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SYSTEM/PROJECT/PRODUCT: STC UTC

Operator Handbook

for an

STC UTC System

ISSUE STATE

Note: Source of documents is shown under Type as below.

1=Paper, 2=VAX, 3=Microfilm, 4=CALTEXT Disc, 5=DECmate Disc,

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The document comprises the following components:

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All	34	10	666HB16940000	hb16940_V34-final.docx

CONTENTS

1. INTRODUCTION

1.1 Purpose

This document describes the available commands and messages output during day-to-day running of an STC Urban Traffic Control system (UTC), hereafter referred to as the System.

The document is written for day-to-day users of the System.

1.2 Scope

The document is limited to STC UTC Systems with the standard operator interface.

It is recommended that users of this document should have been on a UTC System Operator training course.

This document assumes that the reader is familiar with basic traffic engineering concepts such as phase, stage, link and node.

1.3 Related documents

Note: In the references below, the characters 'xxx' substitute for the 3 digit number which uniquely identifies a particular UTC System i.e. the customer variant for these documents.

1.3.1 Parent Documents

1.3.1(a) 666/UH/16940/000 System Requirement Specification for an STC UTC System

1.3.1(b) 666/UH/16940/xxx Customer Requirements Specification

1.3.2 Kindred Documents

1.3.2(a) 666/HC/16940/000 UTC Map Editor and Display

1.3.2(b) 666/HB/16940/001 GENPIC Handbook for an STC UTC System

1.3.2(c) 666/HD/16940/000 Data Preparation Handbook for an STC UTC System

1.3.2(d) 666/HE/16940/000 System Handbook for an STC UTC System

1.3.2(e) 666/HF/16940/000 SCOOT User Guide

1.3.2(f) 666/HG/16940/000 System Management Handbook for an STC UTC System

1.3.2(g) 666/HH/16940/000 Data Preparation Guide for an STC UTC System

1.3.2(h) 666/HI/16940/000 Data File Format Guide for an STC UTC System

1.3.2(i) 666/HD/16067/000 User Handbook for the CTERM Terminal Emulator

1.3.2(j)	666/HP/16940/000	Plan Preparation Handbook for an STC UTC System
1.3.2(k)	666/HT/16940/000	Timetable Preparation Handbook for an STC UTC System

1.3.3 Reference Documents

1.3.3(a)	666/HB/16101/003	SCOOT Traffic Handbook for SCOOT V4.2
1.3.3(b)	666/KE/16066/000	Glossary of terms

1.4 Definitions

For all definitions and abbreviations used in this and related UTC documentation see reference 1.3.3(b).

1.5 Issue state and amendment

Issue 01.00 -	First Issue.
Issue 02.00 -	Updated to include new features
Issue 03.00 -	Updated to reflect release V2.2 of software
Issue 04.00 -	Error corrections and new commands added
Issue 05.00 & 06.00 -	Not issued
Issue 07.00 -	DC 9164, Updated, corrected and numerical issue now concurs with Software issue
Issue 08.00 -	Updated and corrected.
Issue 09.00 -	Updated and corrected.
Issue 10.00 -	Revised and updated to reflect V10 software.
Issue 11.00 -	Not issued
Issue 12.00 -	Changed to Word format and revised and updated to reflect V12 software.
Issue 13.00 -	Not issued
Issue 14.00 -	Revised and updated to reflect V14 software.
Issue 15.00 -	Revised and updated to reflect V15 software.
Issue 16.00 -	Revised and updated to reflect V16 software. Customer corrections included. “VAX/VMS” references changed to “STC”. NMCS updates included.
Issue 17.00 -	Revised and updated to reflect V17 software.
Issue 18.00 -	Not Issued
Issue 19.00 -	Revised and updated to reflect V19 software.
Issue 20 -	Not issued
Issue 21 -	Revised and updated to reflect V21 software.
Issue 22 -	Not issued
Issue 23 -	Revised and updated to reflect V23 software.

Issue 24 -	Not issued
Issue 25 -	Not issued
Issue 26 -	Not Issued
Issue 27 -	Not Issued
Issue 28 -	Revised and updated to reflect V28 software, including command ‘EMES’ changes and Tidal Flow changes.
	Also ESS changes to ‘CHCP’ command.
	Add ESS changes for priority CHAN and commands XCHA, LSCH, SCAS and XSCA.
	Added changes for Tuen Mun-style ‘primed’ green wave for GWAV.
	Added ESS2006-2007 changes for LSTF, LTEC and OUTT.
Issue 29	Not issued
Issue 30 -	ECAS added to CASTs description.
	Added page for LIHS command.
	Parent/child SCOOT wildcard SCNs for ESS2007-2008.
	Plan description option for LIPT.
	Added MOVA and XMVA commands and fault categories.
	Added an appendix on UTMC Type 2 concepts.
	ESS 2009 changes for :
	Commands SSSU, CHAN SUPER, UPDA RESTORE, SSGM and FLTG for a CDB.
	Special DLOT for intersection and ped. faults.
	Stage count messages U23, U24 added for ASTRID.
	Fault category changes for SCOOT detectors.
	Ctrl-P print screen for LVAL, NFTD and RFTD.
Issue 31	Not issued
Issue 32 -	Entries for commands ASCC, LASC, XASC, CREP.
	Updates to Appendices for CHAN parameters and fault categories.
	Add UTC System CHAN parameter PFLG for Fault Log restore.
	Update ALRM command syntax for special operational alarms.
	Add new LEME command for equipment messages.
Issue 33	Not issued
Issue 34	ASTR/XSTR removed as commands
	Updates to Appendices for CHAN parameters and fault categories
	LOGO improvements
	OUTT improvements

Add UTC System CHAN parameters ZRTS, ZRTM, ZRTP for RTIG trigger of pseudo special facility.

Add information on UTC Event driven messages

1.6 System Facility Licenses

This document covers all the facilities that the System can provide, some of which are separately licensed by STC. The facilities available on your System are therefore those for which licenses have been purchased. If you are in doubt as to which are available on your System, please contact STC.

2. GENERAL DESCRIPTION

The STC Urban traffic control (UTC) System provides traffic control within a designated area. It employs the SCOOT adaptive control methodology as well as fixed time control. The system is based on a single computer. For a description of system features see the System Handbook, reference 1.3.2(d).

Three different types of command exist as follows:

(a) System management commands: These include methods for starting up, closing down and backing up the system. See reference 1.3.2(f).

(b) Database management commands: These include commands such as DBAS and UPDA, which concern the system databases. See reference 1.3.2(c).

(c) Traffic control commands: These include all the commands used for the day to day running of the traffic system. See section 7.

2.1 Logging in to the System

2.1.1 Logging in via the MMI Interface

If the terminal is connected but not logged, the UTC Logon box should be shown on the screen. The logon procedure is the following:

1) Enter your Username in the top line

2) Enter your Password in the second line

3) Confirm by pressing the RETURN key or clicking on the 'OK' button.

2.1.2 Logging in via a Terminal Server

If the terminal is connected via a terminal server then the following sequence should enable an authorised user to log in:

(1) Press [RETURN]

This should give you the LOCAL prompt

(2) Enter **C** [RETURN]

If a preferred service has been defined then the system prompts for a Username and then a Password.

USERNAME> <USERNAME> [RETURN]

PASSWORD> <PASSWORD> [RETURN]

If a preferred service has not been defined then enter the service name as follows:

(3) Enter **C** <SERVICENAME> [RETURN] (e.g. "**C TMC**")

The system should now prompt you for a Username and then a Password as above in (2).

If the terminal being used is a CTERM PC and a terminal server is not used then set the current directory to CTERM (This is normally set up anyway). Then type

CTERM [RETURN] at the prompt and you should then be prompted for a user name and password as above.

3. TERMINAL USE

This section of the Handbook refers to non-windows based terminal use. If you are using a windows-based system, see section 5 for some basic information on terminal use.

3.1 Keyboard Use

This section describes the special keys present on the keyboards of the terminals used in the system. These are split into two groups that are detailed below, depending on the type of terminal being used. That is: Common keys and keys for non-MMI terminals.

3.1.1 Common Keys

All the following keys are used on both MMI and non-MMI terminals.

Cursor keys	These keys are used mainly during EDT sessions. While the traffic system is running however they can be used for command line editing, see section 3.2 for more details.
Return	Used to terminate an input line, i.e. a traffic command. In the text of this manual <CR> or <RETURN> denotes pressing the RETURN key.
Control	Used in conjunction with other keys to provide special functions. For example, in order to enter a control-P (CTRL-P) character, press and hold the control key, then press the P key, and finally release the control key.
Shift	Used in conjunction with other keys to alter the case or function of the key. For example, in order to enter the # key on a VTxxx series terminal press and hold the shift key, then press the 3 key, and finally release the shift key.
Delete	Deletes one character to the left. On VDUs the cursor moves one character position to the left. On hard copy devices, characters deleted are printed between slashes; the resulting line can be re-displayed by typing CTRL-R see below.
TAB	Enters a Tabulation character in the same way as a typewriter.
$	Type this character at a traffic terminal to access the DCL command line interpreter. When you have finished entering DCL commands at the terminal, enter the command LOGO. Terminals using the DCL command line interpreter cannot receive any traffic system messages or enter any traffic commands until the DCL LOGO command has been entered. HELP on DCL commands can be obtained by entering the HELP command at the DCL prompt. A beep indicates that the facility is not configured for this terminal.

This is not a facility that should be used in normal operation and consequently should be used with <u>extreme</u> care.

Note: DCL is the DIGITAL Command Language common to all DEC computers. DCL provides commands for interactive program development, device and file manipulation, and interactive program execution and control.

3.1.2 Keys for Non-MMI terminals

The following keys are used on non-MMI terminals, such as VT-series (VT-220, VT-320 and VT-420) and IBM PC compatible computers running the CTERM terminal emulator. Note that text windows on an MMI terminal also use these keys.

Beep — The terminal beeps when the system rejects the input, such as when characters are entered without a command line being open, or a command line not configured for the terminal is requested.

Alt — Found on PC compatible keyboards. This key is used to control the facilities provided by the CTERM terminal emulator, reference 1.3.2(i).

Set-up — Found on most DEC or DEC compatible terminals. This key allows most of the operating parameters of the terminal to be changed. Consult the User Guide of the terminal for further details.

ALT-S — Enters the set-up mode for PC compatibles running the terminal emulator, reference 1.3.2(i).

ALT-X — Exits the terminal emulator on the PC compatibles and returns you to local MS-DOS control, reference 1.3.2(i). To re-enter the traffic system type the command "CTERM" at the MS-DOS prompt.

CTRL-F — This invokes an automatic form of the snapshot dump facility mentioned below (see **CTRL-P**) for the MONI and OVRB commands when plan compliance faults occur.

CTRL-A — Selects either insert or overwrite mode in command line editing, see section 3.2.

CTRL-D — Switches the status line at the bottom of the screen off or on, if the facility has been configured for the terminal.

CTRL-O — Used to suppress unwanted output from listing commands.

CTRL-P — Produces screen snapshots for live update display programs in the traffic system.

CTRL-Q — Cancels a **CTRL-S** character (see below).

CTRL-R — On hard copy devices, redisplays the current line. This is useful if a lot of deletions have taken place on a line, and it is wished to check it before entering.

CTRL-S	Prevents any terminal I/O until **CTRL-Q** is pressed. Can be used for example to halt listings to examine a particular part of them.
CTRL-T	While the traffic system is running, if this character is entered, the number and SCN of the entering terminal are displayed.
CTRL-U	Deletes the whole of the current command line.
-	Type this character at a non-MMI traffic terminal before entering a traffic command in EXPERT mode (if the traffic system is running). A beep indicates that the facility is not configured for this terminal. Note: EXPERT mode allows a command and all its parameters to be entered on a single line and then executed - compare NOVICE mode (see # prompt below).
#	Type this character at a non-MMI traffic terminal before entering a traffic command in NOVICE mode (if the traffic system is running). A beep indicates that the facility is not configured for this terminal. Note: NOVICE mode allows you to enter a command in stages, each parameter required being prompted for in turn - compare EXPERT mode (see - prompt above).
; (Semi-colon)	Type this character at a traffic terminal after a traffic prompt and before entering a comment. That is, the traffic system ignores (but sends to all terminals and the log) any string starting with (;).
HELP	Used to access the UTC System help facility. This key can be generated on a PC compatible by shift F5.

3.2 Command Line Editing

When the System is operating the cursor control keys can be used to retrieve the last few commands entered, modify and action them. This can be useful for a repetitive task using the same or similar command lines.

The cursor-up and cursor-down keys allow the selection of one of the previously entered command lines.

The cursor-left and cursor-right keys move the cursor along the selected line.

The **CTRL-A** key (non-MMI terminal) toggles between the overwrite and insert modes. In the insert mode the sequence you type is inserted into the line at the cursor, in the overwrite mode the sequence overwrites the existing text.

The delete (backspace) key deletes the character prior to the cursor.

3.3 Shortcut Command Entry

Some of the more frequently used commands can be entered in a shorthand manner by means of the function keys on the DEC terminal or PC keyboards. These commands are:

Command	VT320/420	PC
-LSTF	PF1	F1
-LSTS	PF2	F2
-LSTA	PF3	F3
-ACKD	PF4	F4
#MONI	F7	F7
#DIPM	F8	F8
#PICT	F9	F9
-ENDS	F10	F10
-GENP	F18	<SHIFT>F8
-TUAC	F19	<SHIFT>F9
-DBAS	F20	<SHIFT>F10

4. CASTS - "COMMANDS ACTIONED AND STORED TOGETHER"

CASTs are collections of system commands that can be actioned together by a single command. They are normally used for changing a number of parameters, such as SCOOT CHAN commands, at the same time each day by timetable event - for example, one for the morning peak, and another for the evening peak. The allowable commands in a CAST are a sub-set of the timetable commands, and these are defined in the table in Appendix A.

A typical CAST might consist of the following list of commands (example taken from a morning peak CAST):

CHAN MAXC RLA 120

CHAN TREN RLA ON

CHAN FDWN RLA NO

CHAN SLAG N22431C -3

CHAN TPLN N21211 1

CHAN TPLN N22431 1

...

The following commands are available for use with CASTs, these being detailed in section 7:

ICAS Include commands in a CAST

DCAS Delete commands in a CAST

ACAS Action the CAST, either by operator command or timetable

LCAS List the contents of a CAST

ECAS Edit the contents of a CAST

NCAS Give the CAST a meaningful name, such as AM-PEAK, OFF-PEAK

NOTE: A CAST name may consist of up to 40 alphanumeric characters and may include spaces. It should be noted that only that part of the name up to the first space is regarded as unique and is the name by which the CAST is known to the system.

The maximum number of allowed CASTs is 1,000.

5. MAN MACHINE INTERFACE

The new Man-Machine Interface (MMI) system is a Windows based, user friendly interface for the UTC System.

If you have limited experience of Windows operation using a mouse, STC recommend that you use the Tutorial found in the Help menu.

5.1 Starting a Session

When the UTC System is running, to access the system it is necessary to start a session. The screen displays a window asking for Username and Password. These can be entered via the keyboard or the mouse.

5.2 Use of the Mouse

The mouse is used to move the pointer around the screen and selecting the various options available either by a single 'click' or a double 'click'.

The mouse supplied as part of the Workstation has 3 buttons. The function of each button is explained in detail in the DECwindows Motif Quick Reference guide. If MMI is being used on a PC supplied with a mouse with only 2 button the operation of the third button is normally achieved by pressing both buttons together.

5.3 Menus

The menu bar displays the main menu names. If the pointer is moved to any of the names then the list of commands available is displayed. If the mouse is clicked once then the menu options are displayed permanently. The pointer can then be moved to any of the commands displayed for actioning. The actual actioning of any particular command may require the input of relevant parameters. The System prompts you for the correct information.

The main menu bar is the top-level window of the UTC Session. From a UTC Session you can fully control and monitor the operation of the UTC System.

The menu bar is implemented as a series of pull-down and cascade menus. The menu options accessed from the menu bar fall into two main categories:

- UTC Command options
- UTC Session local operations.

Most of the menu options fall into the first category. When a UTC command option is selected a command entry dialogue box is displayed which prompts you for additional parameters. When these have been entered a command line is constructed which is then submitted to the UTC System for actioning. The UTC System may reject the command in which case an error message is shown. All commands sent to the UTC System are echoed in the main message window.

The second category refers to options that are actioned locally by the UTC Session. These are generally options, which call up additional windows.

5.3.1 Menu Options

Main menu options are those accessible from the top-level menu bar. These options are described below.

5.3.1(a) Pause Menu Option

This option locks your X terminal until you re-enter the password associated with your user name. This option is provided to allow you to leave your X terminal safely unattended without having to log out.

5.3.1(b) Exit

Using the Exit Menu Option

This option exits the UTC session. All UTC Session windows are deleted. Some external UTC applications such as the Graphics Editor and DECterm displays such as Plan Monitor (DIPM) continue to run.

To start another UTC Session select the UTC Session option from the Session Manager.

To close down all windows on the display you should select 'End Session' from the Session Manager instead.

5.3.1(c) Restore Options

This option is used to restore various UTC Session options to their last saved state. At the time of issue of this document, this only refers to the message options as set up on the Message Options Window.

5.3.1(d) Save Options

This option is used to save various UTC Session options to a file. The options are read from this file when you next log in as this user.

The following is saved:

· Message Options as set up in the Message Options Window

· The position and size of open windows.

· Novice/Expert options from the Command Entry Window.

Note: The open/closed state of windows is not saved. You should select which windows you want opened at start-up from the Automatic Start-up window. The iconised state of windows is not saved.

5.3.1(e) Automatic Start-Up Window

This window selects which windows are opened when you next log on as a user. To add windows to the start-up list you should click on Options from the left listing. To remove windows from the start-up list click on the window option in the right listing.

Select <OK> when you have finished making changes. The current set-up is saved to a file a used when this user next logs in. Note that you do not have to select

'Save Options', the automatic start-up is saved automatically. Select <RESET> to restore the start-up list to its last saved state. Select <CANCEL> to close the window without saving any changes.

5.3.2 OK

Click on the OK button when you have finished making changes to the options. The options are implemented and the window closed.

5.3.3 Apply

Clicking on the Apply button implements the options currently selected without closing the window.

5.3.4 Default

Clicking on this button returns the options to their default state. The options are not implemented.

5.3.5 Cancel

Click on this button to close the window without saving any changes.

5.4 Windows

The MMI allows you to open several windows and display them together on the screen or if preferred they can be stored and reopened later. The use of several windows open together allows comprehensive monitoring of several commands to see the effects of any changes. Each of the Windows opened can be sized to your requirements around the screen or to fill the screen completely. The windows can be totally customised on a per user basis with respect to colour, size and position around the screen.

5.5 Help

Help is available on-line through a number of help screens.

Select Help on Window to display help about the current window.

Select Help on Commands to display a scrolling list of UTC commands for which help is available. Double click on the command for which help is required and the help text is displayed in the help window. Any related commands are also shown.

Select Help on Version to display the current version of the software.

The help screen has two main areas. The main area displays help on the currently selected topic. Use the scroll bar to display text not in the viewing area.

The additional topics window contains a list of sub-topics and related topics. To view one of these double-click on the appropriate item. Return to the original topic by selecting 'Go Back'.

You can search for other help topics by title or keyword from the Search pull-down menu. The Search pull-down menu contains the following options:

History	A window is displayed listing the help topics accessed during the current session. Double-click on one of these topics to re-open it.
Title	Opens the Search Topic Titles window. Enter the title in the top field and select 'Apply'. A list of topic titles matching the search criteria is shown in the lower area.
Keywords	Opens the Search Topic Keywords window. Enter the keyword in the top field, or scroll through the list using the scroll bar. Double click on the keyword to enter it into the keyword field and press 'Apply'. A list of topic titles matching the search criteria is shown in the lower area.

Having selected one of the above options it is possible to 'Go To' or 'Visit' the topic.

Go To	Opens a new window showing the topic selected and transfers control to that window.
Visit	Opens a new window showing the topic selected, however clicking on the exit button returns control to the previous help window.

5.6 Commands

5.6.1 Command Entry Menu Option

This option is used to call up the command entry window, and takes the form of a toggle button. When the toggle button is raised, pressing it opens the command entry dialogue. When the button is lowered, pressing it closes the command entry dialogue.

5.6.2 Command Entry Window

This window allows you to type a UTC command directly into the computer.

A command history selection box is also provided. When a new command is entered a copy is retained in the command history list which can be called up again if required.

The command dialogue operates in two modes, which can be selected from the Mode pull-down menu. The first is 'Expert' mode, which is used by experienced UTC users. In this mode you type the full command without prompting. 'Novice' mode allows you to enter a command with zero or more parameters. If additional parameters are allowed you are prompted for the parameters. If you enter invalid data a message showing an example of what should be entered is displayed.

5.6.3 Confirm

Command Confirmation Dialogue

This dialogue appears when the requested command must be confirmed before it can be actioned. To proceed you must either select <OK> to action the command or <CANCEL> to cancel it.

5.6.4 Listing Window

A listing window is generated when you select a listing command from the main menu. The listing window can display up to 1000 lines of text. If a listing larger than 1000 lines is requested the listing is truncated and a warning message is displayed at the end of the listing. In that case you should re-enter the listing command by pressing <FILTER> and select an appropriate filter to remove unwanted messages.

The re-display button re-submits the listing command used to generate the listing window. That is, it forces a re-display. This is useful for cases where the information in the listing is no longer accurate because, for example, a new fault has just been raised or cleared.

5.7 Graphics

5.7.1 Introduction

This is a brief overview of the MMI Graphics Editor and Display facility on the System. Refer to the UTC Map Editor and Display Handbook, ref. 1.3.2(a), for more details. Information on graphics on UTC systems without the MMI facility is contained in the GENPIC Handbook, reference 1.3.2(b).

5.7.2 Map Display Menu Option

This menu option is used to call the Map display window. This feature enables you to load and display pictures generated through the Map Editor.

This option is a toggle button. When the button is raised, pressing the button opens the LGU window. When the button is lowered, pressing it closes the LGU window.

When loaded, the pictures may contain symbols which, when selected, display information current to the UTC System.

5.7.3 Edit

Using the Edit Menu

This menu entry provides the <SELECT ALL> option.

Using this menu entry all the symbols currently present on the screen become selected. This is equivalent to clicking the mouse button once on each entry on the screen.

5.7.4 Symbols

Using the Symbols Menu

Two menu entries are provided which enable you to switch the display of live update symbol information on and off. To start the display of information simply click on one of the symbols. Move the mouse to the menu and click on the word <SYMBOLS>. A menu list appears with two entries. Clicking on the first one causes UTC information to be displayed near the chosen symbol. This option may be used with the <SELECT ALL> function described earlier, which permits multiple live update symbols to be controlled using a few mouse operations.

5.7.5 Map Menu

Using the Map Menu

The map menu entry provides a zoom facility. This allows you to examine a section of the picture in more detail. Three levels of zoom are provided, and an un-zoom.

To use the zoom facility, first select the level by selecting the map menu and clicking on the appropriate zoom button. Following this a rectangle appears in the graphics update window which may be sized using the mouse. This specifies the portion of the picture to be focused on when the zoom occurs.

Select the area to zoom on by positioning the rectangle and clicking the left mouse button. This displays the selected area in more detail.

5.7.6 File

Using the File Menu

This menu permits you to load a new picture into the display area using the <LOAD> entry. The picture should have been generated or imported into the map editor. Live update graphics symbols may have been added using the graphics editor.

The <QUIT> option terminates the display, closing the live update display window.

5.7.7 Loading New Pictures

You have chosen to load a new picture file into the Live Graphics update facility. To select the file to load, click on the picture of your choice which is displayed in the list in the centre of the dialogue box.

The picture you have selected is displayed under the list.

To accept the choice and subsequently load the picture, click on the <LOAD> button. To cancel the operation, click on the <CANCEL> button.

To change the filter of pictures displayed in the picture list, click on the filter box at the top of the dialogue box. Enter your new filter using the keyboard, and then click on the filter button at the bottom of the dialogue. The pictures matching your new choice of filter are now displayed.

5.8 Messages

5.8.1 Message Entry Window

This window allows you to enter lines of text to be broadcast to other users of the traffic system.

Type the message text in the message entry field and press <BROADCAST> or <RETURN>. Messages must be entered one line at a time.

A selection box containing a history of previously entered messages is also provided.

5.8.2 Message Options Window

This window allows you to specify how UTC sessions should handle new traffic messages.

For certain types of message it may be desirable that the user is notified immediately. This may be achieved by specifying that particular types of message are displayed in a 'raised' window. A raised window is stacked on top of all other windows so it is immediately visible. Fault messages may be categorised as 'High' 'Medium' or 'Low' priority. Other message categories are <URGENT>, <USER> and <LISTING>.

The message options window also allows you to indicate if a command status pop up window should be created when a command reply message is received. Command reply messages are split into four categories -

Success	The command was successfully actioned.
Informational	The command was successfully actioned, but there is something the user should be aware of.
Warning	The command was not fully actioned - e.g. a computer was off-line or no action was required.
Error	The command could not be actioned/ The message text should display the reason.

Command status windows are modal - that is you must acknowledge that you have seen it by clicking on the <OK> button on the window before you may do anything else. Command Messages continue to be output in the primary message window even if you have the command status window option enables, allowing you to refer back to them.

5.8.2(a) Urgent Messages

Urgent messages are messages that have been configured with the <URGENT> token in the UTC Message Roots file.

5.8.2(b) User Messages

User messages are messages broadcast by other users of the UTC System. It is likely that such messages would need to be displayed immediately.

5.8.2(c) Listings Messages

This refers to messages called from the command entry window. Listings requested from the main menu are displayed in listing boxes and this command has no effect on them.

If this option is selected and a listing command is entered in the command entry window, the output message window is raised.

5.8.3 Message Entry Window

The message windows called from the Layout pull-down menu are used to display traffic system messages. What types of messages are displayed depends on the message window opened.

The message windows store approximately 500 lines of text. When new messages are output they are always appended to the bottom of the window and the viewing area is re-positioned to show the latest message.

The window can be re-sized to show the desired number of lines, or it may be iconised. While iconised, the window icon shows whether additional messages have been output to the window since it was last iconised. Normally, the icon shows an empty in-tray; when a new message is added the icon changes to an in-tray containing a letter.

Note: For certain messages, the message window is automatically de-iconised and raised when a message is output. See 'Message Options' for further details.

Output to a message window may be stopped by pressing the <PAUSE> button. This allows the listing to be viewed without the distraction of new messages being added. Approximately 100 messages can be stored before messages are lost in this mode.

You can print the contents of the window by selecting Print from the File menu. This prints the entire contents of the message file, which could be 500 lines if the file is full.

5.8.4 New Output Window Menu Option

This menu option is used to create a new primary message output window. The primary message output window is the message window that displays all messages by default. For example, all event driven messages are displayed in the primary output window unless you open a SCOOT Message Window. They would then be re-directed to that window.

If you create a new output window, messages are no longer output to previously created output windows; i.e. they become read-only windows. You may create up to ten general output windows.

5.8.5 System Message Menu Option

This menu option is used to open or close the system message window. System Messages are unsolicited messages generated by the UTC System when an event of some sort occurs, e.g. a fault being raised or cleared.

This option is a toggle button. When the toggle button is raised, pressing it opens the message window. When the button is lowered, pressing it closes the message window.

5.8.6 SCOOT Message Menu Option

This menu option is used to open or close the SCOOT Message window. The messages output to this window are the Event Driven Messages, generated by the MESS command.

This option is a toggle button. When the toggle button is raised, pressing it opens the message window. When the button is lowered, pressing it closes the message window.

5.8.7 Faults

5.8.7(a) Fault Messages

High, Medium or Low Priority Faults may be selected on the Message Options Window. When a fault of the selected priority is raised or cleared, the message window is displayed.

5.8.7(b) Faults Menu

This menu option provides two options relating to the faults currently outstanding on particular equipment.

<CLEAR>	permits you to clear all outstanding faults relating to the currently selected equipment.
<ACKNOWLEDGE>	permits you to acknowledge the faults currently outstanding on the selected equipment. If equipment is selected for which no faults are outstanding an error message is displayed.

6. MAP EDITOR AND DISPLAY

6.1 MMI Facilities

This is a licensed facility - see section 1.6.

The new UTC Map Editor and Display are now covered in a separate document - UTC Map Editor and Display Handbook, reference 1.3.2(a).

Personalised Window settings, such as colours, can be set by each user to his individual preferences using Options on the Session Manger Menu bar. Similarly, Workspace settings, such as icon position, can be set from the Workspace menu, which can be revealed by clicking on a vacant area of the screen. To retain the settings so that they are automatically recalled on start-up, both the Option_Save and Option_Save Session Manager commands should be selected from the UTC and Session Manager menu bars.

6.2 Non-MMI Facilities

UTC Systems that do not have the MMI facility use the original GENPIC and PICT facilities. Customers who require a copy of the instructions for using these facilities should request a copy from the UTC Customer Support Desk.

7. CONSTRUCTION AND USE OF TIME-DISTANCE DIAGRAMS

7.1 General Description

The Time-Distance Diagram (TDD) module is initiated by the operator command TDDD on a PC compatible terminal. Users of the new MMI may also display it in a window on a suitable graphics terminal. The GUI version of this display also enables additional graphics features to be used with the display.

A Time-Distance diagram displays increasing distance of selected controllers from an arbitrary origin (in metres) along the Y-axis against increasing time from zero (in seconds) along the X-axis. Green horizontal bars are displayed at the appropriate Y heights for the time values for which a selected stage of the junction controller or vehicle stage of the pedestrian controller is green. Progression of vehicles from one controller to another as time advances can be superimposed as diagonal cruise lines of different speeds (in kilometres per hour).

One use of TDD is to either predict the 'green progression' along a major road or monitor the actual lengths of the greens for the current plan timings. The controllers along the road are entered into a diagram along with their distances from the desired origin and, for junction controllers, the stages to be displayed as green on the diagram. The stages chosen for display are usually those that give green to the main road vehicles. Cruise lines and variation of plan timings may then be used to attempt to optimise the flow of vehicles along the road for a given set of active plans.

Another use of TDD can be to predict the effect of imposing a selected green wave route on a set of controllers, some or all of which are configured as on that route.

7.2 Modes of operation

TDD supports the display of time-distance diagrams in either PREDICT or MONITOR mode. It also supplies a SET-UP mode, which is used for diagram construction. Each of these modes is entered by typing the relevant command followed by a diagram number. At all times the command EXIT may be used to quit from TDD and revert to the traffic command line. This may also be accomplished in the usual way by typing a traffic command prompt.

Other commands are available within modes to change characteristics of the display. Some of these are only valid when TDD is in the correct mode for that command. However, the commands to select modes i.e. SET-UP, PREDICT and MONITOR are always available.

Note: On command entry only the first four characters are significant.

In PREDICT mode TDD is capable of interpreting different selected plans for each controller on the diagram and using the fixed-time plan information, the intergreen matrix and minimum stage durations to determine when the selected stages are actually green in a plan's cycle. The display of the diagram is static and is only updated when a new plan selection is made or one of the display parameters is changed.

In MONITOR mode TDD uses the actual current stage information being received from each controller rather than stored timings. It updates once per second which plan each controller is on, what the plan's cycle time is, and indicates when the chosen stages for display are actually active.

Y-axis resolution of the diagram is automatically scaled to fit on all the controllers required for the diagram at their appropriate distances from the origin. X-axis resolution in the first instance allows 64 seconds of data to be displayed.

7.3 Setting Up Diagrams

When TDD is started it outputs a list of all available diagrams and waits for a command to be entered. Diagrams with no data prepared are marked as "Vacant". A command may then be entered to SET-UP, PREDICT or MONITOR a selected diagram.

This list may be redisplayed later in a session by typing SET-UP as a command on its own. Typing SET-UP n, where n is a diagram number, enters the "real" set-up mode for the selected diagram. This is where the diagram's background information may be altered.

The title and a list of controllers in the diagram are displayed on the screen. Each controller (intersection or pelican) occupies one line of the display. In addition to the controller SCN (and fifteen character descriptive string, where appropriate), its distance in metres from the notional origin of the diagram, and (for an intersection) the stage(s) which are to show green on the diagram are displayed.

Data may be modified (or entered initially) by moving the cursor to the appropriate part of the screen, and typing in the data. Cursor movement is achieved by using the four arrow keys, clearly visible between the main keyboard letters and the numeric keypad. Note that the up arrow key must be typed twice on remote terminals to move the cursor one place.

To alter the equipment type letter, the cursor is positioned over the SCN field, and then either J or P is typed. To edit the numeric SCN, the cursor is also positioned over the SCN field. Any existing number may be removed a character at a time using the delete key, and then the new number typed in. The same method is used for the distance from the origin (i.e. positioning the cursor over the distance field and then editing it).

Controllers need not be entered in any particular order; the program sorts them into ascending order of distance from the origin automatically when SET-UP mode is exited.

The stage or stages to show green on the diagram are entered by positioning the cursor on the stages field of a line, then typing the stage letters required. A stage that is already present may be deleted by typing the stage letter.

To enter a new command in SET-UP mode, it is necessary to move the cursor up to the command line at the top of the screen, before typing the command.

7.4 Predicting Stage Timings

PREDICT mode is entered by using the command PREDICT n, at the TDD command line. A display is then given showing the chosen diagram with all controllers in local mode. Status indications are shown to the left of each controller's SCN. These show which plan the controller is on, and what the cycle-time for that plan is. If a green-wave route is active on the controller they display the route's associated plan and the SCN of the route the controller is on.

PREDICT mode commands are available for specifying which plan or green-wave a controller is on. These match the syntax of the appropriate UTC commands.

PLAN J01234 5 displays the timings of controller **J01234** for plan 5 if that controller is on the current diagram.

GWAVE G01234 displays the timings for all displayed controllers that are part of that route. If the route uses a green-wave plan then the timings of the controllers in that plan are displayed. However, when a green-wave route is being PREDICTed a different approach is used from that for green-wave or fixed-time plans.

A green-wave route does not have a cycle-time as such; each request on the route is only made once. Another feature is that when a stage is requested as part of the route it can't be predicted which stage the controller was on before the request. The display for a green-wave therefore does not show exact intergreen times to a stage; rather it shows the maximum intergreen time to the requested stage from any other. This is shown on the time-distance diagram as a cyan-coloured area before the green of the actual stage. The 'cyan' time also includes the dead time before a stage request where stage changes are disabled. At the time when a controller is released from the green-wave a single yellow dot is displayed to indicate as such.

XGWAVE G01234 is also provided to remove a route from the diagram and PLAN

J01234 0 removes the current set of plan timings for that controller from the display.

Also available in PREDICT mode is the DEMAND command which is used to enable or disable simulation of demands for demand-dependent stages, and the STAGE command which can enable or disable simulation of stage demands from the controller. When DEMANDS are off the plan interpretation follows the 'Add' stage of a 'Nominate and Add' pair. If DEMANDS are turned on the 'Nominate' stage is assumed to have a demand for it. When STAGE DEMANDS are off the plan interpreter follows the second path through an alternative stage sequence. If STAGE DEMANDS are turned on the first path is followed, as a stage demand is assumed to have come from the controller.

7.5 Monitoring Current Stage Timings

Using the command MONITOR n, at the TDD command line enters MONITOR mode. A display is then given showing the chosen diagram with all controllers in their current UTC modes of operation. Status indications are shown to the left of each controller's SCN.

If a controller is on a fixed-time plan the status indications show which plan the controller is on, and what the cycle-time for that plan is. As before when a green-wave route is active the green-wave route SCN replaces the cycle-time field.

If a controller is on SCOOT the controller's SCOOT node is displayed in the cycle-time field and the plan number given is that of the current SCOOT translation plan for the controller's SCOOT node. While a junction controller is on controller checks the legend 'chk' is displayed in the plan number field.

In addition to the CYCLETIME command, MONITOR mode provides AUTOCYCLING that turns ON/OFF the automatic sensing of the largest cycle time of the controllers' current plans. If this facility is enabled it automatically re-scales the diagram, if necessary reducing the resolution, when a plan change is made, so that at least two cycles of the largest cycle-time can be displayed on the diagram.

Commands are also available in MONITOR mode to STOP and then CONTINUE the update of the display. SINGLESHOT ON updates the display for one cycle of the longest cycle-time equipment on the diagram before pausing. Update may then be either CONTINUEd or SINGLESHOT OFF entered.

7.6 Facilities common to both display modes

In both PREDICT and MONITOR modes the CYCLETIME n command is available. This allows re-scaling of the X-axis to provide display of up to 400 seconds of data with the resolution being reduced when needed.

Diagonal cruise lines of a selected speed may be overlaid on an updating diagram, in either mode, using the CRUISE n command, n is a speed in km/h. To remove the cruise lines type CRUISE on its own.

In addition, the grid lines of white dots, which help to provide a frame of reference to the diagram, may be turned ON/OFF using the GRID command.

7.7 TDDD Command Summary

The following is a summary of valid command syntax understood by TDD. Some commands are only valid when TDD is in the correct mode for that command. The commands to select modes i.e. SET-UP, PREDICT and MONITOR are always available.

On command entry only the first four characters are significant. Hence, the shortest form of any command is the first four characters of its name. Parameter names are shown in lower case. Optional parameters are shown inside square brackets; curly braces enclose others. A slash is used to indicate one of two alternative parameters.

Command syntax	**Description of action**
AUTOCYCLING {ON/OFF}	In MONITOR mode enables/disables the autocycling feature.

CONTINUE	In MONITOR mode restarts the diagram update.
CRUISE [num]	In either PREDICT or MONITOR mode, if no number is specified remove cruise lines from the diagram, otherwise display cruise lines for speed 'num'km/h.
CYCLETIME {num}	In either PREDICT or MONITOR mode the diagram's X axis width is set to 'num'. Also cancels autocycling.
DELETE [diagram]	In SET-UP mode deletes either the specified diagram or the current diagram if none specified.
DEMAND {ON/OFF}	In PREDICT mode enables/disables the interpretation of demand-dependent stages when they are being nominated.
EXIT	Exits from TDD to the command line. Entering a traffic command prompt causes an equivalent action.
GRID {ON/OFF}	In either PREDICT or MONITOR mode enables/disables the display of grid lines.
GWAV {scn}	In PREDICT mode causes timings from the green-wave route associated with the given green-wave SCN to be used for all controllers in that route on the diagram.
HELP	Provides help on TDD.
MONITOR [diagram]	If a diagram number is specified, enters MONITOR mode for that diagram; otherwise the currently selected diagram is used.
PLAN {scn} {plan}	In PREDICT mode causes timings from the specified plan to be used with the specified controller SCN.
PREDICT [diagram]	If a diagram number is specified enters PREDICT mode for that diagram, otherwise the currently selected diagram is used.
SET-UP [diagram]	If a diagram number is specified, enters SET-UP mode for that diagram; otherwise a list of available diagrams is given.
SINGLESHOT {ON/OFF}	In MONITOR mode enables/disables the singleshot feature.
STAGE {ON/OFF}	In PREDICT mode determines whether stage demands are on/off when an alternative stage sequence plan is interpreted. This determines which of the sub-sequences is executed.
STOP	In MONITOR mode stops the diagram update.

XGWA {scn}	In PREDICT mode causes the controllers on the green-wave route associated with the given green-wave SCN to revert to their previous plans.

8. ENHANCED FAULT LISTING FILTER

8.1 Introduction

The enhanced fault listing filter is an optional facility (configured by STC), which uses the concept of Fault Category Groups as an aid to viewing and clearing faults (see Appendix C for Fault Category numbers).

8.2 Fault Groups

A fault group may be created which has a number of fault categories associated with it. Each fault group is assigned a 4 digit number which may be used instead of the fault category in listing commands such as LSTF, LOGO, LSTA, etc. A fault group can be either inclusive or exclusive. When an inclusive fault group is used only those fault categories included in the fault group will be listed; when an exclusive fault group is used all fault categories except the excluded ones will be listed.

The fault group number must consist of 4 digits; each digit shall be in the range 1 to 9 (0 is not allowed). A fault group may also have a name (like a named CAST); the name shall be a text string which must be unique up to the first space character.

Enter the fault categories you want to include or exclude from the group. If a category is prefixed with a + then the category is included. If prefixed with a - then the category is excluded. A fault group is inclusive or exclusive depending on the sign of the first fault category specified for the group. Wildcard fault categories can be specified (e.g. +100 meaning +111 to +199).

Three new commands have been introduced to manage the fault grouping facility. They are FLTG, XFLG and LFLG.

The FLTG command specifies a fault category group, as shown in the examples below:

```
FLTG 1111 +100 +200
```

This defines group 1111 as an inclusive group which will only list equipments which have faults in categories in the ranges 111 to 199 and 211 to 299.

An existing fault specification may be modified. For example,

```
FLTG 1111 -121 -122
```

takes the existing definition and excludes fault categeories 121 and 122. this is the same as the following specification:

```
FLTG 1111 +100 +200 -121 -122
```

If you want to reset the list of fault categories enter a 0 as the first fault category. The command

```
FLTG 2222 0 -121 -122
```

takes the existing specification of fault group 2222 and replaces it with one which just excludes fault categories 121 and 122.

If a fault group is named the name may be used instead of the group number, as shown in the examples below:

```
FLTG 4111 “NODET exclude detector faults” -411 -412 -421 -431
```

```
LSTF NODET
```

The XFLG can be used to completely erase a fault grouping. FOR example to erase fault group number 5555 the following command would be used:

```
XFLG 5555
```

The LFLG command may be used to list the current fault category groupings. The output which would result from the use of a LFLG command might be:

```
Mo 13:30:32 Start of Fault Group Listing
   Group 1111 “SUMMARY” +100 +200 -212
   Group 1112 “TEST2” +100 +300 -310
   Group 1113 “TEST3” +211 +212
   Group 2111 “” +211 +212 +213
   Group 4111 “NODET EXCLUDE DETECTOR FAULTS” -411 -412 -421 -431
Mo 13:30:32 End of Fault Group Listing
```

For systems connecting to Common Database servers, the faults that are sent to the Common Database can now be filtered.

To do this, a special, named fault group called CDBFAULTS needs to be created. The FLTG command is used to create a fault group. For example, to stop faults with the fault category number 122 from going to COMET you can type the command

```
FLTG 1234 "CDBFAULTS" -122
```

where 1234 is a free fault group ID.

For COMET systems, within 10 minutes of changing a fault group, the COMET fault tables will be retrospectively updated to clear or raise active faults that have been filtered out or restored. For non-COMET systems, no retrospective update of the fault tables will occur.

8.3 Fault Groups with the XFLT Command

The grouping of Fault Categories can also be applied to the XFLT command. For example, a fault group 8888 could be created which excludes 141 controller faults [141] and Outstation no reply faults [511] by use of the following command:

```
FLTG 8888 –141 –511
```

The fault grouping can then by used with the XFLT command in the following ways:

```
XFLT J00000 8888
```

```
XFLT X00000 8888
```

9. OPERATOR COMMANDS

9.1 Introduction

In this section the following convention is used to indicate how the command line is formatted.

9.1.1 Command Prompt

Command prompts are used to precede a traffic command on non-MMI terminals, such as a VT-420 or an IBM PC compatible computer running the CTERM terminal emulator. In these cases the Expert Prompt "-" or Novice Prompt "#" (see section 3.1) for more details. MMI terminals do not require the use of these prompts as the command can be implemented from the pull-down menus or the Command Entry window. Therefore all the command described in this handbook should be either preceded by a prompt (non-MMI terminal) or not. For example, the command ACKD should be entered as such:

-ACKD	on a VT320, VT420 or PC running CTERM
ACKD	on an MMI terminal

9.1.2 Optional Parameters

Command parameters shown within square brackets are optional.

Example command format:

HELP [NAME]

Example command usage:

HELP

HELP LSTF

9.1.3 Choice of Parameters

Some parameters may have more than one form. Each possible form is shown separated by a vertical bar '|'.

Example command format:

AUDI [SYS | OP | BOTH]

Example command usage:

AUDI

AUDI SYS

AUDI OP

AUDI BOTH

9.1.4 Parameters

The various mnemonics used are:

SCN	UTC System Code Number, see the System Handbook for STCL UTC Systems, reference 1.3.2(d), for more details.
ScSCN	SCOOT System Code Number, see the System Handbook for STC UTC Systems, reference 1.3.2(d), for more details.
TERM	Terminal SCN
VALUE	Simple Number. Could be a fault or status category.
STAGE	Stage Identifier. Just the letter name of the stage, omitting any second letters for nominated or demand stages.
PARAM	SCOOT Database Parameter
TIME	A time in hours minutes and seconds. Colons separate the fields and the whole is in 24-hour format. If the seconds field is zero it may be omitted.

Examples: 23:59:59

07:30

(1) DATE

A date either in dd-mm-yy format or dd/mm/yy format. Shortcuts such as YESTERDAY, TODAY, TOMORROW and names of days of the week can be specified as a date. These may be abbreviated to, eg., Y, TOD, WED, etc.

Examples: 26-JUN-87

26/6/87

(2) TIME1-TIME2

Nominally two times separated by a hyphen with no intervening spaces. However either the first time or the second time may be omitted, in which case defaults of 00:00 and 23:59:59 are taken respectively. In addition, the keyword 'NOW' may be used to represent the current time, and if the two times required are the same, only a time with no hyphen need be specified. The following are all legal intervals.

Examples:	11:00-13:00	(Eleven until one)
	-2:00	(Midnight until two)
	12:00-NOW	(Twelve until now)
	20:00-	(Eight until midnight)

(3) text parameters

Some commands take character strings as part of their parameters. For example, the SIGN command takes a character string to represent the sign state, and the CHAN command (Appendix B). Where character strings are part of a command's parameters, it is only necessary to specify enough of the characters of the string to make it unique amongst the choices given for that command.

Example: OUTT W (W short for Week is acceptable.)

9.1.5 Redirection of output

The System allows output from many listings commands to be redirected to other terminals and printers. This is achieved by appending an ">" followed by a terminal SCN to the command line. Alternatively, the terminal SCN may be substituted with the strings 'PRINTER' or 'TI'. If PRINTER is specified then output is sent to the spooling printer. If TI, output is sent to the current terminal. Note that there should be at least one space between the last normal parameter and the ">", and no space between this and the terminal SCN.

Example: MESS M14 N01234A >T01003

which outputs the M14 message on terminal T01003

If the system has been set up with an export pseudo printer, output may also be directed to it.

The file name in the export directory will be of the form:

EXPORT YYYYMMDDHHmmss_n.TXT

where: YYYY is the year

MM is the month

DD is the date

HH is the hour

mm is the minutes

ss is the seconds

n is the nth file created in that second (usually 1)

of the time that the file was created.

9.1.6 Command Cancel Facility

This facility is not automatically available and may require the payment of a licence fee.

This facility allows some commands to be cancelled automatically at a specified time.

The command has the format:

COMMAND SCN [any other parameters] [+]hh:mm[:ss]

where the items in square brackets are optional.

The + sign in front of the time means that the command is cancelled hh hours, mm minutes and ss seconds from the time that the command was issued; if the + sign is omitted the command is cancelled at the next occurrence of the specified time.

Example: CSFY F12345 +11:03

where the current time is 10:01, means that special facility F12345 will be cancelled automatically at 21:04.

Example: CSFY F12345 11:03

Means that special facility F12345 will be cancelled at 11:03.

The cancel time cannot be used with wildcard SCNs.

The cancel time can be cancelled before the expiry of the cancel timer by using the appropriate cancel command, e.g. XCSF for CSFY, AUDI for XAUD, etc.

Details of those commands that have a currently unexpired cancel timer are stored in timetable 0 and can be seen using the OUTT 0 command.

Commands using the cancel timer cannot be entered into a CAST or a timetable.

Commands with a cancel timer set are cancelled by an UPDA with closedown or system restart.

9.1.7 Example Commands

Please note that the SCNs used in the command examples are fictitious and are not the real SCNs used in your System.

9.1.8 Parent/child wildcard SCOOT SCNs

Certain operator commands will accept wildcard SCOOT SCNs in a parent/child relationship using the symbols ‘<’ and ‘>’. This is best demonstrated by example:

RAA>	would mean that the listing would apply to RAA, RAAN*, RAAN*/*, RAAN**, RAAN***
N10111<	would mean N01111, RAA (assuming N01111 is in RAA)
N10111<>	would mean RAA, N10111, N10111/*, N10111*, N10111**

9.1.9 ASTRID graphs of stage starts

This is an ESS licensable facility. ASTRID has been modified to draw graphs for intersection stage and pedestrian stage counts. Two new messages have been created. U23 (intersections) and U24 (pedestrian) messages can be set up using the MESS command. The messages are output every 5 minutes. E.g. add the following commands to your ASTRID CAST:

MESS U23 J00000 >ASTRID

MESS U24 P00000 >ASTRID

Enabling these new messages will allow access to intersection stage and ped counts as ASTRID graphs. The graphs will show stage occurrences expressed as counts per hour.

;

'semi-colon' - broadcast message

This command causes a message to be broadcast to all terminals on the System. The message is also written to the System log.

Operator Command Format:

; 'message'

Example:

; Message from terminal 1 - DEC maintenance at 1400

Related Command:

ECHO

Timetable Command Format:

Not available

ACAS

Action CAST

This command causes the System to perform all the commands held within a particular CAST.

When a CAST is actioned, normally a message is output to the log. This message may be suppressed by entering an exclamation mark (!) as the first character of the CAST name.

The CAST number or mnemonic may not be wildcarded.

Operator Command Format:

ACAS CAST_number | CAST_mnemonic

Examples:

ACAS 1

ACAS peak

ACAS !peak

Timetable Command Format:

TIME ACAS CAST number

Example:

08:30 ACAS 1

Related Commands:

ICAS, DCAS, LCAS, NCAS

MMI Menu:

Traffic/Admin/SCOOT under CASTs

ACCT

Action CAST by Cycle Time

This command associates a CAST with a change, for the specified SCOOT region, to the specified cycle time.

The direction from which the change occurs must be specified using '+' for a change in which the cycle time is rising and '-' for a change in which the cycle time is falling.

Separate associations must be made for rising and falling trends for a given region and cycle time. The same CAST may be used in multiple associations.

A maximum of 8 ACCT events may be associated with each SCOOT Region.

The CHAN TACC command (see Section 10) may be used to put the ACCT command into or out of test mode.

Operator Command Format:

ACCT CASTNAME Region_SCN Region_Cycle_Time +|-

ACCT CASTNUMBER Region_SCN Region_Cycle_Time +|-

Examples:

ACCT 101 RCA 56 -

ACCT am-rush-clear-crossing2 RCA 56 +

Timetable Command Format:

TIME ACCT CASTNAME Region_SCN Region_Cycle_Time +|-

TIME ACCT CASTNUMBER Region_SCN Region_Cycle_Time +|-

Examples:

06:00 ACCT 101 RCA 56 -

06:10 ACCT am-rush-clear-crossing2 RCA 56 +

Related Commands:

LACC, XACC

MMI Menu:

SCOOT / SCOOT Specials

ACKD

Acknowledge fault(s) and cancel alarm

This command cancels the audible alarms and acknowledges unsolicited fault messages and the System alarm. The operational alarm is extinguished.

The faults being acknowledged may be listed using the output redirection parameter >T, >P or >B (terminal, printer or both).

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- If the ALL parameter is used then faults on all TCCs are acknowledged, otherwise only those on the TCC on which the command is entered are acknowledged. An equipment or computer SCN may be entered to acknowledge faults on a specific equipment or computer. The SCN may be wildcarded.

Operator Command Format:

ACKD [ALL | Computer_SCN]

Examples:

ACKD

ACKD ALL

ACKD H01000

Timetable Command Format:

Not available

Related Commands:

LSTA, LSTF

MMI Menu:

Available on the Status Panel Window

ACSV

Action CASTs by Sensor Values

This command allows the 5-minute smoothed converted data from pollution sensors to action two casts. One when the values of all the sensors in a group pass their ON threshold for the 'on_timer' period and the other when all the values pass the OFF threshold for the 'off_timer' period.

Operator Command Format:

ACSV SCN GROUP On_timer Off_timer On_CAST Off_CAST

Command example:

ACSV H01000 3 15 25 CAST1 CAST2

Timetable Command Format:

TIME ACSV SCN GROUP

Example:

01:00 ACSV H01000 3 15 25 CAST1 CAST2

Inverse Command:

XACS

Related Command:

LACS

MMI Menu:

Traffic / Normal

ALRM

Raise User Defined Operational Alarm

This command is intended to be entered in a CAST or COMET strategy, which, when actioned will cause an operational alarm to be raised and the associated message text to be output. If available, the audible alarm will be sounded. The alarm event can be viewed using the LSTA command and the alarm cleared with the ACKD command.

The optional SCN may be an un-wildcarded UTC SCN or SCOOT detector SCN.

An optional special operational alarm number in the range 1 to 10 may be specified after the optional SCN. (This is for use with the Siemens Remote Alarm Panel application.) ACKD also clears all special operational alarms.

Command Format:

ALRM [UTC_SCN] [ALARM_NUMBER] “MESSAGE_TEXT”

Command example:

ALRM J12341 “Control of J12341 changed by CAST”

ALRM “All car parks full”

Timetable Command Format:

As Operator, with TIME prefix.

Inverse Command:

None

Related Command:

LSTA, ACKD

MMI Menu:

Faults

ARCM

Start Removable Disk Archive

This command starts a utility to enable data to archived, backed-up or restored from a removable disk such as an Iomega Jazz drive. The utility is menu driven.

Data that can be archived is either system log files or ASTRID monthly data. Data that can be backed-up and restored is the same set that can b backed-up and restored to tape drive. Note, data that has been archived can be used by the UTC system by just loading the appropriate disk cartridge. Data that has been backed-up must be restored to permanent disks before the UTC system can use it.

Operator Command Format:

ARCM

Example:

ARCM

Timetable Command Format:

Not available

Related Command:

DBAS

MMI Menu:

Manager

ARRQ

Associate three CASTs and timer with a Remote Request

This command associates three CASTs and a timer with a Remote Request. The activation of the CASTs are:

- The first CAST is executed when the Remote Request is applied.
- The second CAST is executed when the Remote Request is removed.
- The third CAST is executed **TIME** seconds after the Remote Request is removed, the range of values for **TIME** is from 0 to 3600 seconds.

Operator and timetable ARRQ commands have the same priority. Thus an operator ARRQ command supersedes a timetable command and vice-versa.

CAST number 0 may be used for any of the three CASTs, meaning no action is taken. For example, the command:

ARRQ Z99111 101 0 120 103

means that CAST 101 runs when the remote request bit is set, nothing happens when it is cleared, but CAST 103 runs 120 seconds after it has cleared.

If an ARRQ command is issued to change the assignment of CASTs to a remote request is issued whilst the remote request bit is still active, the new assignment is held in a pending state until the active sequence of CASTs has terminated.

Operator Command Format:

ARRQ Remote_SCN CAST_name CAST_name TIME CAST_name

ARRQ Remote_SCN CAST_num CAST_num TIME CAST_num

Examples:

ARRQ Z03113 block-cross1 clear-cross1 300 normal-cross1

ARRQ Z01120 36 am-rush-clear-crossing2 300 24

Timetable Command Format:

TIME ARRQ Remote_SCN CAST_name CAST_name TIME CAST_name

TIME ARRQ Remote_SCN CAST_num CAST_num TIME CAST_num

Examples:

12:30 ARRQ Z03113 block-cross1 clear-cross1 300 normal-cross1

12:30 ARRQ Z01120 36 am-rush-clear-crossing2 300 24

Related Commands:

LARR, XARR

MMI Menu:

None

ASCC

Action CAST by Saturation/Congestion

This command creates an event trigger to run the specified CAST when a SCOOT link's saturation or congestion (%) rises or falls below the specified threshold. The values against which thresholds are compared are the saturation and congestion values presented in the M08 SCOOT message.

The direction from which the change occurs must be specified using '+' for a change in which the saturation or congestion is rising and '-' for a change in which the saturation or congestion is falling.

If saturation or congestion rises or falls such that it crosses the threshold for more than one event trigger in one go, then the CASTs for all those triggers will be executed in order.

Separate associations must be made for rising and falling trends for a given link and saturation/congestion.

ASCC event triggers that you want to persist *MUST* be put into a timetable or CAST to be executed at the beginning of each day.

A maximum of 12 ASCC events may be associated with each SCOOT link.

Operator Command Format:

ASCC CAST name/number LinkSCN SATURATION SAT% +|-

ASCC CAST name/number LinkSCN CONGESTION CONG% +|-

Examples:

ASCC 123 N01231A CONGESTION 56 +

ASCC station-rd-oversat_clearing N01231A SATURATION 85 -

Timetable Command Format:

As Operator, with TIME prefix.

Related Commands:

XASC, LASC

MMI Menu:

Traffic > Specials

ASLD

Assign SCOOT link to count site

This command allows a SCOOT link or links to be assigned to a count detector SCN to enable the System to generate vehicle count information from the SCOOT detectors on those links. The command allocates the conversion factor between Link Profile Units(LPUs) and actual vehicles counted during the survey period initiated by the SSSU command, this value must be supplied the first time the command is used for a particular link. If more than one link is associated with a count detector SCN the value stored is the sum of all the links assigned.

Link conversion factors can be listed by the LLCF command.

See SSSU for a description of calibrating a SCOOT link for vehicle counts.

If the SCOOT link has only a single detector no survey is needed; The method of counting is based on that used for the SCOOT M63 meesage and should give an accurate result.

Operator Command Format:

ASLD LinkSCN [DetSCN [VALUE]]

(where VALUE is the on-street vehicle count determined during the survey of the link, see SSSU command)

Examples:

ASLD N01221A D01226 250

ASLD N01221A D01226

ASLD N01221A

In the first example the link is associated with the counting detector and calculates a new link conversion factor based on the previous SCOOT survey activated by the SSSU command. In the second example, the link, with a single SCOOT loop, is associated with the counting detector. In the third example the link is no longer associated with a counting detector.

Timetable Command Format:

Not available

Related Commands:

LLCF, SSSU

MMI Menu:

Admin

ASTD

Start up the Astrid Display

ASTRID is a SCOOT database facility supplied by the Transport Research Laboratory. This command calls the ASTRID X windows display and is only available on an X windows terminal.

Please refer to the TRL documentation for further information on this facility.

Operator Command Format:

ASTD

Example:

ASTD

Timetable Command Format:

Not available

Related Command:

ASTC

MMI Menu:

SCOOT

AUDI

Enable audible alarms

This command alters the state of the System and Operational audible alarms. Either or both of the audible alarms may be turned on. If the command is entered with no parameters the current setting of the audible alarm inhibit values is displayed.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

AUDI [SYS | OP | BOTH][TIME]

Examples:

AUDI SYS - Enable system audible alarm.

AUDI - display status of alarms.

AUDI SYS 12:00 - cancel system audible alarm at 12:00

Timetable Command Format:

TIME AUDI SYS | OP | BOTH

Example:

17:01 AUDI BOTH

Related Commands:

XAUD

MMI Menu:

Admin

AUTH

User Configurable Optimiser Authorities [V3.1 SCOOT]

This command provides the user with control of the authorities for the Split and Offset optimisers. The authority is the amount by which the optimiser can affect the offset (in the case of the Offset optimiser) or the stage change point (in the case of the split optimiser). In previous versions of SCOOT, these values were fixed in the kernel.

The user is able to configure values for the five types of authority which are defined below:

OFFSET	Offset	Default +/- 4 seconds
SPLIT_TEMP	Split Temporary Change	Default +/- 4 seconds
SPLIT_PERM	Split Permanent Change	Default +/- 1 second
FIL_TEMP	Split Filter Temp. Change	Default +/- 2 seconds
FIL_PERM	Split Filter Perm. Change	Default +/- 1 second

The Authority Table is a new data structure that holds all user configured authority values. The table can hold 10 different lines of data for each of the five authority types. Line 0 is reserved for the default values listed above.

The table has two versions, the on-line and the modified. The modified version is used for data configuration and then brought on-line by means of the UPDA command.

Full details on the use of the AUTH command can be found in the SCOOT User Guide (Reference 1.3.2(e).

All the SCOOT AUTH values for one line together can be displayed by entering the command AUTH LINE <line number>.

Operator Command Format:

AUTH

AUTH {table}

AUTH {table} {line}

AUTH {table} {line} {values}

AUTH LINE <line number>

where:

{table}	Table numbers 1 to 5 or OFFSET, SPLIT_PERM, SPLIT_TEMP, FIL_TEMP, FIL_PERM.
{line}	Line numbers 1 to 9
{values}	values entered for line, including cycle time and authorities

Examples:

AUTH

AUTH 1

AUTH OFFSET

AUTH SPLIT_TEMP 2

AUTH OFFSET 4 64 1 2 4

AUTH LINE 2

Timetable Command Format:

Not available

Related Commands:

CHAN NOAP, CHAN NSAP

MMI Menu:

SCOOT Specials Auth

AVSP

Average SCOOT Plan

This command calculates the average offsets from a junction or pelican controller running under SCOOT control. The SCOOT node SCN may be wild carded. By default, the average is calculated over a period equivalent to 10 SCOOT cycles of the node with the longest cycle time. The results are displayed on the terminal from which the command was issued; it can be redirected to another terminal or printer. The results will be output after all the data has been collected for all the specified nodes. The monitoring of a particular node will cease when either the node is no longer under SCOOT control or when the SCOOT cycle time or number of stages changes. The output comprises one line per node with each line showing the UTC controller SCN, the UTC controller description and the calculated fixed time plan.

Operator Command Format:

AVSP NODE_SCN [CYCLES][TERMINAL]

Examples:

AVSP N03111

AVSP N04211 20

AVSP N* >EXPORT

Timetable Command Format:

TIME AVSP SCN [CYCLES] TERMINAL

Example:

09:30 AVSP N* 5 T01005

Related Commands:

None

MMI Menu:

SCOOT/SCOOT Specials

Example Output:

```
Fr 11:29:32 Plan analysis
P60632 CHSTFD SB/WSTBK: CY032 V 7, P 25, V 27
J60621 CHSTFLD/ROSMARY: Not under SCOOT control
J60611 RSMRY/LDYBROOK : CY064 A 36, BC(A)* 1, ABC* 3, E(A)* 17, AE* 19
J60531 ROSMRY/ST JOHN : Not under SCOOT control
J60521 ROSEMRY/WALKDEN: CY064 A 29, B 59, CD* 6
J60511 ROSMRY/STOCKWEL: CY064 A 39, B* 0, C* 17
J60442 NOTTM/BAUMS    : CY072 A 60, B 5, C 21, D 45
P60441 NOTTM/MURRAY   : CY036 V 5, P 30, V 32
J60431 NOTTM/PORTLAND : CY088 A 39, BCD(A)* 24, ABCD* 26
J60421 ST PTRS/PORTLND: Not under SCOOT control
```

```
P60412 BELVEDR SB/STN : CY032 V 21, P 7, V 9
P60411 BELVEDR NB/STN : CY044 V 17, P 6, V 8
J13441 A60/SAINSBURY'S: Not under SCOOT control
J13431 MANSFLD/NOTTM  : Cannot calculate averages - cycle time changed
J13421 MANS/THACKERAYS: Cannot calculate averages - cycle time changed
J13241 MANSFLD/MAGNUS : CY072 A 8, B 56
J13231 MANSFLD/WINCHTR: CY072 A 18, B 43, C 52, D 69
P13232 MANSFD/BURLNGTN: CY072 V 18, V 43, V 52, P 61, V 63, V 69
Fr 11:29:32 Plan analysis complete
```

CANA

Silence Audible Alarm

This command allows the operator to silence the audible alarm. Alarms are not acknowledged, nor is the alarm prevented from sounding again when new alarm conditions arise.

Operator Command Format:

CANA

Example:

CANA

Timetable Command Format:

Not available

Related Commands:

AUDI, XAUD

MMI Menu:

Admin

CARP

Start Car Park state control

This command starts car park state control by permitting the current car park state to be changed. The states that may be entered are: OPEN, CLOSED, SPACES, ALMOST-FULL, FULL, FAULTY. Note that the ALMOST-FULL state can only be set if both the almost full increasing and decreasing thresholds have previously been set up in data preparation.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

CARP SCN STATE [TIME}

Examples:

CARP C07311 FULL

CARP C07199 ALMOST-FULL

CARP C07311 12:00

Timetable Command Format:

TIME CARP SCN STATE

Examples:

09:30 CARP C01332 FULL

19:45 CARP C13221 CLOSED

Inverse Command:

XCAR

Related Commands:

SIGN, XSIG, STCS

MMI Menu:

Car Parks

CDBC

Select SCNs to Send to Common data Base

This command allows the operator to select which SCNs are sent to the Common Data Base.

Operator Command Format:

CDBC

Example:

CDBC

Timetable Command Format:

Not available

Related Commands:

None

MMI Menu:

CDB

CHAN

Change value of parameter

This command is used to change the value of a parameter in the database. It is a temporary change and the value is lost if the System is re-started or for SCOOT parameters if the SCOOT database is reinitialised. The parameters that you are permitted to change are listed in Appendix B. SCOOT parameters are detailed in the SCOOT User Guide, ref. 1.3.2(e), and UTC parameters in section 10.

If the System is so licenced, the System log may show the previous value of the changed parameter.

An extra ESS licensable facility allows 'OPTION' to be specified as SUPER to execute the CHAN in Priority mode. The current parameter value for the SCN will be stored so that it may later be restored by a XCHA command. SUPER is invalid if the facility is not allowed, or if any other value is specified.

A warning message will be issued if a normal CHAN is executed while a Priority mode is in effect.

Operator Command Format:

CHAN PARAM ScSCN | SCN VALUE [OPTION]

(OPTION = “SUPER” for priority CHAN mode)

Examples:

CHAN JNYT N23121A 24

CHAN TREN RLL 1

CHAN STOC N** 10

CHAN SLAG N23121B 12

CHAN VEHC C01234 250

Timetable Command Format:

TIME CHAN PARAM ScSCN/SCN VALUE [OPTION]

Examples:

08:00 CHAN JNYT N23121A 24

16:30:30 CHAN TREN RLL 1

08:00:10 CHAN STOC N** 10

Related Commands:

VALU, RUBA, LUBA, XCHA, SCAS, XSCA

MMI Menu:

SCOOT, Car Parks

CHCK

Start controller test sequence checking

This command starts the controller test sequence on the specified junction controller(s). The checking continues until the end of the sequence is reached or until terminated by an -XCHC command. The operator command tests a single controller (i.e. the SCN may not be wildcarded) whereas the timetable command tests all controllers. If activated from the timetable then the terminal on which the results are to be printed must be specified.

This command is not available if a previous controller test sequence is still active.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

CHCK SCN

Example:

CHCK J03181

Timetable Command Format:

TIME CHCK TERM

Example:

03:00:20 CHCK T01004

Inverse Command:

XCHC

Related Command:

CHCP

MMI Menu:

Traffic - Specials

Termination Conditions for controller test sequence checking:

Any of the following conditions causes a controller test to terminate:

- intersection isolated due to equipment fault
- intersection isolated due to OTU fault
- stuck on intergreen [intergreen timer >= longest intergreen + 15 seconds or intergreen timer >= 40 seconds when starting fallback checks]
- stuck on green [stage timer >= min green + 15 seconds or stage timer >= 180 seconds when starting fallback checks]
- fallback sequence wrong [wrong stage reply]
- operator cancel command
- transmission error(s)

- invalid OTU
- higher priority plan request
- controller checks timed out
- intersection isolated by operator
- OTU disconnected by operator
- maximum time allowed for the test exceeded

CHCP

Change pelican controller checks mode

This command causes the System to set flags to indicate that night-time or day-time pelican checks are in progress. During the night the System monitors for the pedestrian stages occurring every cycle for a pre-set period, and during the day the System monitors for the pedestrian stages failing to occur for a pre-set period. Flags may be set individually per pelican.

Operator Command Format:

Not available

Timetable Command Format:

TIME CHCP SCN NAME

SCN Pelican SCN (may be wildcarded)

NAME = "NIGHT" or "DAY". The first letter of each may also be used.

Note: The Pelican SCN may be omitted, in which case ‘P00000’ is assumed. This also means that older versions of CASTs, which do not have an SCN reference, will also execute as if ‘P00000’ had been entered.

Examples:

21:30 CHCP NIGHT

21:30 CHCP N

03:00 CHCP P12000 DAY

03:00 CHCP D

MMI Menu:

Not available

CHDC

Initiate SCOOT detector counts checking

This command starts the SCOOT detector counts checking process that accumulates data for an hour. It should be run at the same time for each normal weekday, to check for deviations from the average hourly occupancy values. The accumulated data may be viewed by using the DCOU command.

Either when using this command for the first time, whenever new SCOOT detectors are added to the System, or the command is changed to run at a different time in the timetable, it is suggested the following sequence be followed:

- If not yet in the timetable, include the command: HH:MM CHDC in the timetable for all weekdays
- Before the above timetable event is due, toggle the ADJU parameter from OFF ON and the OVERRIDE. This resets the accumulated values to zero.
- After CHDC has completed for the first time (i.e. over 1 hour after the timetable event) reset ADJU to its normal setting of ON - CHAN ADJU ON

Alternatively:

- Item above can be changed to maintain ADJU at OVERRIDE for one week, which then gives an average for the five working days, and after this sets the parameter to its normal ON setting.

See the DCOU command for interpreting the detector fault report.

Operator Command Format:

Not available

Timetable Command Format:

TIME CHDC

Example:

07:30 CHDC

Related Commands:

DCOU, CHAN/VALU ADJU

MMI Menu:

Not available

CHGO

Changeover to standby computer

This command is for use on those systems that have a standby computer that can be used as a traffic control computer in the event of a failure of one of the other traffic control computers.

For those Systems that have a single standby computer the TCC letter of the traffic computer which has failed is entered as a single parameter. For those Systems which have more than one standby computer the SCN of the standby computer you wish to take over the duties of the failed TCC is entered as the first parameter.

Following a changeover command, the standby computer shuts down and comes back up shortly afterwards as the designated TCC. When the system restarts a message is put into the System Log that the standby computer is acting as a TCC.

Note: The Ethernet connection from the failed TCC to the TC12 PC may need to be moved to the standby computer for the changeover to become effective.

Changeover can also be initiated or cancelled by rebooting the standby computer and answering the relevant questions that are asked at startup.

When a standby computer is replacing a TCC the MMI Status Display will be udated accordingly.

Operator Command Format:

CHGO [STANDBY COMPUTER SCN] {TCC-LETTER}

Examples:

CHGO A

CHGO H03000 A

Timetable Command Format:

Not available

Related Commands:

XCHG

MMI Menu:

Manager

CHSI

Start sign exercising

This command starts the sign exercising facility. Sign exercising ensures that the specified sign cycles through all the possible states. A single SCN may be specified by operator command. No SCN is required for the timetable command as all car park and diversion signs are exercised, but the command must include a terminal number for redirection of the output.

Operator Command Format:

CHSI SCN

Example:

CHSI S17198

Timetable Command Format:

TIME CHSI TERM

Example:

07:30 CHSI T01003

Inverse Command:

XCHS

MMI Menu:

Traffic - Specials

CJNL

Insert Clear Journal command into the journal

This command inserts a clear journal action into the command journal on the specified computer.

Note: This command should be used with caution since if the System is re-started (manually or automatically) all commands preceding the clear journal action are not executed which may leave the System in an unstable state.

Operator Command Format:

CJNL HARDWARE-SCN

Example:

CJNL H01000

Timetable Command Format:

Not available

Related Command:

LJNL

MMI Menu:

Manager

CLOS

Close car park

This command allows the System to close a type 0 or type 2 car park (or car parks if the SCN is wildcarded) and to set all the signs associated with the car park to the closed state.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

CLOS SCN [TIME}

Example:

CLOS C07911

CLOS C07911 12:00

Timetable Command Format:

TIME CLOS SCN

Example:

15:15 CLOS C07912

Inverse Command:

OPEN

MMI Menu:

Car Parks

CPOC

Display Car Park Occupancy

This command displays the car park occupancy data for a chosen day or date. If no day or date is specified then the information defaults to that of the previous day.

TODAY may be entered if the occupancy readings are required for the current day.

Operator Command Format:

CPOC SCN [DAY | DATE]

Examples:

CPOC C07199

CPOC C07199 WEDNESDAY

CPOC C07199 THU

CPOC C12341 21-JUN-93

CPOC C12341 TODAY

CPOC C21332 21/5/93

Timetable Command Format:

TIME CPOC SCN [DAY | DATE] TERM

Examples:

12:00 CPOC C02145 T01005

21:00 CPOC C07199 TODAY T01010

MMI Menu:

Car Parks

CPOP

Display Car Park Occupancy Prediction

This command displays the car park occupancy predictions for a chosen date and time.

If no day or date is specified the default information is for the previous day. The current day may be selected by entering 'TODAY' instead of the day or date. If the specified time does not coincide with a prediction interval, the predictions are selected for the nearest interval to the specified time. The prediction interval is based on the car park occupancy data collection interval. The predictions are available between the selected time and a configured number of hours after this time, and at a spacing of the data collection interval.

Operator Command Format:

CPOP SCN TIME [DAY | DATE | TODAY]

Examples:

CPOP C07199 12:35

CPOP C07199 00:15 WEDNESDAY

CPOP C07199 14:42 21-JAN-1994

CPOP C07199 TODAY

Timetable Command Format:

TIME CPOP SCN TIME [DAY | DATE | TODAY] TERM

Example:

12:00 CPOP C07199 12:35 T01001

Related Commands:

CPOC, WAVC

MMI Menu:

Car Parks

CREP

Print OTU Reply bit count

This command displays the file containing the reply data bit set counts for the specified OTU. The OTU must previously have been monitored using the LOTU command.

This command is similar in format to the the DLOT command. The specified LOTU file will be scanned, and instead of reporting the raw bit values, a count of the setting of reply bits will be made. That is, a change in value of a reply bit from 0 to 1 will be counted, but not 1 to 0.

The count interval may be specified as a number of minutes in the range 5 to 60. If the interval is not specified, 5 minutes is assumed.

Note that if the LOTU is stopped and restarted, the count and interval will be restarted from the new LOTU session.

As for DLOT, a time range may be specified in which case only the reply bit counts logged between the specified times will be printed otherwise all reply bit count data will be printed.

Normally a UTC or SCOOT equipment SCN would be specified (for example, a junction or SCOOT loop). An Outstation may be specified only in the format Xnnnnn. Alternative OTU specifications accepted by DLOT, such as modem line and port, and TC12 byte and bit number are not accepted to avoid confusion with the interval specification.

In the time range the word 'NOW' may be entered to mean the current time.

If the OTU has been monitored continuously there will be up to n, where n is the LOTU file lifetime, files in the directory. The DATE parameter is then used to select which file to output. If a time period is also required this is added after the date parameter.

Operator Command Format:

CREP SCN [INTERVAL] [DATE] [TIME1-[TIME2]]

Examples:

CREP J01321 15 13:00-

(this will output the reply counts for J01321 for today from 13:00)

Timetable Command Format:

As Operator, prefixed with TIME, suffixed with terminal/printer destination.

Related Commands:

DLOT, LOTU, XLOT, MONI, OVRB

MMI Menu:

Faults

CSFY

Call Special Facility

This command allows a specified special facility to be called (turned on). The SCN may be wildcarded.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

CSFY SCN [TIME}

Example:

CSFY F02145

CSFY F02145 12:00

Timetable Command Format:

TIME CSFY SCN

Example:

12:00 CSFY F02145

Related Commands:

SFNO, XSFN

Inverse Command:

XCSF

MMI Menu:

Traffic - Normal

CSUM

Associate count detectors with summing pseudo detector

To enable count data from a number of detectors to be summed together this command allows one or more standard count detector to be associated with a pseudo count detector (count detector type 0). The pseudo detector's count value represents the sum of the count values from all the detectors associated with it. All the standard commands and displays for viewing count data can be used with pseudo detectors. Count data summation does not operate retrospectively.

Note, pseudo detectors can also be associated with SCOOT links, in which case the count value also includes the vehicle count calculated from the link. (See ASLD).

The first count detector (Detector1) specified on the command line can be a standard or pseudo count detector. The second (Detector2) must be a pseudo detector. If Detector2 is not specified then any existing association that Detector1 has is removed. A count detector can only be associated with one pseudo detector

The LLCF command can be used to show existing associations.

Operator Command Format:

CSUM Detector1 [Detector2]

Examples:

CSUM D01221 D01229

CSUM D01222 D01229

CSUM D01223 D01229

CSUM D01223

Timetable Command Format:

Not available

Related Command:

ASLD, LLCF

MMI Menu:

Admin

DATE

Display or modify current date

Allows you to change the date being used by the System and as stored in the battery maintained clock. When the date is entered, the System calculates for itself the appropriate day of the week and then displays the day, time and date on all terminals.

If the command is entered without a new date parameter the current date and time are displayed.

WARNING: Archived files may be lost if the date is advanced.

Operator Command Format:

DATE [DATE]

Examples:

DATE 01-APR-87

DATE 01/04/87

DATE

Timetable Command Format:

Not available

Related Command:

TIME

MMI Menu:

Manager

DBAS

Run database preparation process

This command starts the background database preparation process. The terminal on which this command is entered is inhibited from receiving any further system messages and is not capable of entering any further system commands until the command is finished or cancelled. For details of the database preparation process, consult the Data Preparation Manual (reference 1.3.2(c)). Once the databases have been updated they can be introduced to the Traffic System by using the -UPDA command.

Operator Command Format:

DBAS

Example:

DBAS

Timetable Command Format:

Not available

Related Commands:

UPDA, TUAC, PPRP, TTBP

MMI Menu:

Manager

DCAS

Delete an entry from a CAST

This command allows you to remove particular entries from a CAST. The entry to be deleted is identified by the entry number of the command within the CAST. Once the entry is deleted the sequence of commands in the CAST is automatically renumbered so that no gap exists. If ALL is specified then all commands in the CAST are deleted.

If the System is so licenced, the System log may show the contents of the line of the CAST which was deleted.

Operator Command Format:

DCAS CAST_number entry_number | ALL

or DCAS CAST_mnemonic entry_number | ALL

Examples:

DCAS 1 15

DCAS peak 25

DCAS 1 ALL

Timetable Command Format:

Not available

Inverse Command:

ICAS

Related Commands:

LCAS, ACAS, NCAS, ICAS

MMI Menu:

Admin/SCOOT (under CASTs)/Traffic

DCOF

Delete car park occupancy file

This command deletes the car park occupancy data associated with the specified file number. The number becomes available for reassignment to occupancy data from another day.

Operator Command Format:

DCOF FILE_NUMBER

Example:

DCOF 4

Timetable Command Format:

Not available

Inverse Command:

None

Related Commands:

LCOF, RCOF, UCOF

MMI Menu:

Car Parks, Special Data

DCOU

List output of SCOOT detector checks

This command is used to display the results of the SCOOT detector checks initiated by the -CHDC command.

The report lists all the SCOOT detectors in the System together with their accumulated base values (which is an averaged LPU count over a previous number of CHDC count intervals), the current CHDC count values and an indication that the detector may be faulty. This indication occurs when the SCOOT parameter ADJU has been set to ON and the current value is greater than 20% away from the accumulated value. This indication is purely informative, and should be interpreted by the customer, taking into account any traffic anomalies that may have occurred.

See the SCOOT User Guide, ref. 1.3.2(e), for details of setting the ADJU parameter, and CHDC in this document.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

DCOU

Example:

DCOU

Timetable Command Format:

TIME DCOU TERMINAL

Example:

12:00 DCOU T01001

Related Commands:

CHDC, CHAN/VALU ADJU

MMI Menu:

Reports

DDFV

Display Default Values

This command performs an averaging of SCOOT events for a region using data from the U01, U02 and U03 messages stored in the SCOOT message log. A wildcarded SCN may be specified, in which case the display shows the messages associated concerned with each SCN. An event message of at least U01 must already be contained in the SCOOT_LOG. If U02 and U03 are also held the display is more comprehensive.

Important note:

The command MESS U01 [<REG>][<NODE>] >SCOOT_LOG must have occurred for the times requiring display. This supplies the data required for the averaging.

Operator Command Format:

DDFV [REGION_SCN] [DATE] [TIME1-TIME2]

Examples:

DDFV RHU 16:00-18:00

DDFV RBA 14-JUN-1995 08:00-10:00

Timetable Command Format:

TIME DDFV [REGION_SCN] [DATE] [TIME] >TERMINAL

Example:

12:00 DDFV RBA 10-JUL-1995 >T01001

Related Commands:

LOGM, MESS

MMI Menu:

Reports

DEMA

Force demand on a particular stage

This command allows demand to be forced on a particular junction or pelican with a demand dependent stage. The SCN may be wildcarded if desired.

The stage parameter is optional; if omitted all the demand dependent stages are forced by using the 'DX' bit. If a stage is specified it must have been configured as a demand dependent stage. Only pelicans which have a 'PX' bit may be run by this command.

Junction Configuration	**Command:** DEMA J12345	**Command:** DEMA J12345 A	**Command:** DEMA J12345 *
DX only	Force DX	Rejected	Rejected
Dn only	Rejected	Force DA	Force all Dn (but not DX)
Dn and DX	Force DX	Force DA	Force all Dn (but not DX)

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

DEMA Junction_SCN [DD_STAGE] [TIME}

DEMA Pelican_SCN

Examples:

DEMA J01159 C

DEMA P02131

DEMA P02131 12:00

Timetable Command Format:

TIME DEMA Junction_SCN [DD_STAGE]

TIME DEMA Pelican_SCN

Examples:

08:30 DEMA J01159 C

08:31 DEMA P02131

Inverse Command:

XDEM

Related Command:

LSTS

MMI Menu:

Faults

DGUL

Display SCOOT GULP data

This command is used to print out the SCOOT data that was stored as the result of a -GULP command. The first two parameters specified must be exactly the same as those specified by the GULP command. The listing appears on the terminal at which the command was entered (which must be configured for SCOOT output). An alternative terminal may optionally be specified (a SCOOT output Hard copy device for example). A width for the listing may be specified in either case. This parameter defaults to 80 if the terminal in question is a VDU, and 132 if the terminal is a hard copy device.

If the command is entered on a graphics terminal, the output is displayed in a window.

The symbols used on the printout are:

1 Delay

2 Occupancy (Demand)

4 SCOOT Congestion

8 Cycle time

! Trend flag

* SCOOT cycle time > 120 seconds

Operator Command Format:

DGUL ScSCN VALUE [TERM] [WIDTH]

where:

VALUE = filenumber (1-5)

TERM = terminal SCN

WIDTH = 40-132

Examples:

DGUL N04141I 5

DGUL N04141I 5 T01007 132

Timetable Command Format:

Not available

Related Commands:

GULP, XGUL

MMI Menu:

SCOOT

DIAL

Allow "dial-up" terminal access

This command enables either all dial-up users or a specific user to have access to the Traffic System. If the command is entered with no parameters the currently logged in users are displayed. The valid "dial-up" users of the System are defined during database preparation.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

DIAL [ALL | USER_NAME] [TIME}

Examples:

DIAL	- Display currently logged in users.
DIAL ALL	- Enable all dial up users.
DIAL SIEMENS	- Enable user SIEMENS.
DIAL ALL 12:00	- Cancel enable all dial up users at 12:00

Timetable Command Format:

TIME DIAL ALL | USER_NAME

Example:

08:30 DIAL SIEMENS

Inverse Command:

XDIA

Related Command:

ENDS

MMI Menu:

Admin

DIMO

Transmit dimming override bit

The command causes the System to continuously transmit the dimming override control bit to the specified equipment until cancelled. The SCN may be wildcarded or a junction, pelican, car park sign or diversion sign may be specified.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

DIMO SCN [TIME}

Example:

DIMO J01211

DIMO J01211 12:00

Timetable Command Format:

TIME DIMO SCN

Example:

16:24 DIMO J01211

Inverse Command:

XDIM

MMI Menu:

Traffic - Normal

DIPM

Display plan monitor

This command displays the following live update display for the specified junction on the VDU or PC compatible terminal on which the command is entered:

a) the current plan timings;

b) the actual timings being run by the controller;

c) the control and reply words and the specified database data (either stage timings or plan timings).

d) optionally a plan number may be specified in the command; this causes the plan timings to be displayed for this plan.

The display, once instigated for an SCN, is updated every second until cancelled by the entry of another traffic prompt on the same terminal. The snapshot print facility is available for this command.

While this program is running:

· Press L to display the lower junction stage timings matrix;

· Press U to display the upper junction stage timings matrix;

· Press T to display junction stage timings matrix (defaults to lower);

  The stage timings matrix displays the minimum and maximum timings for each stage, and all intergreen values;

· Press P to display the current plan timings. This displays the cycle times for fixed-time plans 1 to 40, or LOCAL for each plan that is undefined. Also shown are the future timetable events for this controller, displaying the event and the time at which it is scheduled to occur;

· Press D to display the stage delays;

· Press O to display the stage offsets;

· Press R to display the predicted green times (if configured);

· Press H to display the predicted higher green times (if configured);

· Press W to display the predicted loWer green times (if configured);

· Press S to display SCOOT optimiser status (if configured);

· Press F to display the status of any associated SCOOT detectors (if configured).

· Press G to display any associated SCOOT stage lengths (if configured).

· Press ? to display a list of keys and their functions

· Press CTRL-P to dump the display to the dump printer.

· Enter a number between 1 and 40, followed by <RETURN> to display the plan timings for a particular fixed time plan.

- Press the up or down arrows, as necessary, to view plan cycle times for all fixed time plans.

Operator Command Format:

DIPM SCN [VALUE] (optional value = plan number)

Example:

DIPM J01153

Timetable Command Format:

Not available

MMI Menu:

Info/Faults

DISO

Disconnect outstation

This command causes the System to cease transmitting any control words to and ignore any reply words from the specified OTU until cancelled by an XDIS command. The SCN may be wildcarded.

Operator Command Format:

DISO SCN

Example:

DISO X01450

Timetable Command Format:

Not available

Inverse Command:

XDIS

MMI Menu:

Faults

DLOT

Display logged OTU data

This command is used to display the previously logged OTU data which has been recorded as a result of issuing a LOTU command. Data is retrieved from the file for the specified time period on a particular day or the whole file is retrieved if no date or time period is specified. If only a start time is specified data is listed from that time up to the end of the file. The entry "NOW" in the time range displays data for the current time.

An ESS licensable facility has been implemented to provide a similar feature to the MONI Control-F functionality with LOTU:

> If a single time (rather than a time range) is supplied DLOT will display a single page report which includes the events leading up to and at the specified time and ~5 events following the specified time.
>
> To make this new DLOT single page report even easier to use, the pop-up context menu that is displayed when you right-click a line in a LOGO or LSTF window has been extended so if you right-click on a fault, then the menu will include two additional menu options.
>
> > Print Control/Reply For This Time
> >
> > List Control/Reply For This Time
>
> These two commands run DLOT with the specified equipment and for the specified fault time. The first command sends the output to the printer and the second re-directs output to the user's terminal.

If DLOT is used without a date, the most recent date, for which data exists, will be used.

A single DLOT command cannot display data which crosses a midnight boundary. A separate command must be used for each date

Any equipment SCN that has an OTU associated with it, a computer SCN or Telecommand 12 PC SCN may be entered, followed by the outstation address. A Telecommand 12 Outstation SCN may be entered, followed by a (reply) byte and bit number.

If the SCN specified is that of an OTU all changes of control and reply bits will be shown. If, however, the SCN specified is that of an equipment on the OTU, only changes of reply and/or control bits associated with the specified equipment will be shown.

The output from this command goes to the System Log printer, but may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

- Common format for all Systems

(a) DLOT SCN [DATE] [START_TIME[-END_TIME]]

- Telecommand 8 System

(b) DLOT COMPUTER_SCN ADDRESS [DATE] [START_TIME[-END_TIME]]

- Telecommand 8 OTUs on a Telecommand 12 PC

(c) DLOT PC_SCN ADDRESS [DATE] [START_TIME[-END_TIME]]

- Telecommand 12 OTUs

(d) DLOT PC_SCN TC12_MODEM ADDRESS [DATE] [START_TIME[-END_TIME]]

DLOT PC_SCN TC12_BYTE_NUMBER BIT_NUMBER

Examples:

DLOT X01450

DLOT X01450 16:45-18:00

DLOT X01460 21-OCT-01 15:30-17:00

DLOT H01000 145

DLOT H01000 145 16:45-18:00

DLOT E01001 123 -15:00

DLOT E01001 5 16 10:30-15:00

DLOT J12341 12:30-14:00

Timetable Command Format:

Not available

Related Commands:

LOTU, XLOT, MONI, OVRB

MMI Menu:

Faults

DSSG

Print logged stage timings data

This command spools the file containing the logged stage timings data for the specified intersections or pelican. The equipment must previously have been monitored using the SSGM command. A time range may be specified in which case only the stage timings data logged between the specified times is printed, otherwise all stage timings data is printed. If no parameters are entered, then all logged data for all currently available stage monitors are displayed. If a logging session is still active for an equipment, then the equipment logging must be terminated (using the XSSG command) before DSSG is accepted for the command.

The time shown at the left hand side of each line of timing data is the time of the start of the intergreen which runs at the end of stage A.

The sum of the stage and intergreen times on each line of display is shown at the right hand end of the line. (ESS licensable facility)

Two letters are output alongside the stage and timing information, giving the equipment mode and status. The meaning of each of these letters is:

First Letter - Mode

P	Fixed time plan
I	Isolating fault
A	APS
L	Local
D	Diversion
R	Remote request
S	SCOOT
M	Manual wave
G	Green wave
C	Controller checks
B	Bus active
O	MOVA control

Second Letter - Fault

I	Isolated
F	Faulty
X	Transmission fault
?	Incomplete data

Operator Command Format:

DSSG [SCN [START TIME]-[END TIME]]

Command Examples:

DSSG P01320 08:30-17:00

DSSG P01236

Timetable Command Format:

TIME DSSG SCN TERM

Related Commands:

SSGM, XSSG

MMI Menu:

Faults

DUBA

Difference Against User Baseline

This command is used to display SCOOT baseline parameters, which currently differ on the Live System from the recorded baseline value, set by RUBA. Wildcard SCOOT SCNs are permitted as for the LUBA command. Area level commands require no SCOOT SCN.

If no parameter or SCN is entered, then all differences are listed to the terminal. Note that if there is no difference between the live value and the baseline value then the parameter is not listed.

Operator Command Format:

DUBA [PARAM[ScSCN]]

Command Examples:

DUBA STOC N03451*

DUBA

Timetable Command Format:

TIME DUBA [PARAM[ScSCN]] TERM

Example:

10:00 DUBA >T01001

Related Commands:

LUBA, RUBA

MMI Menu:

SCOOT

ECAS

Edit CAST

This command starts the MMI Timetable/CAST editor. The command may only be used on an MMI terminal.

When the CAST editor is in use the use of other CAST editing commands, such as ICAS, DCAS or NCAS, may be restricted.

This is a licenced feature.

Operator Command Format:

ECAS [CAST identifier]

Examples:

ECAS

ECAS 23

ECAS ASTRID_MESSAGES

Timetable Command Format:

Not available

Related Commands:

TTBP, ICAS, DCAS, NCAS, DBAS, TAUC, UPDA

MMI Menu:

Manager

ECHO

Echo Message to Terminal

This command is causes the text content of the command to be output on all terminals or else a single, specified, terminal. Note that the text of the message must be enclosed in double quotes.

This is a licenced feature.

Operator Command Format:

ECHO Message [>TERMINAL>]

Examples:

ECHO "Good morning"

ECHO "Good morning John" >T01097

Timetable Command Format:

12:00:01 "Good afternoon operators"

08:30:00 "Good morning Simon" > T01005

Related Commands:

None

MMI Menu:

Admin

EDAV

Earliest date of System files available

This command supplies the date of the earliest (oldest) System files available for examination. By using an optional parameter, the earliest date of stored event driven messages is output.

Operator Command Format:

EDAV [SCOOT_LOG]

Examples:

EDAV

EDAV [SCOOT_LOG]

Timetable Command Format:

Not available

Related Commands:

LOGO, OPFD, SURV, WEEK

MMI Menu:

Info

EMES

Equipment Message

This command causes the text of a message to be associated with an equipment SCN. The text of the message will be output as part of an appropriate fault status listing. If the associated equipment is a junction or pelican controller the text will be displayed in the Fault Messages area of the DIPM display. Note that the text of the message must be enclosed in double quotes.

More than one message can be associated with an equipment by using the optional fault category parameter. A fault category of zero is equivalent to omitting it. Any positive number will be accepted, but a genuine fault category will be displayed by LSTF when listing by fault category, by wildcarded fault category, or by fault groups.

This is a licenced feature.

Operator Command Format:

EMES SCN [VALUE] message (VALUE = fault category)

Examples:

EMES J03111 “Resurfacing northbound all week”

EMES J01111 121 "Ignore plan compliance fault"

Timetable Command Format:

06:30 J11111 “New PROM fitted 30 Nov”

07:00 J05111 113 “Sometimes sticks on minimum?”

Related Commands:

XEME, LSTF, DIPM, LEME

MMI Menu:

Faults

EMIX

Engine Mix for a Link[V4.2 SCOOT]

This command defines the mix of engine types for a link, which SCOOT Version 4.2 uses for pollution modelling.

The values to be entered for a link are:

Percentage of vehicles fitted with a catalytic converter

Percentage of vehicles not fitted with a catalytic converter

Percentage of light diesel engined vehicles

Percentage of heavy diesel engined vehicles

When no percentage values are entered the current values for the link are listed.

Operator Command Format:

EMIX SCN [Cat% Non-Cat% Light_diesel% Heavy_diesel%]

Examples:

EMIX N01111

EMIX N01111 45 15 30 10

Timetable Command Format:

TIME EMIX ScSCN {VALUE1 VALUE2 VALUE3 VALUE4}

Example:

16:00 EMIX N14141A 24 36 15 25

Related Commands:

CHAN, VALU, LUBA, RUBA

MMI Menu:

SCOOT Specials

ENDS

Terminate dial-up session

This command is only available to a user on a dial-up terminal, or terminals connected through a network. The command logs you off the System and (for dial-up users) hangs up the line.

Operator Command Format:

ENDS

Example:

ENDS

Timetable Command Format:

Not available

Related Commands:

DIAL, XDIA

MMI Menu:

Not applicable

ENOT

Edit Noticeboard

This command allows the user to set up and edit a noticeboard. The default noticeboard is called “noticeboard” and its name need not be specified when editting it. To edit other noticeboards the particular noticeboard name must be specified.

This command is not available from a character terminal.

This is a licenced feature.

Operator Command Format:

ENOT [NOTICEBOARD NAME]

Examples:

ENOT

ENOT JOHNS_NOTICEBOARD

Timetable Command Format:

Not available

Related Commands:

NOTB

MMI Menu:

Admin

FALL

Transmit fall-back mode bit

This command causes the specified SCN to leave its CLF fallback mode (next lower priority to UTC) and enter VA mode (least priority) when under local control. It causes the System to determine the fall-back mode selection control bit number for the specified SCN from the database, and continuously transmit that bit to the equipment until cancelled. The SCN may be wildcarded if desired. The system continues to transmit the force bits as required by the current plan, to ensure that a controller enters fallback mode a plan should be selected with fallback mode enabled.

The FC bit is examined to ensure the fallback mode is entered correctly; a suitable error message is raised to flag when the FC bit is not returned.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

FALL SCN [TIME}

Example:

FALL J11241

FALL J11241 12:00

Timetable Command Format:

TIME FALL SCN

Example:

07:12:30 FALL J11241

Inverse Command:

XFAL

MMI Menu:

Traffic - Normal

FLAS

Set controller to flashing mode

This command sets the specified controller(s) to flashing mode until cancelled by the XFLA command. The SCN may be wildcarded. Flashing mode is only enabled for controllers that have the FF control bit configured.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

FLAS SCN [TIME}

Example:

FLAS J11241

FLAS J11241 12:00

Timetable Command Format:

TIME FLAS SCN

Example:

07:12:30 FLAS J11241

Inverse Command:

XFLA

MMI Menu:

Traffic - Special

FLOW

Display detector flow monitor

The command displays the five-minute counts collected during the past sixty-minute period for the flow sites specified in the command. It is a rolling display with counts over sixty minutes old being deleted at the end of each five minute period. The latest five-minute totals are added to the display. This live-update display is cancelled by the entry of another traffic prompt on the same terminal. This command shows count data unless "OCCUPANCY" (which may be entered as O) is specified after the SCNs.

The display may be dumped out onto the terminal printer by pressing CTRL-P.

A maximum of 4 SCNs may be specified in the command and they may not be individually wildcarded.

Letters used against the values are:

'blank'	Count collected over the full period
C	Count interval has not occurred yet or non-detector reason for invalid count interval
X	Detector fault occurred during the count interval
S	Combination of detector and non-detector fault reason for an invalid count interval

Operator Command Format:

FLOW SCN [SCN] [SCN] [SCN] OCCUPANCY

FLOW SCN [SCN] [SCN] [SCN]

Examples:

FLOW D09231 D09232 O

FLOW D09231 D09232

Timetable Command Format:

Not available

Related Commands:

OPFD, SURV, WEEK

MMI Menu:

Reports

FLTA

Specify which Faults raise a System Alarm

This command allows an operator to specify which faults should raise a system alarm. A Fault category (which may be wild carded) and, optionally, an equipment type should be specified. The equipment type should be specified by entering an appropriate globally wildcarded SCN. If no equipment type is specified, the command will operate on all equipment types.

Operator Command Format:

FLTA [SCN] FAULT_CATEGORY

Example:

FLTA J00000 100

FLTA 700

Timetable Command Format:

TIME FLTA [SCN] FAULT_CATEGORY

Example:

07:00 FLTA J00000 120

Inverse Command:

XFTA

MMI Menu:

Faults

FLTG

Create Fault Group

This ESS licensable command creates or modifies a fault category group which may be used to list and clear faults. A fuller description may be found in Section 8

The fault category group is assigned to a group number. The group number must consist of 4 digits, each in the range 1 to 9.

Operator Command Format:

FLTG GROUPNO [“NAME”] [0] [+|-FLTCAT] …

Examples:

FLTG 1111 +100 +200

FLTG 1112 +100 +200 –121 -122

Timetable Command Format:

Not available

Related Commands:

LFLG, XFLG, XFLT

MMI Menu:

Admin/Fault groups

FLTY

Set fault manually

This command allows a particular category of fault to be set on a specified SCN. It may subsequently be overridden by the System that has priority. Wildcarded SCNs are allowed, but fault category groups (e.g. 100, 220, ...), representing a range of faults, are not permitted. Fault categories are detailed in Appendix C. Terminals and the computer cannot be set as faulty.

Operator Command Format:

FLTY SCN VALUE (VALUE = fault category)

Example:

FLTY J11191 121

Timetable Command Format:

Not available

Related Commands:

XFLT, LSTF

MMI Menu:

Faults

GDDD

Graphical Detector Data Display

This command opens a window to create, modify, delete and display count data histograms. The display shows a bar graph of occupancy, flow or sensor data for the preceding 24 hours. The graph is updated at regular intervals which is initially fixed when the display is created.

Note: This command is only available on an MMI display.

Operator Command Format:

GDDD

Example:

GDDD

Timetable Command Format:

Not available

Related Commands:

FLOW, WEEK

MMI Menu:

Reports

GENP

Generate semi-graphic pictures

This command is used to create, modify, delete and display pictures. If used on PC compatibles running suitable terminal emulation software, the Intecolor picture generator is started; if an Xwindows terminal is used the Graphics Editor is started. Details of picture generation are given in the UTC Map Editor and Display Handbook, reference 1.3.2(a).

Operator Command Format:

GENP

Example:

GENP

Timetable Command Format:

Not available

Related Commands:

PICT, LSTP

MMI Menu:

Not applicable

GUBA

Restore the Recorded User Baseline Data

This is a configurable command and may not be available on your system.

Optional parameters may be attached to the GUBA command of either a SCOOT parameter (JNYT, STOC etc) and/or a SCOOT SCN. In this case the user baseline is only loaded for the selected SCOOT parameter and/or only the selected SCOOT SCN.

Operator Command format:

GUBA [PARAM] [ScSCN]

Example:

GUBA STOC N02112A

Related commands:

LUBA, RUBA, DUBA, CHAN, VALU

Timetable Command Format:

Not available

MMI Menu:

SCOOT / Parameters

GWAV

Start operator green wave

This command starts an operator green wave using the SCN specified. The SCN may not be wildcarded.

If VIP routes are enabled by configuration the 'option' parameter can be an override value of a VIP convoy length. Also if a 'primed' green wave is enabled by configuration the 'option' parameter can be the text “PRIME”, or an abbreviation, to start a primed green wave.

The start and finish of a green wave is normally recorded in the log and output to terminals. If this is not required the description of the green wave, entered in DBAS should start with a ! character.

Operator Command Format:

GWAV SCN [OPTION]

(OPTION = VIP convoy length or “PRIME”)

Example:

GWAV G05119

Timetable Command Format:

Not available

Inverse Command:

XGWA

Related Commands:

LSTG

MMI Menu:

Traffic - Specials

HELP

Online HELP facility

This command with no parameters displays a summary list of all operator commands and System features for which HELP is available. To obtain help on a particular command or feature, type the HELP command with a command or feature name as a parameter.

Operator Command Format:

HELP [NAME] NAME = command or feature name

Examples:

HELP

HELP GULP

Timetable Command Format:

Not available

MMI Menu:

HELP on menu bar

HRYC

Start Manual Hurry Call

This command requests a controller to call the specified stage for the duration given by the value of ‘TIMER’. If the stage is demand dependent the appropriate D bit is automatically set. The facility is implemented as a single equipment manual wave (MWAV). Manual wave control started and finished messages will be output to operator terminals at the start and end of the call. In addition, where the controller status is shown (e.g. DIPM or LSTS) it will appear as manual wave control.

A maximum of 5 equipments may be specified in a single command. the SCN must be that of a junction or pelican controller, not wildcarded. STAGE must be a controller stage (A-H or V) or X. If X is specified then any existing manual wave on the specified controller will be cancelled. If the stage is not specified for a pelican controller the default is V.TIMER is the required duration of force in the range 60 to 300 seconds; if this is not specified the default value is 60 seconds

Operator Command Format:

HRYC SCN STAGE [TIMER] [SCN STAGE [TIMER]] [SCN STAGE [TIMER]] [SCN STAGE [TIMER]] [SCN STAGE [TIMER]]

Example :

HRYC J03111 A 90

HRYC J03112 B 90 J03211 D 150

HRYC J03211 X J03212 C 70

HRYC P05111 90

Timetable Command Format :

not available

Related commands :

XHRY, MWAV

MMI Menu :

Traffic - Specials

ICAS

Insert an entry into a CAST

This allows you to add commands into a particular CAST. A CAST number or identifier (the first word of the CAST title) must be specified, along with the command to the inserted with its parameters. If the entry number quoted in the command already exists the new command is added after that entry. If the entry number quoted is greater than the highest existing entry or this parameter is omitted the command is inserted as the last entry in the CAST.

A CAST index may also be specified. If omitted, the command entry is inserted at the end of the CAST. If an index is supplied, the command entry is inserted at the position immediately following the command with that index. If a CAST index of 0 is specified the command is inserted at the beginning of the CAST.

Operator Command Format:

ICAS CAST_number [INDEX] Command [Parameters]

or ICAS CAST_mnemonic [INDEX] Command [Parameters]

Examples:

ICAS 1 5 CLOS C01356

ICAS peak 21 OPEN C01356

Timetable Command Format:

Not available

Inverse Command:

DCAS

Related Commands:

LCAS, ACAS, NCAS, ECAS

MMI Menu:

Admin/SCOOT/Traffic

IFLT

Inhibit Fault by Category

This facility allows the user to set the UTC System so that it will ignore certain categories of faults on specified equipments.

When a fault is inhibited, that fault will no longer be reported on operator terminals, in the system log or in LSTF. If the fault is raised when it is inhibited the fault is implicitly cleared.

Inhibiting a fault, inhibits the raising and consequential effects of a fault, not just the reporting of the fault. For example, normally a manual control reply bit will isolate a junction. If the manual control fault is inhibited, the junction will be left on normal control when the MC bit is present. If the junction really is under manual control other faults such as plan compliance faults are likely to be raised. In other words, as with IHRW these commands should be used with care.

Not all fault categories can be inhibited. A list of those fault categories which may be inhibited is shown at Appendix C – Fault and Advice Details.

This is a licenced feature.

Operator Command Format:

IFLT SCN [Fault_Category]

Examples:

IFLT J01123 121

IFLT J00000 132

Timetable Command Format:

09:31 IFLT J00000 132

Inverse Command:

XIFT

Related Command:

LIFT

MMI Menu:

Faults

IHPC

Inhibit Plan Compliance fault isolation

This command suspends the isolation of an intersection or pelican controller when a plan compliance fault is reported. The command may be actioned on a single injunction or Pelican SCN or on a sub-area or wildcarded sub-area.

For intersections, plan compliance fault 121 or wrong stage returned fault 122 may be selected. For pelicans, only plan compliance fault 121 is available. The wildcard 120 may be used with junction or sub-area SCNs but not pelican SCNs.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

IHPC SCN Fault_Number [TIME]

Examples:

IHPC J01123 121

IHPC P01321 120

IHPC P01321 120 12:00

Timetable Command Format:

TIME IHPC SCN Fault_Number

Example:

15:55 IHPC J01123 121

Inverse Command:

XIHP

MMI Menu:

Faults

IHRW

Inhibit reply word analysis

This command allows you to inhibit the reply word analysis from any equipment or remote request connected to the System. The SCN of the equipment may not be wildcarded. The inhibition may be cancelled using the XIHR command.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details. The optional time parameter can only be used in conjunction with the, configurable, command cancel facility.

If the STANDARD parameter is used, controllers which are connected to an OTU which becomes faulty will become “isolated by OTU fault” and will appear in the listing produced by an LSTS 6 command. This is the default behaviour if the STANDARD|ENHANCED parameter is omitted.

If the ENHANCED parameter is used, controllers which are connected to an OTU which becomes faulty will not become “isolated by OTU fault” and will not appear in the listing produced by an LSTS 6 command.

If a controller has reply word analysis inhibited this fact will be reported in the Fault Messages part of a DIPM display.

Operator Command Format:

IHRW SCN|REMOTE REQUEST [STANDARD|ENHANCED] [TIME]

Examples:

IHRW J01123

IHRW P01321

IHRW J03111 STANDARD

IHRW P03112 ENHANCED

IHRW P01321 12:00

Timetable Command Format:

TIME IHRW SCN [STANDARD|ENHANCED]

Inverse Command:

XIHR

Related Commands:

LIHR

MMI Menu:

Faults

IHTP

Inhibit Tram Priority

This command causes the System to inhibit tram priority on any junction equipment until cancelled by an IHT command. The junction SCN may be wildcarded. The required Tram Inhibit (TI) bit must be specified.

Operator Command Format:

IHTP SCN <TI bit>

Examples:

IHTP J01123 3

IHPC J11000 1

Timetable Command Format:

TIME IHTP SCN <TI bit>

Example:

15:55 IHTP J01123 4

Inverse Command:

XIHT

MMI Menu:

Traffic

INFO

Display information

This command allows you to display information about some of the equipments and facilities of the System, including:

1. diversion signs
2. user ID details (not the password)
3. terminal details
4. quantities of the various equipments connected to a UTC system
5. current versions of the UTC software and of SCOOT
6. list members of a linked list
7. TC8 and TC12 OTUs
8. which controllers use particular data word formats

If a computer SCN is specified a linked list number must also be included before the parameter LINK.

The command then outputs all equipment SCNs on that linked list. If an equipment SCN (optionally wildcarded) is specified with the parameter LINK the command outputs the linked list number for the SCN/SCNS.

For Telecommand 8 outstations connected via a Telecommand 12 PC, the PC SCN and the address of the outstation are given. For Telecommand 12 outstations, the PC SCN, modem number and OTU address is given.

The outstation SCN or user identifier may be wildcarded.

The User ID or terminal SCN gives the characteristics of the user/terminal, and a list of commands available to that user or terminal.

For diversion signs, all the text aspects defined for each type 2 diversion sign are listed. Signs which do not have any text aspects defined are not listed.

The data word formats used by each junction or pelican controller may be listed. Alternatively those controllers which are using a specified format may be listed

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Formats:

1. INFO DIVERSION_SCN
2. INFO USER ID

   INFO USER_ID [EXT]

   INFO ALL
3. INFO TERMINAL_SCN [EXT]
4. INFO EQUIP_COUNT
5. INFO VERSION

6. INFO SCN [LINK]
   INFO SCN LINKED_LIST [LINK]
7. INFO OUTSTATION_SCN
8. INFO SCN FORMAT [FORMAT NO]

Examples:

1. INFO V77111
2. INFO WENDY
   INFO WENDY EXT
   INFO ALL
3. INFO T01003
   INFO T01099 EXT
4. INFO EQUIP_COUNT
5. INFO VERSION
6. INFO J11121 LINK
   INFO H00000 1 LINK
   INFO J00000 LINK
7. INFO X23110
   INFO X00000
8 INFO J00000 FORMAT
   INFO P00000 FORMAT 9

Timetable Command Format:

Not available

MMI Menu:

Info

INHW

Inhibit weekly flow analysis

This command prevents output being produced for the specified flow site(s) when an -OPFD command is entered. The flag is cancelled by the XINH command. The SCN may not be wildcarded.

Operator Command Format:

INHW SCN

Example:

INHW D91156

Timetable Command Format:

TIME INHW SCN

Example:

09:00 INHW D91156

Inverse Command:

XINH

Related Command:

OPFD

MMI Menu:

Reports

INTD

Introduce diversion

This command is used to introduce a selected diversion. Wildcards are not allowed.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

INTD SCN [TIME}

Example:

INTD U09231

INTD U09231 12:00

Timetable Command Format:

TIME INTD SCN

Example:

16:30 INTD U09231

Inverse Command:

REMD

MMI Menu:

Traffic - Special

ISOL

Isolate controller

This command isolates the specified controller. The controller remains isolated until the command is cancelled by XISO. The SCN may be wildcarded if desired.

An isolated controller is normally listed as a fault although the system configuration can be set by STC not to show isolated controllers in the output from LSTF. The system still associates a fault category with an isolated controller.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

ISOL SCN [TIME}

Example:

ISOL J09231

ISOL J09231 12:00

Timetable Command Format:

TIME ISOL SCN

Example:

16:30 ISOL J09231

Inverse Command:

XISO

Related Commands:

DISO, XDIS

MMI Menu:

Faults

KILL

Shutdown System

On an Alpha based UTC system this command causes the Traffic System and the computer on which it is running to shut down. Any street equipment connected to the computer is isolated and any open disk files are closed.

On a PC SCOOT system this command causes the Traffic System to shut down Any street equipment connected to the computer is isolated and any open disk files are closed. . If necessary, the computer may be shut down separately.

As the Traffic System is halted the Hardware SCN must also be entered to prevent accidental use.

Operator Command Format:

KILL Hardware_SCN

Example:

KILL H01000

Timetable Command Format:

Not available

MMI Menu:

Manager

LACC

List CAST Associations

This command lists the associations of CASTs with changes in SCOOT region cycle time made by the ACCT command.

Changes in which the cycle time rises or falls to the given value are distinct.

A '+' in the listing indicates that the CAST is called when the cycle time rises to the given value and a '-' when the cycle time falls to the given value.

Operator Command Format:

LACC [SCOOT_Region_SCN]

Example:

LACC RCA

Timetable Command Format:

Not available

Related commands:

ACCT, XACC

MMI Menu:

Traffic / Specials

LACS

List Active CASTs actioned by Sensors

This command displays all the ACSV commands and their groups that are available on the specified TCC. If the TCC and group number is specified then the sensors SCNs and threshold values for that group are shown.

Operator Command Format:

LACS SCN [GROUP]

Example:

LACS H01000 3

LACS H01000

Timetable Command Format:

Not available

Related Commands:

ACSV, XACS

MMI Menu:

Traffic / Normal

LARR

List CASTs Associated with Remote Requests

This command displays the CASTs that have been set-up with the ARRQ command for the selected remote requests. The listing only includes data for those remote requests that have been configured with ARRQ. Data for timetable and operator ARRQs are listed separately. Asterisks against a line in the listing indicate that the selected ARRQ is active (i.e. the remote request is ON, or the remote request is OFF but the time-out period has not yet expired).

Operator Command Format:

LARR Remote_Request_SCN

Examples:

LARR Z36351

LARR Z00000

Timetable Command Format:

TIME LARR Remote_Request_SCN TERM

Example:

12:00 LARR Z36351 T01001

Related Commands:

ARRQ, XARR

MMI Menu:

Info

LASC

List Action CAST by Saturation/Congestion Event Triggers

This command lists the event triggers created by ASCC.

A '+' in the listing indicates that the CAST is called when the saturation/congestion rises to the given value and a '-' when the saturation/congestion falls to the given value.

Operator Command Format:

LASC LinkSCN

Example:

LASC N**

Timetable Command Format:

As Operator with TIME prefix and suffixed with terminal/printer destination.

Related commands:

ASCC, XASC

MMI Menu:

Info

LCAS

List the contents of a CAST

This command allows you to view all the commands contained within a particular CAST either at a terminal or on a printer.

The number preceding the description of each command is the CAST index and is needed by the ICAS and DCAS commands to specify a position within a CAST. If the number is 0, then all available CASTs and their names are listed. If the CAST is empty then an asterisk (*) is shown in place of the name. The command LCAS 0 lists the numbers and names of all non-empty CASTs.

An optional wildcarded SCN may be specified, in which case the display will be limited to only those entries concerning that SCN. LCAS supports the use of parent/child wildcarded SCOOT SCNs.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LCAS CAST_number | CAST_mnemonic [SCN] [E[XPAND]]

Examples:

LCAS 1

LCAS peak

LCAS 0	- list numbers and names of non-empty CASTs
LCAS 0 EXP	- list numbers and names of non-empty CASTs with their contents (and named empty CASTs).
LCAS 0 J01111 EXP	- list entries for J01111 in all CASTs.

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

Related Commands:

ICAS, ACAS, NCAS, DCAS, ECAS

MMI Menu:

Info/Admin/Traffic/SCOOT

LCOF

List car park occupancy files

This command allows you to view a list of the configured car park occupancy files or the details of just one file if its number is specified. The output lists the file number, the date of the data and a description.

Operator Command Format:

LCOF [nn]

Examples:

LCOF

LCOF 4

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

Related Commands:

DCOF, RCOF, UCOF

MMI Menu:

Car Parks, Special Data

LEME

List equipment messages

This command allows the user to list equipment messages created by EMES.

The LEME command with no parameters will list every EMES message.

The SCN may be wildcarded (unlike for EMES). It may be omitted, which means all SCNs.

The optional fault category is used to distinguish between messages; if zero or omitted, all fault categories will be displayed. Any positive number will be accepted, but also a genuine fault category or wildcarded fault category.

The optional message string can be used to search for that substring in the existing EMES messages.

Operator Command Format:

LEME [SCN] [FAULT_CATEGORY] [STRING]

Examples:

LEME	(list all EMES messages)
LEME J01000	(list messages for junctions in subarea 01)
LEME 777	(list messages with number 777)
LEME "compliance"	(list messages containing string "compliance")

Timetable Command Format:

As Operator with TIME prefix and suffixed with terminal/printer destination.

Related Commands:

EMES, XEME

MMI Menu:

Faults

LFLG

List fault category groups

This, optional, command allows you to view all the fault category groups which have been set up.

Operator Command Format:

LFLG

Examples:

LFLG

Timetable Command Format:

Not available

Related Commands:

FLTG, XFLG, XFLT

MMI Menu:

Admin/Fault groups

LFTA

List Faults which raise System Alarms

This command displaysthose faults which will raise the system alarm indicator whyen the fault occurs. With no parameter the complete list of faults will be displayed. A fault category, fault group or equipment type may be specified

Operator Command Format:

LFTA [SCN] [FAULT_CATEGORY]

Examples:

LFTA J00000

LFTA

Timetable Command Format:

TIME LFTA [SCN] [FAULT_CATEGORY]

Examples:

06:30 LFTA J00000

07:00 LFTA

Inverse Command:

None

Related Commands:

FLTA, XFTA

MMI Menu:

Faults

LIFT

List Inhibited Faults

This facility allows the user to see which faults have been inhibited by use of the IFLT command.

Not all fault categories can be inhibited. A list of those fault categories which may be inhibited is shown at Appendix C – Fault and Advice Details.

This is a licenced feature.

Operator Command Format:

LIFT [SCN] [Fault_Category]

Examples:

LIFT

LIFT J01123

LIFT J00000 132

Timetable Command Format:

09:33 LIFT >T01002

Related Commands:

IFLT, XIFT

MMI Menu:

Reports

LIHR

List equipments with reply word analysis inhibited

This command lists those equipments which have reply word analysis inhibited. The SCN may be wildcarded. It should be noted that a command of the form IHRW X12340 inhibits reply word analysis for all equipments on that OTU. However, a command of the form LIHR Xnnnn0 is not allowed since it is the equipments on the OTU which are affected not the OTU itself.

Operator Command Format:

LIHR SCN

Examples:

LIHR A00000

LIHR P00000

LIHR J12000

Timetable Command Format:

TIME LIHR SCN TERM

Example:

08:00 LIHR A00000 T01001

Related Commands:

IHRW, XIHR

MMI Menu:

Reports

LIHS

List Equipment History

This command is a variation on the LOGO command. The command is intended to be able to answer the question - what was a particular site doing at a particular date and time? Normally when using LOGO to locate this kind of information it is necessary to scan several hours of output working out which messages are relevant for the time you are interested in. Specifically it may be difficult to work out which mode of control was in effect and what faults were present at the time in question.

LIHS does this for you automatically. You specify a site, a date and time. It only includes messages from the log which are either fault raised or cleared messages or are mode change messages (such as 'Timetable plan started', 'SCOOT control finished', &c). It then filters out any message which it can work out has been superceded by a later message. For instance, given the message sequence.

SCOOT control finished on R*

SCOOT control started on N01234

Timetable plan 4 started on A01000

Timetable plan 5 started on A01200

Then LIHS J01234 would reduce this down to :

SCOOT control started on N01234

Timetable plan 5 started on A01200

Enter a date range to specify the system logs that should be scanned to retrieve the status. The time entered should be the time on the end day of the date range for which you want the historic status displayed.

Operator Command Format:

LIHS [SCN] [FAULT.CAT] [DATE] [TIME]

Examples:

LIHS J01231 10-JAN-2001:14-JAN-2001 17:37

Timetable Command Format:

TIME LIHS [SCN] [FAULT.CAT] [DATE] [TIME] TERMINAL

Example:

09:33 LIHS J10231 >T01002

Related Commands:

LOGO

MMI Menu:

Not available

LIPT

List plan timings

This command lists the stored plan timings for the specified SCN. Local plans are omitted by default. To see both local and non-local plans the parameter LOCAL should be added to the command. The SCN may be wildcarded or omitted if a plan number is given. If the plan number specified is zero, the current timings for the SCN are listed including any vary or offset changes. If no plan number is given, the SCN may not be wildcarded or omitted. This form of the command causes all fixed-time plans for that SCN to be listed.

The option LOCAL is used to display local plans as well as the other plans. If local is not entered then local plans are not displayed.

The option DESCRIPTION appends the plan name to the plan timings.

One of the optional parameters must be specified. A LIPT command with no parameters is illegal.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LIPT [SCN [FIXEDTIME | SCOOT | GREENWAVE] [PLAN] [LOCAL | ERRORS | HISTORY | TIMINGS | DESCRIPTION]]

Note: If the currently implemented plan is requested for equipment operating under SCOOT control then the plan line output only reflects accurately the stage sequence and any fixed offsets and stage durations. The stage offsets for stages under SCOOT control are shown as being offset by 127 seconds, the current timings implemented are not shown. If this information is required use the PLAN parameter of the VALU command.

Examples:

LIPT A01000 FIXEDTIME 4

LIPT 22 ERRORS

LIPT J11191 SCOOT 1 HISTORY

LIPT J00000 F 1 LOCAL

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info

LIVE

Stop simulation of an equipment

NOTE: This is an unsupported feature for use by STC maintenance engineers.

This command stops simulation of the specified equipment. The valid equipment types are outstations, junctions, pelicans, special facilities, count detectors, queue detectors, SCOOT detectors, car parks, car park signs and diversion signs. If a computer SCN is entered then an outstation address must be specified. If the equipment is an outstation or outstation address then simulation is stopped for all equipment on the outstation. The SCN may be wildcarded except for computer SCNs.

Operator Command Format:

LIVE COMPUTER_SCN ADDRESS

LIVE SCN

Examples:

LIVE J11241

LIVE X00000

LIVE H01000 12

Timetable Command Format:

Not available

Inverse Command:

XLIV

Related Command:

None.

MMI Menu:

Not applicable

LJNL

List command journal

This command allows you to list the commands in the operator journal for the specified computer. Optional start and end times may be specified with this command. If no computer is specified then the contents of the journals for all the computers in the System are listed.

If an optionally wildcarded UTC or SCOOT SCN is specified then the list is restricted to those equipments matched by that SCN. If a computer SCN is entered then only the journal on the specified computer will be listed. LJNL supports the use of parent/child wildcarded SCOOT SCNs.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LJNL [SCN] [TIME1-[TIME2]]

Examples:

LJNL H01000

LJNL 16:45

LJNL 16:45-18:20

Timetable Command Format:

Not available

Related Commands:

CJNL

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info/Reports

LLCF

List link conversion factors

This command lists the conversion factor between LPUs and vehicle counts for a particular link. The conversion factor is given as a number and fraction (in number of vehicles/LPU).

When used with the Link SCN and Terminal parameters, as in example 1, this command lists the conversion factors for specified links on the specified terminal. When used with only the Link SCN parameters, as in example 2, this command lists the conversion factors for the specified links on the terminal on which the command was entered.

When used with the Counting Detector SCN and Terminal parameters, as in example 3, this command lists the conversion factors for all links associated with the specified counting detectors on the specified terminal. When used with only the Counting Detector SCN parameter, as in example 4, this command lists the conversion factors for all links associated with the specified counting detectors on the terminal on which the command was entered. When used with no parameters, as in example 5, this command lists the conversion factors for all links on the terminal's default district on the terminal on which the command was entered.

Both the Link SCN and the Counting Detector SCN parameters may be wildcarded.

Calibration of SCOOT detectors for vehicle counting is described under the SSSU command.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LLCF [count_detector_SCN | link_SCN]

Examples:

LLCF N12345A >T01001

LLCF N12345A

LLCF D12345 >T01001

LLCF D00000

LLCF

Timetable Command Format:

Not available

Related Commands:

ASLD, SSSU

MMI Menu:

Info

LLNK

Transmit local link inhibit bit

This command causes the System to determine the local link inhibit control bit number for the specified controller(s) from the database and continuously transmit that bit to the controller until cancelled. The SCN may be wildcarded.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

LLNK SCN [TIME}

Example:

LLNK J11191

LLNK J11191 12:00

Timetable Command Format:

TIME LLNK SCN

Example:

08:00 LLNK J11191

Inverse Command:

XLLN

MMI Menu:

Traffic - Normal

LMON

Link Occupancy Monitor

This command sets up a live update display on the terminal for specified link. The SCN specified in the command may not be wildcarded. Various SCOOT parameters are displayed for the line, and a horizontally scrolling area displays the detector data stream for each link. The M08, M10, M11 and M14 event messages used in Link Validation may be displayed. See reference 1.3.2(e) for more detail.

In order to start, or stop, the 4 event messages the "1", "2", "3" and "4" keys are used. Pressing a key once starts the message, pressing it again stops it.

The display may be dumped to the printer configured for the terminal by pressing CTRL-P.

Operator Command Format:

LMON ScSCN

Example:

LMON N11191A

Timetable Command Format:

Not available

Related Commands:

LVAL, NFTD, RFTD

MMI Menu:

SCOOT

LNMC

List network message commands

This command displays command messages sent to remote computers on the network by NMCS commands.

If a non-zero command number is specified, the message configured for that NMCS command is output. If the command number is specified as zero all NMCS command messages are output.

Operator Command Format:

LNMC COMMAND_NO

Example:

LNMC 125

Timetable Command Format:

Not available

Related Command:

NMCS

MMI Menu:

Info

LOGM

List Event Message Log

This command lists the contents of the stored event message log. An optionally wildcarded SCN may be specified, in which case the display shows the messages concerned with each SCN. An event message may also be specified in order to limit the display further.

The command accepts a single date or date range of the forms:

DATE

DATE1:DATE2

DATE1:

DATE2 must be later than DATE1 and neither may be later than today.

DATE1 and DATE2 both default to today if either is omitted

If no date or date interval is given, the current date is assumed. If no time interval is specified, the whole of the day is assumed.

The word 'NOW' may be entered to mean the current time.

Operator Command Format:

LOGM [SCN] [MESSAGE-NUMBER] [DATE] [TIME1-TIME2]

Example:

LOGM RHUN** M14 16:00-18:00

Timetable Command Format:

Not available

Related Commands:

EDAV, LSTM

MMI Menu:

Reports

LOGO

List message log

This command lists the contents of the stored message log. The log may be listed for a single day, a number of days between two dates and from a particular date until today. In addition a time range may be specified so that only those entries which fall inside the time range are listed for each day. The log may also be examined for a specified SCN (wildcarded if required) and/or fault category.

If no date is specified the current date is assumed. If no time interval is specified all data for the date(s) specified is output.

The word 'NOW' may be entered, to mean the current time. If no date is given after the colon that divides the two dates, today's date is assumed. YESTERDAY (abbreviated to Y) may be used to list yesterday’s data. To list data for any particular day of the week the name of the day may be entered, e.g. MON for Monday, TUE for Tuesday, etc.

If the SCN is wildcarded, stored messages that are a sub-set of the wildcarded SCN are reported. If a specific non-wildcarded SCN is entered, then wildcarded commands in the stored message log that refer to the input SCN, WILL NOT BE REPORTED.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

If the command is entered in the MMI command entry window, the output appears in the Output Messages Window. If the command is entered in from the MMI pull down menu, the output appears in a System Log Output window.

Operator Command Format:

LOGO [SCN | UIC] [OPTION] [VALUE] [SEARCH-STRING]

[DATE | DATE: | DATE1:DATE2] [TIME1-TIME2]

UIC = User ID

OPTION = RELATED list sites related to this SCN or HIDDEN to view hidden messages

VALUE = fault category (see Appendix C but excluding the OPE categories)

SEARCH-STRING = displays message containing this text, enclosed in “”

Examples:

LOGO X04140

LOGO 1-APR-87

LOGO 1-APR-87:

LOGO 1-APR-87:1-JAN-88

LOGO 08:00-08:40

LOGO J11191 08:00-NOW

LOGO A23000 100 1-APR-87 08:00-08:45

LOGO A23000 100 1-APR-87: 08:00-08:45

LOGO A23000 100 1-APR-87:1-JAN-88 08:00-08:45

LOGO Y

LOGO MON:WED

Timetable Command Format:

TIME LOGO [SCN] [VALUE] TERMINAL

Example:

08:00:00 LOGO J11191 T01001

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

Related Commands:

EDAV

MMI Menu:

Faults, Reports

LOTU

Log OTU control and reply bits

This command allows you to record the OTU control and reply information for up to four specified outstations simultaneously. All the data which is logged on any one day will be stored in the same file

Each file is capable of storing from 1 to 24 hours of logging data, the exact maximum value being set up during the Data Preparation process (DBAS), in the UTC SYSTEM WIDE VARIANTS form. An optional end time may be specified with the command. If is wished to log an OTU continuously the word CONT should be added to the end of the LOTU command

The contents of the log file may be examined using the DLOT command. The log file is kept for the number of days specified in the database after which it is deleted. Accumulation of log data may be stopped using the XLOT command.

Operator Command Format:

- Common format for all systems

    LOTU SCN [END_TIME] [CONT]

- Telecommand 8 System

    LOTU COMPUTER_SCN ADDRESS [END_TIME] [CONT]

- Telecommand 8 OTUs on a Telecommand 12 PC

    LOTU PC_SCN ADDRESS [END_TIME] [CONT]

- Telecommand 12 OTUs

    LOTU PC_SCN TC12_MODEM ADDRESS [END_TIME] [CONT]

Examples:

LOTU X01450

LOTU X01450 18:00

LOTU X01460 CONT

LOTU H01000 145

LOTU H01000 145 18:00

LOTU E01001 5 16 15:00

Timetable Command Format:

- Common format for all systems

    TIME LOTU SCN [END_TIME]

- Telecommand 8 System

    TIME LOTU COMPUTER_SCN ADDRESS [END_TIME]

- Telecommand 8 OTUs on a Telecommand 12 PC

    TIME LOTU PC_SCN ADDRESS [END_TIME]

- Telecommand 12 OTUs

TIME LOTU PC_SCN TC12_MODEM ADDRESS [END_TIME]

Examples:

TIME LOTU X01450

TIME LOTU X01450 18:00

TIME LOTU H01000 145

TIME LOTU H01000 145 18:00

TIME LOTU E01001 5 16 15:00

Inverse Command:

XLOT

Related Commands:

DLOT, MONI, OVRB

MMI Menu:

Faults

LSCH

List all the Priority CHANs in effect

This command is used to display all the CHAN commands which have been set in Priority mode, by means of the CHAN command with 'SUPER' suffix. There are no parameters with this command.

This is a licensed facility (ESS).

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSCH

Example:

LSCH

Timetable Command Format:

TIME LSCH TERMINAL

Related Commands:

CHAN, XCHA

Inverse Commands:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

SCOOT

LSTA

List Unacknowledged Alarms

This command lists all the currently unacknowledged System alarms. The alarms can be acknowledged by an ACKD command.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSTA

Example:

LSTA

Timetable Command Format:

Not available

Related Commands:

ACKD, LSTF

Inverse Commands:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Faults

LSTD

List flow detector status

This command lists the last hour's flow in vehicles, the occupancy percentage and the congestion state for a particular flow detector. The SCN may be wildcarded.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSTD SCN

Examples:

LSTD D01213

LSTD D00000

Timetable Command Format:

TIME LSTD SCN TERM

Example:

07:30:00 LSTD D01244 T01002

Related Commands:

None

MMI Menu:

Info

LSTF

List Faults

This command allows you to display all the current faults. The SCN and the fault category may be wildcarded. See Appendix C for a full description of fault categories. (NOTE that the fault category OPE is excluded from the categories that may be used).

Note: If the system was so configured by STC, isolated controllers using the ISOL command may not be included in the list.

Optionally, faults on all outstations on a particular TC12 modem may be listed by adding the syntax 'MODEM nn', where nn is a TC12 modem number, after a TC12 PC SCN. This SCN, and the modem number may not be wildcarded.

For an LSTF command in the timetable the terminal number of the terminal where the data is to be output must be specified.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSTF [SCN] [“MODEM” NUMBER] [VALUE] [MODEM]

(NUMBER = TC12 modem number, VALUE = fault category)

Examples:

LSTF 121

LSTF J00000

LSTF J23000 140

Timetable Command Format:

TIME LSTF SCN [“MODEM” NUMBER] [VALUE] TERM

Example:

08:00 LSTF A23000 100 T01004

Related Commands:

LSTA, ACKD

Inverse Command:

None but Listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info/Reports

LSTG

List green wave routes

This command is used to list the rolling green wave route for the given green-wave SCN. Each equipment in the route is listed together with its offset from the start of the route, the stage used and its duration.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

The SCN may not be wildcarded.

Operator Command Format:

LSTG SCN

Example:

LSTG G01239

Timetable Command Format:

Not available

Related Commands:

GWAV, XGWA

Inverse Command:

None but Listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info

LSTM

List active event driven messages

This command lists the commands that generate the current active event driven messages for the specified terminal. If no terminal is specified the command defaults to the terminal on which the command was entered. The terminal SCN may not be wildcarded.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSTM [TERM]

Example:

LSTM

Timetable Command Format:

TIME TERMINAL

Related Commands:

MESS, XMES

MMI Menu:

SCOOT

LSTP

List picture titles

This command lists the names and titles of pictures available for the PICT (picture display) command.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

NOTE: This command is not available for the Xwindows Graphics Editor.

Operator Command Format:

LSTP

Example:

LSTP

Timetable Command Format:

Not available

Related Commands:

GENP, PICT

MMI Menu:

Not applicable

LSTS

List status

This command displays the status of one controller (which may be wildcarded), or all controllers if the SCN is omitted. The status information includes timetable plan, operator plan, operator varied plan, emergency route plan, SCOOT control, isolated VA plan etc. The format allows the optional input of the type of status, in which case only controllers in that state are listed.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LSTS [SCN] [VALUE]

VALUE = status category, which are as follows:

1	Timetable control	equipment is under control of a timetable PLAN command.
2	Operator control	equipment is being controlled by an operator entered PLAN command.
3	Operator varied control	equipment is being controlled by an operator entered VARY command.
4	Green wave control	equipment is being controlled by an operator GWAV command, or by a remotely requested green wave
5	SCOOT control	equipment is being controlled by SCOOT
6	Isolated	equipment is isolated due to fault, operator command or faulty OTU.
7	Local	equipment is not currently under control by the Traffic System.
8	Controller checks	equipment controller checks are currently operating.
9	APS	equipment is under APS control.
10	Remote Plan	equipment is operating under a fixed plan requested by a "remote request".
11	Diversion Plan	equipment is operating under diversion control.
12	Isolation inhibit	equipment does not isolate when a plan compliance fault occurs.

Examples:

LSTS J03181

LSTS A23000 4

Timetable Command Format:

TIME LSTS SCN [VALUE] TERM

Example:

08:00 LSTS A23000 4 T01003

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info

LTEC

List transmission error counts

This command allows you to list the intermittent transmission error count for the current hour for specified OTUs or TC12 PCs. The outstation or TC12 PC SCN may be wildcarded if desired.

Optionally, transmission fault counts on all outstations on a particular TC12 modem may be listed by adding the syntax 'MODEM nn', where nn is a TC12 modem number, after a TC12 PC SCN. This SCN, and the modem number may not be wildcarded.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LTEC SCN [“MODEM” NUMBER] (NUMBER = TC12 modem number)

Example:

LTEC X01110

LTEC E01002

LTEC E01001 MODEM 2

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Reports

LTRA

List Current Tram Priority

This command causes the System to list the current tram priority for one or more junctions

Operator Command Format:

LTRA SCN

Examples:

LTRA J01123

LTRA J00000

Timetable Command Format:

Not available

Related Commands:

TRAP, XTRA

MMI Menu:

Traffic

LUBA

List user baseline

This command allows you to list the baseline values recorded for each SCOOT database parameter. The SCN of the parameter type must be specified and may be wildcarded. If no parameter or SCN is included in the command a full tabular listing of default values for all SCOOT SCNs is produced.

Area level commands do not need the entry of a SCOOT SCN.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

LUBA [parameter_type [ScSCN]]

Examples:

LUBA BIAS N01259A

LUBA CYFX N*

LUBA

Timetable Command Format:

Not available

Related Commands:

RUBA, VALU, CHAN

MMI Menu:

Reports/SCOOT

LVAL

Link Validation Display

This command is used on a roving terminal to enable a link to be validated. It displays an interactive screen of SCOOT data for the specified link on the terminal on which the command is entered.

The facility is not operational if the link is faulty.

The CTRL-V key combination or F9 key is used to switch between the modes of this facility; the modes are Monitor, Set and Valdation.. The display must be in Monitor mode before it can be cancelled with a command prompt. If data is being entered into a field then <RETURN> must be pressed before the CTRL V key has any effect.

The display appears in two parts. The top of the screen shows various SCOOT parameters; those appearing on the second line may be changed. The bottom section consists of data records that become available once per cycle, showing the SCOOT Queue Lengths and Clear Times. You may enter Street Queue Lengths and Clear Times, a Valid field (Y or N) to say whether the record should be used in the estimation of STOC values, and a comment.

The following keys perform actions while the LVAL command is active:

CTRL-V or F9	(in Monitor mode)	Select Validate mode
CTRL-V or F9	(in Validate mode)	Select Monitor mode
CTRL-R or CTRL-W		Refresh screen
CTRL-P		Print screen to default printer
S	(in Set mode)	Set-up STOC initial value
R	(in Set mode)	Replaces value at cursor with starting value
Cursor Left	(in Validate mode)	Move to field on left
Cursor Right	(in Validate mode)	Move to field on right
Cursor Up	(in Validate mode)	Move to field above
Cursor Down	(in Validate mode)	Move to field below
Space Bar	(in Validate mode)	Toggle Valid field
Space Bar	(in Validate mode)	Edit field (apart from Valid Field)
Return	(in Validate mode)	Accept input
Delete	(in Validate mode)	Delete character to left

Valid inputs for fields are positive numeric only, except SLAG and ELAG that may contain negative input (use '-' key), and the COMMENT field, which may contain any printable character.

The output from this command is stored in the file:

UTC_OUTPUT_:[VALIDATION_DISPLAYS]xxxxxx.DAT where xxxxxx is the link being validated, (e.g. for link N04441A the file produced would be called N04441A.DAT).

The file is in ASCII format and may be examined or printed using the PVAL command.

Operator Command Format:

LVAL ScSCN

Example:

LVAL N04441A

Timetable Command Format:

Not available

Inverse Command:

None

Related Commands:

LMON, NFTD, PVAL, RFTD.

MMI Menu:

SCOOT

MESS

Commence output of event message

Licensed facility - see section 1.6.

This command allows selected event driven messages to be output for the specified SCOOT SCN, whenever SCOOT generates them, until cancelled by an -XMES command. The list of event driven messages available is given in reference 1.3.2(e). The terminal on which the messages are to be output must be specified in the timetable command.

An optional parameter may be used to redirect the output to a file for transfer to the ASTRID computer at regular intervals. The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Similarly, the output may be directed to an archive file. The file is saved on disk in DBASE 4 format and may be subsequently transferred to a PC by means of the TXDF command. In order to constrain the amount of storage space used by these files, each file is only retained on disk for 24 hours. When a new message file is created, it automatically overwrites any existing file of the same type, e.g. a new M02 file overwrites an existing M02 file.

The output may also be directed to the SCOOT log file from which they may be recovered using the LOGM command.

If your system is configured with environmental monitoring equipment connected to an OTU, the data from the sensors can be displayed using this command.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

MESS NAME ScSCN [>ASTRID] [TIME}

NAME = event message name (see reference 1.3.2(e)).

Examples:

MESS M14 N04141A

MESS C05 RLL > ASTRID

MESS M14 N04161A >ARCHIVE

MESS M14 N04161A >SCOOT_LOG

MESS M14 N04161A 12:00

For environmental monitoring equipment messages:

MESS A01 W01234

Timetable Command Format:

TIME MESS NAME ScSCN [TERM | ASTRID]

Examples:

15:15 MESS M14 N04141I T01002

15:20:30 MESS C05 RLL ASTRID

Inverse Command:

XMES

Related Commands:

LOGM, LSTM, TXDF

MMI Menu:

SCOOT

MONI

Display outstation monitor

This command sets up a live-update display on a VDU terminal showing control bits being sent and the reply bits being received from an OTU address. The display is called by specifying the SCN of any single item of equipment using that address, or by specifying the outstation address on the controlling computer or Telecommand 12 PC. If the SCN on the display appears flashing the OTU has been disconnected. If it appears in inverse video it is invalid. The display includes both the current time and date.

The display may be dumped to the console of the TCC controlling the OTU address by pressing CTRL-P. In addition, the CTRL-F facility for catching plan compliance faults is available. If CTRL-F is pressed while this display is active then any subsequent plan compliance faults cause the snapshot print facility to be invoked after a short delay, in order to record the fault on paper. The time is underlined in order to remind the user that CTRL-F has been pressed. This facility is cancelled by pressing CTRL-F again, or by exiting the display.

While the display is running the terminal is prevented from outputting any System messages, and all traffic commands are inhibited. The display is cancelled by the entry of another traffic prompt on the same terminal, or by timing out.

On the right hand column of the display is an indication of the transmission fault status, which is determined from the highest priority individual fault flag. Telecommand 8- and Telecommand 12-specific codes are marked respectively with TC8 or TC12. Common codes are unmarked.

Status	Fault	Type
0	No error	
M	Message transfer error	
A	Address / Parity error	
L	Line error (no reply)	TC8
R	No reply	TC12
T	No reply from TC12 PC	TC12
S	Reply too short	TC12
X	Overrun error	TC12
F	Framing error	TC12
P	Parity error	TC12
C	CRC error	TC12
1	Invalid Configuration	TC12
2	No control message received	TC12
3	IMD failed	TC12
4	Output processing overrun	TC12

The following keys can alter the display information while the MONI command is active for a Telecommand 12 outstation:

Function Keys - Removing bits on other equipment

F4 (PC) or PF4 (VT Series) - Hide bits not on the already selected equipment (toggle)

Other Keys - Selection of equipment

B	Select "bit mode" or "equipment mode" (toggle)
<	Select next equipment / byte
>	Select previous equipment / byte

Operator Command Format:

MONI SCN	(a)	
MONI Computer_SCN address	(b)	(TC8 System)
MONI TC12_PC_SCN address	(c)	(TC8 equipment on a TC12 System)
MONI TC12_PC_SCN TC12_modem address	(d)	(TC12 equipment)
MONI SCN byte_number bit_number	(e)	(TC12 equipment)
MONI Computer_SCN IP_Address	(f)	(UTMC equipment)
MONI IP_Address	(g)	(UTMC equipment)

Examples:

MONI J01131	(a)
MONI H01000 123	(b)
MONI E01001 20	(c)
MONI E01001 1 12	(d)
MONI X09110 2 3	(e)
MONI 10.77.4.1	(f)
MONI H01000 10.77.4.1	(g)

Timetable Command Format:

Not available

MMI Menu:

Faults

MOVA

Set MOVA Priority Control

This command sets the specified controller(s) in MOVA control mode until cancelled by an XMVA command. The SCN may be wildcarded. MOVA control will only be enabled for controllers which have the MO control bit configured.

The command is also allowed in timetables or CASTs.

Note that MOVA is defined as a junction mode of control which is higher priority than operator plan, SCOOT and timetable plan but lower than greenwave.

Operator Command Format:

MOVA SCN

Examples:

MOVA J01923

Timetable Command Format:

TIME MOVA SCN

Examples:

06:30 MOVA J01900

Related Command:

XMVA

MMI Menu:

Traffic, Specials

MOVE

Move count detector

This command moves a Type 8 (moveable) count detector to the specified position on an OTU. The count value will be reset to 0.

The first word (16 bits per word) on an OTU is 1 and the least significant (i.e. rightmost) bit is 0.

An optional scale factor may be specified; the default value is a scale factor of 0. A scale factor of 0 means that the count will be incremented by 1 when the bit which is being monitored changes from 0 to 1. The bit changing from 1 to 0 will be ignored.

Operator Command Format:

MOVE DETECTOR OTU WORD BIT [SCALE]

Examples:

MOVE D88111 X13150 1 11

MOVE D88112 X01230 2 0 2

Timetable Command Format:

TIME MOVE DETECTOR OTU WORD BIT [SCALE]

Examples:

06:30 MOVE D88113 X13160 1 12

18:30 MOVE D88114 X01250 3 0 4

Related Command:

XMOV,

MMI Menu:

Traffic, Specials

MWAV

Manual Wave Display

This command starts the manual wave display. A green wave plan number must be specified. Each equipment in the green wave plan is displayed as follows:

<*><SCN> <description> <current stage> <green stage> <timer><G>

where:

<*>	Normally this is blank but if the equipment is faulty an asterisk is shown. If the equipment is isolated the asterisk flashes.
<SCN>	The junction or pelican SCN.
<current stage>	The current stage on the junction or GX/PV for pelicans.
<green stage>	The stage to be held (from the green wave plan).
<timer>	The maximum time for manual control. While under manual control the timer counts down each second.
<G>	Normally blank unless the equipment is under green wave control in which case a 'G' is shown.

Equipment on the display may be selected using the cursor keys - the "current" junction or pelican is highlighted in reverse video. Manual control is imposed on the current equipment by pressing the PF1 key. The stage specified in the green wave plan is then held for a default time, but may be cancelled at any time by selecting the equipment with the cursor keys and pressing PF3. Manual control may be extended by pressing PF1 which resets the timer to its maximum value.

Manual control is cancelled on all equipment when the MWAV display is terminated.

Operator Command Format:

MWAV <green wave plan number>

Example:

MWAV 47

Timetable Command Format:

Not available

MMI Menu:

Traffic - Specials

NCAS

Name a CAST

This command allows you to assign or re-assign a mnemonic to a CAST. If STRING is omitted the name is deleted. A CAST name may consist of up to 40 alphanumeric upper-case characters and may include spaces. It should be noted that only that part of the name up to the first space is regarded as unique and is the name by which the CAST is known to the System.

Operator Command Format:

NCAS cast_number [STRING]

(where STRING is up to 40 alphanumeric characters, starting with a letter and may include spaces)

Example:

NCAS 1 AM PEAK CAST

Timetable Command Format:

Not available

Related Commands:

ACAS, LCAS, ICAS, DCAS, ECAS

MMI Menu:

Admin/SCOOT/Traffic

NFTD

Node Fine Tuning Display

This command is used on a roving terminal to enable you to fine-tune a node. It provides a live-update display of certain SCOOT data values for the specified node, on the terminal on which the command is entered. The values displayed are obtained from the SCOOT database and the event messages. See reference 1.3.2(e).

The display is in two parts. The top of the screen shows various SCOOT parameters. The bottom section consists of link data for the specified node, which is updated in real time:

1 The link letter is displayed (in reverse video if any detectors for the link are faulty). A '+' follows if the link is currently green; a '-' follows if the link is green with exit blocked.

2 The green time for the last completed green stage.

3 Length of queue at the stop line (in vehicles).

4 The back of the queue (in vehicles).

5 The queue at start of green (in vehicles).

6 The queue clear time.

7 The percentage saturation.

8 The percentage congestion.

9 The number of vehicles forming a standing queue (in LPUs).

10 The offset of link in relation to its upstream node.

11 The STOC value from the database for the link.

There is no limit on the number of displays that may be active at any time on different terminals. More than one display may simultaneously observe a single node.

The following keys perform actions while the NFTD command is active.

Keys	
Ctrl-R or Ctrl-W	Refresh Screen
Ctrl-P	Print screen to default printer
F7	Calls link screen for link at cursor
F8	Calls region screen for this node
CURSOR UP	Move to link above
CURSOR DOWN	Move to link below
'-'	Exit

To exit the command, enter one of the usual traffic prompts of '-' or '#', or press CTRL-Z.

Operator Command Format:

NFTD ScSCN

Example:

NFTD N04441

Timetable Command Format:

Not available

Related Commands:

LMON, LVAL, RFTD

MMI Menu:

SCOOT

NMCS

Send command numbers to non-UTC computers

This command sends command numbers to remote non-UTC computers on the DECNET network. The interpretation of the command number is specific to the remote computer. Contact the administrator of the remote computer for details of which commands may be available.

A message is stored in the UTC database for each available command number. These messages are sent to the remote computers along with the command numbers. The messages may be listed with the LNMC command.

Before commands may be sent to the remote node, the remote node must establish a link with the UTC System.

A preferred NMCS remote node was set up when your System was delivered. If you are sending a command to the preferred NMCS node, the node name may be omitted from the NMCS command.

Two different formats of the command are available. The version you must use depends on the software running on the remote node. If you use the wrong command format, the following message is displayed:

“Command format is incompatible with the current link protocol.”

Operator Command Format:

Version 1 NMCS COMMAND_NO [NODE_NAME]

Version 2 NMCS COMMAND [PARAMETER] [NODE_NAME]

Examples:

Version 1 -NMCS 46 BELF01

Version 2 -NMCS PLAN 4 BUTE0

Timetable Command Format:

TIME NMCS COMMAND_NO [NODE_NAME]

Related Command:

LNMC Version 1 only.

MMI Menu:

Traffic - Specials

NODT

Transfer a SCOOT node from one region to another

This command allows the operator to move a Node between regions on the SCOOT System when this is considered desirable. If the cycle time of the target region is too high then the command is rejected, otherwise the cycle time and stage times of the node are adjusted accordingly. Neither SCN may be wildcarded.

THE NODT command is journalled so that after a System restart a node which has been transferred into a destination region before the System was shut down will be found in the destination region after the System is restarted.

Operator Command Format:

NODT NODE_SCN REGION_SCN

Example:

NODT N01259 RAS

Timetable Command Format:

TIME NODT NODE_SCN REGION_SCN

Example:

09:00 NODT N02345 RZZ

MMI Menu:

SCOOT

NOTB

Display Noticeboard

This command allows the user to display a noticeboard. If used without a parameter, the default noticeboard is shown. To show other noticeboards the particular noticeboard name must be specified.

If automatic startup is set from the Options menu the NOTB commands is actioned automatically the show the default noticeboard whenever the user logs in.

This is a licenced feature.

Operator Command Format:

NOTB [NOTICEBOARD NAME]

Examples:

NOTB

NOTB JOHNS_NOTICEBOARD

Timetable Command Format:

Not available

Related Commands:

ENOT

MMI Menu:

Faults

OFST

Change Stage Offsets

The OFST command brings up a Plan Preparation screen and prompts for an offset value to be entered. After the updates have been made, the old and new plans are output to the terminal.

An optional removal time for this command may be specified, to the nearest minute.

This command may only be entered when a fixed time plan is active. If the plan changes while the display is active, the plan is not implemented when the operator terminates the display.

Operator Command Format:

OFST SCN [TIME]

Example:

OFST J01213 10:19

Timetable Command Format:

Not available

Related Commands:

PPRP, VARY, XPLA

MMI Menu:

Traffic / Normal

OJNL

Optimise the journal

This command causes the journal to be optimised. Superseded commands are deleted from the journal. When optimisation is complete then optimisation statistics are output on the System Log printer. This command is not normally used as optimisation of the journal is done shortly after midnight each day.

Operator Command Format:

OJNL [Hardware_SCN]

Example:

OJNL

Timetable Command Format:

Not available

Related Commands:

CJNL, LJNL

MMI Menu:

Manager

OPEN

Open car park

This command allows the System to open a car park or car parks, and to set all the signs associated with the car park to the required state. The SCN specified may be wildcarded if desired.

This command only applies to car parks with no close bit (CC). (See reference 1.3.2(c).)

Operator Command Format:

OPEN SCN

Example:

OPEN C79129

Timetable Command Format:

TIME OPEN SCN

Example:

15:15 OPEN C79129

Inverse Command:

CLOS

MMI Menu:

Car Parks

OPFD

Output weekly flow analysis

This command displays the hourly counts and analysis for a week for the SCN specified in the command. The SCN can be wildcarded, in which case all equipment referred to by that SCN is included in the output. The week to which the output refers is the week starting on the Monday on or before the date specified in the operator command. In the event of there being no data files for this week the command is rejected. When used in the timetable the last complete week's data is output.

Letters used against the values are:

'blank'	Count collected over the full period.
c	Data unavailable for some or all of the period.
s	Counts unavailable for some or all of the period due to fault condition(s).

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

OPFD SCN DATE

Example:

OPFD D09115 18-JAN-91

Timetable Command Format:

TIME OPFD SCN TERMINAL

Example:

08:30 OPFD D09115 T01005

Related Commands:

FLOW, SURV, WEEK, XINH, INHW, EDAV, LSTD

MMI Menu:

Reports

OUTT

List contents of timetable

This command lists the contents of a specified daily timetable. If an (optionally wildcarded) UTC or SCOOT SCN is given the System lists only those events that involve this SCN.

OUTT supports the use of parent/child wildcarded SCOOT SCNs.

If no timetable number is given the current timetable is listed. A date may be specified instead of a timetable number in which case the timetable that would normally run on the specified date will be chosen.

In place of a single timetable number, a range may be specified. This takes the form x-y (eg. 1-5), which means all timetables in that range, or WEEK, which means all timetables in the day of week schedule, or YEAR, which means all timetables in the date of year schedule. Beware of abbreviations, such as 'WE' or 'YE' which may be mistaken for date shortcuts for 'Wednesday' or 'Yesterday'. Use at least 3-character abbreviations to avoid ambiguity.

If a time interval is given then only those events in this range are listed.

The contents of CASTs in the timetable can be listed by using the EXPAND parameter.

If the name WEEK is specified instead of an SCN or timetable number, the timetable numbers in use in the current day-of-week schedule are listed. If the name YEAR is given the timetable numbers in use on special days of the year are listed, together with the dates.

If a junction or pelican SCN is specified together with the word SUMMARY a summary of the timetabled commands which affect that site for the whole week will be output. A date may be entered in which case the summary will apply to the week beginning on the specified date. A summary listing only displays those commands suitable for displaying in the summary. PLAN commands are output as a number (the plan); CHAN TPLN as Sn where n is the translation plan. Other commands are displayed using the command mnemonic.

Details of those commands that have a currently unexpired cancel timer are stored in timetable 0. They may therefore be viewed using OUTT 0.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

OUTT [SCN/ScSCN] [VALUE | DATE] [SEARCH-STRING] [TIME1-TIME2] [EXPAND]

OUTT [NAME]

OUTT SCN [DATE] SUMMARY

VALUE = timetable number (1-20) or a range (eg., “2-9”) or “WEEK” or “YEAR”

DATE = equivalent to the timetable number which will run on this date, or start of week for a Summary

SEARCH-STRING = Events containing the specified text will be displayed, the text needs to be enclosed in “”.

NAME = "WEEK" or "YEAR"

Examples:

OUTT 7

OUTT J03181 7 06:00-NOW

OUTT YEAR

OUTT Y

OUTT J12341 SUMMARY

OUTT N40121 1-7 10:00-13:00

OUTT N01231/* EXP

OUTT N40111<>

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info/Reports

OVRB

Override control/reply bits

This command allows you selectively to override the control and/or reply bits for a single outstation address. Initially the command produces a monitor display, similar to that used by the -MONI command, the (non wildcarded) SCN of the OTU or any equipment on the OTU address being used to call up the display. The display contains both the time and date.

You may then use various keys to select those bits to override, and to set up their values (See below for a list of keys and their functions). The operator-overridden bits are displayed as bold (bright) 0s and 1s on both the OVRB display and on any MONI or DIPM showing the same address.

The snapshot print facility is available for this command. In addition, the CTRL-F facility for catching plan compliance faults is available. If CTRL-F is pressed while this display is active then any subsequent plan compliance faults cause the snapshot print facility to be invoked after a short delay in order to record the fault on paper. The time is underlined in order to remind you that CTRL-F has been pressed. This facility is cancelled by pressing CTRL-F again, or by leaving the command.

While the display is running, the terminal is prevented from outputting any System Messages and all traffic commands are inhibited. The display and override conditions are cancelled by the entry of a new traffic prompt on the same terminal, or by timing out. Normal operation with the OTU is then resumed.

The control/reply bit pattern is only output when one or more of the bits change.

Terminals must be specifically configured during database preparation if they wish to use this command.

On the right hand column of the display is an indication of the transmission fault status, which is determined from the highest priority individual fault flag. Telecommand 8- and Telecommand 12-specific codes are marked respectively with TC8 or TC12. Common codes are unmarked.

When an OVRB is cancelled an entry is made in the log stating the time at which the OVRB was cancelled.

Status	Fault	Type
0	No error	
M	Message transfer error	
A	Address / Parity error	
L	Line error (no reply)	TC8
R	No reply	TC12
T	No reply from TC12 PC	TC12
Framing error		TC12

Parity error	TC12
CRC error	TC12
Invalid Configuration	TC12
No control message received	TC12
IMD failed	TC12
Output processing overrun	TC12

The error bit may be overwritten by pressing one of these keys with the cursor positioned on the error column (with the exception of TC12 errors 'T',' 1', '2' , ‘3’ and '4').

Keys used with OVRB are:

PF1 (F1)	Start overwrite
PF2 (F2)	Single shot overwrite
PF3 (F3)	Stop overwrite
PF4 (F4)	Hide bits not on already selected equipment (toggle).
0	Select bit, set to zero, and move right one bit.
1	Select bit, set to one, and move right one bit.
SPACE	Deselect bit and move right one bit.
DELETE	Move left one bit and deselect.
RIGHT	Move right one bit.
LEFT	Move left one bit.
UP	Select bit and set it to zero, or toggle 0/1 if it is already selected.
DOWN	Deselect bit.

Other Keys - Selection of equipment (TC12 street equipment only)

B	Select "bit mode" or "equipment mode" (toggle)
<	Select next equipment / byte
>	Select previous equipment / byte

Operator Command Format:

OVRB SCN	(a)	
OVRB Computer_SCN address	(b)	(TC8 System)
OVRB TC12_PC_SCN address	(c)	(TC8 equipment on a TC12 System)
OVRB TC12_PC_SCN TC12_modem address	(d)	(TC12 equipment)
OVRB SCN byte_number bit_number	(e)	(TC12 equipment)

Examples:

OVRB J01131 (a)

OVRB H01000 123	(b)
OVRB E01001 20	(c)
OVRB E01001 1 12	(d)
OVRB X09110 2 3	(e)

Timetable Command Format:

Not available

Related Command:

MONI, LOTU

MMI Menu:

Faults

PICT

Display picture

This command can be used to display only Intecolor type pictures created using GENP. Pictures may be shown on any VDU terminal, however on monochrome terminals only the top half of the picture is displayed. The SCN specified is that of the main item in the picture. If question marks (?) are displayed for the status of an equipment, the SCN is unknown; if an exclamation mark (!) is displayed instead then the link to the TCC where the equipment is connected is unavailable.

The command may also be used to display pictures on a System with a graphical user interface.

Operator Command Format:

PICT SCN

Examples:

PICT J01233

PICT J01234

Timetable Command Format:

Not available

Related Commands:

GENP, LSTP

MMI Menu:

Layout - Map window

PLAN

Select plan

This command imposes the specified plan on the sub-area, group or individual SCN in the command. Any monitor displays of the SCN are also updated with the new timings.

The SCN may be a junction, pelican or sub-area SCN. Only sub-area SCNs may be wildcarded, except those marked as not being available for wildcarding. A time range, during which the plan is to be applied, may be specified. If the start time is omitted the plan starts now, and if the end time is omitted the plan continues indefinitely.

It is important to remember that a plan implemented by operator request overrides both timetable fixed time plans and SCOOT and remains in force until cancelled. A command with a new time range or no time range affecting a given SCN supersedes any existing time range.

The priority level specifies the priority of the plan request with regard to other types of plan requests that are on the same equipment. Either OPERATOR or TEMPORARY may be specified.

OPERATOR level is the default, and plans requested at this level may only be superseded by a small number of plan modes, such as ripple green-waves.

TEMPORARY level plans have a similar level to timetable plans and all other modes of control (including SCOOT control) take precedence over a temporary level plan request. Temporary plan requests are not journalled, and are cancelled by a timetable request.

When the plan is removed automatically at the specified time an appropriate message is output.

If VALUE below is set to 0 the equipment(s) operates under local control.

Operator Command Format:

PLAN SCN VALUE [TIME1-TIME2][PRIORITY]

where: VALUE = plan number

Examples:

PLAN P01133 4 17:30-

PLAN A23000 3 -20:45

PLAN J12345 2 TEMPORARY

Timetable Command Format:

TIME PLAN SCN VALUE

where: VALUE = plan number

Example:

21:38:10 PLAN A23000 20

Inverse Command:

XPLA

Related Commands:

LIPT, PPRP, DIPM, VARY, OFST

MMI Menu:

Traffic - Normal

PPRP

Prepare plan data

This command is used for preparing plan data for intersection and pelican controllers that may form part of a SCOOT node. The plans specify which control bits are to be sent to the on-street equipment and the sequence and time in which they are sent. The control bits are used to force particular stages to run and in a given order.

Note that if a SCOOT node SCN is specified without a plan type string, the plan type defaults to SCOOT. If the SCN parameter is omitted, plans for all equipment are displayed.

See the Plan Preparation Handbook (ref. 1.3.2(j)) for full details of the use of this command.

Operator Command Format:

PPRP [SCN] [FIXEDTIME | SCOOT | GREENWAVE | TEST] [PLAN]

The SCN is either a UTC equipment SCN (junction, pelican or sub-area) or a SCOOT node SCN, possibly wildcarded. If the SCN parameter is omitted plans for all equipment are displayed. The plan number is in the range 1 - 147 which selects the type of the plan, as follows:

1 - 40	:	Fixed time plans
41 - 46	:	SCOOT stage translation plans
47	:	Test plan
48 - 147	:	Green wave plans.

The plan type description ("FIXEDTIME", ...), can be replaced by the first letter, i.e. "F", "S", "T" or "G". If one of the plan types is defined in the command line (i.e. "F", etc.) then the plan number used is offset from the first plan of that type with the appropriate range being checked accordingly.

Examples:

PPRP	start plan prep with the default set-up of editing all fixed time plans for all equipment (pelicans and intersections)
PPRP J12111	edit all fixed time plans for the SCN
PPRP J12111 F 1	edit fixed time plan 1 for the given SCN
PPRP S 1	edit SCOOT plan 1 for the given SCN
PPRP G	edit all green wave plans.

Timetable Command Format:

Not available

Related Commands:

PLAN, XPLA, LIPT, OFST, VARY

MMI Menu:

Manager

PRIN

Enable log printer

This command turns log printing on, i.e. messages for the System Log are output to the System Log printer.

Operator Command Format:

PRIN

Example:

PRIN

Timetable Command Format:

TIME PRIN

Example:

09:00:00 PRIN

Inverse Command:

XPRI

MMI Menu:

Admin

PVAL

Print LVAL log

This command allows the operator to display the log created by the link validation display (LVAL). A link SCN must be specified which may be wildcarded. If the SCN is wildcarded, all logs matching the wildcard are displayed.

Operator Command Format:

PVAL SCOOT_LINK_SCN

Examples:

PVAL N01421A

PVAL N01421*

Timetable Command Format:

Not available

Related Command:

LVAL

MMI Menu:

SCOOT

RCOF

Record car park occupancy file

This command records the car park occupancy data for a specified date. The data is used for occupancy predictions in place of weighted average data for days on which special events produce significantly different occupancy profiles. More realistic occupancy predictions can then be produced.

Operator Command Format:

RCOF nn date description

Example:

RCOF 15 14-APR-1995 Good Friday

Timetable Command Format:

Not available

Inverse Command:

DCOF

Related Commands:

DCOF, LCOF, UCOF

MMI Menu:

Car Parks, Special Data

REIN

Reinitialise SCOOT databases

This command is used to re-initialise the SCOOT databases, which may be necessary, if SCOOT has been running in the background for some time with its decisions not being implemented. All nodes must be switched off SCOOT control with an -XSCO command before this command is accepted. The SCOOT part of the System goes off-line for a short period and no SCOOT commands are accepted until SCOOT is back on-line.

An optional computer SCN may be given as a parameter, which re-initialises the SCOOT database on the specified TCC.

Operator Command Format:

REIN

REIN SCN

Examples:

REIN

REIN H01000

Timetable Command Format:

Not available

MMI Menu:

Manager

REMD

Remove diversion

This command is used to remove a selected diversion. Wildcarded SCNs may not be used with this command.

Operator Command Format:

REMD SCN

Example:

REMD U03429

Timetable Command Format:

TIME REMD SCN

Example:

16:24 REMD U03429

Inverse Command:

INTD

MMI Menu:

Traffic - Specials

RFTD

Region Fine Tuning Display

This command is used on a roving terminal to enable you to fine tune a region. It provides a live-update display of certain SCOOT data values for the specified region, on the terminal on which the command is entered. The values displayed are obtained from the SCOOT database and the event messages. See reference 1.3.2(e) for more details.

The top of the screen shows various SCOOT parameters. The bottom section consists of node data for every node in the region, updated once per optimiser cycle. The node SCN, and optional status and the new and old values of MPCY are shown. The node status is as follows:

blank	normal
D	double cycling
FS	forced single cycling
FD	forced double cycling.

The MPCY values are followed by '+' if the value has increased from the previous value and '-' if the value has decreased.

There is no configured limit on the number of these displays that may be active at any time on different terminals. More than one display may observe a single region at any one time.

To exit the command, enter one of the usual traffic prompts of '-' or '#', or press CTRL-Z.

A maximum of 4 Regions may be displayed in one display. To switch to the NFTD display for any of the nodes shown in the display use the cursor arrow keys to move the cursor to select a particular node and the display switches to the NFTD display when the F7 key is pressed.

Use CTRL-P to print the display to the default printer.

Operator Command Format:

RFTD ScSCN

Example:

RFTD RNC

Timetable Command Format:

Not available

Related Commands:

LMON, LVAL, NFTD

MMI Menu:

SCOOT

RRUL

Select Raid rules file

The RRUL command allows the user to select the rules file that the Raid methed of incident detection should use.

This is a licenceable feature.

Operator Command Format:

RRUL {RULE_FILE}

Example:

RRUL MONDAY

Timetable Command Format:

TIME RRUL RULE_FILE

Example:

06:00 RRUL SATURDAY

Inverse Command:

None

MMI Menu:

Traffic - Specials

RSTA

Shut down and restart UTC computer

This command causes the UTC computer to shut down and restart shortly afterwards.

Due to the destructive nature of this command, the computer SCN must be typed to prevent accidental use.

Note: This command is reserved for use by STC engineers.

Operator Command Format:

RSTA SCN

Example:

RSTA H01000

Timetable Command Format:

Not available

MMI Menu:

Manager

RUBA

Record user baseline

This command allows you to record the baseline values for each parameter type in the database. The SCN of the parameter type must be specified and may not be wildcarded. The parameters that may be set up in the baseline database are listed in Appendix B. Parameters altered by RUBA are stored permanently, surviving System shutdowns and restarts, although the value may subsequently be changed by timetable or operator CHAN commands. Wildcarded SCOOT SCNs are allowed.

Operator Command Format:

RUBA parameter_type ScSCN value(s)

Example:

RUBA BIAS N01259A 10

Timetable Command Format:

Not available

Related Commands:

LUBA, CHAN, VALU

MMI Menu:

SCOOT

SAPS

Start Automatic Plan Selection

This command is used to enable automatic fixed-time plan change decisions. These decisions are based on queue, volume and occupancy information. APS remains implemented until cancelled by an -XAPS command. While in live mode the TAPS command to enter APS test mode is inhibited.

The SCN may be an un-wildcarded sub-area SCN or an intersection, pelican or diversion SCN that may be wildcarded. By specifying a diversion SCN the diversion may be started when queue, volume and occupancy conditions are reached.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

SAPS sub_area_SCN [TIME}

Example:

SAPS A02000

SAPS A02000 12:00

Timetable Command Format:

TIME SAPS sub_area_SCN

Example:

16:24 SAPS A02000

Inverse Command:

XAPS

Related Commands:

TAPS, XTAP

MMI Menu:

Traffic - Specials

SCAS

Action the CHANs in a selected CAST in Priority mode

This command causes a selected CAST to be actioned - ie., all the commands in the CAST will be executed. However, all the CHAN commands in the selected CAST will executed with the 'SUPER' suffix to put them in CHAN Priority mode. The CAST may be referred to by its name or by number.

This action may be cancelled by the XSCA command on the same CAST.

This command is not available in the timetable.

Operator Command Format:

SCAS CAST.IDENTIFIER

Examples:

SCAS 16

SCAS ROADWORKS

Timetable Command Format:

Not available

Inverse Command:

XSCA

Related Command:

XCHA,

MMI Menu:

CASTS

SCOO

Implement SCOOT control

This command switches SCOOT control on for a node or region. SCOOT is implemented unless a higher priority mode is present for the equipment or the request is cancelled by an XSCO command. Operator and timetable SCOO and XSCO commands have equal priority.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

SCOO ScSCN [TIME]

Examples:

SCOO N23311

SCOO RHA

SCOO N23311 12:00

Timetable Command Format:

TIME SCOO ScSCN

Example:

08:00:38 SCOO N23331

Inverse Command:

XSCO

MMI Menu:

Traffic - Normal/SCOOT

SEED

Display database values

This command provides a method of looking at database values that were selected during data preparation without entering data preparation itself. The values are static and do not change while the display is active, unlike the SEES display.

Where an equipment data display is selected only one equipment may be displayed at a time.

The displays available through this command are similar to the data preparation forms. The display selected depends on the parameters that may include an equipment SCN and/or other qualifiers. When an SCN and one or more other qualifiers are entered, the equipment type must be correct for the qualifier (UPPER_TIMINGS / LOWER_TIMINGS display is for junctions only).

The following data displays are currently supported:

- Outstation (TC12 or TC8)
- Junction
- Pelican
- Queue Detector
- Count Detector
- Special Facility
- Remote Request
- Car Park
- Car Park Sign
- Diversion
- Diversion Sign
- Junction Stage Data
- Equipment Word Formats
- System Wide Variants

Operator Command Format:

SEED <SCN>   for any valid equipment data

SEED <SCN> [UPPER_TIMINGS|LOWER_TIMINGS]

SEED EQUIPMENT_WORD_FORMATS [CONTROL|REPLY] <eqp_type>

SEED SYSTEM_WIDE_VARIANTS

SEED WALLMAP <word_number>

Examples:

SEED P01111

SEED J01111 UPPER_TIMINGS

SEED EQUIPMENT_WORD_FORMATS CONTROL P

SEED SYSTEM_WIDE_VARIANTS

SEED WALLMAP 1

Timetable Command Format:

Not available

Related Command:

None

MMI Menu:

Info

SFNO

Inhibit special facility selection

This command allows you to inhibit the selection of a particular special facility or range of special facilities (wildcarding is permitted).

Operator Command Format:

SFNO SCN

Examples:

SFNO F02331

SFNO F00000

Timetable Command Format:

TIME SFNO SCN

Example:

16:45 SFNO F01233

Inverse Command:

XSFN

Related Commands:

CSFY, XCSF

MMI Menu:

Traffic - Normal

SIGN

Override sign legend

This command causes the System to set the legend being displayed on the individual sign to the state specified in the command. The legend remains in force until cancelled by the -XSIG command or until changed by the operator. This command may not be wildcarded.

Car Park signs only:

- Entrance type signs can only be set to FULL or SPACES.
- Only named type signs can also be set to BLANK.
- City-type signs cannot be set to CLOSED. If they are set to SPACES or ALMOST-FULL, then a number representing the car park group must also be specified.

Diversion signs only:

- Standard diversion signs can only be set to either ON or OFF. Multi-aspect diversion signs may be set using the decimal number for the required aspect, or by entering the legend string that has been associated with it. Legend strings containing spaces should be enclosed in quotes.

Variable Message Signs consist of one Type1 sign and up to five Type2 signs contained at one location. The signs can be set either using six single digit numbers or five single digit numbers and a legend.

e.g. 0 0 2 0 1 2 or 0 0 2 0 1 CLOSED

These are equivalent to:

Type2 sign set to BLANK

Type2 sign set to BLANK

Type2 sign set to STATE2

Type2 sign set to BLANK

Type2 sign set to STATE1

Type1 sign set to CLOSED

The order of the signs is from top Type2 signs down to the Type1 sign at the bottom.

States/legends available for Variable Message Signs are:

Type2 sign states - 0 1 or 2

Type1 sign states - 0 1 or 2

Type1 sign legends - BLANK, CONGESTED, CLOSED

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

SIGN SCN [LEGEND [GROUP]] [TIME}

LEGEND = one of:

for car parks	"BLANK", "SPACES", "ALMOST-FULL", "FULL", "CLOSED"
for diversions	"ON", "OFF
for Variable Message Signs	SIGN SCN STATE STATE STATE STATE SIGN SCN STATE STATE STATE LEGEND

Examples:

SIGN S70312 ALMOST

SIGN S70398 ALMOST-FULL 2

SIGN V05123 ON

SIGN V07311 "Bridge closed"

SIGN M07311 0 0 2 2 0 CLOSED

SIGN M07199 0 0 1 1 0 2

SIGN S70312 12:00

Timetable Command Format:

TIME SIGN SCN [LEGEND [GROUP]]

Example:

16:33 SIGN S70318 ALMOST

Related commands:

STCS, SEED

Inverse Command:

XSIG

MMI Menu:

Traffic - Normal/Car Parks

SIGO

Change Car Park group search list

This command dynamically changes the order of the car park group search list. Default search order for the car parks is "1 2 3 4 5". If the group-list parameter is not used the command shows the current search order.

Operator Command Format:

SIGO SCN [GROUP_LIST]

Examples:

SIGO C70312

SIGO C70398 1 3 4 5 2

Timetable Command Format:

TIME SIGO SCN [GROUP_LIST]

Example:

16:33 SIGO S70318 1 3 2 4 5

MMI Menu:

Car Parks

SLOF

Disable part time signals

This command disables part time signals for a given SCN. It transmits the appropriate bit until cancelled with an -XSLO command.

This command may not be wildcarded.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

SLOF [SCN] [TIME]

Example:

SLOF J09231

SLOF J09231 12:00

Timetable Command Format:

TIME SLOF SCN

Example:

16:33 SLOF J09231

Inverse Command:

XSLO

MMI Menu:

Traffic - Normal

SNSD

Display Current Analogue Sensor Value

This command displays the five minute values collected during the past hour for the analogue sensor sites specified in the command. The display is updated every five minutes. The display may be dumped out on the printer associated with your terminal by pressing CTRL-P. The SCNs specified must not be wildcarded.

To exit the command, enter the usual traffic prompts of - or #

Operator Command Format:

SNSD SCN [SCN] [SCN] [SCN]

Examples:

SNSD W02193

SNSD W09124 W09125 W09126

Timetable Command Format:

Not available

Related Commands:

SNSV, SNSS

MMI Menu:

Reports

SNSS

Display Analogue Sensor Values

This command displays sensor data in five or fifteen minute intervals for the selected non-wildcarded SCN. If no date is entered, the current date is used. A time interval may be specified for the report. If no data is available for the SCN on the date specified the command is rejected. The display may be dumped to the printer of the terminal issuing the command by pressing CTRL-P. Five-minute interval data may be displayed in several pages - to advance a page, press the space bar. To exit the command, enter the usual traffic prompts of - or #.

Symbols next to the value interval have the following meaning:

‘blank’	No symbol next to the interval indicates a valid reading for this interval.
C	interval has not occurred yet or no data collected for part or all of this interval
X	sensor fault during interval
S	combination of sensor fault and a non-detector reason for invalid value interval

Operator Command Format:

SNSS SCN [VALUE] [DATE] [TIME1-TIME2]

VALUE = 5 or 15 (minutes) - default if omitted is 15

Examples:

SNSS W09231 1-APR-96

SNSS W09211 5 25-AUG-96 10:00-18:30

Timetable Command Format:

Not available

Related Commands:

SNSV, SNSD

MMI Menu:

Reports

SNSV

Display Current Sensor Values

This command displays the current values for the specified environment sensors. Optionally a type can be specified and only the sensors of that type are displayed.

Operator Command Format:

SNSV SENSOR.SCN [TYPE]

Examples:

SNSV W00000

SNSV W00000 CO

Timetable Command Format:

Not available

Related Commands:

SNSD, SNSS

MMI Menu:

Reports

SORT

Sort Controller Checks Messages

This facility sorts messages produced by the controller checks program for the specified days into SCN order and then displays them. The controller checks messages output for each SCN include those generated by operator requested checks as well as timetable checks.

The files containing the controller checks messages are kept for the same number of days as detector data files (configured in database preparation) and are then deleted.

If the second date is omitted then only the data for the first date is processed, if neither date is specified then today's date is used instead.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

SORT [DATE_1 [DATE_2]]

Examples:

SORT 1-May-90 3-May-90

SORT 3-May-90

SORT

Timetable Command Format:

SORT term

Related Commands:

CHCK, XCHC

MMI Menu:

Admin

SSGM

Log stage timings data to data file

This command starts the logging of stage timings data to a data file for a specified intersection or pelican.

The log records observed stage green and intergreen times for controllers, and vehicle, not-vehicle and, if available, pedestrian green times for pedestrian signal controllers. The observed cycle time is also displayed.

Every hour, the log will record the number of appearances of each stage seen over the hour.

A start time is defaulted to the current time. If no end time is specified, the logging terminates after 24 hours. Logging also terminates if the number of free disc blocks drops below 1500.

If a database update (UPDA) that requests a system shutdown occurs whilst logging is active, then the logging will be suspended during the shutdown and will then resume. The log will indicate such events.

If no parameters are entered all the currently active stage monitors are displayed.

The DSSG command may be used to print the contents of a logging file. The XSSG command is used for terminating stage timings logging before the cancel time.

Up to 10 equipments per TCC may have their stage timings data logged simultaneously. Logging files are kept for the number of days specified in the database; after this time has elapsed they are automatically deleted.

Operator Command Format:

SSGM SCN [END TIME]

Examples:

SSGM J03113 16:45

SSGM J03113

Timetable Command Format:

TIME SSGM SCN [END TIME]

Related Commands:

DSSG, XSSG

MMI Menu:

Faults

SSPC

Send message to SIESPACE Car Park PC

This command sends messages to the Siespace Car park PC. A detector count message can be sent by specifying a detector SCN and the number of vehicles counted by the detector.

The specified detector should be configured on the Siespace PC as either a car park entry or exit detector. The command is intended to be used for forcing a car park state by being able to set the car park count to either full (by sending a high detector count for an entry detector) or empty (by sending a high detector count for an exit detector). The detector SCN does not need to be configured in the UTC database but must be defined in the Siespace PC database (though the sub-area part of the detector SCN must be valid).

Operator Command Format:

SSPC [DET.SCN] [COUNT]

Examples:

SSPC D11881 200

Timetable Command Format:

Not available

Related Commands:

None

MMI Menu:

Not available

SSSU

Start SCOOT survey

A SCOOT Survey is used to determine a Links LPU Count. When used with the Link SCN and Minutes parameters (see example 1) this command starts a SCOOT Survey on the link with a duration of 30 minutes.

When used with only the Link SCN parameter (see example 2) a SCOOT Survey starts on the link with a duration of one hour. If a SCOOT Survey is already in progress it is cancelled and restarted.

If the link becomes faulty the Survey is cancelled. The command is rejected if the number of simultaneous SCOOT surveys (up to 16) is exceeded.

During the time the survey is running on the computer an on-street engineer should count the number of vehicles on the link. At the end of the period of the survey the LPU count is written to the database against the count detector associated with this link. The ASLD command must subsequently be used to calibrate the link using the on-street vehicles count.

SCOOT Detector Calibration

The following steps describe the process in calibrating a SCOOT detector for vehicle counts using an example link (N12341A) and count detector (D12351):

i. Define a pseudo count detector (Format Type 0) in the Data Base Preparation form "Count Detector". (In the example, create count detector D12351).

ii. Synchronise the start of an on-street vehicle count for the link to be calibrated (N12341A for the example) and the SSSU command. For example, start both the on-street vehicle count and SSSU at 10:00 precisely, and both for the same interval of time. For a 30 minute interval this would be:

    SSSU N12341A 30

iii. At the end of the interval, the on-street value is noted down (320, for example). The SSSU lpu count is stored automatically by the UTC system.

iv. Assign the SCOOT link to the count detector using the ASLD command. The parameters are the SCOOT link, the pseudo count detector and the on-street vehicle count. The command for the example would be:

    ASLD N12341A D12351 320

v. To verify the conversion factor being used, enter the command LLCF for either the link or the detector:

    LLCF N12341A

    LLCF D12351

vi. The link and pseudo count detector are now associated, and the pseudo count detector stores vehicle counts in exactly the same manner as a real detector. All the display commands (FLOW, SURV, WEEK and OPFD) show data as for normal count detectors.

Operator Command Format:

SSSU N01414A [TIME PERIOD] (TIME PERIOD 1-60 minutes)

Examples:

SSSU N01414A 30

SSSU N01414A

Timetable Command Format:

TIME SSSU SCN [TIME PERIOD]

Example:

16:04 SSSU N01414A 30

Related Commands:

ASLD, LLCF

MMI Menu:

Admin

STCS

List car park, car park sign, diversion sign and special facility status

This command lists the status of car parks, car park signs, diversions and special facilities. Wildcarded SCNs may be specified if desired. The status information for car parks includes such items as the current occupancy, the thresholds, and its overall state (SPACES, FULL etc.). For signs and special facilities the current state is shown and whether the equipment is under operator control. For diversion signs the active state is shown; i.e. ON or OFF.

For a STCS command in the timetable a terminal number, where the data is to be output, must be specified.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

STCS SCN

Examples:

STCS C79134

STCS S79136

STCS V12441

Timetable Command Format:

TIME STCS SCN TERM

Example:

16:04 STCS C79129 T02001

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

Related Commands:

CLOS, OPEN, SIGN, XSIG, CHAN, VALU

MMI Menu:

Car Parks

SURV

Display survey flow counts

This command displays detector flow or occupancy data in five or fifteen minute intervals, for the selected non-wildcarded SCN on the specified date. If no date is entered the current date is used. A time interval may be specified in order to restrict the report. If no data is present on the disk for the SCN or date specified, the command is rejected. The snapshot print facility is available for this command.

The optional parameter OCCUPANCY may be used to display occupancy data rather than count detector data.

Symbols next to the count interval have the following meaning:

'blank' Count/Occupancy collected over the full period

C Count/Occupancy interval has not occurred yet or non-detector reason for invalid count/occupancy interval

X Detector fault occurred during the count interval

S Combination of detector and non-detector fault reason for an invalid count/occupancy interval

P Predicted counts. This is only available on systems configured to display this value.

Operator Command Format:

SURV SCN [VALUE] [DATE] [TIME1-TIME2] [OCCUPANCY]

VALUE = 5 or 15 minutes - default is 15.

OCCUPANCY indicates that the data to be displayed is occupancy values

Examples:

SURV D92316 1-APR-93

SURV D12332 30-JUL-93 OCCUPANCY

Timetable Command Format:

Not available

Related Commands:

FLOW, OPFD, WEEK, LSTD

MMI Menu:

Reports

SUTT

Supersede Timetable

This command enables a currently running timetable to be superseded by a new timetable. The new timetable operates until midnight, until superseded by another timetable or until the System is re-booted.

A suitable entry is made in the System Log.

Operator Command Format:

SUTT VALUE

VALUE = a valid timetable number

Example:

SUTT 5

Timetable Command Format:

Not available

Related Commands:

OUTT

Inverse Command:

XSUT

MMI Menu:

Manager

SYNC

Synchronise group timers

This command causes the SG bit to be sent to all controllers that have this bit configured so that equipment may be synchronised.

Operator Command Format:

SYNC

Example:

SYNC

Timetable Command Format:

TIME SYNC

Example:

16:30 SYNC

MMI Menu:

Not available

TAPS

Start APS in test mode

This command is used to enable automatic fixed-time plan change decisions in test mode. These decisions are based on queue, volume and congestion information. While in test mode no plan changes are actually implemented, instead messages are output detailing which plan would have been selected. APS remains implemented until cancelled by an XTAP command. While in test mode the SAPS command is inhibited.

The volume and queue detectors may have test values assigned to them while in test mode by entering the required data as parameters to the TAPS command:

1) Using the command with a volume detector SCN, VALUE is a one-minute count.
2) With a queue detector SCN, VALUE is either ON or OFF.
3) Enable by sub-area by specifying a sub-area SCN (not wildcarded).
4) Enable by equipment by specifying an intersection, pelican or diversion SCN that may be wildcarded.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

TAPS [sub_area_SCN] [equipment_SCN] [VALUE] [TIME}

If the sub-area SCN is input then no further parameters are allowed, i.e. APS is put into test mode.

If the sub-area SCN is omitted then an equipment SCN and data value MUST be input.

Equipment types may be either: count (flow) detectors or queue detectors.

Valid data is: 0-213 vehicles/minute (for counts)

Examples:

1	-TAPS D03251 10	(10 vehicles/min at detector D03251)
2	-TAPS Q12121 ON	(turns on the queue detector Q12121)
3	-TAPS A12000	(enables automatic fixed time plan change decisions in test mode for A12000)
4	-TAPS J12000	(enables automatic fixed time plan change decisions for all junctions with J12000).

TAPS D03251 12:00

Timetable Command Format:

TIME TAPS sub_area_SCN

Example:

16:24 TAPS A02000

Related Command:

XAPS

Inverse Command:

XTAP

MMI Menu:

Traffic - Specials

TDDD

Time/Distance diagram display

This command is used to create, modify, delete and display the time/distance diagrams either on PC compatible terminals or on graphics terminals. Please refer to section 7 for details.

This facility allows the monitoring of current plan timings (including SCOOT) and prediction of the outcome of new plan timings.

On multi-computer Systems the required computer SCN must be entered.

Operator Command Format:

TDDD [SCN]

Example:

TDDD

Timetable Command Format:

Not available

Inverse Command:

None

MMI Menu:

Traffic, Normal

TEST

Test Wall map or alarm panel

This command has 2 modes:

a) if NAME = MAP, lights all the wall map indicators until cancelled by the XTES command when they return to their correct states.

b) if NAME = ALM, tests the lamps and audible alarms on the alarm panel. The System light and audible alarm come on for three seconds after which the operational light and audible alarm come on for three seconds. The sequence continues until cancelled by the -XTES command. The watch dog lamp stays on for the duration of the test. If ALL is specified, the alarms on all TCCs are tested, otherwise only the alarms on the TCC on which the command is entered are tested.

Operator Command Format:

TEST NAME (NAME = "MAP" or "ALM")

Examples:

TEST ALM [ALL]

TEST MAP

Timetable Command Format:

Not available

Inverse Command:

XTES

MMI Menu:

Admin

TIDL

Start Tidal Flow control

This command causes the UTC System to take control of the Tidal Flow Scheme and order a change of TFS aspect. Direction may take the values IN (inbound) OUT (outbound) XX (double cross) or EMERGENCY (emergency close of centre lane).

Direction may be abbreviated to I, O, X or E.

If direction is omitted then the current state of control is output to the current or specified terminal using the same mnemonics as above for direction plus LOCAL for a controller which is not under UTC control.

Operator Command Format:

TIDL SCN [direction]

Examples:

TIDL L05111 IN

TIDL L05111

Timetable Command Format:

TIME TIDL SCN [direction]

Example:

07:12:30 TIDL L05111

Inverse Command:

XTID

MMI Menu:

Traffic - Specials

TIME

Display or modify current time

This command displays and allows you to change the time and/or date used by the System and stored in the battery maintained clock. If neither parameter is entered the current date and time are displayed. If only one parameter is entered, that parameter changes while the other remains the same.

This option is allowed on all terminals allowing UTC or SCOOT commands.

On completion, the following message is output:

OLD hh:mm:ss.tt DD-MM-YY NEW hh:mm:ss.tt REQ hh:mm:ss.tt

where:	OLD	the old time;
	NEW	the new time;
	REQ	the requested time;
	hh	hours;
	mm	minutes;
	ss	seconds;
	tt	ticks.

WARNING: Archived files may be lost if the date is advanced.

Operator Command Format:

TIME [TIME] [DATE]

Examples:

TIME 12:00:37

TIME

Timetable Command Format:

Not available

Related Commands:

DATE

MMI Menu:

Manager

TRAP

Set Tram Priority

This command causes the system to set the tram priority for a junction to AM or PM peak. The SCN may be wild carded.

Note: The AM and PM bits are mutually exclusive. For example, if a junction has the AM bit set, setting the PM bit will cause the AM bit to be cleared.

Operator Command Format:

TRAP SCN AM|PM

Examples:

TRAP J04211 AM

TRAP J04000 PM

Timetable Command Format:

TIME TRAP SCN AM|PM

Example:

06:00 TRAP J00000 AM

Inverse Command:

XTRA

MMI Menu:

Traffic

TROF

Disable output of unsolicited messages to terminal

This command disables output of System (unsolicited) messages to the specified terminal or printer. Output requested by a user on the device (i.e. solicited output) such as fault listings is unaffected.

NOTE: This command cannot be used to disable the System Log printer. The command XPRI should be used instead.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

TROF [TERM] [TIME}

Example:

TROF T01001

TROF T01001 12:00

Timetable Command Format:

TIME TROF TERM

Example:

07:12:30 TROF T01001

Inverse Command:

XTRO

MMI Menu:

Admin

TSYN

Implement Immediate Time Synchronisation

This command allows the operator to implement time synchronisation immediately.

This command can be actioned from the timetable or operator command. It is only for systems with an external clock connected.

Operator Command Format:

TSYN

Example:

TSYN

Timetable Command Format:

TIME TSYN

MMI Menu:

Manager

TTBP

Start Timetable Preparation Process

This command starts the timetable preparation process. If the command is entered from an X windows based UTC session, the windows version of this process is started. More than one user can use the windows timetable preparation process at the same time; non-windows timetable preparation may only be used by one user at a time.

Timetable Preparation cannot be run while another user is running DBAS or TUAC.

Context sensitive help for the windows version is available from within the program.

In the non-windows version, the top-level menu displayed after the process has successfully started contains the following options. Select from this menu by entering the first letter of the option required.

List Timetable Data File to printer -

displays a menu from which one or more timetable source files may be selected and then printed to the Traffic System printer or listed on the terminal.

Edit Timetable Data Files -

displays a menu from which timetable source data may be selectively edited. Time of day timetables (T) or day of week/date of year schedules (W) may be edited.

The Edit Time of Day Timetable Data option allows you to use the EDT editor to edit the contents of a TODnn.MAC file. You are prompted to enter the number (nn) of the Time of Day timetable file you wish to edit. After pressing <RETURN> a message informs you that a temporary copy of the file is being made for editing. The data preparation program then transfers to the EDT editor program to allow the file to be edited. On leaving the editor you are returned to the Date Preparation Edit menu.

The Edit Day of Week/Date of Year Timetable Data option allows you to use the EDT editor to edit the contents of the XXXTTB.MAC file. After pressing <RETURN> a message informs you that a copy of the file is being made for editing. The data preparation program then transfers to the EDT editor program allow the file to be edited. On leaving the editor you are returned to the Data Preparation Edit Menu.

Process Timetable Data File -

displays a menu from which the timetable source data may be selectively checked and processed. The UPDA command is used to make the data "live". One or more time of day timetables or the day of week/date of year schedule may be processed. After processing, any errors may be listed to the terminal or printer, or both. Errors from the last run of processing may be listed by selecting the List Errors option.

Temporary Files -

When Timetable data is modified a separate temporary file is created to hold the modified data. If changes are retained after editing the data, then the temporary file is retained. On returning to re-edit data for which a temporary file exists you are given the option of restoring the original data and deleting the temporary file, or making further changes to the temporary file.

When processing is carried out on modified data it is the temporary file which is processed. If processing is successful the old data file is deleted and the temporary (modified) data becomes the current data. If processing is not successful then both the original and temporary files are left on the System. On exiting Timetable Preparation, if a temporary data file still exists you are prompted to delete or keep the file.

For a full description of the use of this command, see the separate Timetable Preparation Handbook, reference 1.3.2(k).

Operator Command Format:

TTBP

Example:

TTBP

Timetable Command Format:

None

Related Commands:

DBAS, TUAC, UPDA

MMI Menu:

Manager

TUAC

Configure Terminals and Users

This command starts the background Terminal and User Configuration process. The terminal entering this command will not receive any further Traffic System messages or be able to enter any traffic commands until the command has finished.

A description of this command is contained in the Data Preparation Handbook, ref. 1.3.2(c).

Operator Command Format:

TUAC

Example:

TUAC

Timetable Command Format:

Not available

Related Command:

DBAS, UPDA

MMI Menu:

Manager

TUNL

Change Tunnel Lane Flow Direction

This command is used to direct a tunnel controller to change the tunnel lane flow direction signs for the requested direction

The directions that may be requested depend on the system configuration but typically the allowed directions are NFLOW (normal flow), CFLOW (contra-flow), or XX (lane closed). If the direction is omitted the current state of the tunnel controller is shown.

Operator Command Format:

TUNL SCN [Direction]

Example:

TUNL L05111 CFLOW

TUNL L05111

Timetable Command Format:

TIME TUNL SCN [Direction]

Example:

07:12:30 TUNL L05111

Related Command:

XTUN

MMI Menu:

Traffic - Specials

TXDF

Transfer Data File to PC Compatible Terminal

This command transfers a file to a PC. It is only valid for a correctly configured MMI or directly connected PC and is available by Operator, Timetable or CAST command.

The TXDF command may also be used to transfer files into the Export directory on the TMC, from whence they may be copied.

The type of file transferred may be one of those listed under “FILE_TYPE”.

For weekly data files the selected date is converted to the previous Monday and specifies the file to be transferred. The date parameter is not appropriate when the OTU FILE_TYPE is used, and an outstation SCN must be provided. In addition, the date parameter cannot be used in timetables and CASTs. The files are kept for one month on the System.

For weekly and daily detector counts, and weekly car park occupancy data, automatic conversion of the data files to DBASE IV format is available by supplying the parameter DBASE on the command line. For daily detector counts conversion to a format suitable for input into the TRANSPAC PC application is available by supplying the parameter TRANSPAC on the command line. Event message data is already in DBASE format and does not require the conversion parameter.

The PC terminal SCN specifies the PC to which the data transfer will take place. This is mandatory when the terminal on which the command is entered is not a PC.

The TRANSPAC data files produced are in the following format:

- Each data file contains data for any number of sites. The first record of each site's data starts with *BEGIN and contains the file number and site reference number, which are the only variable items of information. The first field after *BEGIN is 00 followed by the file number and the file reference number. The next eight records contain the data for one day. The first six characters contain the date in the format yymmdd, followed by the end time of the first time period in the format hhmm. Where the record contains count or car park data, the flows for each of the next twelve 15 minute periods are then given. Then each subsequent day's data for the remainder of the week is given. At the end of each site's data is the *END record, which is a repeat of the first record. The next site's data follows in similar format.

Should the PC inadvertently become disconnected during the file transfer process, the CTERM or MMI session on the PC should be restarted before attempting the transfer again.

An ESS licensable facility allows the TXDF command to transfer data of various types for a single site or a group of sites (using wild carded SCNs) to the PC. If a single site or group of sites is selected for data transfer the data conversion must be set to DBASE The types of data which may be transferred with this facility are:

COUNT_DATA

DAILY_COUNT
CARPARK_DATA
CPP_DATA
ENVIRON
ENVWEEK

Operator Command Format:

TXDF FILE_TYPE [SCN] [CONVERSION] [DATE] [>PC_SCN]

or

TXDF OTU [OTU_SCN] [DATE] [>PC_SCN]

where:

FILE_TYPE:

COUNT_DATA	for weekly detector count files (abbrev. CO)
CARPARK_DATA	for weekly car park occupancy files (abbrev. CA)
LOG	for current daily system log (abbrev. L)
DAILY_COUNT	for daily detector count files (abbrev. D)
mxx	for event message files, where “m” is a letter and “xx” a number
CPP_DATA	for daily car park occupancy prediction data (abbrev. CP)
SCOOT_LOG	for current daily SCOOT Log (abbrev. S)
ENVIRON	for daily environmental sensor file (abbrev. ENVI)
ENVWEEK	for weekly environmental sensor file (abbrev. ENVW)
FLOW_DATA	For detector flow data in dBase format with a layout similar to that output from the OPFD command (abbrev FLO)
ASTRID	For extracted ASTRID data in Lotus123 format only. Files of format ASddmmyy.123 must already exist in the ASTRID_OUTPUT directory

CONVERSION:	DBASE
	TRANSPAC (daily detector files only)

Command Availability:

The following table shows the possible combinations of parameters that may be entered into the command:

	CONVERSION TYPE				
PARAMETER	NONE	DBASE	TRANSPAC	OTU	DATE
COUNT_DATA	ü	N/A	N/A	N/A	OP
CARPARK_DATA	ü	ü	N/A	N/A	OP
LOG	ü	N/A	N/A	N/A	OP
OTU	ü	N/A	N/A	ü	OP
DAILY_COUNT	ü	ü	CF	N/A	OP
xmm (message)	ü	N/A(DF)	N/A	N/A	OP
CPP	ü	ü	N/A	N/A	OP
SCOOT_LOG	ü	ü	N/A	N/A	OP
ENVIRON	ü	ü	N/A	N/A	OP
ENVWEEK	ü	ü	N/A	N/A	OP
FLOW_DATA	ü	N/A(DF)	N/A	N/A	OP
ASTRID	ü	N/A	N/A	N/A	OP

where:

ü Available

N/A Not available

OP Available by Operator command only

DF Default output.

CF A licenced configurable item

Examples:

TXDF D TRANSPAC >POP426

TXDF CO 04-JAN-93

TXDF CA 26-JUL-93 >PC01

TXDF OTU X11110 >UTCPC

TXDF S01

TXDF CP DBASE

TXDF CO 4-JUL-01 >EXPORT

TDXF FLO D03111 3-JUN-03>EXPORT

Timetable Command Format:

TIME TXDF FILE_TYPE [CONVERSION] PC_TERMINAL_SCN or

TIME TXDF OTU OTU_SCN PC_TERMINAL_SCN

Examples:

02:00 TXDF CO PC01

02:50 TXDF CARPARK_DATA PC01

06:00 TXDF M14 UTCPC

11:00 TXDF A01 PC01

12:20 TXDF OTU X01230 UTC_02

Related Commands:

None

MMI Menu:

Admin

UCOF

Use car park occupancy file

This command instructs the System to use a specified car park occupancy file instead of weighted average data for calculation of occupancy predictions. The command is available to the operator and from the timetable and when entered is enforced for the remainder of the day. Wildcards are not permitted in the car park SCN.

The command is journalled.

If 0 is input as the file number, the previous UCOF command is cancelled.

Operator Command Format:

UCOF CAR_PARK_SCN FILE_NUMBER

Example:

UCOF C07311 10

Timetable Command Format:

TIME UCOF CAR_PARK_SCN FILE_NUMBER

Timetable Example:

07:00 UCOF C07311 10

Inverse Command:

see above

Related Commands:

DCOF, LCOF, RCOF

MMI Menu:

Car Parks, Special Data

UDDL

Download data to an outstation

The command UDDL is followed by the SCN of the controller in question and any of the parameters available. The parameters are the same as for the Upload Data Command (UDUL) except that it is not possible to download a fault log.

The data to be downloaded is that taken from the file containing the current or most recently edited outstation data.

For a parameter group to be downloaded to the outstation, it must first have been uploaded from the instation and edited. If the file has not been edited since it was uploaded, a warning is displayed to the user with the option to exit without downloading the unchanged data to the outstation.

Items within the data file which are normally “Read Only” Handset items are ignored and not downloaded to the outstation.

A status message is produced to indicate the success or failure of the download of each data group to each outstation.

Download of Level 3 Data items is controlled on a system wide basis and is configured as part of the UTC System Configuration. If Level 3 Download is disabled then Level 3 Data items are filtered from the download message and not sent to the controller.

Operator Command Format:

UDDL [OTU_SCN] [DATA_CATEGORY_1] [...[DATA_CATEGORY]]

Examples:

UDDL X00000 ALL

UDDL X01120 CLF

Timetable Command Format:

TIME UDDL X01120 TIME CLF

Inverse Command:

None

Related Commands:

UDFV

MMI Menu:

Traffic, Upload/Download

UDFV

Fault Log viewer for uploaded fault logs

The fault log viewer is a program that allows the operator to view previously uploaded controller and OTU fault logs (by UDUL..FAULT_LOG).This command is only allowed on X terminals.

The command UDFV prompts the user to state which fault log he/she wishes to view. If none are entered, the most recently uploaded fault log is displayed for the operator.

A fault log must be Uploaded using the UDUL command before any can be viewed using the UDFV command.

Up to two sets of fault log flags OR fault log data can be displayed, but not simultaneously, for visual comparison. The visual comparison takes the form of two display areas within a window with the first or most recent fault log displayed on the right and the second on the left. Each display area uses separate scroll bars where required to move up and down within the individual display. If no parameters are entered, the most recently uploaded fault log flags are displayed for the SCN in question. If the [DATA] parameter is not included, then fault log flags are displayed by default.

The display text consists of the FLF / FLD numbers and the associated parameter from the fault log.

Operator Command Format:

UDFV [OTU_SCN] [Fault Log1] [Fault Log2] [DATA]

Examples:

UDFV X40150 01/02/95 DATA

UDFV X01120

Timetable Command Format:

Not available

Inverse Command:

None

Related Commands:

UDUL, LSTF

MMI Menu:

Traffic, Upload/Download

UDLC

Upload/Download Line Check and Configuration

This command is used to check that all the OTUs on a line have the correct line configuration and, if they are different, update them with the values from the database. The facility downloads the OTU group and then checks that the following items match the values configured in the UTC database - number of OTUs on the line, number of control bytes for each OTU on the line, number of reply bytes for each OTU on the line. These are the items accessed by the GNO, GCW and GRW handset commands respectively.

Because changing these parameters can affect one-second communications, continuous mode is used for upload/download operations even if this is not the selected transfer mode.

This command is intended especially for those times when, say, the number of reply bytes is changed on one OTU. Running this command for the OTU will automatically update all other OTUs on the line. Upload/download must be enabled on OTUs for this facility to check and configure them otherwise normal manual configuration procedures must be used.

Operator Command Format:

UDLC [OTU_SCN]

Examples:

UDLC X01120

Timetable Command Format:

Not available

Related Commands:

UDUL, UDDL, UDRH, UDSL

MMI Menu:

Traffic - Upload/Download

UDMC

Modify Upload/Download transfer mode

The command UDMC is used to configure communication lines to a particular mode of Upload/Download operation. The communication line is identified by the TC12PC SCN and the modem number. If all modems on a particular PC are to be configured to one mode of operation, then entering ALL instead of the modem number configures all the modems attached to the TC12 PC. Wildcarding of the TC12 PC SCN is permitted. This configures all modems on every TC12 PC to the mode of operation selected.

The system default mode of operation for Upload / Download is defined in the UTC System configuration file. The modes of operation for Upload / Download available on any system are stored in the UTC System configuration file.

The modes of operation (subject to system configuration) are identified by the mnemonics detailed below:

- SPLIT Split Second Mode
- ONE One Second in N Mode
- CONT Continuous Mode

A status message is output if a particular line configuration could not be carried out successfully.

The value of N for use with the One Second in N mode (ONE) is set as part of the System Wide variants screen of the UTC Data Preparation facility. This figure is subject to a lower limit of 4 and upper limit of 30.

Operator Command Format:

UDMC [PC_SCN] [MODEM_LINE] [[TRANSFER_MODE]
UDMC [PC_SCN] ALL [TRANSFER_MODE]
UDMC [PC_SCN] [TRANSFER_MODE]

Examples:

UDMC E00000 CONT
UDMC E01001 ALL ONE
UDMC E01002 2 SPLIT

Timetable Command Format:

Not available

Inverse Command:

None

Related Commands:

UDUL, UDDL, UDRH

MMI Menu:

Traffic, Upload/Download

UDRH

Remote Handset facility

The Remote Handset is a program that allows the operator to send OTU and controller handset commands to an OTU and displays the OTU's responses. This command is only available on systems which have the upload/download facility enabled. The OTU additionally must have been configured within data preparation as supporting upload/download.

Multiple users can use the Remote Handset for OTUs on different TC12 modem lines but not for OTUs on the same line. Additionally the Remote Handset cannot be used on an OTU if an upload/download transfer (UDDL, UDUL) is in progress on the same line as the OTU.

The command UDRH is followed by the SCN of the outstation to which a remote handset session is being established. This starts a separate window with a portion displaying the recently entered commands and a second portion being used to display output from the controller. Scroll bars allow viewing of historic data, with up to 250 lines "off the top" being retained for viewing by "scrolling".

The UDRH display may be exited by using either the F10 key or the <Control D> key combination.

Refer to the OTU and controller handbooks for information on the available handset commands.

Operator Command Format:

UDRH [OTU_SCN]

Example:

UDRH X01120

Timetable Command Format:

Not available

Inverse Command:

None

Related Commands:

UDUL, UDDL, UDSL

MMI Menu:

Traffic, Upload/Download

UDSL

List Upload/Download status

This listing command shows the upload/download status of the specified controllers or modem lines. The listing shows whether any upload/download operations are in progress and, if so, which application is using the line.

If a PC SCN is entered, a modem line number or "ALL" must be entered. The listing for the modem lines also includes the current transfer mode selected for the line.

Operator Command Format:

UDSL [OTU_SCN] [LINE_NUMBER]

Examples:

UDSL X00000

UDSL E01001 1

UDSL E00000 ALL

Timetable Command Format:

10:00 UDSL X00000 >Terminal_SCN

Inverse Command:

None

Related Commands:

UDUL, UDDL, UDRH

MMI Menu:

Traffic, Upload/Download

UDUL

Upload data from outstations

The command UDUL is followed by the SCN of an outstation and a number of optional parameters, which determine the range of data to be Uploaded from the Outstation.

If OTU data is uploaded a check is made of the line parameters. If different, a message is displayed but no other action is taken. This can be useful to check OTU line details without changing them.

If no optional parameters are specified, a complete upload is commanded of all the data available for upload at the outstation (i.e. all the categories indicated in the list).

When the data has been uploaded to the instation, it is stored in a single file (except for the fault log) on the UTC System, identified by an SCN based filename. The file includes a header, which details the date and time of the upload.

A status message is produced to indicate the success or failure of the Upload from each outstation.

If the fault log data is included in the Upload, this is stored in a separate file.

The Optional Parameters that determine the range of data to be Uploaded are detailed below:

Data Range	**Parameter**
General data	GENERAL
Priority Data	PRIORITY
Safety Timings Data	SAFETY
Monitoring Data	MONITOR
Maintenance Data	FAULT_LOG
Cableless Linking Facility	CLF
Master Time Clock	TIME
Pelican Data	PELICAN
OTU Data	OTU

Operator Command Format:

UDUL [OTU_SCN] [DATA_CATEGORY_1] [...[DATA_CATEGORY]]

Examples:

UDUL X00000 ALL

UDUL X01120 FAULT_LOG TIME CLF

Timetable Command Format:

07:00 UDUL X01120 FAULT_LOG TIME CLF

Inverse Command:

None

Related Commands:

UDDL, UDRH, UDSL

MMI Menu:

Traffic, Upload/Download

UPDA

Introduce updated databases

This command causes the System to install all updated database modules that are resident in the 'pending' disc directories of the traffic computer. Only those modules that have more recent time-stamps than the modules currently being used are installed. The following optional parameters may be specified.

- 'USERS' to update user configuration data
- 'TIMINGS' to update junction and pelican timings
- 'SCOOT' to update SCOOT data
- 'TIMETABLES' to update timetables only
- 'DESCRIPTIONS' to update equipment descriptions
- 'DST' to update daylight saving start and end dates
- 'ALL' to update all databases (this is the same as no parameter)
- 'SMOOTH' to update only the data that may be updated smoothly
- ‘JOURNAL/NOJOURNAL’ specifies the command journal action
- ‘RESTORE’ undoes the last UPDA command

If 'ALL' is selected the relevant Traffic System closes down and restarts shortly afterwards. Appropriate messages inform you of the System state. This cancels any commands with a cancel timer set.

If only timetables are updated, it is not necessary for the relevant traffic System to be closed down. If a new timetable is selected, an entry is placed in the System Log.

JOURNAL and NOJOURNAL have the same effect as ALL except that JOURNAL specifies the command journal should be used to restore the system state if UPDA needs to closedown the system. NOJOURNAL specifies that the journal should be cleared and the system state should be restored from the timetable. At present, UPDA ALL is equivalent to UPDA NOJOURNAL.

RESTORE undoes the last UPDA command. That is, it loads the database modules that were in use prior to the last UPDA command. This option is only available to licensed customers (such as customers with ESS).

On completion of the update, the message 'Database update complete' is output. This message is also output if no changes are required.

Note: Installing SCOOT data implicitly includes a re-initialisation of the SCOOT database (see the REIN command).

Operator Command Format:

UPDA [PARAM]

PARAM = one of TIMETABLES | ALL | SMOOTH | SCOOT | TIMINGS | USERS | DESCRIPTIONS | DST | JOURNAL | NOJOURNAL | RESTORE

Examples:

UPDA

UPDA SMOOTH

Timetable Command Format:

Not available

Related Commands:

DBAS, TUAC, REIN

MMI Menu:

Manager

VALU

List value of SCOOT parameter

This command is used to list the value of a SCOOT or UTC parameter in the database. The parameters that can be listed are defined in Appendix B. Wildcard SCNs are permitted as for the CHAN command. The SCOOT SCN parameter is required for all commands except those at area level. SCOOT parameters are detailed in the SCOOT User Guide, ref. 1.3.2(e). The UTC parameters are described in section 10.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

VALU PARAM [ScSCN]

Examples:

VALU JNYT N23121A

VALU TREN RLL

VALU STOC N**

Timetable Command Format:

TIME VALU PARAM [ScSCN] TERM

Examples:

09:00 VALU ADJU T01004

08:00 VALU JNYT N23121A T01004

16:30:20 VALU TREN RLL T03001

08:00:10 VALU STOC N** T02002

Related Commands:

SEES, CHAN

MMI Menu:

Car Parks/SCOOT

VARY

Vary stage green times

This command brings up a Plan Preparation screen. The view window contains a data history of the last 10 changes to the plan currently running for the SCN. An edit window appears which contains the TEST plan for the controller. This may then be changed in the same way as with Plan Preparation.

An optional removal time may be specified for this command, to the nearest minute.

This command may only be entered when a fixed time plan is active. If the plan changes while the display is active, the plan is not implemented when terminate the display.

Operator Command Format:

VARY SCN [TIME]

Examples:

VARY J03181

VARY J03181 08:10

Timetable Command Format:

Not available

Related Commands:

PPRP, XPLA, OFST

MMI Menu:

Traffic - Normal

VEGA

Display SCOOT link profile and queue

This command allows you to display the demand profiles and stop-line queues on up to 4 SCOOT links. If a single link SCN is entered a more detailed display is given. Optionally a single link SCN with the link part only wildcarded and the node specified may be entered. In this case the display is for the first four links on the node.

While the display is running the terminal is prevented from outputting any System messages and all traffic commands are inhibited. The display is cancelled by the entry of another traffic prompt on the same terminal.

The display is presented in the form of 2 histograms.

The upper histogram shows the flow of vehicles in red (when the lights for this link are red) and green (when the lights are green) on the vertical axis against the cycle time of the region which contains the upstream node of the link on the horizontal. Each bar of the histogram representing 4 seconds duration. If the downstream link is exit blocked then the flow bars are displayed in magenta.

The lower histogram shows in blue the proportion of the maximum queue clear time the queue requires to discharge. Each bar of the histogram represents 4 seconds duration. The horizontal axis shows the cycle time of the region that contains the upstream node of the link. If the link being displayed is a filter this histogram is not updated.

Screen dump facilities are available. <CTRL> P (non-MMI terminal) dumps the picture in to the printer associated with the terminal issuing the command.

Operator Command Format:

VEGA ScSCN [ScSCN] [ScSCN] [ScSCN]

Examples:

VEGA N04331A N04331B

VEGA N04351J

VEGA N04341*

Timetable Command Format:

Not available

MMI Menu:

SCOOT

WAVC

List weighted averages table

This command causes the contents of the weighted averages table to be listed for a specified car park. The specified SCN may not be wildcarded.

This may only be used for car parks of type 2 and 3.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

WAVC SCN

Example:

WAVC C79245

Timetable Command Format:

Not available

MMI Menu:

Reports

WEEK

Display weekly detector flow counts

This command causes the System to display the hourly counts collected over seven days for the specified detector SCN. The SCN may not be wildcarded.

If the date is not specified the current day and the previous six days are displayed.

If a date is specified that day and the following six days are displayed. If data for the date entered in the command does not exist on disk, then the command is rejected.

The optional parameter OCCUPANCY may be added to display occupancy data rather than count detector data.

Letters used against the values are:

'blank'	Count collected over the full period
c	Data unavailable for some or all of the period
s	Counts unavailable for some or all of the period due to fault condition(s).
p	No count data available for the current day and so data from a previous week has been substituted.

Operator Command Format:

WEEK SCN [DATE] [OCCUPANCY]

OCCUPANCY indicates that the data to be displayed is occupancy values

Examples:

WEEK D09231 1-APR-93

WEEK D09111 30-JUL-93 OCCUPANCY

Timetable Command Format:

Not available

Related Commands:

FLOW, OPFD, SURV, EDAV, LSTD

MMI Menu:

Reports

WHAT

List equipment

This command causes the System to list all equipment matching the specified SCN. This command is useful in finding out exactly what equipments are in a particular sub-area etc.

The SCN may be wildcarded. WHAT supports the use of parent/child wildcarded SCOOT SCNs.

If the sub-area equipment type (letter A) is given, ALL equipment types that match the SCN are displayed. Unwanted output can be disposed of with the CTRL-O (non-MMI) facility as described in section 9.1.4.

An optional text string can be added to the command that causes only those SCNs with the text string in their description to be output. If the text string is in quotes spaces are allowed.

A “Sort by SCN” button is available on the WHAT display listing window. This allows the output to be sorted by SCN.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

WHAT SCN

WHAT SCN text

WHAT SCN "text"

Examples:

WHAT C00000 (Display all car parks)

WHAT S70300 (All car park signs in sub-area 70 group 3)

WHAT A01100 "east bound"

WHAT RAA>

WHAT N40121<>

Timetable Command Format:

Not available

Inverse Command:

None but listings may be terminated by <CTRL> O (non-MMI)

MMI Menu:

Info

XACC

Delete CAST Association with Region Cycle Time

This command deletes an association of a CAST with a cycle time made by ACCT.

Exactly the same parameters as used in the original ACCT command that made the association must be used in the XACC command to delete that association. The CAST name and number are, however, interchangeable.

The LACC command may be used to find which associations exist.

See help on ACCT for more information.

Operator Command Format:

XACC castname Region_SCN Region_Cycle_Time +|-

XACC castnumber Region_SCN Region_Cycle_Time <+|-

Example:

XACC 101 RCA 56 -

XACC am-rush-clear-crossing2 RCA 56 +

Timetable Command Format:

TIME XACC RAB 123

Related command:

LACC, ACCT

MMI Menu:

SCOOT / SCOOT Specials

XACS

Cancel ACSV Command

This command removes the on the off casts and timer periods associated with a given group though a previous ACSV command.

Operator Command Format:

XACS SCN GROUP

Example:

XACS H01000 3

Timetable Command Format:

TIME XACS SCN GROUP

Example:

22:01 XACS H01000 2

Inverse Command:

ACSV

Related Command:

LACS

MMI Menu:

Traffic / Normal

XAPS

Cancel APS

This command is used to disable automatic fixed-time plan change decisions. APS control may be re-enabled by the SAPS command. The SCN may not be wildcarded if it is a sub-area SCN. An intersection, pelican or diversion SCN may be wildcarded.

Operator Command Format:

XAPS SCN

Example:

XAPS A01000

Timetable Command Format:

TIME XAPS SCN

Example:

16:24 XAPS A01000

Inverse Command:

SAPS

Related Commands:

TAPS, XTAP

MMI Menu:

Traffic - Specials

XARR

Remove Association between Remote Request and CASTs

This command removes the association between the Remote Request and the CASTs that had been set up by the ARRQ command.

If the ARRQ that is being removed is active (i.e. the remote request is ON) then XARR forces the ARRQ to terminate as if the remote request was now off. After the timeout period and running the second removal CAST the ARRQ association is removed.

Operator and timetable XARR commands have the same priority. Thus an operator XARR command supersedes a timetable command and vice-versa.

Operator Command Format:

XARR SCN

Example:

XARR Z03113

Timetable Command Format:

TIME XARR SCN

Example:

12:00 XARR Z03113

Inverse Command:

ARRQ

Related Command:

LARR

MMI Menu:

Traffic / Specials

XASC

Cancel Action CAST by Saturation/Congestion

This command deletes an event trigger created by ASCC

Exactly the same parameters as used in the original ASCC command which made the trigger must be used in the XASC command to delete that trigger.

The LASC command may be used to find which associations exist.

See help on ASCC for more information.

Operator Command Format:

XASC CAST LinkSCN SATURATION SAT% +|-

XASC CAST LinkSCN CONGESTION CONG% +|-

Example:

XASC 123 N01231A CONGESTION 56 +

XASC station-rd-oversat_clearing N01231A SATURATION 85 -

Timetable Command Format:

As Operator, with TIME prefix.

Inverse Command:

ASCC

Related Command:

LASC

MMI Menu:

Traffic > Specials

XAUD

Disable audible alarms

This command causes the operational and/or System audible alarms to remain silent when an alarm condition is detected. If no alarm condition exists, the status (enabled or disabled) of the operational and/or System alarms is displayed.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

XAUD [OP | SYS | BOTH] [TIME]

Examples:

XAUD OP

XAUD SYS

XAUD BOTH

XAUD OP 12:00

Timetable Command Format:

TIME XAUD STR

Example:

16:24 XAUD BOTH

Inverse Command:

AUDI

MMI Menu:

Admin

XCAR

Cancels car park state control

This command cancels the operator command CARP, for modifying a car park state and restores the car park to its default mode of operation.

Operator Command Format:

XCAR SCN

Example:

XCAR C07311

Timetable Command Format:

TIME XCAR SCN

Example:

05:00 XCAR C07311

Inverse Command:

CARP

Related Commands:

STCS, SIGN

MMI Menu:

Car Parks

XCHA

Cancels a Priority CHAN

This command is used to cancel a CHAN Priority and revert to the lower level pending value for the specified parameter and SCN. The SCN may be wildcarded.

A valid SCOOT or UTC SCN must be supplied except for Area level parameters.

This is a licensed facility (ESS).

Operator Command Format:

XCHA PARAM [ScSCN/SCN]

Example:

XCHA STOC N10151*

Timetable Command Format:

TIME XCHA PARAM SCN

Example:

05:00 XCHA STOC N11123*

Inverse Command:

CHAN … SUPER

Related Commands:

CHAN, LSCH

MMI Menu:

SCOOT

XCHC

Stop controller test sequence checking

This command cancels all junction controller checks currently in progress.

Operator Command Format:

XCHC

Example:

XCHC

Timetable Command Format:

TIME XCHC

Example:

05:00 XCHC

Inverse Command:

CHCK

MMI Menu:

Traffic - Specials

XCHG

Resume normal TCC operation

This command is used to resume normal TCC operation after a CHGO command has been used to cause a standby computer to be used in place of a failed TCC.

It should be remembered that the Ethernet connection from the TCC to the TC12 PC may need to be moved to allow the repaired computer to resume control of the on-street equipment.

Changeover can also be initiated or cancelled by rebooting the standby computer and answering the relevant questions that are asked at startup.

Operator Command Format:

XCHG [STANDBY COMPUTER]

Example:

XCHG

XCHG H03000

Timetable Command Format:

Not available

Inverse Command:

CHGO

MMI Menu:

Manager

XCHS

Stop sign exercising

This command cancels all sign exercising currently in progress.

Operator Command Format:

XCHS

Example:

XCHS

Timetable Command Format:

TIME XCHS

Example:

05:00 XCHS

Inverse Command:

CHSI

MMI Menu:

Traffic - Specials

XCSF

De-select special facility

This command cancels a special facility. The special facility may have been set either by the System or by the CSFY command. This command may be wildcarded.

Operator Command Format:

XCSF SCN

Example:

XCSF F01254

Timetable Command Format:

TIME XCSF SCN

Example:

05:00 XCSF F01254

Related Commands:

SFNO, XSFN

Inverse Command:

CSFY

MMI Menu:

Traffic - Normal

XDEM

Cancel forced demand(s) on a particular stage

This command allows you to cancel demands that have been previously forced for a stage on a Junction or Pelican by the DEMA command. The SCN may be wildcarded to cancel demands on all Junctions or Pelicans.

The stage parameter is optional; if omitted all the demands for stages which are forced using the 'DX' bit are removed. If a stage is specified it must have been configured as a demand dependent stage and the demand for that stage is removed. Only pelican controllers which have a 'PX' bit may have their demand cancelled by this command.

Junction Configuration	**Command:** DEMA J12345	**Command:** DEMA J12345 A	**Command:** DEMA J12345 *
DX only	Cancel DX	Rejected	Rejected
Dn only	Rejected	Cancel DA	Cancel all Dn (but not DX)
Dn and DX	Cancel DX	Cancel DA	Cancel all Dn (but not DX)

Operator Command Format:

XDEM SCN [DD_STAGE]

Examples:

XDEM J01111 C

XDEM J00000

Timetable Command Format:

TIME XDEM SCN [DD_STAGE]

Examples:

21:45:50 XDEM J01111 C

23:30:00 XDEM J00000

Inverse Command:

DEMA

Related Command:

LSTS

MMI Menu:

Faults

XDIA

Disable dial up Access

This command disables either all dial-up access to the System or access for a particular dial-up user.

If the dial-up users are logged onto the System when the command is entered they are automatically logged off.

Operator Command Format:

XDIA [ALL | USERNAME]

Examples:

XDIA ALL

XDIA SIEMENS

Timetable Command Format:

TIME XDIA STRING

Example:

21:45:50 XDIA ALL

Inverse Command:

DIAL

Related Commands:

ENDS

MMI Menu:

Admin

XDIM

Cancel dimming override bit

The command causes the System to cancel the dimming override control bit being transmitted to the specified equipment. The SCN may be wildcarded if desired.

Operator Command Format:

XDIM SCN

Example:

XDIM J01111

Timetable Command Format:

TIME XDIM SCN

Example:

21:45:50 XDIM J01111

Inverse Command:

DIMO

MMI Menu:

Traffic - Normal

XDIS

Reconnect outstation

This command causes the System to resume transmission of control words to and receipt of reply words from the specified OTU. The SCN may be wildcarded if desired.

Operator Command Format:

XDIS SCN

Example:

XDIS X01450

Timetable Command Format:

Not available

Inverse Command:

DISO

Related Commands:

ISOL, XISO

MMI Menu:

Faults

XEME

Cancel Equipment Message

This command removes the text of any message associated with an equipment SCN. If fault category is zero, or omitted, then all messages will be removed, otherwise only the message associated with the optional fault category will be removed.

Operator Command Format:

XEME SCN [VALUE]   (VALUE = fault category)

Examples:

XEME J03111

XEME J01111 121

Timetable Command Format:

23:59 XEME J11111

23:00 XEME J05000 113

Related Commands:

EMES, LSTF, DIPM, LEME

MMI Menu:

Faults

XFAL

Clear fall-back mode bit

This command causes the System to cancel the fall-back mode selection control bit being transmitted to the specified equipment. The SCN may be wildcarded if desired.

Operator Command Format:

XFAL SCN

Example:

XFAL J01124

Timetable Command Format:

TIME XFAL SCN

Example:

23:50 XFAL J01124

Inverse Command:

FALL

MMI Menu:

Traffic - Normal

XFLA

Cancel flashing amber mode

This command causes the System to cancel a previous operator command, FLAS and restores the controller from flashing mode to its default mode of operation. The SCN may be wildcarded. However, if a wildcarded SCN is used, the XFLA command is only enabled if all the controllers have the FF bit configured.

Operator Command Format:

XFLA SCN

Example:

XFLA J11241

Timetable Command Format:

TIME XFLA SCN

Example:

07:12:30 XFLA J11241

Inverse Command:

FLAS

MMI Menu:

Traffic – Specials

XFLG

Erase fault category group

This, optional, command allows you to erase a previously set up fault category group.

Operator Command Format:

XFLG nn

Examples:

XFLG 1111

Timetable Command Format:

Not available

Related Commands:

FLTG, LFLG, XFLT

MMI Menu:

Admin/Fault groups

XFLT

Cancel fault

This command allows you to clear faults recorded on a particular SCN. The SCN may be wildcarded if desired. A fault category may be specified which may also be wildcarded. If the fault category is omitted, a value of zero (i.e. all faults) is assumed. Faults on the computer or the terminals may not be cleared by use of this command.

For a list of fault categories, see Appendix C.

Operator Command Format:

XFLT SCN [VALUE] (VALUE = fault category)

Examples:

XFLT X23310

XFLT J01119 100

Timetable Command Format:

TIME XFLT X00000

Inverse Command:

FLTY

Related Command:

LSTF, FLTG, LFLG, XFLG

MMI Menu:

Faults

XFTA

Specify which Faults should not raise a System Alarm

This command allows an operator to specify which faults shold not raise a system alarm. A Fault category (which may be wild carded) and, optionally, an equipment type should be specified. The equipment type should be specified by entering an appropriate globally wildcarded SCN. If no equipment type is specified, the command will operate on all equipment types.

Operator Command Format:

XFTA [SCN] FAULT_CATEGORY

Example:

XFTA J00000 100

FXTA 700

Timetable Command Format:

TIME XFTA [SCN] FAULT_CATEGORY

Example:

23:00 XFTA J00000 120

Inverse Command:

FLTA

MMI Menu:

Faults

XGWA

Cancel operator green wave

This command cancels a previously requested operator green wave on the specified SCN. Wildcarded SCNs are not allowed.

Terminals must be specifically configured during terminal data preparation if they wish to use this command.

Operator Command Format:

XGWA SCN

Example:

XGWA G05119

Timetable Command Format:

Not allowed

Related Commands:

GWAV, LSTG

MMI Menu:

Traffic - Specials

XHRY

Cancel Manual Hurry Call

This command cancels a manual hurry call request for a controller.

A maximum of 5 controllers may be specified in one command. SCN must be the SCN of a junction or pelican controller, not wildcarded

Operator Command Format :

XHRY SCN [SCN] [SCN] [SCN] [SCN]

Example :

XHRY J03111

XHRY J03112 P21111

Timetable Command Format :

Not available

Related Command :

HRYC

MMI Menu :

Traffic - Specials

XIFT

Cancel Inhibited Fault

This facility allows the user to cancel faults that have been inhibited by use of the IFLT command.

This is a licenced feature.

Operator Command Format:

XIFT [SCN] [Fault_Category]

Examples:

XIFT

XIFT J01123

XIFT J00000 132

Timetable Command Format:

09:34 XIFT J20100

Related Commands:

LIFT, IFLT

MMI Menu:

Faults

XIHP

Re-enable plan compliance fault isolation

This command cancels the inhibition of plan compliance fault isolation of a junction or pelican controller. The wildcard 120 may be used with junction or sub-area SCNs but not pelicans. Omitting the fault category has the same effect.

The particular fault categories for junctions and sub-area SCNs are 121 - plan compliance fault and 122 - wrong stage returned; for pelicans only plan compliance fault 122 is available.

Operator Command Format:

XIHP SCN [Fault_Number]

Example:

XIHP J05119 121

Timetable Command Format:

TIME XIHP SCN Fault_Number

Example:

10:20:40 XIHP J13221 121

Inverse Command:

IHPC

Related Command:

LSTS

MMI Menu:

Faults

XIHR

Re-enable reply word analysis

This command cancels the inhibition of reply word analysis (i.e. enables it) on the equipment specified. The equipment SCN may not be wildcarded.

Operator Command Format:

XIHR SCN

Example:

XIHR J05119

Timetable Command Format:

TIME XIHR SCN

Inverse Command:

IHRW

Related Commands:

DISO, XDIS, ISOL, XISO

MMI Menu:

Faults

XIHT

Cancel Tram Priority Inhibition

This command cancels the inhibition of tram priority as set by the INTP command. The junction SCN may be wild carded. The required TI bit must be specified.

Operator Command Format:

XIHT SCN <TI bit>

Examples:

XIHT J04211 2

XIHT J00000 4

Timetable Command Format:

TIME XIHT SCN <TI bit>

Example:

15:55 XIHT J00000 1

Inverse Command:

IHTP

MMI Menu:

Traffic

XINH

Cancel inhibition of weekly flow analysis

This command cancels the weekly flow analysis inhibit flag for the specified detector SCN (which may not be wildcarded). Output can again be produced for the site when an OPFD command is entered.

Operator Command Format:

XINH SCN

Example:

XINH D92315

Timetable Command Format:

TIME XINH SCN

Example:

10:20:40 XINH D92315

Related Commands:

INHW, OPFD

MMI Menu:

Reports

XISO

Cancel controller isolation

This command cancels the isolation of the specified controller (or controllers if the SCN is wildcarded). Its control bits return to normal.

Operator Command Format:

XISO SCN

Example:

XISO J09000

Timetable Command Format:

TIME XISO SCN

Example:

15:30 XISO J09000

Inverse Command:

ISOL

Related Commands:

DISO, XDIS

MMI Menu:

Faults

XLIV

Start simulation of an equipment

NOTE: This is an unsupported feature for use by STC maintenance engineers.

This command starts simulation of the specified equipment. The valid equipment types are outstations, junctions, pelicans, special facilities, count detectors, SCOOT detectors, queue detectors, car parks, car park signs and diversion signs. If a computer SCN is entered then an outstation address must be specified. If the equipment is an outstation or outstation address then simulation is started for all equipment on the outstation. The SCN may be wildcarded except for computer SCNs.

Operator Command Format:

XLIV COMPUTER_SCN ADDRESS

XLIV SCN

Examples:

XLIV J11241

XLIV X00000

XLIV H01000 12

Timetable Command Format:

Not available

Inverse Command:

LIVE

Related Command:

SIMU

MMI Menu:

Not available

XLLN

Cancel local link inhibit bit

This command cancels the transmission of the local link inhibit control bit to the specified controller (or controllers if the SCN is wildcarded).

Operator Command Format:

XLLN SCN

Example:

XLLN J01111

Timetable Command Format:

TIME XLLN SCN

Example:

15:30 XLLN J01111

Inverse Command:

LLNK

MMI Menu:

Traffic - Normal

XLOT

Cancel logging of OTU control and reply bits

This command terminates the logging of data for a particular OTU (started using the LOTU command).

Any equipment SCN that has an OTU associated with it, or a computer SCN may be entered, followed by an outstation address.

The SCN or address specified may not be wildcarded.

Operator Command Format:

- Common format

  XLOT SCN

- Telecommand 8 System

  XLOT COMPUTER_SCN ADDRESS

- Telecommand 8 OTUs on a Telecommand 12 PC

  XLOT PC_SCN ADDRESS

- Telecommand 12 OTUs

  XLOT PC_SCN TC12_MODEM ADDRESS

Examples:

XLOT X01450

XLOT H01000 145

XLOT E01001 123

XLOT E01001 5 16

Timetable Command Format:

- Common format for all Systems

  TIME XLOT SCN

- Telecommand 8 System

  TIME XLOT COMPUTER_SCN ADDRESS

- Telecommand 8 OTUs on a Telecommand 12 PC

  TIME XLOT PC_SCN ADDRESS

- Telecommand 12 OTUs

  TIME XLOT PC_SCN TC12_MODEM ADDRESS

Examples:

16:20 XLOT X01450

15:00 XLOT H01000 145

12:30 XLOT E01001 123

18:00 XLOT E01001 5 16

Inverse Command:

LOTU

Related commands:

DLOT, MONI, OVRB

MMI Menu:

Faults

XMES

Stop output of event message

This command terminates the output of selected event driven messages. The list of event driven messages is given in reference 1.3.2(e).

If the name ALL is given in place of the name of an event message then all event driven messages currently active on the nominated terminal are cancelled. This is a quick way of clearing up after validation.

An optional parameter may be used to cancel output to the ASTRID computer or to an archive file or SCOOT log. The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

XMES NAME ScSCN [>ASTRID]

NAME = message name (see reference 1.3.2(e)) or "ALL"

Examples:

XMES M14 N04141A

XMES C05 RLL >ASTRID

XMES ALL

XMES M14 N04161A >ARCHIVE

XMES M14 N04161A >SCOOT_LOG

Timetable Command Format:

TIME XMES NAME ScSCN TERM | ASTRID

Examples:

15:15 XMES M14 N04141A T01005

15:20:30 XMES C05 RLL ASTRID

Inverse Command:

MESS

Related Commands:

LSTM

MMI Menu:

SCOOT

XMOV

Remove a Moveable Count Detector from an OTU

This command cancels the effect of the MOVE command.The command removes a Type 8 (Moveable) count detector from its currently allocated OTU. The detector will cease counting and not resume until allocated to another OTU by means of the MOVE command.

Note: This is a licenceable facility.

Operator Command Format:

XMOV {DETECTOR}

Example:

XMOV D88111

Timetable Command Format:

TIME XMOV SCN

Example:

08:30 XMOV D88111

Related Command:

MOVE

MMI Menu:

Traffic, Specials

XMVA

Cancel MOVA Control Mode

This command causes the system to cancel a previous operator command, MOVA and restores the controller from MOVA control to its default mode of operation.

The SCN may be wildcarded. However, if a wildcarded SCN is used, the XMVA command will only be actioned on the controllers which have the MO bit configured.

The command is also allowed in timetables or CASTs.

Operator Command Format:

XMVA SCN

Example:

XMVA J01923

Timetable Command Format:

TIME XMVA SCN

Example:

08:30 XMVA J01900

Related Command:

MOVA

MMI Menu:

Traffic, Specials

XPLA

Cancel operator fixed-time plan

This command removes operator or temporary imposed control (PLAN, VARY or OFFSET) on the SCN specified in the command, and returns the equipment(s) to their normal time of day control.

The SCN may be wildcarded.

Either OPERATOR or TEMPORARY may be specified for the priority parameter. The default is OPERATOR. See PLAN command description for further details of these priority levels.

If an operator imposed plan is running and a PLAN command has also been entered to introduce a further plan at a later time, entry of an XPLA command cancels both.

Operator Command Format:

XPLA SCN

Example:

XPLA J01131

Timetable Command Format:

TIME XPLA SCN

Example:

22:32:15 XPLA J01131

Inverse Command:

PLAN

Related Commands:

VARY, OFST, LIPT

MMI Menu:

Traffic - Normal

XPRI

Disable log printer

This command turns log printing off, i.e. messages for the System Log are not output to the System Log printer.

This command may be cancelled automatically using the command cancel facility. See Section 9.1.6 for details.

Operator Command Format:

XPRI [TIME}

Example:

XPRI

XPRI 12:00

Timetable Command Format:

TIME XPRI

Inverse Command:

PRIN

MMI Menu:

Admin

XRUB

Delete previously RUBAed data

The RUBA command is used to enter various SCOOT parameters into the baseline file. The XRUB command may be used to delete data for a specifed SCN and parameter from the baseline file.

If the parameter is omitted all data for the specified SCN will be deleted.

Operator Command Format:

XRUB [PARAM] SCN

Example:

XRUB STOC N12111A

XRUB N12341Z

Timetable Command Format:

Not available

Related Commands:

RUBA, LUBA, DUBA, CHAN, VALU

MMI Menu:

None

XSCA

Action the CHANs in a selected CAST in Cancel CHAN Priority mode

This command causes a selected CAST to be actioned - ie., all the commands in the CAST will be executed. However, all the CHAN commands in the selected CAST will be translated into XCHA commands. This is the cancel action to a previously executed SCAS command. The CAST may be referred to by its name or by number.

This command is not available in the timetable.

This is a licensed facility (ESS).

Operator Command Format:

XSCA CAST.IDENTIFIER

Examples:

XSCA 16

XSCA ROADWORKS

Timetable Command Format:

Not available

Inverse Command:

SCAS

Related Commands:

CHAN … SUPER, XCHA, ACAS, LCAS, ICAS, DCAS, NCAS

MMI Menu:

CASTS

XSCO

Cancel SCOOT control

This command switches SCOOT control off for a node or region. SCOOT control may be re-implemented by a SCOO command. Operator and timetable SCOO and XSCO commands have equal priority.

Operator Command Format:

XSCO ScSCN

Examples:

XSCO N02331

XSCO RHA

Timetable Command Format:

TIME XSCO ScSCN

Example:

08:00:38 XSCO N02331

Inverse Command:

SCOO

MMI Menu:

Traffic - Normal/SCOOT

XSFN

Re-enable special facility selection

This command cancels the inhibition of a single special facility or range of special facilities (wildcarding is allowed). The special facility may have been inhibited by the SFNO command.

Operator Command Format:

XSFN SCN

Examples:

XSFN F01112

XSFN F01000

Timetable Command Format:

TIME XSFN SCN

Example:

08:00:38 XSFN F01121

Inverse Command:

SFNO

Related Commands:

CSFY, XCSF

MMI Menu:

Traffic - Normal

XSIG

Cancel sign legend override

This command causes the System to cancel the operator imposed car park or diversion sign legends. The SCN may not be wildcarded.

Operator Command Format:

XSIG SCN

Examples:

XSIG S70312

XSIG V00000

Timetable Command Format:

TIME XSIG SCN

Example:

16:33 XSIG S70318

Inverse Command:

SIGN

Related Command:

STCS

MMI Menu:

Traffic - Normal/Car Parks

XSLO

Turn part time signals on

This command causes the System to enable part time signals that have been disabled to use the SLOF command.

This command may not be wildcarded.

Operator Command Format:

XSLO SCN

Example:

XSLO J09231

Timetable Command Format:

TIME XSLO SCN

Examples:

15:15 XSLO J09231

15:20:30 XSLO J09231

Inverse Command:

SLOF

MMI Menu:

Traffic - Normal

XSPO

Cancel spooled output

This command cancels spooled output on the configured printers for the terminal where the command was entered. The command stops spooled output currently in progress and any output initiated within the next 10 seconds. Listings or spooled output requested after this period are unaffected.

Output to a specific terminal/printer can be cancelled by using the redirection operator '>'.

The output from this command may be redirected to other terminals or printers. See section 9.1.5 for more details.

Operator Command Format:

XSPO

Example:

XSPO

Timetable Command Format:

Not available

MMI Menu:

Reports/Admin

XSSG

Cancel logging of stage timings data

This command terminates the logging of intersection/pelican stage timings data initiated by the SSGM command.

Operator Command Format:

XSSG SCN

Example:

XSSG J01332

Timetable Command Format:

TIME XSSG SCN

Inverse Command:

SSGM

Related Command:

DSSG

MMI Menu:

Faults

XSUT

Cancel all operator timetable overrides

This command cancels the effect of all previously entered SUTT commands. The timetable specified by the day-of-week/date-of-year schedules is loaded. The new timetable is scanned from the start of the day till the current time and is then used as the current timetable.

When a new timetable is selected an entry is placed in the System Log.

Operator Command Format:

XSUT

Example:

XSUT

Timetable Command Format:

Not available

Inverse Command:

SUTT

Related Command:

OUTT

MMI Menu:

Manager

XTAP

Cancel APS in test mode

This command is used to disable automatic fixed-time plan change decisions in TEST mode. These decisions are based on queue, volume and congestion information. While in test mode no plan changes are actually implemented, instead messages are output detailing which plan would have been selected. APS test mode may be re-enabled by the -TAPS command. The SCN may be wildcarded, unless it is a sub-area SCN.

Operator Command Format:

XTAP SCN

Example:

XTAP A01000

Timetable Command Format:

TIME XTAP SCN

Example:

15:15 XTAP A01000

Inverse Command:

TAPS

Related Commands:

SAPS, XAPS

MMI Menu:

Traffic - Specials

XTES

Cancel wall map or SIP lamp test

This command cancels all the wall map test indications and restores the lamps to their correct state. It can also be used to cancel the test of the lamps and the audible alarms on the alarm panel.

Operator Command Format:

XTES NAME (NAME = "MAP" or "ALM")

Examples:

XTES MAP

XTES ALM

Timetable Command Format:

Not available

Inverse Command:

TEST

MMI Menu:

Admin

XTID

Cancel Tidal Flow control

This command removes the specified Tidal Flow controller from UTC control and allows it to revert to Local control.

Operator Command Format:

XTID SCN

Example:

XTID L05111

Timetable Command Format:

TIME XTID SCN

Example:

07:12:30 XTID L05111

Inverse Command:

TIDL

MMI Menu:

Traffic – Specials

XTRA

Cancel AM/PM Tram Priority

This command cancels the AM or PM tram priority bits for the specified junction(s). The SCN may be wild carded

Operator Command Format:

XTRA SCN

Examples:

XTRA J04211

Timetable Command Format:

TIME XTRA SCN

Example:

15:55 XTRA J00000

Inverse Command:

TRAP

Related Commands:

LTRA

MMI Menu:

Traffic

XTRO

Enable output to a terminal

This command enables output of System Messages to the specified terminal or printer after having been previously disabled by the TROF command.

Operator Command Format:

XTRO TERM

Example:

XTRO T01001

Timetable Command Format:

TIME XTRO SCN

Example:

07:12:30 XTRO T01001

Inverse Command:

TROF

MMI Menu:

Admin

XTTC

Remove command from Temporary TimeTable

This command This command removes commands from the temporary timetable. Commands that have been entered with a start time are stored in the temporary timetable (timetable 0) until they are executed. If only a time is entered with the XTTC command then all commands with that time will be deleted. If more than one command exists for a particular time then a specific command may be removed by entering the command string for that command. The command string must exacltly match the command string that was originally entered.

A user may only remove those temporary commands for which he has the necessary level of acces for him to enter the command originally.

Operator Command Format:

XTTC {TIME} [COMMAND STRING]

Examples:

XTTC 10:00

XTTC 10:15 PLAN J12341 1

Timetable Command Format:

Not available

MMI Menu:

Admin

XTUN

Cancel Tunnel Control

This command cancels UTC control on the specified tunnel controller. The tunnel controller returns to local control.

Operator Command Format:

XTUN SCN

Example:

XTUN L05111

Timetable Command Format:

TIME XTUN SCN

Example:

07:12:30 XTUN L05111

Inverse Command:

TUNL

MMI Menu:

Traffic - Specials

10. UTC VALU/CHAN Parameter Description

This section describes the VALU and CHAN parameters exclusive to UTC. All SCOOT VALU and CHAN parameter descriptions are contained in the SCOOT User Guide, ref. 1.3.2(e). All the parameters in this section can be used with both VALU and CHAN.

AFDT - Almost Full Decreasing Threshold

This parameter applies to car parks only.

Values for CHAN are 0 to AFIT-1.

The Almost Full Decreasing Threshold is used by the system to change the state of car park signs. If this threshold is crossed with a decreasing vehicle count the system changes the appropriate sign(s) state(s) from "ALMOST FULL" to "SPACES" after completing the Change Down Delay for the associated car park.

AFIT - Almost Full Increasing Threshold

This parameter applies to car parks only.

Values for CHAN are from AFDT to FDTH-1.

The Almost Full Increasing Threshold is used by the system to change the state of car park signs. If this threshold is crossed with an increasing vehicle count the system changes the appropriate sign(s) state(s) from "SPACES" to "ALMOST FULL".

APSR – Automatic Plan Selection Re-Run Interval

This parameter sets the minimum interval for plan change under APS. Acceptable values are in the range 1 to 120 minutes.

Note that some systems are configured to use the highest cycle time for the re-run interval.

CACP - Congestion Alarm Clear Percentage

This is a UTC count detector parameter.

This is the percentage congestion at which a count detector congestion alarm clears. It may not be set to more than the Congestion Alarm Set Percentage (CASP) and in this event remains unchanged.

CAPA - Car park capacity

This parameter is for car parks only.

Values for CHAN are 0 to the maximum capacity configured for any car park on the system. This is defined in the UTC FMS form for Car Park Data.

CASP - Congestion Alarm Set Percentage

This is a UTC Count Detector command.

This is the percentage congestion at which a count detector congestion alarm is set. It may not be set to less than the Congestion Alarm Clear Percentage (CACP) and in this event remains unchanged.

CJNY - VMS to car park or car park group journey time.

This parameter is for VMS Car Park signs only.

Values for CHAN are 0 to 3600 sec.

COMM - Override Communications Profile.

This parameter is for UTMC type 2 outstations only.

Enter the ID of a UTMC2 outstation communications profile. The selected profile will override the profile specified in the database. If the outstation is currently online, then it will go briefly offline and then come back online using the new profile which typically takes less than 3 seconds.

To cancel the override, enter an ID of 0.

Use of this parameter can be useful when monitoring SCOOT detector replies (e.g. with MONI/LMON) to switch from a profile that batches SCOOT detector data, to one that doesn't so that data shown is more immediate.

COPS - Car Park Occupancy Prediction Smoothing Factor

This parameter is for car parks only.

Values for CHAN are 0 to 100 percent.

This parameter is used in smoothing car park occupancy predictions.

CQT1 - Car Park Queuing Time for Range 1

This is a UTC Count Detector command.

This is the queuing time, which is reported when the occupancy of a detector associated with a car park is in range 1. There are four detector occupancy ranges and the limits for these are defined on the count detector form of data preparation. Note that an occupancy of 0 always reports a queuing time of 0.

The four queuing times associated with the occupancy ranges must be in ascending order, not overlapping and in the range 1 to 120 minutes. If the queuing time is set to a value that violates these rules an error is reported and the limit remains unchanged.

CQT2 - Car Park Queuing Time for Range 2

CQT3 - Car Park Queuing Time for Range 3

CQT4 - Car Park Queuing Time for Range 4

See **CQT1** for details of these parameters.

DIVR - Automatic Diversion Selection Re-run Interval

This parameter is only available on those Systems which are configured for automatic diversion selection.

Values for CHAN are 0 to 60 minutes.

This parameter sets the minimum interval between diversion changes when automatic diversion selection is being used.

FDTH - Full Decreasing Threshold

This parameter applies to car parks only.

Values for CHAN are AFIT+1 to CAPA-1.

The Full Decreasing Threshold sets the threshold at which a decreasing vehicle count changes the appropriate car park sign(s) state(s) from "FULL" to "ALMOST FULL" after completing the Change Down Delay for the associated car park.

FITH - Full Increasing Threshold

This parameter applies to car parks only.

Values for CHAN are FDTH+1 to CAPA-1.

The Full Increasing Threshold sets the threshold at which an increasing vehicle count changes the appropriate car park sign(s) state(s) from "ALMOST FULL" to "FULL".

GRET - Green Red entrance threshold

This parameter applies to car parks only.

Values for CHAN are 0 to CAPA.

This parameter is used to set the threshold of vehicles at which an entrance sign changes from "SPACES" to "FULL" (with an increasing vehicle count), or vice-versa for a decreasing vehicle count. The representation of "SPACES" and "FULL" at the entrance sign is system dependent.

GWPL - Green Wave Plan number

This parameter applies to Green Waves only.

Values for CHAN are from 1 to 100.

The default green wave plan defined in data preparation can be changed by this parameter. No two green wave SCNs may have the same green wave plan assigned, and the operator CHAN command that attempts to implement this is rejected. Under timetable or CAST control, an error message is output informing that the change has not occurred at the time of implementing the command.

NCMT - No Counts Message Time

This parameter applies to Counting detectors.

Values for CHAN are 0 to 1440 minutes. Default is 15.

The value must be a multiple of the current count interval.

This value is the number of minutes before a counting detector registers a 'No Counts' fault.

PDCC - Pay and Display Car park Correction

This parameter applies to Pay and display car parks only.

Values for CHAN are 1 to 200 percent. Default 100 percent

This is a factor used with car parks deriving occupancy from pay and display machines. It is used to multiply the raw data before use in the UTC system to allow for over and under buying.

PDCM - Permanent Demand Checking Mode

This is a junction level parameter..

Values for CHAN are OFF, DEMAND, ALL.

A permanent stage demand fault will be raised against a demand dependent stage if PDCM has been set to DEMAND or ALL and the demand dependent stage has appeared every cycle for a 60 minute period. If demands have been forced with DX or Dn or the stage does not appear for a cycle then the 60 minute timer is reset.

A permanent stage demand fault will be raised against a non demand dependent stage if PDCM has been set to ALL and the junction is under local control and the stage has appeared every cycle and every time has run for its configured maximum stage time (within the upper and lower bounds) for a 60 minute period. The 60 minute timer is reset every time the stage does not appear for a cycle or runs less or **longer** than its configured maximum time, or DX is forced.

The way this facility should be used is as follows. Two commands should be put into the timetable at the beginning and end of the light traffic period. For example,

```
02:30 CHAN PDCM J00000 ALL
04:00 CHAN PDCM J00000 OFF
```

If not all the junctions are to be checked then a CAST should be created and the individual CHAN PDCM commands for the required junctions inserted into it.

Note, if controller checks is run on a controller whilst PDCM is enabled then the permanent demand checks will effectively be disabled.

PFLG - Persistent Fault Log

This parameter determines whether the UTC fault log persists between system restarts.

The values for CHAN are: YES and NO

If enabled, then prior to system shutdown, the live fault log is saved to disk. Following the restart, the fault log is reloaded from disk. During startup, the system suppresses error reporting for the short period that it takes for outstations to come online, thereby eliminating temporary startup fault conditions.

The persistent fault log feature is a licensed facility. If the feature is licensed then the default for this parameter will be YES.

PIGE - Permanent Intergreen Extension Limit

This parameter applies to intersection controllers and sets the number of consecutive cycles which are tested for intergreen extensions to their maximum value. If the upper and lower intergreen values are the same, no checking is performed. The range of CHAN values is from 0 (no checking) to 62.

PPEL - Permanent Pedestrian Stage Maximum Extension limit

This parameter applies to pedestrian controllers.

Values to CHAN are 0 to 255.

When set to a non-zero value, this parameter is used to detect puffins that always extend the pedestrian stage. This can occur when the puffin pedestrian detector is faulty.

The check works as follows:

Every time the puffin Not-GX stage runs for at least the upper Not-GX time a counter is incremented. When the counter reaches the PPEL value a 'Permanent Pedestrian Stage Max Extension' [0464] fault will be raised. If the Not-GX stage runs for less than the upper Not-GX time then the counter is cleared.

When set to 0, no checking is performed.

A value of 50 is suggested for this check. This means that if a puffin runs the pedestrian stage to its maximum for 50 times in succession a fault will be raised.

This parameter may not be used on pedestrian controllers for which the upper and lower Not-GX times are the same (i.e. pelicans for which no extension is possible).

PRTD - Priority Route Duration

Priority Routes require an additional license from STCL

Specifies the duration for which the fixed time plan (specified by PRTP) will run when triggered by a greenwave. After this time the previous mode of control will be resumed. The duration may be in the range 1 to 720 seconds. 0 disables priority route control, in which case normal greenwave control will apply to the junction/pelican.

The SCN may be specified as junction, pelican, subarea or greenwave. The SCN may be wildcarded, except for greenwave. A greenwave SCN causes all junctions and pelicans in the greenwave to be set.

PRTP - Priority Route Plan

Priority Routes require an additional license from STCL

The PRTP parameter specifies the Fixed Time plan to run on a controller in place of normal rolling greenwave control. The plan number may be in the range 1 to 40. A value of 0 disables priority route control, in which case normal greenwave control will apply to the junction/pelican.

The SCN may be specified as junction, pelican, subarea or greenwave. The SCN may be wildcarded, except for greenwave. A greenwave SCN causes all junctions and pelicans in the greenwave to be set.

SMOO - Smoothing factor for congestion

This is a UTC detector parameter.

Values for CHAN are 0 to 99%.

This is a smoothing factor for occupancy from flow detectors. The value "X" allocated to this parameter signifies the occupancy value stored for this detector is X% of the current unsmoothed value and (100-X)% of the accumulated smoothed value. 0% means total smoothing, with a stored value constant after a short initial period, and 99% stores practically unsmoothed data.

TDS1 -

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99, in minutes.

TDS2 -

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99, in minutes.

TIS1 -

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99, in minutes.

TIS2 -

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99, in minutes.

VEHC - Vehicle count

This parameter is for car parks only.

Values for CHAN are 0 to CAPA.

This changes the count of vehicles in a car park.

VLAG - Volume alarm lag time

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99, in minutes.

This is the number of continuous minutes, during which the one minute alarm threshold has been exceeded. Alternatively, it is the number of continuous minutes, during which the count of vehicles does not exceed the one minute threshold value.

VTHR - One Minute Volume Alarm Threshold

This is a UTC flow detector parameter.

Values for CHAN are 0 to 99.

The VTHR parameter may be used to change the one minute alarm threshold which is set in DBAS. If more than VTHR vehicles are counted in a one minute period the volume alarm may be set.

ZRTM - RTIG Traffic Movement Association

This is a pseudo Remote Request parameter

Values for CHAN are 0 to 31

This parameter is used in conjunction with ZRTS and ZRTP to associate a remote request with the notification of a bus received from an AVL system using the RTIG XML interface.

See the help for ZRTS for an overall summary of the use of these parameters.

ZRTP - RTIG Traffic Point Association

This is a pseudo Remote Request parameter

Values for CHAN are REGISTER, REQUEST, CLEAR or 0 to 15

This parameter is used in conjunction with ZRTS and ZRTM to associate a remote request with the notification of a bus received from a AVL system using the RTIG XML interface.

See the help for ZRTS for an overall summary of the use of these parameters.

This parameter associates a particular trigger point with the remote request. Though the AVL interface supports up to 16 trigger points, there are only 3 well defined ones. These are 'Register' (0) when the bus is approaching the junction at some distance, 'Request' (1) when the bus is nearer the junction and is requesting immediate priority and 'Clear' (2) when the bus has cleared the junction. An AVL system may not implement all these trigger points though, typically, 'Request' will always be supported and this is the default value.

ZRTS - RTIG Traffic Signal Number Association

This is a pseudo Remote Request parameter

Values for CHAN are 0 to 16383

This parameter is used in conjunction with ZRTM and ZRTP to associate a remote request with the notification of a bus received from an AVL system using the RTIG XML interface.

Normally, RTIG bus notifications are associated with SCOOT links (via the BTSN and BTSM parameters) for SCOOT bus priority. However, to allow alternative actions to be taken, for example, to enable local bus priority at non-SCOOT sites, RTIG notifications can be associated with a pseudo remote request. (A pseudo remote request is one that is not configured on an outstation). When a notification matching the selection criteria is seen, the pseudo remote request is 'set' for 3 seconds. Any actions associated with the remote request - such as setting a special facility, or calling a CAST (ARRQ) - will be initiated.

When the AVL system detects a bus approaching a junction, it supplies the traffic signal number of the junction (1-16383), the stage movement that is requested (0-15), and a trigger point (0-15). To associate a remote request with a RTIG notification all three values must be set with the ZRTS, ZRTM and ZRTP parameters respectively.

The traffic signal number set by ZRTS should be the AVL system's id for the junction (not the UTC SCN).

If ZRTS is set to 0 then this deletes any association.

Users of this facility should insert the CHAN ZRTS/ZRTM/ZRTP configuration commands in a CAST that is run at the start of every day. The ‘ASTRID’ CAST would be a suitable place.

The facility can be monitored using the U27 event driven message.

11. UTC Event Driven Messages

This section describes the supported event driven messages exclusive to UTC. All SCOOT messages are contained in the SCOOT User Guide, ref. 1.3.2(e).

U01 <NODE> <REG> CYT<nnn> CHANGES <...>

Shows a list of the SCOOT Event times for the plan running on this NODE.

This message occurs approx either every 5 minutes or 2.5 minutes.

U02 <REG> Dbl Cycle <>, BIAS <>, CGWT <>, FCYT <>, Gating <>, Hurry <> GWV <>, INCY <>, INOF <>, INSP <>, SCOOT OFF <>, TPLN <>

Shows a list of all the factors which can effect SCOOT Plan lengths since the last time this message was output, or since the message was switched on.

This message occurs approx either every 5 minutes or 2.5 minutes.

U03 <REG> Faulty Detectors : <DET...>

Shows a list of faulty detectors for this region since the last time this message was output, or since the message was switched on.

This message occurs approx either every 5 minutes or 2.5 minutes.

U04 Link <LINK> No Green During Last hour

No Green has occurred in the last hour on this link.

U05 Link <LINK> No Red During Last hour

U06 <LINK> MPH a1 KMPH a2 FLOW b OCC c HR d SR e

a1 average speed in the last interval in miles per hour

a2 average speed in the last interval in km per hour

b flow by detector and time interval.

The following values have been multiplied by 100 for accurate output:

c occupancy by detector and time interval.

d the headway ratio.

e the switch ratio occ/flow.

U07 Link <LINK> MPH a1 KMPH a2 FLOW b OCC c HR d SR e Count f

b is the total flow for the time interval.

a1 is the average speed in the last interval in miles per hour.

a2 is the average speed in the last interval in km per hour.

c is the average occupancy for the time interval.

f is the count of how many U06 messages were used for the averaging.

The following values have been multiplied by 100 for accurate output.

d is the average headway ratio.

e is the average switch ratio occ/flow.

U09 <COUNT-DETECTOR> COUNT: <VEHICLE-COUNT> OCC: <OCCUPANCY> FLT: <FAULT> SUBST: <SUBSTITUTED>

<VEHICLE-COUNT> is the number of vehicles recorded in the last five minutes

<OCCUPANCY> is the smoothed vehicle occupancy (%). 0 if the detector does not have an occupancy bit

<FAULT> is non-zero is count is not available because detector was faulty

<SUBST> is 1 if the vehicle count & occupancy were substituted for the values seen last week (in the event that the if the detector was faulty)

U10 <REMOTE-REQUEST> RID rid LOOP loop SID sid CID cid CSA csa VT vt AID aid OID oid VID vid

Sietag bus tag detected.

rid Reader ID

loop Loop (currently not used)

sid Supplier ID

cid Customer ID

csa Customer subarea

vt Vehicle Type

aid Activation ID

oid Operator ID

vid Vehicle ID

U11 <REMOTE REQUEST> aa .. ll

Bus tag detected

aa..ll the 12 bytes of the bus tag as returned by the OTU

before any interpretation of the data.

U12 <LINK> SID sid CID cid CSA csa VT vt AID aid OID oid VID vid

Sietag bus tag detected.

sid Supplier ID

cid Customer ID

csa Customer subarea

vt Vehicle Type

aid Activation ID

oid Operator ID

vid Vehicle ID

U15 Link <LINK> Inc Started. ATGBV a ALOTPV b FREQ c RuleGp d

a is the average time gap between vehicles (*100)

b is the average loop occupancy time per vehicle (*100)

c is the averaging frequency in intervals of 30 seconds.

d is the rule group for this detector.

U16 Link <LINK> Inc Cleared. ATGBV a ALOTPV b FREQ c RuleGp d

a is the average time gap between vehicles (*100)

b is the average loop occupancy time per vehicle (*100)

c is the averaging frequency in intervals of 30 seconds.

d is the rule group for this detector.

U17 Link <LINK> Grp Inc Started. ATGBV a ALOTPV b FREQ c DetGp d

a is the average time gap between vehicles (*100)

b is the average loop occupancy time per vehicle (*100)

c is the averaging frequency in intervals of 30 seconds.

d is the detector group number.

U18 Link <LINK> Grp Inc Cleared. ATGBV a ALOTPV b FREQ c DetGp d

a is the average time gap between vehicles (*100)

b is the average loop occupancy time per vehicle (*100)

c is the averaging frequency in intervals of 30 seconds.

d is the detector group number.

U19 Link <LINK> Calib error: RuleGp:a ALOTPV:b MAX:c ATGBV:d MIN:e

a: is the rule group for this detector.

b: is the average loop occupancy time per vehicle (*100).

c: is the Max ALOTPV from the rule data.

d: is the average time gap between vehicles (*100).

e; is the Min ATGBV from the rule data.

U22 <Link> Trig=T Pri=P SD=SS VCC=CC Veh=VVVVV OK=K

Output when the TP bit triggers for a junction.

U22 <Link> Trig=T Pri=P SD=SS VCC=CC Veh=VVVVV OK=K

This message is output when the SCOOT system receives a RTIG bus notification for this link. The values displayed are provided by the AVL system (except for K).

T Trigger Point (0 = Register, 1 = Request, 2 = Clear)

P Priority (1-3)

SD Schedule Deviation (How late or early the bus is)

0: Schedule Not Supplied

1: >=1 and <2 minutes late

2: >=2 and <3 minutes late

3: >=3 and <5 minutes late

4: >=5 and <7 minutes late

5: >=7 and <10 minutes late

6: >=10 and <15 minutes late

7: >=15 minutes late

8: On time (within a minute)

9: >=1 and <2 minutes early

10: >=2 and <3 minutes early

11: >=3 and <5 minutes early

12: >=5 and <7 minutes early

13: >=7 and <10 minutes early

14: >=10 and <15 minutes early

15: >=15 minutes early

CC: Local Vehicle Control Centre

VVVVV: The bus vehicle ID

K: If 0 then this bus detection is ignored. If 1 then it is supplied to SCOOT. The bus will be ignored if the trigger point is 2 or if a journey time (BJNY, BJT2) has not been specified for the particular trigger point.

U26 <DETECTOR> MPH a1 KMPH a2 FLOW b OCC c HR d SR e DETL f

a1: average speed in the last interval in miles per hour

a2: average speed in the last interval in km per hour

b: flow by detector and time interval.

f: is the number of lanes covered by the detector as specified by the DETL parameter

The following values have been multiplied by 100 for accurate output:

c: occupancy by detector and time interval.

d: the headway ratio.

e: the switch ratio occ/flow.

U27 <Remote-Request> Pri=P SD=SS VCC=CC Veh=VVVVV

This message is output when the SCOOT system receives an RTIG bus notification for this remote request. The values displayed are provided by the AVL system and are provided for information only.

P Priority (1-3)

SD Schedule Deviation (How late or early the bus is)

0: Schedule Not Supplied

1: >=1 and <2 minutes late

2: >=2 and <3 minutes late

3: >=3 and <5 minutes late

4: >=5 and <7 minutes late

5: >=7 and <10 minutes late

6: >=10 and <15 minutes late

U28 <Link> KPH sssss Flow ccc Occ ooooo Faulty f

This message is output every minute and reports the estimated speed over the loop(s), the leading edge vehicle count, and the percentage occupancy for the one period summed/averaged for all the detectors on the link.

Sssss: Speed in kilometres/hour

Ccc: Leading edge vehicle count

Ooooo: Percentage occupancy

F: 1 if link is faulty, 0 otherwise

U80 <OUTSTATION> UTMC2 Stats - SNMP Message Summary. Sets/Gets:PP Resp:RR Timeouts:TT Peformance:%%

SNMP message summary for UTMC Type 2 OTUs every 5 minutes.

PP: the total number of SNMP SET and GET messages

RR: the total number of SNMP responses received

TT: the total number of requests that timed-out

%%: RR/PP expressed as a percentage.

U81 <OUTSTATION> UTMC2 Stats - SNMP Message Response. Ave: AAAms Best: BBBms Worst: CCCms

Report UTMC2 Mark 2 communications response times - that is, the time taken to send an SNMP request and receive a response back from the OTU for it. This is output every five minutes. All times are in milliseconds. Only successful requests can be timed. For requests that timed-out see the U80 message.

AAA: average (mean) response time of all requests in 5 min period.

BBB: best response time seen in 5 minute period

WWW: worst response time seen in 5 minute period.U82 <OUTSTATION> UTMC2 Stats - SNMP Message Delivery Performance: %% SNMP Message longest blackout: BBBs. Reconnects: RRR

Summary report output every five minutes.

%%: Percentage of SNMP requests successfully delivered (weighted in favour of SET requests).

BBB: Longest interval in seconds during which communications timed-out

RRR: The number of times the instation has had to restart communications to the OTU

U83 <OUTSTATION> UTMC2 Stats - SNMP Inform Summary. Count:CCC Reply lag(s):Ave:AAA Best:BBB Worst:WWW Performance:%%

Summary report output every five minutes focusing on SNMP inform message received from the OTU. Inform messages contain OTU reply data. The delay time of such messages can only be estimated to within 1-2 seconds so these values are of limited usefulness.

CCC: Number of inform messages received

AAA: average estimated transmission delay

BBB: best estimated transmission delay

WWW: worst estimated transmission delay

%%: percentage of messages that took <= 1 second to deliver

12. System Interfaces

12.1 Introduction

The UTC System is capable of interfacing to a variety of other systems that supply or receive traffic information. The following sections describe the current interfaces supported.

12.2 Interface to ASTRID

The UTC System provides an interface to an ASTRID System, which enables UTC data to be transferred for further processing and calculation by ASTRID.

The parameters transferred are:

Event messages - congestion data, as required.

Daily file transfers:

car park occupancies

car park weighted averages

car park occupancy predictions.

12.3 Interface to ARTEMIS

The UTC System is able to interface to an ARTEMIS system taking ARTEMIS detector data for use with other count and occupancy detectors. ARTEMIS data can be used in displays as for other detectors.

The data is sent to the UTC System at 1(B) minute intervals. Since ARTEMIS does not use OTUs for transmission of the data, the detectors can be configured in the database without OTU data. Displays such as OVRB and MONI that show OTU control and reply bytes are therefore not appropriate for use with ARTEMIS detectors.

Invalid or suspect data is highlighted in the same manner as for other data.

12.4 Interface for Collection of On Street Parking data

The UTC System is able to interface to an On Street Parking PC that collects data from Pay and Display type machines on current ticket validity. The data is received from the PC every 15 minutes.

Up to 30 on street ticket machines can be configured together to form each type 5, on street car park. Each ticket machine has its own 4-character identity and can only be configured into one car park at a time.

Commands for other car park types, setting states, capacities and thresholds and displaying occupancies, weighted averages and predictions, can be used with On Street car parks. Since OTUs are not used for data transmission, displays such as OVRB and MONI are not appropriate.

The car park occupancy can be adjusted to allow for over or under buying of tickets using VALU/CHAN parameter. PDCC, range 1-200. The occupancy is calculated by the following formula:

$$\text{Occupancy} = \frac{\text{Number of Valid Tickets} * \text{PDCC}}{100}$$

If the connection to the PC is lost, the car park occupancy is derived from the weighted average data stored for the car park.

12.5 Interface to the Remote Monitoring System

The UTC System is able to accept fault data from the STC RMS. The data is processed with other UTC fault data. Count data is also accepted from the RMS and may be displayed with other count data.

12.6 Interface to UTMC Compliant Database

The UTC System is able to send data to a UTMC compliant Database server such as COMET. The data is sent automatically.

The UTC also receives commands from the UTMC compliant Database server which are actioned in the same manner as commands input by the operator.

12.7 Interface to Variable Message Sign Control PC

The UTC System is able to send car park and spaces data to a VCS PC for display on variable message signs. VCS controlled signs may be configured in the database.

A number of car parks may be grouped together to enable spaces data for the group to be displayed on one sign. The determination of car park group states is as for existing car park groups on named type car park signs. Capacity and occupancy values of car park groups are summed from the values for each open car park within the group.

Car park occupancy prediction data may be used in conjunction with the journey time from the sign to the car park to provide a more accurate spaces value. The additional data is used to adjust the spaces value to the number of spaces predicted to be left at the time of arrival at the car park. This is of value at busy times when the journey time may be significantly greater. The journey time can be configured using the VALU/CHAN parameter CJNY.

The VCS PC returns sign status data for inclusion in the UTC System log.

12.8 Interface to Motorway Control System

The UTC System is able to accept commands to action CASTS from the NMCS. Having actioned the CAST, the UTC System returns to the NMCS a message and the number of the command introduced by the CAST. The relevant operator command is NMCS.

12.9 Interface to Environmental Sensors

The UTC has the ability to interface to environmental analogue sensors for collecting and storing pollution and other environmental data, and to implement control strategies when one or a number of these sensors exceeds user defined threshold levels.

Appendix A - Summary of System Commands

This is a table of all the commands available in the UTC System. Against each command there are a number of parameters, which are:

L - the default command level required to action it

O - operator command

T - timetable command

G - command is logged

A - actioned in real time. A command of this type, when occurring in a timetable, is only actioned at the defined time. If the system is restarted and the timetable scanned, these commands are not actioned if this time has passed.

C - can be used in a CAST

J - command is journalled

		Type						
Name	Function	L	O	T	G	A	C	J
ACAS	Action CAST	8	O	T	G			
ACCT	Action CAST by region cycle time	13	O	T	G		C	
ACKD	Acknowledge fault(s) and cancel alarm	2	O		G			
ACSV	Action CASTs by Sensor Values	8	O	T	G		C	
ALRM	Output alarm text message	10	O	T			C	
ARCM	Start removable Disk Archive	14	O		G			
ARRQ	Associate remote request with CASTs	13	O	T	G		C	
ASCC	Action CAST by Saturation/Congestion	13	O	T	G		C	
ASLD	Assign SCOOT link to count detector	12	O					
ASTD	Start up the ASTRID display	14	O					
AUDI	Enable audible alarms	8	O	T	G		C	J
AUTH	Change SCOOT Authorities	13	O		G			
AVSP	Average SCOOT Plans	4	O	T	G	A	C	
CANA	Silence audible alarms	1	O		G			
CARP	Change Car Park status	12	O	T	G		C	J
CDBC	Select SCNs to be sent to Common Data Base	14	O					
CHAN	Change value of parameter	8	O	T	G		C	J
CHCK	Start controller test sequence checking	12	O	T	G	A	C	
CHCP	Change pelican controller checks mode	16		T	G		C	J
CHDC	Initiate SCOOT detector counts checking	16		T		A	C	
CHGO	Changeover to standby computer	16	O	T		A	C	

Name	Function	Type L	O	T	G	A	C	J
CHSI	Check and exercise signs	12	O	T	G	A	C	
CJNL	Insert clear journal command into the journal	14	O	T	G	A	C	J
CLOS	Close car park	10	O	T	G		C	J
CPOC	Output one day's Car Park occupancy	4	O	T		A	C	
CPOP	Display car park occupancy	4	O	T		A	C	
CREP	Report reply bit occurrence counts	4	O	T		A	C	
CSFY	Call special facility	12	O	T	G		C	J
CSUM	Associate count detectors with summing pseudo detector	12	O		G			
DATE	Modify current date	14	O		G			
DBAS	Run data preparation process	14	O		G			
DCAS	Delete an entry from a CAST	12	O		G			
DCOF	Delete car park occupancy file	14	O		G			
DCOU	List output of SCOOT detector checks	4	O	T		A	C	
DDFV	Display Default Values	4	O	T		A	C	
DEMA	Force demand on a particular stage	12	O	T	G		C	J
DGUL	Display SCOOT GULP data	4	O					
DIAL	Allow dial-up terminal access	14	O	T	G		C	J
DIMO	Transmit dimming override bit	10	O	T	G		C	J
DIPM	Display plan monitor	4	O					
DISO	Disconnect outstation	10	O	T	G		C	J
DLOT	Display logged OTU data	4	O	T		A	C	
DSSG	Display logged stage timings	1	O	T		A	C	
DUBA	Difference Against User Baseline	4	O	T		A	C	
ECAS	Edit CAST	14	O		G			
ECHO	Echo message to terminal	6	O	T		A	C	
EDAV	Earliest date of system files available	4	O					
EMES	Equipment Message	6	O	T	G	A	C	
EMIX	Specify mix of engine types for pollution modelling	8	O	T			C	J
ENDS	Terminate session	1	O					
ENOT	Edit noticeboard contents	10	O					
FALL	Transmit fall-back mode bit	10	O	T	G		C	J
FLAS	Set controller to flashing amber mode	2	O	T	G		C	J

Name	Function	L	O	T	G	A	C	J
		Type						
FLOW	Display detector flow monitor	4	O					
FLTA	Specify which faults should raise a system alarm	12	O	T			C	J
FLTG	Create or modify a fault group	6	O		G			
FLTY	Set fault manually	12	O	T	G	A	C	
GDDD	Graphical data display	1	O					
GENP	Generate semi-graphic pictures	6	O					
GUBA	Restore recorded baseline values	10	O	T	G		C	J
GWAV	Start operator green wave	12	O		G			
HELP	Online HELP screen	1	O					
HRYC	Start manual hurry call	12	O	T	G	A	C	
ICAS	Insert an entry into a CAST	12	O		G			
IFLT	Inhibit faults by category on an equipment	10	O	T	G		C	J
IHPC	Inhibit plan compliance fault isolation	12	O	T	G		C	J
IHRW	Inhibit reply word analysis	12	O	T	G		C	J
IHTP	Inhibit tram priority	12	O	T	G		C	J
INFO	Display information for an outstation	4	O					
INHW	Inhibit weekly flow analysis	10	O	T			C	
INTD	Introduce diversion	10	O	T	G		C	J
ISOL	Isolate controller	10	O	T	G		C	J
KILL	Shutdown System	12	O		G			
LACC	List CAST associations	4	O	T		A	C	
LACS	List configured ACSV commands	4	O	T		A	C	
LARR	List Associated Remote Requests	4	O	T		A	C	
LASC	List CASTs actioned by Saturation/Congestion	4	O	T		A	C	
LCAS	List the contents of a CAST	4	O	T		A	C	
LCOF	List car park occupancy files	4	O		G			
LEME	List equipment messages created by EMES	4	O	T		A	C	
LFLG	List currently defined fault groups	4	O	T		A	C	
LFTA	List faults which raise system alarms	4	O	T		A	C	
LIFT	List categories of faults that have been inhibited	4	O	T		A	C	
LIHR	List equipments with reply word analysis inhibited	4	O	T		A	C	
LIHS	List controller history	4	O	T		A	C	
LIPT	List plan timings	4	O	T		A	C	

Name	Function	L	O	T	G	A	C	J
		Type						
LIVE	Stop simulation of an equipment	12	O		G			
LJNL	List operator journal	4	O	T		A	C	
LLCF	List link conversion factors	4	O	T		A	C	
LLNK	Transmit local link inhibit bit	10	O	T	G		C	J
LMON	SCOOT link monitor	4	O					
LNMC	List networked message commands	4	O	T		A	C	
LOGM	List Event Message Log	4	O	T		A	C	
LOGO	List message log	4	O	T		A	C	
LOTU	Log OTU control and reply bits	8	O	T		A	C	
LSCH	List all the priority CHANs in effect	4	O	T		A	C	
LSTA	List unacknowledged alarms	4	O	T		A	C	
LSTD	List flow detector status	4	O	T		A	C	
LSTF	List faults	4	O	T		A	C	
LSTG	List green wave routes	4	O	T		A	C	
LSTM	List active event driven messages	4	O	T		A	C	
LSTP	List picture titles	4	O	T		A	C	
LSTS	List status	4	O	T		A	C	
LTEC	List transmission error counts	4	O	T		A	C	
LTRA	List current tram priority for a junction	4	O	T		A	C	
LUBA	List user baseline	4	O	T		A	C	
LVAL	Link validation display	10	O					
MESS	Commence output of event message	6	O	T	G		C	J
MONI	Display outstation monitor	4	O					
MOVA	Set MOVA priority control	10	O	T	G		C	J
MOVE	Move type 8 (moveable) count detector	14	O	T	G		C	J
MWAV	Start manual wave display	12	O		G			
NCAS	Name a CAST	12	O		G			
NFTD	Node fine tuning display	8	O					
NMCS	Send command numbers to remote non-UTC computer	8	O	T		A	C	
NODT	Transfer a SCOOT node from one region to another	12	O	T	G		C	J
NOTB	Display noticeboard contents	1	O	T		A	C	
OFST	Change Stage Offsets	12	O		G			
OJNL	Optimise the journal	12	O		G			

Name	Function	L	O	T	G	A	C	J
		Type						
OPEN	Open car park	10	O	T	G		C	J
OPFD	Output flow detector data	4	O	T		A	C	
OUTT	List contents of timetable	4	O					
OVRB	Override control/reply bits	15	O		G			
PICT	Display selected picture	4	O					
PLAN	Select fixed-time plan	8	O	T	G		C	J
PPRP	Prepare plan data	14	O					
PRIN	Enable log printer	10	O	T	G		C	J
PVAL	Print LVAL log	4	O		G			
RCOF	Record car park occupancy file	14	O		G			
REIN	Reinitialise SCOOT databases	14	O	T	G	A	C	J
REMD	Remove diversion	10	O	T	G		C	J
RFTD	Region fine tuning display	8	O					
RRUL	Select Raid rules file	10	O	T	G		C	J
RSTA	Shut down and restart UTC computer	16	O		G			
RUBA	Record user baseline	10	O		G			
SAPS	Start automatic plan selection	10	O	T	G		C	J
SCAS	Action the CHANs in a CAST in priority mode	8	O		G			
SCOO	Implement SCOOT control	8	O	T	G		C	J
SEED	Look at database values	4	O					
SFNO	Inhibit special facility selection	12	O	T	G		C	J
SIGN	Override sign legend	12	O	T	G		C	J
SIGO	Change Car Park sign group search order	12	O	T	G		C	J
SLOF	Turn part time signals off	12	O	T	G		C	J
SNSD	Display current analogue sensor value	4	O					
SNSS	Display analogue sensor value	4	O					
SNSV	Display current sensor value	4	O	T		A	C	
SORT	Sort controller checks messages	8	O	T		A	C	
SSGM	Log stage timings to data file	1	O	T	G	A	C	
SSPC	Send message to SIESPACE Car Park PC	12	O	T		A	C	
SSSU	Start SCOOT survey	10	O	T				
STCS	List car park/sign status	4	O	T		A	C	
SURV	Display survey flow counts	4	O					

Name	Function	Type L	O	T	G	A	C	J
SUTT	Supersede timetable	14	O		G			
SYNC	Synchronise group timers	8	O	T	G	A	C	
TAPS	Start APS in test mode	10	O	T	G		C	J
TDDD	Time distance diagram display	6	O					
TEST	Test wallmap or SIP	8	O		G			
TIDL	Start tidal flow control	1	O	T	G	A	C	
TIME	Modify current time	14	O		G			
TRAP	Set tram priority	12	O	T	G		C	J
TROF	Disable output of unsolicited messages to a terminal	8	O	T	G		C	J
TSYN	Implement immediate time synchronisation	14	O	T	G	A	C	
TTBP	Start timetable preparation	14	O		G			
TUAC	Terminal and user account configuration	16	O		G			
TUNL	Change tunnel lane flow direction	1	O	T		A	C	
TXDF	Transfer file to PC work-station	12	O	T		A	C	
UCOF	Use car park occupancy file	14	O	T	G		C	J
UDDL	Upload/download - download data	14	O	T	G	A	C	
UDFV	Upload/download view fault log	4	O					
UDLC	Check and update TC12 OTU data transmission parameters	14	O	T		A	C	
UDMC	Upload/download configure line mode of operation	14	O	T	G		C	J
UDRH	Upload/download remote handset	14	O		G			
UDSL	Upload/download status listing	4	O	T		A	C	
UDUL	Upload/download - upload data	14	O	T	G	A	C	
UPDA	Introduce updated data	14	O		G			
VALU	Display value of parameter	4	O	T		A	C	
VARY	Vary stage green times	12	O		G			
VEGA	Display SCOOT link profiles and queues	4	O					
WAVC	List weighted averages table	4	O					
WEEK	Display weekly detector flow counts	4	O					
WHAT	List equipment	4	O					
XACC	Delete CAST association with cycle time	13	O	T	G		C	
XACS	Cancel ACSV command	8	O	T			C	
XAPS	Cancel APS	12	O	T	G		C	J

		Type						
Name	Function	L	O	T	G	A	C	J
XARR	Disassociate remote request and CASTs	13	O	T			C	
XASC	Cancel Action CAST by Saturation/Congestion	13	O	T			C	
XAUD	Disable audible alarms	8	O	T	G		C	J
XCAR	Cancel car park state control	12	O	T	G		C	J
XCHA	Cancel a priority CHAN command	8	O					
XCHC	Stop controller test sequence checking	12	O	T	G	A	C	
XCHG	Restore normal TCC operation	16	O	T		A	C	
XCHS	Stop sign exercising	12	O	T	G	A	C	
XCSF	De-select special facility	12	O	T	G		C	J
XDEM	Cancel forced demand(s) on a particular stage	12	O	T	G		C	J
XDIA	Disable dial up access	14	O	T	G		C	J
XDIM	Clear dimming override bit	10	O	T	G		C	J
XDIS	Re-connect outstation	10	O	T	G		C	J
XEME	Clear equipment message	6	O	T	G	A	C	
XFAL	Clear fall-back mode bit	10	O	T	G		C	J
XFLA	Cancel flashing amber mode	2	O	T	G		C	J
XFLG	Delete a fault group	6	O		G			
XFLT	Clear fault	8	O	T	G	A	C	
XFTA	Specify faults which should not raise system alarms	12	O	T			C	J
XGWA	Cancel operator green wave	12	O		G			
XHRY	Cancel manual hurry call	12	O	T	G	A	C	
XIFT	Cancel inhibition of fault categories on equipments	10	O	T	G		C	J
XIHP	Re-enable plan compliance fault isolation	12	O	T	G		C	J
XIHR	Re-enable reply word analysis	12	O	T	G		C	J
XIHT	Cancel inhibition of tram priority	12	O	T	G		C	J
XINH	Cancel inhibition of weekly flow analysis	10	O	T			C	
XISO	Cancel controller isolation	10	O	T	G		C	J
XLIV	Start simulation of an equipment	12	O		G			
XLLN	Clear local link inhibit bit	10	O	T	G		C	J
XLOT	Cancel logging of OTU control & reply bits	8	O	T		A	C	
XMES	Stop output of event message	6	O	T	G		C	J
XMOV	Remove type 8 (moveable) count detector from an OTU	14	O	T	G		C	J

		Type						
Name	Function	L	O	T	G	A	C	J
XMVA	Cancel MOVA control mode	10	O	T	G		C	J
XPLA	Cancel operator fixed-time plan	8	O	T	G	A	C	J
XPRI	Disable log printer	10	O	T	G		C	J
XRUB	Delete data previously entered by RUBA command	14	O		G			
XSCA	Action the CHANs in a selected CAST in Cancel CHAN Priority mode	8	O					
XSCO	Cancel SCOOT control	8	O	T	G		C	J
XSFN	Re-enable special facility selection	12	O	T	G		C	J
XSIG	Cancel sign legend override	12	O	T	G		C	J
XSLO	Turn part-time signals on	12	O	T	G		C	J
XSPO	Cancel spooled output	4	O					
XSSG	Cancel logging of stage timings data	1	O	T	G	A	C	
XSUT	Cancel operator timetable	14	O		G			
XTAP	Cancel APS in test mode	10	O	T	G		C	J
XTES	Cancel wallmap or SIP lamp test	8	O		G			
XTID	Cancel tidal flow scheme	1	O	T	G	A	C	
XTRA	Clear tram priority for a junction	12	O	T	G		C	J
XTRO	Enable output to a terminal	8	O	T	G		C	J
XTTC	Remove command from temporary time table	8	O					
XTUN	Cancel tunnel control	1	O	T	G	A	C	

Appendix B - Fault and Advice Details

The following table defines the fault messages and categories which shall be detected and reported by the UTC System. Where a fault shall cause the equipment to be isolated (I) this is indicated, as is the nature of the alarm - System (S) or Operational (O). The reporting of those faults marked H may be inhibited by use of the (licenceable) IFLT command

Cat	Fault Message	Type I	S	O	H
100	Controller faults				
110	Controller monitoring				
111	Signals stuck in intergreen	I	S		H
112	Signals stuck on stage	I	S		H
113	Signals stuck on minimum	I	S		H
114	Invalid stage transition (for junctions)	I	S		H
114	No vehicle green confirm (for pelicans)	I	S		H
115	Permanent stage demand	I	S		H
116	Permanent intergreen extension	I	S		H
117	Multiple green confirm bits	I	S		H
120	Plan compliance				
121	Plan compliance fault	I	S		
122	Stage forced, different stage returned (for junctions)	I	S		H
122	Pedestrian demand not serviced (for pelicans)		S		H
123	Demand dependent stage fault		S		H
130	Lamps/fixed-time/manual		S		
131	Lamps off	I	S		
132	Manual control in operation	I	S		H
133	Remote attended	I	S		H
134	Fixed time	I	S		H
135	CLF		S		H
136	Pelican signals off	I	S		H
137	No break battery failing		S		H
138	Cabinet door open		S		H
140	Miscellaneous				
141	Type 141 controller fault		S		H
142	Emergency vehicle fault		S		H
143	Invalid phase pattern		S		H
144	Fall-back mode compliance fault		S		
145	Emergency vehicle detected	I	S		H
146	Hurry call detected	I	S		H
147	Hurry call fault		S		H
148	Pedestrian Confirm/Vehicle Green (PC/GX) reply conflict		S		H
149	Lamp failure. Pedestrian stage inhibited		S		H
150	Flashing mode				
151	Flashing mode fault		S		H
160	Controller synchronisation				
161	Controller sync fault		S		H
162	Group timer sync failed		S		H
163	Wrong day of week		S		H

Cat	Fault Message	Type I	S	O	H
164	Invalid day of week		S		H
165	CS bit stuck		S		H
170	Tidal flow controllers				
171	Control confirmation fault		S		H
172	Unexpected aspect reply change		S		
173	Invalid aspect transition		S		
174	Not responding to force bits		S		
175	Inter-aspect fault		S		
176	Stuck on inter-aspect		S		
177	Stuck on aspect		S		
178	XX aspect not seen		S		
180	Tidal flow controllers				
181	Aspect minimum violation		S		H
182	Urgent fault reported		S		H
183	Minor fault reported		S		H
184	Power fail		S		H
185	Invalid aspect reply		S		
187	RTC Synchronisation fault		S		
188	Emergency close not confirmed		S		
190	LRT controllers				
191	LRT controller surge protection unit status		S		
192	LRT artificial request status		S		
193	LRT detector fault		S		
194	LRT OTU status		S		

Cat	Fault Message	I	S	O	H
200	Controller timings faults				
210	Intersection timing faults				
211	Minimum green fault		S		H
212	Maximum green fault		S		H
213	Intergreen fault		S		H
214	Extension violation		S		H
220	Pelican timing faults				
221	Min green to vehicles fault		S		H
222	Min non green to vehicles fault		S		H
223	Max non green to vehicles fault		S		H
224	Extension violation		S		H
226	Flashing amber freq. fault		S		H
227	Min pedestrian confirm fault		S		H
228	Max pedestrian confirm fault		S		H

Cat	Fault Message	I	S	O	H
300	Lamp faults				
310	Intersection lamp faults				
311	Identified lamp fault		S		H
312	Identified red lamp fault		S		H
312	Red to vehicle lamp fault (pelican)		S		H
313	Two or more 3 aspect lamp faults		S		H
314	Unidentified lamp fault		S		H
315	Lamp Failure identified by RMLU		S		H
330	Solar lamp faults				
331	Lamp fuse failed		S		H
332	Lamp not dimming fault		S		H
333	Lamp always dim fault		S		H
334	Solar bright fault		S		
335	Part time signals fault, signals on despite turned off by SL bit		S		

Cat	Fault Message	I	S	O	H
400	Ancillary OSN equipment				
410	VA detector				
411	VA detector fault		S		H
412	SD detector fault				H
413	Permanent SD demand fault				H
420	SCOOT detector				
421	SCOOT detector fault - full		S		
422	SCOOT detector fault - empty		S		
423	SCOOT detector fault - OTU fault		S		
424	SCOOT detector fault – data persistently late/missing		S		
430	Counting detector				
431	Counting detector fault		S		H
432	No counts for last 15 minutes		S		H
440	Car park interface				
441	Car park barrier fault		S		
442	Car park using detector fault		S		
443	Car park state fault		S		
444	Car park vehicle count exceeds capacity		S		
445	Car park vehicle count negative		S		
446	Invalid barrier vehicle count		S		
447	Suspect change of barrier count		S		
448	No change of vehicle count for hours		S		
450	Variable message sign				
451	Sign legend not confirmed	I	S		
452	Sign invalid reply state	I	S		
453	Sign in manual mode	I	S		
454	Sign lamp failure		S		
455	Sign PC link failure		S		
456	Sign isolated				
457	Sign fault (SieSpace)				
458	Sign communication fault (SieSpace)				
460	Pelican push buttons				
461	Push button fault		S		H
462	No pedestrian demand		S		H
463	Permanent pedestrian demand		S		H
464	Permanent pedestrian stage max extension detected		S		H
470	Queue detector				
471	Queue detector fault		S		H
472	Analogue sensors				
472	Analogue sensor fault		S		
473	No sensor data for 5 minutes		S		
474	Sensor level high		S		
475	Sensor level low		S		
476	Sensor OTU fault		S		
477	Sensor under manual calibration		S		
478	Sensor performing own zero check		S		
479	Sensor status channel not healthy		S		
480	Diversion signs				

Cat	Fault Message	Type I	S	O	H
481	Diversion sign invalid reply state		S		H
482	Diversion sign in manual mode		S		
483	Sign power failure		S		H
484	Sign fault (SieSpace)				
485	Sign communication fault (SieSpace)				
490	Special facilities				
491	Special facility sign invalid reply state	I	S		H
492	Special facility sign in manual mode	I	S		H

Cat	Fault Message	I	S	O	H
500	Transmission system				
510	No response from OTU				
511	TX fault, no reply for several seconds	I	S		
512	Persistent TX fault	I	S		H
513	Intermittent TX fault	I	S		H
514	Configuration mismatch		S		
515	Unit has wrong time		S		
516	Initialisation error		S		
517	Not responding		S		
518	Protocol error		S		
519	Unable to resolve IP address		S		
520	Instation data TX faults				
521	Outstation output stuck	I	S		
522	Outstation isolated by PC fault				
523	Isolated – line in use by upload/download				
524	Outstation disconnected by operator				
525	Offline		S		
526	Timed-out waiting for key-frame		S		
530	Instation Telecommand 12 PC faults				
531	PC disconnected	I	S		
532	Intermittent fault	I	S		H
533	Persistent fault	I	S		H
534	Configuration fault	I	S		

Cat	Fault Message	I	S	O	H
600	Instation equipment				
610	Processor				
611	Checkword fault	I	S		
612	Clocks unsynchronised		S		
613	CPU arithmetic error	I	S		
620	Discs				
621	System disc not available		S		
622	Data disc not available		S		
630	Inter-processor links				
631	Non-urgent data mismatch fault		S		
640	Terminals				
641	Output timed out		S		
642	Failed to respond		S		
643	Terminal queue time-out		S		
644	Slow device/message rate too high – messages lost				I
650	External command interfaces				
651	Invalid command received		S		
652	Losing commands		S		

Cat	Fault Message	Type I	S	O	H
700	OMU Faults (RMS link to UTC)				
711	OMU power failed		S		
721	Vehicle phase lamp fail		S		
722	Pedestrian phase lamp fail		S		
723	Green arrow lamp fail		S		
724	Wait lamp fail		S		
725	Regulatory signs fail		S		
726	Switched signs bulb fail		S		
727	Pedestrian flash fail		S		
728	Dim/bright fail		S		
729	Vehicle presence fail		S		
731	Vehicle absence fail		S		
732	Lamps off		S		
733	Lamps flashing		S		
734	Controller stuck		S		
735	Controller ignoring demands		S		
736	Short stage minimum green		S		
737	Short phase intergreen		S		
738	Long all red		S		
739	Short stage ext/max		S		
741	Long stage max		S		
742	Long alternative max		S		
743	Long stage extension		S		
744	Conflicting phase green		S		
745	External input active		S		
746	Stage sequencing fault		S		
747	Long interstage period		S		
748	T200/T400/ST800 fault log entry		S		
749	GEC3000 fault log entry		S		
751	Ferranti TSC fault log entry		S		

Cat	Fault Message	I	S	O	H
		Type			
800	Ancillary outstation equipment				
810	Remote Requests				
811	Permanent remote request		S		H
820	MOVA Control				
821	MOVA not confirmed		S		H
822	MOVA offline		S		H
823	MOVA fault		S		H
824	MOVA enabled locally		S		H

Cat	Fault Message	I	S	O	P	H
900	NMCS Equipment					
911	Unobtainable		S		1	H
912	Power fail		S		1	H
913	Set not confirmed		S		1	H
914	Single bulb fail		S		3	H
915	Dual bulb fail		S		1	H
921	Aspect xxxx fail (See note 1 below)		*			H
922	Red flasher fail		S		1	H
923	Mains fail		S		1	H
924	Dimmer failed		S		3	H
925	Amber flasher failed		S		2	H
926	Flasher sync failed		S		1	H
927	Aspect undefined		S		1	H
928	Isolated		S		1	H
931	Printer		S		1	H
932	Operational problem		S		3	H
933	WORM drive		S		3	H
934	Disk 1		S		3	H
935	Disk 2		S		3	H
936	HP disk		S		3	H
937	Motorola disk		S		3	H
938	External clock		S		3	H
939	Mains failed		S		1	H
941	Program failure		S		1	H
942	Self test failed		S		1	H
943	Site data failed		S		1	H
944	Fan failure		S		2	H
945	Line hogging		S		1	H
946	Operator problem		S		3	H
947	Battery charger fault		S		1	H
948	Stepper fault		S		1	H
949	Contraflow		S		3	H
951	PLC fault		S		1	
952	Manual mode		S		3	

The above faults all generate System Alarms but are categorised at different fault priorities, which is indicated by the number in the last column. If used in graphics, faults in priority 1 cause a Red border to be shown, in priority 2 they result in a Magenta border and in priority 3 a yellow border.

Note 1 :- The string "xxxx" identifies the aspect failing, and can be any of the valid aspects. The aspects strings normally encountered are listed below and these failures are assigned to fault priority 1. Other aspect faults are assigned to fault priority 3.

NULL, END, RE STOP, 20, 30 , 40, 50, 60, 70, LDR, X, LDL, MDL, IT, TI, 1(C) [arrow], MDR, FOG, Q and AMB.

Cat	Fault Message	Type I	Type S	Type O
Operational faults				
OPE	Queue formed			O
OPE	Congestion formed			O
OPE	Volume detector on			O
OPE	SCOOT sub-system on-line			O
OPE	Plan due - operator override			O
OPE	SCOOT control due			O
OPE	APS plan due			O
OPE	Diversion plan due			O
OPE	System log 100% full			O
OPE	Emergency vehicle detected			O
OPE	Hurry call detected			O

Appendix C - VALU and CHAN Parameters

In the following table each parameter to the VALU and CHAN commands has associated with it the SCOOT SCN level to be associated with it. All parameters can be viewed by the VALU command. The columns under **Type** define whether :

C - The parameter can be altered by the CHAN command;

B - The parameter can be baselined;

U - The parameter is for UTC commands. All other parameters are for SCOOT.

The column **Level** defines the SCOOT command level :

A - Area

R - Region

N -Node

L - Link

S - Stage

D - Detector

* NOTE : The following parameters are modifiable by CHAN as a licensed facility only. Please contact Siemens Traffic Controls for further details.

MAXS, MINS, PRTD, PRTP, PFLG

Name	**Function**	Level	**C**	**B**	**U**
ADJU	CDC program adjust mode	A	C	B	
ADZG	Zero Demand Queue	N	C	B	
AELG	Area End Lag	A	C		
AFDT	ALMOST FULL Decreasing Threshold		C		U
AFIT	ALMOST FULL Increasing Threshold		C		U
AIEB	Allow improved exit blocking	A	C	B	
ALBG	Allow SCOOT background mode	N	C	B	
APSR	APS re-run interval	S	C		
ASAL	Allow stage arrive late logic	A	C	B	
ASLG	Area Start Lag	A	C		
ASTC	ASTRID Sub Cell	R	C	B	
AVLL	AVL Data transmission Lag	A	C	B	
BASP	Bus Approach Speed	L	C	B	
BCTU	Bus Cruise Time Uncertainty	L	C	B	
BDDD	Bus Detected Demand Delay	L	C	B	

Name	Function		Level C	B	U
BDOL	Bus distance optimisation limit	L	C	B	
BERL	Bus Priority Extension/Recall Strategy	N	C	B	
BES0	Bus Link Extension Saturation (Importance 0)	L	C	B	
BES1	Bus Link Extension Saturation (Importance 1)	L	C	B	
BES2	Bus Link Extension Saturation (Importance 2)	L	C	B	
BES3	Bus Link Extension Saturation (Importance 3)	L	C	B	
BES4	Bus Link Extension Saturation (Importance 4)	L	C	B	
BES5	Bus Link Extension Saturation (Importance 5)	L	C	B	
BES6	Bus Link Extension Saturation (Importance 6)	L	C	B	
BEXR	Bus Extension Recovery :	N	C	B	
BIAS	Offset Bias	L	C	B	
BJNY	Bus Journey time from detector	L	C	B	
BJT2	Bus Journey Time from Second Trigger Point	L	C	B	
BLAT	Bus Late Limit	L	C	B	
BLCD	Bus link has cancel detection	L	C	B	
BLNK	Bottleneck Link	L	C		
BLSD	Bus link has secondary detection	L	C	B	
BOFF	Bus Priority Status	A	C	B	
BOTT	Bus On Time Threshold	L	C	B	
BPAN	Bus Priority At Node	N	C	B	
BPER	Bus Period	A	C	B	
BPFL	Bus Priority Flag	L	C	B	
BRER	Bus Recall Recovery :	N	C	B	
BRS0	Bus Link Recall Saturation (Importance 0)	L	C	B	
BRS1	Bus Link Recall Saturation (Importance 1)	L	C	B	
BRS2	Bus Link Recall Saturation (Importance 2)	L	C	B	
BRS3	Bus Link Recall Saturation (Importance 3)	L	C	B	
BRS4	Bus Link Recall Saturation (Importance 4)	L	C	B	
BRS5	Bus Link Recall Saturation (Importance 5)	L	C	B	
BRS6	Bus Link Recall Saturation (Importance 6)	L	C	B	
BSEL	Bus Priority Selection Strategy :	N	C	B	
BSLT	Bus Slightly Late Limit	L	C	B	
BTSM	Bus Traffic Signal Movement	L	C	B	

Name	Function		Level C	B	U
BTSN	Bus Traffic Signal Number	L	C	B	
BVLT	Bus Very Late Limit	L	C	B	
CACP	Congestion Alarm Clear Percentage		C		U
CAPA	Capacity		C		U
CASP	Congestion Alarm Set Threshold		C		U
CDEF	Calculated Default Stage Length	S			
CDSL	Calculate Default Stage Lengths Status	A	C		
CFBI	Cycle Feedback Inhibit	N	C	B	
CGIF	Congestion Importance Factor	L	C	B	
CGOF	Congestion Offset Factor	L	C	B	
CGWT	Congestion Weighting	L	C	B	
CHDI	Cycle Time Historic Data Inhibit	L	C	B	
CJNY	VMS to car park journey time		C		U
CLAM	Cycle Lambda Factor	A	C	B	
CLAS	Link Class	L	C	B	
CLIF	Congestion Link Importance Factor	L	C	B	
CLNK	Congestion Link	L	C		
CLUS	Cluster of Trigger Link	L	C	B	
CLWT	Congestion Link Weighting Factor	L	C	B	
CMJI	Cycle Time Minimum Jump Inhibit	R	C	B	
COMM	Override Communication Profile				U
COMP	Composite Link	L	C	B	
CONN	Configured Number of Nodes	A			
COPS	Car park occupancy smoothing factor		C		U
CQT1	Queueing Time (Range 1)		C		U
CQT2	Queueing Time (Range 2)		C		U
CQT3	Queueing Time (Range 3)		C		U
CQT4	Queueing Time (Range 4)		C		U
CTFP	Cycle Time Forward Period	R	C	B	
CTOI	Cycle Time Optimisation Interval	R	C	B	
CYFX	Cyclic Fixed Time	N	C		
CYOS	Cycle Time Optimizer Status	R	C		
DAVL	Discard AVL data	L	C	B	

Name	Function		Level C	Level B	Level U
DCIG	Double Cycle Ignore	N	C	B	
DDFL	Demand Dependent Stage Optimisation	S	C	B	
DEFS	Default Stage Length	S	C		
DETL	Number of lanes	D	C	B	
DETU	Detector Used Status	D	C	B	
DFOF	Default Offset	L	C	B	
DFSP	Default Speed	L	C	B	
DGRN	Double Green	L			
DIVR	Diversion Re-run Interval	A	C	B	
DSTS	Detector Status	D	C		
DUDD	Faulty Detectors	D			
ELAG	End Lag	L	C	B	
ETHR	Detector Empty Fault Threshold	A	C	B	
EXTD	Bus Priority Extend Current Duration	L	C	B	
FCYT	Forced Cycle Time	R	C		
FDTH	FULL Decreasing Threshold		C		U
FDWN	Fast Downward Cycle Times Mode	R	C	B	
FITH	FULL Increasing Threshold		C		U
FLEN	Full Link Length	L	C	B	
FLST	Filter Lower Saturation	N	C	B	
FMUL	Filter Weighing Multiplier	L	C	B	
FORC	Force Single/Double Cycling	N	C		
FSAT	Filter Weighing Saturation	L	C	B	
FTHR	Detector Full Fault Threshold	A	C	B	
FUST	Filter Upper Saturation	N	C	B	
GCAT	Gating Cluster Active Threshold	L	C	B	
GCIT	Gating Cluster Inactive Threshold	L	C	B	
GCLU	Cluster of Gate Link	L	C	B	
GCON	Gate Congestion	L	C	B	
GGAI	Gate gain	L	C	B	
GLMG	Gating Low Minimum Green	L	C	B	
GRET	Green/Red Entrance Threshold		C		U
GSAT	Gate Saturation	L	C	B	

Name	Function		Level C	B	U
GSMO	Green Smoothing Factor	A	C	B	
GUMG	Gating High Minimum Green	L	C	B	
GWPL	Greenwave Plan		C		U
HDLP	Historic Link Profiles Used	L	C	B	
HIST	Historic Occupancy State	L			
IACC	Full/Empty Interval Accumulator	D			
IGFB	enable intergreen feedback	N	C	B	
IGSM	intergreen smoothing factor	A	C	B	
IMPL	SCOOT Control Implemented	N			
INAL	INGRID Alpha - sensitivity of current method	A	C	B	
INBE	INGRID Beta - sensitivity of reference method	A	C	B	
INCO	INGRID minimum confidence level	A	C	B	
INCY	Inhibit Cyclic Optimisation	L	C	B	
INDF	INGRID Detector Fault Status	D			
INFE	INGRID Detector Faulty Empty Limit	A	C	B	
INFF	INGRID Detector Faulty Full Limit	A	C	B	
INFG	INGRID Detector Faulty Good Limit	A	C	B	
INFR	INGRID reporting frequency	A	C	B	
INKE	INGRID keep flag	A	C		
INLD	Inhibit Link Defaults	L	C	B	
INMQ	Inhibit Max Queue Check	L	C	B	
INOF	Inhibit Offset Optimisation	L	C	B	
INS0	INGRID Severity Limit Threshold 0	A	C	B	
INS1	INGRID Severity Limit Threshold 1	A	C	B	
INS2	INGRID Severity Limit Threshold 2	A	C	B	
INS3	INGRID Severity Limit Threshold 3	A	C	B	
INSE	INGRID minimum severity level	A	C	B	
INSP	Inhibit Split Optimisation	L	C	B	
IRCT	Initial Region Cycle Time	R	C		
ISAT	Ideal Node Saturation	N	C	B	
ISGN	Ignore Stage Green	N	C	B	
JNYO	Journey Time Offset On Link	L	C	B	
JNYT	Link Journey Time	L	C	B	

			Level		
Name	**Function**		**C**	**B**	**U**
LFAL	Link Flare Approach Lanes	L	C	B	
LFEL	Link Flare Extra Lanes	L	C	B	
LFLA	Link Flare	L	C	B	
LFMQ	Link Flare Maximum Queue Clear Time	L	C	B	
LLEN	Length of a Link	L	C	B	
LNKU	Link Used Status	L			
LPUV	User LPU Per Vehicle	L	C	B	
LRT1	LRT Saturation Limit 1	N	C	B	
LRT2	LRT Saturation Limit 2	N	C	B	
LRT3	LRT Saturation Limit 3	N	C	B	
LRTS	LRT Stage Permitted	S	C	B	
LRTU	LRT UTC Pattern	N	C	B	
LSTS	Link Fault Status	L			
LTT1	Link Travel Time Low Delay Threshold	L	C	B	
LTT2	Link Travel Time Medium Delay Threshold	L	C	B	
LTT3	Link Travel Time Heavy Delay Threshold	L	C	B	
LTTF	Link travel time factor	L	C	B	
LTTM	Link Travel Time	L			
LTTT	Parameter for link travel calculation	L	C	B	
MAXC	Maximum Cycle Time	R	C	B	
MAXS	Maximum Stage Length	S	C		
MCLL	Max clear late stage	A	C	B	
MDSL	Main Downstream Link	L	C		
MFBI	Model Feedback Inhibit	N	C	B	
MINC	Minimum Cycle Time	R	C	B	
MINH	MONACO Inhibit	A	C	B	
MINS	Minimum Stage Length	S	C		
MMWQ	MONACO Minimum Wasted Queue	A	C	B	
MPCY	Minimum Practical Cycle Time	N			
MPFB	Multi-Pelican Node Feedback Mode	N	C	B	
MPFR	Maximum Pedestrian Frequency	N	C	B	
MPWT	Maximum Pedestrian Waiting Time	N	C	B	
MRNI	MONACO Run Interval	A	C	B	

Name	Function		Level C	B	U
MTWQ	MONACO Threshold Wasted Queue	A	C	B	
MUJT	MONACO Upper Journey Time	A	C	B	
NCMT	No counts message time		C		U
NCYT	Node Cycle Time	N			
NDCG	Node Double Cycling Group	N	C	B	
NIGM	New intergreen modelling method for multi-controller Nodes	N	C	B	
NMIN	Node Minimum Cycle Time	N			
NOAP	Node Offset Authority Pointer	N	C	B	
NOBP	Offset Bus Authority Pointer	N	C	B	
NSAP	Node Split Authority Pointer	N	C	B	
NSBP	Split Bus Authority Pointer	N	C	B	
NSST	Named Stage Start Time	N	C		
NSTG	Named Stage	N			
NTST	Previous and Current Region of a SCOOT Node	N			
OFST	Offset Optimizer Status	N	C		
OFWT	Offset Weighting	L	C	B	
OOEW	Offset optimiser emissions weight	N	C	B	
OPNI	Operator Node Independence	N	C	B	
OPSI	Operator Sub-Region Independence	R	C	B	
OVEP	Bus EP Override Status	N	C	B	
PDCC	Pay and display car park correction		C		U
PDCI	Pedestrian Priority Double Cycling Inhibit	N	C	B	
PDCM	Permanent Demand Checking Mode		C		U
PEDS	Pedestrian Stage	N	C	B	
PFLG	UTC System persistent Fault Log		C		U
PIGE	Intersection Permanent Intergreen Extension Limit		C		U
PLAN	Plan Timings	N			
PLST	Pedestrian Lower Saturation Threshold	N	C	B	
PMAX	Bus Maximum Extension Time	N	C	B	
PPEL	Permanent Pedestrian Stage Maximum Extension Limit		C		U
PPRI	Pedestrian Priority Level	N	C	B	

Name	Function		Level C	B	U
PRTD	Priority Route Duration		C		U
PRTP	Priority Route Plan		C		U
PUST	Pedestrian Upper Saturation Threshold	N	C	B	
QCMQ	Maximum Queue Clear Time	L	C	B	
RCYT	Region Cycle Time	R			
RDFF	Reduced Detection Flow Factor	L	C	B	
RDFR	Reduced Detection Flow Ratio	L	C	B	
RDPF	Reduced Detection Proxy Flow	L	C	B	
RDPL	Reduced Detection Proxy Link	L	C	B	
RSCT	Resume SCOOT Timings	R	C	B	
SATE	Bus Priority Extension Saturation	N	C	B	
SATR	Bus Priority Recall Saturation	N	C	B	
SETH	Suspect Empty Detector Fault Threshold	A	C	B	
SFBI	Split Feedback Inhibit	N	C	B	
SFTH	Suspect Full Detector Fault Threshold	A	C	B	
SJNY	Soft Journey Time	D	C	B	
SKIC	Skipping Inhibit Cycles	N	C		
SKID	Skipping Priority Level Difference	N	C		
SKIF	Skipping Priority Level	N	C	B	
SKIH	Skipping Inhibit Period	N	C		
SKIP	Allow Skipping	A	C	B	
SKIT	Skipping Inhibit Times	S	C		
SKRM	Bus Skipping Recovery Method	N	C	B	
SKTS	Skipping Target Saturation	L	C		
SLAG	Start Lag	L	C	B	
SLAM	Split Lambda Factor	A	C	B	
SLBI	Stopline Link Bias	L	C	B	
SLUL	Stopline Link Upstream Link	L			
SMAN	SOFT Mandatory Status	D	C	B	
SMAX	SOFT Maximum Saturation Occupancy	L	C	B	
SMIN	SOFT Minimum Saturation Occupancy	L	C	B	
SMOI	Split minimum optimisation inhibit	N	C	B	
SMOO	Smoothing Factor		C		U

Name	Function		Level C	B	U
SMUL	Split Weighting Multiplier	L	C	B	
SNSI	Gas Sensor Collection Interval	A	C	B	
SOFT	SOFT status	L	C		
SPEN	Stop Penalty	A	C	B	
SPLT	Split Optimiser Status	N	C		
SRST	Stage Removed Status	S			
SSAT	Split Weighting Saturation	L	C	B	
STOC	Saturation Occupancy	L	C	B	
SUPT	Supplementary Link Type	L	C	B	
TACC	ACCT Test Mode	R	C		
TDS1	Decreasing threshold for state change down from 1		C		U
TDS2	Decreasing threshold for state change down from 2		C		U
TIS1	Increasing threshold for state change up to 1		C		U
TIS2	Increasing threshold for state change up to 2		C		U
TPLN	Translation Plan	N	C		
TRAF	Traffic Period for empty detector fault checking	D	C	B	
TREN	Cycle Time Trend Status	R	C	B	
TSAT	Trend Node Saturation	N	C	B	
UNTS	Up Node Through Stage	L	C		
VEHC	Vehicle Occupancy Count		C		U
VLAG	Volume alarm time lag		C		U
VTHR	One Minute Volume Alarm Threshold		C		U
ZRTM	RTIG Traffic Movement Association				U
ZRTP	RTIG Trigger Pointy Association				U
ZRTS	RTIG Traffic Signal Number Association				U

Appendix D - UTMC Outstation Concepts

UTMC Concepts

UTMC is an SNMP protocol. SNMP uses UDP/IP and so can be used on a wide variety of networks that support IP. Being SNMP, the protocol is principally defined by a MIB. The original product was termed ‘UTMC29’ – from now on the term ‘UTMC Type 1’ will be used instead of UTMC29, in order to distinguish it from the new product ‘UTMC Type 2’.

The original UTMC Type 1 product came in two ‘flavours’ :

- The Siemens simple MIB, interacting with the Siemens Gemini outstation.
- The Peek, or ‘Full’ MIB, interacting with the Peek Chameleon outstation.

The Siemens UTC system can connect to either the Siemens MIB or the Peek MIB. However, both MIBs are like the traditional communications systems Telecommand 8 and Telecommand 12 because it is required that control and reply messages are to be sent to street equipment each and every second regardless of whether anything had changed.

Also with traditional UTC communications, if there is a communications fault when the OTU returns reply data to the instation, or if the data takes longer than a second to send, then the data is lost. In addition, the time-stamping features of SCOOT MC3 cannot be properly used.

UTMC Type 2

This is often also referred to as ‘UG405’. UG405 is a UTMC initiative name for the new UTC communications standard. The standard applies to communications between a UTC instation and the street equipment that it controls and monitors.

In this section, the shorthand term ‘UTMC2’ is used as a synonym for ‘UTMC Type 2’. Note that ‘UTMC2’ has an alternative meaning as Version 2 of the UTMC Common Database MIB. However, there is no conflict of meaning in this section, because of the specific context of UTMC Outstation Communications.

UTMC2 is intended to overcome deficiencies of the existing UTMC Type 1 communications standard as well as adding features to give the end user more choice in the kinds of IP communications network that can be used. In particular, the standard adds the support for time-stamped control and reply data which in conjunction with SCOOT MC3 allows the UTC system to better handle delays or data loss introduced by the IP network.

UTMC2 is an SNMP protocol. SNMP uses UDP/IP and so can be used on a wide variety of networks that support IP. Being SNMP, the protocol is principally defined by a MIB.

UTMC2 differs from TC12, TC8 and UTMC Type 1 UTC simple (Siemens Gemini) MIB operation in a number of ways.

Traditional UTC communications have required control and reply messages to be sent to street equipment each and every second regardless of whether anything had changed. UTMC2, in its normal mode of operation, only requires data to be sent when it changes. This mode of communications is referred to as control-by-exception and reply-by-exception.

With traditional UTC communications, if there is a communications fault when the OTU returns reply data to the instation, or if the data takes longer than a second to send, then the data is lost. With UTMC2, when using reply-by-exception mode, reply data is never lost whilst the OTU remains online to the instation. The outstation will retry sending reply data to the instation until it receives an acknowledgement that it has been received.

Reply data is time-stamped at the outstation to allow the instation to process the data correctly, regardless of whether the data was delayed by the network.

Control data may be time-stamped for future execution. The instation can send stage force bits ahead of time to avoid the effects of network delays. This is referred to as ‘pre-scheduling’.

SCOOT detector data for a number of seconds can be batched together to reduce overall network traffic.

The representation of the data has changed. With traditional UTC communications, the control and reply data has comprised anonymous raw bytes of data. Interpretation of the data was not part of the protocol. With UTMC2, the protocol is described in terms of individual equipment functions – e.g. junction force bits, detector fault bits.

UTMC2 is interoperable with both Siemens and Peek outstations. The UTC instation will not have to be aware of the type of OTU to which it is communicating.

It should be noted that some of these features were part of the UTMC Type 1 Full UTC (Peek Chameleon) MIB.

To use SCOOT with UTMC2 OTUs you must have have a license to use SCOOT MC3. Earlier versions of SCOOT (e.g. 4.5) cannot be used with UTMC2 OTUs. This is because only SCOOT MC3 allows the use of delayed time-stamped reply data.

The differences between traditional and UTMC2 communications are illustrated in the diagram in Figure 1 Overview Diagram.

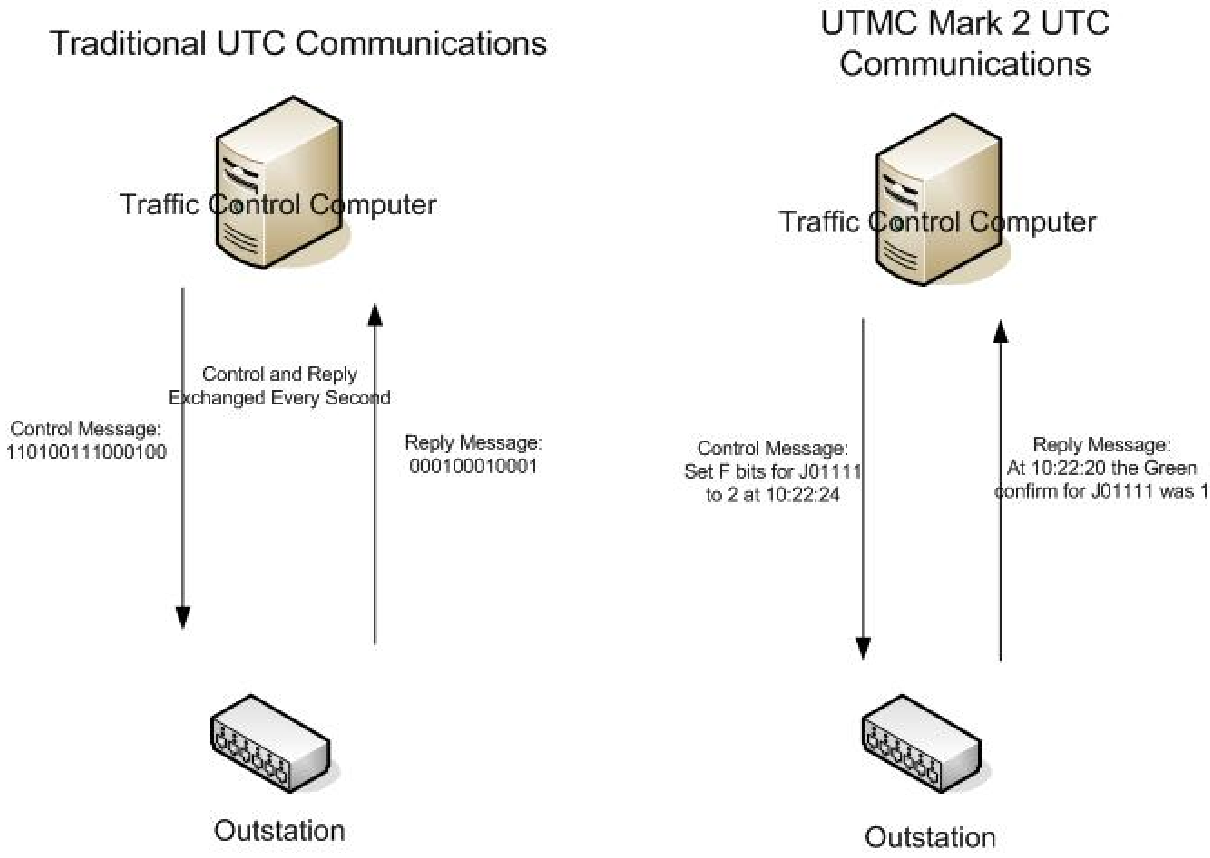

Figure 1 Overview Diagram

Time Synchronisation

Time-synchronisation is a very important part of using the UTMC2 protocol. For the protocol to work correctly, the instation and outstations must be synchronized together (to within < 1second). The standard NTP protocol (Network Time Protocol) is used for this. To avoid time discontinuities due to time drift, the instation MUST be synchronized to a true-time clock source. The high availability of an accurate time source is mandatory for UTMC2. This can be provided in a number of forms of which the simplest is an external time source such as a Wharton clock that receives its time via GPS or the Rugby time signal. Most systems already incorporate some form of time-synchronization. Other time sources such as internet time server pools can be also be used. Any NTP time sources can be used as long as they can provide time of a sufficient quality. SNTP time sources, whilst compatible at the protocol level, are not of sufficient quality. The way NTP works is by gradually speeding up or slowing up the computer's clock to be in sync with the time source making it unnecessary to perform step changes to the time. The system clock is 'trained' by NTP so that even if the time source is not available for a while, clock accuracy is maintained.

If a time variance between the instation and a UTMC2 OTU is detected then the instation will flag a fault and not use the OTU. It will continue to re-attempt communicating every few seconds or so once the OTU time is correct it will come online automatically.

Manual time changes on the instation should be avoided. It should be unnecessary given that the system should be synchronized to a true time source. If you do make a manual time change then it is likely that all the UTMC2 OTUs will go offline within 30 seconds. They will not come back online until their clocks have synchronized with the new instation time which may take several minutes.

Control and Reply Bit Configuration

In terms of the UTMC2 protocol, the UTC system is not aware of how the bits are wired at the OTU - e.g. it just sets the F bits for J32111 - it does not know how they are mapped at the OTU. However, internally the UTC software views a UTMC2 OTU like a TC12 OTU which is why you still have to configure the bit positions for the F bits. Where you actually configure the F bits doesn't really matter but, of course, it makes it so much more convenient if it matches the real OTU (where appropriate). Additionally, for Gemini UTMC2 OTUs, the bit mapping that you enter in data-entry can be exported as a CSV file. This data can then be imported into the Gemini configurator tool and used as the basis for the Gemini configuration.

If the UTMC2 OTU is configured differently from how the instation expects it to be then the instation will report a configuration mismatch error and stop communicating with that OTU. For example, supposing a traffic controller has been configured with a new bit, SO say. You've wired it up to the OTU and you've also added the SO bit to the junction's (J01111) data word format at the instation. In this situation, the instation will raise an error against the [utcControlSO.'J01111'] object. The OTU configuration must also be updated to include the mapping for the new control bit before the OTU will come back online.

Pre-scheduled Plan Control

UTMC2 outstations support the pre-scheduling of control data. This is used by the UTC system when running fixed time and SCOOT plans to send junction and pelican stage force bits (and other bits required for plan control) a number of seconds before their actual execution time. The purpose of doing this is to make control more resilient to network delays or drop-offs. For example, if force bits are sent 2 seconds before the execution time, then even if there is a communications drop-off for the couple of seconds at the stage change time, the force bits will still be executed at the right time.

The extent to which the UTC system will consider pre-scheduling is specified by the communications profile - but the recommended and default value is 4 seconds.

Controllers under fixed-time plans can reap the full benefits of pre-scheduled control because the control pattern is entirely predictable and not subject to change. With SCOOT, however, the stage timings are subject to change by the optimisers - sometimes, with very little notice. For instance, the split optimisers run 5 seconds before the next stage time. The optimiser can decide to advance, stay or retard the stage change time by up to 4 seconds. If the decision is a stay or retard decision (the stage change occurs later) then the plan control bits can be pre-scheduled to the full extent of 4 seconds. If the decision is an advance decision (the stage change occurs sooner) then there is less time available for pre-scheduling. If the advance decision is the maximum of 4 seconds, then there is no time for pre-scheduling as the stage change occurs next second. In other words, pre-scheduling can help to minimize the effects of poor communications with SCOOT control but cannot eliminate it.

Communications Profiles

There are several parameters that can be set for UTMC2 communications. A number of these are difficult to understand without full knowledge of the underlying protocol. To simplify the process of setting up OTUs for users recommended settings have been grouped together into different communications profiles. When a UTC system is first converted to support UTMC2 a set of pre-defined communications profiles is created. Also, all existing non-UTMC2 outstations are pre-set to profile zero. Profile zero is an indication to use the existing communications tolerances in System-Wide Variants. Thus existing OTUs will still work as before.

For each UTMC2 OTU, the user selects which communications profile they wish to use based on the kind of line in use. The existing profiles can be modified or new profiles can be created by advanced users or Siemens engineers. It is recommended that new profiles be created instead of modifying the pre-defined profiles.

The profiles also support the older OTU types (TC8, TC12, UTMC Type 1).

For more information on the Communications Profiles parameters see the Profiles section in 666/HI/16940/000, the Data File Format Guide.

Communications Monitoring

The methods of monitoring and reporting OTU communications faults have necessarily had to change for UTMC2 OTUs. This section describes how outstation communications are monitored and when faults are raised. Values with (P) are communications profile values that can be modified by the user.

Offline fault [525]

> this fault is raised if the instation cannot communicate with the OTU or if there has been a protocol or configuration error of some kind. There will normally be other fault messages to describe the reason. The instation will attempt to establish communications with the OTU every few seconds

TX Fault - No reply [511]

this fault is raised if the instation takes longer than 4 (P) seconds to send a message or if the instation receives reply data which it establishes took longer than 4 seconds for the OTU to deliver. The clearance time is 30 (P) seconds

The following two faults count the number of late messages seen over a certain period. A late message is one which takes longer than 3 (P) seconds to be delivered.

Persistent TX Fault [512].

This is raised if 15 (P) late messages are seen together occuring at a rate >= 1 per 3 (P) minutes.

Intermittent TX Faults [513].

This is raised if 15 (P) late messages are seen in one clock hour.

Every hour, the system will output the number of late messages seen on every OTU. This count can also be seen on the MONI display.

There are some new event-driven messages that can be used to output communications statistics every five minutes. These event messages are OTU level.

U80: instation message summary: the number of messages sent and acknowledged/unacknowledged.

U81: round-trip time of instation message requests in milliseconds. best/worst/avaerage

U82: longest drop-off: the number of times OTU has come on or offline.

U83: Estimated delay lag of reply message sent by OTU to instation in seconds.

Of these, the values that are mostly likely to be of interest are the number of unacknowledged messages from U80 and the average round-trip time from U81. The default ASTRID configuration has been updated to include graphing for these two data items. To collect this data, include MESS U80 X00000 >ASTRID and MESS U81 X00000 >ASTRID commands in your ASTRID start up CAST.

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