

CMT 500

GENERAL SECTION OPERATING INSTRUCTIONS

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WARNING:

Do not attempt to operate this equipment unless you have read and understood these instructions.

TES 1199/D
October 1999

IMPORTANT

Every reasonable effort has been made to ensure that information within these Operating Instructions is correct at the time of release, but Crypton cannot accept responsibility for any errors that may occur.

The information in these Operating Instructions is subject to change without notice, and does not represent a commitment on the part of Crypton.

Service & Warranty

The reliability of this equipment is fully supported by our service agent, Transervice, with repair workshops and field service engineers to provide a full range of After-Sales Care, including installation, contract maintenance, factory overhaul and emergency repairs on site. Please refer to the page at the end of this manual for full details.

Note:

Your attention is drawn to our Terms & Conditions of Sale, particularly paragraph 2. If a service engineer is called out under service warranty where, upon inspection and test the equipment is found to be in full working order and no fault found, the user is liable to be charged the cost incurred for this call out. Before calling out an engineer, ensure your equipment is faulty by checking its operation, particularly mains supply and fault codes/self test if applicable.

Software Licence

Further to our general Terms & Conditions of Sale, the software described in these Operating Instructions is furnished under the following Software Licence Agreement:

1. Licence: You may use the program on the machine provided. You may not copy, duplicate or transmit the program in any form, in whole or in part, without the express prior written permission of Crypton.
2. Term: The licence is effective until terminated. You may terminate the licence by destroying the program together with all copies, or returning the program to Crypton.
3. Crypton does not warrant that the program will meet your requirements or that its operation will be uninterrupted or error free.
4. In no event will Crypton be liable to you for any incidental or consequential damages, including lost profits, business operation and the like, arising out of the use or inability to use this program.

You acknowledge that you have read this Agreement, understand it, and agree to be bound by its provisions.

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1. IMPORTANT NOTES

Due to the flexible, modular nature of the CMT 500 product, it is most important that the particular combination of modules, options and accessories is considered, and the following actions taken before using the equipment. Failure to do so may cause the user to suspect an equipment fault and to call in a Service representative. If the problem reported is due to the user having failed to follow these instructions, then a charge will be made for the visit.

1.1. SAFETY PRECAUTIONS - GENERAL

1. Operators should not allow themselves to come into contact with water or other similar conductors when using the equipment.
2. The equipment is not weatherproof and should not be used outside in rain or snow.
3. The internal circuits and components of the equipment should not be tampered with while the mains supply is switched ON as high voltage circuitry is used.
4. The earth lead of the mains supply cable MUST ALWAYS be connected to a good earth point.
5. Equipment should be sited in an area designated and clearly marked:

FOR USE BY AUTHORISED PERSONNEL ONLY

1.2. SUPPLY

1. This equipment leaves the factory connected for 240V nominal single phase 50 Hz a.c mains supply. Where the mains voltage differs from this, it is essential that the equipment is ordered for the specific voltage in your region.
2. The equipment should be stored and kept in a dry condition.

1.3. CONFIGURATION

This procedure is used to inform each Application Programme what devices are fitted so that it does not look for measurements from devices not fitted and, as a result, indicate a fault when no data is seen.

The CONFIGURATION instructions can be found in the UTILITIES section of each Application Programme Operating Manual.

2. RECEPTION & GENERAL INFORMATION

2.1. RECEPTION

The CMT 500 is switched ON by a rocker switch situated on the rear of the main cubicle. The switch incorporates an automatic thermal trip to protect the electrical components.

An LED visible through the top cubicle mounting, at the front of the console, shows RED to indicate POWER ON. This is part of the Infra-red Handset receiver.

If the switch trips out persistently, there is an equipment fault and a service engineer or Agent (overseas users) should be called. For Service please refer to the end of these Operating Instructions.

The Computer has its own mains power ON/OFF switch. This switch should always be left ON and the Cubical ON/OFF switch on the back used for turning the equipment on and off.

Each time the power is switched on, a 'self-test' routine will be initiated to check important areas of the electronics circuitry. If a fault is detected, a statement will appear on the screen. This exact statement should be passed on during the service call (see back of manual), or to the Agent if overseas, to enable the Service Engineer to recognise the fault before arriving on site. If during normal usage the equipment appears to function abnormally, switch the mains supply off, wait 10 seconds then turn on again to perform a self-test and thereby determine if there is a circuit malfunction.

IMPORTANT NOTE 1:

The main board in the Computer has a 'battery backed memory' which stores some information about the level of hardware in the product. Normally this will be correct but may have to be modified if some hardware change is made. The procedure is detailed in the part of the General section of the manual, titled 'BIOS SET UP'.

IMPORTANT NOTE 2:

Each Crypton (software) Application Programme requires to 'know' what standard items or options are fitted and in working order. The 'CONFIGURATION' of the equipment must be written to the Hard Disk using the 'CONFIGURATION' option on the 'UTILITIES' menu of each application (if applicable).

If an additional item is added, or an item is removed for use elsewhere in the garage, or for service, the configuration must be updated to avoid the possible problems which could occur.

Failure to carry out either of these procedures could result in an apparent malfunction of the equipment when it tries to access a piece of equipment that is not fitted, or does not carry out a test which the operator would expect when a particular item is fitted. If a Service call is made, and an apparent problem is traced to this cause, this will not be a valid Warranty claim and a charge will be made.

IMPORTANT NOTE 3:

Do not disconnect or reconnect any leads between the various parts of the CMT 500 range without first SWITCHING OFF the mains supply; this does not include any connections to the vehicle under test.

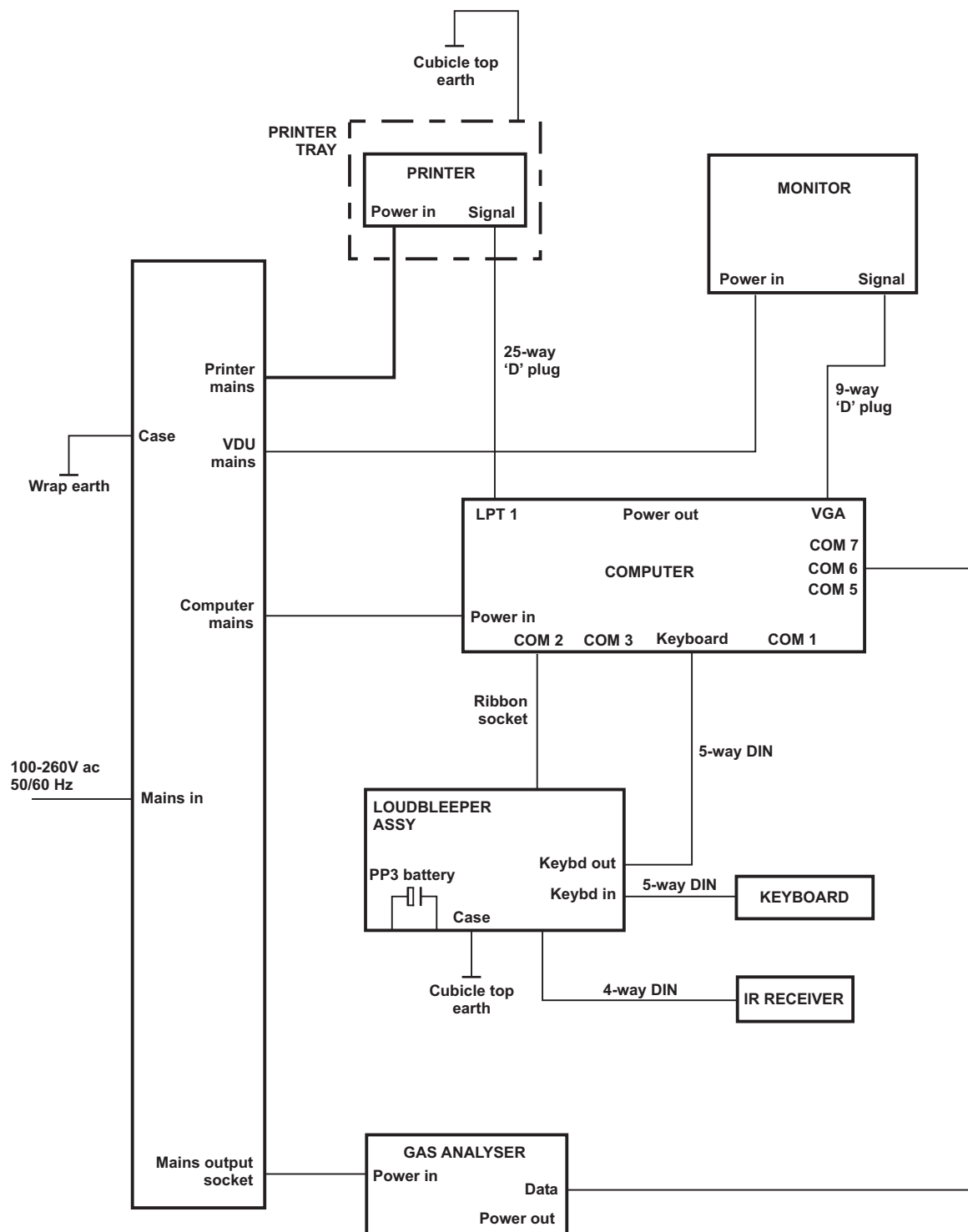


Fig. 2-1 SCHEMATIC OF MAINS & SIGNALS CONNECTIONS

2.2. TROUBLESHOOTING TIPS

2.2.1 Difficulty in selecting items with the light pen

Ensure that the light pen is not moved on the screen between each click of a double click. This is best achieved by resting the pen on the screen and double clicking gently without lifting the pen off the screen. A change in the settings may help - contact Product Support on 01278 436225 for help.

2.2.2 Touch pad inadvertently selects items as pointer moves over them

Ensure that the touch pad is clean and that uniform pressure is being applied by your finger - the touch pad is interpreting changes of finger pressure as a 'mouse click'. A change in the settings may help - contact Product Support on 01278-436225 for help.

2.3. MACHINES SUPPLIED WITH A MOUSE AND MOUSE MAT PAD

Always ensure that the mouse is used on the MOUSE MAT PAD PROVIDED. To ensure that the mouse always has a clean surface, tear the top sheet off the mouse mat pad at least every morning or when the pad is dirty. Replacement pads are available from Crypton - call 01278 436226.

The pad may be attached to the door of a CMT 2000 or the top surface of a CMT500/1000 using the self-adhesive pads provided.

Note:

The mouse may only be used to control an application when a pointer appears on the screen.

2.3.1 Warranty

The mouse must ALWAYS be used on a clean surface. If it is used on a dirty surface the dirt will be picked up by the mouse ball and transferred into the mechanism of the mouse. This will rapidly lead to failure. For this reason the mouse is not covered by our standard warranty and is listed as a 'consumable part'.

If you believe that your mouse has failed due to faulty manufacture within one year of purchase please contact Product Support on 01278 436225 to arrange for its return. If, on inspection, faulty manufacture is confirmed a replacement will be despatched.

IMPORTANT:

Service visits for the replacement of a faulty mouse are chargeable.

2.4. MACHINES SUPPLIED WITH A TOUCH PAD

Move the pointer around the screen by moving your finger around the pad, ensuring that uniform finger pressure is applied. Select an application by either tapping the pad or pressing the left button, once for a single click, twice for a double click.

Ensure that the touch pad is kept clean

Your machine does not need any additional drivers installed and is ready to use with the touch pad.

Note:

The touch pad may only be used to drive applications when a pointer appears on the screen.

3. PRINTER

3.1. INSTALLATION

To fit a printer to the CMT 500 follow the procedure detailed below:

Ensure that the mains power switch on the back of the unit is turned OFF.

1. Unpack the printer and read the relevant sections of the printer manufacturer's operating instructions.
2. Remove printer access cover, remove transit packing and fit ribbon as detailed in the printer manufacturer's operating instructions. Refit printer access cover.
3. Place the printer onto the tray. Connect the signal and mains leads which are already fitted to the cubical. Note the shape of the 'D' connector and always ensure that the tapered sides of the plug and socket are fitted together. Reversal of the connector could result in an expensive repair!
4. Ensure the printer is correctly positioned so that the paper can freely enter through the slot in the bottom of the drawer.

Note: If a 280 printer is being fitted, the paper enters the printer through the slot underneath it; if a 380 printer is being fitted, the paper enters the printer through the slot at the rear.

5. Fit the rear paper deflector if applicable (380 printer).

If a Crypton Application Programme is being used the CMT 500 has now to be configured to enable the Printer to be used with it, refer to the 'UTILITIES' section in the Application Programme manual.

3.2. LOADING THE PAPER

Please refer to the relevant section of the printer manufacturer's operating instructions.

3.3. CHANGING THE PRINTER RIBBON

Please refer to the relevant section of the printer manufacturer's operating instructions.

3.4. PRINTER OPERATION

The printer can be operated on command from the infra-red handset, the keyboard or the application programme.

Normally, printed text will comprise test results plus Header and Footer personalised details.

In some Application Programmes, Customer details, such as name, vehicle registration, mileage, etc., may also be typed in using the QWERTY Keyboard.

4. INFRA-RED HANDSET RHS 1

4.1. INSTALLATION

An RHS 1 handset is supplied with the CMT 500 and will be set to work with standard Application disks. However, when an infra-red handset is purchased as a replacement, the following routine should be observed.

Unpack the handset. This is supplied with an internal dry battery already fitted. To change a battery, remove the four screws from the rear of the case and locate the battery inside. The replacement battery should be an ALKALINE type such as MN 1604 or 6 LF 22 types.

CAUTION: When the handset is dismantled take care not to damage the internal circuitry and coding mechanism.

The handset has a code which personalises it to your CMT 500 Application Programme(s).

This enables several handset-controlled machines to be used in the same area without interference. When a new handset is put into service it is likely that it will already match the code of your CMT 500 since initially all handsets and software leave the factory set for the same code. If alternative settings are required see below for information on changing the handset and software.

To check for compatibility between software application and new handset, select an Engine Test Application on your CMT 500, then operate the handset keys and check for a response on the VDU. If there is no response, proceed as follows:

1. First check that the RED 'Transmit' LED flashes each time a key is pressed. If not, it is likely that the battery needs to be changed. Follow steps 2 to 3. If this is satisfactory proceed from step 2 to steps 4 - 5.
2. Remove the four screws securing the back of the handset and take off the back.
3. Disconnect the battery and fit a new one, ensuring correct polarity is observed. Check that the RED 'Transmit' LED now flashes, (if it does not the handset will require to be serviced/replaced). Refit the back panel and screws.
4. Locate the coding switch arrowed in Fig. 4-1. Normally switch No. 1 will be ON and switches 2-6 will be OFF.
5. Move each toggle switch in turn to the ON position carefully ensuring all the other switches are set to OFF using a small screwdriver. Check as each switch is selected whether the handset will operate the CMT 500. When the correct switch is found, replace the back using the four screws.

NOTE:

Handle the handset with care while the back is removed.

If a second, or third, etc., unit is to be used in the same area it will be necessary to set each additional handset to a different switch setting other than setting 1 and change the software to suit.

Contact Crypton Customer Support on (01278) 436225.

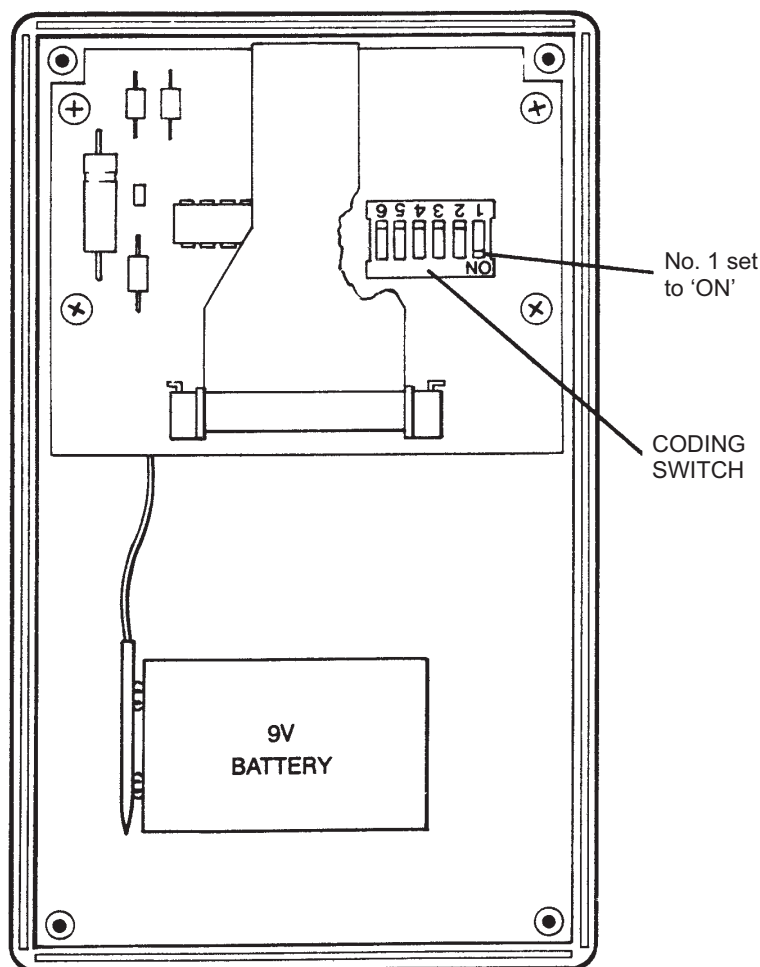


Fig. 4-1 'ADDRESS' SETTING FOR RHS 1 HANDSET

4.2. HANDSET OPERATION

The handset works by transmitting a beam of invisible, Infra-red light which is detected and decoded by an IR Receiver, located in the front of the unit. To operate the handset, point it in the direction of the receiver and press any key firmly.

The specific action of each handset key is determined by the application programme in use. A keypress received by the computer is indicated audibly and by a GREEN LED flashing alongside the power indicator LED. Normally, a single tone 'beep' is sounded when a key is pressed. However, if the keypress is invalid (i.e. not a key that produces any action at that specific point in the programme) there will be a multi-tone 'beep' rising in pitch from start to end.

Fig. 4-2 shows the key configurations which are specific to Crypton Application programmes. The handset is not intended for use with third party software and correct operation cannot be guaranteed if used for this purpose.

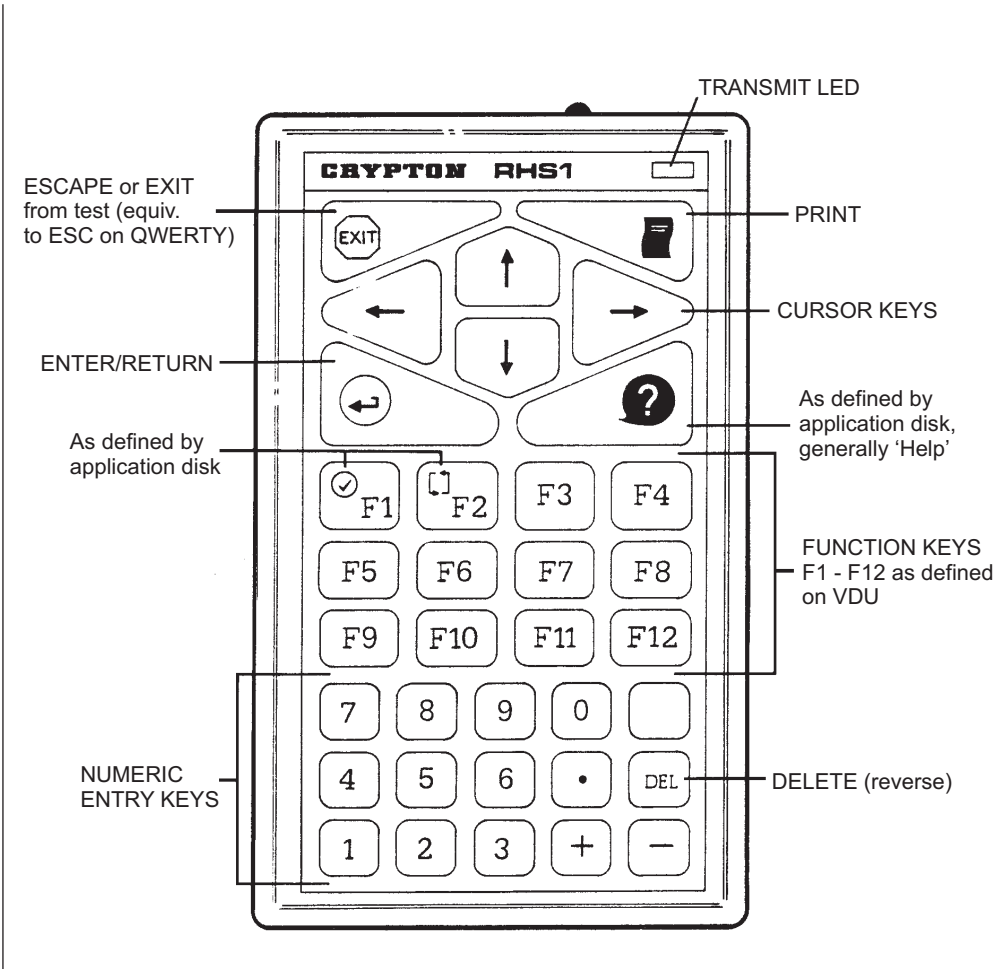


Fig. 4-2 RHS 1 HANDSET KEYS

5. QWERTY KEYBOARD

A typical keyboard is shown in Fig. 5-1, together with basic key operation. Some key functions will be specific to the application programme in use and these are dealt with in the instructions supplied with the software.

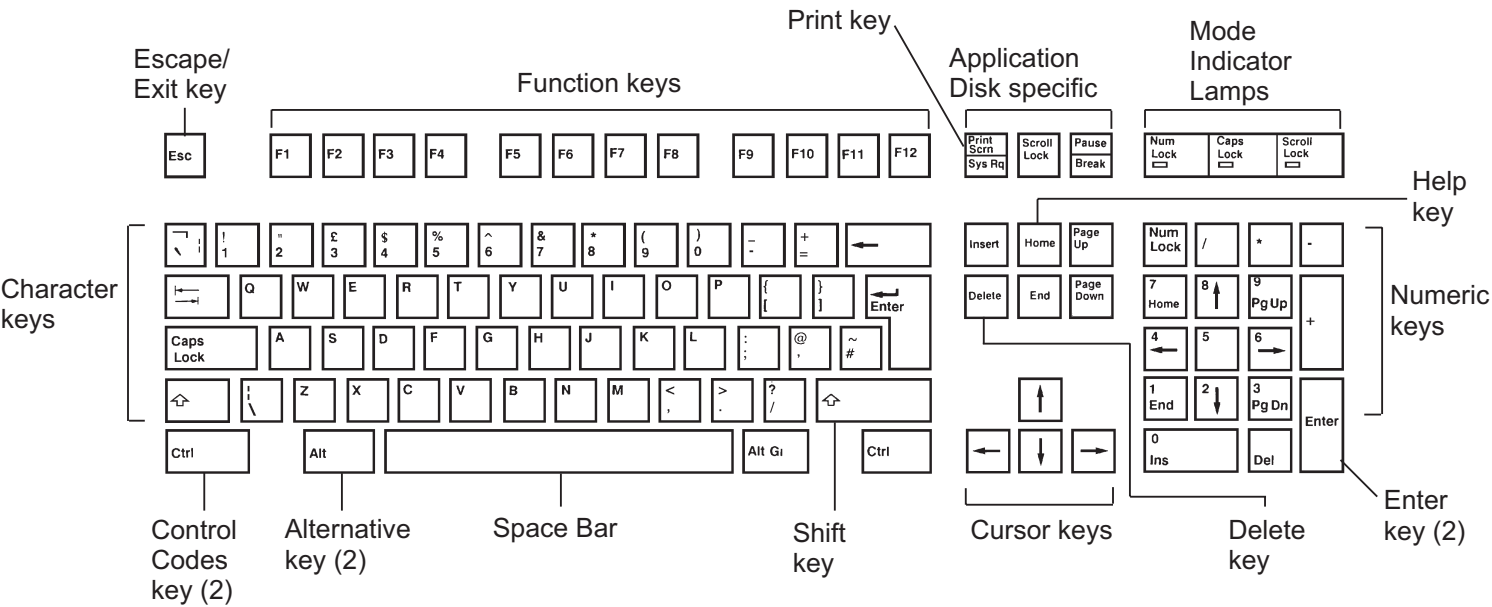


Fig. 5-1 KYBD 1 QWERTY KEYBOARD KEYS

6. EMISSION MEASUREMENT

6.1. INSTALLATION

The 290 (CO/HC/CO₂/O₂) Emission Analyser may be fitted into the trolley and must be secured in place to prevent it being pulled out accidentally if the sample probe is left in a vehicle after testing, and the vehicle is moved.

Remove the hexagon headed screws from all the feet of the emission analyser, remove the feet (store if required in the future) and refit two of the screws to the two front holes of the emission analyser, through the holes in the base of the trolley shelf.

Connection to the CMT 500 consists of a mains lead, MIL 1, and a signal lead, GIL7. The mains lead should be fitted to the connector at the rear of the emission analyser and the other end to the CMT 500 mains outlet.

The GIL 7 plugs directly into the back of the 290 and the computer.

NOTE:

Ensure that the emission analyser mains switch is left in the ON position, otherwise gas analyser communication errors will be displayed on VDU.

The Application Software option, if installed, now has to be configured to include an Emission Analyser and this is done by selecting UTILITIES and CONFIGURATION (see UTILITIES section in the application manual). This process writes the new configuration back to the Hard Disk.

6.2. USE BY ENGINE TEST APPLICATION PROGRAMME

Once it has warmed up and calibrated, the Emission Analyser is controlled automatically by the Application Software. Status messages coming from the emission analyser, such as when re-calibrating, or when a filter is blocked, are passed to the Host and displayed on the VDU. Use of the Emission Analyser can be temporarily abandoned by following the instructions on the screen, or more permanently by re-configuring the Application Software not to include an Emission Analyser (See UTILITIES - CONFIGURATION in the relevant application operating instructions).

For general information on the use, maintenance and calibration of the Emission Analyser refer to the Operating Manual.

7. CRYPTON MENU SYSTEM CMS 2

7.1. OPERATION

Before switching on, ensure that the disk drives(s) are empty so that the HOST uses the hard disk as its program source.

Switch on and wait for the CMS 2 MAIN MENU to be displayed. This screen consists of several APPLICATION KEYS, each carrying a pictorial representation of the program they start up.

Note:

ALWAYS exit the application program you are running and shut down Windows before switching off the Host. This will ensure that all Windows files are correctly closed and that the equipment programs are in a tidy condition before powering down.

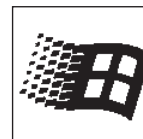
To exit Windows select the SHUT DOWN key on the CMS 2 Main Menu. When selected it changes from green to red.



Note:

If an application is still running this key will grey out and will not function; return to the application(s) still running and shut it down first.

Windows may also be exited by pressing the Windows key or 'CTRL ESC' on the keyboard, selecting 'Shut Down ...' followed by 'Shut down the computer?' on the 'Radio Button' box and then 'Yes'. Alternatively, press the Windows key on the keyboard followed by 'U' and use the up/down arrows to select 'Shut down the computer?' and then press ENTER.

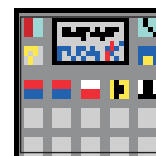


7.2. APPLICATION KEYS

To run an application the relevant key must be selected. This can be done using either the Keyboard or the Pointing Device (light pen, mouse or touch pad).

- To select a key using the pointing device press quickly twice on the required key.
- To select a key using the Keyboard use the up/down/left/right keys on the keyboard and press ENTER on the required key. The selected key is shown with a green border.

Note: If no key has a green border ensure that CMS 2 is active by using 'ALT TAB' until the CMS 2 symbol (shown right) appears.

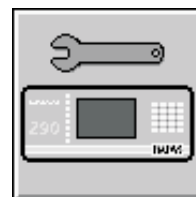


When you run an application, the key for that application "greys out". Other application keys may also grey out to indicate that their applications may not be run at the same time. This is because they all require the use of the same interface modules (e.g. EAM, CD-ROM).

7.3. EMISSION ANALYSER SET-UP KEY

When the ICID 2 program is loaded as 'EMISSION ANALYSER SET-UP' this menu option appears.

It causes the Host to act as a remote front panel for Crypton emission analysers, allowing the operator to see the emission analyser display on the VDU, print the readings on the Host printer and control the analyser using the Host keyboard or handset (if fitted). For details of operation please refer to the specific emission analyser operating instructions.



To run the application press the key quickly twice with the pointing device, or select the key using the keyboard and press ENTER. To exit from the program and return to the CMS 2 Main Menu press 'ESC'.

IMPORTANT:

If this option is used with a "black box" emission analyser (i.e. no display), under no circumstances should the 'Host engine analyser' setting be altered, as this may render the analyser unusable. If this occurs it will require a CHARGEABLE service visit from a NAMAS qualified engineer to correct the problem.

7.4. EXIT / MINIMIZE KEY

This key returns control to the standard Windows desktop. It has two modes:

- MINIMIZE (shown as a down arrow)
- EXIT (shown as an open door).



In the MINIMIZE mode (the default setting) CMS 2 is minimized to the Windows desktop but remains running.

In the EXIT mode CMS 2 is closed. It may be restarted by pressing the Windows key or 'CTRL ESC' on the keyboard, selecting PROGRAMS, followed by START UP and then CRYPTON MENU SYSTEM.

Alternatively it may also be restarted using the standard Windows tools (run C:\CRYPTON\CMS2.EXE), or it will be restarted automatically when the computer is re-booted. You may not exit from CMS 2 when any installed application is running.

To EXIT or MINIMIZE CMS 2 press the key quickly twice with the pointing device, or select the key using the keyboard and press ENTER.

To change the mode of this key hold down the CTRL key and press once on the key with the pointing device. A configuration screen is displayed. Select MINIMIZE or EXIT by pressing once with the pointing device on the 'Radio Button' box. To save the change press OK, or to avoid changing the mode press CANCEL.

To use the keyboard rather than the pointing device select the key with the keyboard and press CTRL ENTER. A configuration screen is displayed. Use the TAB and up/down arrow keys to select MINIMIZE or EXIT. Use the TAB key again to select OK and press ENTER to save the change, or select CANCEL and press ENTER to avoid changing the mode.

7.5. HELP KEY

This key displays information about CMS 2.

To view the information press the key quickly twice with the pointing device, or select the key using the keyboard and press ENTER.



7.6. DOS PROMPT KEY

This option allows the use of other, non Crypton supported, DOS programs. Press the key quickly twice with the pointing device, or select the key using the keyboard and press ENTER.

The C:> prompt will appear in a window. The Host unit can now be used as a normal IBM PC.

To return to the CMS 2 MAIN MENU type EXIT and press the return key from the C:> prompt. The window will close and the main menu will reappear.



7.7. FILE MANAGER KEY

This option allows the use of the Microsoft Windows File Manager. Press the key quickly twice with the pointing device, or select the key using the keyboard and press ENTER.

To return to the CMS 2 MAIN MENU choose EXIT from the File options.



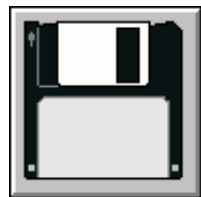
7.8. INSTALL KEY

This key is used to install and remove applications, with the choice of using the Floppy Disk Drive A or CD ROM Drive D.

Note 1: Only Crypton supplied applications may be installed this way.

Note 2: You may not install or remove an application when any application is running.

You may also add keys to display a DOS Prompt and the Windows File Manager.



7.8.1. Installation And Removal Of Crypton Applications

Note: If you are removing an application you will need the Crypton disk from which it was originally installed.

KEEP ALL ORIGINAL DISKS FOR FUTURE USE!

Press the INSTALL key quickly twice with the pointing device. A multi choice screen is displayed.

Choose the required option by pressing once with the pointing device on the appropriate 'Radio Button'. Place the disk containing the Crypton supplied software in the appropriate drive and press OK to begin the software installation/removal, or press CANCEL if you do not wish to install or remove software.

To use the keyboard instead of the pointing device select the INSTALL key and press ENTER. A multi choice screen is displayed. Use the up/down arrows to choose the option required and the TAB key to select OK (and press ENTER) to begin the software installation/removal, or select CANCEL (and press ENTER) if you do not wish to install or remove software.

Note:

You cannot install or remove CMS 2 itself this way. See the section 'RE-INSTALLING CMS 2'.

When you first run CMS 2 there are no Application Keys displayed, but when a Crypton supplied application is installed an Application Key is created.

The application keys are arranged in a predefined order, so when new applications are installed, the keys that are created may not be added to the end of the displayed keys, but may be inserted between existing applications.

7.8.2. Installation Of Non-Crypton Applications on CMS 2

A non-Crypton application that has been installed on the hard drive can have a key assigned to it on the CMS 2 Main Menu. Hold down the CTRL key and press the INSTALL key once with the pointing device. A configuration screen is displayed.



Press once with the pointing device in the check box alongside DISPLAY BLANK KEY (MANUAL INSTALL). If the check box contains an X the key is enabled, if it is blank the key is disabled. Press OK to save the change or press CANCEL to avoid saving the change.

To use the keyboard instead of the pointing device select the INSTALL key, hold down the CTRL key and press ENTER. The configuration screen is displayed. Use the up/down arrow keys to select the DISPLAY BLANK KEY (MANUAL INSTALL) option and the space bar to change the check box. When the check box is set correctly, use the arrow keys to select OK and press ENTER to save the change or select CANCEL and press ENTER to avoid saving the change.

The blank key on the CMS 2 Main Menu now requires configuring. Hold down the CTRL key and press the BLANK key once with the pointing device. A Setting screen will be displayed. Fill in all the file and path details for the required application, using the pointing device to move to each field. When all details have been entered press OK to save the settings or press CANCEL to avoid saving the settings.

To use the keyboard instead of the pointing device select the BLANK key, hold down the CTRL key and press ENTER. A Setting screen will be displayed. Fill in all the file and path details for the required application, using the TAB key to move to each field. When all details have been entered select OK and press ENTER to save the settings or select CANCEL and press ENTER to avoid saving the settings.

7.8.3. Displaying DOS Prompt And Windows File Manager Keys

To display or remove the Dos Prompt and Windows File Manager keys, hold down the CTRL key and press the INSTALL key once with the pointing device. A configuration screen is displayed.

To enable or disable display of the Dos Prompt or File Manager key press once with the pointing device in the appropriate check box. If the check box contains an X the key is enabled, if it is blank the key is disabled. When the check boxes are set correctly press OK to save the changes or CANCEL to avoid saving the changes.

To use the keyboard instead of the pointing device select the INSTALL key, hold down the CTRL key and press ENTER. The configuration screen is displayed. Use the up/down arrow keys to select an option and the space bar to change the check box. When the check boxes are set correctly, use the arrow keys to select OK and press ENTER to save the changes or select CANCEL and press ENTER to avoid saving the changes.

7.9. SWITCHING BETWEEN APPLICATIONS

Pressing the TAB key while holding down the ALT key will allow you to switch between the applications that are running. Every time the TAB key is pressed an information window shows one of the running applications.

To switch to that application release the ALT key.

7.10. RE-INSTALLING CMS 2

If for any reason it is necessary to re-install CMS 2, please contact Product Support on 01278-436225 for help.

8. DISK INFORMATION

8.1. INSERTING A FLOPPY DISK

Additional software packs chosen for use with the CMT 500 will be accompanied by an application manual. This should be unpacked and put into the application section of this binder.

Carefully unpack the programme disk and slide the disk fully into the disk entry slot with the disk label uppermost. When correctly inserted the disk will 'click' downward and lock in the holder. At the same time the release button will move outward. To remove the disk, press the release button on the right of the disk drive slot and slide out the disk.

8.2. DISK WRITE PROTECT

A small slide switch at the front corner of the disk can be moved to one of two positions. These are READ WRITE or WRITE PROTECT. A small window is CLOSED when the switch is in the READ WRITE mode and OPEN when in the WRITE PROTECT mode.

Application Programme Disks should normally be set to READ WRITE mode as data has to be written to the disk occasionally.

Vehicle Data Disks should normally be set to WRITE PROTECT mode to prevent accidentally over-writing any vehicle data (except for Installable data, ISRD, which must be set for READ WRITE during installation).

To install software onto the Hard Disk refer to chapter 7.

8.3. SAFE DISK HANDLING

Once programmed, the protected floppy disk will give trouble-free use provided that reasonable care is taken in handling and general usage.

1. Ensure that the disk is not placed close to strong magnetic fields, e.g. the Handset magnetic backing.
2. Do not expose the disk to excessive high or low temperatures, e.g. do not leave in direct sunlight.
3. Do not leave the disk in a wet environment.
4. Do not allow the disk to lie in an exposed position where it can collect dust.
5. Keep the disk as clean as possible.

9. BIOS SETUP

The BIOS setup is the internal instruction that the computer uses at start-up and when looking for information - what type of hard disk is fitted, etc.

Under normal use no adjustments or action should be necessary to the BIOS setup.

However, it may be necessary to change the BIOS setup if new options are added to the computer, if the computer fails to power up correctly or if an error message is displayed indicating a problem with the BIOS setup.

A typical Start-Up Display is shown in Appendix A of this manual.

Typical AMI BIOS Setup Screens are shown in Appendix B of this manual; the actual screen will vary depending on the equipment fitted.

Unless you are conversant with all the terms shown in these appendices DO NOT ATTEMPT TO CONFIGURE THE BIOS SETUP YOURSELF.

INCORRECT SETTINGS MAY CAUSE THE MACHINE TO FAIL AND CAUSE DAMAGE TO DATA!

If you are in any doubt always choose the option 'Do not write to CMOS and exit' at the setup program menu.

Please contact:

Crypton Technical Support on: (01278) 436225

Appendix A - TYPICAL START-UP DISPLAY

When the CMT is switched on the following will typically appear:

(Energy Star Logo)

(Award)Award Modular BIOS v4.51PG, An Energy Star Ally
(logo) Copyright (C) 1984-98 Award Software, Inc.

ASUS P5A-B ACPI BIOS Revision 1007

AMD-K6-2/300 Processor
Memory Test : (counting)K OK

Award Plug and Play BIOS Extension v1.0A
Initialize Plug and Play Cards...
PNP Init Completed

Detecting HDD Primary Master ... (will vary)
Detecting HDD Primary Slave ... None
Detecting HDD Secondary Master ... CDROM
Detecting HDD Secondary Slave ... None

Press DEL to enter SETUP
04/16/99-ALADDIN5-P5A-B-00

(Screen clears)

System Configurations

+-----+-----+-----+-----+-----+-----+-----+-----+			
CPU Type		: AMD-K6-2/300 Processor	
Co-Processor		: Installed	Base Memory : 640K
Cache Memory		: 512K	Extended Memory : 15360K
-----+-----+-----+-----+-----+-----+-----+-----			
Diskette Drive	A	: 1.44M, 3.5 in.	Display Type : EGA/VGA
Diskette Drive	B	: None	Serial Port(s0) : 3F8 2F8
Pri. Master	Disk	: LBA ,Mode4, 2571MB	Parallel Port(s) : 378
Pri. Slave	Disk	: None	EDO DRAM at Row(s) : None
Sec. Master	Disk	: CDROM,Mode4	SDRAM at Rows(s) : 0 1
Sec. Slave	Disk	: None	Data Integrity : None
+-----+-----+-----+-----+-----+-----+-----+-----+			

PCI Device listing.....

Bus No.	Device No.	Func No.	Vendor ID	Device ID	Device Class	IRQ
0	11	0	1002	4755	Display controller	NA
0	15	0	10B9	5229	IDE Controller	14/15

(Screen clears)

Microsoft Windows98 load screen appears

Appendix B - AMI BIOS SETUP SCREENS

IMPORTANT:

The BIOS settings are critical to the correct operation of the machine and so should be altered only under guidance of Crypton Product Support. Tampering with the settings may result in a chargeable service visit.

B.1 STANDARD CMOS SETUP

ROM PCI/ISA BIOS (P5A-B) STANDARD CMOS SETUP AWARD SOFTWARE, INC.		
Date & Time as required.		
Hard Disks:	Type:	Mode:
Primary Master	: Auto	AUTO
Primary Slave	: Auto	AUTO
Secondary Master	: Auto	AUTO
Secondary Slave	: Auto	AUTO
Drive A	: 1.44M, 3.5 in.	
Drive B	: None	
Floppy 3 Mode Support	: Disabled	
Video	: EGA/VGA	
Halt On	: All ,but Disk/Key	

B.2 BIOS FEATURES SETUP

ROM PCI/ISA BIOS (P5A-B) BIOS FEATURES SETUP AWARD SOFTWARE, INC.	
Boot Virus Detection	: Disabled
CPU Internal Cache	: Enabled
External Cache	: Enabled
Quick Power On Self Test	: Enabled
HDD Sequence SCSI/IDE First	: IDE
Boot Sequence	: A,C
Boot Up Floppy Seek	: Enabled
Floppy disk Access Control	: R/W
IDE HDD Block Mode Sectors	: HDD MAX
HDD S.M.A.R.T. Capability	: Disabled
PS/2 Mouse function Control	: Auto
OS/2 Onboard Memory > 64M	: Disabled
PCI/VGA Palette Snoop	: Disabled
Video ROM BIOS Shadow	: Enabled
C8000 - CBFFF Shadow	: Disabled
CC000 - CFFFF Shadow	: Disabled
D0000 - D3FFF Shadow	: Disabled
D4000 - D7FFF Shadow	: Disabled
D8000 - DBFFF Shadow	: Disabled
DC000 - DFFFF Shadow	: Disabled
Boot Up NumLock Status	: On
Typematic Rate Setting	: Disabled
Typematic Rate	: 6
Typematic Delay (Msec)	: 250
Security Option	: System

B.3 CHIPSET FEATURES SETUP

ROM PCI/ISA BIOS (P5A-B)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

SDRAM Configuration	: By SPD
SDRAM CAS Latency	: 3T *
SDRAM RAS Precharge Time	: 3T *
SDRAM RAS to CAS Delay	: 3T *
Enhanced Page Mode Count	: Disabled
Internal Page Detection	: Enabled
SDRAM Pipe Function	: Disabled
SDRAM x111-2111 Mode	: Enabled
I/O Recovery time	: 2 BUSCLK
Graphics Aperture Size	: 64MB
Frame Buffer Posted Write	: Enabled
AGP Bus Turbo Mode	: Enabled
AMD K6 Write Allocate	: Enabled
Passive Release	: Enabled
Delayed Transaction	: Disabled
Memory Hole At 15M-16M	: Disabled
Data Integrity Mode	: Disabled *
KBD Clock Source Speed	: 8MHz
Onboard FDC Controller	: Enabled
Onboard FDC Swap A & B	: No Swap
Onboard Serial Port 1	: 3F8H/IRQ4
Onboard Serial Port 2	: 2F8H/IRQ3
Onboard Parallel Port	: 378H/IRQ7
Parallel port Mode	: EPP
ECP DMA Select	: Disabled *
Onboard IR	: Disabled
IR Mode	: IrDA SIR
FIR DMA Select	: 1
Onboard PCI IDE Enable	: Both
IDE Ultra DMA Mode	: Auto
IDE0 Master PIO/DMA Mode	: Auto
IDE0 Slave PIO/DMA Mode	: Auto
IDE1 Master PIO/DMA Mode	: Auto
IDE1 Slave PIO/DMA Mode	: Auto

Note: * Indicates value is fixed by other settings

B.4 POWER MANAGEMENT SETUP

ROM PCI/ISA BIOS (P5A-B)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management : Disable
Video Off Option : Always O
Video Off Method : DPMS Off

** PM Timers **

HDD Power Down : Disable
Doze Mode : Disable *
Standby Mode : Disable *
Suspend Mode : Disable *

** Power Up Control **

PWR Button < 4 Secs : Soft Off
PWR Up On Modem Act : Enabled
Wake on LAN : Enabled
Automatic Power Up : Disabled

** Fan Monitor **

Chassis Fan Speed : Ignore
CPU Fan Speed : 5357RPM #
Power Fan Speed : Ignore

** Thermal Monitor **

CPU Temperature : 42°C/107°F #
MB Temperature : 31°C/ 87°F #

** Voltage Monitor **

VCORE Voltage : 2.2V #
+3.3V Voltage : 3.4V #
+5V Voltage : 5.0V #
+12V Voltage : 12.2V #
-12v Voltage : -11.3V #
-5V Voltage : -5.1V #

Note: * Indicates value is fixed by other settings
Indicates live reading updated continuously and may vary

B.5 PNP AND PCI SETUP

ROM PCI/ISA BIOS (P5A-B)
PNP AND PCI SETUP
AWARD SOFTWARE, INC.

PNP OS Installed : No
Slot 1 IRQ : Auto
Slot 2 IRQ : Auto
Slot 3 IRQ : Auto
PCI Latency Timer : 32 PCI Clock

IRQ 3 Used By ISA : No/ICU
IRQ 4 Used By ISA : No/ICU
IRQ 5 Used By ISA : Yes
IRQ 7 Used By ISA : No/ICU
IRQ 9 Used By ISA : No/ICU
IRQ 10 Used By ISA : Yes
IRQ 11 Used By ISA : No/ICU
IRQ 12 Used By ISA : No/ICU
IRQ 14 Used By ISA : No/ICU
IRQ 15 Used By ISA : No/ICU

DMA 1 Used By ISA : No/ICU
DMA 3 Used By ISA : No/ICU
DMA 5 Used By ISA : No/ICU

ISA MEM Block BASE : No/ICU

USB Function : Disabled
USB IRQ : Auto
VGA BIOS Sequence : PCI/AGP

Note:

If an FTG ISA Lightpen board is fitted, reserve the interrupt it will use (normally IRQ11) by setting the appropriate "IRQ used by ISA" setting to "Yes"

Appendix C - GOOD WORKING PRACTICE

IMPORTANT:

This section provides a RECOMMENDED GOOD WORKING PRACTICE FOR USE & CARE OF IT BASED EQUIPMENT, particularly with regard to emissions testing.

In order to provide and ensure a continued and long working life from your investment in PC based equipment we recommend that where possible you observe the following 'good working practice'.

C.1 TURNING UNIT OFF / LEAVING FOR PERIODS BETWEEN TESTS

When a test is completed the operator should return the unit to the MAIN MENU from which the 'EMISSIONS TEST PETROL' test is selected. This ensures that the application programme is correctly closed down and ready for use without delay on the next test.

It is always recommended that, prior to switching the mains power off on the unit, the operator returns BACK to the MAIN MENU SCREEN, from which the emissions test was previously selected.

C.2 EXTREMES OF WEATHER CONDITIONS

Extremes of weather conditions can give very low temperatures, particularly where a wind chill factor is introduced. In such weather conditions and where temperatures are likely to fall below freezing, we recommend that you leave the main unit switched on at all times and just turn the VDU power switch off overnight to save the VDU screen.

Leaving the equipment powered continuously will reduce any effect of Temperature Cycling or dampness and assists in preventing any incidence of ice forming within the collection bowl/filter pipes of the gas analyser.

This is particularly beneficial if there is no background heating in your garage, or if there are high levels of cold through draft in low overnight temperatures.

C.3 LEAK TEST OPERATION

Please ensure you follow the screen instructions on the procedure for the Analyser Leak Test and ALWAYS use the 'RETURN' key to proceed.

If you exit this test part way through, by using the 'ESC' key, the message 'GAS ANALYSER NOT CONNECTED' can occur and the programme will not allow you to continue to carry out M.O.T. tests, post 1/8/1975 registration vehicle type.

If you do inadvertently get into this situation just EXIT back to the MAIN MENU and turn the mains power switch on the rear of the unit off and then back on again. Reselect 'EMISSIONS TEST PETROL' when the menu appears.

C.4 PROBLEMS WITH DAMP PAPER

If your garage suffers from an excessive build up of condensation and moisture then it is always beneficial to only hold the minimum amount of paper in the printer storage tray that is needed for say a 'week's use'; the remaining paper should be stored in a dry place.

This can minimise problems with damp paper jamming the tractor feed mechanism. By leaving the unit powered continuously the internal heat will also help prevent moisture/dampness problems.

AFTER SALES SERVICE

Apart from the routine maintenance and adjustments stipulated in this manual the equipment must not be tampered with in any way. All further servicing must be carried out only by an engineer from Transervice or Authorised Agent (outside the UK). Failure to observe these conditions will invalidate the Guarantee.

On-Site Service / Overhaul / Spare Parts

If you require a Service Engineer to attend ON SITE, either due to an equipment fault, or for machine calibration, or if the equipment covered by this manual requires to be sent back for factory overhaul, or if you need spare parts, please contact our Product Support Helpline at the following number.

Tel: 01278 436225 Fax: 01278 436238

Overseas

Service abroad is provided by the agent from whom your equipment was purchased.

Fully Comprehensive After-Sales Service

Transervice can offer a range of contracts to cover:

Installations ♦ Contract Maintenance ♦ Factory Overhaul ♦ Repairs on Site
Spare Parts ♦ Certification and Calibration of Equipment ♦ Lift Safety Kits

Crypton provide information and contracts covering:

Car Data ♦ Fault Code Information ♦ Diagnostic Information ♦ Technical Topics
Software Support Contracts ♦ Software Updates ♦ Accessories

Helplines

Crypton run an Equipment Helpline during normal office hours.

Tel: 01278 436225 Fax: 01278 436238 email: support@CryptonTechnology.com

A fully comprehensive Product Support Contract is also available which provides additional assistance with equipment/technical support. Please contact Product Support on the above Helpline no. for further details.

Crypton run a Vehicle Helpline during normal office hours, for vehicle diagnostic problems and information.

Tel: 09065 54 44 33 (all calls charged at £1/min)

Training Centre

The Crypton Training Centre offers a full range of courses, from training on the practical use of new equipment, to the vehicle electrical/electronic systems likely to be encountered. For details of courses or for further information please contact:

The Secretary, Crypton Training Centre, Bristol Road, Bridgwater, Somerset TA6 4BX.

Tel: 01278 436224 Fax: 01278 436230

CRYPTON

Terms and Conditions of Sale

GUARANTEE

We guarantee our products as free from defects due to faulty material or bad workmanship for a period of 12 calendar months for all products. The period of the guarantee commences from the date of delivery to the Purchaser, either by us or by our distributor. Our liability is limited to the replacement of parts found defective and making good defects found within the prescribed period arising solely from faulty material or bad workmanship, in the products of our own manufacture, properly used solely for the purposes for which they were intended, and not due to wear and tear, misuse, neglect or improper adjustment.

Any product alleged to be defective shall be forwarded to us, carriage paid, immediately the alleged defect is discovered, for identification, examination and report or if not capable of being so forwarded, notice in writing shall be sent to us immediately. The Purchaser will be charged for engineers time and travelling expenses if a warranty repair is carried out on site, other than for fixed items of equipment such as brake testers. If we accept liability the repaired or new product, in replacement, will be delivered free from our works. We give no guarantee in respect of any proprietary electrical or other equipment made by other manufacturers, and supplied with our products, but will so far as possible, transfer the benefit of such guarantee, if any, given by such other manufacturers. We are in no circumstances liable for any consequential or other loss or damage arising through any defect in our product. In lieu of any express or implied statutory or other warranties, guarantees, conditions or liabilities (whether as to fitness, quality, standard of workmanship or otherwise) which are hereby excluded, the following provisions shall apply:

- (a) The Purchaser shall not be entitled to rescind the contract or to claim damages on the grounds of any statement whatsoever as to the suitability of the goods for any particular purpose, and the Purchaser assumes responsibility for the capacity and performance of the goods being sufficient and suitable for his purpose, and for his premises being suited to the installation and operation of the plant and machinery. The Purchaser agrees and confirms that apart from the express terms of the contract, no statement or representation has been made by the Company relating to the goods to be supplied under the contract or, if any has been made, he has not relied on it.
- (b) The Company's liability in respect of any defect whether quality, suitability or performance or otherwise in any goods supplied or for any loss, injury or consequential damage attributable thereto is limited to the terms of this guarantee and the Purchaser hereby acknowledges:
 - (i) that if purchased the goods in a competitive market and that the bargaining strength of the Company was in no way a relevant factor in the purchase of the goods from the Company.
 - (ii) that the Purchaser knows the extent of the meaning of this Condition and the limitations thereby imposed by it under Sections 13, 14 and 15 of the Sale of Goods Act 1979.

Our guarantee does not apply should equipment be operated or stored under adverse conditions e.g. outside installations or in areas used for steam cleaning or pressure washing, etc., unless otherwise specified in the relevant equipment manual.

The above guarantee is given in lieu of all other terms, conditions, warranties, guarantees, undertakings and representations, express or implied, statutory or otherwise, which, except to the extent that this provision is held to be void or unenforceable under or by virtue of any provision contained in the Sale of Goods Act 1979 or the Unfair Contract Terms Act 1977 or any statutory modification or re-enactment thereof for the time being in force, are hereby expressly excluded.

DESIGN

We reserve the right to alter the design or construction of equipment at any time without notice.

LAW OF CONTRACT

All contracts for the sale of the Company's products shall be deemed to be made and executed in England, and the same shall be construed, performed and enforced in accordance with English Law and the parties submit to the jurisdiction of the English Courts. The application of the Uniform Laws of International Sales shall be excluded. This condition shall not prevent the Company instituting proceedings in the Courts of any other country to enforce such contract against the customer.

DELIVERY

Delivery dates, given in good faith, are approximate and reflect conditions prevailing at that time. No liability can be accepted arising from delays in delivery, irrespective of the cause of any such delay.

CANCELLATION AND VARIATION

Orders once accepted by us are binding and cannot be cancelled or varied unless we at our discretion accept the cancellation or variation. We will make every effort to meet our Purchasers in this respect but

- (a) we cannot accept cancellation for non-standard products; and
- (b) we cannot accept cancellation changes in delivery dates or other variations notified to us later than the end of the penultimate month prior to the month fixed for delivery; and in such circumstances and any other cancellations or variations to which we have not agreed we shall enforce our contractual rights and/or impose an appropriate charge.

TERMS

Quotations given are open for acceptance within 14 days and are subject to revision should the state of the raw material market or other circumstances render this action necessary.

Orders, whether received as a result of a quotation or not, can only be accepted for execution at prices ruling at date of despatch.

Payment - except where otherwise stated in our invoice, or agreed in writing, our terms are nett cash and payment is due on presentation of invoice. Where we have agreed to open an account with the Purchaser invoices are due for payment by the 25th of the month following month of invoice and interest will be charged on overdue accounts at the prevailing County Court rate.

VALUE ADDED TAX

VAT is not included in our prices and will be shown separately on all invoices at the rate ruling at date of despatch and subject to current legislation.

CARRIAGE

Carriage is paid to destinations on the mainland of England, Scotland and Wales on all orders of £500 Nett or over, except accessories, spare parts and repairs. Where carriage is chargeable its cost is added to the invoice value at current rates.

PACKING AND UNLOADING

Damages or shortages must be signed for as such and claim made on the carriers, in writing, within three days of delivery. Where Company vehicles are used the driver must be notified at the time of unloading and the consignment note marked to indicate the damage or shortage. The practice of signing for the goods "not examined" does not absolve the Purchaser from this condition.

The consignee is responsible for unloading.

Packing cases and slings, when used, are charged extra but credited in full on return, carriage paid and in good condition.

LOSS IN TRANSIT

British Rail, Public Transport Companies and the Post Office only accept claims for loss in transit made within a limited period. If goods are not received within 14 days of the date of our invoice, we must be advised immediately otherwise neither the carriers nor ourselves will be liable for any loss involved.

PASSING OF RISK

The risk in the goods shall remain in us until delivery to the Purchaser or his agent. In the absence of written notice from the Purchaser to us and the carriers, as prescribed above, the goods shall be deemed to have been delivered complete and in satisfactory condition.

PASSING OF PROPERTY

Until such time as all sums due to the Company from the Purchaser whether in respect of goods delivered by the Company to the Purchaser or otherwise have been paid the provisions of this Condition shall have effect:

- (a) All goods delivered by the Company to the Purchaser will remain the property of the Company to the intent that the whole legal and beneficial interest therein shall remain that of the Company.
- (b) If the Purchaser becomes or threatens to become insolvent or being a body corporate has a Receiver appointed or passes a resolution for winding up or if a Court makes an Order to that effect or being an individual or partnership makes any composition or arrangements with his or their creditors or has a receiving order made against him or them or if the Purchaser shall be in breach of these Conditions, then the Company shall be at liberty to forthwith remove and repossess all goods which remain the property of the Company in accordance with this Condition and enter upon any property to do so or to inspect goods to identify the Company's goods.
- (c) The Purchaser shall only be at liberty to resell the goods purchased from the Company prior to the passing of title on the understanding that if it does not resell the goods then it will hold on trust for the Company so much of the proceeds of sale received by it under contracts which include any of the goods hereby sold either in their original or altered state as are necessary to discharge payment in full to the Company.
- (d) No provision of this Condition shall be deemed to cause a Mortgage or Charge of the Property or undertaking of the Purchaser or any part thereof to have been created by the Purchaser in favour of the Company.

SEPARABILITY

Any failure by us in respect of one delivery shall not entitle the Purchaser to treat the contract as repudiated, each delivery being, for such purpose, deemed a separate contract.

INSTALLATION

The Purchaser is responsible for the preparation of the site, where such a site is necessary, together with the provision of any supplies and services that may be required. The specifications and the responsibilities of agents, distributors and end-users are clearly set forth in separate leaflets, available on the various products concerned.

If failure to fulfil this responsibility extends the time taken to commission equipment or results in extra visits by engineers the Purchaser is fully liable for the extra cost. If installation of equipment is unduly delayed, the Company reserves the right to pass on cost inflation as a supplementary charge.

REFUSAL

Goods consigned to the order of end-users and/or distributors render them liable for all carriage and handling charges incurred, if delivery of the goods is refused on arrival at destination.

RETURNED EQUIPMENT

In exceptional conditions, subject to agreement in writing, and the equipment being of current standard design, new equipment in good condition will be accepted, carriage paid to factory, subject to a handling charge. Any costs incurred in making the equipment as new will be charged in addition to the handling charge.

SPARES AND AFTER SALES SERVICE

Spare parts and service are available through our service agent Transervice, Brearley Works, Luddendenfoot, Halifax, West Yorks, HX2 6JB. Initial contact should be made via the Crypton Product Support Helpline on 01278 436225. All spare parts purchases are subject to minimum order values.

RIGHT TO TERMINATE

If the Purchaser breaks any of these conditions or becomes insolvent or subject to any law relating to bankrupts or being a corporation goes into liquidation, whether voluntary or compulsory or has a receiver appointed over its assets, we may suspend deliveries or, by notice to the Purchaser, terminate the contract and such termination shall be without prejudice to any other rights or remedies to which we may be entitled.

All quotations and tenders are given and contracts are made by the Company subject to the above terms and conditions and unless previously agreed in writing by an authorised officer of the Company:

- (i) no verbal, written or other addition hereto or variation hereof including (without prejudice to the generality of the foregoing) any representation or warranty relating to the goods or services to be provided by the Company shall be effective; and
- (ii) these terms and conditions supersede any other terms and conditions appearing elsewhere and shall prevail over and exclude any course of dealing established between the Company and the Purchaser and any other terms and conditions stipulated or incorporated or referred to by the Purchaser or his agent or any third party; and
- (iii) it shall be a pre-condition of the Company giving any quotation or tender or entering into any agreement for the supply of any goods or services that such agreement be made subject to these terms and conditions.