

CRYPTON

In tune with the future



STP420 Emissions analyser

**OPERATING INSTRUCTIONS
GENERAL SECTION**

TES1403/D
April 2004

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 agents, 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.

WARNING:

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

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HEALTH AND SAFETY

1. The equipment is not weatherproof and should not be used outside in rain or snow.
2. The internal circuits and components of the analyser should not be tampered with. No internal parts are operator serviceable.
3. Operators should exercise due caution with regard to the engine fan and associated belts.
4. Always provide ventilation by using an exhaust gas extraction system or by having an adequate supply of fresh air.

Carbon Monoxide (CO) from a vehicle exhaust is a highly poisonous gas. If breathed in, it is absorbed by the blood and will result in greatly slowed reactions and if absorbed in sufficient quantity can be fatal. Published figures show that a concentration of 0.3% CO in the air can be fatal if inhaled for 30 minutes.

5. Before starting an engine, ensure that the gear selector is in neutral or park.
6. Care should be taken with regard to scalding from the cooling system, burns from the exhaust system and electric shocks from the ignition HT system.
7. When disconnecting the fuel system of a hot engine beware of the fire hazard caused by fuel spilling onto manifolds, ignition distributor, etc.
8. Position the mains cable and sampler pipe in such a manner that they do not present a hazard to anyone.
9. The earth lead of the mains supply cable MUST ALWAYS be connected to a good earth point.
10. Operators should not allow themselves to come into contact with water or other similar conductors when using the equipment.
11. Equipment should be sited in an area designated and clearly marked:

FOR USE BY AUTHORISED PERSONNEL ONLY

RECEPTION

This equipment leaves the factory set for 230V a.c. nominal, single phase 50/60 Hz. mains supply. Where the mains voltage differs from this, it is essential that the equipment is ordered for the specific voltage in your region.

The equipment should be stored and kept in a dry condition.

The STP 420/620 is supplied with all main parts (i.e. Computer, Gas Analyser etc.) fitted, with the exception of the Keyboard, Mouse and Monitor. Details for fitting these items are covered later in this manual.

Carefully unpack all items and examine for damage. Check contents against the packing list enclosed for any loss or discrepancy. Report any loss, breakage or discrepancy to the supplier immediately.

IMPORTANT NOTE

Do not disconnect or reconnect any leads between the various parts of the STP 420/620 without first SWITCHING OFF the mains supply; this does not include any connections to the vehicle under test.

FITTING THE KEYBOARD AND MOUSE

To fit the Keyboard, Mouse and Monitor follow the procedure detailed below, observing the correct sequence of actions:

1. Remove the back panel as shown in Fig. 1 by unscrewing the 4 earth nib Philips screws. The panel is connected to the main trolley by an earth bonding wire; take care not to strain or damage the lead while the back panel is removed. Note the plastic grommet for the monitor cables, this will need to be removed later when fitting the monitor.

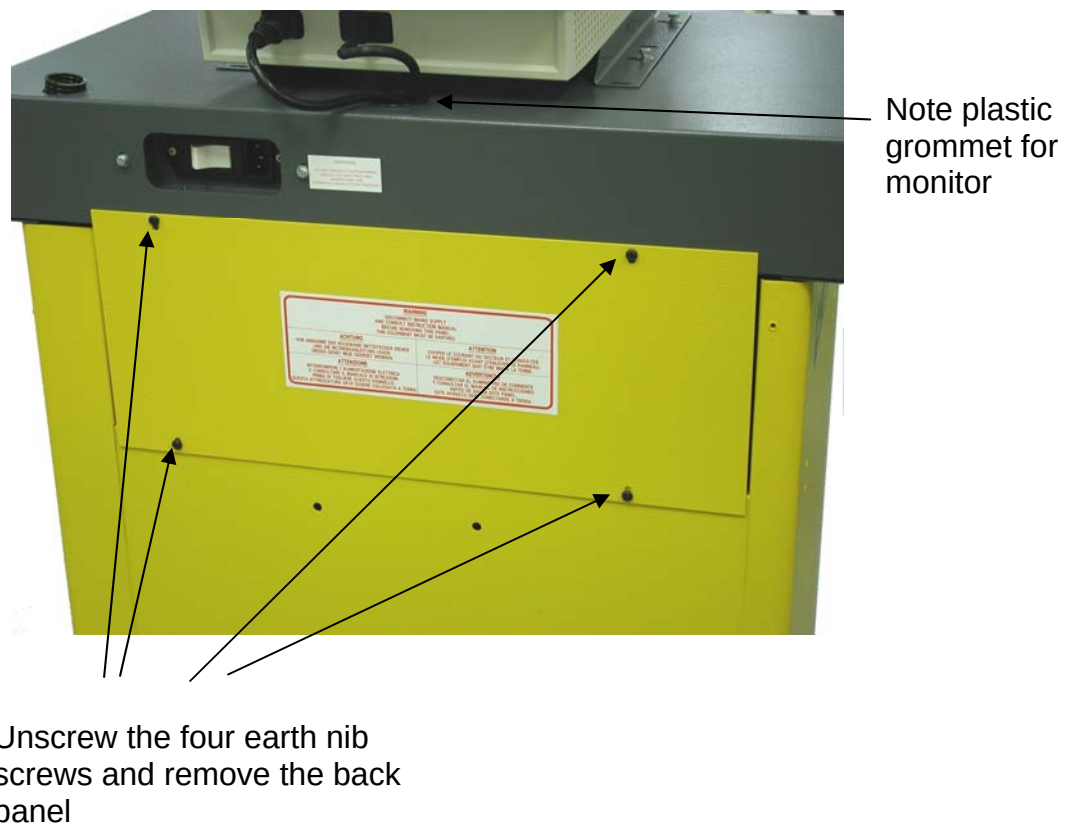


Fig. 1

2. Place the keyboard and Mouse on the front tray of the trolley (Fig. 2). Feed the cables through the hole at the back of the tray, over the top of the Computer and plug in to the colour coded connectors on the back of the computer, green for the mouse and purple for the Keyboard. Refer to Fig. 3

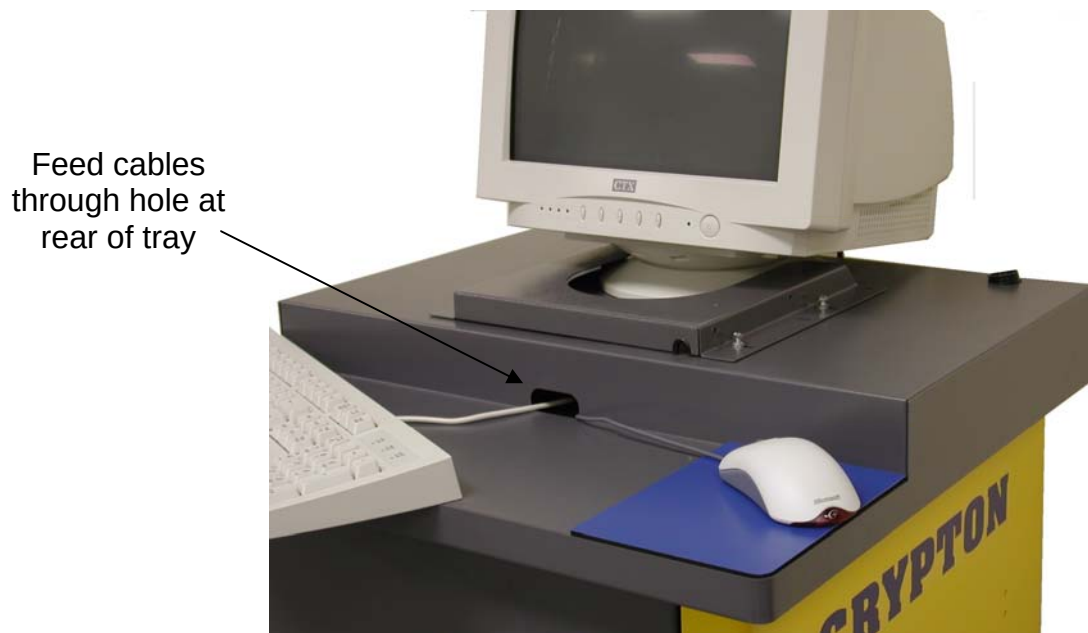


Fig. 2

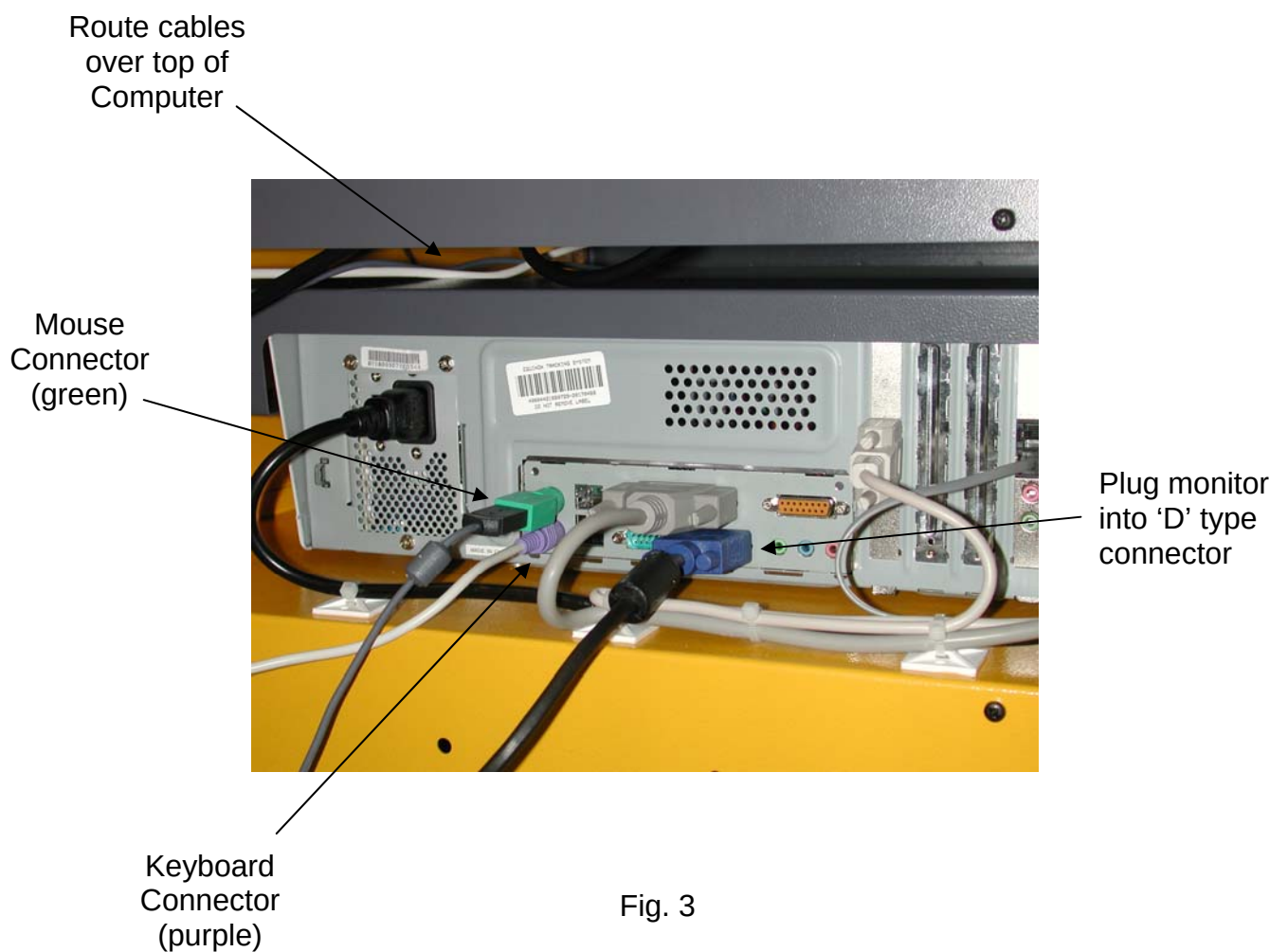


Fig. 3

FITTING THE MONITOR

3. Slacken the four screws (do not remove) securing the Monitor clamp to the top of the trolley. Fit the Monitor base to the Monitor and place on top of the trolley at the back with the screen facing the front. Slide into position underneath the clamp and retighten the four screws as shown in Fig. 4a. The Transit Bracket must then be secured to the rear of the monitor as shown in Fig. 4b

Place Monitor on back of trolley and slide forward underneath retaining clamp

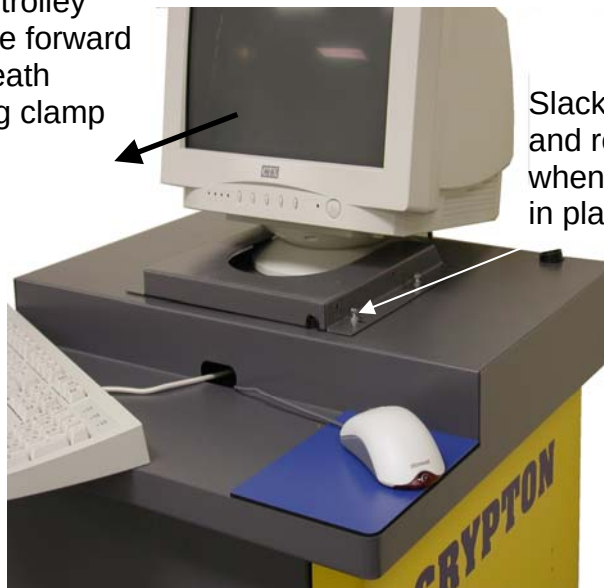


Fig. 4a

Slacken screws and retighten when monitor is in place

Clip Transit Bracket to rear of Monitor and secure to trolley with its retaining screws.

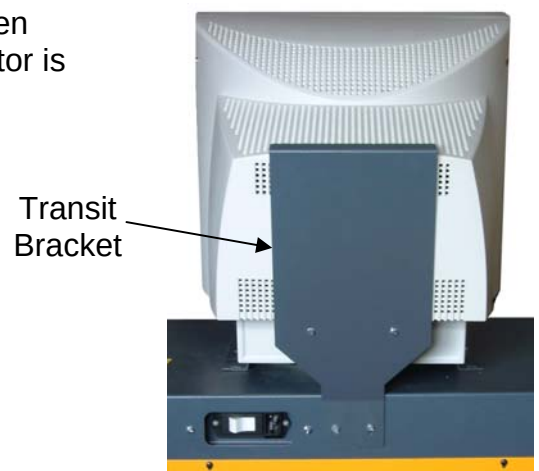


Fig. 4b

4. Remove the plastic grommet from the hole in the trolley immediately behind the Monitor (Fig. 1). Feed the monitor signal lead through the grommet from the top and then down through the hole in the metalwork. The monitor mains lead is already fitted and the free end will be lying with the computer. Feed this up through the metalwork and then through the grommet from the bottom. Replace the grommet.
5. Plug the mains lead into the socket on the back of the Monitor and the signal lead into the 15 way high density 'D' type connector on the computer as shown in Fig. 3. Tighten the screw locks finger tight. Ensure that there is enough slack left on the cables to allow the Monitor to swivel from side to side.
6. Bundle cables neatly into the rear of the unit and replace the back panel, **taking care not to trap or damage the earth lead.**

FITTING THE CABLE HOOKS

Four hooks are provided for securing cables. Threaded inserts are fitted just below the 'Crypton' label on each side of the unit for this purpose. Fit hooks using hardware provided.

OPERATION

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

The STP 420/620 is switched ON by a rocker switch situated on the rear of the cabinet.

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 to the Service Office (see back of manual), or 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. Switch on using the switch on the rear of the cabinet; the mains switches of the individual units (computer, VDU, printer, gas analyser, etc.) should normally be left on.

Note 1:

It is good practice to maintain computer equipment at an even temperature. If your garage is subject to large temperature variations it is recommended that you leave the unit ON at all times. Turn the VDU off at night using its own mains switch as this item, in common with all picture tubes, has a limited life. Continuous power gives two advantages - less thermal cycling of the computer and a faster gas module warm-up at low ambient temperatures.

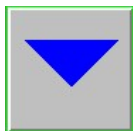
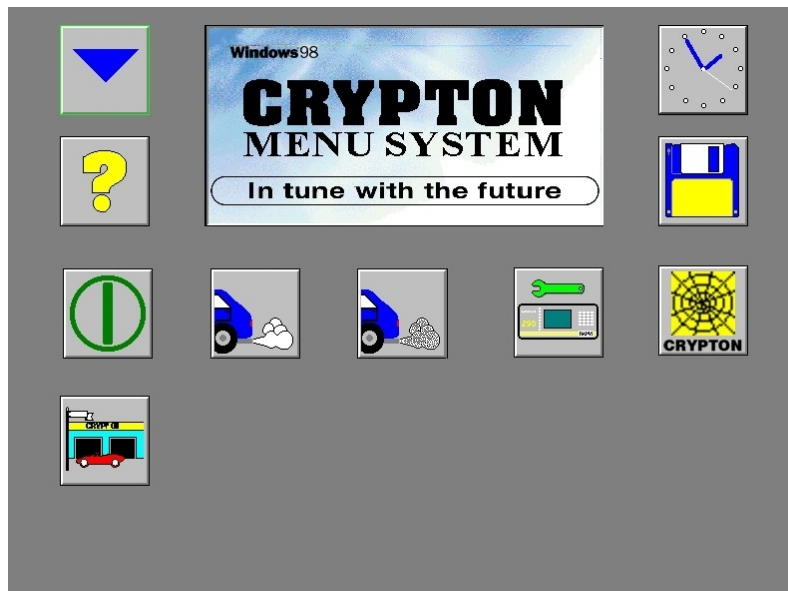
Note 2:

ALWAYS exit the application program you are running and return to the main menu screen before switching the equipment off (refer to the shut down procedure in the ICMS 2 section). This will ensure that all 'Windows' files are correctly closed and that the equipment programs are in a tidy condition before powering down.

CRYPTON MENU SYSTEM ICMS 2

After switch on, the computer will perform the start up sequence and the ICMS2 menu screen will be displayed as shown below.

The STP 420 is controlled by means of an 'icon' based menu system ICMS 2. Each application is accessed by double clicking on the individual icon for that application. Alternatively, if a mouse is not available, the icons can be selected by cycling around using the cursor (arrow) keys. As each icon is selected, it will highlighted in green. The application can then be accessed by pressing the enter key.



MINIMISE

Double clicking this icon allows the ICMS 2 menu to be 'minimised' to the bottom of the screen and allows access to the Windows 98 operating system



HELP

Basic information about ICMS 2 including version number.

**SHUT DOWN**

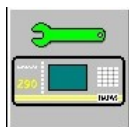
Double click to shut the system down. This will take a short period of time during which the 'windows is shutting down' message will be displayed. When the computer has shut down it is safe to turn the power off.

**WGTS2**

M.O.T. Gas Test (PETROL). Please refer to TES1204, WGTS2 operating instructions (supplied) for further details on how to use this program. For details of connections and operation of the gas analyser, please refer to TES 1401, Emission Analyser operating instructions (supplied).

**SMOKEMETER**

M.O.T. Smoke Test (Diesel). Please refer to Dieseltune smokemeter operating instructions (supplied) for further details.

**EMISSION ANALYSER SETUP**

Causes the host computer to act as a remote terminal for the gas analyser allowing full control of the analyser through the computer keyboard. For details of connections and operation please refer to TES 1401, Emission Analyser operating instructions (supplied).

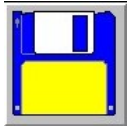
To exit from the program and return to the ICMS 2 Main Menu press 'ESC'.

**CRYPTON WEBPAGE**

For machines with a modem and connection to a telephone line. This icon will access the Crypton website via the internet.

**CIMS 1**

Allows creation of M.O.T. records. Please refer to TES 1223, CIMS 1 operating instructions (supplied) for further details.

**INSTALL/REMOVE SOFTWARE****Install Software**

Place the Application Installation Disk (Disk 1 if there is more than one disk in the set) in the disk drive. Double click the icon. The following dialogue box will be displayed:



Select either 'FLOPPY' or 'CD-ROM' as appropriate and follow the instructions on the screen to 'install' the program onto the hard disk.

Note:

The disk must be placed in the drive BEFORE the option is selected or an error message will be displayed.

When installation is complete the new program icon will then appear on the ICMS 2 MAIN MENU.

IMPORTANT: KEEP ALL ORIGINAL DISKS FOR FUTURE USE. A PROGRAM MAY ONLY BE REMOVED OR UPDATED IF THE ORIGINAL DISK(S) IS AVAILABLE!

Remove Software

Crypton programs resident on the hard disk can be removed back to the original installation disk by selecting the 'REMOVE SOFTWARE' menu option (either 'FLOPPY' or 'CD-ROM' as appropriate). The original application disk must be placed in the drive for the de-installation to work.

Select in the normal way and follow the instructions on screen.

Note 1:

The disk must be placed in the drive BEFORE the option is selected or an error message will be displayed.

Note 2:

Due to the copy protection system used on all Crypton software, a program can only be replaced onto the particular disk from which it was originally taken.

KEEP ALL ORIGINAL FLOPPY DISKS IN A SAFE PLACE!

Remember: In order to install the latest version of an application, it will be necessary to remove the old program back to its original disk.

DISK INFORMATION

INSERTING A FLOPPY DISK

Additional software packs chosen for use with the STP 420 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 underneath the disk drive slot and slide out the disk.

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.

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.
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.

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

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. Initial contact should be made via the Crypton Product Support Helpline on +44(0)1278 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.

CRYPTON

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Website: www.cryptontechnology.com

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 an Authorised Agent. 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: +44(0)1278 436225 Fax: +44(0)1278 450567

Overseas

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

Fully Comprehensive After-Sales Service

Call Crypton Helpline for details of local service agents. +44(0)1278 436225

Technical Information

Crypton provide information and contracts covering:

Car Data, Fault Code Information, Diagnostic Information, Software Support Contracts,
Software Updates & Accessories.