

MICROVITEC
COLOUR DISPLAYS



MICROVITEC
cub

Operator's Manual

NOTE:

For equipment purchased and/or operated outside the UK, the local supplier or dealer from whom you purchased the equipment should be consulted for prevailing local equipment warranty.

WICHTIGE ANMERKUNG:

Wenn das Gerät außerhalb Großbritanniens eingekauft oder bedient wird, müssen Sie Ihren Fachhändler, von dem Sie das Gerät gekauft haben, um Rat und die vorwaltende Garantie bitten.

IMPORTANT:

Si l'appareil était acheté ou utilisé au dehors de l'Angleterre demandez vous conseil votre distributeur ou au revendeur concernant la garantie dominante.

NOTA:

Si el monitor ha sido adquirido o se utiliza fuera de Gran Bretaña, consulte con el suministrador o vendedor para todo lo referente a la garantía prevalente.

INTRODUCTION

This colour monitor incorporates many advanced features and is engineered to high professional standards.

Featuring superior colour image quality – it will display with remarkable clarity and fidelity – colour picture information from computerised video sources.

Depending on model – input signals may be processed on board by customised interface panels resolving either analogue or digital information.

To achieve the excellence, high reliability and high performance of which this monitor is capable – we recommend that you read fully these instructions – and retain them for future reference.

INSTALLATION

OPERATING SAFETY

BEFORE CONNECTING THIS APPARATUS TO THE MAINS POWER SUPPLY: READ THE FOLLOWING IMPORTANT NOTES:

ELECTRICAL SUPPLY

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

GREEN AND YELLOW : EARTH
BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:-

1. EARTH

The wire coloured GREEN and YELLOW must be connected to the

terminal marked E, or by the safety earth symbol  or coloured GREEN, or GREEN and YELLOW.

2. NEUTRAL

The wire coloured BLUE must be connected to the terminal marked N, or coloured BLACK.

3. LIVE

The wire coloured BROWN must be connected to the terminal marked L, or coloured RED.

WARNING: IF A MOULDED-ON PLUG IS FITTED TO THIS APPARATUS AND SOCKET OUTLETS ARE NOT SUITABLE FOR THIS PLUG, THE PLUG MUST BE CUT OFF, AND AN APPROPRIATE THREE PIN PLUG FITTED. THE PLUG CUT FROM THE MAINS LEAD MUST BE DESTROYED,

AS A PLUG WITH A BARED FLEXIBLE CORD IS HAZARDOUS IF ENGAGED IN A LIVE SOCKET.

IF A 13A PLUG IS USED A 3A ASTA APPROVED FUSE TO BS: 1362 MUST BE FITTED. FOR ANY OTHER PLUG OR CONNECTOR, PROTECT WITH A 3A FUSE ON A DISTRIBUTION BOARD.

CAUTION: WHEN CHANGING A MAINS FUSE THE FUSE COVER MUST BE RE-FITTED. IF THE FUSE COVER IS LOST OR BROKEN DO NOT USE THE PLUG UNTIL A REPLACEMENT IS OBTAINED. REPLACEMENT FUSE COVERS CAN BE OBTAINED FROM THE SUPPLIER. WHEN ORDERING PLEASE STATE COLOUR OF INSERT IN THE PLUG BASE, OR THE COLOUR EMBOSSED IN WORDS ON THE PLUG BASE.

NOTE: To prevent shock or fire hazard, do not expose this equipment to rain or moisture. If such exposure occurs, remove the plug from the power feed point and have the exposed unit checked by a competent technician.

VENTILATION: It is important that all ventilation slots at the top, bottom and back of the monitor's cover are clear of any obstruction so that a free flow of air is available.

Do not cover with mats or material of any kind.

This monitor should be operated within an ambient temperature range not exceeding -10°C to $+40^{\circ}\text{C}$.

DEGAUSSING: Ferrous metal parts inside the monitor and picture display tube, can cause picture colour purity problems if these parts become magnetised.

The monitor contains circuitry which automatically de-magnetises (degausses) these parts when first 'switched-on'.



If however, after moving the monitor about in the Earth's magnetic field and colour purity problems do arise, then switching the monitor 'off', leaving for 15 minutes – and then switching 'on' again will effectively degauss the affected metal parts.

Note: Equipment containing strong magnets should not be located near to the monitor.

CHECK LIST

If after installation your new system does not work, the following checks may help to locate the problem and establish whether it is the monitor or other parts of the system that may be at fault.

NOTE: It is important that you carry out these checks **before** returning the monitor for repair.

- 1) Check that the mains power supply is ON.
- 2) Check that the power ON/OFF switch on the monitor is switched to ON. Mains power 'ON' is normally shown by the illuminated indicator.
- 3) Check that the input lead has been connected correctly and that it is of the correct type for the monitor's input (i.e. TTL input, analogue input etc.)
- 4) **Check that 'Contrast'  and 'Brilliance'  controls have been turned up clockwise.**
- 5) Check that signals from the computer or other source are being fed into the monitor's input.
(e.g. is the computer or other source being used switched 'ON' and functioning correctly?)
NOTE: The monitor screen will remain blank and appear to be 'OFF' unless a signal is going into the monitor — except for 'IBM' type monitors' — which will default to a 'white screen'.
- 6) Try typing some characters, followed by pressing 'Return' or 'Enter' key, when using Micro-computer source.
- 7) If possible — try the monitor out with another micro-computer or other alternative equipment source.
- 8) Before returning the monitor please ensure you have carried out all the checks listed.
If returning the monitor to the address given in the Warranty — or to address advised — **PLEASE ENSURE THE MONITOR IS PROPERLY AND CAREFULLY PACKED BEFORE SHIPPING** — If not, this will invalidate Warranty.

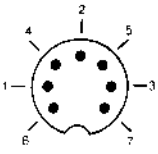
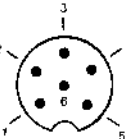
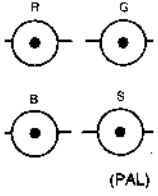
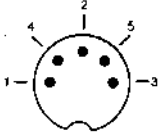

Protection and Safety

Should the monitor fail to operate after normal warm-up time or during use switch OFF and remove the plug from the power feed point.

DO NOT OPERATE THE EQUIPMENT IN A FAULTY CONDITION AS THIS MAY DAMAGE THE MONITOR OR PICTURE DISPLAY TUBE.

Ask your Dealer or Distributor for assistance:

Failing this — contact MICROVITEC or agents at the address given in the Warranty.

| Input/Type | Connector | Pin-Out Details | | Notes |
|-------------------------|---|--|------------------|---|
| IBM |  7-Pin 270° Din | Pin No | IBM | (1) For certain models – a screened lead should be used to maintain RFI protection. |
| | | 1 | Red video | |
| RGB-TTL* BBC |  6-Pin Din | Pin No | TTL | (1) *May be switch selectable to BNC sockets – R, G, B & S. |
| | | 1 | Red | |
| 1 VOLT – 75 OHMS |  4 × BNC Sockets | R | Red | (1) Where both TTL and 1 volt 75R inputs are available – a toggle switch is provided to select function: (TTL or 75R). (2) On some models – BNC socket 'S' may be switched to 'PAL' video by selector switch incorporated |
| | | G | Green | |
| AUDIO IN |  5-Pin 180° Din | B | Blue | (1) Audio Socket 5-Pin Din & PAL BNC Socket are normally both fitted together. (2) On some models – this facility may be switch selectable. For example: a) DUAL STANDARD MODEL TTL or PAL selectable b) TRIPLE STANDARD MODEL TTL, 75R or PAL selectable. |
| | | S | Sync | |
| PAL VIDEO (COMP. VIDEO) |  1 × BNC Socket | S | Signal | (3) Using suitable lead sets – sockets may be used to connect VCR's, Disc players etc. |
| | | Screen | | |
| | | 1 | No Connection | |
| | | 2 | Ground (Scrn) | |
| | | 3 | Audio in (100mV) | |
| | | 4 | Video in | |
| | | 5 | No connection | |
| | | NOTE: 'AUDIO' 5-Pin Din Socket & 'PAL' BNC Socket are wired in parallel:– DIN-Pin 4 = BNC Signal DIN-Pin 2 = BNC Scrn. | | |

INPUT/CONTROL FACILITIES

INTERCONNECTIONS

INTERCONNECTIONS

Normally, the interconnecting lead assembly appropriate for the particular Models specification is supplied with the monitor unit.

If required, your dealer, distributor or MICROVITEC may supply new or replacement lead assemblies, suitable for your monitor and particular host system.

INPUT CONNECTIONS

Currently—there are many different configurations of input facilities and lead assemblies available in this range of MICROVITEC monitors.

The table following provides details of the standard and more popular type of input configurations — For specialist applications, your dealer, distributor or MICROVITEC should be consulted.

INPUTS AND CONTROL FACILITIES

The input and control facilities provided will vary with your monitor's specification. On some models, input connection sockets, type of input and signal mode, may be switch selectable.

Instructions for the use of the facilities provided on your monitor may be found in the Table following.

All input and input control facilities described are located on the monitor's rear panel. Usually these connections are made and the facilities are selected at the time of installation. Normally no further adjustments are required.

INSTALLATION NOTES:

- 1) Pin-out connections of connector sockets are shown viewed from the front (entry face) of the sockets or rear (solder side) of the mating plug.
- 2) Where selector switches are incorporated, moving the switch toggle in the direction of the caption selects the function marked.
- 3) **IMPORTANT:** To ensure correct operation where dual or multi types of input are incorporated, it is recommended that only one type of input be connected at any one time.
- 4) **NOTE:** Where separate selector switches are fitted to individual input sockets for selection of mode or type of input, ALL selector switches must be set to the corresponding marked settings required.




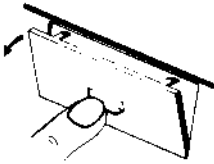


OPERATION







The location, type and function of the operating controls provided will vary according to your monitor's specification.

Controls may be located on the back of the monitor, or on some models, concealed by a hinged door on the monitor's fascia or alternatively, located on the front of the monitor. Instructions for the use of the specific controls provided on your particular model may be found in the accompanying Table.

NOTE: All monitors are extensively tested before despatch and operating controls may therefore require no further adjustment. However, to allow for variations in ambient lighting conditions in your viewing area, controls may be adjusted to compensate for any differences, as described in the following Table:

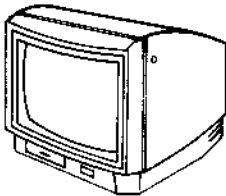
OPERATING CONTROLS

| SYMBOL | CONTROL | OPERATION |
|---|--|---|
|  <p>OR</p> |  <p>ON Rocker Switch</p> | <p>a) ROCKER SWITCH: Pressing the side of the switch adjacent to the symbol 'I' or ● will switch the monitor 'ON'. Pressing the side of the switch marked ○ will switch the monitor 'OFF'.</p> <p>b) PUSH SWITCH: Pressing the switch IN will switch the monitor 'ON'. Pressing the switch a second time will relax the push button and switch the monitor 'OFF'.</p> |
| | <p>Push Switch</p>  <p>ON-OFF</p> | <p>NOTE. Power 'ON' may be indicated by an illuminated Rocker Switch, or on some versions by a separate illuminated power 'ON' indicator.</p> <p>PLEASE NOTE: After 'switch on' allow a few seconds for the display to appear on screen. Note that no picture will appear until display data is fed into the monitor.</p> |
| <p>HINGED DOOR</p>  | | <p>NOTE: On some models, the controls described following are concealed behind a hinged door on the monitor's fascia.</p> <p>To access these controls, PUSH down with the tip of a finger, onto the projecting 'finger grip' in the centre of the hinged door. Hinge the door downwards to expose the controls.</p> |
|  | <p>CONTRAST CONTROL</p>  | <p>Adjustment of this control alters the contrast setting between light and dark shadings of the displayed image. Turning the control clockwise increases the contrast setting. Turning the control anti-clockwise decreases the contrast between light and dark areas.</p> |

| | CONTROL | OPERATION |
|---|---|---|
|  | BRIGHTNESS CONTROL  | <p>Adjustment of this control allows the setting of the OVERALL BRIGHTNESS of the displayed picture. Rotating the control clock-wise increases the level of brightness, rotating the control anti-clockwise decreases the picture's brightness. This control is best adjusted in conjunction with the CONTRAST control. CONTRAST is used to provide the required degree of illumination of 'white' parts of the picture. BRIGHTNESS should be adjusted so that the 'black' areas of the picture are 'just' black.</p> |
|  | COLOUR SATURATION  NOTE: This control is operative only in PAL video mode. | <p>This control sets the amount of colour in the displayed image. Rotating clockwise gives maximum colour intensity. Rotating anti-clockwise gives minimum colour intensity. This control is best set when fitted – by first reducing colour content to minimum, and then adjusting contrast and brightness as described previously. Finally, the colour control should be advanced to provide the colour level setting required by the viewer.</p> |
|  | VOLUME  | <p>The level of sound may be adjusted by rotating this control; clockwise to increase, anti-clockwise to decrease levels.</p> |

CARE OF YOUR MONITOR

Cabinet:



NOTE: Unplug the monitor from the mains power supply before cleaning.

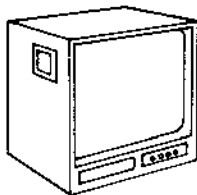
The cabinet may be cleaned periodically using a soft clean cloth.

To avoid damage, painted surfaces should only be cleaned with a soft cloth, moistened if necessary with lukewarm water. Proprietary cleaners and polishes should not be used. Do not use spirits, solvents or ammonia.

Picture Display Tube:

The screen area of the picture display tube may be cleaned with a soft lint-free cloth, moistened if necessary with lukewarm water, then, finally polished lightly with a clean dry cloth. Proprietary cleaners and harsh abrasive powders should be avoided.

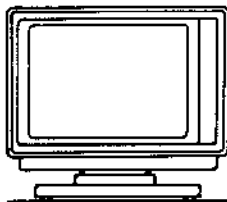
Siting the Monitor:



The monitor should be sited so that it is not in direct sunlight or so that the screen is exposed to strong direct lighting.

For least eye strain and fatigue from viewing, soft incidental back lighting in the viewing area is recommended.

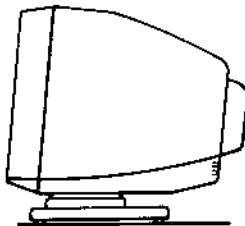
Normally, the best angle for viewing, is with the screen slightly below eye level when seated in the operating or viewing position.



The monitor should not be sited near or on radiators or other heating devices in order to maintain normal operating temperatures within the monitor.

The monitor should be stood on a firm, flat level surface. Unsafe tables, stands, desks or carts should not be used.

Avoid placing power leads and interconnecting cables where these may be stepped on or tripped over.



As a further aid to viewing convenience, an easily fitted extra 'Tilt and Swivel' base assembly is available for some of the medium and smaller sized models in this range. Your dealer, distributor or the Manufacturers of this monitor would be pleased to supply details.

EQUIPMENT WARRANTY (

Applicable U.K. only)

The supplier guarantees at its discretion either to refund the cost, or repair or replace free of charge (save for delivery) any of the goods found to its satisfaction to be defective owing to faulty design, materials or workmanship within 12 months from the date of purchase provided that in the case of goods or components not manufactured by the supplier its liability under this clause shall in no circumstances extend beyond any corresponding liability of the manufacturer to the supplier in respect of such goods or components. Where the supplier has manufactured goods to a design of the buyer, no liability is accepted by the supplier for design errors which are the responsibility of the buyer, or for any defect which arises as a result of the design of the buyer. The supplier will make a charge to the buyer in respect of any goods returned to the supplier for repair which upon examination are found to be in full working order. This charge will include return carriage costs.

The supplier's obligation herein to refund, repair, or replace the goods is the only liability of the supplier hereunder. All other warranties conditions, and statements expressed or implied, statutory or otherwise are excluded insofar as they may be excluded at law. Subject as aforesaid the supplier shall be under no liability in contract or tort for any loss or damage arising directly or indirectly out of the supply, use or adaptation of the goods.

The buyer shall indemnify the supplier against all claims made or liabilities incurred arising out of modifications to the goods carried out by the buyer or the incorporation of the goods by the buyer into larger systems or combinations unless expressly approved by the supplier in writing.

To take advantage of the warranty the purchaser MUST:

1. Complete the warranty registration card and mail it within seven days from the date of purchase.
2. In the unlikely event of the equipment failing, it should be returned to the supplier or distributor from whom it was purchased. Failing this — the equipment should be returned to MICROVITEC PLC as follows:
3. When submitted for warranty service, the purchaser must pre-pay postal and/or transport charges to the manufacturer's factory/service centre and accept a COD postage and/or transport charge when the equipment is returned from warranty service.
4. Pack the equipment in its original carton or functional equivalent to eliminate postal and/or transport damage when returning equipment for warranty service.
5. Briefly describe the symptoms associated with the equipment failure in writing and submit it to the manufacturer/service centre, together with the defective equipment.

NOTE: For equipment purchased and/or operated outside the UK, the local supplier or dealer from whom you purchased the equipment should be consulted for prevailing local equipment warranty.

MICROVITEC PLC
BOLLING ROAD,
BRADFORD, WEST YORKSHIRE BD4 7TU,
ENGLAND.
TEL (0274) 390011/726500.
TELEX: 517717 MVITEC G.
FAX (0274) 734944.

**MICROVITEC PLC WARRANTY
ATTACH THIS CARD TO FAULTY EQUIPMENT**

NOTE: ALL ITEMS MUST BE COMPLETED FOR WARRANTY TO BE IN EFFECT, IF PURCHASED THROUGH A DEALER THEN THE ADDITIONAL SECTIONS MUST BE COMPLETED BY THE DEALER.

BEFORE RETURNING EQUIPMENT YOU ARE ADVISED TO CHECK THE EQUIPMENT USING CHECK LIST IN THE OPERATING INSTRUCTIONS BOOKLET SUPPLIED WITH THIS EQUIPMENT, AN ADMINISTRATIVE CHARGE WILL BE MADE ON EQUIPMENT RETURNED WITHOUT FAULT.

NAME

ADDRESS UNIT IS TO BE RETURNED TO

..... TEL:

MODEL NO: SERIAL NO:

NAME/ADDRESS OF DEALER

NATURE OF DAMAGE OR FAULT (Please give as much information as possible)

.....
.....
.....
.....

**WARRANTY REGISTRATION CARD
(DETACH HERE AND MAIL WITHIN 7 DAYS OF PURCHASE)**

NAME

ADDRESS

..... TEL:

MODEL NO: SERIAL NO:

NAME/ADDRESS OF DEALER

..... DATE OF PURCHASE

IF EQUIPMENT IS TO BE USED IN A BUSINESS:

WHAT TYPE OF BUSINESS?

WHAT IS YOUR JOB TITLE?

WAS THE EQUIPMENT PURCHASED FOR ANY SPECIAL APPLICATION? YES/NO

IF YES? PLEASE STATE BRIEFLY THE APPLICATION

HOW DID YOU HEAR ABOUT MICROVITEC?

DO YOU HAVE ANY ADDITIONAL COMMENTS ABOUT THE PERFORMANCE OF YOUR EQUIPMENT

.....
.....
.....
.....

MICROVITEC PLC
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