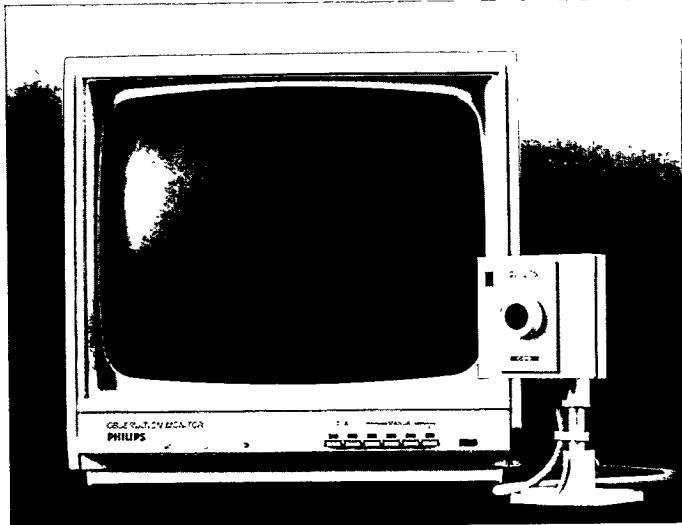


Philips Consumer Electronics



OBSERVATION CAMERA VCM8120/01T
for Philips observation monitor 12TX3512



USER MANUAL



PHILIPS

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The illustrations referred to in this manual are printed on the insides of the two fold-out cover pages.

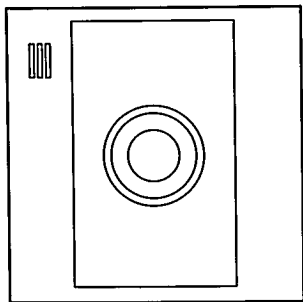


Fig. 1

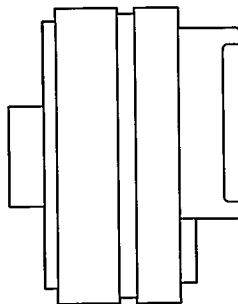


Fig. 3

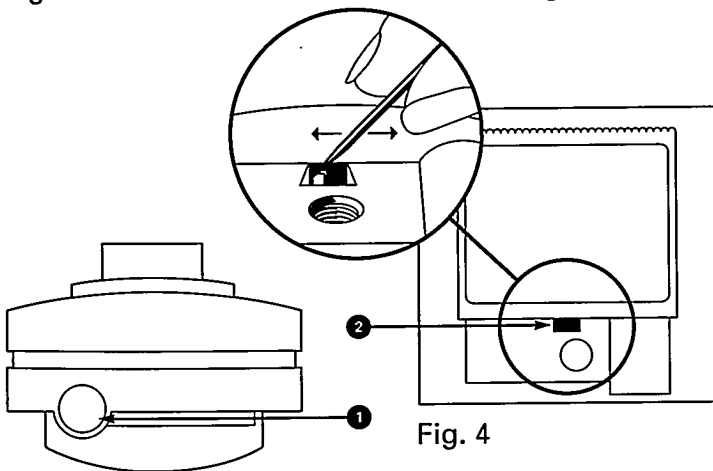


Fig. 2

Fig. 4

The complete camera pack contains the following items:

- One CCD camera with integrated lens.
- One adjustable mounting bracket (with screws and plugs)
- One coaxial connection cable (10 metres/33 ft).
- Extra plugs to extend or shorten the connection cable
- One user manual.

The following accessories are optionally available via your dealer:

- Protective camera housing (*VCM1151*) for conditional outdoor use.
- A cable extension set with RF booster amplifier (*VSS2900*) to cover distances from camera to system monitor of up to 600 metres.

FOR U.K. ONLY:

The wires in the mains lead are coloured according to the following code:

BLUE = Neutral

BROWN = Live

If the mains plug (or adapter) contains a fuse, the value of this fuse should be 3 Amp. Alternatively, if another type of plug (not fused) is used, the fuse at the distribution board should not be greater than 5 Amp.

If the colours of the wires in the mains lead do not correspond with the coloured markings identifying the terminals, proceed as follows:

The **BLUE** wire should be connected to the terminal marked 'N' or coloured black.

The **BROWN** wire should be connected to the terminal marked 'L' or coloured red.

Before replacing the plug cover, make sure that the cord grip is clamped over the sheath of the lead, not simply over the two wires.

Introduction

Your new CCD camera is specially developed for use with the Philips observation system monitor. It features a sensitive microphone thus registering both images and sound via the monitor.

The system operates on 240 V AC and on 12 V DC (such as a car battery) and can be used for a wide variety of purposes: monitoring stores, petrol stations, cloakrooms , etc. It is ideal also for private use such as monitoring the front door, a children's room, the garden, etc.

You can also connect a video cassette recorder to record whatever the camera registers. These scenes can then be played back again via the system monitor later.

Interconnecting the observation system

The power supply

Your observation system operates on either 240 V, 50 Hz AC or on 12 V DC (car battery, etc.), via a special connector (*fig 9-12*). The power for the camera is supplied by the monitor, via the coaxial cable. It means that the selected camera is switched on automatically when you switch your monitor on.

Connecting the camera

A standard coaxial connection cable (10 metres) is supplied with your camera. The cable is fitted with a male, 75 Ohm coaxial plug on one end and a male cinch plug on the other. The cinch plug (*fig. 6*) fits the connection socket of the camera (*fig. 2 - 1*).

The monitor features four input sockets. You will find them on the rear of the monitor, numbered 1 to 4 (*fig. 9-16*). The reason is that you can use up to four cameras in combination with one monitor. You can thus keep an eye on four different locations by manually switching from one camera to another, at will, using one of the four camera selection buttons in the front control panel of the system monitor. You can also set the monitor to automatically switch from one camera to the other with selectable intervals (*fig. 9-17*). To override the automatic switching sequence press the button corresponding with the relevant camera input socket.

If you have purchased this camera to replace an older system camera, you may want to install it as camera 1. In that case you will have to use the new cable, supplied with your camera. Connect it to the camera input socket number 1 (*fig. 9-16*). If you have purchased the camera as an extension of your current system you should use one of the other four connection sockets (*fig. 9-16*).

The default channel setting of the camera is for channel 3. If you do not get an optimum image, check whether the channel switch on the rear of the monitor is set for the same channel (*fig.9-14*). You can change the channel setting of the camera too, if necessary (e.g. when you get interference from a strong, local TV station). You will find the switch in a recess on the back of the camera (*fig. 4-2*). You can change its setting by sliding it with the help of a sharp pencil or toothpick.

The connection cable

The connection cable supplied with the camera has a length of 10 metres. If the distance between camera and monitor happens to be shorter or longer, you can easily make a special cable, using a standard coaxial cable (available at your dealer's) and the extra coaxial plugs supplied with your camera (*fig. 7*). You can actually cover a distance of 100 metres or more, depending on the quality of the cable you are using.

Changing the length of the cable

If the distance is shorter than 10 metres and the extra length bothers you, you can shorten the cable. Measure the required length, starting from the cinch plug (*fig. 6*) to make sure that the cinch plug is included with the shorter cable you are making. Do not make the cable too tight but allow a little leeway. Then mount the male coaxial plug (*fig. 7*) at the other end.

If the distance between camera and monitor is larger than the length of the connection cable, you can make an extension cable, using both separate plugs supplied with this set (*fig. 7*) and the required length of a good quality coaxial cable (75 Ohm), available at any TV store.

If you want to bridge a longer distance, you should use a special cable extension set with RF booster amplifier, which will allow a distance from camera to monitor of up to 600 metres.

Operating the observation system

When the necessary connections have been made, you can switch the system on by pressing the red POWER button, on the control panel of the monitor (*fig. 8-7*). The camera that has been selected by pressing the relevant selection button on the front control panel of the monitor (*fig. 8-8*) will automatically be activated. You can switch the entire system off by pressing the power button again (*fig. 8-7*).

Picture and sound can be adjusted with the relevant controls on the system monitor (*fig 8-11*). If vertical picture roll occurs, you can easily solve that problem with the help of the vertical hold knob (*fig. 9-13*) on the rear of the monitor.

The lens

Your camera is equipped with an integrated, 4 mm, f/2.0 lens with a viewing angle of 74° horizontally and 55° vertically. The depth of field ranges from 1 metre to infinity.

Warning:

Do not touch the surface of the lens . This could damage the delicate coating on the surface of the lens. If the lens has to be cleaned, use special lens cleaning tissue, available at any good camera store.

Installing the camera

It is advisable to install the camera first and connect it to the system monitor on the spot. It will allow you to properly aim the camera at the area you want covered while checking the results on the monitor (*see below*). When satisfied you can place the monitor in its permanent position.

The mounting bracket

- First determine where you want to install the camera.
- Hold the camera in your hand at the spot where you want to install it, while checking on the monitor whether it does indeed cover the proper area from that position.
- Fasten the mounting bracket to ceiling, wall or any other flat and solid surface. Use the screws and plastic mounting plugs when fastening the mounting bracket on a plastered surface.
- Tighten the ball joint control knob (*fig 5 - 5*).
- Attach the camera to the bracket by turning the mounting socket *in the back of the camera (fig 5 - 3)* onto the threaded end of the mounting bracket (*fig 5 - 4*).
- Loosen the two knurled knobs on the mounting bracket (*fig. 5 - 5 and 5 - 6*) and carefully aim the camera at the object or area you want monitored.
- Tighten both knobs again to secure the camera in position.

Note:

The camera can also be mounted on any camera tripod with standard 1/4" Whitworth thread.

A multi-camera system

If you use this camera in a multiple camera system, you should connect the camera to one of the free camera connection sockets in the back of the system monitor (*fig. 9-16*). You can connect up to four cameras to one single system monitor.

The monitor offers a choice of two possibilities to switch from one camera to the other:

- **Manual switching**, using the corresponding MANUAL keys (*fig. 8-8*) on the front control panel of the system monitor.
- **Automatic switching**. This mode is activated when you press the AUTO key (*fig. 8-9*). Using this option, the monitor will automatically switch from one camera to the other, in sequence. You can choose for observation periods per camera, ranging from 4 to 60 seconds, set with the SEC. adjustment in the back of the monitor (*fig. 9-17*). To override the automatic switching, simply press the required MANUAL key (*fig 8-8*).

With both switching modes, only the camera which is actually in operation is switched on, the other cameras are automatically switched off.

Adding a VCR or slave monitor

You may connect a video recorder to the VIDEO/AUDIO IN and OUT sockets of the monitor (*fig. 9-15*). This way you can record whatever images your camera registers and play the recording back via the monitor after pressing the VCR key on the front panel of the monitor (*fig. 8-10*).

You can also connect a second, so-called 'slave monitor' to the VIDEO/AUDIO OUT sockets. It will give the same picture and sound as the system monitor.

Maintenance tips

Your observation system will require a minimum of maintenance, just observe the following rules:

- **Ventilation.** To prevent overheating of the system monitor, you should see to it that the ventilation slots are never covered. Do not place the monitor close to a radiator or other heat source.
- **Cleaning.** You may clean the exterior of the camera and system monitor with a damp and lint-free cloth or chamois.
- **Cleaning the lens.** Use special lens cleaning tissue (available at any good camera store) to clean the lens, if necessary. Do NOT use any cleaning liquids containing alcohol, spirits, ammonia, etc.
- **The back panel of the monitor** may only be removed by a service technician.
- **Moisture.** Direct contact with moisture should be avoided.
- **Outdoor use.** For outdoor applications you should use a protective housing to shield the camera from rain and snow.

Technical specifications

Camera:

Image pick-up device	1/3" CCD
Scanning system	CCIR, 625 lines, interlaced
Output signal	RF video and audio VHF-I switchable between channels 3 and 4 (external switch)
Integrated lens	4 mm, f/2.0 fixed focus (1 m to infinity)
Viewing angle	74° horizontal, 55° vertical
Illumination range	4 to 25,000 lux (50 ire/-6dB) 1 to 25,000 lux (acceptable picture)
Mounting socket	1/4" Whitworth
Connection cable	75 Ohm coaxial cable with cinch (RCA) and coaxial (Euro) plug
Input voltage	12 V DC, supplied by the system monitor, via the coaxial cable
Power consumption	1.3 Watt
Audio	Built-in electret microphone
Ambient conditions:	
Temperature	in operation: -20° C to +55° C in storage: -25° C to +70° C
Relative humidity	in operation: 20% to 90% in storage: up to 90%
Radiation	FTZ approved
Safety	VDE approved
Dimensions	54 x 70 x 70 mm
Weight	130 gr.

Fig. 5

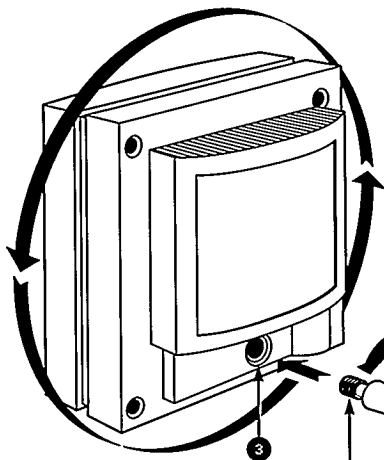


Fig. 6

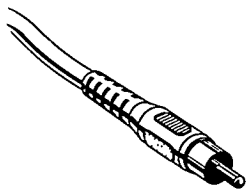
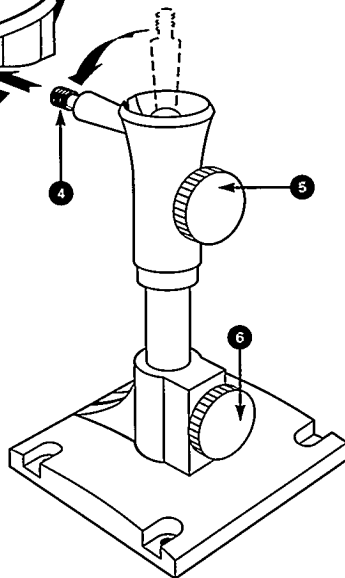
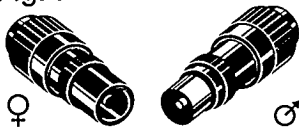


Fig. 7



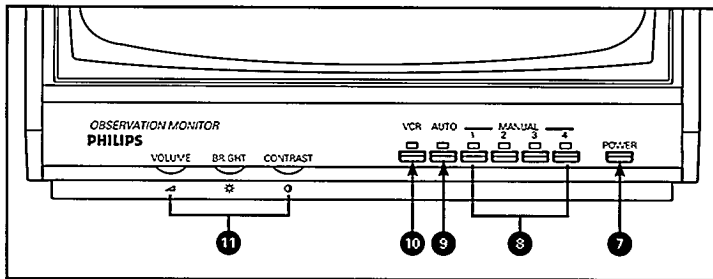


Fig. 8

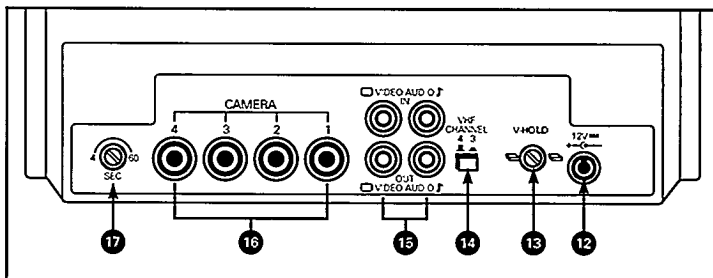


Fig. 9

Technical specifications

Monitor

Transmission system	B&W, fixed channel (Ch. 3 or 4) for each input
Picture tube	90°, 12"/31 cm, Quickstart
Automatic functions	Line synchronisation Black level stabilisation AGC Stabilised power supply with short circuit protection for camera
Semi-automatic function	Frame synchronisation (vertical hold)
Connections	Up to 4 cameras VCR or slave monitor 12 V DC power supply
Controls	Audio volume Image brightness Image contrast
Camera selection	Direct access to 4 cameras or sequential automatic switching (adjustable from 4 to 60 seconds)
Ambient temperature	Maximum 45 C
Supply voltage	240 V AC, 50 Hz or 12 V DC (battery)
Power consumption	AC: max. 31 W (incl. camera) DC: max. 19 W (incl. camera)
Sound output	0.7 Watt music power
Loudspeaker	3" diameter
Dimensions(wxhxd)	30.5 x 29 x 30 cm
Weight	6.5 kg

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