

TELETEST

BROADCAST TECHNOLOGY



NOW WITH
RADIO LINK

HANDHELD
BROADCAST
LCD MONITORS
PAL / NTSC / SDI
4/3 - 16/9



TELETEST

BROADCAST TECHNOLOGY

HANDHELD COLOUR LCD MONITORS

TELETEST™ launched the World's first portable 16/9 LCD monitor in 1998 and have set the standards ever since.

WORLDWIDE APPROVAL

Designed and manufactured in the UK, these professional handheld LCD monitors have been tried and tested by broadcast cameramen around the World.

CONSTANT ENHANCEMENTS

Teletest customers have used their monitors in dusty desert war zones for news reports, hot and humid tropical islands for travel programs and the freezing polar regions for nature documentaries.

Many customers come back with suggestions. Teletest takes every comment seriously and enhancements and new features are always made with every new batch of monitors.



High quality, portable screen :
Ideal for focusing and shooting with.



Practical accessories:
For perfect monitoring solutions.
Radio link with carry case



Rugged and versatile:
Ideal for demanding environments.
Monitor with Steadicam mount

Broadcast design:
For all professional applications.
Stand included with monitor



7" 4/3 - 16/9 LCD MONITOR



Side view - actual size



Side view - tilt up



Side view - tilt down

OZL1702 PAL

OZL1722 NTSC & PAL (OPTIMISED FOR NTSC)

ERGONOMIC CONTROLS

The switches and picture control knobs are easy to use yet small enough to avoid accidental operation. Six LEDs are used to display the input, aspect ratio format, low battery and "On Air" control status, all of which can be controlled remotely using the port at the rear of the monitor.

DURABLE CONNECTORS

The industry standard XLR-4 and BNC connectors are mounted directly onto the chassis making them virtually unbreakable.

STAND

A rugged stand is included with the monitor ensuring the monitor can be mounted onto a camera or left free standing on a desk.

The monitor can rotate 360° in the stand and is fastened in the required position using an M5 wing-knob on either side.

ADAPTER FIXING POINTS

The monitor has multiple fixing points on its rear for mounting professional battery adapters and Teletest expansion boxes.



Monitor on its stand, front view - actual size



Monitor rear view - actual size

HIGH QUALITY IMAGE

The 16/9 LCD screens used in Teletest's portable monitors are the sharpest available with excellent angles of view.

The screens are perfect for focusing with and the colour temperature and contrast ratio are suitable for most applications.



The Teletest LCD monitor used outdoors in bright sunlight

BRIGHT, ANTI GLARE SCREEN

The screen is almost twice the brightness of other LCD and conventional tube monitors making it easy to see in bright light.

It is protected by a toughened, 3mm scratch resistant anti-glare glass screen which cuts down on reflections when used outdoors.



A competitor's LCD monitor used in the same conditions

FORMAT VERSATILITY

The 16/9 screen can show images in 4/3, 16/9 and Zoom modes. The Zoom mode expands a 4/3 picture to fill the screen with no

distortion by cropping from the top and bottom of the image. Control is achieved by using the switches on the front or the remote socket at the rear.



4/3 mode: Image shows a 4/3 source
Places the 4/3 image in centre of the screen with black bands on either side.



Zoom mode: Image shows a 4/3 source
Expands the 4/3 image without distortion by cropping top and bottom of the image.



16/9 mode: Image shows a 16/9 source
Fills the screen with the 16/9 image.

PICTURE MANIPULATION

The image can be reversed or rotated 180°. This makes it easy to use in awkward positions

and the reverse feature is ideal for use by puppeteers in a studio or on location.



Normal picture



Mirrored picture



Flipped picture

RUGGED & LIGHTWEIGHT DESIGN

The housing is precision made from extremely light and very tough aircraft grade aluminium. It weighs the same as a plastic monitor would with considerably more strength.

The metal is first anodised then coated with a tough matt black paint and oven baked for durability. This highly robust monitor can withstand the harshest of environments.



HIGH QUALITY INPUTS

COMPOSITE VIDEO

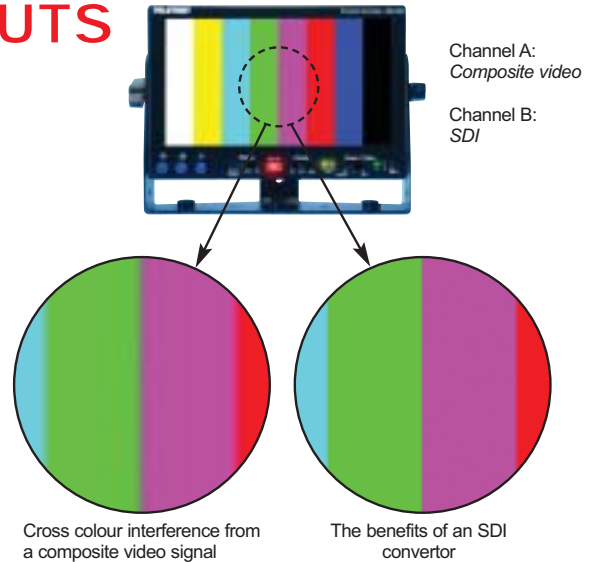
The monitor has two composite video inputs, A and B which can be selected using a switch on the front panel or the remote socket on the rear. Channel A has a broadcast quality loop through that will continue to operate even when there is no power to the monitor. Channel B, when not used for composite video signals can be used for component RGB or SDI sources.

COMPONENT RGB

Analogue red, green, blue and composite sync signals can be fed into the expansion port on the rear of the unit. This gives a very high quality picture and is useful for graphical applications.

SDI CONVERTOR

The optional **OZE2000** is a 270Mbits SDI D/A converter box that displays crystal clear 8 bit digital pictures on the analogue LCD screen. The unit fixes to the rear of the monitor and it's cable is connected to the expansion port. There are 2 digital BNC inputs on the convertor and these can be selected using a switch just below them.



OZE2000 SDI converter fixed to the rear of the monitor

PROTECTING THE MONITOR

CARRY CASE WITH SUN HOOD

The **OZA1120** is a very comprehensive splashproof and padded carry case that protects the LCD monitor from knocks and falls and harsh weather conditions.

The sun hood can be folded away when not in use and there is a clear rain-proof screen on the front that can be removed in dry weather. The pouch at the rear of the case is large enough to store broadcast camera batteries and expansion boxes such as the radio receiver.

Splashproof and padded case



Draw string at rear for video and power cables



Integral sun hood folded flat



Flap for receiver antenna



Adjustable neck strap



OZA1122 Sun hood on an LCD; also shown flattened

SUN HOOD

The **OZA1122** is a sun hood that can be folded flat when not in use. It is held in place using the wing-knobs on either side of the monitor and is ideal for studio work.

POWERING THE MONITOR

VOLTAGE INPUT

The monitor can take a wide range of voltages from 11-30V:

- 11-14V regulated DC
- 14-30V un-regulated DC
- 12V battery adapter

The **OZP1225** 12V switch mode mains PSU can power the monitor for a long period in a fixed installation.



POWERING FROM A CAMERA

As the Teletest LCD monitor consumes only 700mA it can be powered from the various aux sockets on a broadcast camera.



The **OZW5005** cable connects to the camera's aux light socket or the aux power socket on a Sony / IDX / Anton Bauer battery adapter.



The **OZW5015** cable connects to the aux power socket on a PAG battery adapter.



The **OZW5026** cable splits the power from an XLR-4 external power source to the camera and LCD.

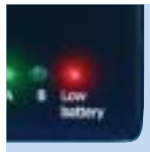
INTERNAL PROTECTION

To help protect the LCD from accidents there is:

- a large power diode on the XLR4 power input
- an auto switching thermal fuse on the circuit
- a quick blow fuse on the LCD panel

LOW BATTERY INDICATOR

This will glow red when the power drops below an acceptable level.



DV-CAM BATTERIES

Most DV cameras use the Sony and Canon 7.2V Li-ion batteries.

The **OZP3102** (Sony) and the **OZP3122** (Canon) battery adapters converts the output of a 7.2V Li-ion battery into 12V.



These adapters can be fixed to the rear of the Teletest monitor leaving enough space to mount the radio link or SDI expansion boxes. These batteries

OZP3200 Li-ion battery charger with an **OZP3950** Li-ion battery

provide the user with a very compact and lightweight monitoring system with long running times.

For example, a Sony type 5Ah Li-ion battery (part# **OZP3950**) can power a Teletest monitor and receiver for up to 3 hours. The **OZP3200** is a compact Sony type battery charger which can be powered from most 12V sources including a cigarette lighter socket in a car.



Li-ion battery & adapter on a monitor fitted with a radio receiver

BROADCAST CAMERA BATTERIES

Teletest provides three adapter plate for use with the major types and makes of batteries that power modern broadcast cameras. Such batteries have extremely long running times.

The **OZA1120** carry case with sun hood has a battery pouch in the rear which will accept even broadcast the largest of batteries.



OZP4100
PAG-LOK battery adapter



OZP4140
IDX & Sony battery adapter



OZP4120
Anton Bauer battery adapter

MOUNTING THE MONITOR



The stand included with the monitor is very versatile and should suit most applications.

Sun hood in use with the stand

The Teletest carry case or sun hood can be still be fitted when the stand is being used.

The stand with the 2 wing-knobs

The stand is lightweight, very strong and has multiple fixing points including:

- Three 1/4" Whitworth threads on the flat base for mounting on tripods, camera arms etc
- One 1/4" Whitworth thread on a right angle
- Three countersunk (inside faces) holes on either side of the stand for screw-mounting onto the side of a rack or cabinet.
- Two holes on the flat base for screw mounting onto the top of a desk or the underside of a helicopter cockpit.

MOUNTING ON A CAMERA

The monitor can be mounted onto a broadcast camera handle using the following accessories.

The **OZA3240** is an offset arm for mounting the monitor away from the camera's eyepiece so directors and focus pullers may see the picture.

The **OZA3000** adapter fixes the stand into the hot shoe on the camera arm.

The **OZA3010** screws through the stand and into the screw thread on the camera handle.

The **OZA3210** is a clamp for fixing the monitor anywhere on the camera handle so a portable light can be mounted as well.



OZA3240
LCD offset arm



OZA3000 hot shoe mounting tool



The **OZA3220** is a support arm that fits between a tripod and a camera so the monitor can be seen to one side whilst in use.

OZA3220 LCD support arm fixed to a tripod



OZA3010 1/4"W thread mounting tool



OZA3210 camera handle clamp



OZA3205 ball & socket mount

FREE MOUNTING

At the bottom of the LCD is a 1/4"W Whitworth screw thread used for mounting the monitor to equipment such as tripods, a ball and socket mount etc.

This thread also takes the **OZA3207** lighting spigot adapter which mounts the monitor to lighting stands, Magic Arms etc.



OZA3200 gooseneck with ball & socket mounting tool

STEADICAM™ MOUNTING

STEADICAM LCD MONITOR BRACKET

The Teletest portable LCD monitor can be mounted on many Steadicam rigs using the **OZA4010** Steadicam adapter.

The base of the adapter fits into the monitor fixing mount on the Steadicam rig. Dynamic balance is achieved by maintaining the centre of mass. This provides Steadicam operators with a practical alternative to the green screens currently used.

For indoor and studio work a Teletest monitor is very often the primary choice of display as it has the following advantages:

- **Colour picture:** essential for colour critical applications eg music videos, commercials and general studio work
- **Large screen:** the Teletest 7" 16/9 screen is twice the size of a 4" green screen in 16/9 mode
- **Lightweight:** 950gm compared to 2500gm, almost 3 x lighter; reduces operator fatigue
- **Low power:** 8Watts compared to 18Watts, over half the power consumption; batteries last longer which is essential for live productions
- **Smaller footprint:** easier to move through tight spaces, doorways, airplane aisles etc
- **Robust:** the LCD monitor will cope with very harsh treatment eg being knocked or dropped
- **Low cost backup:** the Teletest 7" LCD is 1/8th of the cost of the 5" green screen!



STEADICAM BREAKOUT CABLE

The Steadicam can provide the power and video needed by the Teletest LCD monitor.

The optional **OZW4000** breakout lead is connected to the 4pin Hirose cable on the Steadicam rig which is passed through the adapter mount (see photo).

The XLR4 socket connects to the LCD monitor's power input and the BNC plug to the video input.

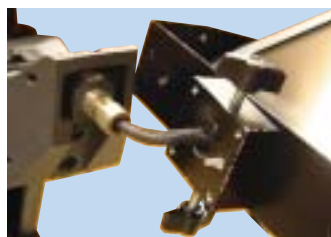


ALL WEATHER USE

When the weather is bad or there is direct sunlight, the optional carry case and sun hood can still be used with the Steadicam bracket.



Can be used in all weather conditions



Single video and power lead



Monitor can be positioned at any angle



RADIO LINK

PORTABLE SOLUTION

This licence exempt video & stereo audio radio link provides a completely portable solution for directors who wish to monitor filming without the inconvenience of cables.

TRANSMITTER

The transmitter is fixed to a broadcast or film camera and sends high quality pictures and stereo sound to the receiver up to 100m away. It has 4 frequencies so that a different channel may be selected if someone else is using the same frequency nearby.



OZE3110 / OZE3115 transmitter mounted on a broadcast camera

RECEIVER

This is fixed to the rear of the Teletest LCD and takes its power from the monitor's on-board battery. Stereo audio can be heard using the headphone amplifier built into the receiver. The receiver can also be used with any other monitor giving ultimate equipment flexibility.

LICENCE EXEMPT

The 2.4GHz frequency range has been allocated across most of the World for low power video and stereo audio transmissions. It can be used in buildings or outside.

RANGE

The range of all manufacturer's 2.4GHz transmitters can vary due to obstructions in the signal's path and the presence of computers, mobile phones or metal structures.

As a realistic guide the low power transmitter will send signals 50m line of sight and 25m in a building. The high power transmitter will send signals almost twice the distance but note that it is not yet licensable in the UK.

OZE3100 receiver mounted on the rear of the Teletest LCD monitor



RECEIVER

The OZE3100 receiver can be mounted onto the rear of the Teletest LCD monitor, or any other monitor.

The power and video signals come via the expansion cable which is inserted into the rear of the Teletest LCD. The picture

can then be viewed on the LCD monitor's channel B input.

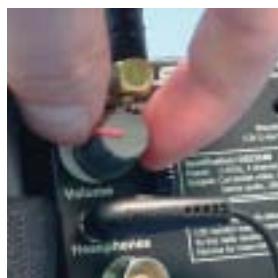
A BNC and XLR4 are provided for use with other manufacturer's monitors.

The receiver also has a stereo headphone amplifier.

An OZP3102 Sony type or an OZP3122 Canon type 7.2V Li-ion battery adapter can be fixed to the receiver for battery powered applications.



OZE3100 receiver fixed to the rear of the monitor



Volume control on the receiver



OZE3100 receiver

TRANSMITTER

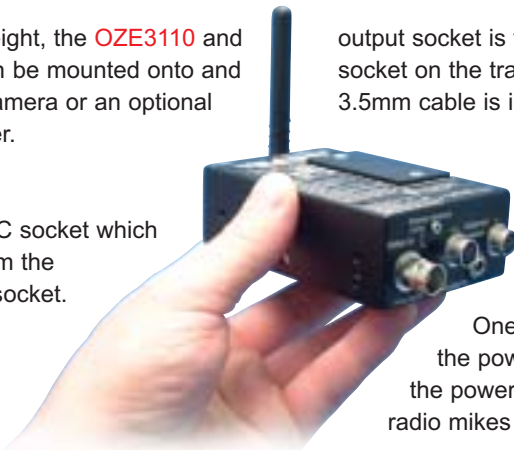
Very compact and lightweight, the **OZE3110** and **OZE3115** transmitters can be mounted onto and take its power from the camera or an optional 7.2V Li-ion battery adapter.

VIDEO CONNECTOR

The transmitter has a BNC socket which takes the video signal from the camera's monitor output socket.

AUDIO CONNECTOR

The audio signal from the camera's headphone



output socket is fed to the 3.5mm jack socket on the transmitter (a 3.5mm to 3.5mm cable is included).

POWER CONNECTORS

Two industry standard Hirose 4pin sockets are used on the transmitter.

One of these connectors is for the power input and the other is for the power loop through to supply radio mikes etc.

POWERING FROM A CAMERA

As the Teletest transmitter is low power it can be powered from a broadcast camera.



The **OZW3000** cable connects to the camera's aux light socket or the aux power socket on a Sony, IDX or Anton Bauer battery plate.

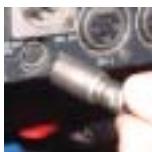
The **OZW3010** cable connects to the aux power socket on a PAG battery adapter on a camera.



The **OZW3025** cable splits the power from an XLR-4 external power source to the camera and transmitter.

The **OZW3030** connects to the camera's Hirose 12V power output socket on the rear.

Warning: Do not connect a transmitter to the Hirose socket on an **unmodified Sony camera** as the internal fuse may fail.



POWERING FROM OTHER SOURCES

The **OZP1214** switch mode mains PSU or the **OZW3020** XLR4 cable can power the transmitter for a long period in a fixed installation.



For completely portable applications, an **OZP3102** Sony type or an **OZP3122** Canon type 7.2V Li-ion battery adapter may be fixed to the top of the transmitter.

One **OZP3950** 5Ah Li-ion battery used with the adapter will power a transmitter for over 8 hours.



MOUNTING THE TRANSMITTER

The transmitter can be mounted to the camera handle using the following accessories:

- The hot shoe mounting tool **OZA3000**
- The 1/4"W threaded mounting tool **OZA3010**
- A camera handle clamp **OZA3210**
- Using velcro and mounting the transmitter onto the camera battery or in a pouch on the protective camera case.



PORTABLE CAMERA & TRANSMITTER

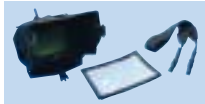
A miniature portable surveillance or "roving-cam" system can be assembled using Teletest's transmitter, battery adapter and high quality colour camera **OZA5100**.

Ideal for covert filming, wildlife applications or creative studio shooting.



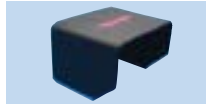
ACCESSORIES

OZA1120



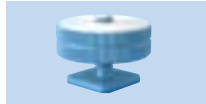
Carry case with sun hood: for OZL17xx LCDs

OZA1122



Sun hood: for OZL17xx LCD monitors

OZA3000



Hot shoe mounting tool with 1/4\"W thread

OZA3010



1/4\"W thread mounting tool with plastic head

OZA3200



Gooseneck, base plate, ball & socket + 1/4\"W thread

OZA3205



Ball & socket mount (large) with 1/4\"W thread

OZA3207



Lighting spigot adapter with 1/4\"W thread

OZA3210



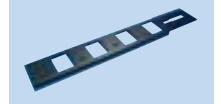
Camera handle clamp with 1/4\"W threaded hole

OZA3215



1/4\"W thread male to male stud adaptor

OZA3220



LCD support arm for a camera on a tripod

OZA3240



LCD offset arm for a camera

OZA4010



Steadicam LCD monitor bracket

OZA5100



1/3\" CCD colour camera, Hirose and BNC plugs

OZE2000



SDI D/A converter unit

OZE3100



2.4GHz, 4 channel stereo audio and video receiver

OZE3110 / 3115



2.4GHz, 4 channel low / high power transmitter*

OZE3900



2.4GHz replacement antenna

OZL17SCR



7\" anti-glare replacement screen**

OZP1214



Fig8 switch mode - Hirose 4pin: 12VDC 2.5A***

OZP1225



Fig8 switch mode - XLR4 socket: 12VDC 2.5A***

OZP3102 / 3122



Sony / Canon 7.2V battery adapter - 2 pin socket

OZP3200



Sony type 7.2V Li-ion battery charger

OZP3750 / 3950



Sony type 7.2V 3Ah / 5Ah Li-ion batteries

OZP4100



PAG-LOK battery adapter - 2 pin socket

OZP4120



Anton Bauer battery adapter - 2 pin socket

OZP4140



IDX and Sony battery adapter - 2 pin socket

OZW1010



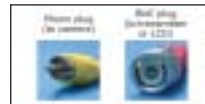
8 pin mini DIN plug - soldered ends, 2m

OZW2010



BNC plug - BNC plug, thin cable 75cm

OZW2012



Phono plug - BNC plug, thin cable 75cm

OZW2510



BNC plug - phono socket adapter

OZW2520



BNC socket - BNC socket adapter

OZW3000



Anton Bauer/Sony plug - Hirose 4pin plug

OZW3010



PAG adaptor 2.1mm plug - Hirose 4pin plug

OZW3020



XLR4 plug - Hirose 4pin plug

OZW3025



XLR4 Y splitter - Hirose 4pin plug

OZW3030



Hirose 4pin plug - Hirose 4pin plug****

OZW4000



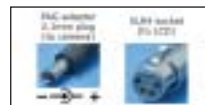
Hirose 4pin socket to XLR4 socket and BNC plug

OZW5005



Anton Bauer / Sony plug - XLR4 socket

OZW5015



PAG adaptor 2.1mm plug - XLR4 socket

OZW5021



XLR4 plug - XLR4 socket

OZW5026



XLR4 Y splitter - XLR4 socket

OZW5060



12V car adapter - XLR4 socket

OZW5062



12V car adapter - XLR4 socket Y splitter

* The OZE3115 high power transmitter is not yet licensable for use in the UK.

** This replacement screen can only be fitted by returning the unit to Teletest.

*** These PSUs are multistandard and can be used in all countries.

**** Do not connect a Teletest transmitter to the Hirose power output socket on an unmodified Sony camera.

TECHNICAL SPECIFICATIONS

LCD SPECIFICATIONS

LCD screen: 7" 16/9 active matrix TFT
Manufacturer: Philips™, Hong Kong
Active picture area: 154mm x 86mm
Resolution: 480 x 234 x 3 pixels (336,960 pixels)
Brightness, contrast: 400 Cd/m2, 250:1
Viewing angles: 70° left, 70° right, 45° top, 70° bottom
System: PAL, RGB 50/60Hz
Format control: 4/3, 16/9, Zoom

OZL1702:

7" 16/9 active matrix TFT
 Philips™, Hong Kong
 154mm x 86mm
 480 x 234 x 3 pixels (336,960 pixels)
 400 Cd/m2, 250:1
 70° left, 70° right, 45° top, 70° bottom
 PAL, RGB 50/60Hz
 4/3, 16/9, Zoom

OZL1722:

7" 16/9 TFT (optimised for NTSC)
 Promate™, Taiwan
 154mm x 86mm
 480 x 234 x 3 pixels (336,960 pixels)
 400 Cd/m2, 150:1
 60° left, 60° right, 30° top, 60° bottom
 NTSC & PAL (auto switching), RGB 50/60Hz
 4/3, 16/9, Zoom

VIDEO SPECIFICATIONS

Composite video inputs: 2 x composite video, 1 x component RGB and TTL sync.
Composite video outputs: 1 x broadcast high impedance video loop through.
SDI inputs (optional): 2 x 270 Mbits, 8bit sampling SDI - RGB convertor.
Video connectors: 3 x BNC female panel connectors fixed to the rear plate.
Picture controls: Colour, contrast, brightness, & tint (OZL1722 only) knobs .

FUNCTION CONTROLS

Input selection: 3 position slide switch (front): Off + remote, A input, B input (SDI).
Format control: 3 position slide switch (front): 4/3, 16/9, Zoom formats.
Picture control: 3 position slide switch (front): Normal + remote, Mirror, Flip.
Voltage source: 3 position slide switch (rear): Battery, 11-14V regulated, 14-30V un-regulated.
A output termination: 2 position slide switch (rear): 75ohm, Loop through.
B input source: 2 position slide switch (rear): BNC on rear, Expansion port.
Expansion port selection: 3 position slide switch (rear): Off, On, SDI / RGB.
LED display: A/B select: 2 x green; On Air: 1 x large red; Format: 2 x yellow; Low Battery: 1 x red.

EXPANSION AND REMOTE PORTS

Expansion port: 8 pin mini DIN socket on the rear to take expansion boxes such as SDI convertors and 2.4GHz radio receivers. Boxes available as extra.
Remote port: 8 pin mini DIN socket on the rear to control most functions remotely using +5V provided (auto resetable fused for protection).

Expansion port connections

1: Video B input 75ohm
 2: Composite sync input 75ohm
 3: Green input 75ohm
 4: 12V 700mA output, auto reset fuse
 5: Red input 75ohm
 6: Blue input 75ohm
 7: 0V=CVBS, 5V=RGB
 8: RGB scan: 0V=50Hz, 5V=60Hz
 Shield: 0V

Remote port connections

1: Format: 0V=4/3, 5V=16/9
 2: Video input: 0V=A, 5V=B
 3: Power on out (join to pin 4)
 4: Power on in (join to pin 3)
 5: On air light: 0V=off, 5V=on
 6: Picture: 0V=mirror
 7: Brightness: 0V to 5V=max
 8: 5V 700mA output, auto reset fuse
 Shield: 0V



POWER SPECIFICATIONS

Power supply: 8 Watts at 11V - 14V regulated DC; 14V - 30V un-regulated DC
Power connectors: XLR4 male panel connector fixed to the rear plate (pin4 = positive, pin1 = negative).
 2 pin DC battery lead kept behind a plate on rear of monitor. For connecting to Teletest battery adapters.
Low battery voltages: 10.5V for battery lead, 10.9V for XLR4 connector.

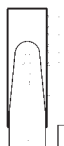
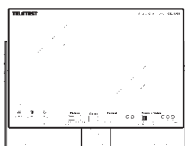
GENERAL SPECIFICATIONS

Pixel perfection: There may be up to 3 imperfect pixels per LCD.
Over-scan: 0% left, 2% right, 1% top, 2.7% bottom.
Backlight: 15,000 to 22,000hrs backlight flourescent tube half life.
Viewing angle: LCD display rotates 360° in the stand using 2 fixing knobs.
Protective glass screen: 3mm toughened high index scratch resistant glass.
Housing: Avionics grade aluminium casing painted black: unbreakable.
Size: LCD monitor LxWxH: 178 x 121 x 40mm Stand and monitor LxWxH: 200 x 146 x 55mm
Weight: LCD monitor: 720gm Stand and monitor: 900gm
Operating temperature: -30°C to +85°C (OZL1702), 0°C to +60°C (OZL1722)
Accessories: Mounting stand with fixing holes and 1/4" Whitworth screw thread for mounting on tripods and cameras. 2 x 8pin mini-DIN plugs for remote / expansion ports. Instructions.

211
178

58
40

121
144



Dimensions in mm



HANDHELD LCD MONITORS



ALSO AVAILABLE:
RACK MOUNTED LCD MONITOR SYSTEMS



ALSO AVAILABLE:
HANDHELD BROADCAST TEST EQUIPMENT

Your Authorised TELETEST Dealer

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BROADCAST TECHNOLOGY