OPTICAL SYSTEMS DESIGN
PTY. LTD A.B.N. 83 003 020 504

OPERATOR MANUAL

OSD353

FIBER OPTIC CCTV

RECEIVER CARD

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C O N T E N T S

1. TECHNICAL SUMMARY

1.1 BRIEF DESCRIPTION

The OSD353 fiber optic video receiver and any of the OSD300 series video transmitters together form a high performance video transmission system capable of providing CCTV or better quality video over distances of at least 5km of standard low cost optical cables when operating on multimode fiber (OSD353) and at least 30km when operating at 1300nm on singlemode fiber (OSD353L).

They offer:

- System bandwidth of 10MHz
- Immunity to electrical interference
- Complete end-to-end isolation
- Safe transmission in hazardous environments

As stated above it inter-operates with OSD's other CCTV video transmission equipment which are available in both card and module form.

The OSD353 receiver has an automatic gain control that utilises the sync tips to ensure stable picture levels under all lighting conditions at the camera. Video d.c. restoration is standard.

The OSD353 is packaged in OSD's standard card format designed to plug into the OSD350 or OSD370 chassis.

The OSD353 operates off a single +12VDC.

2. TECHNICAL SPECIFICATION

ELECTRICAL

Output Impedance	75ohm
Output Levels	1Vpp nominal
Receiver AGC Technique	Sync tips
Video Connector	BNC female socket
Power Connector	9 pin male D connector
Bandwidth	10Hz - 10MHz, +1, -3dB
Weighted Signal to Noise Ratio (pk luminance/rms noise over 5.5MHz)	>50dB at -30dBm peak received optical power

OPTICAL

Receiver operating wavelength	800 to 900nm (OSD353) 1200 to 1600nm (OSD353L)
Receiver sensitivity	<-30dBm peak, for 50dB SNR (Both OSD353 and OSD353L)
Receiver saturation	>-17dBm peak
Optical connectors	ST standard

PHYSICAL

Power Requirements	+12V @ 100mA
Dimensions (mm)	25W x 100H x 208D
Weight	200g
Indicators	RX Signal Present
Operating Temperature	0 to 60°C
Relative Humidity	0 to 95% non-condensing

DB9 Power Connector Pinouts

Pin 6,7,8	Ground
Pin 3	+12V DC input

3. INSTALLATION AND OPERATING INSTRUCTIONS

3.1 INTRODUCTION

This section outlines the methods required to install and operate the OSD353 successfully.
It should be studied carefully if damage to the equipment or poor results are to be avoided.

This equipment has been fully tested prior to dispatch and is ready for immediate operation. However, it is advisable to check for external transportation damage before operation.
If damage is present, return the unit and packing to the supplier immediately.

3.2 INSTALLATION

Plug the unit into its OSD350 or OSD370 chassis and connect the video signal source to the remote transmitter and the monitor or switcher to the OSD353.

Ensure that correctly terminated 75 ohm BNC patch leads are used.

Fix the unit into the chassis using the captivated screws and connect the optical cable.

If a video signal is being transmitted through the link "Video Signal Present" LED will illuminate green on the OSD353 receiver front panel.

Note that OSD353 card can be plugged in or out of the OSD350 or OSD370 chassis with power on or off.

3.3 OTHER CONNECTIONS

The video signal is connected to external equipment by a BNC jack.

The optical fiber must be terminated by the appropriate optical connector. Before connection, inspect the end of the connectors to ensure that no dust or dirt is present as it could contaminate the unit's optical connector and result in poor performance.
If it is necessary to clean the cable connectors use acetone or alcohol and a lint free tissue to remove contamination.

3.4 OPERATION

3.4.1 CONTROLS

The OSD353 has no controls as the output video signal is automatically maintained at 1.0 ± 0.1Vpp.

3.4.2 INDICATORS

"Video Signal" – Green indicator illuminates when a video signal is connected red when no signal present.

4. MAINTENANCE

4.1 INTRODUCTION

The following section outlines the fault-finding procedure for the OSD353 receiver. Please take note of the following:

Personnel without appropriate training should not attempt any maintenance except that outlined below.

If further maintenance is attempted you are warned that every care should be taken to ensure that internal measurements made while the equipment is operational are taken carefully as some components within the unit are expensive and may be damaged by failure of any portion of their support circuitry.

Some components within the unit are electrostatic sensitive and ESD precautions should be taken when carrying out maintenance on the unit.

Check that video signal is connected to the remote transmitter and that the OSD353 has been correctly connected to properly terminated equipment.

Inspect optical connectors, and clean using acetone and a lint free tissue to remove contamination.

Check that the remote transmitter's optical power is set to a level appropriate to the link distance.

4.2 EXTERNAL INSPECTION

Visually check the following:

Check that the correct power source is connected to the power socket with the correct polarity.

Check that the video output signal from the unit is connected correctly to the external equipment and that the remote optical transmitter is functioning correctly and has been terminated correctly to any external equipment.

Inspect the optical connectors for any contamination and clean using isopropyl alcohol and a lint free tissue if any contamination is detected.

Check that any external termination resistors are connected if the system configuration requires them.

4.3 ROUTINE MAINTENANCE

There is no routine maintenance required for the OSD353.

5. WARRANTY

Optical Systems Design warrants that at the time of shipment, its products are free from defects in material and workmanship and conforms to specifications. Our warranty conditions are outlined below:

5.1 WARRANTY PERIOD

For warranty period, please call your local OSD distributor.

5.2 ALL REPAIRS

Optical Systems Design reserves the right to repair or replace faulty modules/units. Please obtain an Optical Systems Design "Return Material Authorisation" form and number before returning goods.
Goods must be returned in adequate packaging material to Optical Systems Design, or its nominated authorised representative, for all repairs.

5.3 WARRANTY REPAIRS

Return shipments to Optical Systems Design shall be at customer's expense and freight back to the customer will be at Optical Systems Design's expense.

5.4 OUT-OF-WARRANTY REPAIRS

Optical Systems Design reserves the right to repair or replace any faulty goods. Freight costs and insurance for both journeys are met by the user. All equipment repaired by Optical Systems Design will have a 3 month warranty from the date of dispatch.

5.5 SITE REPAIRS

By agreement site repairs may be undertaken for which out of pocket, accommodation and travel expenses will be charged.

5.6 EXCLUSIONS

This warranty does not apply to defects caused by unauthorised modifications, misuse, abuse or transport damage to the equipment.

All modifications to Optical Systems Design standard products will need written authorisation.

All modifications are to be carried out by Optical Systems Design and will be charged at normal repair rates.

Warranty is void if unauthorised removal and/or tampering with serial number and/or repair labels is evident.