

OS803R_U.DOC
Author : W.D.
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PRODUCT - OS803R
3 CHANNEL VIDEO ON FIBRE RECEIVER
WITH AGC
USER MANUAL
VERSION 1.0
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USER MANUAL

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1. PRODUCT DESCRIPTION

1.1 General

The OS803R is a three channel Fibre to Video Receiving unit with AGC. This unit converts an optical signal received from the fibre into a composite video signal that is transmitted into a BNC connector. When the optic signal is present an led indicator will light up. Each card uses 3 Optic Receivers.

This unit is designed to fit into a OS800 19" sub rack system. The card is a standard eurocard size.

This unit operates autonomously.

1.2 Basic System Description

The unit consists out of 3 fibre to video receivers and one voltage regulating circuit. The power for this unit comes in trough an edge connector at the back of the unit. This edge connector plugs into a OS800 frame that is fitted with the correct backplane edge connectors.

Only one of the fibre to video receivers is described due to the fact that the other two are exactly the same.

The optical signal from the fibre is received by an optic receiver on the back of the card. This signal is the fed into a video amplifier. The amplifier checks the amplitude of this input signal and employs AGC to set the correct gain for the signal. A jumper can be set to override the AGC and the gain can be set manually. On the output stage the signal is send out on a BNC connector on the back of the card with an output impedance of 75Ω .

Features

- Compatible with standard composite video.
- Compact design allows large concentration of video signals.
- Up to 3 channels per card.
- Multiple cards fit into OS800 - 19" rack system.
- Interface directly to the OS801 Single channel video transmitter on fibre.

Uses

- Security systems.
- Long distance noise free video transmission.

1.3 Indications

Video signal - Indicates Video signal present.

2. PRODUCT STOCK CODES

OS803RAB 3 Channel Video on Fibre Receiver with 850nm optics and ST optic connectors.

3. PREPARATION FOR USE

3.1 Unpacking

Check for physical damage caused during transportation. Return any damaged equipment.

3.2 Configuration of the links.

Each channel has its own associated link.

To set the circuit to AGC mode Link 1,2 and 3 must be set in position. For manual gain mode the links must be out.

Link 4,5,6,7,8,9 selects normal or invert Video signal. This link is factory set and depends on the optic type used. Usually when 1300nm optics are used then the link must be in the top position and when 850nm optics are used the link must be in the bottom position.

3.3 Installation.

It is not necessary to remove the cards from the sub rack.

Connect the fibres to the front of the card taking care not to bend the fibres.

Connect the BNC connectors to the back of the card.

If the links are selected for manual gain adjustment then the following procedure is followed. Each channel has its own adjustment for gain. This gain adjustment is not reachable from the front of the unit. On the back of the card is a reachable test point. By connecting the ground lead of the oscilloscope to the card frame the signal on each channel can be tested by connecting to this test pin. The gain is normally adjusted using a standard reference signal from a pattern generator at the Optic transmitter. The received Video signal is then monitored on the oscilloscope. The gain is now adjusted to get a 300mV sync signal. The oscilloscope must be set to line sync.

If the links are selected for AGC the unit can be used as it is. Note if you have changed the manual setting it is necessary to readjust the AGC setting by following the above procedure in AGC mode.

4. OPERATOR'S INSTRUCTIONS

The unit needs no operator intervention to function. If a fault arises, it is necessary to observe the alarm indications and to perform such procedures as described in the first line maintenance chapter.

5. MAINTENANCE INSTRUCTIONS

No routine maintenance is required on this equipment.

5.1 First line maintenance.

5.1.1 Instruments and tools required

- Optic power meter
- Multi-meter.
- Oscilloscope.

5.1.2 Maintenance procedure

When arriving at a suspect unit it is necessary to check that all connections are correctly made.

Check that all fibre connectors are plugged in correctly and that the fibre is undamaged.

The first thing to check after that is the power supply. Check that the power to the OS800 is switched on. Then check the OS800 Power Supply for the voltage indicators(+V and -V) on the frontpanel. If none of the voltage indicator are working check the fuse on the back of the OS800. If the fuse is replaced and the unit is still not working even without an load the OS800 is faulty and must be replaced.

Use the optic power meter and measure the optic level coming out of the fibre at the suspect channel. Do this by disconnecting the ST connector and connect the fibre to an Optic power meter and check the optic emission level. If this level is to low or not present the fibre or the transmitter could be damaged or is not working

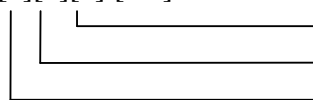
The next thing to check is the signal coming out of the unit. Do this by replacing the fibre and connecting the ground of your oscilloscope to the indicated GND testpin on the suspect unit. Then connect the probe to the Video Out testpin on the suspect channel. Measure this video signal to see if the signal is OK. If the signal is too small or to big check if the unit is set for Manual or AGC. If the unit is set for AGC adjustment is unnecessary.

If all these tests have been done and the system is still not operational the unit must be returned to the supplier for repair.

6. Ordering Information:

Stock Code selection:

OS803 R [x][x][x]/[ver]



Version.(not specifically required for ordering)

Power supply option.

Optic Connector Option.

Optic option.

OPTIC OPTION	WAVELENGTH	RANGE	BUDGET DISTANCE	OPTIC CONNECTOR OPTION		POWER SUPPLY OPTION	
A	850nm	Short range multi mode	3.5km	A	SMA	-	220VAC
B	1300nm	Medium range multi mode	12km	B	ST	-	110VAC
G	1300nm	Short range multi/single mode	8/12km			-	24V DC

7. SPECIFICATIONS

7.1 Electrical Characteristics

Power Supply

Power Connector -	20 Pin Double Sided Edge Connector
Supply Voltage -	12V \pm 10% DC
Supply Current -	250 mA (max)
Power Dissipation -	3 Watt (max)

Video Input

Video Output Connector -	BNC Female
Output Impedance -	75 Ohms
System Bandwidth -	100 Hz to 10 MHz
Signal/Noise Ratio -	52 dB minimum
Differential Gain -	2 % typical
Differential Phase -	2° typical

7.2 Optical Characteristics

Connector -	ST or SMA
Reception Wavelength -	820 nm or 1300nm
Responsivity -	7 mV/ μ W Typical or 13mV/ μ W
Fibre Compatibility -	50/125 μ m diameter
Minimum Receive Level-	-30dB

7.3 Physical Characteristics

Space Consumption in 19" rack -	rack height x 25 mm	
Overall Unit Dimensions -	Length -	171 mm
	Width -	128.5 mm with frontplate for frame
	Height -	25 mm with frontplate for frame
	Weight -	150 g (max)