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REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	Preliminary Version	Nov 05
1.1	First Release	Nov 05
1.2	Added audio de-embedder to block diagram	Sept 06
1.3	Updated *Vista*LINK® section, cleaned up format & layout	Oct 08
1.4	Updates features & specs	Nov 08

WARNING

Never look directly into an optical fiber. Non-reversible damage to the eye can occur in a matter of milliseconds.

Do not hook up the 7707ADVT DWDM and 7707ADVR cards directly with a short fiber optic cable. The 7707ADVT DWDM card produces +7dBm of power which will damage the receiver if connected directly.

Do not hook up the 7707ADVT cards that output more than -7dBm of power (see 7707ADVT specifications for output power of various laser types) and 7707ADVR-H high sensitivity receiver cards directly with a short fiber optic cable. The 7707ADVT cards that produce more than -7dBm of power will damage the receiver if connected directly.

1. OVERVIEW

The 7707ADVR fiber receiver extends one analog or digital video over a single fiber optic link, accompanied by two stereo channels of analog audio, or four channels of digital AES audio. Video and audio signals are decoded from a single 270Mb/s optical transport signal, which is input from a companion 7707ADVT transmitter. This standard data rate promotes signal compatibility, and efficient use of optical bandwidth. The video output supports composite NTSC or PAL analog video, or 270Mb/s serial digital SDI, SDTi, or DVB-ASI video. The 7707ADVR is designed to operate with a companion 7707ADVT transmitter, to permit communication over distances up to 120Km, with minimum possible latency.

In the case where digital SDI or SDTi video is detected at the input of the companion 7707ADVT, this signal is transported transparently across the fiber, with audio embedded into two of the four available audio groups. While composite NTSC or PAL analog video is detected at the input, this signal is encoded, with audio, into an SDTi data stream for transport across the fiber. DVB-ASI is transported transparently across the fiber, without audio. The 7707ADVR provides conversion back to the original video signal type, and selectable analog or digital audio.

Monitoring and control of card status and parameters is provided locally, at the card-edge, or remotely via *Vista*LINK® capability. The wide-band optical input of the 7707ADVR is compatible with all available 7707ADVT transmitter wavelengths.

Features:

- Single card fiber optic receiver for one composite Analog or SDI video and four analog or AES audio signals
- Auto sensing (analog or digital) video and audio outputs
- Supports both NTSC and PAL analog or 4:2:2 component digital video
- Supports Analog to Digital and Digital to Analog audio conversion
- Broadcast quality analog video and audio performance
- Meets or exceeds EIA/TIA RS250-C short haul specifications for analog video and audio transport
- Supports 32, 44.1, 48kHz AES audio
- Comprehensive signal and card status monitoring via four digit card edge display or remotely through SNMP and *Vista*LINK®
- Dolby-E™ compatible
- Audio de-embedding capability for digital video and Analog or AES Audio
- -NF version converts copper 270Mb/s link input back to video & audio
- *Vista*LINK® capability is available when modules are used with the 3RU 7700FR-C or 350FR frame and a 7700FC *Vista*LINK® Frame Controller module in slot 1 of the frame
- Adjustable gain, DC offset and pre-emphasis for driving up to 250m of Belden 1694A coaxial cable
- Fully hot-swappable from front of frame with no fiber disconnect/reconnect required
- Supports single-mode and multi-mode fiber optic cable
- Input available with fiber optics or BNC (-NF version)
- Wideband optical input (1270nm-1610nm)
- Passes embedded and/or external audio for digital video

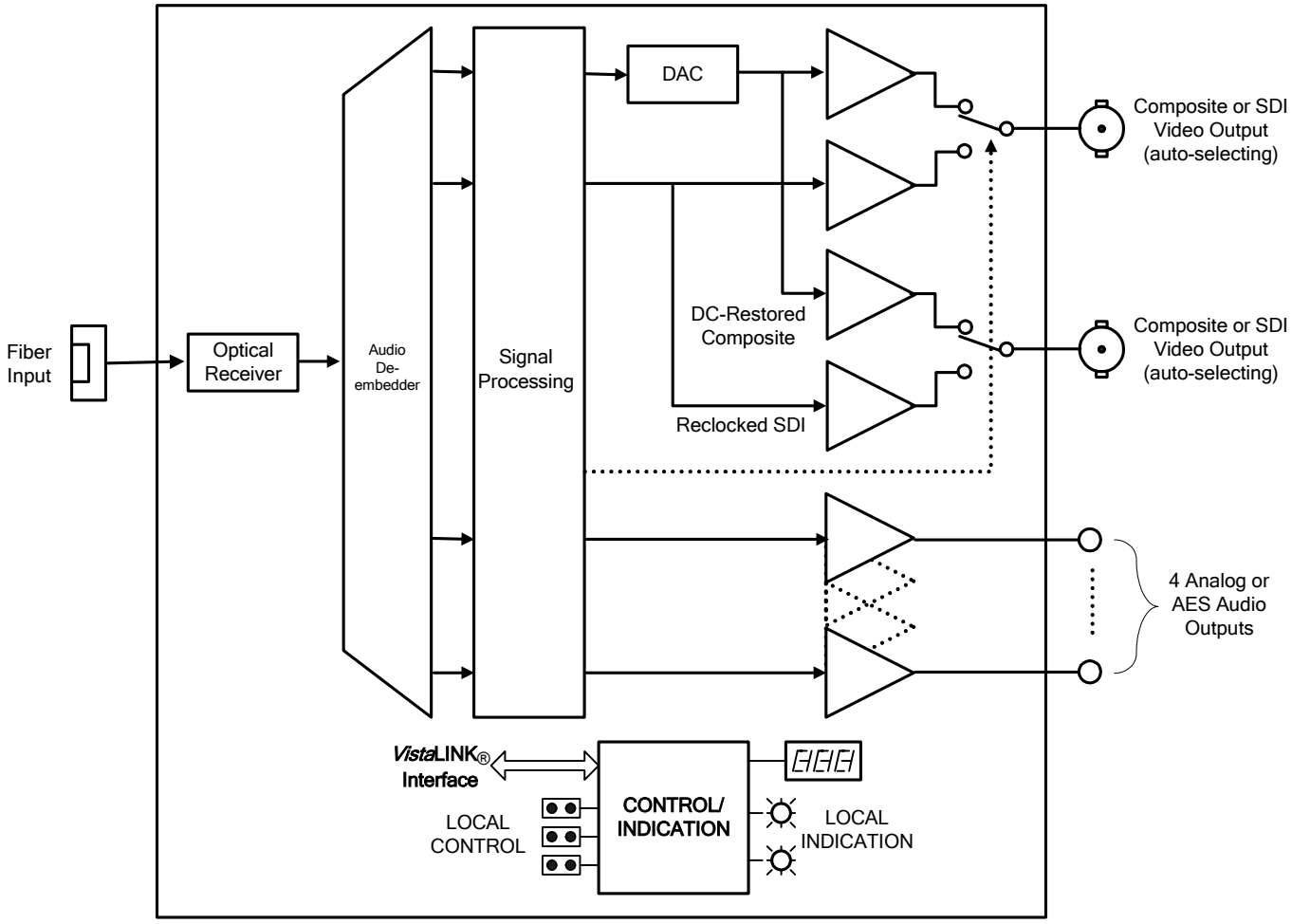

Figure 1-1: 7707ADVR Block Diagram

2. INSTALLATION

Each 7707ADVR module comes with a companion rear plate that has two BNC connectors, one terminal header with removable terminal block, and one SC/PC (shown), ST/PC or FC/PC optical connector. For information on mounting the rear plate and inserting the module into the frame see the 7700FR chapter section 3.

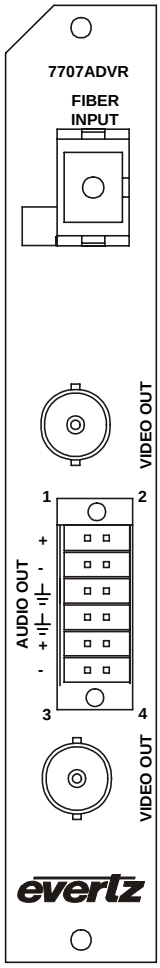

Figure 2-1: 7707ADVR Rear Panel

SDI OUT: Output BNC connector for serial digital video signals compatible with the SMPTE 259M-C, or SMPTE 305M standards.

ANALOG OUT: Output BNC connector for composite NTSC or PAL video signals.

FIBER INPUT: The 7707ADVR is available with a female SC/PC (shown), ST/PC or FC/PC type optical input connector. The optical input is a 270Mb/s SDI or SDTi formatted signal, comprised of encoded video and audio data.

Do not hook up the 7707ADVT DWDM and 7707ADVR cards directly with a short fiber optic cable. The 7707ADVT DWDM card produces +7dBm of power which will damage the receiver if connected directly.

Do not hook up the 7707ADVT cards that output more than -7dBm of power (see 7707ADVT specifications for output power of various laser types) and 7707ADVR-H high sensitivity receiver cards directly with a short fiber optic cable. The 7707ADVT cards that produce more than -7dBm of power will damage the receiver if connected directly.

AUDIO OUT: Removable terminal block providing output connections for four balanced analog audio signals, and two balanced AES audio signals. Terminal connections are described by the silkscreen labels, as depicted in Figure 2-1. User configuration selects audio outputs to be either analog or digital.

2.1. CARE AND HANDLING OF OPTICAL FIBER

2.1.1. Handling and Connecting Fibers

Never touch the end face of an optical fiber. Always keep dust caps on optical fiber connectors when not connected and always remember to properly clean the optical end face of a connector before making a connection.

The transmission characteristics of the fiber are dependent on the shape of the optical core and therefore care must be taken to prevent fiber damage due to heavy objects or abrupt fiber bending. Evertz recommends that the user maintains a minimum bending radius of 5 cm to avoid fiber-bending loss that will decrease the maximum attainable distance of the fiber cable. The Evertz fiber optic modules come with cable lockout devices, to prevent the user from damaging the fiber by installing a module into a slot in the frame that does not have a suitable I/O module. For further information about care and handling of fiber optic cable see section 3 of the Fiber Optics System Design chapter of this manual.

3. SPECIFICATIONS

3.1. SERIAL VIDEO OUTPUT

Number of Outputs:	2 regenerated
Standard:	SMPTE 259M-C, 525 or 625 line components SMPTE 305M (SDTi), DVB-ASI
Connector:	1 BNC per IEC 61169-8 Annex A
Equalization:	Automatic to 300m with Belden 1694A (or equivalent)
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	900ps nominal
Overshoot:	<10% of amplitude
Return Loss:	> 15dB at 270Mb/s
Wide Band Jitter:	< 0.2UI

3.2. ANALOG VIDEO OUTPUT

Standard:	SMPTE 170M, (NTSC), ITU-R 624-2 (PAL)
Number of Outputs:	2 BNC per IEC 61169-8 Annex A
System bandwidth:	> 5.5 MHz
Output Level:	1 Vp-p (nominal), 2 Vp-p (maximum)
Gain:	Unity gain nominal, adjustable 50% to 150%
Output Impedance:	75Ω
Return Loss:	> 30dB to 5.5MHz
SNR:	> 70dB
Differential Gain:	< 1.0%
Differential Phase:	< 0.7°
Pre-Emphasis:	Adjustable cable loss compensation for up to 250m of Belden 1694A
Passband Ripple:	
NTSC:	< ±0.1dB to 4.1MHz and < ±0.2dB to 5.5MHz
PAL:	< ±0.1dB to 4.8MHz and < ±0.2dB to 5.8MHz
Chroma/Luma Gain:	98% - 103%
Chroma/Luma Delay:	
NTSC:	<5ns
PAL:	<12ns
Line Time Distortion:	1.2%

3.3. AES AUDIO OUTPUTS

Number of Outputs:	4 regenerated (selectable for balanced or unbalanced)
Standard:	
Unbalanced AES:	SMPTE 276M
Balanced AES:	AES3-1992
Other:	Dolby E compatible
Connector:	12 pin terminal strip
Input Return Loss:	>15dB (1MHz to 6MHz)
Signal Level:	

Unbalanced:	1 Vp-p ±0.1Vp-p
Balanced:	2 Vp-p ±0.1Vp-p
Resolution:	Up to 24-bits
Sampling Rate:	32, 44.1, 48 kHz
Output Jitter:	<0.1UI
Impedance:	
Unbalanced:	75Ω
Balanced:	110Ω

3.4. ANALOG AUDIO OUTPUTS

Number of Outputs:	4
Type:	Balanced analog audio
Connector:	12 pin removal terminal block
Output impedance:	66Ω
Freq. Response:	+/- 0.1dB, 20Hz to 20 kHz
THD 20Hz-20kHz:	< 0.005%
Channel Phase Diff.	+/- 1 deg
SNR (weighted):	> 85dB
Output Level Adj:	-20dB to +3dB
Max Output Level:	+24 dBu into 10kΩ loads

3.5. OPTICAL INPUT

Number of Inputs:	1
Connector:	Female SC/PC, ST/PC, FC/PC
Operating Wavelength:	1270nm to 1610nm
Maximum Input Power:	0dBm
Optical Sensitivity:	-31dBm

3.6. ELECTRICAL

Voltage:	+12VDC
Power:	13 Watts

3.7. COMPLIANCE

Electrical Safety:	CSA Listed to CSA C22.2 No. 60065-03, UL 60065-03 IEC 60065-(2001-12) 7th Edition Complies with CE Low voltage directive 93/68/EEC
EMI/RFI:	Complies with FCC regulations for class A devices Complies with EU EMC directive 89/336/EEC

3.8. PHYSICAL

7700 or 7701 frame mounting:
Number of slots: 1

4. STATUS INDICATORS AND DISPLAYS

The 7707ADVR has 6 LED Status indicators and a 4 digit alphanumeric display on the front card edge to show operational status of the card at a glance. The card edge pushbutton and toggle-switch are used to select various indications to the alphanumeric display. Figure 4-1 shows the location of the LEDs and card edge controls.

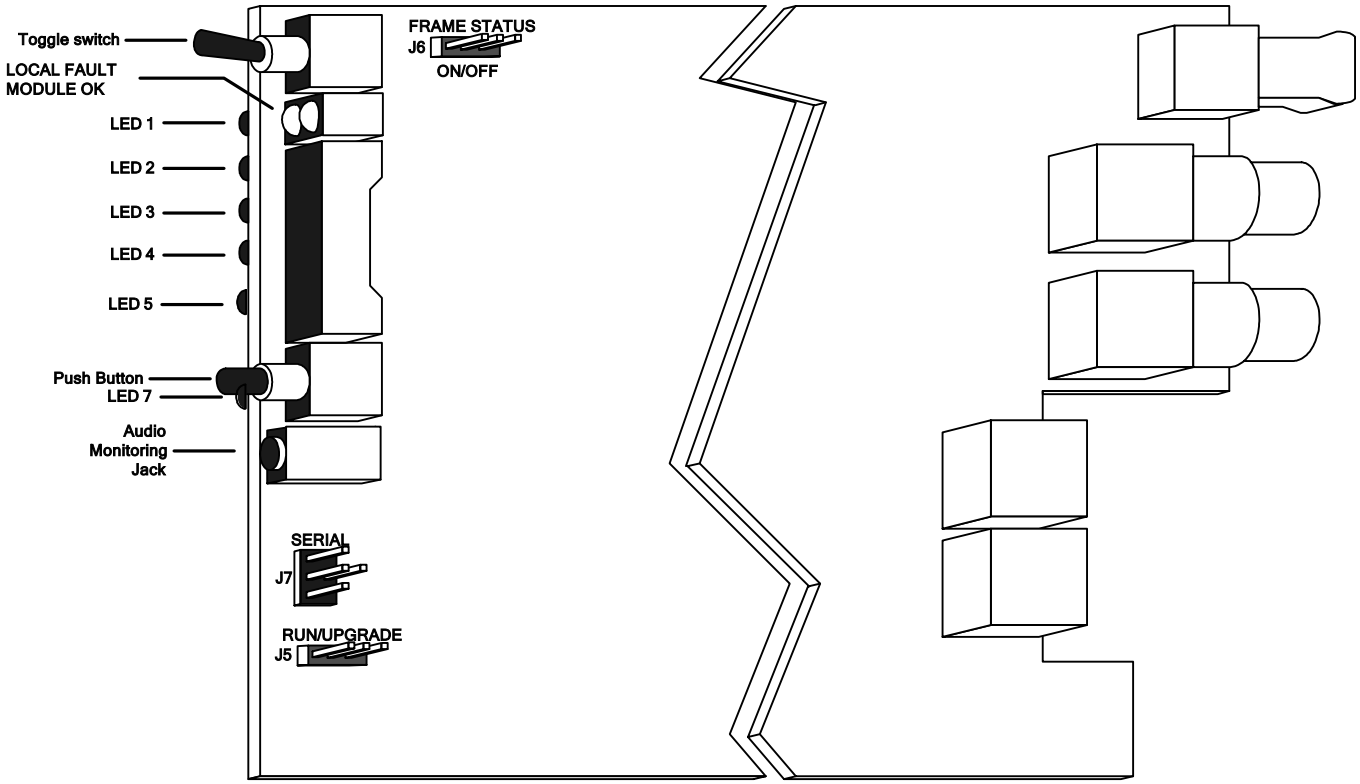

Figure 4-1: Location of Jumpers and Card Edge Controls

4.1. STATUS INDICATOR LEDS

Two large LEDs at the front card-edge indicate operational health of the module:

LOCAL / FAULT	RED	Link Loss
	GREEN	Link Present
LED1	RED	Link Error
	GREEN	Link Present
	OFF	Link Loss
LED2	RED	Audio 1 Transport Error
	GREEN	AES 1 / Analog 1 Output Present
	OFF	AES 1 / Analog 1 Output Loss
LED3	RED	Audio 2 Transport Error
	GREEN	AES 2 / Analog 2 Output Present
	OFF	AES 2 / Analog 2 Output Loss
LED4	RED	Audio 3 Transport Error
	GREEN	AES 3 / Analog 3 Output Present
	OFF	AES 3 / Analog 3 Output Loss
LED5	RED	Audio 4 Transport Error
	GREEN	AES 4 / Analog 4 Output Present
	OFF	AES 4 / Analog 4 Output Loss
LED7	RED	ADVT Control Packet is Missing
	GREEN	ADVT Control Packet is Detected
	OFF	

4.2. CARD EDGE MENU CONTROL

Control functions are implemented via the 4-digit dot-matrix display and controls located at the card-edge. The card-edge pushbutton and toggle-switch are used to navigate through the display menu.

Pressing the pushbutton advances the display to the next menu level. The toggle-switch may then be used to move up or down through selections of that menu level. Select BACK to return to previous menu level.

If a specific menu selection has a configuration value associated with it, then this may be changed using the toggle switch. Pressing the pushbutton will apply the displayed value and return you to the previous menu level.

The card edge menu system is divided into 2 parts:

CTRL: Control is used to configure the card
STAT: Status is to check status of card parameters via card edge

4.3. CTRL – (CONTROL) MENU STRUCTURE

VID	Video Setup
AUD	Audio Setup
DISP	Orientation of the Text on the Card Edge Display
FRST	Factory Reset

4.3.1. Video Setup – (VID)

OSTD	Output Video Standard on Input Video or Link Loss. When set to AUTO, the last valid input standard will be used to determine the output video standard.
ADVT	ADVT Control Packet Dembed This packet is used on the ADVR for AUTO configuration
EDH	EDH Insertion
ANLG	Analog Video Calibration Menu

4.3.1.1. Output Standard on Video Loss Control

VID
OSTD
AUTO
N270
P270
ASI
NTSC
PAL

Output Video Standard on loss of link.

AUTO: The last valid input standard will be used.
N270: Video output standard is N270.
P270: Video output standard is P270.
ASI: Video output standard is ASI.
NTSC: Video output standard is NTSC.
PAL: Video output standard is PAL.

4.3.1.2. ADVT Control Packet Dembed

VID
ADVT
DID
50-5F

Sets the DID looked for in the HANC. 50-5F (Hex) are unassigned user DIDs in the standard.

4.3.1.3. EDH Insertion ON/OFF

VID
EDH
ON/OFF

This system recalculates CRC values and updates EDH flag systems when enabled. Setting this control to OFF will disable EDH insertation only when no EDH is present on the input. If EDH is present on the video input, then this value is forced ON

4.3.1.4. Analog Video Calibration (GAIN)

VID	ANLG	GAIN	95% - 150%

Allows the user to adjust the analog output gain in 5% steps

Default = 100

4.3.1.5. Analog Video Calibration (EQ1)

VID	ANLG	EQ1	0 - 100

Analog Video EQ Control
Default = 6%

4.3.1.6. Analog Video Calibration (EQ2)

VID	ANLG	EQ2	0 - 100

Analog Video EQ Control
Default = 6%

4.3.1.7. Analog Video Calibration (DC)

VID	ANLG	DC	-100 to 100

Allows the user to adjust the Analog DC Level Control in increments of 5mV

Default = 0

4.3.2. Audio Setup – (AUD)

MODE	Audio Mode Set
DEMB	Audio De-embedder Control
ANLG	Analog Audio Control
DGTL	Digital Audio Output Termination Control
JACK	Audio Monitoring Jack Control

4.3.2.1. Set Audio Mode

AUD	MODE	DGTL, ANLG, AUTO

This menu allows the user to set the audio output signal. When set to Auto the 7707ADVR reads the control packet from the 7707ADVT.
DGTL: AES Audio
ANLG: Analog Audio
AUTO: Auto detection of audio

4.3.2.2. Audio De-embedder 1 Controls

AUD
DEMB
DMB1
OFF
GRP1
GRP2
GRP3
GRP4
AUTO

Controls Audio De-embedder 1.

OFF: Audio De-embedder is disabled.
GRP1: Audio is de-embedded from group 1.
GRP2: Audio is de-embedded from group 2.
GRP3: Audio is de-embedded from group 3.
GRP4: Audio is de-embedded from group 4.
AUTO: The 7707ADVR reads the control packet from the 7707ADVT to determine the group to de-embed.

4.3.2.3. Audio De-embedder 2 Controls

AUD
DEMB
DMB2
OFF
GRP1
GRP2
GRP3
GRP4
AUTO

Controls Audio De-embedder 2.

OFF: Audio De-embedder is disabled.
GRP1: Audio is de-embedded from group 1.
GRP2: Audio is de-embedded from group 2.
GRP3: Audio is de-embedded from group 3.
GRP4: Audio is de-embedded from group 4.
AUTO: The 7707ADVR reads the control packet from the 7707ADVT to determine the group to de-embed.

4.3.2.4. SDTi Audio Bypass Control

AUD
DEMB
REM
ON/OFF

Removes Audio Groups Dembedded by ADVR (Groups are added by the 7707ADVT).

4.3.2.5. Analog Audio Level Control (dBu)

AUD
ANLG
LVL
16 - 24

0.1 dBu Steps. Sets the full scale analog audio signal level at card output.

4.3.2.6. Analog Audio Presence Detection

AUD
ANLG
DET
LVL
0 to 60

Analog Audio will be detected when an analog audio sample arrives above the set LVL threshold. Entered in dBU.

4.3.2.7. Analog Audio Presence Detection Time Duration

AUD
ANLG
DET
DUR
1 to 20

The time, in seconds, for which analog audio must be below the above LVL threshold for audio to be considered not present.

Default Menu Value is 10.

4.3.2.8. Analog Audio Presence Detection Enable/Disable

AUD
ANLG
DET
ENB
ON/OFF

When set to OFF, all Analog Audio channels are considered present.
This control allows the user to disable constant alarms/traps during media sessions with silent periods in audio sources.

4.3.2.9. Audio Channel 1 and 2 Pair Enable or Mute

AUD
ANLG
ENB
A1+2
ENB/MUTE

Allows user to Pass or Mute Analog Audio channels 1 and 2

4.3.2.10. Audio Channel 3 and 4 Pair Enable or Mute

AUD
ANLG
ENB
A3+4
ENB/MUTE

Allows user to Pass or Mute Analog Audio channels 3 and 4

4.3.2.11. Digital Audio Output Termination Control (ALL Audio)

AUD
DGTL
TERM
ALL
BAL
UBAL

Adjusts all 4 AES outputs at once.

BAL sets the AES output to Balanced audio (110 ohms) (XLR)
UBAL sets the AES output to Unbalanced audio (75 ohms) (BNC)

4.3.2.12. Digital Audio Output Termination Control (AES 1 through 4)

AUD	DGTL	TERM	AES1 - 4	BAL
				UBAL

Adjusts AES1 output individually.

BAL sets the AES1 output to Balanced audio (110 ohms) (XLR).
UBAL sets the AES1 output to Unbalanced audio (75 ohms) (BNC).

AES2, AES3, and AES4 are configured the same way as AES1. For simplicity, only AES1 has been shown.

4.3.2.13. Audio Monitor Jack Source Selection

AUD	JACK	SRCE	OFF
			A1+2
			A3+4
			AES1
			AES2
			AES3
			AES4

Selects the audio source to be monitored by the Audio Monitor Jack

OFF: No audio will be present on Audio Monitor Jack.
A1+2: Audio Jack will be sourced from Analog Audio input 1 and 2.
A3+4: Audio Jack will be sourced from Analog Audio input 3 and 4.
AES1: Audio Jack will be sourced from Digital Audio Input 1.
AES2: Audio Jack will be sourced from Digital Audio Input 2.
AES3: Audio Jack will be sourced from Digital Audio Input 3.
AES4: Audio Jack will be sourced from Digital Audio Input 4.

4.3.2.14. Audio Jack Volume Control

AUD	VOL	0 - 64

Allows the user to control the volume output of the card edge monitoring jack.

4.3.3. Orientation of the Text on the Card Edge Display (DISP)

DISP	VERT
	HORZ

Allows the user to set a horizontal or vertical orientation for the card edge display messages.

4.3.4. Factory Reset (FRST)

FRST	NO
	YES

Allows the user to perform factory reset.

4.4. STAT – (STATUS) MENU STRUCTURE

PWR	Optical Power Indication
VID	Video Status
AUD	Audio Status
VER	Displays Firmware Version

4.4.1. Video Status Card Edge Monitoring

INP	Video Input Status
OUT	Output Video Standard
ADVT	ADVT Control Packet Detect
SDTI	SDTI Input Detect
EDH	EDH Input Detect

4.4.1.1. Optical Power Indication

VID
PWR
-40 to –1
OVER
LOW

Displays Optical Power levels detected on the fiber input.
OVER indicates the Power level is above the measurable range.
LOW indicates the Power level is below the measurable range.

4.4.1.2. Video Input Detect

VID
INP
N270
P270
ASI
NTSC
PAL
ERR
LOS

Reports Standard of recognized video source.

N270: Video source is 525 SDI.
P270: Video source is 625 SDI.
ASI: Video source is ASI.
NTSC: Video source is NTSC composite.
PAL: Video source is PAL composite.
ERR: Indicates that there is an EDH error.
LOS: Indicates that no valid optical signal is present on the input.

4.4.1.3. Output Video Standard

VID
OUT
N270
P270
ASI
NTSC
PAL

Current Output Video Standard.

N270: Video Mode is 525 SDI.
P270: Video Mode is 625 SDI.
ASI: Video Mode is ASI.
NTSC: Video Mode is NTSC composite.
PAL: Video Mode is PAL composite.

4.4.1.4. ADVT Control Packet Detect

VID
ADVT
PSNT
LOS

PRST indicates an ADVT control packet was found on the fiber video input.
LOS indicates an ADVT control packet was not found on the fiber video input.

4.4.1.5. SDTi Input Detect

VID
SDTI
PSNT
LOS

PRST Means SDTI headers are detected on input.
LOS Means SDTI headers were not detected on video.

4.4.1.6. EDH Input Detect

VID
EDH
PSNT
LOS

PRST Means SDTI headers are detected on input.
LOS Means SDTI headers were not detected on video.

4.4.2. Audio Status Card Edge Monitoring

MODE	Audio Mode Report
DEMB	Displays the current status of Audio De-embedder 1 and 2
ALG1	Analog Audio Input 1 Status
ALG2	Analog Audio Input 2 Status
ALG3	Analog Audio Input 3 Status
ALG4	Analog Audio Input 4 Status

4.4.2.1. Audio Mode Report

AUD
MODE
DGTL
ANLG

Displays current ADVR Audio output mode.

4.4.2.2. Displays the current status of Audio De-embedders

AUD
DEMB
DMB1
DMB2

Displays the current status of audio de-embedders (DMB1 and DMB2 in sub-menu).

4.4.2.3. Displays the current status of Audio De-embedder 1

AUD
DEMB
DMB1
GRP1
GRP2
GRP3
GRP4
OFF

This menu displays the current status of Audio De-embedder 1.

GRP1: De-embedder 1 is currently assigned Audio Group 1.
GRP2: De-embedder 1 is currently assigned Audio Group 2.
GRP3: De-embedder 1 is currently assigned Audio Group 3.
GRP4: De-embedder 1 is currently assigned Audio Group 4.
OFF: De-embedder 1 is disabled.

4.4.2.4. Displays the current status of Audio De-embedder 2

AUD
DEMB
DMB2
GRP1
GRP2
GRP3
GRP4
OFF

This menu displays the current status of Audio De-embedder 2.

GRP1: De-embedder 2 is currently assigned Audio Group 1.
GRP2: De-embedder 2 is currently assigned Audio Group 2.
GRP3: De-embedder 2 is currently assigned Audio Group 3.
GRP4: De-embedder 2 is currently assigned Audio Group 4.
OFF: De-embedder 2 is disabled.

4.4.2.5. Analog Audio Input 1 Status

AUD
ALG1
PSNT
SLNT

PSNT: Analog Audio 1 is present.
SLNT: Analog Audio 1 is not detected.

ALG2, ALG3, and ALG4 are configured the same way as ALG1. For simplicity, only ALG1 has been shown.

4.4.3. Firmware Version

VER	VER x.x BUILD xxx **Software version. Character string scrolls across four digit display.**

4.5. UPGR – (UPGRADE) MENU STRUCTURE

UPGR
NO
YES

This menu allows user to configure the module for firmware upgrades.
NO: Module stays in run mode.
YES: Puts module in upgrade mode.

5. JUMPER CONTROLS

5.1. SELECTING WHETHER LOCAL FAULTS WILL BE MONITORED BY THE GLOBAL FRAME STATUS

The FRAME STATUS jumper J4 determines whether local faults (as shown by the Local Fault indicator) will be connected to the 7700FR frame's global status bus.

FRAME STATUS: To monitor faults on this module with the frame status indicators (on the Power Supply FRAME STATUS LED's and on the Frame's Fault Tally output) install this jumper in the On position. (Default)

When this jumper is installed in the Off position local faults on this module will not be monitored.

5.2. CONFIGURING THE MODULE FOR FIRMWARE UPGRADES

UPGRADE: The UPGRADE jumper J5 is used when firmware upgrades are being done to the module. For normal operation it should be installed in the *RUN* position. See the *Upgrading Firmware* section of this manual for more information.

To upgrade the firmware in the module unit pull it out of the frame. Move the UPGRADE jumper into the *UPGD* position. Install the Upgrade cable provided (located in the vinyl pouch in the front of this manual) onto the SERIAL header (J7) at the card edge. Re-install the module into the frame. Run the upgrade as described in the *Upgrading Firmware* section of this manual. Once the upgrade is completed, remove the module from the frame, move the UPGRADE jumper into the *RUN* position, remove the upgrade cable and re-install the module. The module is now ready for normal operation.

6. *VISTA*LINK® REMOTE MONITORING/CONTROL

6.1. WHAT IS *VISTA*LINK®?

*Vista*LINK® is Evertz' remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. *Vista*LINK® provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through *Vista*LINK® PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, *Vista*LINK® enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

There are 3 components of SNMP:

1. An SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz VL-Fiber demo Manager graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *Vista*LINK® enabled fiber optic products.

2. Managed devices, (such as 7707EO and 7707OE cards), each with a unique address (OID), communicate with the NMS through an SNMP Agent. Evertz *Vista*LINK® enabled 7700 series modules reside in the 3RU 7700FR-C MultiFrame and communicate with the manager via the 7700FC *Vista*LINK® frame controller module, which serves as the Agent.

3. A virtual database, known as the Management information Base (MIB), lists all the variables being monitored which both the Manager and Agent understand. Please contact Evertz for further information about obtaining a copy of the MIB for interfacing to a third party Manager/NMS.

For more information on connecting and configuring the *Vista*LINK® network, see the 7700FC Frame Controller chapter.

6.2. *VISTA*LINK® MONITORED PARAMETERS

The following parameters can be remotely monitored via the *Vista*LINK® interface.

Parameter	Description
Card Type	Indicates either 7707ADVR or 7707ADVR-H card type.
Audio Mode Status	Indicates whether the audio mode is analog or digital.
Analog Audio Status 1 to 4	Indicates presence of analog audio.
Audio De-embedder status 1	Indicates whether De-embedder 1 is on or off.
Audio De-embedder status 2	Indicates whether De-embedder 2 is on or off.
Optical Power	Indicates optical power level in dBm units at fiber input.
Video Input Status	Indicates video standard of the input signal.
Output Video Standard	Indicates video standard of the output signal.
SDTi Input Detect	Indicates whether SDTi signal is present or not.
ADVT Control Packet Detect	Indicates whether an ADVT control packet was found or not on the fiber video input.
Digital Video Equalization	Indicates equalization strength in %.

Table 6-1: *Vista*LINK® Monitored Parameters

6.3. *VISTA*LINK® CONTROLLED PARAMETERS

The following parameters can be remotely controlled via the *Vista*LINK® interface.

Parameter	Description
Audio Mode	Sets audio mode to auto, digital or analog.
Audio De-embedder Remove	Removes Audio Groups Dembedded by ADVR when set to On.
Analog Audio Output Level	Sets analog audio level from 16dBu to 24dBu in steps of 0.1 dBu.
Analog Audio Detection Level	Sets analog audio level detection form –60dBu to 0dBu in steps of 10dBu.
Analog Audio Silence Duration	Sets analog audio silence duration from 1sec to 20sec in steps of 1 second.
Analog Audio Detection Enable	Enables or disables analog audio detection
Audio De-embedder 1	Controls audio de-embedder 1.
Audio De-embedder 2	Controls audio de-embedder 2.
Video Standard On Loss	Sets output video standard on input video or link loss. When set to AUTO, the last valid input standard will be used to determine the output video standard.
Control Packet DID	Sets the DID looked for in the HANC.
EDH Insertion Enable	Enables or disables EDH insertion. Setting this control to OFF will disable EDH insertation only when no EDH is present on the input.
Analog Video Gain	Sets analog video gain from 95% to 150% in steps of 5%.
Analog Video DC Offset	Sets analog video DC offset form –100mv to 100mV in steps of 5mV.
Optical Power Alarm Threshold	Sets the optical power level that triggers an alarm if the fiber signal degrades.
Digital Video Equalization Threshold	Sets the equalization level that triggers an alarm if the digital video signal degrades.
Analog Video EQ 1	Sets analog video 1 equalization from 0% to 100% in steps of 1%.
Analog Video EQ 2	Sets analog video 2 equalization from 0% to 100% in steps of 1%.
Analog Audio 1 and 2 Output Enable	Enables or mute Audio Channel Pair 1 and 2.
Analog Audio 3 and 4 Output Enable	Enables or mute Audio Channel Pair 3 and 4.
Audio digital Output Termination 1 to 4	Sets AES 1 to 4 output to balanced or unbalanced audio.

Table 6-2: *Vista*LINK® Controlled Parameters

6.4. *VISTA*LINK® TRAPS

The following traps can be remotely enabled and monitored through *Vista*LINK® interface.

Trap	Destination
Link Loss	Triggers when there's a loss of fiber link data stream at fiber input.
Link Error	Triggers when there is an error on valid fiber link input.
Optical Power Below Threshold	Triggers when optical power at fiber input has dropped below a set threshold.
Audio Output 1 to 4 Loss	Triggers when loss of audio signal 1 to 4 happens.
Audio Output 1 to 4 Error	Triggers when an error of audio signal 1 to 4 happens.

Table 6-3: *Vista*LINK® Traps

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