TABLE OF CONTENTS

Figures

REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	Original Version	Mar 03

1. OVERVIEW

The 500ADA-W is a distribution amplifier for SDIF-2 Word Clock and other TTL level signals. The 500ADA-W features one input that can be high impedance or 75 ohm terminated and has nine outputs. The 500ADA-W provides continuous voltage gain adjustment from –6dB to +6dB up to a maximum output signal level of 5 volts into a 75 ohm load or 10 volts into a high impedance load.

The 500ADA-W is housed in the 500FR exponent Frame that will hold up to 16 modules.

Features:

- Jumper selectable 75 Ohm or high impedance (1 kohm typical) input
- Voltage gain adjustment range from – 6dB to +6dB
- Outputs can drive 5 volts into 75 ohm loads or 10 volts into high impedance loads

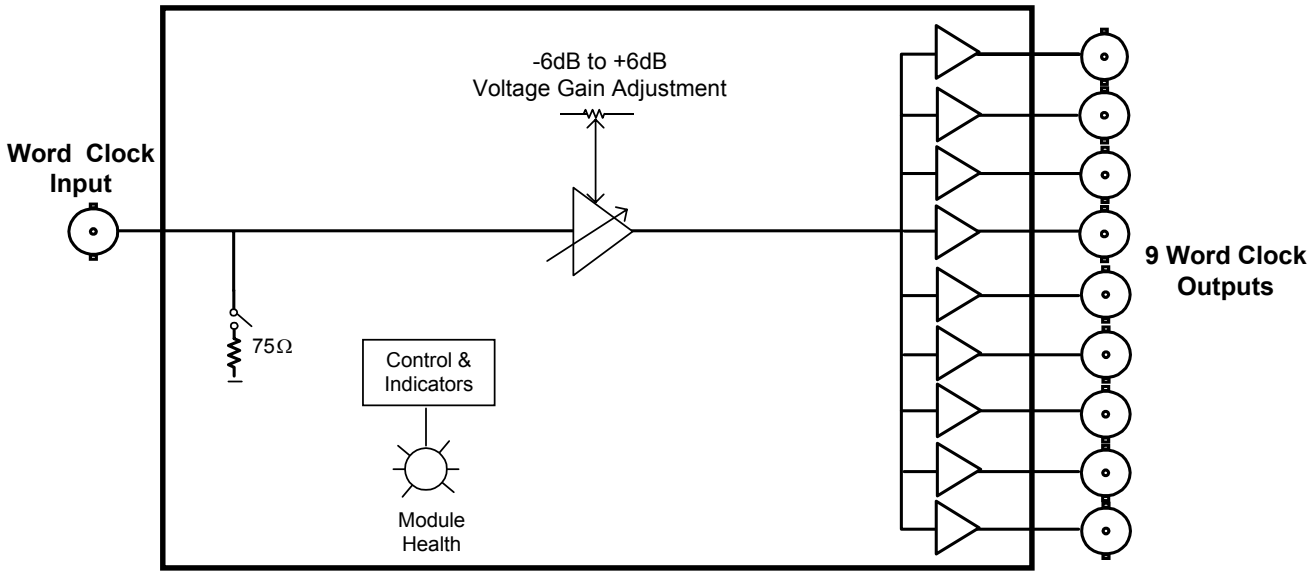

Figure 1: 500ADA-W Block Diagram

2. INSTALLATION

The 500ADA-W comes with a companion rear panel overlay that can be placed over the rear panel BNC connectors to identify their function. For information on inserting the module into the frame see the 500FR chapter section 3.

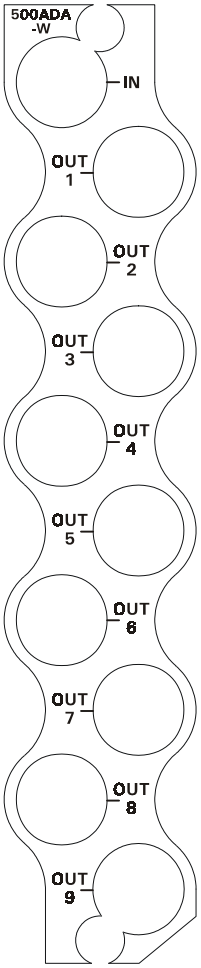

Figure 2: 500ADA-W Rear Panel Overlay

IN Input BNC connector for SDIF-2 Word Clock and other TTL level signals. The TERM jumper located on the module near the back determines whether the input signal will be high impedance or terminated with 75 ohms. (See section 5.2)

OUT 1 to 9 There are nine BNC connectors with level adjusted copies of the input signal.

3. SPECIFICATIONS

3.1. WORD CLOCK INPUT

Standards: SDIF-2 Word Clock
Connector: 1 BNC input per IEC 169-8
Signal amplitude: 0 to 5 volts (terminated or unterminated)
Impedance: 75 Ohms terminated, 1 kOhm Hi-Z (jumper selectable)

3.2. WORD CLOCK OUTPUTS

Number of Outputs: 9 Per Card
Connector: BNC per IEC 169-8
Output impedance: 75 Ohm
Output Level:
Minimum: 0 V
Maximum: 5 V into 75 ohm load
10 V into high impedance load
Voltage Gain range: ±6dB
Frequency Range: 28 kHz to 100 kHz

3.3. ELECTRICAL

Voltage: + 12VDC
Power: 6 Watts
EMI/RFI: Complies with FCC Part 15 Class A, EU EMC Directive

3.4. PHYSICAL

Number of slots: 1

4. STATUS LEDS

The 500ADA-W has two LED Status indicators on the front card edge to show operational status of the card at a glance. Figure 3 shows the location of the LEDs.

Two large LEDs on the front of the board indicate the general health of the module

LOCAL FAULT: This Red LED indicates poor module health and will be On if a local input power fault exists (i.e.: a blown fuse). The LOCAL FAULT indication can also be reported to the frame through the FRAME STATUS jumper.

MODULE OK: This Green LED indicates good module health. It will be On when the board power is good.

5. JUMPERS AND USER ADJUSTMENTS

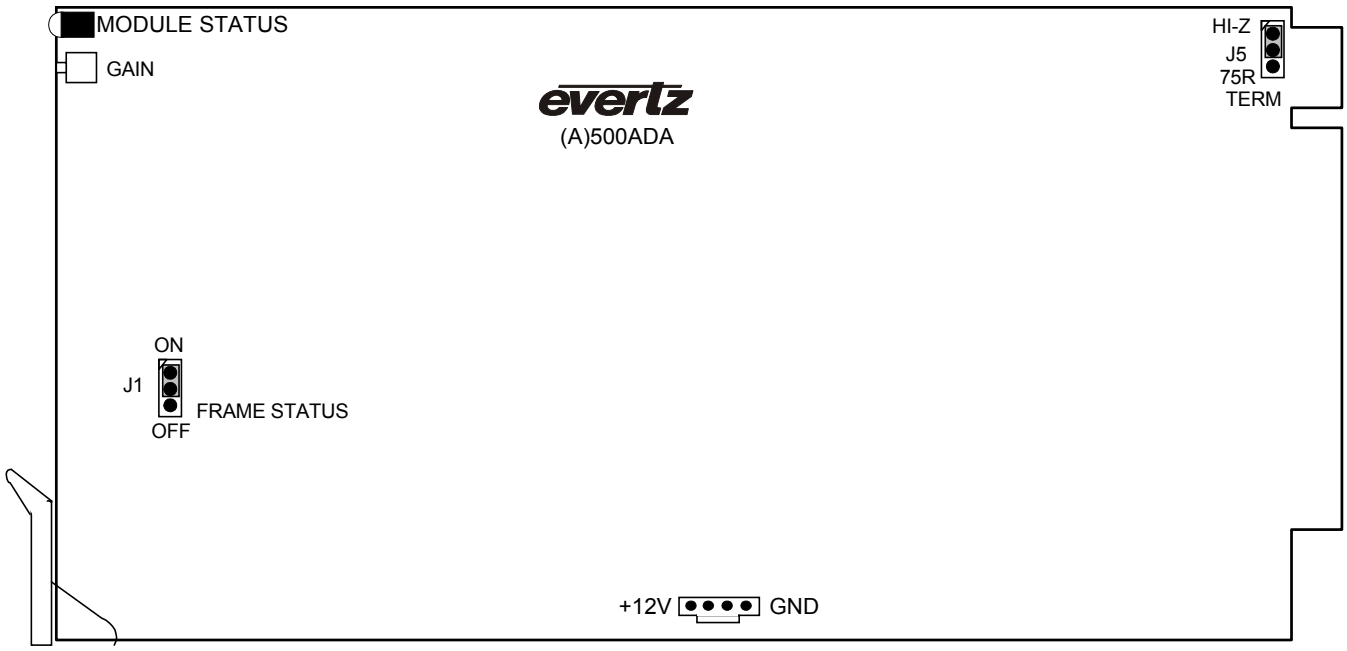

Figure 3: LED and Jumper Locations

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

The FRAME STATUS jumper J1, located at the front of the module determines whether local faults (as shown by the Local Fault indicator) will be connected to the 500FR frame's global status bus.

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

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

5.2. SELECTING THE INPUT TERMINATION

The input termination may be set via card jumper J5 to either 75 Ohms (default) or Hi-Z (1k Ohms). Set it to Hi-Z when using a "T" connector to loop the signal through several device inputs.

5.3. GAIN ADJUSTMENT

The **GAIN** POT on the cards front edge allows you to adjust the input signal level. Turning the POT clockwise will increase the gain.