## Model 7700ADA

The 7700ADA Analog Distribution Amplifier is a general purpose amplifier for distributing analog signals. The 7700ADA features one balanced input with four outputs. The 7700ADA has been designed to distribute a wide range of analog video signals. It can also distribute other pulses and signals that do not exceed 2Vp-p.

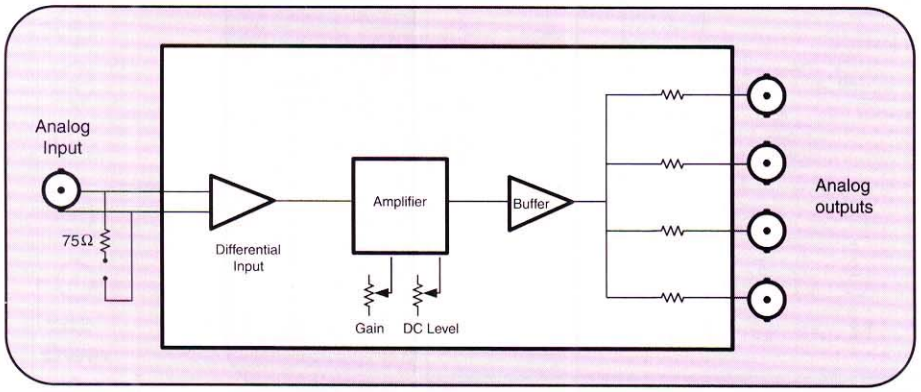
## Features

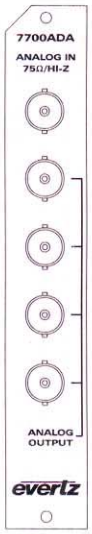
- 75 Ω or high impedance input (jumper selectable)
- Looping feature with external "T" connector
- Consistent input impedance if card power is lost
- High common mode range and common mode rejection ratio (CMRR)

**Card Edge LEDs:**

- Module status/Local Fault
- Power supply status

## 7700ADA Block Diagram




## Specifications

**Analog Video Input:**

| | |
|---|---|
| **Standard:** | Any analog video format up to 2Vp-p and 30MHz bandwidth |
| **Number of Inputs:** | 1 |
| **Connector:** | 1 BNC per IEC 169-8 |
| **Equalization:** | None |
| **Return Loss:** | >25dB up to 30MHz |
| **Common mode range:** | 6Vp-p |
| **CMRR:** | >75dB at 60Hz<br>>45dB at 100kHz |
| **Return Loss:** | >30dB up to 30MHz |
| **Signal Amplitude:** | 2.5Vp-p max |

**Analog Video Outputs:**

| | |
|---|---|
| **Number of Outputs:** | 4 per card |
| **Connector:** | BNC per IEC 169-8 |
| **Gain Level:** | 1x +3.5dB, -2.5dB |
| **DC Offset:** | OV ± 200mV (Adjustable) |

**Electrical:**

| | |
|---|---|
| **Voltage:** | +12VDC |
| **Power:** | 1.2 Watts |
| **EMI/RFI:** | Complies with FCC Part 15 Class A, EU EMC Directive |

**Physical:**

| | |
|---|---|
| **Number of Slots:** | 1 |

**Ordering Information:**

| | |
|---|---|
| **7700ADA** | Analog Video Distribution Amplifier |

**Ordering Options**

Rear Plate must be specified at time of order
Eg: Model + 3RU

**Rear Plate Suffix**

| | |
|---|---|
| **+3RU** | 3RU Rear Plate for use with 7700FR-C Multiframe |
| **+1RU** | 1RU Rear Plate for use with 7701FR Multiframe |
| **+SA** | Standalone Enclosure Rear Plate |

**Enclosures:**

| | |
|---|---|
| **7700FR-C** | 3RU Multiframe which holds 15 modules |
| **7701FR** | 1RU Multiframe which holds 3 modules |
| **S7701FR** | Standalone enclosure |

# Analog Video Equalizing Distribution Amplifier



## 7700ADA-EQ

The 7700ADA-EQ Equalizing Analog Distribution Amplifier is a general purpose amplifier for distributing analog video signals. The 7700ADA-EQ features one balanced equalized input with four outputs. The 7700ADA-EQ amplifier has been designed to distribute a wide range of analog video signals. It can also distribute other pulses and signals that do not exceed 2Vp-p.

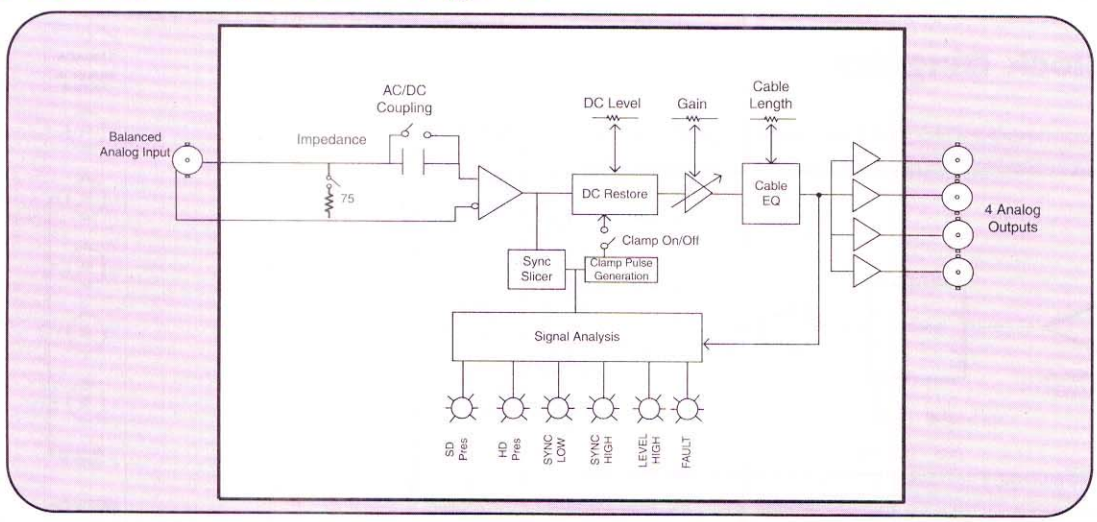
## Features

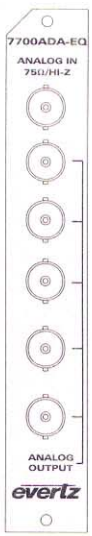
- 75Ω or high impedance input (jumper selectable)
- High common mode range and common mode rejection ratio (CMMR)
- Gain control
- Jumper selectable AC or DC coupling
- Jumper selectable fast or slow back porch clamp
- DC level control when clamp is enabled
- Cable equalizer adjustment range: 0 to 300m of 8281 or 1694
- Looping feature with external "T" connector
- Consistent input impedance if card power is lost

**Card Edge LEDs:**

- Module status/Local Fault
- Power supply status
- EQ Warning

## 7700ADA-EQ Block Diagram




## Specifications

**Analog Video Input:**

| | |
|---|---|
| **Standards:** | Any analog video format, up to 2Vp-p and 30MHz bandwidth |
| **Connector:** | 1 BNC input per IEC 169-8 |
| **Common mode range:** | >6Vp-p |
| **CMRR:** | >70dB to 1kHz |
| **Signal amplitude:** | 2.5Vp-p max |
| **Cable equalizer:** | 0 to 300m of Belden 8281 or 1694 cable |
| **Impedance:** | 75Ω terminated, 35kΩ Hi-Z (jumper selectable) |
| **Coupling:** | AC or DC (jumper selectable) |
| **Return loss:** | > 40dB to 10MHz, >30dB to 30MHz |
| **Clamp range:** | >+/- 600mV |
| **Fast clamp attenuation of 60Hz:** | >36dB |

**Analog Video Outputs:**

| | |
|---|---|
| **Number of Outputs:** | 4 Per Card |
| **Connector:** | BNC per IEC 169-8 |
| **Output impedance:** | 75Ω |
| **Gain control range:** | ± 5dB |
| **DC level:** | < +/- 100mV (with DC Coupling active and back porch clamp disabled) |
| **DC level Control range:** | < +/- 200mV( with back porch clamp enabled) |
| **Freq. Response:** | < ±0.05dB no equalization (to 5.5MHz)<br>< ±0.09dB for 5 to 100m Belden 8281 or 1694 (to 5.5Mhz)<br>< ±0.15dB for 100 to 300m Belden 8281 or 1694 (to 5.5MHz) |
| **Differential Gain:** | <0.17 % 0 to 300m |
| **Differential Phase:** | < 0.19 deg 0 to 300m |
| **C/L gain inequality:** | <+/-0.1% for all cable lengths |
| **C/L Delay:** | <+/-2ns |
| **Output isolation:** | >42dB to 10MHz, >32 dB to 30MHz |
| **Output return loss:** | >40dB to 30MHz |
| **Noise performance:** | <-78dB RMS NTC7 weighting,<br><-70dB RMS 15kHz to 5.5MHz |

**Electrical:**

| | |
|---|---|
| **Voltage:** | +12VDC |
| **Power:** | 1.2 Watts |
| **EMI/RFI:** | Complies with FCC Part 15 Class A, EU EMC Directive |

**Physical:**

| | |
|---|---|
| **Number of Slots:** | 1 |

**Ordering Information:**

| | |
|---|---|
| **7700ADA-EQ** | Analog Video Equalizing Distribution Amplifier |

**Ordering Options**

Rear Plate must be specified at time of order
Eg: Model + 3RU

| **Rear Plate Suffix** | |
|---|---|
| **+3RU** | 3RU Rear Plate for use with 7700FR-C Multiframe |
| **+1RU** | 1RU Rear Plate for use with 7701FR Multiframe |
| **+SA** | Standalone Enclosure Rear Plate |

**Enclosures:**

| | |
|---|---|
| **7700FR-C** | 3RU Multiframe which holds 15 modules |
| **7701FR** | 1RU Multiframe which holds 3 modules |
| **S7701FR** | Standalone enclosure |

## Model 7700ADA-AUD

The 7700ADA-AUD Dual Analog Audio distribution amplifier is a general purpose amplifier for distributing analog audio signals. It can be operated as two independent 4 output amplifiers for stereo signals, or as a single amplifier with 8 outputs where higher fanout is required.

The 7700ADA-AUD can be operated with either differential or single ended inputs and offers a wide range of gain adjustment to handle a wide variety of input signals.

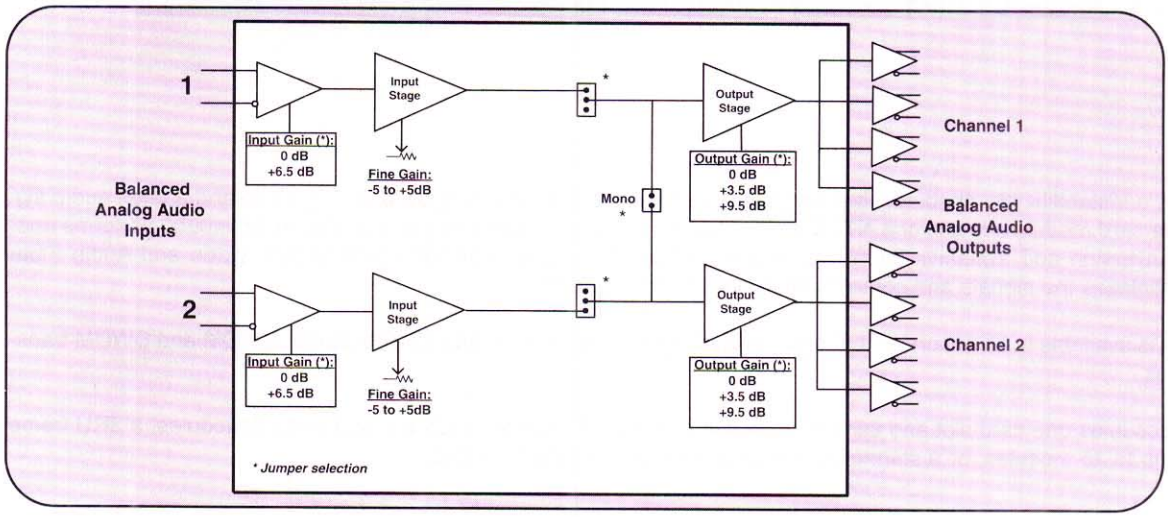
## Features

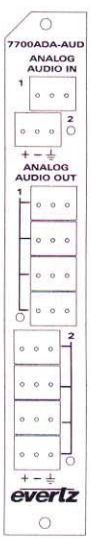
- Differential and single ended input (automatic single ended to differential conversion)
- Configurable for stereo or mono
- High impedance input
- Low impedance outputs
- Wide gain adjustment range
- High common mode range and common mode rejection ratio (CMRR)
- Very high SNR
- Very low THD+N

**Card Edge LEDs**

- Module status/Local fault

## 7700ADA-AUD Block Diagram




## Specifications

**Analog Audio Input:**

| | |
|---|---|
| **Standards:** | Any analog audio signal |
| **Number of inputs:** | 2 (Balanced or Single ended) |
| **Connectors:** | 3 pin removable terminal strips |
| **Input step gain:** | 0 dB or +6.5 dB (configurable with jumpers) |
| **Fine gain control:** | -5 to +5dB (card edge pot adjustable) |
| **Maximum input level:** | |
| **0 dB input gain** | +33 dBu |
| **+6.5 dB input gain** | +26.5 dBu |
| **Noise floor:** | -87 dBu (0 dB input gain), -91 dBu (+6.5 dB input gain jumper setup) |
| **Common mode rejection:** | > 115 dB @ 60 Hz, 90 dB @ 20 kHz (tested with +28 dBu CM input) |
| **Common mode range:** | |
| **0 dB input gain** | > ±22 V |
| **+6.5 dB input gain** | > ±7 V |
| **Input impedance:** | |
| **0 dB input gain** | 33 kΩ |
| **+6.5 dB input gain** | 15 kΩ |

**Analog Audio Outputs:**

| | |
|---|---|
| **Number of Outputs:** | |
| **Stereo Mode:** | 4 outputs each on left and right channels |
| **Mono Mode:** | 8 Outputs |
| **Connectors:** | 3 pin removable terminal strips |
| **Output step gain:** | 0, 3.5 or 9.5 dB (configurable with jumpers) |
| **Maximum output level:** | +28 dBu across hi-impedance load<br>+24 dBm into 600Ω load |
| **Output impedance:** | 66Ω |
| **Frequency Response:** | +/-0.02 dB 20 Hz to 20 kHz |
| **Stereo phase mismatch:** | < 1° @ 20 kHz |
| **SNR:** | |
| **0dB input gain** | 115 dB |
| **+6.5 dB input gain** | 119 dB |
| **THD+ Noise:** | 0.001% 20 Hz to 20 kHz @ 28 dBu, unweighted RMS, Hi-Z load<br>0.01% with 600Ω up to 24dBm |
| **Intermodulation Distortion:** | 0.001% - SMPTE @ 18 dBu |
| **Stereo crosstalk:** | >115 dB @ 1 kHz, >93 dB @ 20 kHz |
| **Output Isolation:** | > 110 dB @ 1 kHz, 100 dB @ 20 kHz |

**Electrical:**

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

**Physical:**

| | |
|---|---|
| **Number of Slots:** | 1 |

**Ordering Information:**

| | |
|---|---|
| **7700ADA-AUD** | Dual Analog Audio Distribution Amplifier |

**Ordering Options**

Rear Plate must be specified at time of order
Eg: Model + 3RU

| **Rear Plate Suffix** | |
|---|---|
| **+3RU** | 3RU Rear Plate for use with 7700FR-C Multiframe |
| **+1RU** | 1RU Rear Plate for use with 7701FR Multiframe |
| **+SA** | Standalone Enclosure Rear Plate |

**Enclosures:**

| | |
|---|---|
| **7700FR-C** | 3RU Multiframe which holds 15 modules |
| **7701FR** | 1RU Multiframe which holds 3 modules |
| **S7701FR** | Standalone enclosure |