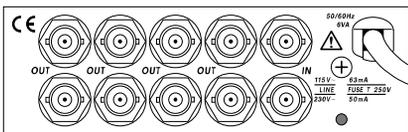
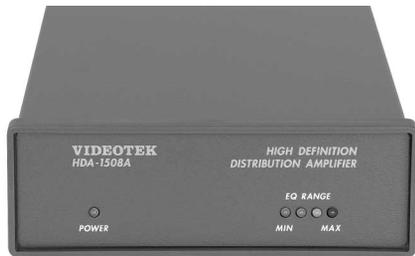


DISTRIBUTION AMPLIFIERS

HDA-1508/1508A HIGH DEFINITION DIGITAL VIDEO DISTRIBUTION AMPLIFIERS



(Shown with looping input)

FEATURES

- Looping input (HDA-1508)
- 8 non-relocked outputs
- Dynamic Equalization Display
- High quality signal output
- Multi-standard
- Multi-format

SPECIFICATIONS:

VIDEO INPUT

CONNECTOR:
BNC, 75 Ω

FORMAT:

1.485 Gb/s per SMPTE 292M through 270 Mb/s per SMPTE 259M-C

RETURN LOSS:

≥15 dB, from 5 MHz to 1.485 GHz

EQUALIZATION:

Automatic EQ up to 100 meters of 8281 at 1.485 Gb/s

VIDEO OUTPUT

CONNECTOR:
BNC

IMPEDANCE:

75 Ω, source terminated

LEVEL:

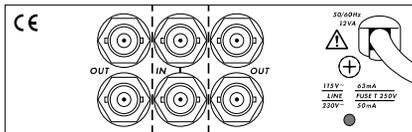
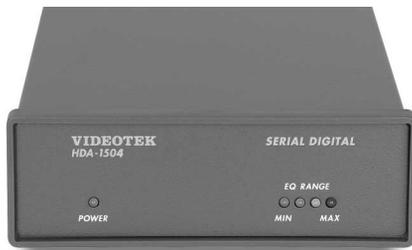
800 mV p-p ±10%

RISE AND FALL TIME:

≤ 270 ps, from 20% to 80% points

Model	Outputs	Looping Input
HDA-1504	4	Y
HDA-1504A	4	N
HDA-1508	8	Y
HDA-1508A	8	N

HDA-1504/1504A HIGH DEFINITION DIGITAL VIDEO DISTRIBUTION AMPLIFIERS



(Shown with looping input)

FEATURES

- Looping input (HDA-1504)
- 4 non-relocked outputs
- Dynamic Equalization Display
- High quality signal output
- Multi-standard
- Multi-format

SPECIFICATIONS:

VIDEO INPUT

CONNECTOR:
BNC, 75 Ω

FORMAT:

1.485 Gb/s per SMPTE 292M through 270 Mb/s per SMPTE 259M-C

RETURN LOSS:

≥15 dB, from 5 MHz to 1.485 GHz

EQUALIZATION:

Automatic EQ up to 100 meters of 8281 at 1.485 Gb/s

VIDEO OUTPUT

CONNECTOR:
BNC

IMPEDANCE:

75 Ω, source terminated

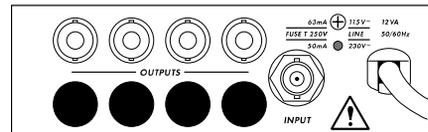
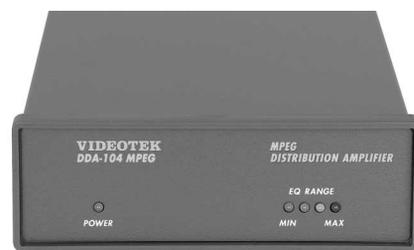
LEVEL:

800 mV p-p ±10%

RISE AND FALL TIME:

≤ 270 ps, from 20% to 80% points

DDA-104MPEG DISTRIBUTION AMPLIFIERS



FEATURES

- MPEG input data rates from 19.39 Mb/s to 270 Mb/s
- Compatible with DVB-ASI signals (NRZ and NRZI)
- Four fully-compliant outputs
- Front panel input equalization indicators

SPECIFICATIONS:

DIGITAL DATA

INPUT LEVEL:

800 mV p-p nominal

INPUT CABLE EQUALIZATION:

Automatic equalization for up to 300m of 8281 @ 270 Mb/s

INPUT:

BNC 75Ω, terminating

INPUT RETURN LOSS:

≥15 dB, 5 MHz to 270 MHz

DATA RATES:

19.39 Mb/s to 270 Mb/s (NRZ or NRZI)

OUTPUT LEVEL:

800 mV p-p ±10% with 75Ω resistive load

OUTPUT IMPEDANCE:

75Ω, nominal

THROUGHPUT DELAY:

1.5 ns, typical

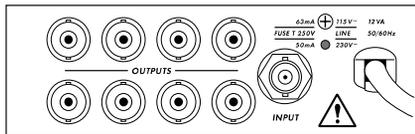
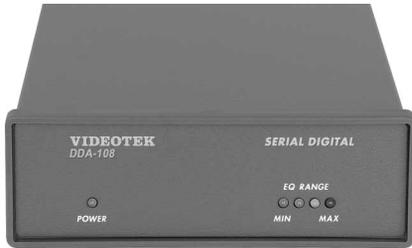
WEIGHT:

2.5 lb (1.13 kg)

CONSUMPTION:

6.0 VA

DDA-108 DIGITAL DISTRIBUTION AMPLIFIER



FEATURES

- Single terminated input
- Eight outputs
- Dynamic equalization display
- High quality output signal
- Multi-standard

SPECIFICATIONS:

VIDEO

FORMAT COMPATIBILITY:

SMPT 259M, ITU-R BT.601/656 Serial Component (270 Mb/s), NTSC 143 Mb/s Serial Composite and PAL 177 Mb/s Serial Composite, DTV 360 Mb/s

INPUT:

BNC 75Ω, internally terminated

INPUT RETURN LOSS:

>18 dB from 5 MHz to 360 MHz

INPUT LEVEL:

800 mV p-p ±10%

INPUT CABLE EQUALIZATION:

Automatic equalization for up to 300m of 8281 @ 270 Mb/s

OUTPUT CONNECTORS:

8 BNC

OUTPUT IMPEDANCE:

75Ω source terminated

OUTPUT LEVEL:

800 mV p-p ±10% with 75Ω resistive load

DC OFFSET:

0V ±0.5V (per SMPT 259M)

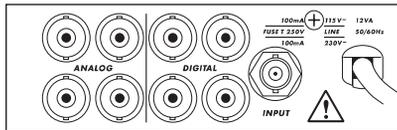
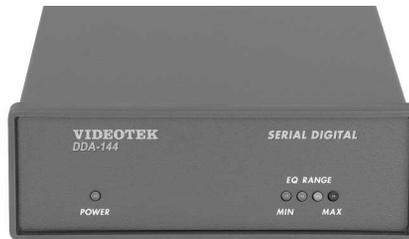
RISE AND FALL TIME:

500 to 1500 ps nominal measured at 20% to 80% points

THROUGHPUT DELAY:

1.5 ns typical

DDA-144 SERIAL DIGITAL DISTRIBUTION AMPLIFIER WITH ANALOG COMPOSITE MONITOR OUTPUTS



FEATURES

- Single terminated input
- Four component serial digital video outputs
- Serial reclocked digital processing
- Four composite analog video monitoring outputs (NTSC or PAL)
- Front panel LED equalization indicators

SPECIFICATIONS:

VIDEO

FORMAT COMPATIBILITY:

SMPT 259M, ITU-R BT.601/656 Serial Component (270 Mb/s, 525/625 line)

INPUT:

BNC 75Ω, internally terminated

INPUT RETURN LOSS:

≥18 dB to 270 MHz

INPUT LEVEL:

800 mV p-p ±10%

INPUT CABLE EQUALIZATION:

Automatic equalization up to 200m of 8281

OUTPUT CONNECTORS:

8 BNC

OUTPUT FORMAT COMPATIBILITY:

4 component serial digital (270 Mb/s, 525/625 line)

4 composite analog (NTSC/PAL, input dependent)

OUTPUT IMPEDANCE:

75Ω, source terminated

ANALOG OUTPUTS

DIFFERENTIAL GAIN: ≤1.5%

DIFFERENTIAL PHASE: ≤1.5°

FREQUENCY RESPONSE: ±0.25 dB to 4.5 MHz

OUTPUT LEVEL: 1V p-p ±1%, internally adjustable

SC/H PHASE: 0° ±10°

RETURN LOSS: ≥40 dB

CHROMA-LUMA DELAY: <10 ns

DC OFFSET: 0V ±100 mV

DIGITAL OUTPUTS

DC OFFSET: 0V ±0.5V

RISE AND FALL TIME:

400 to 1500 ps nominal measured at 20% to 80% points

THROUGHPUT DELAY:

15 ns nominal

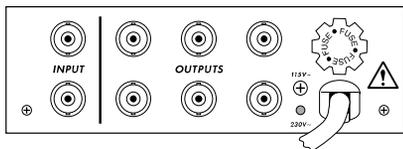
OUTPUT LEVEL:

800 mV p-p ±10%

RETURN LOSS: ≥15 dB

DISTRIBUTION AMPLIFIERS

VDA-16/16A VIDEO DISTRIBUTION AMPLIFIER



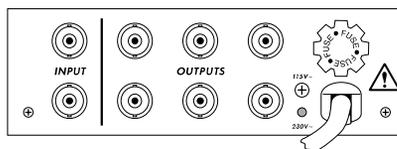
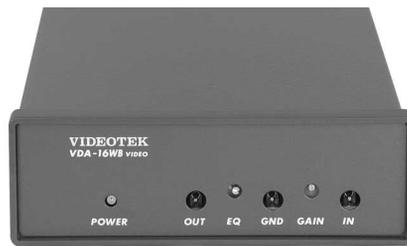
FEATURES

- One looping video input
- Six isolated video outputs
- Front panel output level adjustment
- Cable equalizer front panel adjustment (400 ft. 8281) (VDA-16 only)

SPECIFICATIONS: VIDEO

- INPUT IMPEDANCE:**
Hi-Z looping
- INPUT RETURN LOSS:**
40 dB minimum,
50 Hz to 5 MHz
- MAXIMUM INPUT LEVEL:**
2V p-p
- OUTPUT IMPEDANCE:**
75Ω, source terminated
- MAXIMUM OUTPUT LEVEL:**
2V p-p, 50 Hz to 10 MHz,
75Ω load
- GAIN:**
Continuously adjustable ±6 dB
- FREQUENCY RESPONSE:**
±0.2 dB, 50 Hz to 10 MHz
- CABLE EQUALIZATION:**
(VDA-16 only)
Adjustable for up to 400 feet of 8281
- DIFFERENTIAL GAIN:**
≤0.2%, 10% to 90% APL
- DIFFERENTIAL PHASE:**
≤0.2°, 10% to 90% APL
- TILT:**
≤0.5%
- OVERSHOOT AND RINGING:**
≤0.5%
- OUTPUT ISOLATION:**
40 dB minimum, 50 Hz to 5 MHz
35 dB minimum, 50 Hz to 10 MHz
- MAXIMUM DC ON INPUT:**
±3V with a 1V p-p signal
- THROUGHPUT DELAY:**
15 ns typical

VDA-16WB WIDE BAND VIDEO DISTRIBUTION AMPLIFIER



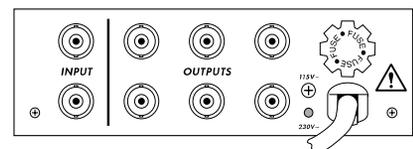
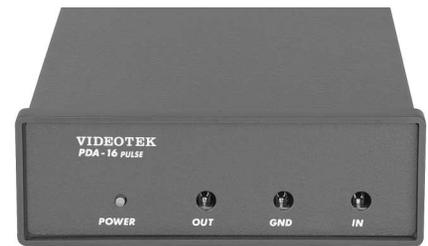
FEATURES

- 40MHz video bandwidth
- One looping video input
- Front panel output level adjustment
- Cable equalizer front panel adjustment (1000 ft. 8281)

SPECIFICATIONS: VIDEO

- INPUT IMPEDANCE:**
Hi-Z looping
- INPUT RETURN LOSS:**
40 dB minimum, DC to 10 MHz
- MAXIMUM INPUT LEVEL:**
2V p-p
- OUTPUT IMPEDANCE:**
75Ω, source terminated
- OUTPUT DC COMPONENT:**
0 ±100 mV DC
- MAXIMUM OUTPUT LEVEL:**
2V p-p
- GAIN:** Continuously adjustable ±6 dB
- FREQUENCY RESPONSE:**
±0.25 dB, DC to 20 MHz
±0.5 dB, 20 to 40 MHz .
- CABLE EQUALIZATION:**
Adjustable for up to 1000 feet of 8281:
+0 dB, -1.0 dB, DC to 20 MHz
+0 dB, -2.0 dB, DC to 30 MHz
+0 dB, -5.0 dB, DC to 40 MHz
- DIFFERENTIAL GAIN:**
≤0.15%, 10% to 90% APL. All outputs terminated.
- DIFFERENTIAL PHASE:**
≤0.15°, 10% to 90% APL.
All outputs terminated.
- TILT:**
≤0.5%
- OVERSHOOT AND RINGING:** ≤0.5%
- HUM AND NOISE:** -60 dB below 1V p-p unity gain
- OUTPUT ISOLATION:**
40 dB minimum, DC to 10 MHz

PDA-16 PULSE DISTRIBUTION AMPLIFIER



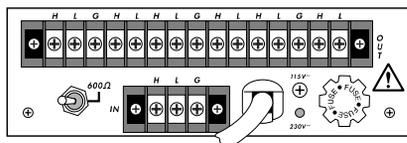
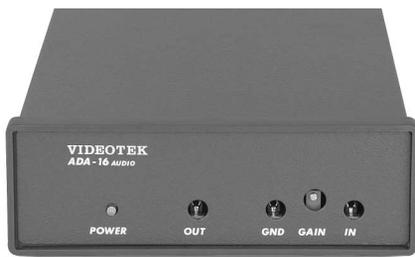
FEATURES

- One looping pulse input
- Six pulse outputs

SPECIFICATIONS: PULSE

- INPUT IMPEDANCE:**
Hi-Z looping
- INPUT RETURN LOSS:**
40 dB minimum
- INPUT LEVEL:**
2V to 8V p-p
- OUTPUT IMPEDANCE:**
75Ω, source terminated
- OUTPUT LEVEL:**
4V p-p ±100 mV into
75Ω load
- OUTPUT ISOLATION:**
40 dB minimum
- RISE/FALL TIME:**
140 ns ± 20 ns
- DELAY TIME :**
100 ns typical
- OVERSHOOT AND RINGING:**
1% maximum
- HUM:**
55 dB below 4V p-p
- TILT:**
1% maximum

**ADA-16
AUDIO
DISTRIBUTION AMPLIFIER**



FEATURES

- One balanced/unbalanced audio input
- Six balanced audio outputs
- Barrier strip input/output connectors

**SPECIFICATIONS:
AUDIO**

INPUT IMPEDANCE:
600Ω or Hi-Z selectable termination

OUTPUT IMPEDANCE:
600Ω, source terminated

MAXIMUM INPUT LEVEL:
+18 dBm, 20 Hz to 20 kHz

MAXIMUM OUTPUT LEVEL:
+18 dBm balanced
+12dBm unbalanced,
20 Hz to 20 kHz

GAIN:
Continuously adjustable from
-20 dB to +18 dB

FREQUENCY RESPONSE:
±0.1 dB 20 Hz to 20 kHz
±0.25 dB 10 Hz to 50 kHz

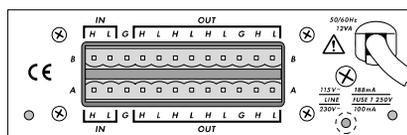
HARMONIC DISTORTION:
0.1% maximum at +10 dBm output level,
20 Hz to 20 kHz

COMMON MODE REJECTION:
60 dB minimum,
20 Hz to 20 kHz

HUM AND NOISE:
70 dB below maximum
output level

OUTPUT ISOLATION:
40 dB minimum,
20 Hz to 20 kHz

**ADS-24
STEREO AUDIO
DISTRIBUTION AMPLIFIER**



FEATURES

- One stereo audio input
- Four stereo audio outputs
- Common gain adjustment for left and right channels
- Separate channel balance adjustment

**SPECIFICATIONS:
AUDIO**

INPUTS:
Two balanced or unbalanced inputs

OUTPUTS:
4 stereo outputs, balanced or unbalanced

CONNECTORS:
2 detachable connectors

INPUT IMPEDANCE:
Hi-Z

MAXIMUM INPUT LEVEL:
+24 dBm balanced

CMRR:
>80 dB @ 60 Hz
>75 dB @ 20 kHz

OUTPUT IMPEDANCE:
<50Ω

MAXIMUM OUTPUT LEVEL:
+24 dBm balanced

GAIN:
-6 dB to +33 dB

NOISE:
>82 dB, 20 Hz to 20 kHz

FREQUENCY RESPONSE:
±0.05 dB, 20 Hz to 20 kHz
±0.25 dB, 10 Hz to 50 kHz

THD:
<0.01%

INTERMOD DISTORTION:
<0.02%

INTERCHANNEL CROSSTALK:
>100 dB

CHANNEL PHASE MATCHING:
<100 ns

**ROUTING &
DISTRIBUTION**

DISTRIBUTION AMPLIFIERS COMMON SPECIFICATIONS

POWER

INPUT:
115/230 VAC, 50/60 Hz

CONSUMPTION:

HDA-1508:	7.0 VA
HDA-1504:	7.0 VA
DDA-104MPEG:	6.0 VA
DDA-108:	6.0 VA
DDA-144:	12.0 VA
VDA-16/16A:	7.0 VA
VDA-16WB:	10.0 VA
PDA-16:	6.5 VA
ADA-16:	6.5 VA
ADS-24:	19.0 VA

CONNECTIONS:
3-wire captive power cord

ENVIRONMENTAL

OPERATING TEMPERATURE:
0°C to 50°C

STORAGE TEMPERATURE:
-40°C to 85°C

HUMIDITY:
90% maximum (non-condensing)

MECHANICAL

DIMENSIONS:
Height: 1.74" (4.4 cm)
Width: 5.25" (13.3 cm)
Depth: 9.9" (25.2 cm)

WEIGHT:

HDA-1508:	2.75 lb. (1.25kg)
HDA-1504:	2.75 lb. (1.25kg)
DDA-104MPEG:	2.50 lb. (1.13kg)
DDA-108:	2.50 lb. (1.13 kg)
DDA-144:	3.10 lb (1.40 kg)
VDA-16/16A:	2.75 lb (1.25 kg)
VDA-16WB:	2.75 lb (1.25 kg)
PDA-16:	2.75 lb (1.25 kg)
ADA-16:	2.75 lb (1.25 kg)
ADS-24:	2.75 lb (1.25 kg)

STANDARD ACCESSORIES

Operation & Service Manual
Power cord (HDA-1508/1508A, HDA-1504/1504A, ADS-24)

OPTIONS

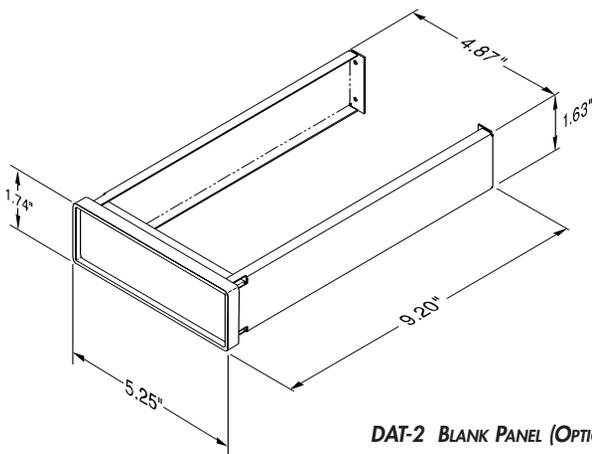
DAT-1: Rackmount Tray.
Accommodates 3 DA's.

DAT-2: Blank Panel for DAT-1.

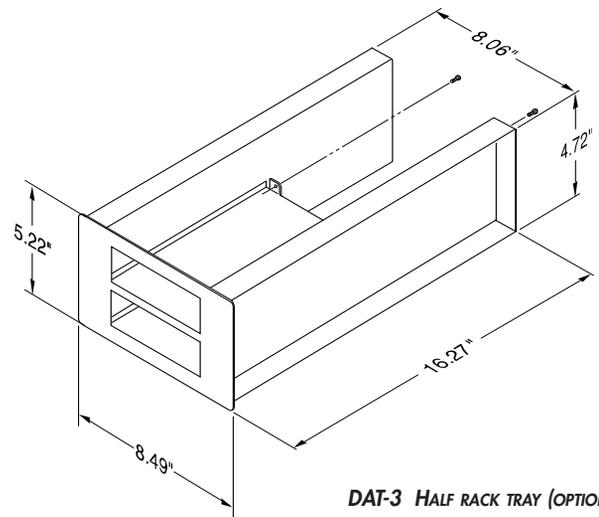
DAT-3: Half rack tray for DRC-1 to mount any two Videotek modular stand-alone switchers, distribution amplifiers, sync generators, or test signal generators.



DAT-1 RACKMOUNT TRAY (OPTIONAL)



DAT-2 BLANK PANEL (OPTIONAL)



DAT-3 HALF RACK TRAY (OPTIONAL)



Videotek also offers versions of its Distribution Amplifiers for the OMNIFRAME® system as described on the following eight pages.