

# SPECIFICATIONS

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## ANALOG VIDEO SWITCHING

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|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| <b>Bandwidth</b> from input jack to output jack (bypass mode for component video) |         |
| Composite & S-Video.....                                                          | 70 MHz  |
| Component: Y .....                                                                | 110 MHz |
| Pr.....                                                                           | 90 MHz  |
| Pb .....                                                                          | 80 MHz  |

All analog video inputs and outputs are 75  $\Omega$ , 1.5 Vp-p.

## ANALOG AUDIO

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|                                                 |                                                 |
|-------------------------------------------------|-------------------------------------------------|
| <b>Input Impedance</b> .....                    | 20 k $\Omega$                                   |
| <b>Output Impedance</b>                         |                                                 |
| Main .....                                      | 300 $\Omega$ (RCA), 600 $\Omega$ (XLR)          |
| Zone2/3 & Record .....                          | 51 $\Omega$                                     |
| <b>Rated Input</b> .....                        | 2.0 Vrms                                        |
| <b>Maximum Input</b> .....                      | 5.3 Vrms, 3.0 Vrms for 6-Ch input               |
| <b>Minimum Load</b> .....                       | 5 k $\Omega$                                    |
| <b>Rated Output</b> (100 k $\Omega$ load) ..... | 2.0 Vrms                                        |
| <b>Maximum Output</b>                           |                                                 |
| RCA .....                                       | 6.3 Vrms                                        |
| XLR .....                                       | 12.6 Vrms                                       |
| <b>Headphone Output</b> .....                   | 100 mW into 32 $\Omega$ at 0.2% THD+N           |
| <b>Volume Control Range</b>                     |                                                 |
| Main .....                                      | -95.5 to +31.5 dB in 0.5 dB increments          |
| Zone2/3 and Headphone .....                     | -62.5 to +10.0 dB in 1.25 dB increments         |
| <b>Crosstalk</b> (at 1 kHz) .....               | 82 dB between channels, 86 dB between inputs    |
| <b>XLR Pin Configuration</b> .....              | Pin 1: Ground, Pin 2: Positive, Pin 3: Negative |

## DIGITAL AUDIO

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|                                                                                          |                                 |
|------------------------------------------------------------------------------------------|---------------------------------|
| <b>Crossover</b>                                                                         |                                 |
| High-Pass Slope (Small Speaker Setting).....                                             | 12 dB/octave (2nd order)        |
| Low-Pass Slope (Subwoofer).....                                                          | 24 dB/octave (4th order)        |
| Frequency (Adjustable) .....                                                             | 25 to 160 Hz in 5 Hz increments |
| <b>Tone Control</b>                                                                      |                                 |
| Filter Type.....                                                                         | Shelf                           |
| Range.....                                                                               | $\pm 12$ dB                     |
| Bass Turnover Frequency.....                                                             | 200 Hz                          |
| Treble Turnover Frequency.....                                                           | 2 kHz                           |
| <b>Analog to Digital Conversion S/N Ratio</b> at digital Rec output (IEC-A filter) ..... | 100 dB                          |

All digital inputs and outputs comply with HDMI, S/PDIF, or AES/EBU standards.

# SPECIFICATIONS continued ...

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## MAIN Path (RCA & XLR output)

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### Frequency Response and Bandwidth

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| Analog-Direct Inputs.....       | 10 Hz to 20 kHz (+0, -0.2 dB), 1 Hz to 120 kHz (+0, -3 dB) |
| Analog-DSP Inputs at 24/96..... | 10 Hz to 20 kHz (+0, -0.3 dB), 2 Hz to 37 kHz (+0, -3 dB)  |
| Digital Inputs at 24/96.....    | 10 Hz to 20 kHz (+0, -0.2 dB), 1 Hz to 39 kHz (+0, -3 dB)  |

### THD+N (at Rated Input & Output)

|                                 |                       |
|---------------------------------|-----------------------|
| Analog-Direct Inputs.....       | 0.006% (80 kHz BW)    |
| Analog-DSP Inputs at 24/48..... | 0.006% (AES17 filter) |
| Digital Inputs at 24/48.....    | 0.004% (AES17 filter) |

### IMD (CCIF at 15 kHz & 16 kHz)

|                                 |        |
|---------------------------------|--------|
| Analog-Direct Inputs.....       | 0.001% |
| Analog-DSP Inputs at 24/48..... | 0.003% |
| Digital Inputs at 24/48.....    | 0.001% |

### S/N Ratio (ref. 2.0 Vrms, IEC-A filter)

|                                 |        |
|---------------------------------|--------|
| Analog-Direct Inputs.....       | 106 dB |
| Analog-DSP Inputs at 24/48..... | 100 dB |
| Digital Inputs at 24/96.....    | 104 dB |

## ZONE2 and ZONE3 Paths

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**Frequency Response and Bandwidth** ..... 20 Hz to 20 kHz (+0, -0.1 dB), 3 Hz to 140 kHz (+0, -3 dB)

**THD+N** (at Rated Input & Output) ..... 0.06% (80 kHz BW)

**IMD** (CCIF at 15 kHz & 16 kHz)..... 0.06%

**S/N Ratio** (ref. 2.0 Vrms, IEC-A filter) ..... 97 dB

## FM TUNER

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### Sensitivity

|                |                                    |
|----------------|------------------------------------|
| 50 dB S/N..... | 13 dB $\mu$ typ., 25 dB $\mu$ max. |
| IHF.....       | 10 dB $\mu$ typ., 20 dB $\mu$ max. |

### S/N Ratio

|             |                        |
|-------------|------------------------|
| Mono.....   | 75 dB typ., 65 dB min. |
| Stereo..... | 69 dB typ., 60 dB min. |

### Distortion

|             |                      |
|-------------|----------------------|
| Mono.....   | 0.2% typ., 1.0% max. |
| Stereo..... | 0.3% typ., 1.5% max. |

**Stereo Separation** ..... 40 dB typ., 25 dB min.

**Alternate Channel Selectivity** ( $\pm 400$  kHz) ..... 70 dB typ., 60 dB min.

**Frequency Response**..... 25 Hz to 15 kHz (+0, -2 dB)

## AM TUNER

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**Sensitivity** (20 dB S/N) ..... 49 dB $\mu$  typ., 56 dB $\mu$  max.

**S/N Ratio**..... 50 dB typ., 43 dB min.

**Distortion**..... 0.7% typ., 2.0% max.

**One Signal Selectivity** ( $\pm 10$  kHz) ..... 24 dB typ., 18 dB min.

# SPECIFICATIONS continued ...

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## CONTROL

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### Infra Red

|                              |                  |
|------------------------------|------------------|
| Carrier Frequency.....       | 38 kHz           |
| Max. 12V Supply Current..... | 150 mA           |
| Max. Emitter Current .....   | 60 mA per output |

### RS-232 Interface

|                               |                                                                       |
|-------------------------------|-----------------------------------------------------------------------|
| Connection .....              | DB-9F, straight-wired                                                 |
| Pinout (processor side) ..... | Pin 2: Tx, Pin 3: Rx, Pin 5: Ground                                   |
| Baud rate .....               | 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200                   |
| Configuration.....            | 8 data bits, 1 stop bit, no parity bits, flow control (RTS/CTS, None) |

### Trigger Outputs

|                              |                                                 |
|------------------------------|-------------------------------------------------|
| Polarity .....               | tip positive, sleeve ground                     |
| Max. Current at 12 VDC ..... | Triggers 1 and 2: 50 mA each, Trigger 3: 200 mA |
| Sequential Delay .....       | 250 ms                                          |

## POWER REQUIREMENT

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**Consumption**..... Maximum 150 W

Low voltage version: In countries where the line voltage is 120V, this product operates from a single phase AC power source that supplies between 108V and 132V at a frequency of 60 Hz.

High voltage version: In countries where the line voltage is 220, 230, or 240V, this product operates from a single phase AC power source that supplies between 216V and 264V at a frequency of 50 or 60 Hz.

## DIMENSIONS

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|                                                                                 |                                                                              |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>Height</b> .....                                                             | 5 7/8 in. (14.9 cm) including feet, rackmounting – 3 rack units without feet |
| <b>Width</b> .....                                                              | 17 1/4 inches (43.8 cm)                                                      |
| <b>Depth</b> .....                                                              | 14 1/4 inches (36.2 cm)                                                      |
| <b>Weight</b> (unpacked, not including 8 lb (3.5 kg) ARC-1 microphone kit)..... | 30.7 lb (14 kg)                                                              |