



Preliminary Specifications—Omnia-6fm

Description

96kHz, 24-bit digital audio processor utilizing Motorola 56303 DSP chipsets. Wideband AGC with selectable "split channel" processing mode, 5-band AGC, Six-band limiter.

Dimensions & Weight

- 19"w x 16.25"d x 5.25"h (48.3 x 13.3 x 36.8 cm), 32 lbs. (14.5kg), net

Audio Performance

All measurements made with reference to 100% modulation, or ± 75 kHz FM carrier deviation. Due to the dynamic nature of this system under program conditions, it is not possible to quantify the specifications of the gain controlling functions of the AGC and limiter sections. To properly evaluate those functions, there is only one known precise set of test gear for that...your ears! Listen and judge carefully.

- Frequency Response: ± 0.2 dB DC - 15kHz, de-emphasized, as measured at discrete left/right analog outputs.
- System Distortion*: < 0.017% THD, de-emphasized.
- Stereo Noise*: > 90dB de-emphasized
- Total System Separation*: > 65dB, 20Hz – 15kHz. *These parameters are measured at the recovered left/right audio output of a Belar FMS-2 stereo decoder.
- Main to Sub Crosstalk: > 75dB, measured with a spectrum analyzer.
- Sub to Main Crosstalk: > 75dB, measured with a spectrum analyzer.

Composite I/O Section

SCA/RDS Subcarrier Input

Type: Subcarrier input > 53kHz sums into composite baseband output. Input level control provided via front panel user interface. High pass filter provided to suppress subcarrier sub-harmonics from causing crosstalk into main multiplexed baseband signal.

Composite Outputs

- Configuration: Two independent, individually adjusted outputs. Each output has separate output driver section. Capable of driving 100 feet of low capacitance RG-58 A/U cable.
- Level: 0-10Vp-p, adjustable via front panel user interface.
- Connector: BNC, unbalanced.

Pilot Output

- Source: Buffered square-wave reference for RDS or other 57kHz subcarrier services. Logic level of 0-5V peak-to-peak.
- Connector: BNC, unbalanced.

Analog and Digital I/O Sections

(All input and output sections described are installed as standard equipment.)

Analog Audio Input

- Discrete Left/Right Audio Inputs: 10k-ohm load impedance, electronically balanced bridging input, 24-bit analog-to-digital converter.
- Maximum Input Level: +24dBu.
- Connector: XLR, female, EMI suppressed.

Digital Audio Input

- Configuration: Stereo AES/EBU.
- Sampling Rate: 32kHz, 44.1kHz, 48kHz, 96kHz, sample rate converter provided.
- Connector: XLR, female, EMI suppressed, balanced and floating.

Analog Audio Output

- Discrete Left/Right: Flat or pre-emphasized, 600-ohm load or greater, electronically balanced, 24-bit digital-to-analog converter.
- Connector: XLR, male, EMI suppressed.

Digital Audio Output

- Configuration: Stereo AES/EBU.
- Sampling Rate: 32kHz, 44.1kHz, 48kHz, 96kHz, selectable.
- Connector: XLR, male, EMI suppressed, balanced and floating.

Computer Interface

- Configuration: PC Card (modem/10 BaseT), back-panel Ethernet connection, RS-232 for basic serial communication via DB-25 connector.
- Communications: Remote control can be established using a Windows®-based program running on any common computer platform.

Remote Closures Interface

- Configuration: Eight user-selectable remote tally functions, set via front panel user interface.
- Connector: DB-9, EMI suppressed.

Power

- Configuration: Universal power supply accepts 100-240VAC, 50-60Hz, 50VA.
- Connector: IEC, detachable 3-wire power cord, EMI suppressed.

Warranty:

Two years, parts and labor, limited.