



the rules of sound



ES 3160

EASYLINE
SOLUTIONS

Description

Specifications

Digital Receiver Amplifier CD/MP3 - USB

The new Easy Line Solutions model ES 3160 combines technology that until now had only been used for high-end professional products. For example, signal sources and amplifiers are created using digital technology to achieve compact size and light weight; important qualities for storing on a shelf or under a desk or counter more easily as well as energy saving (thus with very low thermal dissipation) so the unit can be physically positioned more easily.

A microprocessor controls the status of the sources and amplifier in real time while offering maximum flexibility in managing inputs (many priority levels can be selected). The microprocessor also produces warning signals (Chime). The ES 3160 has a nominal 160W power amplifier that is available on constant output impedance (minimum 4 Ohm) or constant voltage 70 and 100V, controlled by the master volume. The tuner and CD-MP3 player use superior components, from the tuner that combines high sensitivity and stable reception to the visualization of the radio station name to the CD-MP3 insert mounted on anti-vibration supports, which limit stress. A USB connector lets you use a memory stick with the provided adapter or portable players that can reproduce MP3 audio files. Using the USB practically eliminates machine maintenance since it does not involve moving parts that are subject to wear.

The ES 3160 model has four universal inputs (Mic, Mic+Phantom for electret microphones, Line) on the supplied plug-In connectors (input 1 also has an XLR plug) and an input for external sound sources that are different from those incorporated. A voice activation circuit is available on input 1 with priority function. The ES 3160 offers many priority configuration selections that can be activated for the universal inputs through external commands (e.g. from the microphone base button). Inputs 2 and 3 also have RJ 45 plugs for quick BM3001 microphone console connection, which can also be connected from a distance using a category 5 cable. Auxiliary outputs are available on practical connections to send sources like 'music on hold' for pre-programmed telephone lines or to drive an additional power amplifier.

A command for activating the Chime sequence and the clean contacts of an active auxiliary relay for each intervention/announcement (useful for driving circuits with external priority) add versatility to the machine. Separate equalization is available for both speech and music channels. A presence control for increasing speech Intelligibility across all four channels is provided along with a high pass filter that is selectable on each of the four inputs. Tone controls act only on the musical programme inputs. Diagnostic lights for the amplifier, from the processed audio signal level to the activity of the priority circuit, help the installer and user to better understand the operation status.

- Real time microprocessor monitoring of the main functions
- 160 W Power Handling
- 100 V / 70 V and low impedance (4 Ohm)
- Anti-shock CD/MP3 mechanics
- USB port for easy MP3 player or flash-drive connection
- 4 universal inputs (Micro, Micro + Phantom, Line) with removable connectors, presence, hi-pass filters and configurable priority
- Vocal circuit and XLR connector available on input 1
- Remote paging facility using the BM 3001 microphone set which is easily connectable thru CAT 5 FTP cable and RJ 45 connectors
- Aux BGM input facility with tone control
- Aux outputs for telephone switchboard or additional external amplifiers
- Led for amplifier´s diagnostic, audio signal level and priority circuits activation

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Specifications

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AMPLIFIER

Output power	160 W (RMS)
Frequency response	50 Hz ÷ 13.5 kHz
Signal / noise ratio	Mic (1 ÷ 4) 60 dB Aux 80 dB
Distortion (at 1 kHz, nominal power)	<0,3%
Aux Input Tone Controls	Bass ± 8 dB @ 80 Hz Treble ± 8 dB @ 13 kHz
Presence control (inputs 1 ÷ 4)	±10 dB @ 2,15 kHz
High-pass filter (inputs 1 ÷ 4)	150 Hz
Input Sensitivity/ Impedance	MIC (1 ÷ 4) Balanced - 50 dBu / 10 kΩ MIC PHANTOM (1 ÷ 4) Balanced - 21 dBu / 5 kΩ LINE (1 ÷ 4) Balanced 0 dBu
Aux Output Level / Impedance	AUX OUTPUT (pre / music on hold) - 1 dBu / 600 Ω
Phantom power' voltage / current	32 V / 18 mA
Loudspeaker Outputs (Power: 160 W)	Low impedance 4 Ω (25 V) Constant voltage 70 V (31 Ω) / 100 V (62 Ω)

RADIO

FM range	87.5 ÷ 108 MHz
FM frequency response	30 Hz ÷ 15 kHz
FM channel separation (1 kHz)	≥ 30 dB
FM Intermediate rejection	≥ 70 dB
FM Image rejection	≥ 50 dB
FM signal / noise ratio	≥ 55 dB
AM (MW) range	522 ÷ 1620 kHz
Antenna input	75 Ω - Coaxial

AUDIO CD

Frequency response	20 Hz ÷ 20 kHz
Signal / noise ratio	≥ 86 dB
Total harmonic distortion (1 kHz)	< 0,2 %
Channel separation	≥ 60 dB

PROTECTIONS

Amplifier	Short circuit, thermal, overload
Load	DC Offset Delay, fuse
Power supply	fuses