

# ES 3160

## CD-USB/MP3 DIGITAL RECEIVER AMPLIFIER



### DESCRIPTION

ES 3160 is a mixer-amplifier with 4 mic-line audio inputs on removable connectors (the first input also has an XLR socket), CD/USB – MP3 player and tuner and an aux input for an additional external music source.

The amplifier nominal power is 160 W, available on either a low impedance output (min. 4  $\Omega$ ) or 100 – 70 V constant voltage output (for loudspeakers having 100 – 70 V transformers).

Input 1 has a signal detection circuit ('VOX') providing automatic priority operation.

All inputs 1, 2, 3 and 4 can access the priority through an external command (connected to the removable connector). Inputs 2 and 3 also have an RJ 45 socket for quick connection of an RCF BM 3001 paging microphone (through CAT5 cable).

A USB port (on the front panel) allows connection of a USB flash drive containing MP3 files.

Aux outputs are available to send the internal / external music source signals to additional amplifiers, mixers, phone systems ('music on hold' function), etc.

The 4 mic.-line inputs have a common 'presence' control and separate high-pass filters that are useful for improving speech intelligibility.

Both the internal music source (CD/USB – MP3 player and tuner) and the AUX INPUT have separate tone controls.

Front panel LED's indicate the device state (ON, PROT), the priority activation (PRIOR) and the signal level (SIG/PK).

### CERTIFICATIONS AND APPROVALS

- CE comply with European Community 2006/95/CE LVD Directive and 2004/108/CE EMC
- Directive Immunity according to IEC EN 55013+A1+A2, IEC EN 55020+A2+EC, EN 61000-3-2, EN 61000-3-3+A1
- Safety according to IEC EN 60065:2002

### INSTALLATION NOTES

The ES 3160 is supplied with 4 footpads that allow to place the unit on a table. In case the ES 3160 will be assembled in a cabinet use the rack support AR 3000 and to ensure proper heat dissipation, install the unit while leaving clearances between the units and wall or other components, in case of rack mounting use two rack units, one above and one below the amplifier, for the installation of two panels P AER1, in order to ensure proper air circulation.

### MAIN FEATURES

- CD-USB/MP3 Player / FM tuner / Mixer Amplifier
- IR Remote control for CD - USB/MP3 player & tuner functions
- Full digital technology amplifier 160W RMS, 100V-70V and 4 Ohm outputs
- 4 universal inputs with phantom facility, Presence Control and per-channel High-Pass filters
- RJ45 connectors on input 2 and 3 for connection to BM3001 microphone
- Screw terminal connections, additional XLR and RJ45 input connections available
- Configurable Priority settings, VOX facility on input 1
- Selectable aux input for music source with volume and tone controls
- USB port on front panel allows reproduction of MP3 files from a memory stick
- Music On Hold and PRE outputs
- Microprocessor controlled
- Digital Chime and Siren built-in generator
- Continuous Chime or Siren activation through dry contact
- Status / Priority / Audio Level LED indications

### MAIN APPLICATIONS

- Restaurants
- Boutique
- Pub
- Beauty Centre
- Market
- Hotels
- Office building
- Medical centres

### ACCESSORIES (included)

- 4 Male Audio Input connector 4 pole
- 1 Male Command Input connector 2 pole
- 1 Male Relay Input connector 3 pole
- 1 Male output connector 4 pole
- Safety protection cover for 100 V output connector
- Remote control unit
- 1 FM indoor antenna
- CR 2025 (3 V) lithium battery
- AC Power cord
- User's Guide
- Quick Start Instruction
- Warranty Card

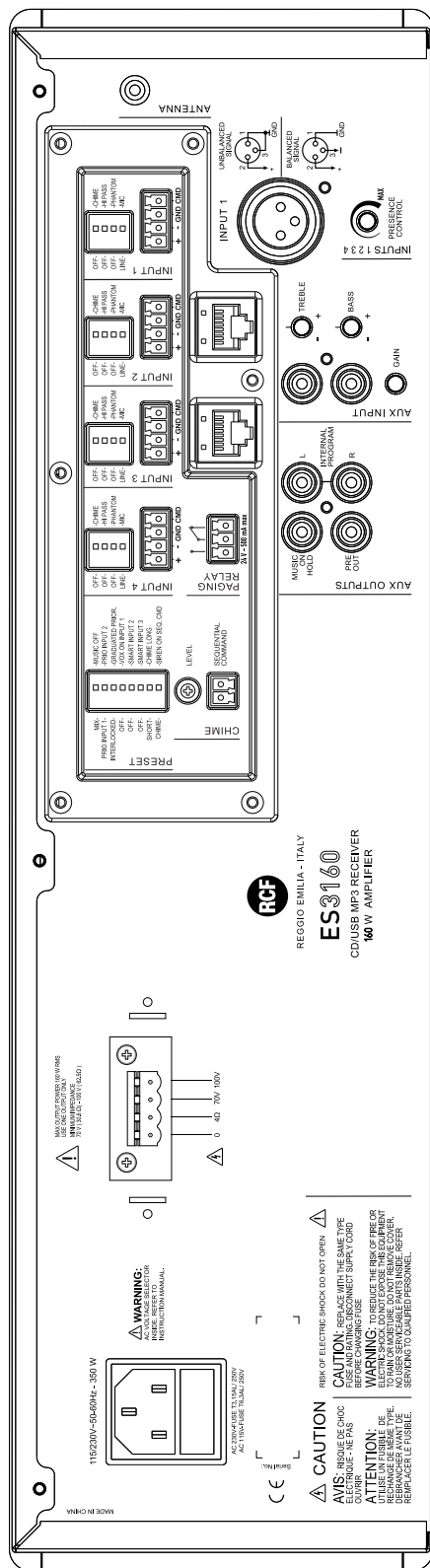
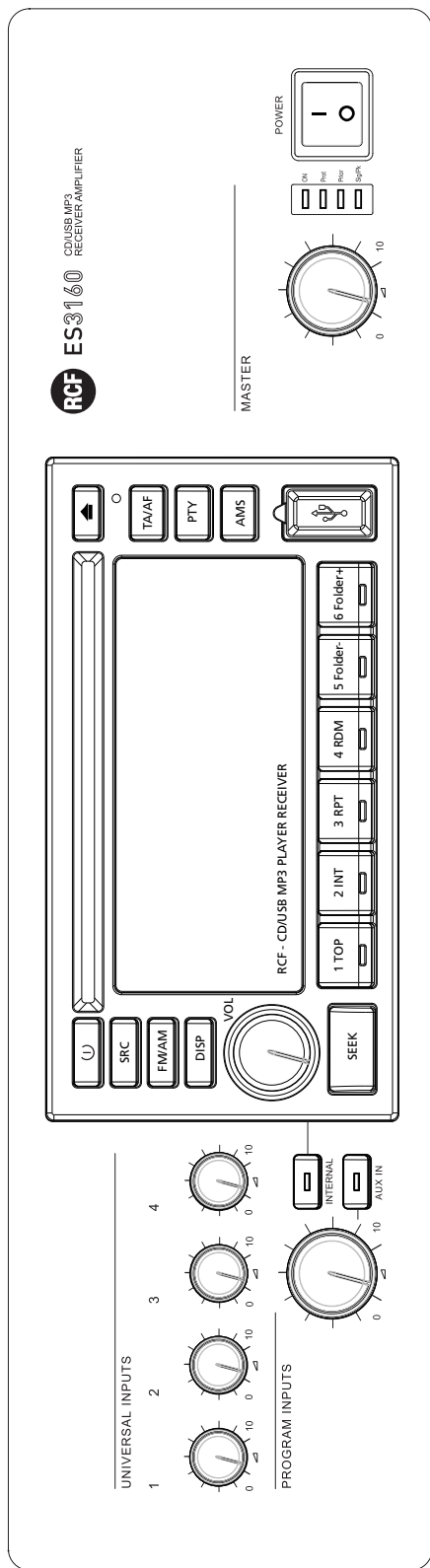
### ACCESSORIES (not included)

- AR 3000 rack mounting support 3 units (code 133 60 101 Optional)
- BM 3001 microphone console with CAT5 cable and RJ 45 connector (code 143 22 008 Optional)

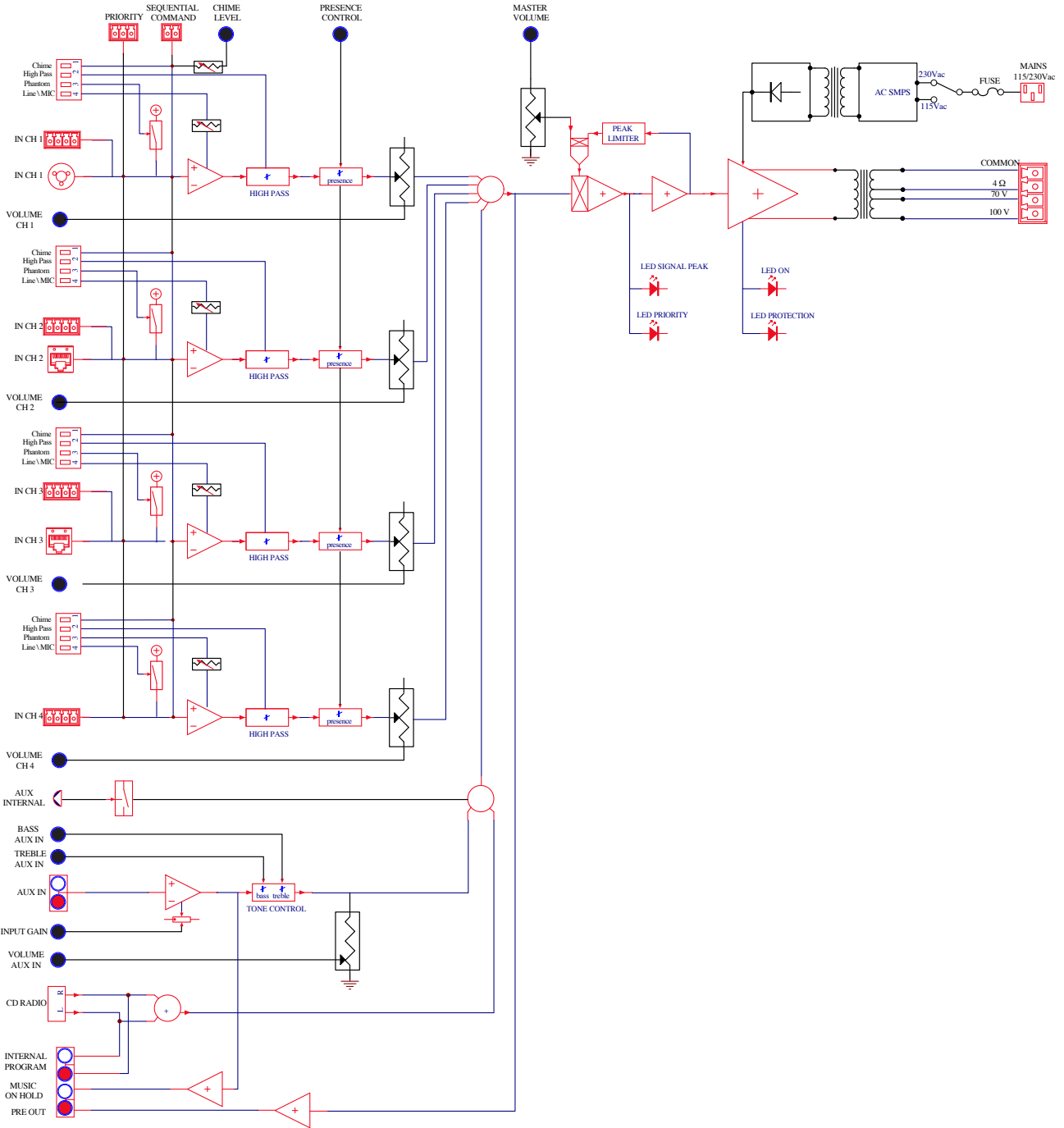


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## FRONT PANEL & REAR PANEL



## SCHEMATICS

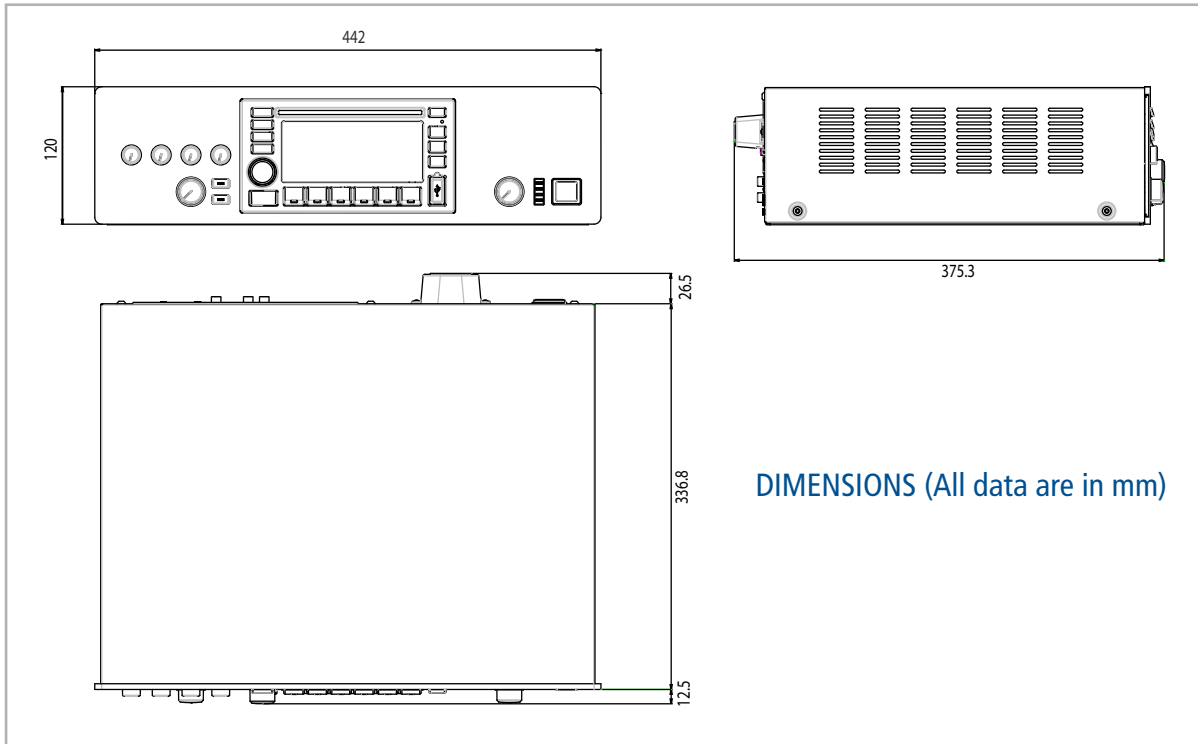


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## PART NUMBERS

12135057

1.0+E



## SPECIFICATIONS

### AMPLIFIER

Output power	160 W RMS
Frequency response ( $\pm 3$ dB)	70 Hz $\div$ 13.5 kHz
Frequency response ( $\pm 6$ dB)	30 Hz $\div$ 20 kHz
Signal / noise ratio Mic (1 $\div$ 4)	60 dB
Signal / noise ratio Aux	< 0,3 % (at 1 kHz, nominal power)
AUX Input tone controls	$\pm 8$ dB @ 80 Hz (bass); $\pm 8$ dB @ 13 kHz
Main Input presence control	+ 10 dB @ 2,15 kHz
Main input High-pass filter	150 Hz
Input Sensitivity (balanced)	- 56 dBu (max - 25 dBu) Low level Micro - 28 dBu (max 0 dBu) Low level Line - 7 dBu (max + 19 dBu) High level
AUX Input Sensitivity	Adjustable - 4 $\div$ + 15 dBu (max +22 dBu)
Input Impedance	10 k $\Omega$ (Main Input); 20 k $\Omega$ (Aux Input);
Phantom power	32 V / 18 mA
AUX Output level	- 1 dBu / 600 $\Omega$
Loudspeaker Outputs min.	4 $\Omega$ (Low impedance) 70 V (31 $\Omega$ )/100 V (62 $\Omega$ ) (Cv)
Protections Amplifier	Overload, Short circuit, Thermal
Protections Power supply	Fuses (T3.15AL - 250 V ;T6.3AL - 250 V)
Operating voltage	220 $\div$ 240 / 110 $\div$ 120 V ~ 50 / 60 Hz
Power (consumption)	350 W
Dimensions (WxHxD)	444 x 127 x 345 mm
Net weight	8 kg
Operating temperature	-25° to +55°
Relative humidity	90% non condensing

### RADIO TUNER

FM range	87.5 $\div$ 108 MHz
FM frequency response	30 Hz $\div$ 15 kHz
FM channel separation (1 kHz)	$\geq 30$ dB
FM Intermediate rejection	$\geq 70$ dB
FM Image rejection	$\geq 50$ dB
FM signal / noise ratio	$\geq 55$ dB
Antenna input	75 $\Omega$ – Coaxial

### AUDIO CD PLAYER

Frequency response	20 Hz $\div$ 20 kHz
Signal / noise ratio	$\geq 86$ dB
Total harmonic distortion (1 kHz)	< 0.2 %
Channel separation	$\geq 60$ dB

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