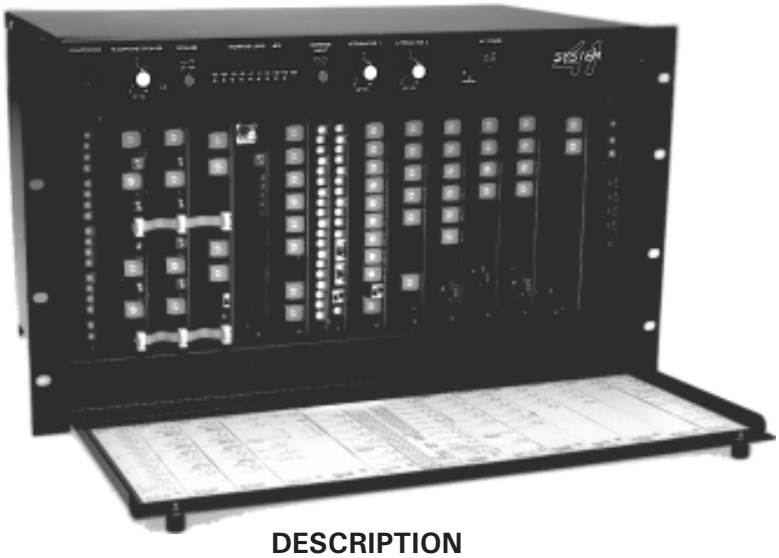
IRP®

Professional Sound Products

SYSTEM 41® Mainframe DJ-4151



DESCRIPTION

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The DJ-4151 Modular Signal Processing Mainframe provides fourteen mounting spaces, ±24VDC power and a hinged security panel for the SYSTEM 41 signal processing modules. The system operator is furnished with a power ON/OFF switch and a power ON LED that monitors both the positive and negative DC output power to the mainframe modules. Any module can occupy any space in the mainframe. The hinged security panel covers all module controls and has an inside mounting surface for "write on" documentation panels for recording control settings of each module. The DJ-4151 also has an internal dual 25 watts/channel amplifier, which when used in Bridge Mode can produce 70 Watts into 8 ohms. The internal amplifier can be coupled with the DH-100A transformer to provide constant voltage output for 70V applications.

The combination of the internal amplifier with the flexibility of the SYSTEM 41 signal processing modules makes the DJ-4151 a truly "Integrated Audio System". The DJ-4151 is ideal for applications such as; distance learning, conference rooms, courtrooms and general sound reinforcement.

The DJ-4151 Mainframe is designed to mount in a standard 19 inch equipment rack and requires 10.5 inches (6 rack units) of rack space.

FEATURES

- Internal Dual Channel/Bridgeable
- 25 Watt Amplifier
- EMI-RFI Line Filter
- Low Field Toroidal Transformer
- Rugged 18 Gauge Steel Construction
- Removable Screw-Clamp Connectors
- Capacity For 14 Single Space Modules
- Hinged Security Panel
- Wiring Saddles On Rear Panel
- Any Module Can Occupy Any Space
- Mounting Surface For Documentation Panels
- Five Year Limited Warranty

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SPECIFICATIONS

MAINFRAME

AC MAINS POWER:

- Connection ..... Standard IEC
- Voltage ..... 117 Volts±10% 60Hz
- Power ..... 350 Watts Maximum
- Fuse (Powers ***SYSTEM* 41** Modules Only) ..... 1.25A Slo-Blo, Rear Panel

OUTPUT POWER ..... DC, Rectified and Filtered

- Voltage ..... ±24 Volts Split Supply (nominal)
- Current 1200mA
- Ripple ..... 1 Volt Peak to Peak (maximum)
- Fuses (Powers ***SYSTEM* 41** Modules Only) ..... 1.6A, Rear Panel (requires two)

CARD CAPACITY ..... 14 Single Space Modules

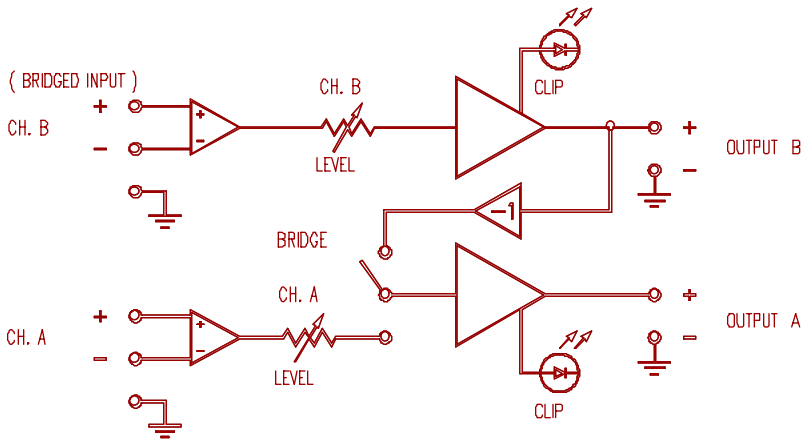
RACK MOUNTING ..... Standard 19 Inch Equipment Rack (6 rack units)

SIZE (W x H x D) ..... 19 Inches (48.3 cm) x 10.5 Inches (26.7 cm) x 11 Inches (27.9 cm)

WEIGHT (Including Internal Amplifier) ..... 23.5lbs. (10.7 Kg), Shipping 33.5lbs. (15.2 Kg)

FINISH ..... Flat Black

AMPLIFIER FUNCTIONAL DIAGRAM



AMPLIFIER

FREQUENCY RESPONSE ..... 20Hz to 20kHz (±0.5dB)

BANDWIDTH ..... 5Hz to 100kHz (±3dB)

NOISE (A weighted, any mode) ..... 100dB Below Full Rated Power

THD (8Ω) 20Hz-20kHz ..... <0.1% (At Rated Output)

INPUT IMPEDANCE 20kΩ

MAXIMUM OUTPUT POWER (20Hz - 20kHz):

- Dual Channel Mode (8Ω) ..... 25 Watts
- Dual Channel Mode (4Ω) ..... 40 Watts
- Dual Channel Mode (2Ω) ..... 50 Watts
- Mono Bridged (8Ω) ..... 70 Watts
- Mono Bridged (4Ω) ..... 100 Watts

SLEW RATE (Dual Channel Mode) 30V/µsec

VOLTAGE GAIN 14.14 (23dB)

DAMPING FACTOR ..... >200/8Ω

NUMBER OF CHANNELS ..... Two

INPUT CONNECTORS ..... Removable Screw-Clamp

OUTPUT CONNECTORS ..... Removable Screw-Clamp

POWER SUPPLY TYPE ..... High Frequency Switching

COOLING ..... Natural Convection

OPTIONAL ACCESSORIES ..... DH-100A (70V Transformer)

ARCHITECTS' & ENGINEERS' SPECIFICATIONS

The mainframe shall provide 14 module mounting spaces, EMI-RFI line filtering and shielding and a hinged security panel for the IRP *SYSTEM* 41 signal processing modules. Positive and negative supplies of filtered 24 Volts at 1.2 amperes maximum shall be bussed to all module positions, allowing any module to occupy any space. A hinged front security panel shall cover all module controls and provide an inside mounting surface for documentation panels. The system operator shall have access to the Power ON/OFF switch for the mainframe and shall be provided with a Power ON LED. This Power ON indicator shall simultaneously monitor both positive and negative DC power supply outputs.

The mainframe shall have an internal amplifier which shall provide output power over a frequency range of 20Hz to 20kHz, both channels driven, of 25 Watts/channel, 8Ω/channel; 40 Watts/channel, 4Ω/channel; 50 Watts/channel, 2Ω/channel. A mode switch shall be employed to select either Dual Channel or Bridge mode operation. In Bridge mode operation, the amplifier shall provide output power over a frequency range of 20HZ to 20kHz of 70 Watts at 8Ω and 100 Watts at 4Ω. The mode switch shall be recessed on the inside of the mainframe to prevent accidental switching. THD shall be less than 0.1% at 20Hz to 20kHz at the rated output power. The frequency response shall be ±0.5dB from 20Hz to 20kHz. Amplifier slew rate shall be 30 Volts/µsec. Noise (A weighted, any mode) shall be 100dB below full rated output power. The amplifier shall have short circuit protection for the output that will prohibit operation until an acceptable load is sensed by the amplifier. The amplifier shall operate from a 60 Hz 120 VAC source and employ a power switch independent of the mainframe power supply. Power line surge suppression at turn on shall be provided. Natural convection shall be adequate to cool amplifier under normal operating conditions. The amplifier shall not use a 50 Hz/60 Hz power transformer and shall use a high frequency switch mode power supply operating at 60kHz. A power line filter shall prevent coupling high frequency to the power line. The input shall be actively balanced. Input and output connections shall be removable screw-clamp connectors. Input gain controls shall be recessed and screwdriver adjustable only. Each channel shall have LEDs to indicate the onset of clipping. A power on LED, power ON/OFF switch shall be mounted on the front panel.

The primary power requirement shall be 117 VAC±10%, 60Hz, 350 Watts Max. A 1.25 amp slo-blo fuse shall be supplied for AC power. The ±24VDC busses shall each be fused at 1.6 amps by rear panel fuses. A steel panel shall separate the power supply and amplifier circuitry from the module circuitry. The mainframe shall be 10.5 inches high by 11.0 inches deep by 19.0 inches wide and shall mount in a standard E.I.A. 19.0 inch equipment rack. The mainframe shall be the IRP model DJ-4151.

ORDERING INFORMATION

Specify: DJ-4151 Mainframe