

DA-550F CE-GB

MULTICHANNEL POWER AMPLIFIERS



The DA-550F is a 4-Channel Digital Power Amplifier featuring lightweight, compact, high power output, and high efficiency. It delivers 550 W x 4 channels (4 Ω output) using a switching power supply. Each channel is equipped with an independent power section. Its Control/Monitor terminals permit power ON/OFF control of the individual channels and status monitoring for the power ON/OFF on each channel, protection on each channel, and fan operation. Prepare the control panel or status monitor display panel separately. It can be mounted in an EIA Standard equipment rack (2 unit size).

Key features

- 4 Ω speaker outputs
- 4 x 550 W rated output
- Independent power supply for each channel
- Light weight and compact
- Rack mountable with 2 units
- Stack up to 5 units without open spaces between units
- Selectable stereo or bridge operation (DA-550F)
- Forced-air cooling system
- Low heat dissipation
- Comprehensive protection circuitry
- Removable dust filters for easy maintenance

Specifications

*0 dB = 0.775 V

Power Source	220 - 240 V AC, 50/60 Hz
Amplification System	Class D
Power Consumption	480 W (based on EN standards) 2750 W (rated output 4 Ω x 4) 1550 W (rated output 8 Ω x 4)
Input	4 circuits, +4 dB* (1.23 V) (input level control in maximum position), 10 k Ω , electronically-balanced, removable terminal block (3 pins), XLR-3-31 type connector CH 1 mode ON/OFF switch (ON: CH 1 to All ch, OFF: Each ch)
Rated Output	4 channels: 550 W x 4 (4 Ω), 350 W x 4 (8 Ω) 2 channels (BRIDGE): 1100 W x 2 (8 Ω) M4 screw terminal, distance between barriers: 8.8 mm (0.35)
Frequency Response	20 Hz - 20 kHz (-2 dB, +1 dB)
Total Harmonic Distortion	0.1 % (1 kHz) 0.15 % (20 Hz - 20 kHz)
Signal to Noise Ratio	100 dB (A-weighted)
Crosstalk	70 dB (A-weighted)
Control/Monitor	Control input: Power ON/OFF status of the individual channels photocoupler input, drive voltage: 9 V DC (Min) - 14 V (Max), 12 V (Typ) Monitor output: Power ON/OFF status of the individual channels, Protection status of the individual channels, Fan operation status photocoupler open collector output, withstand voltage: 30 V DC, control current: 12 mA or less Connector: RJ-45 connector x 2 Connection cable: Shielded Category 5 twisted pair cable for LAN (CAT5-STP) Maximum cable distance: 600 m (656.17 yd)
Protection Circuit	Protection against excessive current flow due to overload, short circuit, unusual DC voltage output, temperature rise at power amp. heat sink (100 # (212 #) or more), temperature rise at power supply heat sink (80 # (176 #) or more)
LED Indicator	Power (blue) x 1, Input (green) x 4, Output (yellow) x 4, Peak (red) x 4, Protect (red) x 4
Cooling	Forced air cooling
Operating Temperature	-10 °C to +40 °C (14 °F to 104 °F)
Operating Humidity	90 %RH or less (no condensation)
Finish	Panel: Aluminum, black, alumite Case: Plated steel sheet
Dimensions	482 (W) x 88.4 (H) x 404.2 (D) mm (18.98 x 3.48" x 15.91")
Weight	9 kg (19.84 lb)
Included Accessories	Power cord (2 m (6.56 ft), Removable terminal plug (3 pins) ...4, Rack mounting screw (with washer) ...4, Tamper-proof cap ...4

A&E specifications

The multi-channel power amplifier shall use digital class-D circuit topology and shall be configurable to allow two, three or four channel operation. Power output in four-channel mode with all channels driven shall be: 550 W at 4 ohms and 350 W at 8 ohms. Each pair of channels shall be independently bridgeable to produce 1100 W at 8 ohms. Total harmonic distortion (THD) shall be less than 0.1% @ 1 kHz, 0.15 % (20 to 20,000 Hz). The frequency response shall be 20 to 20,000 Hz (3 dB). The signal to noise ratio shall be 100 dB (A-weighted). The crosstalk shall be 70 dB (A-weighted). The input impedance shall be 10k ohms for each input into an electronically balanced input circuit. Rear panel switches shall allow selection of bridged operation for each pair of channel (1-2 and 3-4) independent of the status of the other pair of channels. A rear channel input mode switch shall allow the selection of input 1 to all mode, whereby the signal from input 1 is simultaneously fed to all other channels. Each input shall feature a 3 pin phoenix block and XLR connector. Rear panel output connector shall be a heavy gauge M4 screw-terminal barrier strip suitable for use with spade lugs or up to #12 AWG bare wires. The front panel attenuators shall be recessed to prevent accidental level changes and may be removed and replaced by included security covers once levels have been properly set. The front panel shall have four sets of four LED indicators to indicate the following conditions: signal presence at input (greater than -20 dB), signal presence at output (greater than 1 W @ 8 ohms load), peak clipping and protection circuit activation. The front panel shall also have four removable air filters that may be removed for cleaning without removing the amplifier from the rack. The amplifier shall be forced-air fan cooled with the air intake at the front and exhaust at the rear. Built-in protection circuitry shall monitor voltage and current levels to minimize potential damage from overloads, and disable output during shorts, DC offset, or excessive operating temperature at power amp heat sink over 100°C, or excessive operating temperature at power supply heat sink over 80°C via a relay for each channel. The relay shall also delay amplifier connection to the load during turn-on for about 2 seconds, so as to prevent any occurrence of noise at turn-on. Power consumption shall be 480 W (based on EN standards) and 2750 W (rated output 4 ohms x 4 channels), and 1550 W (rated output at 8 ohms x 4 channels). Each channel shall be equipped with control/monitor terminals to permit power on/off control of each channel, status monitoring of power on/off and protection for each channel and fan operation. The control panel and monitor display shall be a custom made non-TOA piece. The control/monitor connection shall be made via two RJ-45 connectors. The amplifier shall use two standard rack-spaces or 88.4 mm and its dimensions shall be 482 (W) x 88.4 (H) x 404.2 (D) mm. Front panel finish shall be black anodized aluminum and case finish shall be sheet steel. Weight shall be 9 kg. The amplifier shall be a TOA model DA-550F.