

## Sound Palette Series

- The SP1200 is a single-channel music controller and amplifier designed for installations requiring high performance, flexible features and ease of use.
- Four independent stereo, line-level inputs are provided for connection of standard music sources, such as CD, Tape, Satellite Receiver, etc. Each input is terminated to dual RCA connectors. An integral AGC circuit automatically compensates for level differences between input sources. A three-band EQ is provided for equalization of the music sources. Music Input 1 is buffered to a stereo RCA output that may be used for music-on-hold or other external applications.
- One input is provided for a paging microphone, and is terminated to both Phoenix-type and XLR connectors. Two-band EQ, variable gain, and switchable phantom power are provided. A variable VOX sensitivity control allows precise setting of trigger threshold points. Page Mic activation and music ducking can also be activated by using the supplied contact terminals.
- A second microphone input is provided for voice reinforcement. This input is terminated to a Phoenix-type connector and offers two-band EQ, variable gain, and switchable phantom power. The gain of this input is independent of the master levels set for the music sources. Settings of the microphone and music levels are retained in memory, allowing adjustment of one source without affecting the other.
- Operator controls provide four music source selector buttons and one OFF button. LED ladder display indicates relative level setting. Push buttons are provided for volume UP and DOWN. All control setting changes can be made from optional remote controls. A three-wire remote control bus allows connection of up to 10 remotes on three conductor cable.
- The output section of the SP1200 offers 200 watts of RMS power into either 70/100 Volt lines or into 8-ohm loads. The transformerless design of the amplifier allows frequency response to 20 Hz, without the distortion and losses typical of conventional designs.
- Many of the SP1200's functions are under micro-processor control and management. An RS485 port is provided on the rear panel to allow interconnection with industry-standard control systems. Up to eight SP1200 units may be interconnected, to share four music sources and control data.
- This Mackie Designs product is covered by an exclusive, one-time, NO FAULT repair policy in addition to a three-year limited warranty.

## Single Zone Controller Amplifier



## Features

- Single-zone program controller/amplifier
- 4 stereo, line-level program inputs
- 1 Mic input
- 1 Paging Mic input
- Digital cross-fade between Input sources
- 200 watts/channel at 70V/100V or 8Ω
- Transformerless amplifier outputs
- Ambient noise sensing for page level
- AGC for music sources
- 3-band sweepable EQ for music sources
- 2-band EQ on each mic input
- Expandable to 16 zones
- Dual-zone or stereo operation
- RS485 port for third-party control systems

## Applications

- Zoned Music Distribution
- Multi-Zone Paging with Program Distribution
- Automated Noise-Compensating Gain Systems
- Music/Speech Reinforcement Systems

## Specifications

## Inputs

Program Inputs: 4 Stereo RCA, -10 dB to +10 dB

Mic 1: Balanced, 100Ω, -52 dB to +4 dB, variable, switchable phantom power, XLR and Phoenix-type terminals

Mic 2: One, balanced, 100Ω, -52 to +4 dB, variable, switchable phantom power, and Phoenix-type terminals

Amp In: -10 dB, Unbalanced, RCA

## Outputs

Amplifier Channel: Mono operation

Output Power: 200 Watts, 20 Hz–20 kHz

Auxiliary Output: Unbalanced, RCA or mono

Pre-Out: -10 dB, Unbalanced, RCA

## Controls

Program Select: 4 Momentary Pushbuttons with LED indicators

Volume UP/DN: 1 Momentary Pushbutton

Music OFF/Mic 2 Select: 1 Momentary Pushbutton with LED Indicator

Mic 1 EQ: Low/High Potentiometers (100 to 12 kHz ±12 dB)

Program EQ: Low/Mid/Mid Sweep, High Potentiometers (80–12 kHz ± 12 dB)

Phantom Power Select: 4 DIP switches (+24 VDC)

Mic Input Pad: -20 dB, on 4 DIP Switches

Page Mic Activation: 2-pole contact on Phoenix-type connector

VOX Sensitivity: Potentiometer

## Indicators

Program Select: 4 Indicator LEDs, Plus OFF

Volume Setting: 8-segment LED Bar Graph

Status: Power, Overload, Protection

## Performance

Frequency Response: 20 Hz–20 kHz, +/-0.5 dB

Total Harmonic Distortion: Less than 0.01% at 200 W

Signal to Noise Ratio: Greater than 90 dB

## Physical

Construction: Black painted aluminum and steel chassis, white nomenclature

Enclosure: 19" Rack Mountable, 3.5" panel space

Dimensions (HxWxD): 3.5" x 19.0" x 16.6" (88 mm x 482 mm x 422 mm)

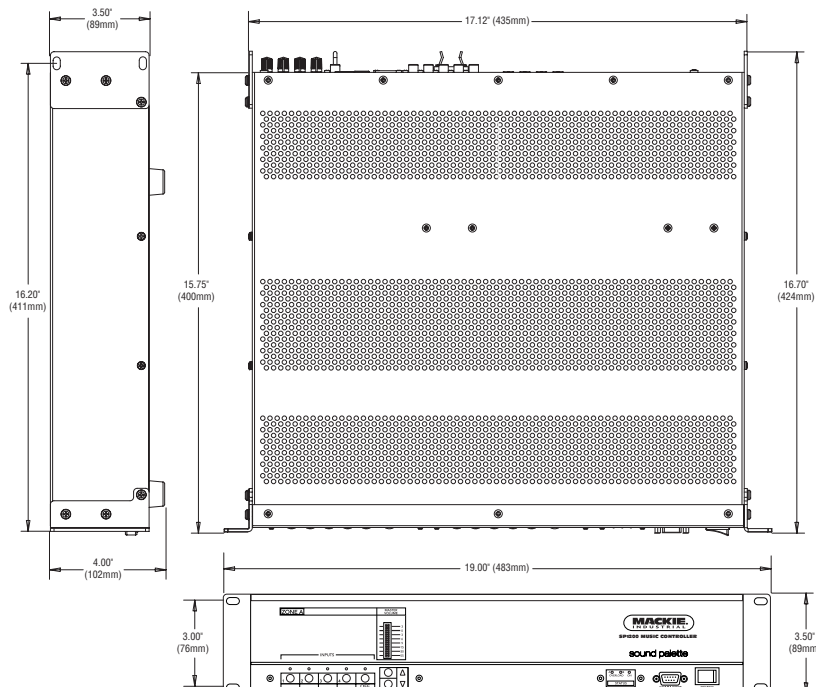
Net Weight: 26 lbs. (11.8 kg)

## Accessories

SP-41R Remote program selection and volume control

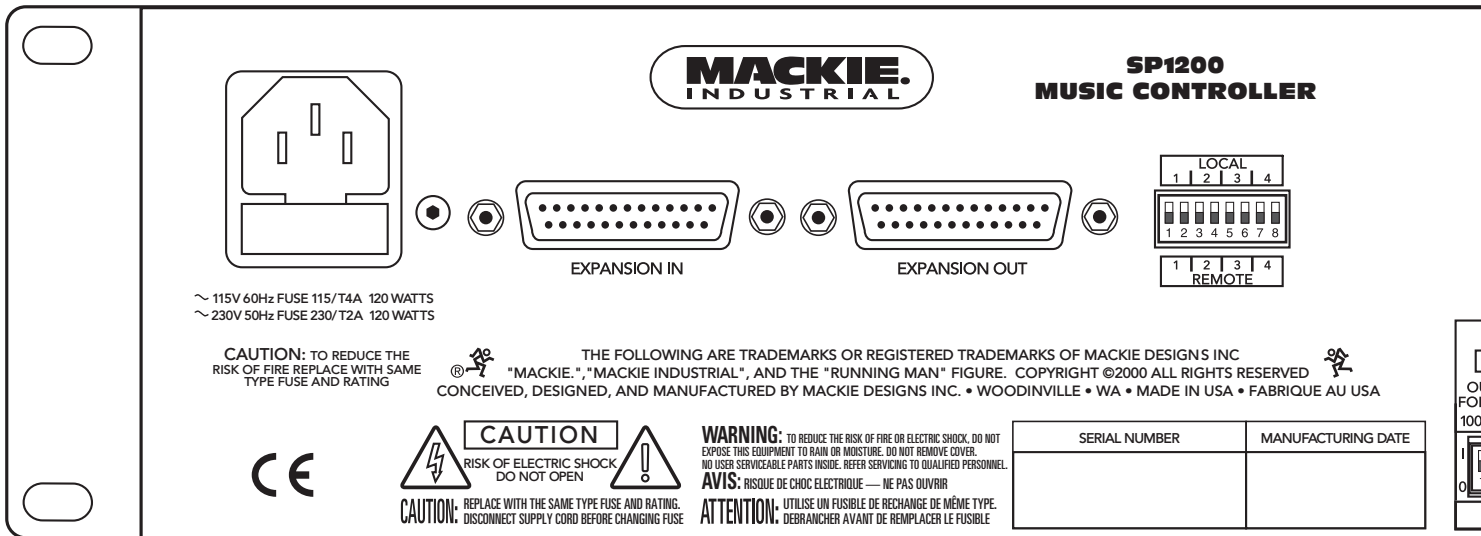
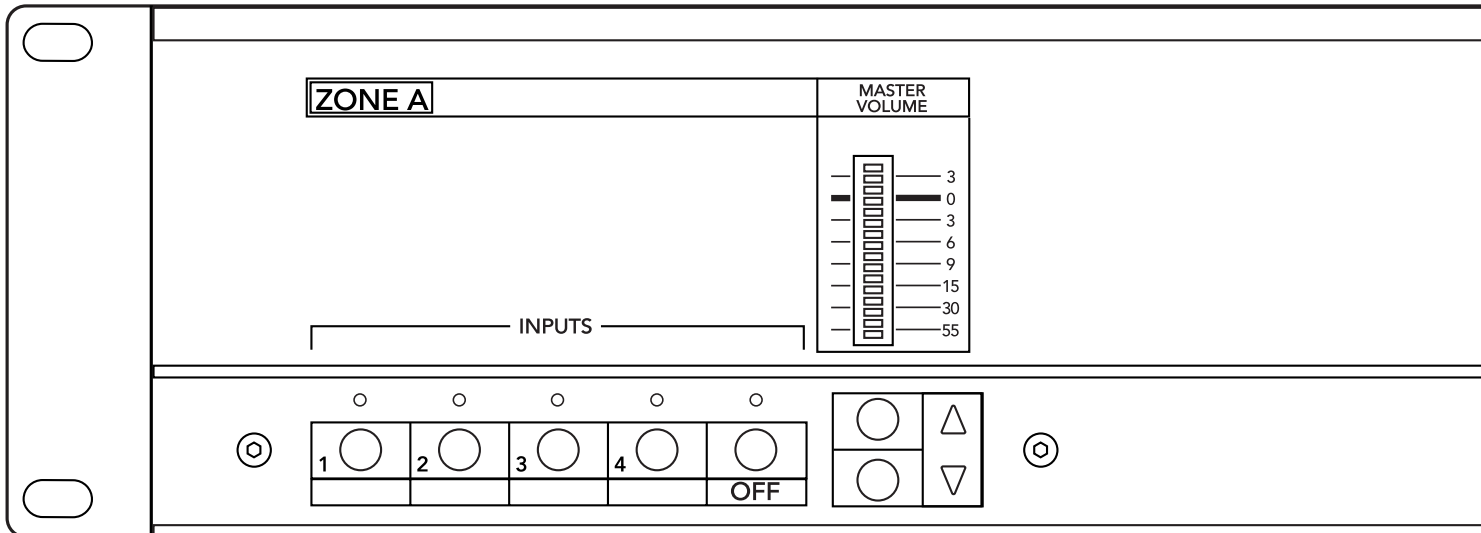
SP-DSP1 Ambient Noise Sensing for music level control

MT-3100 Ambient Noise Sensing Microphone



# SP1200

## Single Zone Controller Amplifier



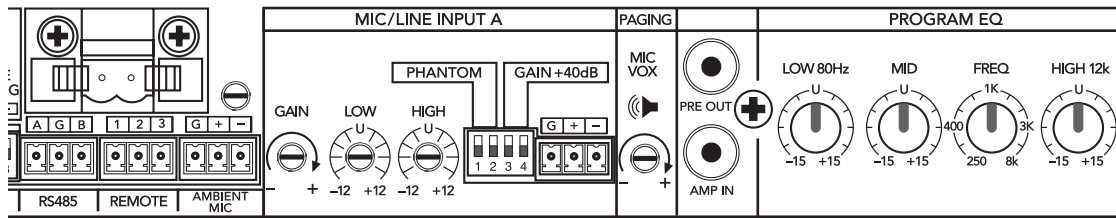
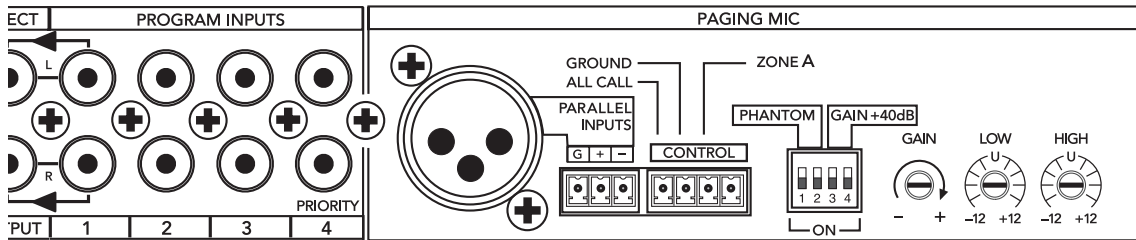
# SP1200

## Single Zone Controller Amplifier



**SP1200 MUSIC CONTROLLER**

sound palette



# SP1200 Single Zone Controller Amplifier

## Architects' and Engineers' Specifications

The background music/paging processor shall be a single zone unit that is expandable up to a total of 8/15 zones by adding up to seven additional units (SP1200/SP2400) from the manufacturer that can be either single or dual-zone processors. It shall consist of the following sub-systems: (1) 4 stereo line-level inputs; (2) 3 microphone inputs, one paging, one sound reinforcement, and one ambient noise sensing; (3) a 3-band equalizer for the line-level inputs; (4) a 2-band equalizer each for the paging and sound reinforcement microphone inputs; (5) a transformerless 200 W power amplifier, capable of delivering full rated power into 70/100 V lines or 8-ohm loads; (6) one auxiliary power amplifier input; (7) a signal processing loop and two line-level outputs; (8) connectors and circuitry for remote control of level, program selection, and paging microphone priority; (9) an expansion bus to carry balanced audio and control data to other units in a multi-processor system; (10) an internal RS485 port to re-flash the unit's firmware.

The four line-level stereo inputs per zone shall be unbalanced, terminated to RCA connectors and accept nominal  $-10$  dB signals. The stereo input signals shall be internally mixed to mono and remain available to the expansion bus in stereo. Selection of the active input shall be from either a momentary push button on the front panel or remotely from an accessory panel provided by the manufacturer. In either case, the selected input shall cross fade with the current program. When the paging microphone is activated, the current line-level program shall attenuate to a level that is preset by a potentiometer on the rear panel. DIP switches shall be provided to direct the line-level input signals to other units (SP1200/SP2400) in a multi-processor system via the expansion bus.

The paging microphone input shall be actively balanced, accept a nominal signal between  $-52$  dB and  $+4$  dB that is trimmed by means of a DIP switch on the rear panel. It shall be terminated in a XLR connector that is paralleled to a Phoenix-type connector. The input shall provide 24 V phantom powering that is selected by a DIP switch on the rear panel. The input shall be activated by either VOX or a contact closure made at a connector on the rear panel. The VOX level shall be set by a potentiometer on the rear panel. A DIP switch shall be provided on the rear panel to direct the paging microphone signal to other units in a multi-processor system via the expansion bus.

The sound reinforcement microphone input shall be actively balanced, accept a nominal signal between  $-52$  dB and  $+4$  dB that is trimmed by means of a DIP switch on the rear panel. It shall be terminated in a XLR connector that is parallel to a Phoenix-type connector. The input

shall provide 24 V phantom powering that is selected by a DIP switch on the rear panel. The input shall be activated by a momentary switch on the front panel, an optional remote control panel supplied by the manufacturer, or a contact closure made at a connector on the rear panel.

The ambient noise sensing microphone input shall be actively balanced, and accept a nominal signal between  $-52$  dB and  $+4$  dB that is trimmed by means of a DIP switch on the rear panel. It shall be terminated in a Phoenix-type connector. The input shall provide 24 V phantom powering that is selected by a DIP switch on the rear panel. An optional ambient noise sensing microphone shall be available from the manufacturer as an accessory.

Two-band equalization for the paging and sound reinforcement microphones and three-band equalization for the line-level inputs shall be provided. All adjustments shall be made by potentiometers on the rear panel. The two-band equalizers shall have shelving filters at 100 Hz and 10 kHz that can be adjusted  $\pm 12$  dB. The three-band equalizer shall have shelving filters at 80 Hz and 12 kHz that can be adjusted  $\pm 12$  dB and a  $\pm 12$  dB mid-band filter that is sweepable between 250 Hz and 8 kHz.

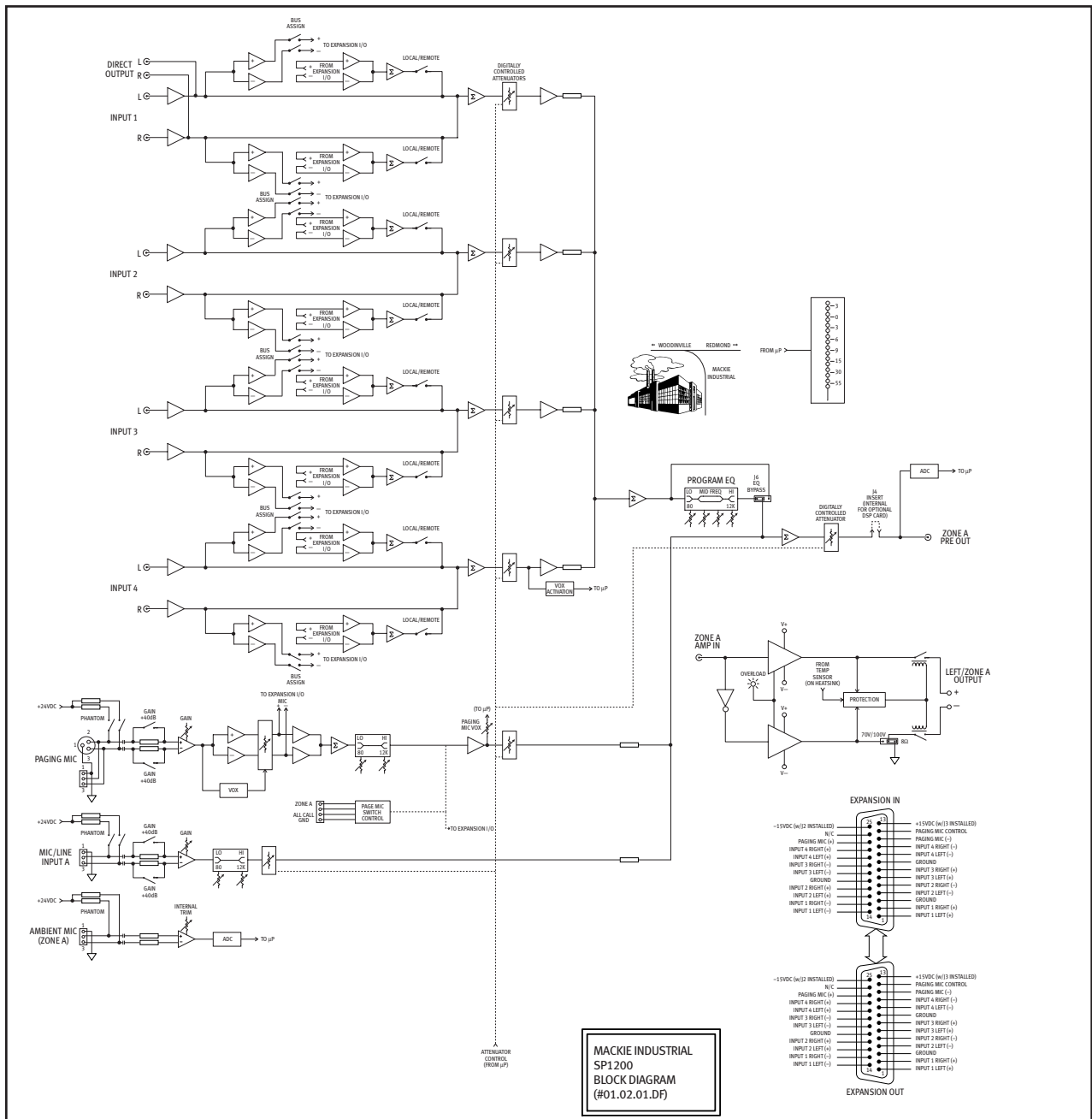
The integrated power amplifier shall produce a minimum of 200 WRMS over a range of 20 Hz to 20 kHz with no more than 0.01% distortion and drive either 70/100 V constant voltage lines or a constant impedance load of 8 ohms, without having an output transformer. It shall be protected from short circuit, overload conditions, and extreme operating temperatures. One direct, unbalanced line-level input to the amplifier shall be provided via RCA connectors on the rear panel.

An expansion bus shall be provided to send and receive balanced audio signals and control signals to other units in a multi-processor system on 25 conductor, shielded cable or industry standard computer cables terminated with DB25 male connectors. Complete setup control of a multi-processor system shall be possible through the DIP switch settings and without an external processor. An internal industry standard RS232 port shall be included to re-flash the unit's firmware using software provided by the manufacturer.

The power supply shall be internal and connected to 50 or 60 Hz source current through a detachable IEC power cord. It shall have an on/off switch and fuse holder. The power supply shall draw a maximum of 5 A and illuminate an indicator light when on.

The unit shall be self-contained in an aluminum and steel chassis that can be mounted in a standard 19" EIA rack using no more than 3.5" of vertical space. The background music/paging processor shall be a model SP1200 manufactured by Mackie Designs Inc.

# SP1200 Single Zone Controller Amplifier



Electronic files for this product available at:  
[www.mackieindustrial.com](http://www.mackieindustrial.com)



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<b>This Specification Sheet</b>	<b>SP1200_SS.PDF</b>
<b>Quick-Start Manual</b>	<b>SP1200QS.PDF</b>
<b>Owner/Operator's Manual</b>	<b>SP1200ML.PDF</b>
<b>CADD files</b>	<b>SP1200.DXF</b>

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