

DS101 Series Soundmasking Conditioners

The industry's largest supplier of design-build soundmasking solutions

tech spec_sheet



FEATURES

- Analog soundmasking generator
- One or two channel configurations
- Three soundmasking spectra: Pink, White, and Superwhite
- Low pass filter with variable cutoff frequency selection
- Twenty-two active band 1/3-octave equalizer for shaping soundmasking spectrum (*dedicated*)
- Six active band one octave equalizer (*mixer dedicated*)
- Two high level (*paging, music, or other source*) and one low level (*microphone*) level mixer inputs
- Available with a built-in 60-Watt amplifier with 70-Volt line distribution
- Amplifier models can use either internal or external soundmasking source via rear panel input selector and gain control
- Dedicated outputs for “Soundmasking Only”, “Paging Only”, “Music Only” or “Mix Out” facilitates use of external soundmasking amplifiers or processors
- Muting for high level and soundmasking signals
- Seven-position zone level control
- Available with shelf or standard 19” NEMA rack mount (*2U, 3-1/2 inches” high*)
- Colored LED display indicates Power On, Level, and Overload
- Dedicated internal electronics and amplifier output fuses protect unit against power surges
- High contrast control panel
- Protective front panel security cover deters tampering
- All models are rated at 100% duty cycle

GENERAL APPLICATION

Dynasound’s DS101 series of Soundmasking Conditioners are used to increase speech privacy in a variety of environments by introducing a soundmasking signal, while also providing paging and music - all in one compact unit. Based on configuration, the DS101 series Soundmasking Conditioners can be used to generate a soundmasking signal, tune the signal specific to the environments acoustical requirements, and drive loudspeakers and soundmasking devices located throughout the environment. Models configured with the

▶ soundmasking.com

6439 Atlantic Blvd_Norcross, GA 30071_(770) 242-8176_(800) 989-6275

by **DYNASOUND**

Copyright© 2005. All rights reserved. This document may not be reproduced or transmitted in whole or part without permission of Dynasound, Inc.

internal mixer can accept two high level auxiliary signals (*such as music, telephone paging, and other line level sources*) as well as one low level auxiliary signal (*microphone paging*). The mixer section equalizes and blends these auxiliary signals independent of the soundmasking signal. The soundmasking can be muted for emergency paging and the high level signals can be muted for priority paging. The output of the models configured with an internal amplifier can be set by the built-in zone level control. All models have line level outputs to drive external power amplifiers.

GENERAL DESCRIPTION AND OPERATION

Dynasound's DS101 series of Soundmasking Conditioners are available in five configurations that range from a basic soundmasking generator to a complete mid-sized soundmasking system. The appropriate model should be chosen for the respective application. Each model is available for rack mounting (*denoted by the "R" suffix when ordering*) or shelf mounting (*denoted by the "S" suffix when ordering*). Each is composed of a unique combination of the three basic building blocks: (1) An analog soundmasking generator and dedicated spectrum equalizer, (2) a three input mixer and dedicated equalizer; and (3) a 60-Watt power amplifier with 70-Volt line output. The five model configurations and the application is described below:

DS1010R, DS1010S - Soundmasking Conditioner

This model may be used as the source for a large or very complex soundmasking system. It features a selection of Pink, White, or Superwhite Noise spectra and a 1/3-octave equalizer for tuning the selected spectrum.

Weight: 16 lbs. Power Requirements: 5 Watts.

DS1011R, DS1011S - Soundmasking Conditioner / Mixer

This model may be used as the source for a large soundmasking system that has "All-Call" microphone or telephone paging and/or general music coverage. It can be used to cover areas with a mix of soundmasking, music, paging, or other source signals. It features a selection of Pink, White, or Superwhite Noise spectra and a 1/3-octave equalizer for tuning the selected spectrum. The mixer section has its own dedicated six band equalizer.

Weight: 16 lbs. Power Requirements: 7 Watts.

DS1012R, DS1012S - Soundmasking Conditioner / Mixer / Power Amplifier

This model may be used as the source for mid- to large-sized soundmasking systems that require "All-Call" microphone or telephone paging and/or general music coverage. It can be used to cover areas with a mix of soundmasking, music, paging, or other source signals. It features a selection of Pink, White, or Superwhite Noise spectra and a 1/3-octave equalizer for tuning the selected spectrum. The mixer section has its own dedicated six band equalizer. It also includes a 60-Watt 70-Volt output internal amplifier. This model may be used in the same way as the DS1011 through the variety of auxiliary outputs. In addition, it serves as a complete soundmasking/music/paging system, capable of driving up to 60 loudspeakers (*approximately 13,000 sq.ft.*).

Weight: 22 lbs. Power Requirements: 157 Watts.

DS1013R, DS1013S - Soundmasking Conditioner + Power Amplifier

This model may be used as the source for mid- to large-sized soundmasking systems. It features a selection of Pink, White, or Superwhite Noise spectra and a 1/3-octave equalizer for tuning the selected spectrum. It also includes a 60-Watt, 70-Volt output internal amplifier. This model may be used in the same way as the DS1010, through the auxiliary outputs. In addition, it serves as a complete soundmasking system, capable of driving up to 60 loudspeakers or soundmasking devices (*approximately 13,000 sq.ft.*).

Weight: 21 lbs. Power Requirements: 155 Watts.

DS1014R, DS1014S - Two Channel Soundmasking Conditioner

This model may be used as the source for a large or very complex soundmasking system. It features a selection of Pink, White, or Superwhite Noise spectra and two 1/3-octave equalizers for tuning the selected spectrum. It has two discrete outputs that operate as independent zones. This model should be used when two independent channels of soundmasking are required. It replaces the use of two DS1010 units consuming the rack space of one. Weight: 16 lbs. Power Requirements: 10 Watts.

When operating a DS101 series soundmasking conditioner, the soundmasking signal is generated and equalized on its own dedicated circuit. The high contrast controls for the circuit are accessible by removing a protective cover plate on the front panel of the unit (*Note that this panel is to be replaced so as to prevent tampering after the soundmasking signal and auxiliary signal mix has been adjusted*).

The level of each of the three auxiliary inputs is first mixed with independent volume controls, then all three signals are equalized. This mixed and equalized signal is then blended with the independently equalized soundmasking signal. Finally the layered signal of auxiliary sources and soundmasking is fed either to the MIX OUT terminal blocks at the rear or to the internal amplifier via the selection of the SOURCE SELECT switch located on the rear panel. This switch works in conjunction with a gain adjustment control.

The input to the power amplifier may be from the internal soundmasking generator or mixer board (*depending on the model*), or from an exterior source. The input level to the amplifier is set by a seven position zone level control on the front panel. The output of the amplifier board appears at a rear panel terminal strip and is 70-Volt line for ease of wiring an entire speaker array.

There is a vertical LED Bar Graph on the front panel, which monitors the model output. With no output, the lowest Green light is lit to indicate that the unit is powered. The top Red LED indicates overload. (*Note: Units with mixer modules (DS1011 and DS1012) have all green segment lights*). In units without power amplifiers, the mixed output signal is fed to the LED Bar Graph Display for visual indication of unit output.

Muting is accomplished on line input 1, line input 2, and the soundmasking signal by closure of a remote SPST switch (*provided by others*) such as those found on a microphone and telephone paging systems. This is a simple industry standard operation and no additional voltage is needed to accomplish this.

The internal power amplifier amplifies the signal provided from one of three locations: (1) the internal soundmasking generator/ equalizer section; (2) the internal mixer/equalizer section; or from (3) an external source selected by the SOURCE SELECT switch (*rear panel*). Prior to amplification, the signal passes through an attenuator network that is controlled by a seven-position switch located on the front panel. The amplifiers power is conservatively rated at 60 Watts (*RMS*). The frequency response of the amplifier is flat from 32 to 20 kHz. The outputs are on a terminal strip on the rear panel (Amplifier Output). An output fuse protects the amplifier from overload.

SPECIFICATIONS

Soundmasking Generator

Soundmasking Source: Pink, White, and Superwhite Spectra (*switchable*)

Spectrum Slope: Pink = +0 dB/Octave; White = +3 dB/Octave; Superwhite = +6 dB/Octave;

Spectrum Tuning: 22 active bands, 1/3-octave increments with ISO center frequencies of 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, and 10 kHz (*-9 dB to +10 dB*)

Low Pass Filter: Adjustable roll-off frequency from 100 to 10000 Hz with -12 dB/Octave slope

Muting: Terminal Post, (*rear panel*)

Mixer

Inputs: 3 total; two 10K Ohm impedance for high level line sources (*rear panel terminal posts*), one 250 Ohm impedance for low level microphone-type sources (*rear panel XLR audio connector*)

Source Tuning: six active bands, one-octave increments with ISO center frequencies of 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz (*-9 dB to +10 dB*)

Muting: Terminal Post, (*rear panel*)

Amplifier

Input: .7 Volts, 10 K Ohm impedance

Output: conservatively rated @ 60 Watts RMS, Constant 70-Volt distributed line

Attenuation: seven-position attenuation, padded in 1.5 dB increments.

Physical

Dimensions: 3 1/2 inches high, 10 3/4 inches deep, 18 inches wide (shelf mounted) or 19 inches wide (rack mounted).

Power: 120 Volt, 60 Hz, fused. See listing above for specific model.

Finish: Black with gold silk screening. Metal side panels for shelf mount, or black "L" adapters for rack mount.

ORDERING INFORMATION

DS1010R, DS1010S - Soundmasking Conditioner.

Shipping weight: *16 lbs.*

DS1011R, DS1011S - Soundmasking Conditioner/
Mixer.

Shipping weight: *16 lbs.*

DS1012R, DS1012S - Soundmasking Conditioner/
Mixer/ Amplifier

Shipping weight: *22 lbs.*

DS1013R, DS1013S - Soundmasking Conditioner/
Amplifier

Shipping weight: *21 lbs.*

DS1014R, DS1014S - Two Channel Soundmasking
Conditioner.

Shipping weight: *16 lbs.*

Note:

R suffix denotes rack mount unit

S suffix denotes shelf mount unit