REVO10 DSP POWERED LOUDSPEAKER

User Manual

Table of Contents

Safety 3
- Important Safety Instructions 3
- Precautions 4
- Suspension 4

Description 5
- Features 5
- DSP Settings 6

Quick Start Guide 7

Specifications 8

Safety

Important Safety Information

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT OVEREXPOSE THIS SPEAKER TO RAIN OR MOISTURE.

WARNING: CONNECT ONLY TO MAINS POWER SUPPLY WITH A PROTECTIVE EARTHING CONNECTION.

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE REAR AMPLIFIER COVER OR ATTEMPT TO OPEN THE SPEAKER. THERE ARE NO USER-SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

1. Read this manual carefully.
2. Keep this manual safe for future reference.
3. Follow all warnings and recommendations.
4. Do not operate or store near water.
5. Do not expose the speaker to dripping or splashing liquid, and ensure that no objects containing liquid are placed on this speaker.
6. Clean only with a dry cloth.
7. Do not install or operate near any heat sources such as radiators, gas heaters, stoves, or other heating apparatus.
8. Only use attachments and accessories specified by the manufacturer.
9. Do not block any ventilation openings, including sound ports.
10. Install in accordance with the manufacturer's instructions.
11. Do not obstruct or remove the ground plug from the speaker, doing so may cause electric shock resulting in serious injury or death.
12. Protect the power cord from being walked on, pinched, or rolled over.
13. Unplug the speaker during electrical storms and power outages.
14. Refer all servicing to a qualified service technician. Servicing is required when the speaker no longer operates, fails to power on, has a distorted sound, or emits an electrical smell or sound.
15. To completely disconnect AC power from this speaker, the power supply cord must be unplugged.

Precautions

If an AVE Loudspeaker is used outdoors on a sunny day, ensure that it is in a shaded area and is well ventilated to help prevent overheating.

Do not use AVE speakers in environments that are below 0°C OR exceed +40°C.

AVE Loudspeakers are capable of generating sound pressure level (SPL) sufficient to cause permanent hearing damage to anyone within normal coverage distance. Caution should be taken to avoid prolonged exposure to SPL levels exceeding 90dB.

Suspension

Suspending any object is potentially dangerous and should only be attempted by qualified individuals with thorough knowledge of the techniques and regulations for suspending objects. It is the responsibility of the installer to ensure all loudspeakers are installed correctly. AVE strongly recommends inspecting installed systems every 6 months for signs of weakness or damage. If any damage or weakness is detected then remedial action should be taken immediately. The user is responsible for making sure the wall, ceiling, or structure is capable of supporting all objects suspended overhead. Any hardware used to suspend a loudspeaker not associated with AVE is the responsibility of others.

Description

The Revo10 DSP is a professional 10" powered speaker designed to deliver performance and versatility for a wide range of sound reinforcement applications. The Revo10 DSP is suitable for musician/DJ performances, presentations, functions, places of worship, and other similar applications.

Each RevoDSP loudspeaker features an on-board hybrid amplifier with both Class A/B & Class D technologies. Delivering an impressive 1100W peak power into 4Ohms, and is managed by the on-board digital signal processor (DSP). The DSP allows you to customise the sound to suit your application and ensures the loudspeaker delivers optimum performance, even at high volumes.

The on-board DSP features 8 selectable presets that have been custom tuned in Australia to optimise the speaker for its intended application. The DSP technology also allows you to edit 4 of the 8 programs, which is perfect for creating and customising your own presets. With access to adjust the speaker's EQ curve, HP & LF filters, main output volume, and time delays.

The Revo10DSP uses the combination of a 10" Bass driver and 1.34" High frequency tweeter to reproduce a broad frequency response from 50Hz to 20,000Hz with a clean and punchy sound. Housed in a robust ABS plastic housing, capable of withstanding accidental knocks and bumps.

Features

- 2-Way powered speaker with 1100W peak power
- Efficient bi-amplified design using Class D & Class A/B technology
- Specially selected transducers for high output and clarity
- Integrated DSP with 4 factory presets + 4 user assignable presets
- Proprietary DSP software lets users customise their own tuning and DSP presets
- Tested in Australia for 40hrs to ensure quality and reliability
- Lightweight and durable ABS plastic chassis
- Designed, Engineered, and Tuned in Australia
- PowerCON input and output for secure power connections
- Suitable for; Bands, DJs, Places of Worship, Bars, Venues, Public Address, Presentations, and more.

DSP Settings

The on-board DSP features eight (8) user-selectable presets to tailor and shape the loudspeakers performance to suit various applications.

Preset Number	Function
0	Music
1	Live
2	Reference
3	Speech
4	Satellite
5	Music
6	Live
7	Reference

Preset 0: Music *(user editable)*

Designed for DJs and pre-recorded music with enhanced highs and bass response.

Preset 1: Live *(user editable)*

Designed for live music applications, with custom EQ curve to lower feedback potential from microphones on stage.

Preset 2: Reference *(user editable)*

Designed for use as a reference point for music producers and live sound. Flat frequency response with increased low end up to 100Hz.

Preset 3: Speech *(user editable)*

Designed for presentation and public speaking applications, features a tailored frequency response that lowers feedback potential.

Preset 4: Satellite

Designed for use with a subwoofer, adds a high pass (low-cut) filter.

Preset 5: Music

Designed for DJs and pre-recorded music with enhanced highs and bass response.

Presets 6: Live

Designed for live music applications, with custom EQ curve to lower feedback potential from microphones on stage.

Preset 7: Reference

Designed for use as a reference point for music producers and live sound. Flat frequency response with increased low end up to 100Hz.

The user editable presets can be loaded in the AVE DSP software and adjusted to tailor the sound to your application. Editable parameters; HPF/LPF Filters, System Time Delay, 6-band Graphic EQ, and Main Volume Output. Once edited the preset can be saved to the speaker and recalled using the program selection knob.

Quick Start Guide

To set up your AVE Revo10 DSP speaker up, follow the below steps;

1. Connect the Powercon AC power cord from a grounded mains 240v power source.
2. Connect the XLR line input, or mic input into the speaker.
3. Adjust both **gain knobs** to 0 (off).
4. Switch the power switch to the '**ON'** position.
5. Slowly increase the input's **gain knob** to the desired level (ensuring that the speaker is not distorting or clipping).

Specifications

Product number:	REVO10DSP
Product type:	PA loudspeaker
Type:	Powered 2-Way
Low/mid driver dimensions:	10″
Low/mid driver dimensions (mm):	254.mm
LF Voice Coil Size:	1.5”
LF Voice Coil Size: (mm)	38.1mm
HF driver dimensions:	1.34″
HF driver dimensions (mm):	34mm
Amplifier:	Class A/B & Class D
Dispersion (H x V):	90° x 60°
RMS:	350W
Peak power:	1100W
Frequency response:	45 Hz – 20 kHz
Max. SPL (peak):	120 dB
DSP Control:	8 Selectable Programs (4 User editable)
Input sensitivity:	775mV / 22k Ω (Balanced) 775mV / 11K Ω (Unbalanced)
Max Input Level	20 dBu
Signal to Noise:	90 dB (A-Weighted)
Total Harmonic Distortion (THD)	<0.5% (1kHz -9dB)
Controls:	1 x mic gain, 1x main level, DSP selector mode, power
Indicators:	Power, limit
Inputs:	1x XLR (line), 1x ¼” TS Jack (mic)
Outputs:	1x XLR
Other Connections:	1x USB-B port (DSP Connection)
Operating voltage:	110 – 240 V / 50 – 60 Hz, Switching Power Supply
Power Connection:	Powercon
Operating Temperature:	0 – 40°C
Cabinet material:	ABS Plastic
Dimensions:	300 x 300 x 500mm
Weight:	12.0 kg