Sound Town STCA600-6Z

Sound Town STCA600-6Z 6-Zone Commercial Power Amplifier Instruction Manual

Model: STCA600-6Z | Brand: Sound Town

1. INTRODUCTION

The Sound Town STCA600-6Z is a 6-zone 19-inch rack-mountable commercial power amplifier designed for various multi-room audio applications. It delivers 600W RMS output, distributed across six independent zones. This amplifier supports 70-volt, 100-volt, 8-ohm, and 4-ohm speaker configurations, making it suitable for environments such as restaurants, bars, schools, and warehouses. Its integrated clipping limiter provides protection for connected speakers and the amplifier itself against overheating. The STCA600-6Z features a comprehensive array of input options, including 2 RCA inputs, 3 microphone inputs (two with phantom power), an Optical (SPDIF) input, Bluetooth connectivity, USB playback, and an FM radio tuner. Output options include 70V/100V/4-16 ohm speaker terminals and an RCA line output. Each of the three microphone inputs includes echo control, and all six zones have individual volume controls for precise audio management.

Figure 1: Front view of the Sound Town STCA600-6Z amplifier with included remote control.

2. KEY FEATURES

- 6-zone speaker outputs with individual volume control for each zone.
- Two phantom-powered microphone inputs for compatibility with condenser microphones.
- Versatile input options: 2 RCA inputs, 3 microphone inputs (one priority mic on front), 1 optical (SPDIF) input, USB input, FM radio tuner, and Bluetooth connectivity.
- Microphone inputs feature adjustable repeat, speed, and echo controls.
- Built-in clipping limiter to protect speakers and the amplifier from damage due to excessive signal levels.
- Supports 70V, 100V, 8-ohm, and 4-ohm speaker systems.
- Ideal for multi-room audio distribution in commercial settings.

3. SETUP AND CONNECTIONS

3.1 Rear Panel Overview

Figure 2: Rear panel connections of the STCA600-6Z amplifier.

The rear panel of the STCA600-6Z amplifier provides all necessary connections for audio inputs, speaker outputs, and power. Familiarize yourself with these connections before proceeding with installation.

3.2 Audio Input Connections

- **RCA Inputs (LINE 1, LINE 2)**: Connect audio sources such as CD players, media players, or mixers using standard RCA cables.
- **Microphone Inputs (MIC 2, MIC 3)**: Use XLR cables to connect dynamic or condenser microphones. These inputs provide phantom power, which can be activated via the PHANTOM switch if required for condenser microphones.
- **Optical (SPDIF) Input**: Connect digital audio sources like TVs or media players using an optical cable.
- **USB Input**: Located on the front panel, this port allows for playback of audio files from a USB drive.
- **FM Antenna**: Connect the included FM antenna for radio reception.
- **Bluetooth**: The amplifier features built-in Bluetooth for wireless audio streaming from compatible devices.

3.3 Speaker Output Connections

OUTPUT CONNECTION DIAGRAM

● **Direct output for 4~16 ohm/70V/100V speakers**

COM

● **6 zone output for 70V speakers**

1. Make sure all speakers have a 70-volt transformer.
2. Connect all the negative ends of the speaker wires to the 'com' terminal.
3. Connect the positive ends of each speaker to the designated terminals (Z1, Z2, Z3, etc.) to divide the speakers into different zones.
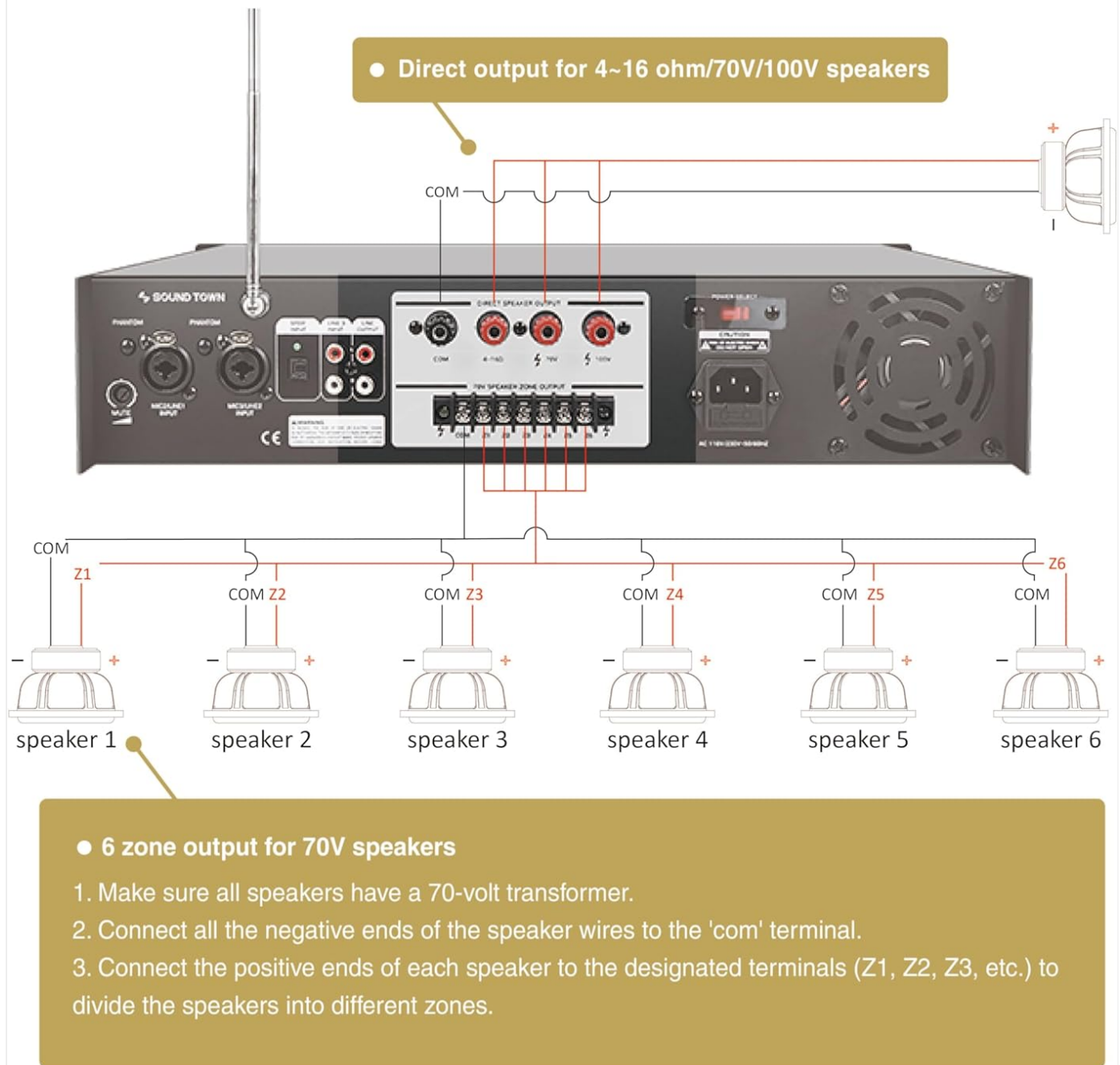
Figure 3: Detailed output connection diagram for various speaker types.

The STCA600-6Z offers flexible speaker output options. Ensure all speakers are correctly wired and match the amplifier's output impedance/voltage settings to prevent damage.

- **Direct Output for 4-16 ohm / 70V / 100V Speakers**:

  - For **4-16 ohm speakers**: Connect the speaker's positive (+) terminal to the "4-16Ω" terminal and the negative (-) terminal to the "COM" terminal.

  - For **70V speakers**: Connect the speaker's positive (+) terminal to the "70V" terminal and the negative (-) terminal to the "COM" terminal. Ensure all 70V speakers have a 70-volt transformer.

  - For **100V speakers**: Connect the speaker's positive (+) terminal to the "100V" terminal and the negative (-) terminal to the "COM" terminal. Ensure all 100V speakers have a 100-volt transformer.

- **6-Zone Output for 70V Speakers**:

  - Ensure all speakers are equipped with a 70-volt transformer.

- Connect all negative ends of the speaker wires to the shared "COM" terminal.
  - Connect the positive ends of each speaker to the designated zone terminals (Z1, Z2, Z3, Z4, Z5, Z6) to divide speakers into different zones.

Important: Always ensure the amplifier is powered off before making any speaker connections. Incorrect wiring can cause damage to the amplifier and speakers.

3.4 Power Connection

Connect the provided AC power cord to the power inlet on the rear panel of the amplifier and then to a suitable AC power outlet. Ensure the voltage selector switch (if present) is set to the correct local voltage (e.g., 110V/220V).

4. OPERATING INSTRUCTIONS

4.1 Front Panel Controls

Figure 4: Front panel controls and display.

- **Power Switch**: Turns the amplifier on or off.
- **Priority MIC 1 Input**: Front-panel microphone input with priority function.
- **MIC Volume Knobs (MIC1, MIC2/LINE1, MIC3/LINE2)**: Adjust the volume for the respective microphone/line inputs.
- **ECHO / DELAY Controls**: Adjust the echo and delay effects for microphone inputs.
- **Zone Volume Knobs (ZONE 1-6)**: Independently control the output volume for each of the six speaker zones.
- **SPDIF VOL / TREBLE / BASS Knobs**: Adjust the volume for the optical input and the overall treble and bass tone.

- **Media Player Controls**: Buttons for USB/Bluetooth/FM functions (Play/Pause, Skip, Mode, etc.) and a display screen.

4.2 Input Source Selection

Use the "MODE" button on the front panel or remote control to cycle through available input sources: Bluetooth, USB, FM Radio, Optical, LINE 1 (RCA), LINE 2 (RCA).

4.3 Bluetooth Operation

1. Select "Bluetooth" mode using the MODE button. The display will show "BT".
2. On your Bluetooth-enabled device (e.g., smartphone, tablet), search for available devices.
3. Select "SOUND TOWN" or a similar name from the list to pair.
4. Once paired, you can stream audio wirelessly to the amplifier.

4.4 USB Playback

1. Insert a USB flash drive containing audio files into the USB port on the front panel.
2. Select "USB" mode using the MODE button. The amplifier will automatically begin playing compatible audio files.
3. Use the media player controls (Play/Pause, Skip) to manage playback.

4.5 FM Radio

1. Ensure the FM antenna is connected to the rear panel.
2. Select "FM" mode using the MODE button.
3. Use the media player controls to scan for and select radio stations.

4.6 Microphone Usage

- Connect microphones to the MIC inputs (MIC 1 on front, MIC 2, MIC 3 on rear).
- If using condenser microphones, activate the PHANTOM power switch on the rear panel for MIC 2 and MIC 3.
- Adjust individual MIC volume knobs and ECHO/DELAY controls as desired.
- MIC 1 has a priority function, which can automatically lower background music when spoken into.

5. MAINTENANCE

- **Cleaning**: Regularly wipe the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Ventilation**: Ensure the amplifier has adequate ventilation. Do not block any ventilation openings on the unit. Maintain at least 4 inches (10 cm) of clear space around the amplifier for proper airflow.
- **Storage**: If storing the unit for an extended period, disconnect it from power and store it in a cool, dry place away from direct sunlight and extreme temperatures.
- **Power Cord**: Periodically check the power cord for any signs of damage. If damaged, replace it with an appropriate cord.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Power cord disconnected; Power switch off; Blown fuse; Power outlet fault.	Check power cord connection; Ensure power switch is ON; Check/replace fuse (consult technician if unsure); Test power outlet with another device.

Problem	Possible Cause	Solution
No sound output	Incorrect input selected; Volume knobs turned down; Speaker wires disconnected/incorrectly wired; Mute function active.	Select correct input source; Increase master and zone volumes; Verify speaker connections and wiring; Check if mute is active on remote or unit.
Distorted sound	Input signal too high; Speaker impedance mismatch; Damaged speaker/cable.	Reduce input source volume; Verify speaker impedance matches amplifier output; Check speakers and cables for damage.
Overheating / Unit shuts off	Insufficient ventilation; Excessive load on amplifier; Internal fault.	Ensure adequate airflow around the unit; Reduce volume or number of connected speakers; If problem persists, disconnect power and contact support.
Bluetooth not connecting	Amplifier not in Bluetooth mode; Device too far; Interference; Device already paired elsewhere.	Ensure amplifier is in BT mode; Move device closer; Reduce interference; Disconnect from other devices and try pairing again.

7. SPECIFICATIONS

Feature	Detail
Model Number	STCA600-6Z
Output Power	600W RMS
Zones	6 independent zones
Speaker Outputs	70V, 100V, 4-16 ohm
Inputs	2 x RCA, 3 x Mic (2 with Phantom Power), 1 x Optical (SPDIF), USB, Bluetooth, FM Radio
Microphone Controls	Echo, Delay, Volume
Tone Controls	Treble, Bass
Protection	Built-in clipping limiter
Item Weight	34.8 pounds (15.78 kg)
Package Dimensions	21.8 x 18.5 x 7.4 inches (55.37 x 46.99 x 18.8 cm)

8. SAFETY INFORMATION

- **Electrical Safety**: Always connect the amplifier to a grounded power outlet. Do not operate the unit with a damaged power cord or plug. Avoid exposing the unit to rain or moisture.
- **Ventilation**: Ensure proper ventilation to prevent overheating. Do not cover the ventilation openings.
- **Placement**: Place the amplifier on a stable, level surface. Avoid placing it near heat sources or in direct sunlight.
- **Servicing**: Do not attempt to service this unit yourself. Refer all servicing to qualified service personnel. Opening the unit may expose you to dangerous voltages or other risks.
- **Children**: Keep the unit out of reach of children.

9. WARRANTY AND SUPPORT

Sound Town products are designed for reliability and performance. For information regarding warranty coverage, technical support, or service, please refer to the warranty card included with your product or visit the official Sound Town website. You may also contact Sound Town customer service directly for assistance.

Sound Town Official Website: Visit the Sound Town Store on Amazon