

Rockville RCS350-6, PEN-40T

Rockville RCS350-6 70V Amplifier and PEN-40T Pendant Speakers Instruction Manual

PRODUCT OVERVIEW

The Rockville RCS350-6 is a 350-Watt, 6-zone rack-mountable digital hybrid amplifier/receiver designed for commercial audio applications. It supports 70V, 100V, 8-ohm, and 4-ohm speaker systems, making it suitable for various environments such as restaurants, bars, cafes, offices, schools, and event halls. The amplifier features Bluetooth audio streaming, USB and SD inputs, FM radio, optical input, RCA line inputs, and three microphone inputs with echo control for versatile audio source integration.

The PEN-40T speakers are 4-inch 70V hanging pendant speakers, available in black and white, designed to complement the amplifier. They feature a 2-way design with a 4-inch woofer and 13mm PEI dome tweeter, providing clear audio across a frequency range of 70Hz-20kHz. These speakers are ideal for spaces with high ceilings, offering downward sound dispersion for an optimal listening experience.

The system includes detachable Euro-block speaker terminals on both the amplifier and speakers for simplified wiring. Built-in protection features such as a clipping limiter and cooling system ensure reliable operation in continuous-use environments.

PACKAGE CONTENTS

- 1 x Rockville RCS350-6 350 Watt 6 Zone 70V Commercial Amplifier/Receiver with Bluetooth
- 10 x Rockville PEN-40T Black 4" 70V Hanging Pendant Speakers
- Power Cable
- Quick Start Guide
- Grill Remover (for PEN-40T speakers)
- Mounting Putty (for PEN-40T speakers)

SETUP AND INSTALLATION

1. Understanding 70V Systems

70V amplifier systems allow for running a large number of speakers at a fixed and constant wattage. Each speaker is 'tapped' to draw a specific wattage. The total wattage drawn by all speakers should not exceed 80% of the

amplifier's total power output. For example, if your amplifier provides 350 watts, the total wattage drawn by all speakers should not exceed 280 watts.

2. Setting Speaker Wattage (PEN-40T)

The PEN-40T speakers feature a tap selector dial on the back. This dial allows you to choose the wattage drawn by each speaker. Available tap options for 70V are 2.5W, 5W, 10W, and 20W. There is also an 8-ohm option for use with traditional stereo systems.



Figure 1: Rear view of PEN-40T speaker with wattage tap dial and Euro-block terminal.

1. Locate the tap dial on the back of the PEN-40T speaker.
2. Rotate the dial to select the desired wattage (2.5W, 5W, 10W, or 20W) based on your system's design and amplifier capacity.
3. Ensure the total wattage of all connected speakers does not exceed the amplifier's recommended load.

3. Hanging the Pendant Speakers

The PEN-40T speakers are designed to be hung from the ceiling. You will need stainless steel cable and wire cable clips (not included in the package) for secure installation. Ensure the cable and clips are rated to support the

speaker's weight.

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Video 1: Detailed guide on how to set up your PEN-40T speakers.

1. Securely attach one end of the stainless steel cable to a sturdy ceiling beam or appropriate mounting point using a wire cable clip. Ensure the connection is firm.
2. Thread the other end of the cable through the eyelet hanging bracket on the top of the PEN-40T speaker.
3. Adjust the cable length to achieve the desired hanging height for the speaker.
4. Use a second wire cable clip to secure the cable, forming a loop that holds the speaker at the chosen height. Tighten the nuts on the clip securely.

4. Wiring the Speakers to the Amplifier

The PEN-40T speakers use detachable Euro-block terminals for speaker wire connections. The RCS350-6 amplifier also features Euro-block terminals for 70V speaker zones output.



Figure 2: Rear panel of the RCS350-6 amplifier with speaker zone outputs.

1. Remove the green Euro-block terminal from the back of the PEN-40T speaker.
2. Using a small flathead screwdriver, loosen the screws for the input terminals (labeled 'IN' on the diagram, typically terminals 2 and 3).
3. Connect the positive (+) speaker wire from your amplifier to the positive input terminal and the negative (-) speaker wire to the negative input terminal.
4. Tighten the screws to secure the wires.
5. Re-insert the Euro-block terminal into the speaker.
6. For parallel wiring multiple speakers, use the output terminals (labeled 'OUT', typically terminals 1 and 4) on the first speaker to connect to the input terminals of the next speaker. Repeat this process for all speakers in the chain.
7. Connect the other end of the speaker wire(s) to the appropriate 70V speaker zone output on the RCS350-6 amplifier. Match positive to positive and negative to negative.

OPERATING INSTRUCTIONS

1. Powering On

Connect the power cable to the RCS350-6 amplifier and a suitable power outlet. Flip the power switch on the front panel to the 'ON' position.

2. Audio Source Connection

The RCS350-6 amplifier supports multiple audio input options:

- **Bluetooth:** Activate Bluetooth on your device and pair with the amplifier.
- **USB/SD:** Insert a USB drive or SD card with audio files into the respective slots.
- **Optical Input:** Connect a digital audio source (e.g., TV, projector) using an optical cable.
- **RCA Line Inputs:** Connect analog audio devices (e.g., MP3 player, CD player) using RCA cables.
- **Microphone Inputs:** Connect up to three microphones for announcements or karaoke. Adjust echo control as needed.

3. Volume Control

The amplifier provides multiple volume controls:

- **Source Volume:** Adjust the volume on your connected audio source device.
- **Input Volume:** Individual volume knobs for each input (MIC 1/2/3, Optical, Line In, MP3).
- **Master Volume:** Controls the overall output volume of the amplifier.
- **Zone Volume:** Individual volume knobs for each of the 6 speaker zones, allowing independent control of speaker groups.

For optimal sound quality and to prevent distortion, it is recommended to keep individual input and zone volumes below their maximum settings, adjusting the master volume for overall loudness.

4. Tone Control

Use the Bass and Treble knobs on the front panel to adjust the low and high frequencies of the audio output to suit your preference and acoustic environment.

MAINTENANCE

To ensure the longevity and optimal performance of your Rockville RCS350-6 amplifier and PEN-40T speakers, follow these general maintenance guidelines:

- Keep the equipment clean by wiping it with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- Ensure proper ventilation for the amplifier to prevent overheating. Do not block the ventilation openings.
- Regularly check all cable connections for security and integrity. Loose connections can lead to poor sound quality or intermittent operation.
- Avoid exposing the equipment to extreme temperatures, humidity, or direct sunlight.

TROUBLESHOOTING

1. Distorted or "Fuzzy" Sound

If you experience distorted or "fuzzy" sound, especially after extended use, it may be related to improper volume level settings. The RCS350-6 amplifier has multiple volume controls that need to be balanced correctly.

1. Check the volume levels of your audio source, individual input, master volume, and zone volumes.
2. Ensure that no single volume control (especially zone volumes) is set to its maximum level. Setting a zone volume to maximum while controlling overall loudness with master or input volume can introduce distortion.
3. Adjust the zone volume knobs to just below half, then use the master and input volumes to achieve the desired sound level. This helps maintain a clean signal path.
4. Verify that all speaker wires are securely connected to both the speakers and the amplifier terminals.

2. No Sound Output

- Confirm the amplifier is powered on and the correct input source is selected.
- Check all volume controls (source, input, master, zone) are not set to minimum or muted.
- Verify speaker wire connections at both the amplifier and speakers. Ensure correct polarity (+ to + and - to -).
- Ensure the speaker tap settings on the PEN-40T speakers are correctly selected and match the amplifier's output.

SPECIFICATIONS

Rockville RCS350-6 Amplifier

- **Output Power:** 350 Watts
- **Speaker Outputs:** 70V, 100V, 8-ohm, 4-ohm
- **Zones:** 6 independent zones with individual volume control
- **Inputs:** Bluetooth, USB, SD, FM Radio, Optical, 2 x RCA Line In, 3 x Microphone (with echo control)
- **Protection:** Clipping limiter, cooling system
- **Dimensions:** 21"D x 18.9"W x 7.1"H
- **Weight:** 76.4 pounds (total bundle)

Rockville PEN-40T Pendant Speakers

- **Speaker Type:** 2-way hanging pendant speaker
- **Woofer:** 4-inch
- **Tweeter:** 13mm PEI dome
- **Frequency Response:** 70Hz-20kHz
- **70V Tap Options:** 2.5W, 5W, 10W, 20W
- **Impedance:** 8-ohm (selectable)
- **Color:** Black (as per model)
- **Material:** Plastic

SUPPORT

For any questions, comments, or concerns regarding your Rockville RCS350-6 amplifier and PEN-40T speakers, please contact Rockville customer support:

- **Phone:** 1-646-758-0144 (Open 24/7)
- **Email:** sales@rockvilleaudio.com

