

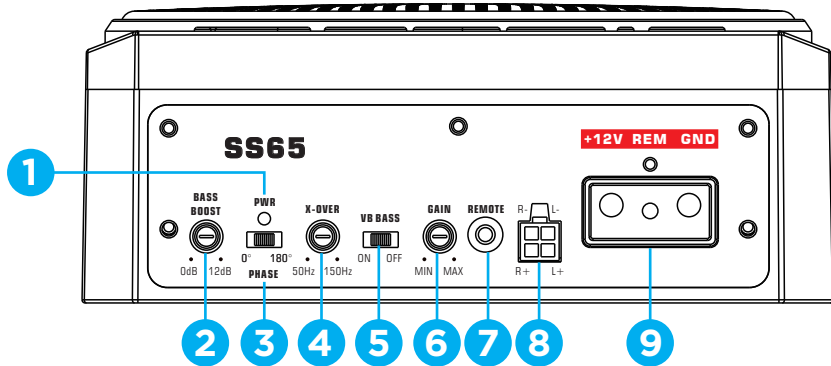


RECOIL[®]

SS65

Active Underseat 6.5" Subwoofer

User Manual



- 1 POWER STATUS LED**
This bi-color LED glows blue when power is on and no problems are present. If a protection circuit activates, it will turn red.
- 2 BASS BOOST**
This feature boosts sound levels in bass frequencies (+0dB to +12dB).
- 3 PHASE SHIFT (0°/180°)**
Use this switch to compensate for acoustic phase issues caused by subwoofer-to-listener distance differences relative to other speakers.
- 4 LOW-PASS CROSSOVER (X-OVER)**
Adjust the maximum frequency reproduced by the subwoofer (all frequencies below your setting).
- 5 VB BASS VIRTUAL BASS**
Engaging this switch activates DSP processing to enhance perceived bass depth, ideal for factory audio systems in compact vehicles.
- 6 INPUT GAIN CONTROL**
Calibration Procedure:

 - Set to minimum before powering on
 - Turn the head unit to ~75% volume
 - Gradually increase gain until distortion occurs
 - Reduce gain slightly to eliminate distortion
 - Fix at this position
- 7 REMOTE BASS LEVEL**
Connect the included remote to independently adjust subwoofer volume.
- 8 RCA LEVEL INPUT**
This is the RCA level signal input. Use the included harness-to-RCA adapter to connect head unit RCA outputs.
- 9 POWER CONNECTOR**
Terminals:

 - +12V: Battery power
 - GND: Chassis ground
 - REM: Auto turn-on trigger (connect to head unit remote)

FEATURES

- **Space-Optimized Design**
Compact 6.5" (165mm) chassis engineered for seamless installation under 95% of vehicle seats.
- **Integrated High-Fidelity Amplifier**
Class-D amplifier (250W RMS) delivers punchy bass without external components.
- **Advanced Thermal Management**
Die-cast aluminum heatsink ensures stable performance at peak loads.
- **Premium Build Quality**
Military-grade components + aluminum die-cast housing resist vibration and cabin temperature extremes.
- **Low Level Signal Input**
RCA low-level inputs (for aftermarket head units)
- **VB BASS Virtual Bass Technology**
DSP algorithm extends perceived low-frequency response, compensating for cabin acoustics in compact vehicles.
- **Precision Tuning Controls**
Side-panel access to:
 - Gain (0.1V-6V input sensitivity)
 - Low-pass filter (50Hz-150Hz)
 - Phase switch (0°-180°)
- **Remote Control**
Wired remote knob (mounts on dash/console) for real-time bass level adjustment.

SPECIFICATIONS

• RMS Power	250W
• Speaker Impedance	0.4Ω
• THD	<1%
• Signal-to-noise Ratio	>85dB
• Frequency Response	20-150Hz
• Low Level Input Sensitivity	0.1-6V
• Low Pass Filter	50-150Hz
• Bass Boost	0-12dB
• Fuse Rating	25A
• Subwoofer	6.5"
• Dimensions(L x W x H) mm	8.62" x 7.64" x 3" (219 x 194 x 77mm)

TROUBLE SHOOTING

Amplifier will not power up	<ol style="list-style-type: none"> 1. Verify $\geq 12V$ DC at +12V terminal 2. Check ground connection on clean bare metal 3. Confirm $\geq 5V$ DC at REM terminal 4. Inspect/replace all fuses 5. If Protection LED is lit: Power cycle amplifier
Protection LED illuminated	<ol style="list-style-type: none"> 1. Check speaker wires for short circuits 2. Reduce head unit volume to prevent clipping 3. Reset amplifier 4. If persistent: Service required
No audio output	<ol style="list-style-type: none"> 1. Verify RCA cables connected to correct inputs 2. Confirm $\geq 5V$ DC at REM terminal 3. Check ground connection 4. Inspect/replace fuses 5. Validate speaker wiring integrity
Low output level	<ol style="list-style-type: none"> 1. Reset Level Control to midpoint 2. Adjust Crossover Control: <ul style="list-style-type: none"> • Low-pass: 80Hz for subs • Bypass if using head unit crossover
Excessive hiss noise	<ol style="list-style-type: none"> 1. Disconnect all RCA inputs → If hiss stops, reconnect components one-by-one to locate noise source 2. Set amplifier gain to minimum 3. Maximize head unit volume (without distortion)
Squealing noise is present.	<ol style="list-style-type: none"> 1. Verify RCA cables not parallel to power wires 2. Ensure head unit and amplifier share single ground point 3. Install ferrite chokes on RCA cables if persistent
Distorted output	<ol style="list-style-type: none"> 1. Reduce Input Level Control until distortion disappears 2. Confirm crossover frequency settings: <ul style="list-style-type: none"> • Low-pass: 60-80Hz for subs • Slope: 24dB/octave recommended 3. Test speaker impedance with multimeter
Amplifier overheating	<ol style="list-style-type: none"> 1. Verify speaker impedance \geq minimum rated Ω 2. Maintain $\geq 2"$ clearance around amplifier 3. Install 12V cooling fan if ambient temp $> 35^{\circ}C$ 4. Check for clipping (reduce head unit bass boost)
Engine noise (static)	<ol style="list-style-type: none"> 1. Replace with shielded twisted-pair RCA cables 2. Reroute RCA cables $\geq 12"$ from vehicle harnesses 3. Add ground loop isolator (Recoil Audio MGLI)
Alternator whine	<ol style="list-style-type: none"> 1. Check ground loop between head unit/amplifier 2. Reground head unit to dashboard metal frame 3. Insert ground loop isolator in RCA path 4. Upgrade battery-to-chassis ground cable to pure copper 8AWG

SAFETY & OPERATION WARNINGS

⚠ ELECTRICAL HAZARD PREVENTION

Disconnect negative battery terminal before installation
 → Exclusive for 12V negative-ground vehicles (verify vehicle manual)

⚠ HEARING PROTECTION

2. Sound pressure exceeds 100dB at maximum volume
 → Limit continuous exposure to ≤15 minutes (OSHA/CE audio safety standard)

⚠ WARRANTY VOID CONDITIONS

3. Warranty invalidated if:
 • Panel removed (tamper-proof seals broken)
 • Water damage from non-condensation sources
 • Burn marks on PCB

⚠ ENVIRONMENTAL LIMITS

4. Operational thresholds:
 Parameter Range
 Temperature -20°C to 65°C
 Humidity ≤90% non-condensing
 UV Exposure Direct sunlight ≤2 hrs/day

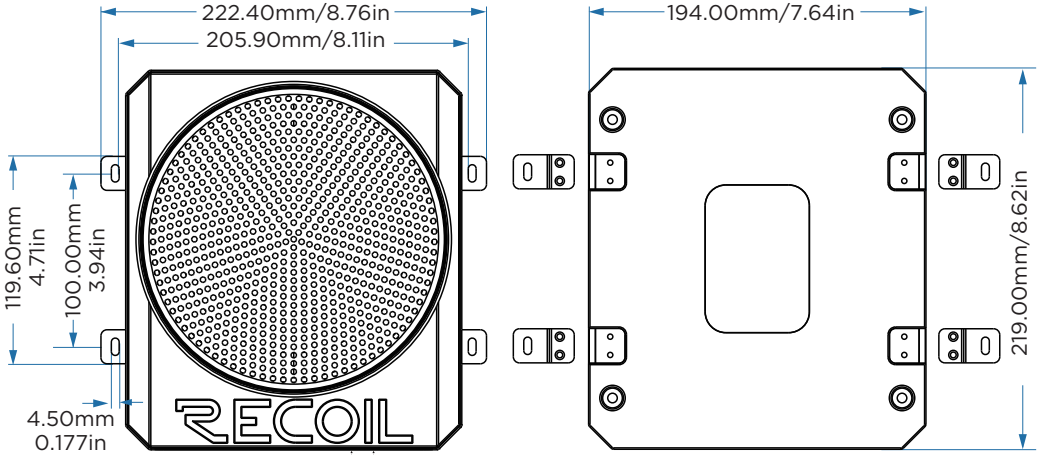
⚠ PROFESSIONAL INSTALLATION REQUIRED

5. Certified MECP technician recommended for:
 • Optimal ground point selection (≤0.5Ω resistance)
 • DSP integration calibration

COMPLETE PACKAGE CONTENTS

Item	Description Quantity
Main Unit	• SS65 Active Subwoofer X 1
Signal Adapters	• Molex-to-RCA Adapter Cable X 1
Control Accessories	• Remote Bass Knob X 1 • Knob Mounting Template X 1
Mounting System	• L-Brackets (Black Anodized) X 4 • M4×12mm Hex Screws X 4 • M3×8mm Countersunk Screws X 8
Anti-Vibration Pads	• 100×25mm Hook/Loop Strips X 4
Documentation	• User Guide X 1

DIMENSIONS



Power plug 1 pcs

