

ROCKVILLE

PS20

2-CHANNEL IP65 ATV/UTV/MOTORCYCLE
MICRO AMP w/WIRELESS STREAMING

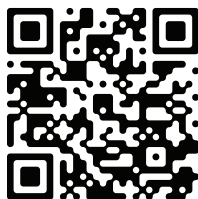
OWNER'S MANUAL

ATTENTION:
WATCH THIS VIDEO BEFORE FIRST USE!

Scan the **QR code** or visit
rockvillesupport.com/ps20 for essential information,
guides (video and/or written), and tips to make the most out
of your purchase.

If you prefer written instructions, please read ahead!

With Rockville you get many options.



Missing items? If you ordered a bundle that includes more than one product and you are missing part of your bundle, it simply means that your order was shipped from two different warehouses. You will receive the remaining items very soon. If you have any concerns or questions, please feel free to call our customer support center at 1-646-758-0144, 24 hours a day, 7 days a week.

רועה נאמן

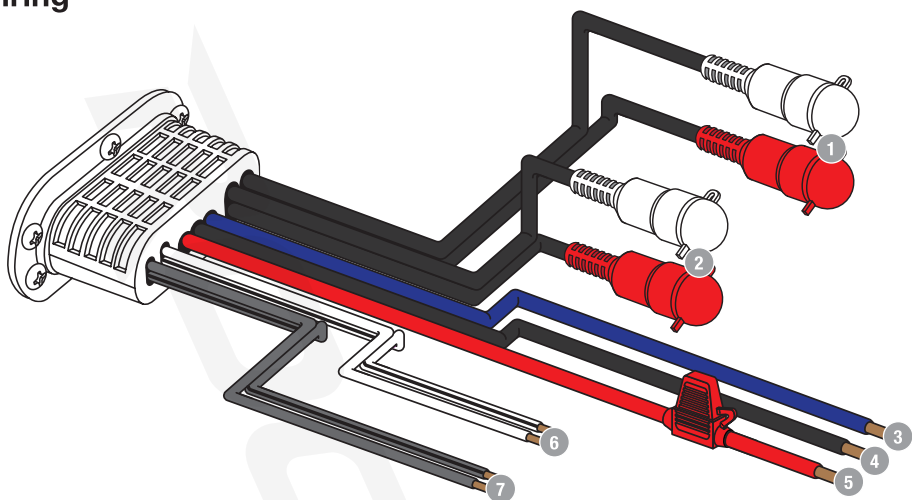
Thank you for purchasing the Rockville PS20 amplifier. Please read this manual carefully to ensure proper use. If you need assistance, please call our technical support help line at 1-646-758-0144, 24 hours a day, 7 days a week.

IMPORTANT SAFETY INSTRUCTIONS



- To reduce risk of electric shock, never open the unit. There are no user serviceable parts, refer service to the Rockville service center.
- Please ensure that the unit is situated in a properly ventilated area.

Wiring

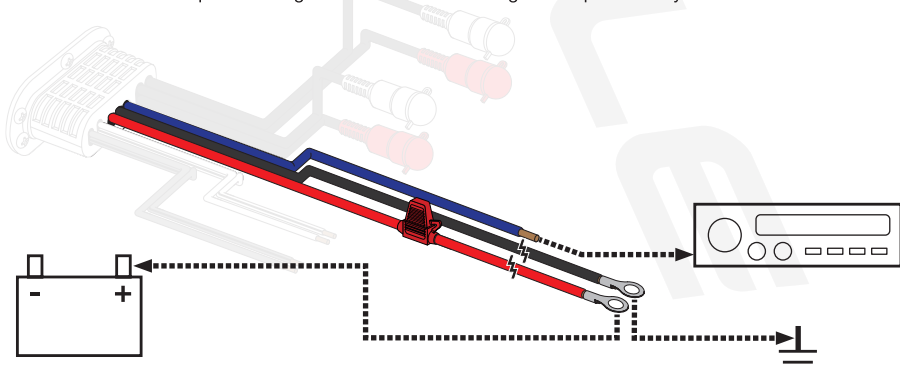


1. Left (white) and Right (red) inputs
2. Left (white) and Right (red) outputs
3. Remote turn-on cable (blue)
4. Ground cable (black)
5. Power cable with in-line fuse (+12V, red)
6. Left negative (white w/black stripe) and Left positive (white) speaker output cables
7. Right negative (grey w/black stripe) and Right positive (grey) speaker output cables

Power Connections

1. Make sure to disconnect the **NEGATIVE (-)** terminal from your vehicle's battery.
2. Attach a 10-gauge or heavier wire to the black wire from the harness marked **GND**. The connection should be as close to the amplifier as possible. The wire should terminate in a ring connector. Connect the ring connector to a metal part of the vehicle's chassis, making sure that there is no paint or other insulator that will block a good ground connection. If necessary, you can connect to the battery's negative terminal.
3. Attach a 10-gauge or heavier wire to the red wire from the harness labeled **+12V** to the battery's **POSITIVE (+)** terminal. The power wire should terminate in a ring terminal connected directly to the **POSITIVE (+)** terminal.
4. Connect the blue remote wire to the remote output on the head unit using 18-gauge or heavier wire. This connection is responsible for turning the amplifier on and off with the rest of the system. If your head unit does not have a power-on wire, you can wire the remote terminal to an accessory wire that turns the amplifier on with your vehicle's ignition.

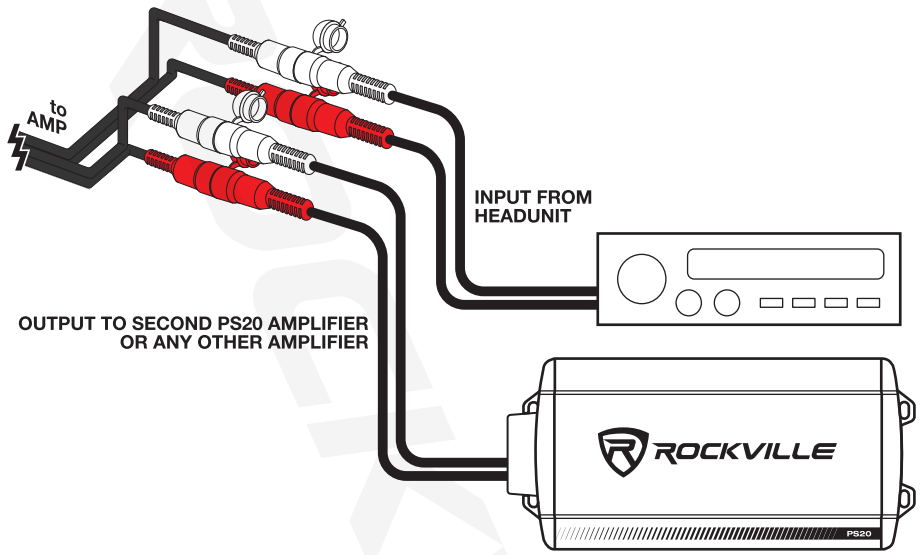
Please note that it is a good practice to feel the power and ground wires near the amplifier after using it for a while. If the wires feel hot, you probably have a bad or loose connection. If the wires still feel hot after adjusting the connections, you should upgrade to the next heavier gauge wire. Since vehicle vibration can loosen connections, it is recommended that all power and ground wires be tightened periodically.



Input Configurations

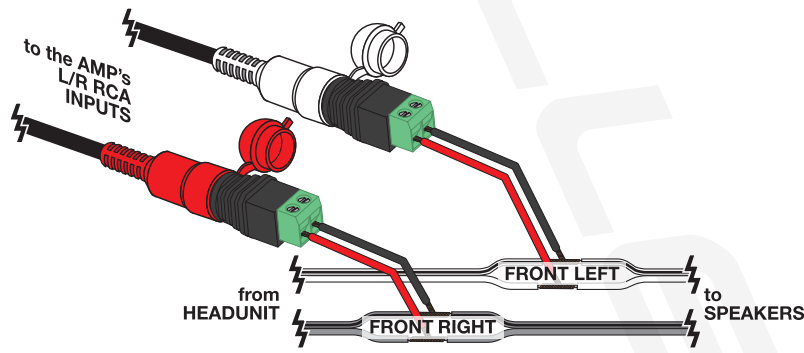
Low Level Input

Connect the RCA outputs of your head unit to the Left and Right RCA input jacks of the amplifier. The PS20 amplifier has RCA pre-amp line outputs for feeding a full-range signal to a secondary full-range amplifier in a multi-amplifier system. Be sure to run the RCA cables SEPARATE from your power, remote, and ground cables. This will prevent unwanted noise and interference.



High Level Inputs

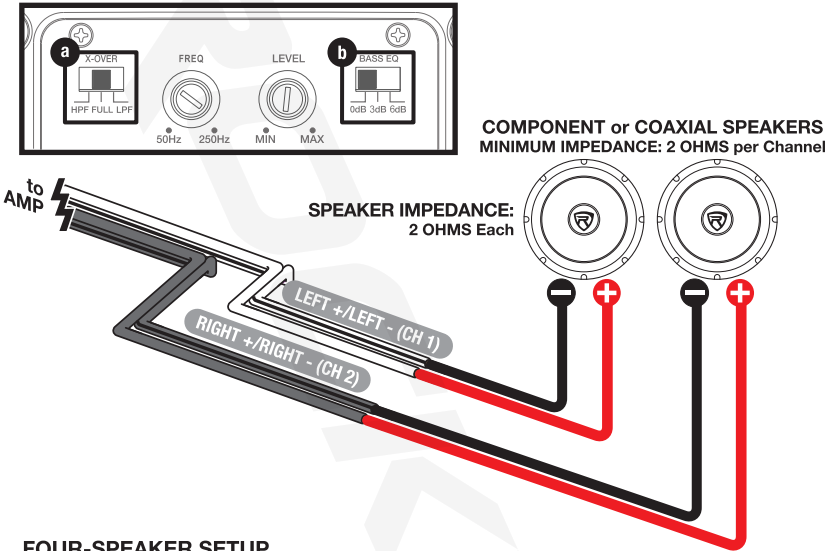
Many factory radios do not have preamp outputs, so the PS20 has High Level inputs. High Level inputs, also called speaker level inputs, allow you to connect the factory speaker wires. They are called High Level inputs because they convert the high voltage running through the factory speaker wires to a voltage that the amplifier can handle. These inputs provide the end user with clean, well-defined sound for optimal musical enjoyment. PLEASE NOTE: The High Level inputs also feature Auto-Start Smart Turn-On. This feature senses when a signal is present from the head unit and automatically turns on the amplifier, eliminating the need for a Remote Turn-On wire.



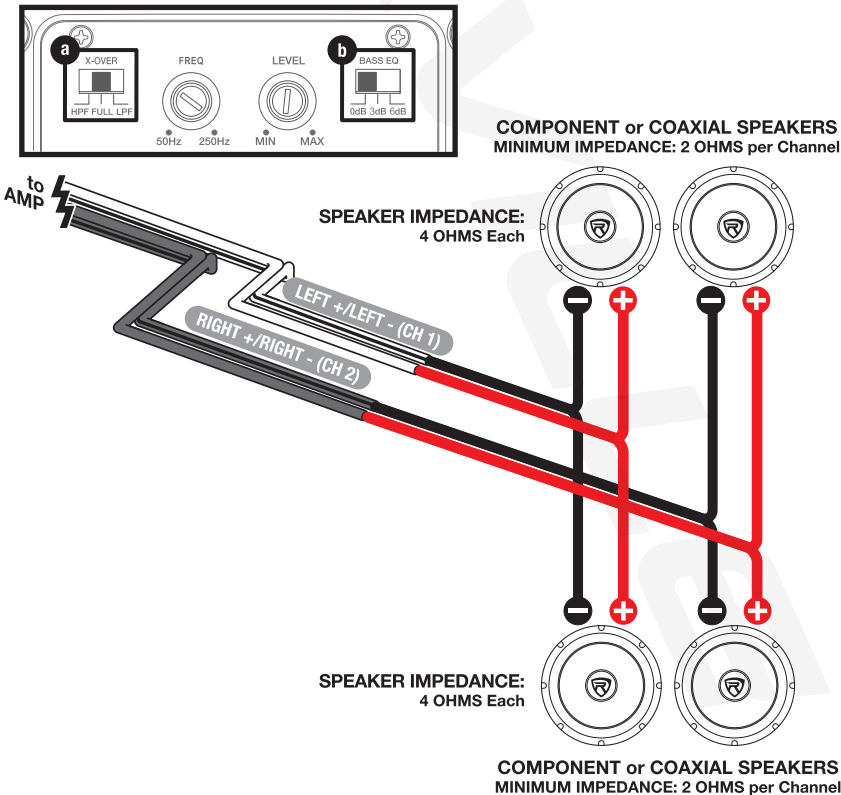
Output Configurations

Install any two or four speakers, being careful not to load any channel below 2 ohms. For typical speaker installations, set the Crossover Mode Switch (a) to full range (FULL). For typical 6" x 9", 6.5", component or coaxial speaker installations, set the Crossover Mode Switches to full range (FULL) or HPF, depending on your setup and the speakers you are using. Set the BASS EQ (b, see page 8) to 0dB.

TWO-SPEAKER SETUP



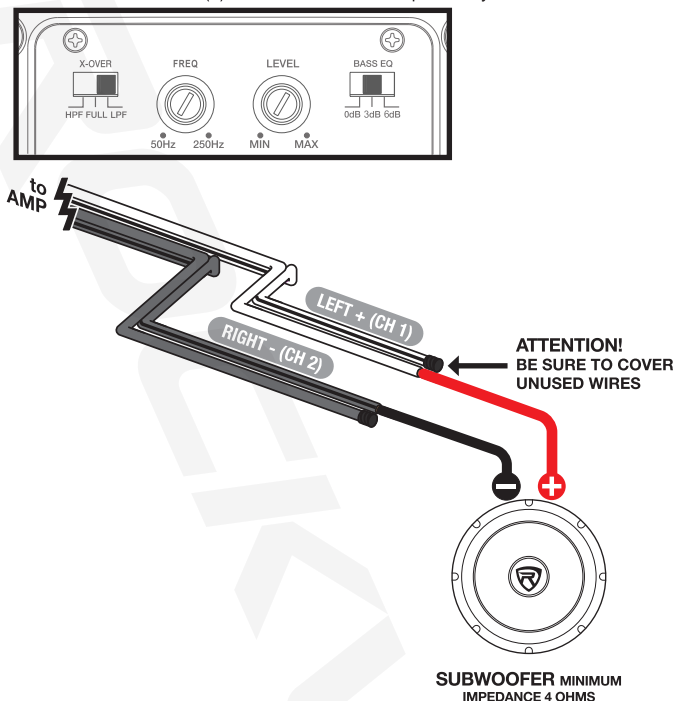
FOUR-SPEAKER SETUP



Output Configurations (continued)

Subwoofer Wiring

Install any subwoofer as shown below, taking care not to load the amplifier below 4 ohms mono. Set the crossover mode switch (a) to LPF. Use the BASS EQ (b) to boost the bass response by 3 or 6 dB.



Adjusting the System

1. Once the system is set up, set the crossover to the approximate settings. For a basic full-range system, set the X-Over switch to full-range (FULL) or high-pass (HPF) and the crossover around 100 Hz. Use a small flathead screwdriver to turn the control. Do not use force when turning the knob, as this could break the knob. For a simple subwoofer system, set the X-Over switch to LPF (Low Pass Filter) and the crossover to around 100Hz. As mentioned earlier, use a small flathead screwdriver to turn the knobs, being careful not to apply too much pressure.
2. Adjust the input sensitivity of the amplifier using the control located on the side of the amplifier marked LEVEL (gain). Turn it counterclockwise to the MIN position. Set your head unit's volume gain to the maximum it can go before the signal distorts, or to the loudest gain, which is usually about 75% - 85% for most head units (you can also use an oscilloscope to see at what gain level your head unit distorts). If you start to hear distortion, turn the gain back down until the signal is no longer distorted. Now turn the amp's LEVEL control clockwise until you hear distortion, then turn it counterclockwise until the distortion is gone. The amp's input sensitivity is now set. It is helpful to have a second person help you adjust the gain. If you are setting up a multi-amp system, adjust the gain controls on each amp separately. Start with the bass amp, then adjust the treble amp's gain control to match. Please note that the amplifier's gain control should not be confused with a volume control. It is a sophisticated device designed to match the output level of your source to the input level of your amplifier. Do not set the amplifier level to maximum unless your input level requires it. Your system can also be extremely sensitive to noise if the input level is set to maximum and does not match your input signal. These adjustments only need to be made once when you first set up your system.
3. Once you are satisfied with the level control settings, use any of the equalizer controls to adjust the tonal level of the system to your personal preference. Keep in mind that after equalizing, you may need to go back and reset the amplifier's gain controls. **If your system has been professionally installed, please do not change the gain settings set by the installer, he or she is the professional!**
4. Be sure to place the supplied silicone cover over the panel to protect it from water, dust, etc.

Features

Wireless Streaming

When the unit is turned on, the Bluetooth LED (located on the left side of the unit) will start flashing to indicate that it is in pairing mode. Locate and select PS20 from the list of available Bluetooth devices on your device. If pairing is successful, the LED will remain solid blue. Please note that a Bluetooth connection will override the RCA input. If you wish to return to the RCA input, you will need to disconnect from your device.

Bass EQ

The Bass EQ allows you to add 3dB or 6dB of bass boost. Use the equalizer to tailor the bass response to the needs of your system. Make sure your speakers can handle the extra power.

Frequency Control

The frequency control allows you to set the frequency range of the selected X-OVER setting. For example, if your X-OVER is set to HPF, you can set the knob to 150Hz, which will prevent your speakers from reproducing any frequencies below 150Hz.

Status LED

This model has an LED (located on the right side of the wiring harness) that indicates the status of the amplifier. The LED will light green when the amplifier is receiving proper power, ground, and remote voltages. If the amplifier encounters any of the diagnostic conditions listed below, the LED will light red, indicating a diagnostic condition. When a diagnostic condition is detected, the amplifier will enter self-preservation mode and eventually shut down if the cause of the diagnostic condition is not corrected.

Thermal Protection: If the amplifier reaches an unsafe operating temperature of 80 degrees Celsius, the amplifier will shut down. Once the amplifier cools down to a safe temperature, it will automatically turn on again. If you live in a hot climate, we recommend installing additional cooling fans to remove the hot air that can build up in an enclosed space. This will help keep the ambient temperature as low as possible, allowing your amplifiers to function properly without interruption.

Speaker Short Protection: If your speakers short-circuit due to voice coil burnout, or if the amplifier senses an impedance too low to handle, the protection LED will illuminate red, indicating a diagnostic condition. Turn off your system, disconnect one speaker at a time, and try to determine which speaker may be faulty. Correct the condition and restart the amplifier. After correcting a diagnostic condition, you must reset the amplifier by turning it off and then on again using the remote power connection. (Turn your radio off and then on again.)

Input Overload Protection: This circuit will either shut down the amplifier completely or cause the amplifier to cycle on and off, indicating that it is in a diagnostic state. Turn off the system and reduce the gain on the amplifier or the volume on your head unit. This should correct the condition.

DC Offset Protection: If DC voltage attempts to enter the amplifier through the speaker terminals, the amplifier will shut down and not operate until the condition is corrected. This circuit also prevents damaging high DC voltages from reaching your speakers should your amplifier ever malfunction.

PLEASE NOTE: You must reset the amplifier by turning it OFF and then ON again after correcting a diagnostic condition (turning your radio OFF and then ON again). If the amplifier remains in protective mode after a reset, it is most likely defective.

Additional Features

- Built-in Wireless Streaming with Auto Pairing (You can run this amp without any receiver)
- IP65 waterproof rating
- Waterproof silicone covers on all inputs and control panel
- Conformal coated circuit board
- Anti-rust materials
- Micro Size amplifier can easily fit in tight spaces making it perfect for Motorcycles, UTV, ATV, etc
- Digital Class D Audio Topology
- Full Range/Low Pass/High Pass Crossover
- RCA Low level inputs and High Level Inputs (with Auto ON)
- Waterproof RCA Input
- High-Speed MOSFET Power supply
- Status mode LED Indicator
- Wireless Streaming mode LED indicator

Specifications

- Dyno Certified RMS Power Ratings <1% THD (Use these ratings when comparing with top premium brands)
 - 2 Ohms: 300 Watts (2 x 150 Watts)
 - 4 Ohms: 180 Watts (2 x 90 Watts)
 - 4 Ohm Bridged: 300w (1 x 300 Watts)
- Peak power at 2 Ohms: 1200 Watts (Use these ratings when comparing with the top budget brands such as Boss, Power Acoustik, etc)
- Variable LPF/HPF Crossover: 50Hz – 250Hz
- Selectable 0/3/6dB Bass Equalizer
- Frequency Response: 20Hz – 20kHz
- Signal to Noise Ratio (1 Watt into 4 Ohms): $\geq 75\text{dB}$
- Input Sensitivity: 0.5V-15V
- Distortion (THD): $\leq 0.5\%$
- Stereo Separation: $\geq 45\text{dB}$
- Fuse Rating: 30A
- Dimensions (Inches): 7.56 L x 3.66 W x 2.07 H

Troubleshooting

PROBLEM	SOLUTION
Unit will not power up	<ol style="list-style-type: none"> 1. Check your ground connection. 2. Check that the Remote Input Turn-On has at least 5V DC. 3. Check that there is battery power going to the +12V terminal. 4. Check all fuses, replace if necessary. 5. Make sure the Status LED is not red. If it is, shut off the amplifier briefly and then turn it back on.
Status LED is red when amplifier is powered up	<ol style="list-style-type: none"> 1. Turn down the volume control on the head unit to prevent overdriving. 2. Check that there is good air flow around the amp. 3. Check the STATUS LED section on page 8 for more information. 4. Check speaker wiring polarity. 5. Check power, ground, and remote wiring. 6. Check voltages.
No Output	<ol style="list-style-type: none"> 1. Check the fuse. 2. Check that the unit is properly grounded. 3. Check that the Remote Input Turn-On has at least 5V DC. 4. Check that all inputs to the unit are properly connected. 5. Check speaker wiring and that you've observed proper polarity. 6. Check the input source's power and output settings. 7. There is a setting on your receiver that can disable your RCA outputs. The setting is under fader/balance control. On your receiver navigate to fader/balance and find the setting, then make sure you enable front, rear, and sub pre-amp outputs. Sometimes the head unit will allow you only to enable front and rear, which would cause the amp to have no sound.
Wireless Streaming	<ol style="list-style-type: none"> 1. Make sure that your Bluetooth device is discoverable. 2. Make sure you've selected the proper source. 3. Make sure that the wireless streaming device is within 5 feet of the unit. 4. Make sure that the unit is not paired to another device.
Low Output	<ol style="list-style-type: none"> 1. Check that all inputs to the unit are properly connected. 2. Check the input source's power settings. 3. Check the head unit's/radio's settings. 4. Check gains on the amp and X-OVER.
High Hiss in the sound	<ol style="list-style-type: none"> 1. Check that all inputs to the unit are properly connected. 2. It is best to set the amplifier's gain control as low as possible while still maintaining enough headroom to power your speakers. The best subjective signal-to-noise ratio is achieved in this manner. Try to set the head unit's volume level as high as possible without distortion.
Squealing noise is present	Check for improperly grounded RCA interconnects. Keep the audio and power cables separated.
Distorted sound	Check that the Level control is set to match the signal level of the head unit and bring it back down.
Engine noise: Static type	<ol style="list-style-type: none"> 1. Route your input cables away from the vehicle's wiring. 2. Use high quality RCA cables.
Engine noise: Alternator whine	<ol style="list-style-type: none"> 1. Check that the RCA grounds are not shorted to the vehicle chassis. 2. Check that the head unit is properly grounded.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

Responsible party name: Rockville

Address: 600 Bayview Ave.

Entrance A

Inwood, NY 11096

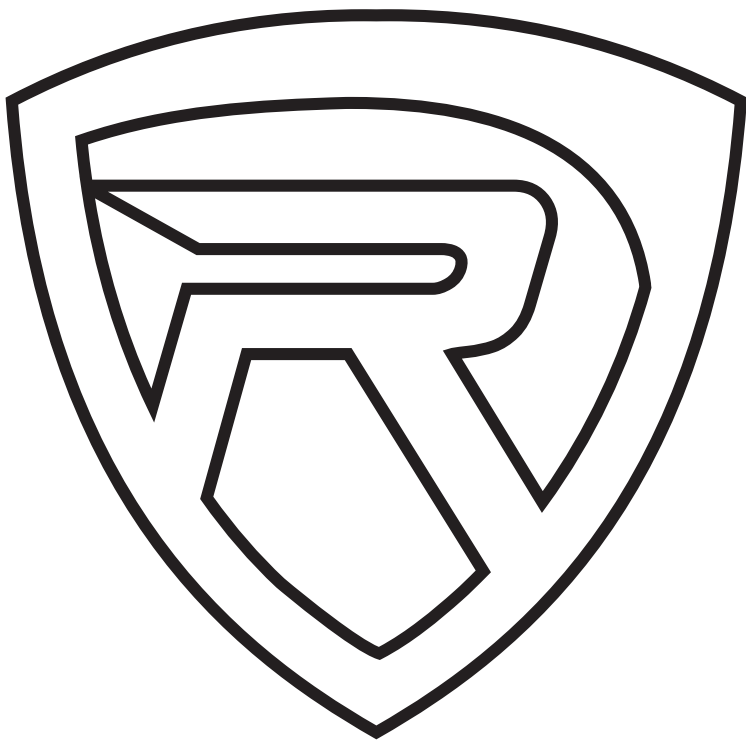
Hereby declares that the product(s) PS20 complies with FCC rules as mentioned in the following paragraph:

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ROCKVILLE



RockvilleAudio.com

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