

How to Use the Audio Authority Model 1020VS A/V Bench Test Unit

WARNING: Do not connect AMPLIFIER outputs to the SPEAKER terminal block. Damage to the 1020VS will result.

The Model 1020VS enables quick functional testing of consumer electronics car audio, home audio, video and home theater equipment, as is needed in retail stores and service centers. It can test products such as DVD players, VCRs, CD and tape players, preamps, equalizers, receivers (including 5.1 channel home theater receivers), power amps and speakers. The 1020VS uses a self-contained car CD or tape unit (not supplied) as a signal source and monitor for RF CD changers. It uses an external video monitor (not supplied) as a video output device. The 1020VS's visual and audible monitoring facilities allow rapid verification of output presence, level, balance and distortion. If desired, test channels can be displayed on an oscilloscope (not supplied) for in-depth analysis.

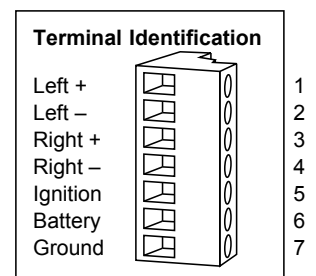
The Model 1020VS includes PCM digital-to-analog conversion, a 5-channel, 25 watt-per-channel load box, built-in monitor amplifier and speakers, and support for personal stereos, computer speakers, FM antenna signals and RF CD changer inputs. The 1020VS may be powered by a 5-amp, 12-volt DC power supply if the front-panel DC terminals are to be used for powering car audio units; or if car power is not needed, it may be powered by a 1.5-amp wall pack power supply (must be ordered separately).

Preparation for Use

1. Select either an Audio Authority 13.8-volt, 5-amp power supply, part number 572-012, priced at \$35.00, for car audio testing or a 1.5-amp wall-mounted supply, part number 571-006, priced at \$7.00. Hookup cable for the 5-amp power supply is included with this product. You will also need some or all of the following common items, depending on your application:
 - (4) stereo RCA patch cords
 - (5-7) pieces of stripped and tinned 18 gauge speaker wire
 - (1) F-to-F cable
 - (1) F-to-Motorola cable
 - (1) mini-phone plug patch cord
 - (1) component video cable
 - (1) composite video cable
 - (1) S-Video cable

You may leave some or all of these cables connected to the 1020VS, except for the Left and Right speaker outputs, where we recommend you disconnect wires which could short and cause damage.

2. Use any DIN-mount car CD or tape player as the signal source and CD changer RF demodulator. Install the radio DIN bracket in the front panel cutout of the 1020VS, insert the radio and support it at the rear with a back strap screwed to the hole provided in the back panel of the 1020VS. You will have to bend and adjust the backstrap as you would in a car installation. Wire a speaker-output unit to the 7-position terminal block as shown. For your convenience, you may remove the terminal block while connecting the wires.
3. If a Speaker Level only radio is installed as output device, wire terminals 1-7 as above using the front channel outputs and DC connections of the radio, and plug the terminal block into the port on the circuit assembly in the 1020VS. If the radio has both Line Level (RCA) and Speaker Level outputs, you should connect only the RCA cables to the radio and the jacks on the back of the 1020VS labeled LINE SOURCE. (There is no advantage to connecting both the RCA outputs and the Speaker outputs of the radio to the 1020VS.)

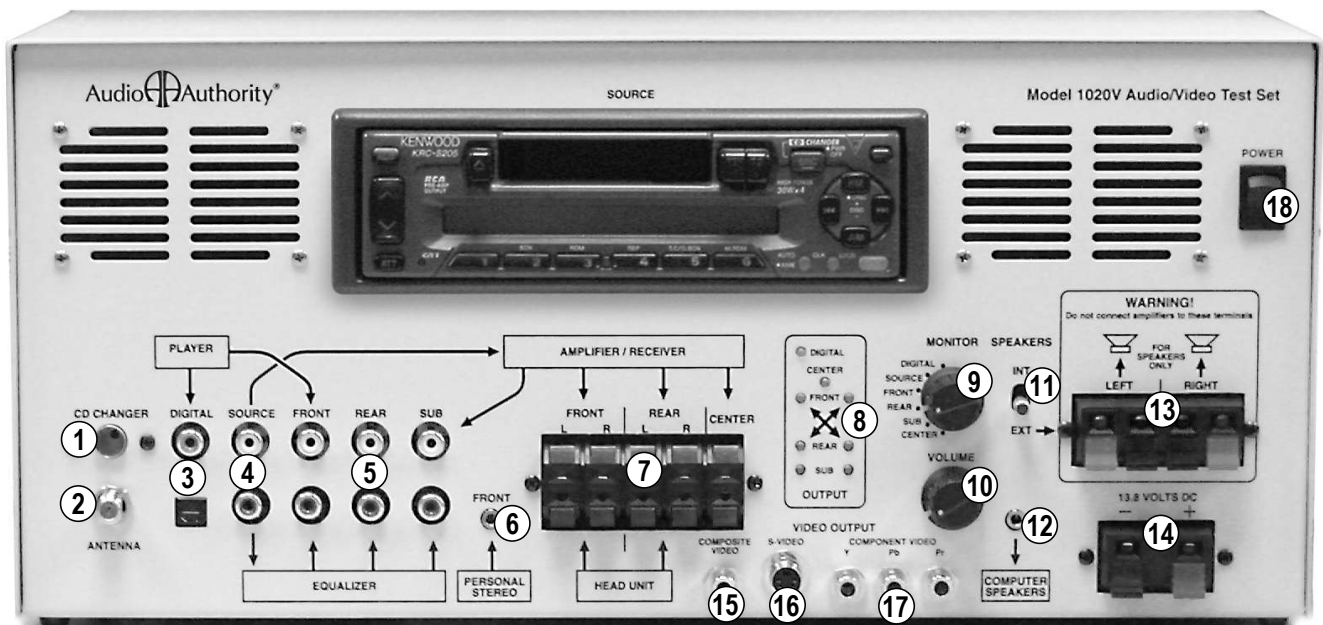


4. Plug the internal Motorola cable into the antenna jack of the radio. To use the internal RF distribution feature, you must connect an indoor or outdoor antenna or signal generator to the 75-ohm Antenna jack located on the rear panel.
5. Connect a video monitor to all three video pass-through jacks.
6. Perform the Self-test described on page 3.

Operation

The 1020VS's front panel is pictured below. It contains the various jacks and terminals necessary for connecting the products for test. Please familiarize yourself with the panel facilities:

- 1) CD Changer jack: Accepts CD changer RF output
- 2) Antenna jack: Provides FM-band signal for FM tuners and receivers
- 3) Digital jacks: Accept coaxial or optical PCM audio
- 4) Source jacks: Provide a stereo test signal
- 5) Front, Rear, Sub jacks: Accept line-level audio
- 6) Personal Stereo jack: Accepts headphone or line-level audio
- 7) Front, Rear, Center terminals: Accept speaker-level outputs
- 8) Output indicators: Show activity on 7 analog and one PCM digital channel
- 9) Monitor switch: Selects which inputs will be monitored
- 10) Volume control: Adjusts level of self-contained speakers
- 11) Speaker switch: Selects internal speakers for monitor or external speakers for test
- 12) Computer Speakers jack: Provides fixed line-level signal for powered speakers
- 13) Left/Right Speaker terminals: Provides powered test signal for speakers (DO NOT connect amplifier here)
- 14) 13.8 Volts DC terminals: Provides DC power for car audio products (requires 5-amp power supply)
- 15) Composite video pass-through: accepts composite output
- 16) S-Video pass-through: accepts S-Video output
- 17) Component video pass-through jacks: accept Y Pb Pr component video output
- 18) Power switch--Turns 1020VS and internal Source radio on/off without losing station presets in radio



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Test Modes

Many test modes are supported by the 1020VS. We will describe some of them to illustrate the use of this product. In the descriptions that follow, some distinction will be made between home and car audio. In many cases, however, the only difference between the two is the source of power, whether a wall outlet or a 13.8-volt source such as the front-panel DC Power terminals of the 1020VS. Please notice that the front panel prompts you graphically with the hookup of common configurations. With a little practice, you can learn to test virtually any home or car audio product that comes across your bench without reference to the instructions printed here.

Note that you may have to adjust the Source radio controls or the video monitor for certain tests, such as tuning the FM receiver for an RF-output CD changer, or component vs. S-Video.

Self Test

Turn on the Power switch. Select the Source position on the Monitor dial (9) and Internal Speakers (11). Preset the 1020VS Volume Control to 9 o'clock. Connect a jumper between the Source (3) and Front jacks. Play the disk, tape or radio of the internal Source unit and adjust its volume control upward until the Front Output indicator lights (8) begin flashing strongly. Sound is heard from the internal speakers. Leave the Source volume control in this position for all tests.

DVD/VCR

Connect the player's video output to the appropriate video jacks and play a disk or tape. The video monitor will show the output, indicating video signal presence (make sure the video is set to receive the type of video connected to it). To test audio, connect audio output as directed below, select Internal Speakers (11) and adjust the volume level (10) as desired.

CD/Tape Player

Connect the player's output to the Front (5) and/or Digital (3) jacks, as shown on the panel graphic. Play a disk or tape. The Front Output lamps (8) will light, indicating channel presence. Select Digital or Front on the Monitor dial (9) as needed, select Internal Speakers (11) and adjust the volume level (10) as desired.

CD Changer

Plug the line-level output of a changer to the Front jacks (5) and operate as CD/Tape above. Plug RF changer into the CD Changer jack (1), select Front on the Monitor dial (9). Front Output lamps (8) light and sound is heard on the internal speakers.

Car Head Unit

Connect speaker outputs to the Front and Rear terminals (7) as shown on the graphic. Plug an antenna cable in (2), connect ignition and battery wires to the red (+) 13.8 Volt terminal and ground to the black (-) terminal (14). Front and Rear Output lamps (8) illuminate to show active channels. Select Front and Rear on the Monitor dial (9), as needed. Plug line level outputs, if present, into the Front and/or Rear (5) RCA jacks (speaker terminals are then inactive) and test as for speaker outputs.

Equalizer

Connect the inputs to the Source jacks and front, rear and sub outputs to their respective jacks on the 1020VS. The output lamps for the channels that are present light up. Select Front, Rear and Sub Monitor. Note: Sub monitor output will be weak but audible through the small full-range speakers built into the 1020VS.

Receiver

Plug a line input of a receiver into Source (4). Plug the Sub output of a home receiver into either Sub jack (5). Connect the speaker outputs to the Front, Rear and Center terminals, as needed (7). Observe the Output indicators (8) and select the appropriate channels to Monitor (Mono sub signals light only one Sub Output lamp). Check a tuner section using the Antenna (2) signal.

Power Amp

Connect speaker outputs to the Front and Rear terminals (7) as needed. Plug the amplifier input into the Source jacks (4). Observe Output lamps (8) and Monitor (9) the desired pair of channels. You may wish to use a Y-adaptor to drive four-channel amps. Note: the internal 25 watt-per-channel load box is protected by self-resetting fuses. Excessive output will open the fuses, removing the load from the amplifier under test.

Speakers

Connect speakers to the Left and Right terminals (13), select Source on the Monitor dial (9) and External Speakers (11). Adjust 1020VS Volume control (10).

Personal Stereo

Plug the line or headphone output into the Personal Stereo jack (6) and play radio, disk or tape. Select Front on the Monitor dial (9).

Computer Speakers

Plug the input to the Computer Speakers jack (12), which provides a fixed level signal. Adjust volume using the computer speaker's volume control.

Digital Sources

Plug the output into either the coax or optical ports (3) and select Digital on the Monitor dial (9).

Other Products

Choose the 1020VS inputs and outputs that match the connectors on the product you want to test. Note: line-level signals are about 1 volt. The 1020VS is not designed to test the millivolt signal levels of magnetic phono cartridges or microphones.

If you experience difficulty during setup or operation of the Model 1020VS, call the Audio Authority Service Hotline at 800-322-8346 for assistance.



2048 Mercer Road, Lexington, Kentucky 40511-1071
Phone: 859/233-4599 • Fax: 859/233-4510
Customer Toll-Free USA & Canada: 800/322-8346
Website: <http://www.audioauthority.com>

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