A note about wiring: In addition to the tools listed, your EQ or active crossover installation will require power and ground wiring, plus RCA cables, terminals, and a remote turn-on lead. The easiest way to get all of these items is in an amplifier wiring kit, available at crutchfield.com.

As with any car audio/video installation, your first step is to disconnect the negative terminal of your car battery to prevent short circuits. Check your Crutchfield MasterSheet™ (available for most vehicles) or vehicle owner’s manual for specific directions. In some vehicles, disconnecting the battery may require you to re-enter a security code or have the dealer reset the internal computer.

Tools Needed: (depending upon vehicle)

- Screws
- Phillips Screwdriver
- Flat Blade Screwdriver
- RCA Patch Cables
- Soldering Iron
- Socket & Ratchet Set
- Wire Stripper/Crimp Tool
- Drill & Bit Set
Crossovers

**Passive crossovers:**
A passive crossover steps into the signal path after the amplification. It’s a capacitor or coil usually installed right on your speaker lead. Crutchfield carries passive high-pass crossovers called Bass Blockers that clean up the sound of midrange speakers and tweeters by removing the low frequencies. To install:

1. Remove your speaker from its position in your doors, dash, or other mounting location following the directions in the Speaker Installation Guide or your Crutchfield MasterSheet™ (available for most vehicles).
2. Disconnect the positive speaker lead from the speaker, and connect the bass blocker to the speaker in its place. Connect the positive speaker lead to the other end of the bass blocker, and test the speaker’s operation. Re-install your speaker.

**Active crossovers:**
Installing an active crossover requires a little more work. You have to connect 12-volt power, ground, and a turn-on lead. The active crossover gets installed between your receiver and your amplifier — many active crossovers have both speaker-level and preamp inputs, so they can usually accommodate either type of connection. The outputs will be preamp-level connections to your amplifier.

1. **Mounting the crossover:** A crossover can be securely mounted with just a few screws. Anywhere between the receiver and the amp is fine. Most people mount the crossover in the trunk near their amp, especially if they have more than one amp. This also makes it easier to add additional amps later. Mount the crossover where it will be easy to get to so that you can make adjustments without too much trouble. Don’t mount your electronic crossover directly on steel — you will invite noise problems. Instead, install it on a non-conductive board and attach the board to the car body; or, use rubber grommets under the screws to isolate the crossover.

**CAUTION:**

Always be careful when drilling or cutting in a vehicle. Be aware of things such as wiring, windows, fuel lines and safety devices. Check drilling/cutting depth and location to avoid damage to vehicle appearance.

To install a bass blocker: disconnect the positive speaker lead from the speaker, and connect the bass blocker to the speaker in its place. Connect the positive speaker lead to the other end of the bass blocker, and re-install the speaker.
2. Making the power connections: Your crossover will require 12-volt power, ground, and turn-on signal.

A. To obtain 12-volt power, cut a length of small-gauge cable (16-gauge is typically sufficient) long enough to reach from the crossover location to your vehicle's fuse panel. Strip one end of the wire, and attach it to the crossover's power input. This may require a crimp-on connector, or bare wire might be sufficient, depending on the equipment you're installing.

B. To ground the crossover, remove a bolt near the crossover mounting location. Scrape away any paint and clean the bolt location thoroughly. Crimp a ring terminal to one end of a length of small-gauge wire, and then bolt the terminal tightly to the vehicle's metal chassis. If you can't find a convenient ground screw or bolt, drill a hole for one — be careful not to drill into the gas tank or a gas or brake line.

C. Making the turn-on connection: In most cases, you can tap into your in-dash receiver's amp turn-on lead to get a turn-on signal for your crossover. This can be done at the amplifier or the receiver, whichever is most convenient. If the crossover is mounted near the amp, you can connect the crossover's turn-on lead to your amp's remote turn-on terminal. If that isn't practical, remove the receiver from the dash to access the turn-on wire (usually a blue wire). For step-by-step instructions on removing your vehicle's radio, see your vehicle-specific Crutchfield MasterSheet (available for most vehicles), or read our In-Dash Receiver Installation Guide. Next, strip the insulation off a small section of this wire coming from the radio. Strip the insulation off another small-gauge cable that's long enough to reach from the in-dash receiver to the crossover, then connect the two with crimp caps or solder. Wrap the solder or crimp connection with electrical tape, or use heat-shrink tubing, to guard against a short. Using wire ties to secure the wire, route the turn-on lead behind your dash and all the way to the crossover mounting location.

3. Making the signal connections: In most cases, you'll be routing RCA cables from your in-dash receiver's preamp outputs to the inputs of your crossover. While your receiver is out of the dash, connect a set of RCA patch cables (long enough to reach your crossover in its mounting location) to these outputs, taping them together so they won't come apart. Route the patch cables (again using wire ties) behind the dash and to the crossover mounting location.

**CAUTION:**
Always be careful when drilling or cutting in a vehicle. Be aware of things such as wiring, windows, fuel lines and safety devices. Check drilling/cutting depth and location to avoid damage to vehicle appearance.

**SAFETY CHECK**
✓ Check that wires do not interfere with safe vehicle operation.

**Note:** When using more than two devices (amplifiers, crossovers, equalizers, etc.) the power of the turn-on signal from your receiver may be inadequate and it will become necessary to install a high-power relay to reliably turn on your equipment.
Equalizers

Like a crossover, the equalizer gets installed between your receiver and your amplifier. The outputs will be preamp connections to your amplifier. Some EQs are designed to be installed in the dash, above or below your receiver. Others are designed to be mounted in a remote location, like the trunk. Either way, the wiring connections required will be the same. To install:

1. **Mounting the equalizer**: A remote-mount EQ can be securely mounted with just a few screws. Anywhere between the receiver and the amp is fine. Most people mount the EQ in the trunk near their amp, especially if they have more than one amp. This also makes it easier to add additional amps later. You should mount it where it will be easy to get to so that you can make adjustments without too much trouble. Don’t mount your EQ directly on steel — you will invite noise problems. Instead, install it on a non-conductive board and attach the board to the car body (or use rubber grommets under the screws to isolate the EQ).

An in-dash EQ can be mounted above or below your in-dash receiver, assuming that you have space available in the dash. This will require custom installation work. Another option is installation below your dash in a universal under-dash mounting kit. To install the under-dash mounting kit, attach it to the mounting surface using the supplied self-tapping screws. In most cases, the use of an under-dash kit will require modifications to the kit or to the mounting surface.

2. **Making the power connections**: Your EQ will require 12-volt power, ground, and turn-on signal.

   A. **To obtain 12-volt power**, cut a length of small-gauge cable (16-gauge is typically sufficient) long enough to reach from the EQ location to your vehicle’s fuse panel. Strip one end of the wire, and attach it to the EQ’s power input. This may require a crimp-on connector, or bare wire might be sufficient, depending on the equipment you’re installing. Route the wire from the EQ location to your car’s fuse panel. Using a fuse tap, connect the wire to a source of switched 12-volt power.

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**CAUTION:**

Always be careful when drilling or cutting in a vehicle. Be aware of things such as wiring, windows, fuel lines and safety devices. Check drilling/cutting depth and location to avoid damage to vehicle appearance.

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Locate the remote turn-on lead behind your radio (usually a blue wire).

Connect the turn-on lead from your amplifier wiring kit to the blue wire. You can wrap the bare wire ends together and solder, or use crimp connectors.
B. To ground the EQ, remove a bolt near the EQ mounting location. Scrape away any paint and clean the bolt location thoroughly. Crimp a ring terminal to one end of a length of small-gauge wire, and then bolt the terminal tightly to the vehicle's metal chassis. If you can't find a convenient ground screw or bolt, drill a hole for one — be careful not to drill into the gas tank or a gas or brake line.

C. Making the turn-on connection: In most cases, you can tap into your in-dash receiver's amp turn-on lead to get a turn-on signal for your EQ. This can be done at the amplifier or the receiver, whichever is most convenient. If the EQ is mounted near the amp, you can connect the EQ's turn-on lead to your amp's remote turn-on terminal. If that isn't practical, remove the receiver from the dash to access the turn-on wire (usually a blue wire). For step-by-step instructions on removing your vehicle's radio, see your vehicle-specific Crutchfield MasterSheet (available for most vehicles), or read our In-Dash Receiver Installation Guide. Strip the insulation off a small section of this wire coming from the radio. Strip the insulation off another small-gauge cable that's long enough to reach from the in-dash receiver to the EQ, then connect the two with crimp caps or solder. Wrap the solder or crimp connection with electrical tape, or use heat-shrink tubing, to guard against a short. Using wire ties to secure the wire, route the turn-on lead behind your dash all the way to the EQ mounting location.

3. Making the signal connections: In most cases, you'll be routing RCA cables from your in-dash receiver's preamp outputs to the inputs of your EQ. While your receiver is out of the dash to access the turn on lead, connect a set of RCA patch cables (long enough to reach your EQ in its mounting location) to these outputs, taping them together so they won't come apart. Route the patch cables (again using wire ties) behind the dash and to the crossover mounting location.

Note: When using more than two devices (amplifiers, crossovers, equalizers, etc.) the power of the turn-on signal from your receiver may be inadequate and it will become necessary to install a high-power relay to reliably turn on your equipment.