



Installation instructions for part AX-CH5-SWC

AX-CH5-SWC Chrysler Data Interface with SWC 2013-up

INTERFACE FEATURES

- Provides accessory power (12-volt 10-amp)
- Retains R.A.P. (retained accessory power)
- Provides NAV outputs (parking brake, reverse, and speed sense)
- Retains audio controls on the steering wheel
- Retains safety chimes
- Retains the factory backup camera (if through the factory radio)
- Retains the factory AUX-IN jack
- Used in non-amplified models, or when bypassing a factory amplifier
- **Fiat 500L only:** For use in both amplified and non-amplified systems
- Retains balance and fade (non-amplified models only)
- Micro "B" USB updatable

APPLICATIONS

| CHRYSLER | JEEP | RAM (CONT) |
|----------------------------|------------------------------|------------------------------|
| 200 LX | Cherokee <i>Sport</i> | Promaster |
| 2015-2016 | 2014-up | (with a 5.0" screen) 2014-up |
| DODGE | Renegade | 2015-up |
| Dart (small screen option) | RAM | Promaster (with NAV) 2014-up |
| 2013-up | 1500, 2500, 3500 | Promaster City 2015-up |
| FIAT | (small screen option) | 2013-up |
| 500L | Chassis Cab 3500, 4500, 5500 | |
| 2014-up | (small screen option) | 2013-up |
| 500X | | |
| 2016-up | | |

Table of Contents

| | |
|--|-----|
| Connections to be made..... | 2-4 |
| Installing the AX-CH5-SWC | 4 |
| Initializing the AX-CH5-SWC | 4 |
| Adjusting the AX-CH5-SWC..... | 5 |
| Steering wheel control extra settings..... | 5-7 |
| L.E.D. feedback | 5 |
| Changing radio type | 6 |
| Remapping the steering wheel control buttons | 6 |
| Dual assignment instructions (long button press) | 7 |
| Resetting the AX-CH5-SWC..... | 7 |

INTERFACE COMPONENTS

- AX-CH5-SWC interface • AX-CH5-SWC harness
- 16-pin harness with stripped leads
- 4-pin harness with stripped leads
- Female 3.5mm connector with stripped leads

TOOLS REQUIRED

- Wire cutter • Crimp tool • Solder gun • Tape
- Connectors (example: butt-connectors, bell caps, etc.)

CAUTION! All accessories, switches, climate controls panels, and especially air bag indicator lights must be connected before cycling the ignition. Also, do not remove the factory radio with the key in the on position, or while the vehicle is running.



Connections to be made

Attention! This interface will work with models that are either factory amplified, or non-amplified. Please follow the instructions carefully for your model vehicle. Failure to do so will result in either no sound, or low sound. If you are unsure if your vehicle is factory amplified or not, please contact your local dealership.

For models *without* a factory amplifier:

From the 16-pin harness with stripped leads to the aftermarket radio:

- Connect the **Red** wire to the accessory wire.

Note: *If installing an AX-LCD (sold separately), there will be an accessory wire there to connect as well.*

- If the aftermarket radio has an illumination wire, connect the **Orange/White** wire to it.

The following (3) wires are only for multimedia/navigation radios that require these wires.

- Connect the **Blue/Pink** wire to the VSS/speed sense wire.
- Connect the **Green/Purple** wire to the reverse wire.
- Connect the **Light Green** wire to the parking brake wire
- Tape off and disregard the following (10) wires, they will not be used in this application: **Blue/White, Brown, Gray, Gray/Black, Green, Green/Black, Purple, Purple/Black, White** and **White/Black**.

From the AX-CH5-SWC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Connect the **Gray** wire to the right front positive speaker output.
- Connect the **Gray/Black** wire to the right front negative speaker output.
- Connect the **White** wire to the left front positive speaker output.
- Connect the **White/Black** wire to the left front negative speaker output.
- Disconnect the (2) 4-pin connectors that have **Green, Green/Black, Purple, and Purple/Black** wires.
- Connect the *4-pin harness with stripped leads* to the 4-pin connector from the gray 22-pin connector.
- Connect the **Green** wire to the left rear positive speaker output.
- Connect the **Green/Black** wire to the left rear negative speaker output.
- Connect the **Purple** wire to the right rear positive speaker output.
- Connect the **Purple/Black** wire to the right rear negative output.
- If retaining the factory backup camera, connect the **Yellow** RCA jack to the reverse camera input.
- If the AUX-IN jack in the dash is desired to be used, connect the **Red** and **White** RCA jacks to the audio AUX-IN jacks of the aftermarket radio.
- The DIN jack is to be used with the optional AX-LCD (sold separately) to retain the personalization features of the vehicle.
 - Connect the **Red** wire to the accessory wire.

Continue to 3.5mm jack steering wheel control retention



Connections to be made

Attention! This interface will work with models that are either factory amplified, or non-amplified. Please follow the instructions carefully for your model vehicle. Failure to do so will result in either no sound, or low sound. If you are unsure if your vehicle is factory amplified or not, please contact your local dealership.

For models with a factory amplifier (Fiat 500L only):

From the 16-pin harness with stripped leads to the aftermarket radio:

- Connect the **Red** wire to the accessory wire.

Note: *If installing an AX-LCD (sold separately), there will be an accessory wire there to connect as well.*

- If the aftermarket radio has an illumination wire, connect the **Orange/White** wire to it.
- Connect the **Blue/White** wire to the amp turn on wire. This wire must be connected to hear sound from the factory amplifier.
- Connect the **Gray** wire to the right front positive speaker output.
- Connect the **Gray/Black** wire to the right front negative speaker output.
- Connect the **White** wire to the left front positive speaker output.
- Connect the **White/Black** wire to the left front negative speaker output.
- Connect the **Green** wire to the left rear positive speaker output.
- Connect the **Green/Black** wire to the left rear negative speaker output.
- Connect the **Purple** wire to the right rear positive speaker output.
- Connect the **Purple/Black** wire to the right rear negative output.

The following (3) wires are only for multimedia/navigation radios that require these wires.

- Connect the **Blue/Pink** wire to the VSS/speed sense wire.
- Connect the **Green/Purple** wire to the reverse wire.
- Connect the **Light Green** wire to the parking brake wire
- Tape off and disregard the following (1) wire, it will not be used in this application: **Brown**

From the AX-CH5-SWC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Tape off and disregard the following (4) wires, they will not be used in this application: **Gray, Gray/Black, White, White/Black**
- Disregard the *4-pin harness with stripped leads*, it will not be used in this application.
- Connect the (2) 4-pin connectors that have **Green, Green/Black, Purple, and Purple/Black** wires.
- If retaining the factory backup camera, connect the **Yellow** RCA jack to the reverse camera input.
- If the AUX-IN jack in the dash is desired to be used, connect the **Red** and **White** RCA jacks to the audio AUX-IN jacks of the aftermarket radio.
- The DIN jack is to be used with the optional AX-LCD (sold separately) to retain the personalization features of the vehicle.
 - Connect the **Red** wire to the accessory wire.

Continue to 3.5mm jack steering wheel control retention

Connections to be made (Cont)

3.5mm jack steering wheel control retention:

- The 3.5mm jack is to be used to retain steering wheel controls.
- For the radios listed below, connect the included *female 3.5mm connector with stripped leads* onto the male 3.5mm SWC jack of the AX-CH5-SWC. Any remaining wires, tape off and disregard:
- **Eclipse:** Connect the steering wheel control wire, normally **Brown**, to the **Brown/White** wire of the connector. Then connect the remaining steering wheel control wire, normally **Brown/White**, to the **Brown** wire of the connector.
- **Metra OE:** Connect the steering wheel control Key 1 wire (**Gray**) to the **Brown** wire.
- **Kenwood or select JVC with a steering wheel control wire:** Connect the **Blue/Yellow** wire to the **Brown** wire.

Note: If your Kenwood radio auto detects as a JVC, manually set the radio type to Kenwood. See the instructions under changing radio type.

- **XITE:** Connect the steering wheel control SWC-2 wire from the radio to the **Brown** wire.
- **Parrot Asteroid Smart or Tablet:** Connect the 3.5mm jack into the AX-SWC-PARROT (sold separately), and then connect the 4-pin connector from the AX-SWC-PARROT into the radio.

Note: The radio must be updated to rev. 2.1.4 or higher software.

- **Universal "2 or 3 wire" radio:** Connect the steering wheel control wire, referred to as Key-A or SWC-1, to the **Brown** wire of the connector. Then connect the remaining steering wheel control wire, referred to as Key-B or SWC-2, to the **Brown/White** wire of the connector. If the radio comes with a third wire for ground, disregard this wire.

Note: After the interface has been programmed to the vehicle, refer to the manual provided with the radio for assigning the SWC buttons. Contact the radio manufacturer for more information.

- **For all other radios:** Connect the 3.5mm jack of the AX-CH5-SWC into the jack on the aftermarket radio designated for an external steering wheel control interface. Please refer to the aftermarket radios manual if in doubt as to where the 3.5mm jack goes to.

Installing the AX-CH5-SWC

With the key in the off position:

- Connect the 16-pin harness with stripped leads, and the AX-CH5-SWC harness, into the interface.

Note: For the Fiat 500L and Ram Promaster City, do not connect the harness to the vehicle yet.

- Connect the AX-CH5-SWC harness to the wiring harness in the vehicle.

Note: If retaining steering wheel controls, ensure the jack/wire is connected before proceeding to the next step.

Initializing the AX-CH5-SWC

- For the steps below, the **Red** L.E.D. (located inside the interface, next to the potentiometer) can only be seen while active. The interface does not need to be opened to see the L.E.D.
- **For the Fiat 500L and Ram Promaster City only:** Turn the hazard lights on.
- Turn the hazard lights on.
- Turn the key (or push-to-start button) to the ignition position, the L.E.D. will turn on.
- Within a minute, the L.E.D. will turn off for a couple seconds, then flash slowly (up to (16) times, indicating which radio is connected to the interface), and then turn off. Pay close attention as to how many slow flashes there are. This will help in troubleshooting, if need be. Refer to the L.E.D. feedback section for more information.
- Within a few seconds the L.E.D. will turn on, and the radio will turn off.
- Within a minute the L.E.D. will turn off, and the radio will come back on, indicating the initialization process is successful.
- **Note:** If the radio does not come back on within a minute, the interface is not communicating to the vehicle. Turn the key off, check all connections, and then try again. The interface may need to be reset at this point.
- **For the Fiat 500L and Ram Promaster City only:** Turn the hazard lights off.



Adjusting the AX-CH5-SWC

Audio level adjustment (factory amplified models only) (Fiat 500L only):

- With the vehicle and radio turned on, turn the volume up 3/4 of the way.
- With a small screwdriver, adjust the potentiometer clockwise to raise the audio level; counterclockwise to lower the audio level.
- Once at a desired level, audio level adjustment is complete.

Steering wheel control extra settings

L.E.D. feedback

The (16) **Red** L.E.D. flashes represent what brand radio the AX-CH5-SWC believes it is connected to. Each flash represents a different radio manufacturer. For example, if you are installing a JVC radio, the AX-CH5-SWC will flash (5) times. Following is a legend that dictates which manufacturer corresponds to which flash.

L.E.D. feedback legend

| | |
|--------------------------------|---------------------------------|
| 1 flash - Eclipse (Type 1) † | 9 flashes - Valor |
| 2 flashes - Kenwood ‡ | 10 flashes - Clarion (Type 2) † |
| 3 flashes - Clarion (Type 1) † | 11 flashes - Metra OE |
| 4 flashes - Sony / Dual | 12 flashes - Eclipse (Type 2) † |
| 5 flashes - JVC | 13 flashes - LG |
| 6 flashes - Pioneer / Jensen | 14 flashes - Parrot ** |
| 7 flashes - Alpine * | 15 flashes - XITE |
| 8 flashes - Visteon | 16 flashes - Philips |

* **Note:** If the AX-CH5-SWC flashes Red (7) times, and you do not have an Alpine radio connected to it, that means the AX-CH5-SWC does not detect a radio connected to it. Verify that the 3.5mm jack is connected to the correct steering wheel jack/wire in the radio.

** **Note:** Part number AX-SWC-PARROT is required (sold separately). Also, the Parrot radio must be updated to rev. 2.1.4.

† **Note:** If you have a Clarion radio and the steering wheel controls do not work, change the radio type to the other Clarion radio type; same for Eclipse. The following section explains how to do this.

‡ **Note:** If you have a Kenwood radio and the L.E.D. feedback comes back as showing as a JVC radio, change the radio type to a Kenwood. The following section explains how to do this.

Continued on the next page



Steering wheel control extra settings

Attention: *The Axxess Updater App can also be used to program the following (3) sub-sections as well, pending that the interface has been initialized and programmed.*

Changing radio type

If the LED flashes do not match the radio you have connected, you must manually program the AX-CH5-SWC to tell it what radio it is connected to.

1. After (3) seconds of turning the key on, press and hold the Volume-Down button on the steering wheel until the L.E.D. in the AX-CH5-SWC goes solid.
2. Release the Volume-Down button; the L.E.D. will go out indicating we are now in Changing Radio Type mode.
3. Refer to the Radio Legend (next page) to know which radio number you would like to have programmed.
4. Press and hold the Volume-Up button until the L.E.D. goes solid, and then release. Repeat this step for the desired radio number you have selected.
5. Once the desired radio number has been selected, press and hold the Volume-Down button on the steering wheel until the L.E.D. goes solid. The L.E.D. will remain on for about (3) seconds while it stores the new radio information.
6. Once the L.E.D. goes off, the Changing Radio Type mode will then end. You can now test the steering control wheel controls.

Note: *If at any time the user fails to press any button for a period longer than (10) seconds, this process will abort.*

Radio legend

- | | | |
|---------------------|----------------------|----------------------|
| 1. Eclipse (Type 1) | 6. Pioneer/Jensen | 11. Metra OE |
| 2. Kenwood | 7. Alpine | 12. Eclipse (Type 2) |
| 3. Clarion (Type 1) | 8. Visteon | 13. LG |
| 4. Sony/Dual | 9. Valor | 14. Parrot |
| 5. JVC | 10. Clarion (Type 2) | 15. XITE |
| | | 16. Philips |

Remapping the steering wheel control buttons

Let's say you have AX-CH5-SWC initialized and you want to change the button assignment for the steering wheel controls. For example, you would like "Seek-Up" to be "Mute". Follow the steps below to remap the steering wheel control buttons:

1. Ensure the AX-CH5-SWC is visible so you can see the L.E.D. flashes to confirm button recognition.
Tip: *Turning the radio off is recommended.*
2. Within the first 20 seconds of turning the ignition on, press and hold the "Volume-Up" button on the steering wheel until the L.E.D. goes solid.
3. Release "Volume-Up", the L.E.D. will then go out; "Volume-Up" has now been programmed.
4. Follow the list in the Button Assignment Legend, to reference the order in which the steering wheel control buttons need to be programmed.

Continued on the next page



Steering wheel control extra settings

Note: If the next function on the list is not on the steering wheel, press the Volume-Up button for (1) second until the L.E.D. comes on, and then release the Volume-Up button. This will tell the AX-CH5-SWC that this function is not available and it will move on to the next function.

5. To complete the remapping process, press and hold the Volume-Up button on the steering wheel until the L.E.D. in the AX-CH5-SWC goes out.

Button assignment legend

- | | |
|-------------------|------------------------|
| 1. Volume-Up | 10. Band |
| 2. Volume-Down | 11. Play/Enter |
| 3. Seek-Up/Next | 12. PTT (Push to Talk) |
| 4. Seek-Down/Prev | 13. On-Hook |
| 5. Source/Mode | 14. Off-Hook |
| 6. Mute | 15. Fan-Up * |
| 7. Preset-Up | 16. Fan-Down * |
| 8. Preset-Down | 17. Temp-Up * |
| 9. Power | 18. Temp-Down * |

* Not applicable in this application

Note: Not all radios will have all of these commands. Please refer to the manual provided with the radio, or contact the radio manufacturer for specific commands recognized by that particular radio.

Dual assignment instructions (long button press)

The AX-CH5-SWC has the capability to assign (2) functions to a single button, except Volume-Up and Volume-Down. Follow the steps below to program the button(s) to your liking.

Note: *Seek-Up and Seek-Down come pre-programmed as Preset-Up and Preset-Down for a long button press.*

1. Turn on the ignition but do not start the vehicle.
2. Press and hold down the steering wheel control button that you want to assign a long press function to for about (10) seconds, or until the L.E.D. flashes rapidly. At this point release the button; the L.E.D. will then go solid.
3. Press and release the Volume-Up button the number of times corresponding to the new button number selected. Refer to the Dual Assignment Legend. The L.E.D. will flash rapidly while the Volume-Up button is being pressed, and then go back to a solid L.E.D. once released. Go to the next step once the Volume-Up button has been pressed the desired number of times.

Caution: *If more than (10) seconds elapses between pressing the Volume-Up button, this procedure will abort, and the L.E.D. will go out.*

4. To store the long press button in memory, press the button that you assigned a long press button to (the button held down in Step 2). The L.E.D. will now go off indicating the new information has been stored.

Note: *These steps must be repeated for each button you would like to assign a dual purpose feature to. To reset a button back to its default state, repeat Step 1, and then press the Volume-Down button. The L.E.D. will go off, and the long press mapping for that button will be erased.*

Continued on the next page



Installation instructions for part AX-CH5-SWC

Steering wheel control extra settings

Dual assignment legend

- | | | | |
|-------------------|----------------|----------------|-----------------|
| 1. Not allowed | 6. ATT/Mute | 11. Play/Enter | 16. Fan-Down * |
| 2. Not allowed | 7. Preset-Up | 12. PTT | 17. Temp-Up * |
| 3. Seek-Up/Next | 8. Preset-Down | 13. On-Hook | 18. Temp-Down * |
| 4. Seek-Down/Prev | 9. Power | 14. Off-Hook | |
| 5. Mode/Source | 10. Band | 15. Fan-Up * | |

* Not applicable in this application

Resetting the AX-CH5-SWC

1. With the radio on, turn the potentiometer:

Note: Before proceeding, remember the position the potentiometer is at.

Left.....hold for 3 seconds

Right.....hold for 3 seconds

Left.....hold for 3 seconds

Back to the initial position

2. The L.E.D. inside the interface will turn off for a couple seconds, then flash fast, then flash slowly (up to (16) times, indicating which radio is connected to the interface), and then turn off. Pay close attention as to how many slow flashes there are. This will help in troubleshooting, if need be. Refer to the L.E.D. feedback section for more information.
3. Within a few seconds the L.E.D. will turn on, and the radio will turn off.
4. Within a minute the L.E.D. will turn off, and the radio will come back on, indicating the resetting and initialization process was successful.

IMPORTANT

If you are having difficulties with the installation of this product, please call our Tech Support line. Before doing so, look over the instructions a second time, and make sure the installation was performed exactly as the instructions are stated. Please have the vehicle apart and ready to perform troubleshooting steps before calling.