



Installation instructions for part AX-MAZ1-SWC

AX-MAZ1-SWC Mazda Data Interface with SWC 2007-2015

INTERFACE FEATURES

- Provides NAV outputs (parking brake, reverse, and speed sense)
- Retains audio controls on the steering wheel
- Can be used in both amplified and non-amplified models
- Retains balance and fade (excludes amplified models)
- Retains the ability to set the clock with a service harness
- Micro "B" USB updatable

INTERFACE COMPONENTS

- AX-MAZ1-SWC interface • AX-MAZ1-SWC harness
- 16-pin harness with stripped leads
- Female 3.5mm connector with stripped leads

APPLICATIONS

MAZDA

CX-7	2007-2012
CX-9	2007-2015

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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.





AX-MAZ1-SWC

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 an amplifier:

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

- 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.

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 (8) wires, they will not be used in this application: **Blue/White, Brown, Green, Green/Black, Orange/White, Purple, Purple/Black, Red.**

From the AX-MAZ1-SWC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Connect the **Red** wire to the accessory wire.
- Connect the **Blue** wire to the power antenna wire.
- If the aftermarket radio has an illumination wire, connect the **Orange** wire to it.
- 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 speaker output.

Note: *The 2' long harness with a 24-pin connector is a service harness for setting the clock with the factory radio. Please run this harness to a location where it can be easily accessed, yet hidden.*

Continue to 3.5mm jack steering wheel control retention



AX-MAZ1-SWC

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 an amplifier:

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

- 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 (3) wires, they will not be used in this application: **Brown, Orange/White, Red**

From the AX-MAZ1-SWC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Connect the **Red** wire to the accessory wire.
- Connect the **Blue** wire to the power antenna wire.
- If the aftermarket radio has an illumination wire, connect the **Orange** wire to it.
- Tape off and disregard the following (4) wires, they will not be used in this application: **Green, Green/Black, Purple, Purple/Black**

Note: *The 2' long harness with a 24-pin connector is a service harness for setting the clock with the factory radio. Please run this harness to a location where it can be easily accessed, yet hidden.*

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-MAZ1-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-MAZ1-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-MAZ1-SWC

With the key in the off position:

- Connect the 16-pin harness with stripped leads, and the AX-MAZ1-SWC harness, into the interface.
- Connect the AX-MAZ1-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-MAZ1-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.

- 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.
- Within a minute the L.E.D. will turn off, indicating the initialization process was successful.

Note: If the L.E.D. does not turn off 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.



AX-MAZ1-SWC

Steering wheel control extra settings

L.E.D. feedback

The (16) Red L.E.D. flashes represent what brand radio the AX-MAZ1-SWC believes it is connected to. Each flash represents a different radio manufacturer. For example, if you are installing a JVC radio, the AX-MAZ1-SWC will flash Red (5) times, and then stop. Following is a legend that dictates which radio 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-MAZ1-SWC flashes Red (7) times, and you do not have an Alpine radio connected to it, that means the AX-MAZ1-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 or higher through www.parrot.com.

† **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.

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.

Changing radio type

If the L.E.D. flashes do not match the radio you have connected, you must manually program the AX-MAZ1-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-MAZ1-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 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.

Continued on the next page



AX-MAZ1-SWC

Steering wheel control extra settings

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-MAZ1-SWC initialized and you want to change the button assignment for the steering wheel control buttons. For example, you would like Seek-Up to become Mute. Follow the steps below to remap the steering wheel control buttons:

1. Ensure the AX-MAZ1-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 twenty 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 the Volume-Up button, the L.E.D. will then go out; The Volume-Up button 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.

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-MAZ1-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-MAZ1-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.*

Continued on the next page



AX-MAZ1-SWC

Steering wheel control extra settings

Dual assignment instructions (long button press)

The AX-MAZ1-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.*

Dual assignment legend

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

** Not applicable in this application*

Resetting the AX-MAZ1-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.
4. Within a minute the L.E.D. will turn off, indicating the resetting and initialization process was successful.



Installation instructions for part AX-MAZ1-SWC



REV 11/23/2016 INSTAX-MAZ1-SWC

IMPORTANT

If you are having difficulties with the installation of this product, please call our Tech Support line at **1-800-253-TECH**. 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.



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