



Installation instructions for part AX-FD1-SWC

AX-FD1-SWC Ford Data Interface with SWC 2007-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 RSE (rear seat entertainment)
- Retains SAT (satellite radio)
- Retains SYNC
- Retains the factory AUX-IN jack
- Can be used in both non-amplified and amplified models (including Sony/THX)
- Retains balance and fade (excluding Sony/THX)
- Micro "B" USB updatable

APPLICATIONS

FORD		FORD (CONT)		LINCOLN	
Econoline (w/ CD)	2009-up	F-150 STX/XLT base	2014	MKX	2007-2010
Edge	2007-2010	F-250/350/450/550	2011-2012	MKZ	2007-2009
Escape	2008-2012	F-250/350/450/550 XLT, XL		Navigator	2007-2014
Expedition	2007-2014	(w/ CD)	2013-2016	MAZDA	
Explorer (with NAV)	2009-2010	F-650/750 (w/ CD)	2016-up	Tribute	2008-2011
Explorer Sport Trac		Focus	2008-2011	MERCURY	
(with NAV)	2009-2010	Fusion	2010-2012	Mariner	2008-2011
F-150 *	2009-2012	Mustang	2009-2014	Milan	2010-2011
F-150 STX/FX2 base/XLT base		Taurus	2010-2012		
	2013				

* XL models must be equipped with a CD player

Table of Contents

Connections to be made.....	2-4
For models <u>without</u> a Sony/THX amplifier.....	2
For models <u>with</u> a Sony/THX amplifier.....	3
3.5mm jack steering wheel control retention.....	4
Installing the AX-FD1-SWC.....	4
Initializing the AX-FD1-SWC.....	4
Adjusting the AX-FD1-SWC.....	5
Extra features.....	5
Steering wheel control extra settings.....	5-8
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-FD1-SWC.....	8

INTERFACE COMPONENTS

- AX-FD1-SWC interface
- AX-FD1-SWC harness
- 16-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.)
- Small flat-blade screwdriver

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 Sony/THX 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 Sony/THX 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 vehicle is equipped with a factory subwoofer, connect the **Blue/White** wire to the amp turn on wire.
- If the aftermarket radio has an illumination wire, connect the **Orange/White** wire to it.
- If the aftermarket radio has a mute wire and the vehicle is equipped with SYNC, connect the **Brown** wire to it. If the mute wire is not connected, the radio will turn off when SYNC is activated.
- 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 (4) wires, they will not be used in this application: **Green, Green/Black, Purple, Purple/Black.**

From the AX-FD1-SWC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Connect the **Blue** wire to the power antenna wire.
- Tape off and disregard the **Blue/White** wire, it will not be used in this application.
- 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 the vehicle is equipped with SYNC, connect the **Red** and **White** RCA jacks labeled "RSE/SYNC/SAT" to the audio AUX-IN jacks.
- If the vehicle is equipped without SYNC, connect the **Red** and **White** RCA jacks labeled "FROM 3.5" to the audio AUX-IN jacks.
- The DIN jack is to be used with the optional AX-LCD (sold separately) to retain SYNC information.
 - Connect the **Red** wire to accessory power.
- If the vehicle is equipped with a factory subwoofer, connect the **White** RCA jack labeled "SUBWOOFER" to the subwoofer out jack.
- Disregard the **Red** RCA jack labeled "CENTER CHANNEL", it will not be used in this application.

Continue to 3.5mm jack steering wheel control retention



Connections to be made

Attention! This interface will work with models that are either Sony/THX 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 Sony/THX 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.
- Connect the **Blue/White** wire to the amp turn on wire. This wire must be connected to hear sound from the factory amplifier.
- If the aftermarket radio has an illumination wire, connect the **Orange/White** wire to it.
- If the aftermarket radio has a mute wire and the vehicle is equipped with SYNC, connect the **Brown** wire to it. If the mute wire is not connected, the radio will turn off when SYNC is activated.
- 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

From the AX-FD1-5WC harness to the aftermarket radio:

- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- Connect the **Blue** wire to the power antenna wire.
- **For NAV models only:** Connect the **Blue/White** wire from the 24-pin connector to the amp turn on wire. This wire must be connected to hear sound from the factory amplifier.
- If the vehicle is equipped with SYNC, connect the **Red** and **White** RCA jacks labeled "RSE/SYNC/SAT" to the audio AUX-IN jacks.
- If the vehicle is equipped without SYNC, connect the **Red** and **White** RCA jacks labeled "FROM 3.5" to the audio AUX-IN jacks.
- The DIN jack is to be used with the optional AX-LCD (sold separately) to retain SYNC information.
 - Connect the **Red** wire to accessory power.
- Connect the **White** RCA jack to the subwoofer out jack.
- Connect the **Red** RCA jack to the center channel out jack on the radio/processor.
Note: If this jack is not present on the aftermarket radio, just leave be. Only the center channel speaker will be lost.
- Tape off and disregard the following (4) wires, they will not be used in this application: **Green, Green/Black, Purple, Purple/Black.**

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-FD1-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-FD1-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-FD1-SWC

With the key in the off position:

- Connect the AX-FD1-SWC harness into the interface, and then to the wiring harness in the vehicle.
Note: *Both connectors of the AX-FD1-SWC harness must be connected to the vehicle.*
Note: *If retaining steering wheel controls, ensure the jack/wire is connected before proceeding to the next step.*

Initializing the AX-FD1-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, 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.*



Adjusting the AX-FD1-SWC (Sony/THX only)

Audio level adjustment:

- With the vehicle and radio turned on, turn the volume up 3/4 of the way.
- With a small flat-blade 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.

Extra features

AUX-IN, RSE, SAT, and SYNC:

- If the vehicle is equipped with AUX-IN, rear seat entertainment, satellite radio, or SYNC, the AX-FD1-SWC can retain these features.

Note: Most Ford radios have SAT built in, so this feature is lost if so.

- Change the source of the radio to AUX-IN; SYNC audio will start playing if SYNC has been activated.
- The display in the factory screen, or the optional AX-LCD (sold separately) will display the SYNC information.
- Listed below are the functions of the AX-LCD while using satellite radio or SYNC:
 - Arrow up—Channel up (only in SAT or USB mode)
 - Arrow down—Channel down (only in SAT or USB mode)
 - Enter—Selects current item on the screen
 - Return/ESC—Exits to the previous screen
- To access RSE, SAT, or AUX-IN, press and hold the MEDIA button on the steering wheel for 2 seconds. This will switch to the next source available. Each time the MEDIA button is pressed for 2 seconds the source will change. The sequence of sources are; SYNC/RSE/SAT/AUX-IN. To temporarily disable SYNC/ RSE/SAT/AUX-IN, press and hold the MEDIA button for 3 seconds. To turn it back on, press the MEDIA button for 2 seconds. The factory screen, or the AX-LCD will provide a visual confirmation of which source is active.

Steering wheel control extra settings

L.E.D. feedback

The (16) Red L.E.D. flashes represent what brand radio the AX-FD1-SWC believes it is connected to. Each flash represents a different radio manufacturer. For example, if you are installing a JVC radio, the AX-FD1-SWC will flash (5) times. Following is a legend that dictates which manufacturer corresponds to which flash.

L.E.D. feedback legend

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

* **Note:** If the AX-FD1-SWC flashes Red (7) times, and you do not have an Alpine radio connected to it, that means the AX-FD1-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.



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-FD1-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-FD1-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.*

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-FD1-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-FD1-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.

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-FD1-SWC that this function is not available and it will move on to the next function.

- To complete the remapping process, press and hold the Volume-Up button on the steering wheel until the L.E.D. in the AX-FD1-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 if the vehicle is equipped with SYNC

** 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-FD1-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.

- Turn on the ignition but do not start the vehicle.
- 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.
- 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.

- 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.



Installation instructions for part AX-FD1-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-FD1-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.