Toyota Data Interface with SWC 2018-up

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INTERFACE FEATURES
- Provides accessory power (12-volt 10-amp)
- Provides NAV outputs (parking brake, reverse, speed sense)
- Retains the factory AUX-IN jack
- Retains the factory backup camera
- Includes an AX-CAM6V 12-to-6V step-down for the factory camera

† Non-amplified models only
- Retains audio controls on the steering wheel
- Can be used in amplified and non-amplified models
- Retains balance and fade†
- Micro-B USB updatable

APPLICATIONS

<table>
<thead>
<tr>
<th>TOYOTA</th>
<th>2019-up</th>
<th>2016-up</th>
<th>2018-up</th>
</tr>
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<td>Avalon</td>
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INTERFACE COMPONENTS
- AX-TYAMP3-SWC interface
- AX-TYAMP3-SWC harness
- 16-pin harness with stripped leads
- Female 3.5mm connector with stripped leads
- AX-CAM6V
- Backup camera harness
- Backup camera harness

TOOLS REQUIRED
- Crimping tool and connectors, or solder gun, solder, and heat shrink
- Small flat-blade screwdriver
- Tape
- Wire cutter
- Zip ties

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Attention! Let the vehicle sit with the key out of the ignition for a few minutes before removing the factory radio. When testing the aftermarket equipment, ensure that all factory equipment is connected before cycling the key to ignition.
**Attention!** This interface will work with models that are either non-amplified, or 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 **Red** wire to the accessory wire.
- Connect the **White** wire to front left positive output.
- Connect the **White/Black** wire to front left negative speaker output.
- Connect the **Gray** wire to the front right positive speaker output.
- Connect the **Gray/Black** wire to the front right negative speaker output.
- Tape off and disregard the following (10) wires, they will not be used in this application: Blue/Pink, Blue/White, Brown, Green, Green/Black, Green/Purple, Light Green, Orange/White, Purple, Purple/Black

**From the AX-TYAMP3-SWC harness to the aftermarket radio:**
- Connect the **Black** wire to the ground wire.
- Connect the **Yellow** wire to the battery wire.
- 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** to the right rear negative speaker output.

**The following (2) wires are only for multimedia/navigation radios that require these wires:**
- Connect the **Green/Purple** wire to the radio’s reverse wire, and also to the **Blue/White** wire from the AX-CAM6V.
- Connect the **Blue/Pink** wire to the radio’s VSS/speed sense wire.
- If the factory AUX-IN jack is desired to be retained, connect the **Red** and **White** RCA jacks to the audio AUX-IN jacks from the aftermarket radio.

**Backup camera harness:**
- Connect the **Black** wire to chassis ground, and also to the **Black** wire from the AX-CAM6V.
- Connect the **Red** wire labeled “Camera Power 6V”, to the **Blue/Red** wire from the AX-CAM6V.
- Connect the **Blue/White** wire from the AX-CAM6V to the radios reverse wire input, along with the **Green/Purple** wire from the AX-TYAMP3-SWC harness.
- Connect the **Yellow** RCA jack to the radios backup camera input.

**The following (1) wire is only for a multimedia/navigation radio that requires this wire:**
- Connect the **Light Green** wire to the radios parking brake wire.

*Continue to 3.5mm jack steering wheel control retention*
Attention! This interface will work with models that are either non-amplified, or 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 **Red** wire to the accessory wire.
- Connect the **Blue/White** wire to the amplifier 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.
- Tape off and disregard the following (5) wires, they will not be used in this application: **Blue/Pink**, **Brown**, **Green/Purple**, **Light Green**, **Orange/White**

From the AX-TYAMP3-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: **Green**, **Green/Black**, **Purple**, **Purple/Black**

The following (2) wires are only for multimedia/navigation radios that require these wires:

- Connect the **Green/Purple** wire to the reverse wire, and also to the **Blue/White** wire from the AX-CAM6V.
- Connect the **Blue/Pink** wire to the VSS/speed sense wire.
- Connect the **Red** and **White** RCA jacks to the audio AUX-IN jacks from the aftermarket radio.

Backup camera harness:

- Connect the **Black** wire to chassis ground, and also to the **Black** wire from the AX-CAM6V.
- Connect the **Red** wire labeled “Camera Power 6V”, to the **Blue/Red** wire from the AX-CAM6V.
- Connect the **Blue/White** wire from the AX-CAM6V to the radios reverse wire input, along with the **Green/Purple** wire from the AX-TYAMP3-SWC harness.
- Connect the **Yellow** RCA jack to the radios backup camera input.

The following (1) wire is only for a multimedia/navigation radio that requires this wire:

- Connect the **Light Green** wire to the radios parking brake wire.

Continue to 3.5mm jack steering wheel control retention
3.5mm jack steering wheel control retention:
The 3.5mm jack is to be used to retain audio controls on the steering wheel.

- For the radios listed below: Connect the female 3.5mm connector with stripped leads, to the male 3.5mm SWC jack from the AX-TYAMP3-SWC harness. Any remaining wires tape off and disregard.
  - Eclipse: Connect the steering wheel control wire, normally Brown, to the Brown/White wire from the connector. Then connect the remaining steering wheel control wire, normally Brown/White, to the Brown wire from 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 the 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), 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 from the connector. Then connect the remaining steering wheel control wire, referred to as Key-B or SWC-2, to the Brown/White wire from 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 from the AX-TYAMP3-SWC harness into the jack from 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 connects to.

With the key in the off position:
1. Connect the 16-pin harness with stripped leads, and the AX-TYAMP3-SWC harness into the interface.
2. Connect the backup camera harness to the wiring harness in the vehicle.
Attention! Do not connect the AX-TYAMP3-SWC harness to the wiring harness in the vehicle just yet.
Attention! If retaining steering wheel controls, ensure that the jack/wire is connected to the radio before proceeding. If this step is skipped, the interface will need to be reset for the steering wheel controls to function.
PROGRAMMING

For the steps below, the L.E.D. located inside the interface can only be seen while active. The interface does not need to be opened to see the L.E.D.

1. Start the vehicle.
2. Connect the AX-TYAMP3-SWC harness to the wiring harness in the vehicle.
3. The L.E.D. will initially turn on solid Green, then turn off for a few second while detecting the radio.
4. The L.E.D. will then flash Red up to (18) times indicating which radio is connected to the interface, then turn off for a couple seconds. Pay close attention to how many Red flashes there are. This will help in troubleshooting, if need be. Refer to the L.E.D. Feedback section for more information.
5. After a couple seconds the L.E.D. will turn on solid Red while the interface auto detects the vehicle. The radio will shut off at this point. The process should take 5 to 30 seconds.
6. Once the vehicle has been auto detected by the interface, the L.E.D. will turn on solid Green, then the radio will come back on, indicating that programming was successful.
7. Test all functions of the installation for proper operation, before reassembling the dash. If the interface fails to function, refer to the Troubleshooting section.

Note: The L.E.D. will turn on solid Green for a moment, then turn off under normal operation after the key has been cycled.

AUDIO LEVEL ADJUSTMENT
(amplified models only)

1. With the vehicle and radio turned on, turn the volume up 3/4 of the way.
2. With a small flat-blade screwdriver, adjust the potentiometer clockwise to raise the audio level; counter clockwise to lower the audio level.
3. Once at a desired level, audio adjustment is complete.
L.E.D. feedback

The (18) Red L.E.D. flashes represent what brand radio the AX-TYAMP3-SWC believes it is connected to. Each flash represents a different radio manufacturer. For example, if you are installing a JVC radio, the AX-TYAMP3-SWC will flash Red (5) times, and then stop. Following is a legend that dictates which radio manufacturer corresponds to which flash.

* Note: If the AX-TYAMP3-SWC flashes Red (7) times, and you do not have an Alpine radio connected to it, that means the AX-TYAMP3-SWC does not detect a radio connected it. Verify that the 3.5mm jack is connected to the correct steering wheel jack/wire in the radio.

** Note: The 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 programmed.

<table>
<thead>
<tr>
<th>Flash Count</th>
<th>Radio</th>
<th>Flash Count</th>
<th>Radio</th>
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<tbody>
<tr>
<td>1</td>
<td>Eclipse (type 1) †</td>
<td>10</td>
<td>Clarion (type 2) †</td>
</tr>
<tr>
<td>2</td>
<td>Kenwood †</td>
<td>11</td>
<td>Metra OE</td>
</tr>
<tr>
<td>3</td>
<td>Clarion (type 1) †</td>
<td>12</td>
<td>Eclipse (type 2) †</td>
</tr>
<tr>
<td>4</td>
<td>Sony / Dual</td>
<td>13</td>
<td>LG</td>
</tr>
<tr>
<td>5</td>
<td>JVC</td>
<td>14</td>
<td>Parrot **</td>
</tr>
<tr>
<td>6</td>
<td>Pioneer / Jensen</td>
<td>15</td>
<td>XITE</td>
</tr>
<tr>
<td>7</td>
<td>Alpine *</td>
<td>16</td>
<td>Philips</td>
</tr>
<tr>
<td>8</td>
<td>Visteon</td>
<td>17</td>
<td>TBA</td>
</tr>
<tr>
<td>9</td>
<td>Valor</td>
<td>18</td>
<td>JBL</td>
</tr>
<tr>
<td>10</td>
<td>Clarion (type 2) †</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Metra OE</td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
<td>14</td>
<td>Parrot **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>XITE</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>Philips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>TBA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>JBL</td>
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Changing radio type

If the LED flashes do not match the radio you have connected, you must manually program the AX-TYAMP3-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-TYAMP3-SWC goes solid.

2. Release the Volume-Down button; the L.E.D. will go out indicating the interface is 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 out, 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.

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<th>Radio</th>
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<td>Eclipse (type 1)</td>
<td>10</td>
<td>Clarion (type 2)</td>
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<tr>
<td>2</td>
<td>Kenwood</td>
<td>11</td>
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<td>5</td>
<td>JVC</td>
<td>14</td>
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<td>6</td>
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<td>15</td>
<td>XITE</td>
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<td>Alpine</td>
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</tr>
<tr>
<td>9</td>
<td>Valor</td>
<td>18</td>
<td>JBL</td>
</tr>
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Remapping

Once the AX-TYAMP3-SWC has been programmed, the button assignment for the steering wheel controls may be reassigned if so desired. For example, if the Seek-Up button is preferred to be the Mute button instead. Follow the steps below to remap the steering wheel control buttons.

1. Ensure the AX-TYAMP3-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 to skip that function, and then release the Volume-Up button. This will tell the AX-TYAMP3-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 until the L.E.D. in the AX-TYAMP3-SWC goes out.

### Button assignment legend

<table>
<thead>
<tr>
<th>Function #</th>
<th>Function</th>
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<th>Function</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Volume-Up</td>
<td>10</td>
<td>Band</td>
</tr>
<tr>
<td>2</td>
<td>Volume-Down</td>
<td>11</td>
<td>Play/Enter</td>
</tr>
<tr>
<td>3</td>
<td>Seek-Up/Next</td>
<td>12</td>
<td>PTT (Push to Talk)</td>
</tr>
<tr>
<td>4</td>
<td>Seek-Down/Prev</td>
<td>13</td>
<td>On-Hook</td>
</tr>
<tr>
<td>5</td>
<td>Source/Mode</td>
<td>14</td>
<td>Off-Hook</td>
</tr>
<tr>
<td>6</td>
<td>Mute</td>
<td>15</td>
<td>Fan-Up *</td>
</tr>
<tr>
<td>7</td>
<td>Preset-Up</td>
<td>16</td>
<td>Fan-Down *</td>
</tr>
<tr>
<td>8</td>
<td>Preset-Down</td>
<td>17</td>
<td>Temp-Up *</td>
</tr>
<tr>
<td>9</td>
<td>Power</td>
<td>18</td>
<td>Temp-Down *</td>
</tr>
</tbody>
</table>

* Not applicable in this application

**Note:** Some radios may not have 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 (long button press)

The AX-TYAMP3-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 the desired setting.

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

1. Turn the key to ignition but do not start the vehicle.
2. Press and hold the desired steering wheel control button for (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. Proceed 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. Press the desired button to store it to memory. The L.E.D. will now go out indicating the new information has been stored to memory.

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

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**Dual assignment legend**

<table>
<thead>
<tr>
<th>Function #</th>
<th>Function</th>
<th>Function #</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not allowed</td>
<td>10</td>
<td>Band</td>
</tr>
<tr>
<td>2</td>
<td>Not allowed</td>
<td>11</td>
<td>Play/Enter</td>
</tr>
<tr>
<td>3</td>
<td>Seek-Up/Next</td>
<td>12</td>
<td>PTT</td>
</tr>
<tr>
<td>4</td>
<td>Seek-Down/Prev</td>
<td>13</td>
<td>On-Hook</td>
</tr>
<tr>
<td>5</td>
<td>Mode/Source</td>
<td>14</td>
<td>Off-Hook</td>
</tr>
<tr>
<td>6</td>
<td>ATT/Mute</td>
<td>15</td>
<td>Fan-Up *</td>
</tr>
<tr>
<td>7</td>
<td>Preset-Up</td>
<td>16</td>
<td>Fan-Down *</td>
</tr>
<tr>
<td>8</td>
<td>Preset-Down</td>
<td>17</td>
<td>Temp-Up *</td>
</tr>
<tr>
<td>9</td>
<td>Power</td>
<td>18</td>
<td>Temp-Down *</td>
</tr>
</tbody>
</table>

* Not applicable in this application
Resetting the interface

The Blue reset button is located inside the interface, between the two connectors. The button is accessible outside the interface, no need to open the interface.

1. Press and hold the reset button for (2) seconds, and then let go to reset the interface.
2. Refer to the Programming section from this point.
If you are having difficulties with the installation of this product, contact our Tech Support line either by phone at 1-800-253-TECH, or email at techsupport@metra-autosound.com. Before doing so, look over the instruction booklet a second time and ensure that the installation was performed exactly as the instruction booklet is stated. Have the vehicle apart and ready to perform troubleshooting steps before contacting Metra/Axxess Tech Support.

Knowledge is Power
Enhance your installation and fabrication skills by enrolling in the most recognized and respected mobile electronics school in our industry. Log onto www.installerinstitute.com or call 800-354-6782 for more information and take steps toward a better tomorrow.

Metra recommends MECP certified technicians