

NO:000001

# MVA-12L Installation Manual

Thank you for purchasing the Beat-Sonic MVA-12L Audio Interface Adapter Kit. You have purchased from Japan's leading supplier of car audio interface adapters and accessories. Designed and made in Japan, this product represents our commitment to quality and excellence. Please read this manual carefully prior to installing this product to ensure correct operation.

Compatible Vehicles	Year	Chassis Code
Lexus SC 430	2002-2004	UZZ40

#### ■Features

- Allows installation of a double-DIN (178mm x 100mm) head unit to replace OEM head unit.
- Retains full function of OEM navigation, amplifier/speakers, touch screen and climate control systems.
- Compatible with Mark Levinson sound system.
- Provides video input to factory Lexus screen for dual screen display (see Appendix A).
   Plug and play adapter with no modifications required to factory vehicle electrical harness.
- Retains partial steering wheel audio controls (see Appendix B)

#### **■**Important

- Front/rear fader control & DSP functions from the new head unit are not supported.
- Traffic Information and Radio Data Service (RDS) will no longer function after removing the OEM head unit. Vehicles equipped with In-Car Portable Phone must have factory handsfree mode disabled prior to removal
- of factory head unit (see Appendix C).
- This product will not rectify any pre-existing faults with the electrical system, factory amplifier and/or speakers.
  This vehicle is not compatible with steering wheel button adapters. Attempting to connect a steering wheel button adapter will result in audio malfunction.
- This product must be installed in vehicles with fully operational factory steering wheel audio button controls.
- This product should be installed by an experienced motor vehicle technician or automotive electrical professional.
- The user assumes all responsibility for any damages and/or injuries caused as a result of improper installation.
- This product must be installed strictly in adherence with the instructions detailed in this manual

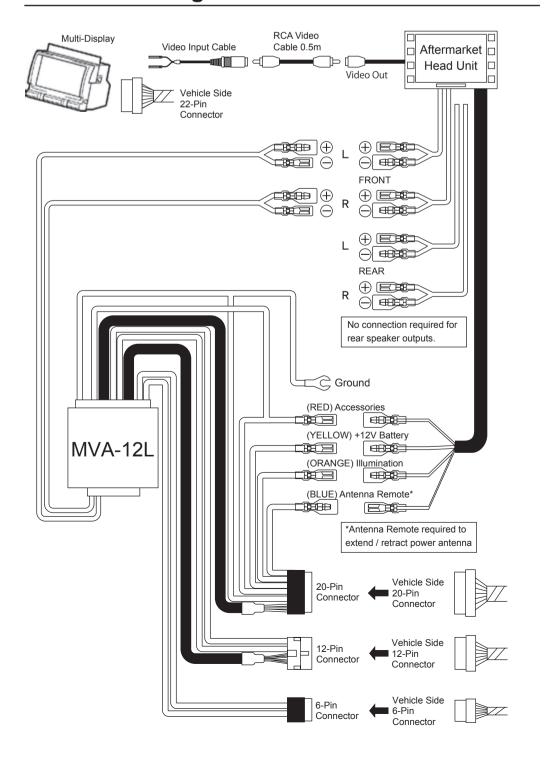
#### **■**Precautions

- Perform installation with patience and due care to prevent damage to this product or any part of the vehicle.
- Ensure all connectors, cables and terminals are correctly secured and fully inserted. Loose and/or improperly secured connectors will cause malfunction.
- Always grasp the connector plug when disconnecting the cable harness. Never disconnect connectors by pulling on the harness wires as serious damage can occur.
- Do not attempt to install this product on any other vehicle other than the specified models
- Do not disassemble, modify or attempt to repair this device. Disassembly, modification or any other changes will render the warranty void.
- Beat-Sonic and its affiliates shall not be held responsible for any consequence, either directly or otherwise, as a result of installing and/or using this product.
- Disconnect negative terminal of the vehicle battery prior to installation to prevent risk of short circuit.

### **■**Contents

- Interface Adapter Module and Harness x 1
- Side Panel (Left & Right) x 1 pair
- Video Input Cable x 1RCA Video Cable 0.5m x 1
- Spacer Panel x 1
- M5 Machine Screw x 4
- M5 Self Tapping Screw x 4Instruction Manual x 1

## **Connection Diagram**



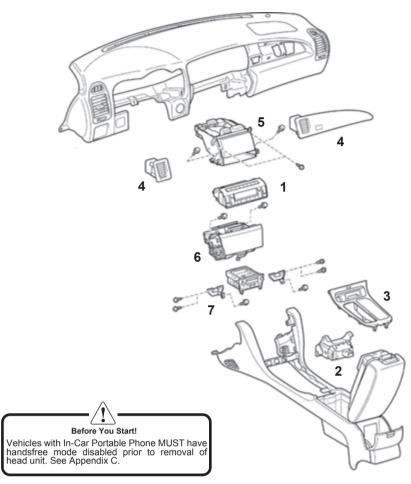
#### Installation

## 1. Remove the Factory Radio Receiver Assembly

Disconnect the negative terminal of the vehicle battery and wait at least 90 seconds before proceeding to prevent accidental airbag deployment.



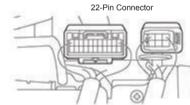
- 1.1 Remove the Climate Control Assembly unit by pulling away to disengage the 6 clips. Disconnect the connectors to remove the assembly.
- 1.2 Remove the seat heater switch panel by pulling away to disengage claws.
- 1.3 Remove the shift panel by pulling away to disengage the 6 clips.
- 1.4 Remove the air vent and air vent garnish assembly on either side of the factory Multi-Display.
- 1.5 Remove the 4 fasteners attached to the mounting brackets for the Multi-Display. Disconnect the 2 connectors on the underside to remove the Multi-Display.
- 1.6 Remove the 4 bolts attached to the mounting brackets for the Radio Receiver.
- 1.7 Disconnect the connectors to remove remove the Radio Receiver with brackets.



## 2. Install the Video Input Cable - Optional Installation

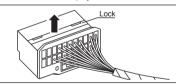
Provided the aftermarket head unit supports video output, the Video Input Cable can be used to connect the video output from the aftermarket head unit to the Lexus Multi-Display. This feature is optional and can be omitted if not required. If video input is not required please skip this step and move to Section 3 on the other side of this manual. For details on using the video input function see Appendix A.

2.1 Locate the 22-Pin Connector disconnected from the underside of the Multi-Display unit. This connector is attached to the vehicle's main harness from inside the dash panel.

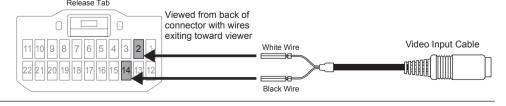


Underside of Multi-Display with connectors inserted

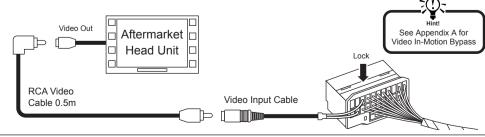
2.2 Insert a very small flat-head screwdriver underneath each of the 2 retainer release slots to lift the retainer lock approximately 1mm.



2.3 Looking at the back of the connector with the release tab facing up and wires facing towards the viewer, insert the Video Input Cable white wire into Pin#2 and the black wire into Pin#14. Ensure the wire terminal is fully inserted and clicked into place.



2.4 Press down the retainer so that it clicks into place then connect the RCA Video Cable to the Video Input Cable. Route the other end of the RCA Video Cable to behind the location of where the aftermarket head unit will be installed.

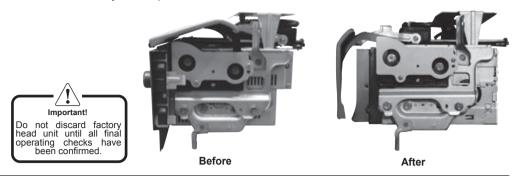


2.5 Re-connect the Multi-Display and temporarily secure into place with the 4 fasteners. Do not re-install air vent and garnish trim at this stage.

### 3. Install the Double DIN Head Unit

3.1 Remove the mounting brackets and folding lid assembly from the factory Radio Receiver by unscrewing the 6 fasteners on each side. Install the brackets and lid assembly to the aftermarket head unit using the same fasteners where possible.

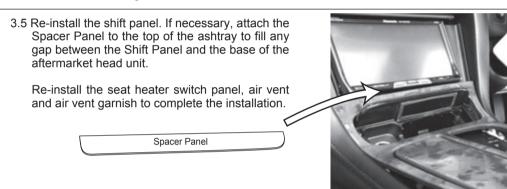
Use the fasteners supplied with this kit if the upper bracket fasteners (A & B) are too short. Note that it may not be possible to attach all 4 lower fasteners on the lower bracket.



- 3.2 Connect the MVA-12L harness to the vehicle side connectors and to the wires of the aftermarket head. If the Video Input Cable has been installed then connect the video output of the aftermarket head unit to the RCA Video Cable.
- 3.3 Install the aftermarket head unit and bracket assembly taking care not to crush or kink the wiring behind. Secure using the 4 mounting fasteners and insert the side panels on either side of the aftermarket head unit.



3.4 Re-install the Climate Control Assembly making sure all the connectors are properly connected. Reconnect the vehicle battery and confirm operation of aftermarket head unit, steering wheel control buttons, factory multi-display, illumination etc. In case of malfunction see Troubleshooting Guide.



## **Appendix A**

## Video Input for Dual Screen Display

The MVA-12L supports external video connection to the factory display screen. The video output of the aftermarket head unit can be connected to the factory display for dual screen mode. To enable this feature please install the Video Input Cable detailed in Step 1 of this manual.

With the vehicle stationary and the Park Brake (Foot Brake) applied, press the "MODE" button on the steering wheel audio control switch to display AUX video input on the Multi-Display. Press "DESTINATION", "MENU", "INFO" or "DISPLAY" buttons below the Multi-Display to return to the factory navigation screen.

## Video In-Motion

The following advanced modification will allow the AUX video to display on the factory Multi-Display while the vehicle is in motion. Beat-Sonic recommends this feature is used only for displaying the navigation maps onto the Multi-Display while the vehicle is in motion. This modification requires cutting of the factory Lexus electrical harness and should only be performed by an experienced installer.

Cutting the SPD wire will disable distance calculated scheduled maintenance items used by the Maintenance Information screen on the Multi-Display.

## DISCLAIMER

Under no circumstances should the driver operate the navigation system, watch video or otherwise be distracted while the vehicle is in motion. Depending on local traffic laws, it may be an offense for the driver to view the screen while the vehicle is in motion.

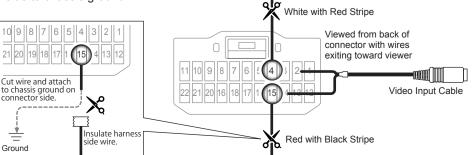
Beat-Sonic and its affiliates accept no responsibility for personal injury, damage to property, vehicle breakdown, breaches of traffic laws, traffic infringements etc. as a result of using the product.

## **Procedure**

Locate the 22-Pin Connector behind the Multi-Display as used to insert the Video Input Cable. The SPD (Speed Sensor) wire is located on Pin#4 and the PKB (Park Brake) wire is located on Pin#15 as shown below.

SPD: Cut the SPD wire (White with Red Stripe) and insulate the wire ends to prevent accidental contact.

PKB: Cut the PKB wire (Red with Black Stripe) and connect the wire on the connector side to chassis ground.

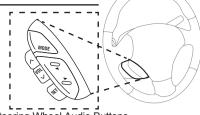


## Appendix B

#### **Steering Wheel Audio Controls**

The MVA-12L Audio Adapter Kit supports partial steering wheel audio button controls via the factory amplifier.

Please note that it is not possible to connect the SC430 steering wheel audio buttons controls to the new head unit either directly or via an adapter.



Steering Wheel Audio Buttons

#### **MODE Button - AUX Input Select**

Selects external video source. Display will be blank if no video source is connected. Press either "DESTINATION", "MENU", "INFO" or "DISPLAY" buttons to return to the factory navigation display.

#### **VOL Button - Volume Adjustment**

Adjusts the gain on the factory amplifer. For optimal performance, set the volume on the aftermarket head unit to mid level and adjust volume by the steering wheel buttons only.

#### SET Button - Preset Volume

Press and hold to store the current volume setting. System will beep to acknowlegde preset volume has been stored. Press SET button once to restore volume to the preset level.

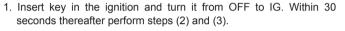
#### Tune/Track Select - Fader Adjust

Controls front/rear fader on the the factory amplifier. For optimal performance, set the fader on the aftermarket head unit to neutral and adjust front/rear fader by the steering wheel buttons only.

## Appendix C

#### **In-Car Portable Phone System**

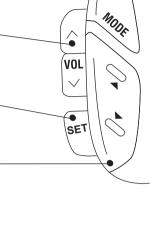
Vehicles equipped with optional In-Car Portable Phone System must have the factory handsfree mode disabled prior to removal of the factory head unit. Failure to perform this step will result in the steering wheel volume buttons not functioning correctly with low or no sound output.

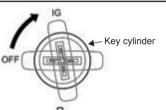


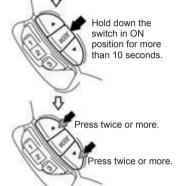
- 2. Hold down the MODE button for more than 10 seconds then release.
- 3. Within 5 seconds:
- a) Press the channel switch **\( \Lambda \)** twice or more.
- b) Press the channel switch ▼ twice or more.

Confirm factory handsfree is disabled by placing phone in cradle, switch ON and enter PIN code. Steering wheel buttons should no longer operate handsfree with phone

If procedure has not been performed correctly, wait at least 30 seconds before repeating steps 1 through 3.







## **Troubleshooting Guide**

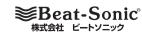
## No Sound, Distorted Sound or Clipping Audio

- Step 1. Confirm on the aftermarket head unit the fader is set to neutral and volume is set to mid
- Step 2. Ensure that only the front speaker outputs from the aftermarket head unit are connected to the MVA-12L harness. Do not attempt to connect rear speaker outputs. The factory Lexus amplifier is 2 channel input and will provide output to all speakers front and rear.
- Step 3. Ensure the Multi-Display unit is fully connected. The sound system will not work if the Multi-Display is not fully connected.
- Step 4. With the ignition ON, press and release the steering wheel "MODE" button. This will reset the audio input on the factory amplifier. The factory screen will go blank if no external video source is connected. Select the "DESTINATION", "MENU", "INFO" or "DISPLAY" button to return to navigation screen.
- Step 5. Vehicles equipped with In-Car Portable Phone (handsfree system) must have the factory handsfree system disabled. If necessary re-install the factory head unit to perform steps in Appendix C above.
- Step 6. Repeatedly press the steering wheel volume UP button for 30-40 times. It may be that the volume has simply been set to very low. The steering wheel volume buttons control the factory amplifier and not the aftermarket head unit so it may not be immediately obvious that the volume is being adjusted.
- Step 7. Re-check all connections to ensure connectors are fully plugged in and seated.

  Confirm by disconnecting then re-connecting. An audible "click" should be heard.
- Step 8. If all above checks fail, reinstall the factory head unit and confirm operation.

  Any malfunction in any of the OEM steering wheel buttons, amplifier and/or speakers will also result in malfunction with aftermarket head unit.
- Step 9. Confirm correct operation of aftermarket head unit on test bench or another vehicle.

## International



472-5, Koushin, Fujieda, Nisshin, Aichi, JAPAN.
TEL: +81-561-73-9000 FAX: +81-561-74-5554
www.beatsonic.co.jp E-mail: enquiries@beatsonic.co.jp

## USA and Canada



14778 Beach Blvd. La Mirada, CA 90638 TEL: 1-714-994-1085 FAX: 1-714-249-4741 www.beatsonicusa.com E-mail: info@beatsonicusa.com