

FM-SC 1 Universal Vehicle Interface for SIRIUS Satellite Radio

User's/Installation Guide



FCC NOTICE:

This device complies with Part 15 of FCC rules. Operation is subject to the following conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

Directed Electronics is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the User's authority to operate the equipment.

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Warning and Safety Information



Please read these instructions carefully before proceeding. Failure to heed them can result in serious injury or death. DO NOT OPERATE EQUIPMENT UNDER ANY CIRCUMSTANCES THAT IMPAIRS YOUR ABILITY TO DRIVE OR OPERATE YOUR VEHICLE SAFELY. As a driver, you alone are responsible for safely operating your vehicle in accordance with traffic safety laws at all times. Any function that requires your prolonged attention should only be performed after coming to a complete stop. Always stop the vehicle in a safe location before performing these functions. Failure to do so may result in an accident.

- DO NOT OPEN, DISASSEMBLE OR ALTER THE UNIT IN ANY WAY. Doing so may result in fire, electric shock or product damage.
- DO NOT INSERT ANY OBJECTS INTO THE UNIT. Doing so may result in injury, fire, electric shock or product damage.
- USE THE CORRECT CURRENT (AMPERAGE) RATING WHEN REPLACING FUSE. Failure to do so may result in injury, fire, electric shock or product damage.
- MAKE THE CORRECT CONNECTIONS. Failure to make proper connections may result in fire or product damage.
- DO NOT SPLICE INTO ELECTRICAL CABLES. Never cut away cable insulation to supply power to other equipment. Doing so degrades and alters the cable's specifications and can result in fire or electric shock.
- DO NOT INSTALL IN LOCATIONS THAT MIGHT HINDER VEHICLE OPERATION. Doing so may obstruct vision or hamper movement which can result in a serious or fatal accident. If you are attaching the unit directly to the vehicle's chassis, check to make sure the area behind the unit is clear from moving parts, fuel or break lines, wire harnesses or any other items which may get damaged by drilling a mounting hole or using the supplied screws.
- DO NOT EXPOSE THE UNIT TO HIGH LEVELS OF HUMIDITY, MOISTURE OR DUST. Doing so can result in electric shock or product failure.
- Install the FM-SC1 system as described in this Guide.

- The use suggestions contained in this user guide are subject to any restrictions or limitations that may be imposed by applicable law—the purchaser should check applicable law for any restrictions or limitations before installing and/or operating this Interface module.
- Do not drop the Interface module or DCU (Display Control Unit) or subject it to strong shocks.
- Failure to follow these warnings and safety instructions may result in a serious accident.



Caution

Please read these instructions carefully before proceeding. Failure to follow these safety instructions and warnings may result in a serious accident and/or personal injury.

- HALT USE IMMEDIATELY IF A PROBLEM ARISES. Power off immediately, failure to do so may cause personal injury or damage. Return the unit to your authorized retailer or nearest service center for repair.
- ENSURE THE WIRING UPON INSTALLATION IS NOT CRIMPED OR PINCHED BY SCREWS OR SHARP METAL EDGES. Route the cables away from moving parts or sharp pointed edges. This will prevent crimping and damage to the wiring. If the wiring must pass through a metal hole, be sure to use a rubber grommet to prevent the wire's insulation from being cut by the metal edge of the hole.
- USE ONLY THE SPECIFIED PARTS AND INSTALL THE PRODUCT SECURELY. Use only the specified accessory parts.
 Use of non specified parts may damage this unit internally or may not securely install the unit in place. This may cause parts to become loose, resulting in hazards or product failure.
- USE CAUTION IF or WHEN DISCONNECTING THE BATTERY TERMINAL. Please consult the vehicle's owner's manual or a service technician prior to removing the battery positive or ground connection, as it may cause damage to the vehicle's electrical system or require reprogramming of the vehicle's computer-controlled devices.

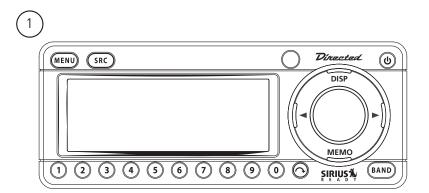


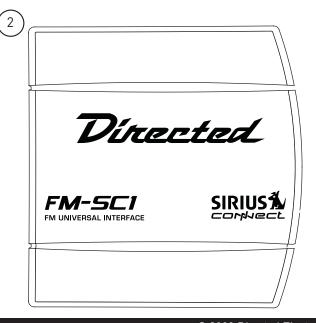
Congratulations

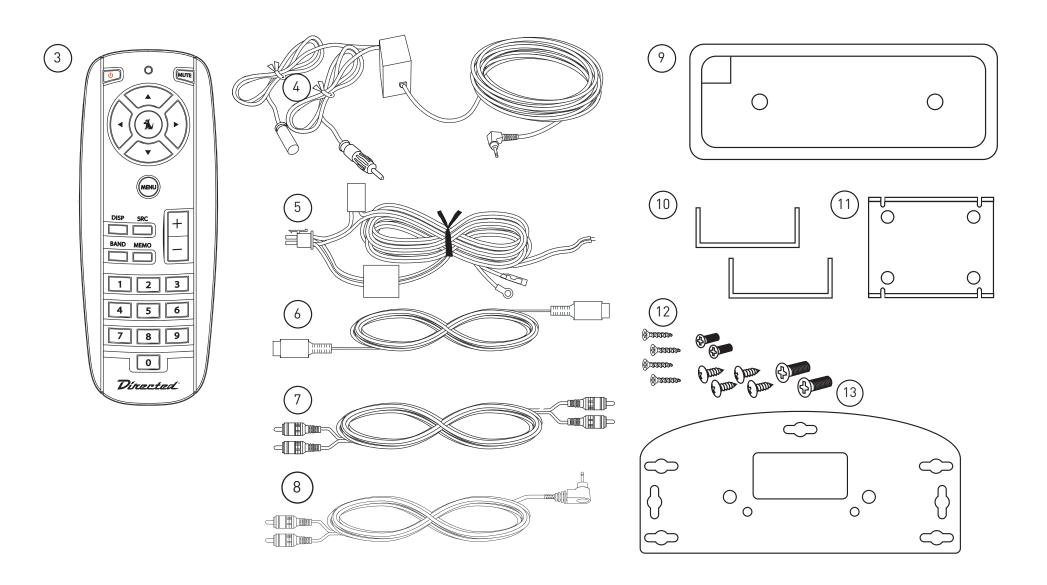
Congratulations on the Purchase of your new FM-SC1 Universal Vehicle Interface for SIRIUS Satellite Radio! Your FM-SC1 system is designed to be compatible with most vehicles. For the latest information about this and other SIRIUS products and accessories from Directed Electronics, please visit http://www.directedsirius.com.

Package Contents

- 1. 1 DCU (Display Control Unit)
- 2. 1 FM-SC1 Universal Interface module
- 3. 1 Remote Control (w/battery)
- 4. 1 FM Direct Adapter
- 1 Power Harness (w/fuse)
- 6. 18 pin DIN Cable
- 7. 1 Audio Cable (RCA to RCA)
- 8. 1 Audio Cable (RCA to 3.5mm right angle plug)
- 9. 1 DCU Holder (flush mount)
- 10. 2 Metal brackets for mounting holder
- 11. 1 DCU Holder (surface mount)
- 12. Mounting hardware for holders and brackets:
 - 2 machine screws for items 9 & 10
 - 4 tapping flat head screws for item 11
 - 2 small machine screws & 4 self tapping screws for item 13
- 13. Mounting bracket for FM-SC1 Universal Interface module
- 14. This guide









Important Pre-Installation Notes

The FM-SC1 system requires either a SiriusConnect Universal Vehicle tuner, or SIRIUS Dock and Play or Portable radio with an installed SirisuConnect Vehicle Dock. This guide assumes that the tuner or docked radio has already been installed. Please refer to the installation guides for those products for additional information.

- Professional installation of this product is recommended by Directed Electronics.
- Read this entire installation manual before proceeding with the installation.
- If the installation notes in this manual are not followed, it may result in personal injury or damage to the various components of the FM-SC1 system, damage to the vehicle's audio/visual systems, damage to the vehicle's electrical systems, or damage to the vehicle's mechanical systems.
- Familiarize yourself with the existing audio/video system in the vehicle by consulting the owner's manuals for these systems before making any wire or cable connections to those systems.

- The FM-SC1 product is designed for 12 volt DC negative ground electrical systems only.
- Disconnect the vehicle's battery before beginning installation.
- When replacing blown fuses, replace the fuses with fuses of the same type, rating, and amperage.
- Do not cut any of the wires and cables provided with the FM-SC1 system. Excess cable or wire length should be neatly bundled and secured in a hidden location.
- Do not route wires or cables across sharp edges, or through holes which could result in the wire or cable becoming damaged, chafed, cut, or shorted. If routing across sharp edges is unavoidable, use wiring conduit or wrap wires/cables with electrical tape. Use rubber grommets when routing through holes. Where the wires or cables may contact moving parts, protect the wires/ cables by encasing them in wiring conduit.
- Avoid pinching, squashing, kinking, or crimping any of the FM-SC1 wires or cables, or any of the vehicle's existing wires/cables during the installation.

FM-SC1 Installation Notes

- The FM-SC1 must be installed inside the passenger compartment of the vehicle, in a location that always remains free from moisture, and is protected from weather elements.
- The recommended location for mounting the FM-SC1 is behind the dash of the vehicle or kick panel if possible. The FM-SC1 may however be installed elsewhere in the vehicle provided the necessary cables and wires can reach the FM-SC1. In larger vehicles where the satellite antenna cable cannot reach to the dashboard, it may be necessary to mount the FM-SC1 in a location toward the rear of the vehicle, such as under a rear seat or behind a rear quarter panel.
- The satellite antenna cable should not be cut, lengthened, or shortened.
- Avoid locating the FM-SC1 near heating or cooling vents in the vehicle, or where hot or cold air blows directly on the FM-SC1.
- Avoid locating the FM-SC1 where it could interfere with the operation of the vehicle.
- Do not install the FM-SC1 under a carpet or in a small

- enclosed area lacking proper ventilation.
- Mount the FM-SC1 securely so it will not shift from the motion or vibration of the vehicle.
- When a mounting location is chosen, before drilling the mounting holes, verify that the holes or mounting screws will not damage anything behind the mounting location, or obstruct any of the vehicle's mechanical or electrical systems.
- When the FM-SC1 is mounted, the cables and wires connected to the FM-SC1 should be free of kinks and crimps, and securely connected to the FM-SC1. Extra cable or wire lengths should be coiled and secured with wire ties or electrical tape to the existing wiring harnesses in the vehicle.
- Follow the wiring diagram when installing the FM-SC1 system.
- The red wire of the FM-SC1 power connector should be connected to a +12 volt accessory power circuit that is switched on and off by the vehicle's ignition switch. Failure to do so can result in the battery power of the vehicle being drained while the vehicle is not running.



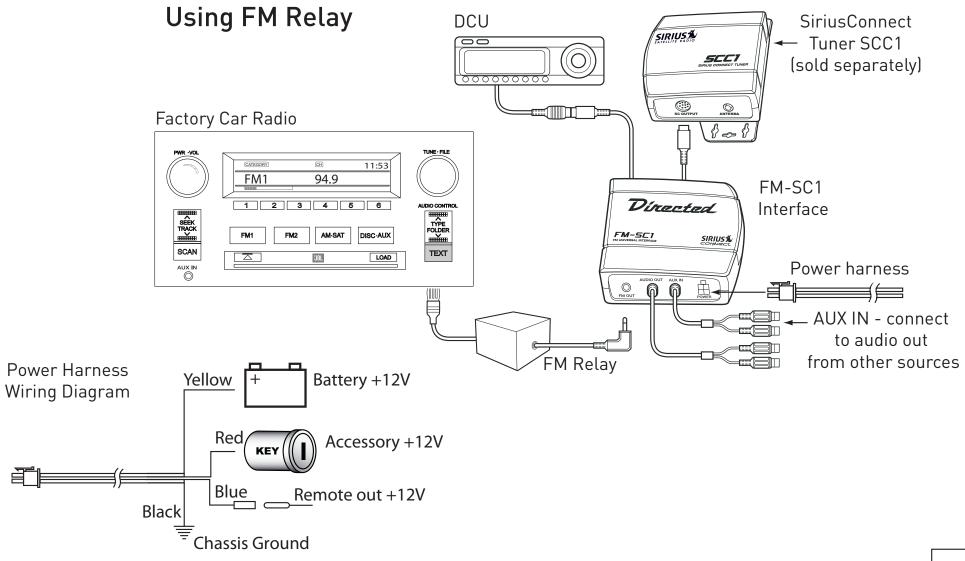
When tapping into an existing electrical circuit for +12 volt power, consult the vehicle's owner's manual and verify that the electrical circuit can provide the additional power required for the FM-SC1 system (See the Specifications section in this manual for the power requirements of the FM-SC1 system). Do not replace the fuse of the electrical circuit with a larger fuse in order to accommodate the FM-SC1 system. Doing so could result in a circuit overload, which could cause an electrical fire.

Power Harness Color Codes		
Red	Accessory +12V	
Yellow	Battery +12V	
Black	Ground (Chassis)	
Blue	Remote out +12V	

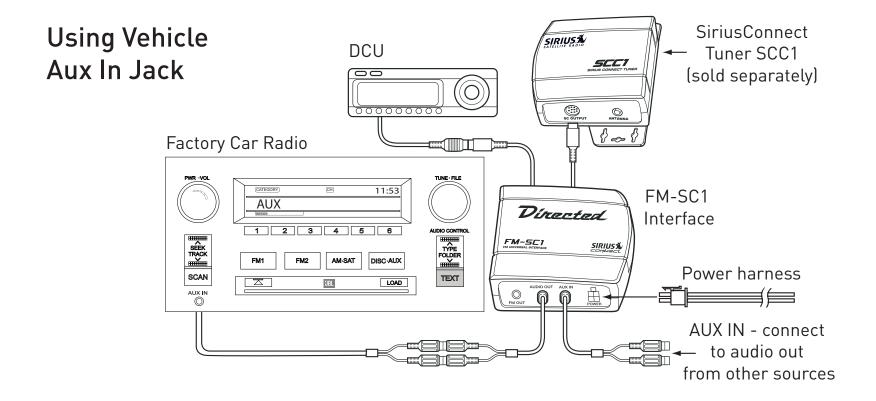
Display Control Unit Installation Notes

- Mount the Display Control Unit (hereafter DCU) in a location which is convenient to the driver, but which does not obstruct the operation of the vehicle, or pose a risk of injury to the occupants in the event of a sudden stop or accident.
- Do not mount the DCU where it would hinder or obstruct the operation of the vehicle's air bags.
- Do not mount the DCU where it will be in direct sunlight for prolonged periods of time, or where the vehicle's heating/cooling vents would blow directly on the DCU.
- The DCU may be mounted using the included Velcro strips to adhere the unit to the vehicle's interior surface, or mounted using a mobile phone type mounting system by using the included mobile phone mounting clip which attaches to the DCU.

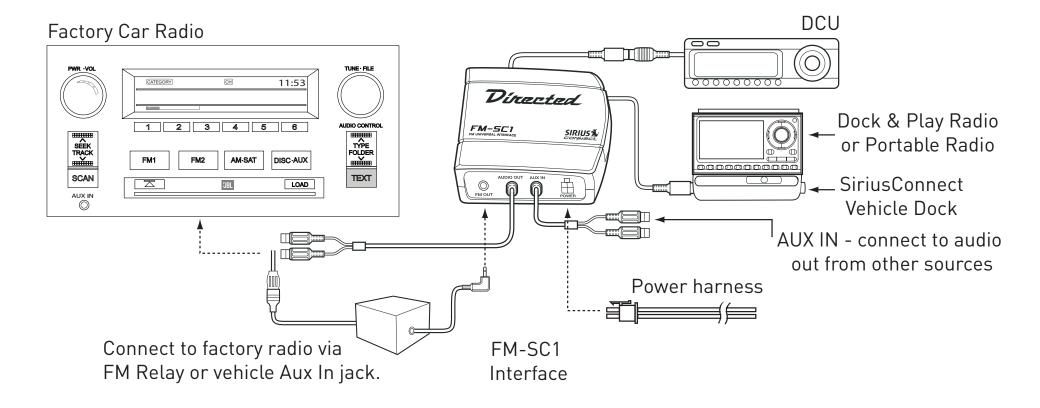
System Wiring Diagrams







The Portable Solution

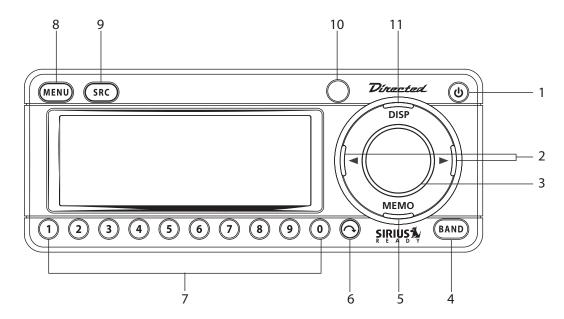




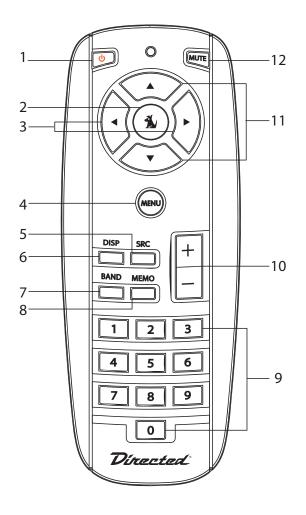
Display Control Unit (DCU)

Controls and Features:

- 1. **POWER (U)** Button Turns the DCU On and Off.
- CATEGORY Buttons (◀ & ▶): Navigates through the Category List Screen which displays SIRIUS Channel Categories.
- Rotary Knob and SELECT Button: Rotate knob to navigate through channels and display screens or to highlight items on the display. Press the Rotary Knob to select.
- 4. **BAND** Button (P.Tune): Pressing and releas
 - ing switches between the three preset banks (A,B & C), which hold 10 presets each. Pressing and holding enables "Preset Tune Mode", which allows for viewing and listening of stored presets with the Channel Buttons.
- 5. MEMORY (**MEMO**) Button (S-Seek Function): Saves and recalls artist names and song titles. You can store up to 20 artist name and song title combinations, or sports games.
- 6. **JUMP ()** Button: Used to quickly switch between the current channel and a favorite channel.
- 7. PRESET Number (**0-9**) Buttons: Sets and selects preset channels.
- 8. **MENU** Button: Used to access menu options to make setup and feature changes.
- 9. SOURCE (SRC) Button: Connects to or from external source.
- 10. Remote Control Receiver: Receives signals from the wireless remote control.
- 11. DISPLAY (**DISP**) Button: Toggles display between category/channel name and time/date. Holding this button down switches the display to the channel list mode.



Remote Control



Controls and Features:

- 1. POWER (**U**) Button: Turns the DCU ON and OFF.
- 2. SELECT (1) Button: Selects items highlighted on the display; hold down to jump to the previously received channel.
- 3. CATEGORY (◀ & ▶) Buttons: Navigates through categories and display screens.
- 4. **MENU** Button: Enters and exits the Setup Mode.
- 5. SOURCE (**SRC**) Button: Connect to or from external source.
- 6. DISPLAY (**DISP**) Button: Toggles display between category/channel name and time/date. Holding this button down switches the display to the channel list mode.
- 7. **BAND** Button: Switches between preset bands A through E.
- 8. MEMORY (**MEMO**) Button: Saves and recalls song and artist information. Holding button down changes the display to memory recall mode.
- 9. NUMBER (0-9) Buttons: Used for selecting channels directly and by preset.
- 10. VOLUME (+ & -) Buttons: Adjusts the volume up and down.
- 11. CHANNEL (▲&▼) Buttons: Navigate through channels and display screens (equivalent to the **rotary knob** on the DCU).
- 12. MUTE Button: Mutes the audio.

Installing Batteries in the Remote:

- 1. Remove the battery cover on back of the remote control.
- 2. Install the CR2025 battery (+ (positive) side is up) by first inserting the rim under the protruding lip on the left side of the battery compartment.
- 3. Push down gently to seat flush then replace the battery cover.



Activating your SIRIUS Subscription

Before you can listen to the SIRIUS service, you must subscribe to the SIRIUS Satellite Radio service.

NOTE: Since this FM-SC1 system requires either a SiriusConnect tuner (SCC1) or Sirius Dock and Play radio installed in a SiriusConnect Vehicle Dock (SCVDOC1), this guide assumes that the Sirius tuner or Vehicle Dock with docked Sirius radio have already been installed.

- 1. Make sure that the FM-SC1 system, SCC1 or docked Sirius radio are properly connected and that its antenna is oriented to receive the SIRIUS satellite signal.
 - **Note:** Use the ID number on the SCC1 or docked Sirius radio for activation call.
- 2. Press the (Power) button to turn the DCU ON.

 After displaying the SIRIUS logo, the unit updates all the SIRIUS channels. The display reads "UPDATING CHANNELS" on the top line and "X% Completed" (0%-20%-40%-60%-80%-100%) on the bottom line until the update completes.
 - **Note:** Don't push any buttons or perform any operations until updating has been completed.
- 3. Once updated and the SIRIUS channels are received, the display changes to "Call 1-888-539-SIRIUS to Subscribe" and places you in The Preview Channel. Channel 184 is SIRIUS' preview channel. Tuning to any other channels is

- disabled until you activate your SIRIUS subscription.
- 4. Press the **MENU** button to enter the "Menu Options" mode. The "SIRIUS ID" menu option is highlighted.
- 5. Push the **Select** button to select "SIRIUS ID". This displays your Tuner's unique 12-digit SIRIUS ID Number (SID).



This SID number is also available on the SIRIUS tuner or packaging. Write the number down and have your credit card handy. A space is provided at the end of this manual to record your SID.

6. Contact SIRIUS on the Internet:

http://activate.siriusradio.com/

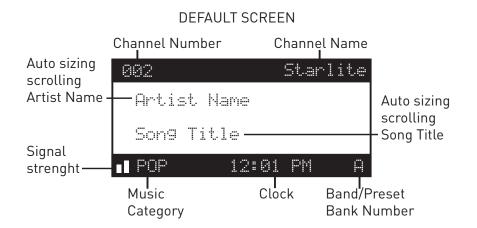
Follow the prompts to activate your subscription, or you can also call SIRIUS toll-free at:

1-888-539-SIRIUS (1-888-539-7474).

Basic Operation

General notes before beginning:

- All operations in this guide both basic and advanced are performed with the Display Control Unit (hereafter DCU) in a default state (i.e. set to an active channel as shown below). Many of these commands may not function as described when the DCU is in a state other than default.
- Functions in this guide unless otherwise specified are performed using the DCU's control panel but can also be performed using the remote control's corresponding buttons.
- After you have successfully activated your SIRIUS subscription, the default screen appears (shown below).



- When the radio is powered on, the previously selected channel automatically starts playing. The artist name and song title of the currently playing song is visible.
- Signal strength is indicated by a series of bars in the lower left corner, three bars being the best or maximum strength, two bars indicating a good signal and one bar indicating a weak one. The absence of bars indicates no signal received.
- Please read the instructions carefully, some controls perform different functions when they are pressed and held. The "Press" command therefore differs from the "Press and Hold" command when used in this guide. The former is a momentary press and quick release while the latter refers to pressing and holding the button for at least 1½ seconds.
- In many instances if no selection or activity is sensed within several seconds of entering a new screen/menu, the DCU automatically reverts to default, without saving any of the new settings pertaining to that screen.

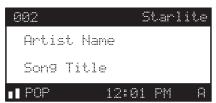


Changing Channels or Categories

Turn the **rotary knob** clockwise to scroll up to the next channel. Turning the **rotary knob** counterclockwise scrolls down the channel list. Use ◀ & ▶ to move between categories. To exit Channel or Category lists and return to default screen press and hold the **DISP** button.

Display Button (DISP)

Pressing the DISPLAY (hereafter **DISP**) button toggles the screen between the default, two lines of smaller text showing artist with song title and a scrolling single line of large text.





Pressing and holding the DISPLAY (**DISP**) button for 1½ seconds enters Channel List mode, described in the next section.

Search Modes (Category, Channel, Artist, Song Title)

The DCU has several ways to search for and select music: by channel, by category, by artist, and by song title.

Searching Channels

If you want to find a different channel to listen to, press and hold the **DISP** button to enter Channel List mode.

1. Use the **rotary knob** to scroll through the available channels in each category.

001	CH	Name
002		Mane
003		Name
ldd4		Name
		Name

- 2. Use the ◀ & ▶ buttons to scroll through the music and entertainment categories.
- 3. When the channel you want is highlighted, press the **Select** button to tune to the channel. The channel changes and the display reverts to the default screen for the new channel.

Pressing the **DISP** button while in the Channel List Mode changes between Channel Name, Artist Name, and Song Title allowing you to preview what is playing on other channels before selecting. To exit this mode without changing to a new channel, press and hold the **DISP** button for 1½ seconds to return to the default screen.

Press one of the ◀ or ▶ buttons to enter List mode again and then press ◀ or ▶ to enter the category list.



Press the **DISP** button to show the Artist Name. Press the **DISP** again to show the Song Title or twice to show channel. Pressing the **Select** button or holding the **DISP** button when in Artist Name or Song Title mode forces these states to remain when the Channel and Category lists are accessed again using the ◀ or ▶ buttons. To return to the default screen, use the **DISP** button to return to Channel name, press **Select** to set.

Note: If you are viewing a sports category channel list (NFL®, NBA®, COLLEGE), pressing the DISPLAY (**DISP**) button toggles between the team names and the current score of any live play-by-play game.

Direct Tuning

Channels can be directly accessed by pressing the **Select** button on the DCU or remote control (button) and then using the 0-9 keys to enter the desired channel number. Once the desired number has been entered, the channel changes and the display reverts to the default screen for the new channel. The display changes immediately if

three numbers are entered, but if just one or two digits are entered, the unit waits for 3 seconds before changing the channel. If the number is invalid an "Invalid Channel" prompt appears before the DCU reverts to the previous valid channel.





Advanced Features

Before proceeding please read the "General notes" information under the "Basic Operation" section of this guide, as these notes are also applicable here.

Setting Channel Presets

For quick access, up to 30 of your favorite channels can be stored as presets. Presets are stored in 3 banks (labeled A, B and C). There are 10 preset buttons, numbered 0 to 9 thus a total of 10 presets per bank totaling 30.

- 1. Press and quickly release the **BAND** button to activate the preset bank you want (A, B or C). The Selected bank is shown in the bottom right corner of the default screen.
- 2. Select the channel you want to preset (see the Basic Operation and Changing Channels section).
- 3. Hold the numbered preset button (**0-9**) in which you want the channel stored for at least 1½ seconds. For example if Band letter is set to □ and button 1 is pressed and held, the preset bank number □□1 (followed by a beep) appears in the bottom right corner of the screen and indicates the memory location to which the channel is stored. If the preset button already has a channel stored in it, the stored channel is replaced with the new channel.

Recalling Channel Presets

The 3 presets in the active bank (A through C) can be selected by pressing the 0-9 buttons.

- 1. Press and quickly release the **BAND** button to activate the preset bank you want. The selected bank is shown in the bottom right corner of the Default screen.
- 2. Press the desired preset button (0 9) to recall the preset. The channel then changes and the display reverts to the Default screen for the new channel.

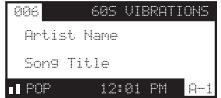
Searching for a Channel Preset (Preset Tune Mode)

It is possible to quickly search through all of your presets using the **rotary knob**.

- 1. Press and hold the **BAND** button to enter the Preset Tune Mode. "Preset Tune Mode" momentarily appears and the top left and bottom right corners of the display inverts (contrast colors) to indicate Preset Tune Mode.
- 2. Press and hold the **DISP** button for $1\frac{1}{2}$ seconds brings up the Preset Tune List.
- 3. Use the **rotary knob** to move up or down through your presets. Only channels stored in your presets are displayed, regardless of which bank they are stored in. Presets are grouped and displayed by preset bank first and then number (e.g. □-1, □-2...□-1, □-2) looping back to the beginning when complete.

Note: Since the Jump () button is also a preset button (see "Settings" section for more details about this button), it also appears as such in the lower right hand corner of the screen when in Preset Tune mode (if enabled).





Default Display

Preset Tune Display

To exit the Preset Tune Mode and return to Channel Tune Mode, press and hold the **BAND** button. Screen remains the same except for the channel and Preset label (top left and bottom right corners) which reverts back to default. (i.e. returns to light letters on a dark background)

Preset Tune Mode

In the Preset Tune Mode, you can view your list of presets showing Channel Name, Artist Name, or Song Title as you do in Channel List Mode:

- 1. Press and hold the **BAND** button to enter the Preset Tune Mode.
- 2. Press and hold the **DISP** button for 1½ seconds which brings up the Preset Tune Mode displaying up to 4 preset channel names. Pressing the **DISP** button while in this

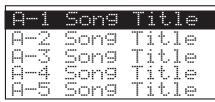
- mode changes between Channel Name, Artist Name and Song Title list modes. The name field scrolls only if the length of the Artist Name or Song Title cannot be viewed in its entirety.
- 3. Use the **rotary knob** to highlight the desired preset.
- 4. Press the **Select** button to select the channel. The channel changes and the display reverts to the Preset Tune Display.



Preset Tune Channel Name List Display



Preset Tune Artist Name List Display



Preset Tune Song Title List Display



Memory (MEMO) and Artist Seek Functions

This feature allows the user to capture and store information for an Artist, Song or Sports Team on the currently tuned channel, and up to a total of 30 listings. The DCU can also be enabled to continuously search all incoming SIRIUS channels and alerting the user when a saved program is being played. When a team (or teams) are stored in memory, an alert prompts you if your teams are playing in a game being broadcast when the unit is initially powered on. Also, while listening to your SIRIUS receiver, should one of your teams begin to play a game, an alert again prompts you.

Storing Song Titles or Sports Games

1. Artist/Song Titles: While the DCU is in the default display mode, momentarily pressing and releasing the MEMO button stores the current program data information within the DCU's memory by first prompting you to choose either artist or song.



To store an artist or song playing, simply highlight either one using the **rotary knob** and press **Select** to save current choice. Once saved the screen returns the prompt

"Stored" on screen followed by how many memory locations are used and how many are still available.

X Used/Y Empty

If an artist has already been stored in memory the "Store Artist" choice becomes disabled leaving you only one choice, the "Store Song" function.

Memory Options: Press and hold MEMO to enter the "Memory" screen. Turn rotary knob to scroll through



From the "Memory" screen, press **Select** to enter "MEMORY RECALL" menu for that specific location.



Turn **rotary knob** to highlight options for saved information. Highlighting "Artist Seek ON" and pressing **Select** alerts you to this artist if playing on another channel, choosing "Artist Seek OFF" cancels this command. Selecting either one returns you to the "Memory" screen.

A check mark () appears in the top bar of the "Memory" menu when "Artist Seek ON" is enabled, its absence means the seek function is turned off (Artist Seek OFF was selected).

To return to the "Memory" screen without selecting anything, press the **MEMO** button, press it again to return to the default screen.



Note: When Artist Seek is enabled, you are alerted by an "Artist Alert" prompt which appears on screen, the prompt changes to display the channel this artist is playing on, If more than one match is found, a list appears. Scroll through the list and highlight a program using the rotary knob. Press Select to access that channel.

"Delete" in the "MEMORY RECALL" screen erases content from this memory location making it available for new selections.

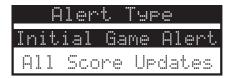
From the "MEMORY RECALL" menu highlight "Delete" and press **Select** to enter the "Memory Delete" menu, highlight "YES" option using the **rotary knob** and press the **Select** button to confirm or "MO" to retain information.

Note: The face icon to the left of the check mark indicates that the Artist is stored in this memory location whereas a song stored is indicated by a musical note icon instead.

2.Sports Games: If the current tuned channel is an NFL, NBA, or college play-by-play sports broadcast, pressing and releasing quickly the **MEMO** button allows you to select one of the teams playing to be stored in memory.



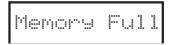
Use the **rotary knob** to highlight the team you wish to store in memory and press the **Select** button. The next screen asks which kind of alert you wish to have.



"Initial Game Alert" sounds an alert when the team you have chosen is playing a game. "All Score Undates" sounds an alert when the team you have chosen is playing a game, and also when the scores are updated for the team.



Use the **rotary knob** to highlight the Flert. Type you wish to store in memory and press the **Select** button. If the **MEMO** button is pressed and all of the memory spaces are full, "Memory Full" flashes on the display for one second.



A screen displaying the Replace/Cancel options follows. This prompt allows you to make the following Replace or Cancel choices.



Replace: The list of stored memory items appears.



Use the **rotary knob** to highlight the data that you would like to overwrite with the new Artist/Song Title or sports game. After highlighting the Selected title in the list, press the **Select** button to delete the stored Artist/ Song Title or sports team and replace it with the updated information. The display returns a "Song Stored" prompt.



Cancel: Choosing this option causes the prompt screen to disappear and revert to the default screen. Nothing is replaced or stored.

Menu Options

To enter the Menu Options page, press the **MENU** button. The "MENU OPTIONS" list is displayed.



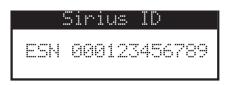
Using the **rotary knob**, highlight the option you wish to adjust and press the **Select** button. The following options are available:

Sirius ID Time Based Features FM Transmitter Signal Indicator Game Alert Factory Default

Settings

Sirius ID

Displays your 12 digit SIRIUS ID (SID). The SID is unique to your SCC1 or Sirius Dock and play Radio, and is located on the label of the tuner or radio as well as on the original factory retail packaging for the tuner or radio. (not to be confused with the FM-SC1 module which looks similar to the SCC1 tuner). This SID is required to activate your service. To exit this option, press the **Select** or **MENU** button.



FM Transmitter

The FM frequency that the FM-SC1 transmits on can be changed with this option. For best performance, first find a frequency on your FM radio that is clear of any broadcast station, and then **Select** the corresponding frequency on the DCU. If you would like to **Select** a FM frequency:

1. From the "MENU OPTIONS" screen, use the **rotary knob** to highlight "FM Frequency". Press the **Select** button.



- 2. Use the **rotary knob** and the **◄**/▶ buttons to adjust the FM frequency.
 - The **rotary knob** adjusts in 0.2 MHz increments
 - The ◀/▶ buttons adjust in 1 MHz increments.

To exit the FM Frequency menu, press the **MENU** button.

Note: When the FM-SC1 is connected to your car radio using the supplied FM relay, you must turn the FM-SC1 system off using the power switch in order to listen to AM/



FM on your car radio. This is not required when FM-SC1 is connected to the AUX IN jack of your car radio.

Game Alert

Game Alert allows you to store your favorite sports teams in memory. The system constantly scans the SIRIUS channels and sounds an alert when a team you stored in memory is playing, or when there is a score update for a team, depending on which option you have chosen for the team. Teams which you have Selected and are currently playing are displayed in a category called "Margine Zone".

You may select one team from each sports league and the college category, however, more teams may be chosen by using the MEMORY (MEMO) function, (See the section titled, "Memory (MEMO) and Artist Seek" for more information to add additional teams). To choose teams to add to your stored game alerts:

- 1. From the "MENU OPTIONS" screen, use the **rotary knob** to highlight "Game Alent" and press the **Select** button.
- 2. Use the **rotary knob** to highlight the sports league or college category of the team you wish to add, and press the **Select** button.



3. Use the **rotary knob** to highlight the league team name or college team name you wish to add, and press the **Select** button.



Note: that for college sports, an alert for all teams playing for that college occurs.

4. Use the **rotary knob** to highlight which type of an alert you want, and press the **Select** button.



When the unit is powered on, and while it is playing, "Initial Game Alert' sounds an alert when the team you have chosen is playing a game. "All Score Undates" does the same but also sounds an alert when the scores are updated for the chosen team.

To exit the Game Alert menu, press the **MENU** button.

Settings

From "MENU OPTIONS" list use the **rotary knob** to highlight "Settings" option and press **Select** to enter. This function has several sub-menus associated with it as follows:



Jump Settings Display Options Memory

Audio Control Confirmation Tone Parental Control

Jump settings

The **JUMP** (hereafter \curvearrowright) button is a special preset button used to quickly move between your current channel and another frequently used one such as a traffic or weather channel. To preset your jump button for traffic or weather:

1. From the "SETTINGS" menu turn the **rotary knob** to highlight "Jume" Settings". Press **Select** to enter. Use the **rotary knob** to highlight "Traffic". Press **Select** to enter. Using **rotary knob** highlight your city of choice from the list and press **Select** to set which returns you to the "Jume" Settings" menu with the

jump icon \curvearrowright now next to "Traffic" and the city is now abbreviated after "Traffic".



Pressing the button now while listening to a channel automatically searches for traffic updates in your area, a "city pending" prompt may appear if awaiting updates before switching to that channel.

2. To preset the jump button to a music channel:
From the "SETTINGS" menu turn **rotary knob** to highlight "Jump Settings". Press **Select** to enter.
Turn **rotary knob** to highlight "Jump Set" and press **Select** to enter. You are prompted to "Tume to the desired channel, press and hold Abutton".

You must exit the menu list to perform this action (Use the **MENU** to exit, find your channel of choice then press and hold the button). After setting your desired channel you can switch from your current channel to this set channel by simply pressing the button. The icon is displayed on the bottom to the right of the clock to indicate you are in the jump preset (icon does not appear in Traffic channel). Press the button again to return to your previous channel.



Display Options

Brightness Control:

- 1. From the "SETTINGS" menu turn the **rotary knob** to highlight "Display Options". Press **Select** to enter. Use the **rotary knob** to highlight "Brightness", Press **Select** to enter.
- 2. Using the **rotary knob** adjusts the overall luminosity of the LCD display for viewing under different lighting conditions. Use the **rotary knob** to adjust brightness up or down. The bar graph moves accordingly to indicate the change. Press **Select** to set and return to "Display Options" menu.



Contrast Control:

- 1. From the "SETTINGS" menu turn the **rotary knob** to highlight "Display Options". Press **Select** to enter. Use the **rotary knob** to highlight "Contrast", Press **Select** to enter.
- 2. Using the **rotary knob** adjusts the contrast between the background and the text on the LCD display. Use the **rotary knob** to adjust the contrast up or down. The bar graph moves accordingly to indicate the change. Press **Select** to set and return to "Display Options" menu.



Memory Options

The Memory Options feature allows you to set whether the system automatically searches all the song titles, artist names, sports teams, etc. stored in memory for any matches when the unit is initially turned on. This feature also allows you to clear all the stored information in memory.

To Set the Automatic Memory Search:

- 1. From the "SETTINGS" menu use the **rotary knob** to highlight "Memory Options". Press the **Select** button.
- 2. Use the **rotary knob** to highlight "Auto Memory Search" and press the **Select** button.
- 3. Use the **rotary knob** to highlight either "On" or "Off" and press the **Select** button.





To exit, press the **MENU** button.

Note: When this function is turned off it overrides the Artist seek function (see "Memory (MEMO) and Artist Seek Functions section of this guide). The check mark () thus remains present in the "Memory" screen, despite the seek function being turned off in this screen.

To Clear All Items Stored in the Memory:

- 1. Use the **rotary knob** to highlight "Memory Options". Press the **Select** button.
- 2. Use the **rotary knob** to highlight "Clear All Memory" and press the **Select** button.
- 3. Use the **rotary knob** to highlight either "Yes" or "No" and press the **Select** button.



To exit, press the **MENU** button.

Audio Control

1. From the "SETTINGS" menu turn the dial to highlight "Audio Control". Press **Select** to enter. Use the **rotary knob** to highlight either "Fixed mode" or "PreAMF mode", Press **Select** to enter.



Fixed Mode:

"Fixed mode" is the system's default mode and should be used when you are connecting the FM-SC1 system to a radio or other host unit.

From the "FLDIO CONTROL" menu turn **rotary knob** to highlight "Fixed", press **Select** to enter. Once in this screen you can adjust the output to a desired level using the **rotary knob**, rotating clockwise to increase volume or counterclockwise to decrease volume. Volume adjustment is indicated by a variable bar graph display.



Press **Select** to set. Once set, this output level is fixed and can only be adjusted by returning to this menu or through the level controls on the remote control.

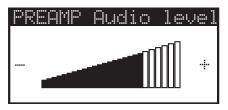
PreAMP Mode:

This mode is designed to allow the FM-SC1 system to be used as the primary sound source in a vehicle. It allows



the user to control the volume level from the DCU using the **rotary knob** (+/- buttons on the Remote Control).

From the "AUDIO CONTROL" menu turn **rotary knob** to highlight "PreAMP". Pressing Select will cause unit to display the ramped "PREAMP AUDIO LEVEL" screen. Turning the **rotary knob** clockwise increases volume which is indicated by ramped vertical bar graph increments. To decrease volume turn the **rotary knob** counterclockwise.



Press **Select** button to set volume, and then exit menu. Volume control is now available using the DCU's **rotary knob** or the remote control +/-buttons.

Note: When in "PreAMP" mode, the **rotary knob** default operation is Volume Up/Down. However, you can still use it as a tuning control at any time by simply pressing any other button on the DCU or remote control that has a tuning function, such as CAT, BAND, a preset, or simply holding the **Select** button down for 2 seconds. The **rotary knob** will then work in its normal tuning or content

navigation mode as long as you are actively navigating channels, categories etc. The **rotary knob** reverts to volume control operation after three seconds of no tuning activity.

Confirmation Tone

The DCU sounds an audio tone alert when the unit powers ON and OFF as well as when the Artist Seek Alert is activated. The default is ON. To change the tone option, perform the following:

1. From the "SETTINGS" menu use the **rotary knob** to highlight the "Confirmation Tone". Press the **Select** button.



2. Use the **rotary knob** to highlight "OH" or "OFF". Press the **Select** button to choose the Selected option. To exit the Confirmation Tone menu, press the **MENU** button.

Parental Control

The DCU has the ability to lockout with password protection any channels you do not want others to access without your permission. The locked channel does not appear in the channel list.

When anyone tries to access a locked channel using the button on the remote control and entering a locked channel number, the "Enter Code" prompt is displayed and the channel cannot be accessed until the proper code is entered.



To Lock or Unlock a Channel:

1. From the "SETTINGS" menu use the **rotary knob** to highlight "Parental Control" Press the **Select** button to enter menu. Use the **rotary knob** to highlight "Lock/Unlock". Press the **Select** button.



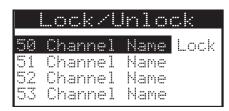
2. If this is the first time that Channel Lock is being used, you are prompted to enter a four digit code. This initial default number is **0000** until changed. Your new code can be any four digit number from **0000** to **9999**. If you should exit this prompt without entering a code, you will be prompted to set a code next time you enter

the Channel Lock feature.

3. If a code has been previously set, a "Enter Code" prompt appears. Enter your four digit code and press the **Select** button to continue.



4. When the correct code has been entered, use the **rotary knob** to highlight the channel you want to lock or unlock. A locked channel has "Lock" displayed to the right of the channel name. Highlight a channel name and press the **Select** button to lock or unlock the channel.



To exit the Channel Lock menu, press the **MENU** button.

To Change the Lock/Unlock Code:

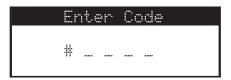
The first time the Channel Lock feature is accessed you are prompted to enter a four digit code. This code can be any four digit number from **0000** to **9999**. If you should exit this prompt without entering a code, you will be



prompted to set a code next time you enter the Channel Lock feature.

To change the lock code:

1. From the "PARENTAL CONTROL" menu use the rotary knob to highlight "Edit Code" and press the Select button.



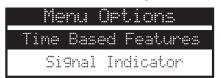
- 2. At the prompt, enter your four digit code.
- 3. The "New Code" prompt appears. Enter your new four digit code using the 0-9 number buttons on the DCU, or the 0-9 numbers using the remote. You are then prompted to confirm the new code by entering it again.

The lock code is now changed. To exit the Channel Lock menu, press the **MENU** button.

If you have forgotten your lock code, call SIRIUS Customer Service for help.

Time Based Features

From the default screen, pressing **MENU** button enters the "MENU OPTIONS" screen. Using the **rotary knob**, scroll to "Time Based Features" and press **Select** to enter.



This feature allows for adjustment of the following items:

Clock - Sets format, the time zone and daylight savings time function.

Alarm - Sets an alarm for a specific time.

Program Alert - Sets a program for automatic activation by entering time, day and channel and then selecting yes causes this channel to turn on at the specified time.

Auto Shutdown - Sets the unit to turn off at a specified time. If no user activity is sensed the unit turns off after 59 minutes.

Sleep Mode - Sets the unit to turn off after a specified period of time chosen from the sleep mode options. Unlike auto shutdown, unit shuts down after that specified time period regardless of user activity.

Clock:

You can configure the unit for the time zone in which you reside. The time data for the unit's clock is provided via the SIRIUS signal, and updates based on the data

received from the signal. You can also turn ON or OFF the automatic adjustment for Daylight Savings Time (DST).

From the "TIME BASED FEATURES" menu highlight "Clock" and press **Select** button:



To Set the Format:

- 1. From the "CLOCK" menu, use **rotary knob** to highlight "Format" then press the **Select** button.
- 2. Use the **rotary knob** to highlight "12 hour" or "24 hour" clock then press **Select** again to set.

To Set the Time Zone:

- 1. From the "CLOCK" menu, use **rotary knob** to highlight "Time Zone" then press the **Select** button.
- 2. Use the **rotary knob** to highlight your time zone then press **Select** again to set.

To Set Daylight Savings Time:

- 1. From the "CLOCK" menu, use **rotary knob** to highlight "Daylight Savings Time" then press the **Select** button.
- 2. Use the **rotary knob** to highlight whether DST is observed or not ("DST observed" or "DST not

observed") then press **Select** to set.

To exit the Clock menu, press the **MENU** button.

Alarm:

This feature allows you to set an alarm to sound at a specific time each day. From the "TIME BASED FEATURES" menu highlight "Alarm" and press **Select** button.

To set the time of the alarm:

1. From the "PLARM" menu, use the **rotary knob** to highlight "Plarm Time" then press the **Select** button.



- 2. Use the ◀ & ▶ buttons to adjust the hours and the rotary knob to adjust minutes (AM, PM are adjusted with hour adjustment), press Select again to set. Once the alarm time has been set it must be turned on as follows.
- 3. Press MENU to exit "Alarm Time" and turn rotary knob to highlight "Set Alarm" press Select to enter. Rotary knob to highlight "on" and press Select to set alarm.



To Turn the alarm ON or OFF:

- 1. From the "Alarm" menu, use the **rotary knob** to highlight "Set Alarm". Press the **Select** button.
- 2. Using the **rotary knob** highlight "On" or Off" and press the **Select** button.

To exit the Clock menu, press the **MENU** button.

Program Alert:

This feature allows you to program the radio to automatically tune to a specific channel at a specific time.

1. From the "PROGRAM ALERT" menu, use the **rotary knob** to highlight "Program Time/Day" then press the **Select** button.



- 2. Use the **rotary knob** to highlight "Time" or "Daw" then press **Select** to enter screen.
- 3. For the time screen, use the ◀ & ▶ buttons to adjust the hours and the **rotary knob** to adjust minutes (AM, PM are adjusted with hour adjustment), press **Select** again to set.
- 4. Use the **rotary knob** to highlight "Data" then press **Select** to enter "DAT" menu. Use the **rotary knob** to highlight a specific day or period, press **Select** again to set.

- 5. To exit "PROGRAM TIME/DAY" menu, press the **MENU** button, then use the **rotary knob** to highlight "Channel" then press the **Select** button to enter list. Using the **rotary knob** highlight your channel of choice, press **Select** to set.
- 6. From "PROGRAM ALERT" menu, use the **rotary knob** to highlight "Program Alert. On/OFF" then press the **Select** button to enter. Turn the **rotary knob** to highlight "OM", press **Select** to set and enable the program alert function. To turn off repeat step 6 but highlight and select "OFF" instead.

Auto Shutdown:

You can set the unit to automatically shut off after a one hour period of inactivity, that is if no buttons have been pressed for one hour. After 59 minutes of inactivity, a beep tone sounds and a display prompt appears on the screen, "Cancel Auto Shutdown" at which time the auto shutdown can be reset again to 1-hour of inactivity by pressing the **Select** button.

1. From "AUTO SHUTDOWN" menu, use the **rotary knob** to highlight "Enabled" then press the **Select** button.



2. To Disable repeat step 1 selecting "Disabled" instead.

To exit the "AUTO SHUTDOWN" menu, press the **MENU** button.

Sleep Mode:

You can program the unit to turn off automatically after a selected period of time, 15, 30, 45, or 60 minutes, regardless of any activity. To activate the Sleep Mode feature:

1. From "SLEEP" menu, use the **rotary knob** to highlight a time period, then press the **Select** button.



You may also choose "Iff" to cancel the sleep feature if you change your mind.

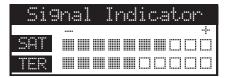
To exit the "SLEEP" menu, press the **MENU** button.

Signal Indicator

The signal indicator menu displays the strength of the SIRIUS signal from the satellite antenna and also from terrestrial (ground) transmitters. To display the SIRIUS signal strength:

1. Use the **rotary knob** to highlight "Signal Indicator". Press the **Select** button.

2. Two 10 segment horizontal bar graphs are displayed (SHT and TER) with a "-" sign to the left and a "+" sign to the right. "SHT" indicates satellite signal strength and "TER" indicates terrestrial signal strength - if available. To exit the Signal Indicator menu, press the **MENU** button.



Factory Default

This Menu option restores most features to the original factory settings. To activate this feature, perform the following procedure while in the "Menu Options" list mode:

1. Use the **rotary knob** to highlight the "Factory Default" option. Press the **Select** button. The "Restore Settings" menu appears. Turn the **rotary knob** to highlight "Yes" or "Ho", press **Select** to set (Selecting "Yes" returns unit to factory default settings, selecting "Ho" leaves them as they are).



2. Use the **rotary knob** to select "Yes" to restore all settings to the settings from the factory, or select "Yes" to leave them as-is and return to the Menu Options list



mode. If "Yes" is chosen, the DCU reverts to the original factory settings for the following parameters:

- All Presets Revert to Empty
- All Game Alerts Cleared
- Display Contrast to 50%
- FM Frequency set to 88.1 MHz
- All Skipped Channels Reset (Locked Channels Remain Locked)
- Memory Search On
- Memory Locations Erased
- Eastern Time Zone
- Daylight Savings Time Observed
- Auto Shutdown Off
- Sleep Mode Off

The Parental Control feature is not affected by the Factory Default option. If a code was initially set for the Parental Control feature, the code does not reset with the Factory Default feature, thus preventing someone from circumventing the Parental Control feature. Channels which have been locked remain locked.

The DCU then displays "Call 1— 888—539—SIRIUS to Subscribe" and places you in Channel 184, the SIRIUS preview channel. Your unit is still subscribed to the SIRIUS service.

Troubleshooting

This section lists several common problems and suggested solutions. If, after trying the suggested solutions listed here, you are still unable to resolve the problem you're having with your FM-SC1 and DCU, contact your installer, dealer, or retailer for more help.

Problem	Cause and Suggested Solution
System does not turn on	Blown fuse, or the power cable is not properly connected. Check for a bad fuse and check power cable connection. Check to make sure DIN cable between DCU and module is plugged in & not pinched or damaged.
DCU displays "ANTENNA NOT DETECTED"	The satellite antenna is not connected to the tuner module or SiriusConnect vehicle dock. Check satellite antenna connection to the Tuner.
Audio static or loss of clarity	Direct analog audio connection is the best choice for audio quality. When using the supplied FM relay, strong local FM stations can sometimes cause static if you have the FM-SC1 tuned to the same frequency. Always select an unused frequency for the FM-SC1 to use when setting up FM Modulation. Locate a quiet FM frequency on your vehicle radio and set the FM-SC1's FM frequency to match.
DCU displays "ACQUIRING SIGNAL"	Check for obstacles over or around satellite antenna. Change vehicle location to eliminate nearby obstacles (bridges, overpasses, etc.)
No sound	The audio cables or FM relay are not connected, or the FM radio is set to the wrong frequency. Check the audio cables at the FM-SC1 and the vehicle radio. Tune the vehicle FM radio to the same FM frequency the FM-SC1 is set to. Check the audio output levels using the Settings/Audio Control menu.



Specifications

Power Requirements	9-16 Volts D0
Audio Output	1.5V (normal) 2.2V (max.) (2Vrms
Total Harmonic Distortion (THD)	<0.2%
Signal-to-noise (S/N)	Greater than 73dE
Fuse Requirement	2A, 250V ATC
Power Supply	9-16V, Negative Ground, DC
DCU Dimensions (Width x Height x Depth)	
	(114mm x 40mm x 18.6mm
DCU Weight	5.15oz. (146g
FM Universal Interface (Width x Length x Height)	4.98" x 4.95" x 1.37
	(126.26mm x 125.75mm x 34.75mm
FM Universal Interface Weight	15.45oz. (438g
Audio Interface	4 RCA Type Connectors (R/L
Remote Control Dimensions (Width x Length x Height)	1.61" x 4.09" x .59"
	(41mm x 104mm x 15mm
Remote Control Battery Requirements	CR2025

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Limited One Year Consumer Warranty

Directed Electronics (herein "DIRECTED") promises to the original purchaser, to repair or replace this product (herein "unit") with a new or refurbished unit should it prove to be defective in workmanship or material under normal use, for a period of one-year from the date of purchase from the dealer as indicated by the date code marking of the unit. During this one-year period, there will be no charge for this repair or replacement PROVIDED the unit is returned to DIRECTED, shipping pre-paid. This warranty is non-transferable and does not apply to any unit that has been modified or used in a manner contrary to its intended purpose, and does not cover damage to the unit caused by installation or removal of the unit. This warranty is void if the product has been damaged by accident or unreasonable use, neglect, improper service or other causes not arising out of defects in materials or construction. This warranty does not cover the elimination of externally generated static or noise, or the correction of antenna problems or weak reception, damage to speakers, accessories, electrical systems, cosmetic damage, or damage due to negligence, misuse, failure to follow operating instructions, accidental spills or customer applied cleaners, damage due to environmental causes such as lightning, extreme temperatures, damage due to accidents, fire, theft, damage due to improper connection to equipment of another manufacturer, modification of existing equipment, or any unit which has been tampered for any reason. ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FIT-NESS FOR PARTICULAR PURPOSE, AND WARRANTY OF NONINFRINGEMENT OF INTELLECTUAL PROPERTY ARE EXPRESSLY EXCLUDED TO THE MAXIMUM EXTENT ALLOWED BY LAW, AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT. DIRECTED HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. IN NO EVENT WILL DIRECTED BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFITS) AND IN NO EVENT, SHALL DIRECTED'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY DEALER FOR THE PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Unit must be returned to DIRECTED, postage prepaid, with bill of sale or other dated proof of purchase bearing the following information: consumer's name, telephone number, and address, authorized dealer's name and address, and product description. Note: This warranty does not cover labor costs for the removal and reinstallation of the unit. This warranty is only valid for sale of product within the United States of America. Products or units sold outside of the United States are sold As-Is. IN ORDER FOR THIS WARRANTY TO BE VALID, YOUR UNIT MUST BE SHIPPED WITH PROOF OF PURCHASE FROM AN AUTHORIZED DIRECTED DEALER. BY PURCHASING THIS PRODUCT. THE CONSUMER AGREES AND CONSENTS THAT ALL DISPUTES BETWEEN THE CONSUMER AND DIRECTED SHALL BE RESOLVED IN ACCORDANCE WITH CALIFORNIA LAWS IN SAN DIEGO COUNTY, CALIFORNIA. 920 0031 2007 09

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