



Universal DICE interface for iPod

with FM-RDS technology

Installation Guide/User Manual



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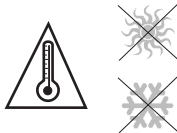
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Warning and safety!

Please read these instructions carefully before proceeding. Failure to follow instructions may result in improper operation or injury. Neither DICE Electronics, LLC. nor Apple Inc., its regional offices, distributors or resellers take any responsibility for any damage or injury as a result of using the integration kit.

- Do not open, disassemble or alter the interface in any way.
- Do not insert anything into the casing.
- Do not cut or try to alter cables in any way and always use the correct connections.
- Only operate unit when stationary or ask passengers to operate it for you.
- Do not allow the Apple iPod to distract you from driving.
- Exercise good judgement and keep your eyes on the road at all times.
- Do not expose unit to extreme temperatures, humidity or shock.
- Keep the unit and iPod away from fluids.
- Keep away from children! - Interface components may contain small parts, can be broken or disassembled and components may become loose from vibration and heat. Small components and packaging materials may be a choking hazard when handled by children.



Congratulations on your purchase

Thank you for purchasing the DICE integration kit for iPod. Please review our user manual and installation guide before operating the unit. This interface was designed and manufactured to seamlessly integrate with your vehicle's factory entertainment system.

Product registration

In order to validate your warranty period and to receive telephone or online support, you **MUST** register your DICE product.

To register your DICE product, please complete the following steps:

1. Visit <http://www.diceelectronics.com/register>
2. Complete the product registration form.
3. Submit the form.
4. Save the registration/support/warranty sheet in a safe place for future reference.

If you are unable to complete the registration via internet, please call DICE Electronics at 1-888-342-3999.

Supported iPod models and firmware version requirements

FW:3.1.1



iPod
4th generation
20GB 40GB
(no text display)

FW:1.2.1



iPod
4th generation color display
20GB 30GB 40GB 60GB
(no text display)

FW:1.0.3



iPod classic
80GB 160GB

FW:1.2.1



iPod
5th generation (video)
30GB 60GB 80GB

FW:1.4.1



iPod mini
4GB 6GB
(no text display)

FW:1.0.3



iPod nano
3th generation (video)
4GB 8GB

FW:1.3.1



iPod nano
1st generation
1GB 2GB 4GB

FW:1.1.3



iPod nano
2nd generation (aluminum)
2GB 4GB 8GB

FW:1.1.1

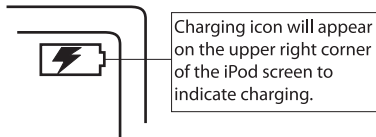


iPod touch
8GB 16GB 32GB

For the latest firmware versions and models not listed, please contact your authorized dealer or DICE Electronics, LLC.

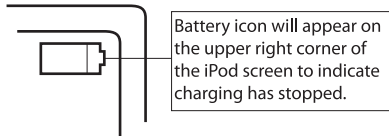
Charging for kits installed with pro-install cable

The interface automatically charges the battery of the iPod when connected and the key is in the ACC/ON position.



Charging for kits installed with plug and play cable

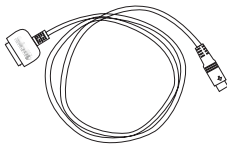
The interface automatically charges the battery of the iPod when connected. Most vehicles turn off ACC power when the key is in the OFF position and the iPod will stop playing and charging. However, in some vehicles the ACC power is always on and the iPod should be disconnected to prevent draining the vehicles battery.



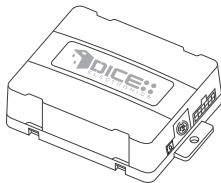
Some vehicles will constantly supply ACC power even when ignition is OFF! The iPod will continue to charge until disconnected! To prevent battery from draining or possibly being damaged, iPod MUST be disconnected in these vehicles!

Integration kit contents

- 1 Vehicle specific interface unit
- 1 plug and play antenna/power adapter
- 1 pro-install antenna/power cable (optional)
- 1 iPod dock cable
- 1 User manual



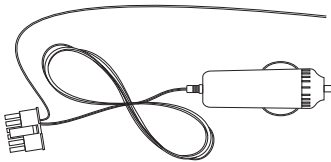
iPod dock cable



interface unit



user manual



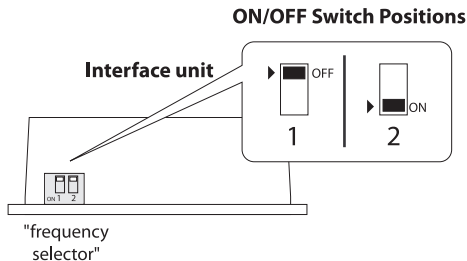
plug and play antenna/power adapter



pro-install antenna/power cable (optional)

Transmitter frequency setting

The frequency selector switch is located on the interface unit and is used to set the optimal transmitting frequency. Incorrect dip switch settings may cause the DICE interface not to work properly or not to operate at all. **Disconnect the vehicle harness from module and cycle ignition off for 5 seconds after changing the switches!** After making changes to the frequency selector be sure to tune to the correct FM frequency on which the iPod will be heard.



NOTE: Try to select a transmitting frequency that is not occupied by a local FM radio station.

Frequency configuration settings		
	Dip switch configuration	
FM (MHz)	Dip switch 1	Dip switch 2
88.7	OFF	OFF
93.3	ON	OFF
97.5	ON	ON
107.7	OFF	ON

Plug and play v.s. Pro-Install

The FM-RDS kit can be installed in one of two ways: plug and play or pro-install.

1. Plug and play installation

This is the fastest and easiest way to install the kit and is recommended if a professional is not available to do the installation. All features of the FM-RDS kit will be functional, however light amounts of radio interference should be expected in highly populated areas as the audio from the iPod is transmitted through the air.

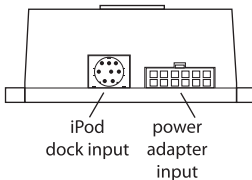
2. Pro-install

For the best possible sound quality we recommend installing the kit using the pro-install antenna/power cable included with the kit. This will connect directly to the radio's antenna port, eliminating the usual radio interference associated with FM transmitters. For this type of installation, we do recommend professional installation.

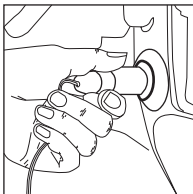
NOTE: *Pro-installation may require additional antenna adapters sold separately.*

Plug and play installation instructions

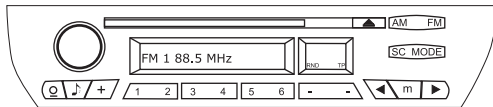
1. Connect the interface power adapter and iPod docking cable to the interface unit.



2. Plug the power adapter into a cigarette lighter socket.



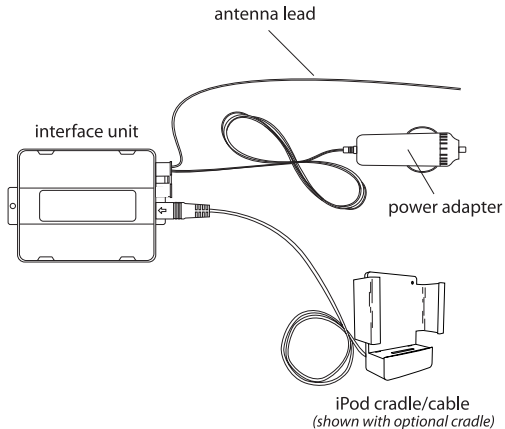
3. Set the vehicle's ignition to ON, turn on the radio and tune to the FM frequency that was selected on the module. See settings on pg. 9.



4. Connect the iPod to the cradle or dock cable. Select and start to play a song and the music should now be playing through the factory radio.

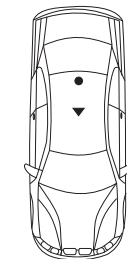
5. While the music is playing, position the interface unit and antenna lead so the least amount of static or interference is heard. Try to position the antenna lead as close to the vehicle's antenna as possible. Do not cut or shorten the antenna lead!

NOTE: The interface unit should be placed at an accessible location, near the vehicle's antenna.

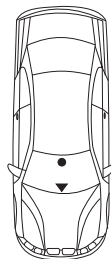


Positioning the FM-RDS interface unit

- vehicle's antenna location
- ▼ recommended module location



roof-top antennas



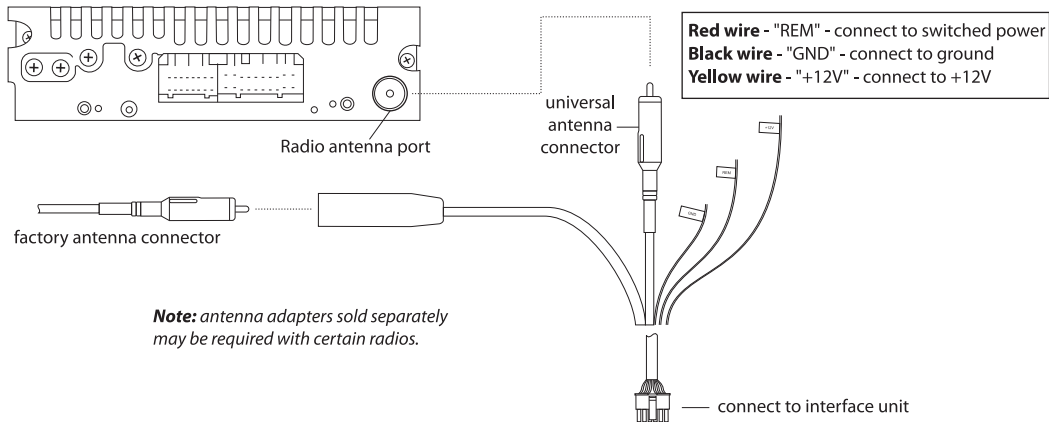
window/front antennas

Pro-Install instructions

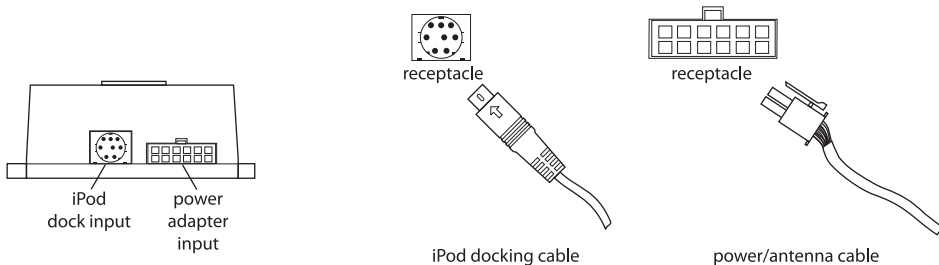
Installation should only be performed by a qualified professional. Beware of sharp edges to avoid injury and exercise caution when removing trims as they may break. The interface unit should be placed at an accessible location, such as in the glove box, the center console or under the front seat.

- 1 Pull vehicle into service bay.
- 2 Make sure that the radio code is available before disconnecting battery. Disconnect both battery terminals. These cables must be disconnected during installation to ensure proper initialization of the module when it is connected.
- 3 Pull out the radio by removing surrounding trims and screws to access the factory antenna connector. Most trims can be removed by carefully pulling on the piece or using trim removal tools. Trim is usually held in place by snap-in clips. Consult your dealership if additional information is needed on removing the radio.

4. You can access the factory antenna port located on the back of the radio. If the factory antenna cable is connected, unplug it and plug the universal antenna connector into the receptacle. Connect the +12 volt, ground and remote wire leads to their proper sources.



5 Connect the power/antenna cable and the iPod docking cable to the interface unit. Apply cable ties to secure the cables.

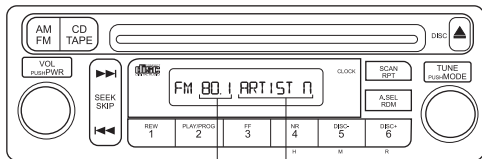


6 Verify that all connections have been properly made.

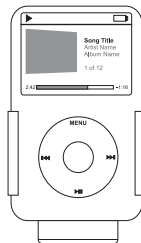
7 Reconnect the car's battery. Test the unit before seating the cables and reinstalling the panels/trim.

Using the FM-RDS integration for iPod

Select the FM radio source on the radio and tune to the frequency that was selected on the interface unit. As soon as the radio is tuned to the appropriate frequency, audio from the iPod will be heard.



FM frequency RDS text



About RDS

Radios with RDS capability allow the currently playing song title and artist name to be displayed on the screen of the radio. To find out if a radio has RDS, tune to a popular radio station and if the station name is displayed then the radio has RDS capability.

Troubleshooting

Problem	Solution
Cannot hear audio from iPod.	Make sure to select the FM source on the radio and tune to the correct FM frequency. Check DIP switch settings (refer to pg.9). With the ignition OFF disconnect vehicle harness from module for a few seconds and reconnect.
Audio from iPod receives high amounts of static and radio interference.	Select an FM frequency that is not already occupied by a radio station. Select a frequency preset (refer to pg.9) with the least amount of static. It's best to drive around and experiment to find the ideal setting. Reposition interface unit. If problem persists, the professional installation is recommended.
Cannot switch back to local radio stations while the iPod is connected.	With the pro-install, the iPod must be disconnected before the vehicles factory antenna is reactivated.
iPod continues to charge when ignition is in OFF position.	Some vehicles will not turn off ACC power and the iPod will continue to charge until disconnected! To prevent battery from draining or possibly being damaged, iPod MUST be disconnected!
RDS text does not consistently show up or scroll.	For RDS text to appear, a strong signal is required. If plug and play connection is used, RDS text may not always refresh promptly.

FCC Notice:

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

Caution: Changes or modifications not expressly approved by the manufacturer may void the users authority to operate this device.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Disclaimer and warranty

Important disclaimer, please read!

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Warranty and Support

Products carry a 90 day limited warranty that protects you from defects in material and workmanship of products sold by DICE Electronics, or its authorized agents, distributors and dealers. The warranty period begins the day a product is purchased by the end user. Products found to be defective during the warranty period will either be repaired or replaced by DICE Electronics at no charge unless warranty is void. Unauthorized attempt of repair or alteration of the product in any way immediately voids this warranty. Warranty does not extend to cosmetics or finish. A DICE product specialist must determine that defect is present in the product and issue an RMA. Be sure that all wiring is connected as described in the user manual and all related equipment is functioning properly. DICE Electronics disclaims any liability for other incurred damages resulting from product defects. Any expenses in the removal and reinstallation of products are not covered by this warranty.

If experience any problems or need help, please contact your local dealer or call 888-342-3999, or visit our support site at <http://www.diceelectronics.com/support>.



FM-RDS
www.diceelectronics.com

FM-RDS-iPod