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DEA601 Radio System

Introduction

The information and figures in this manual describes features that may or may not be on your specific vehicle either because they are options that you did not purchase or due to changes subsequent to the printing of this owner manual.

The DEA601 System consist of 7" Smart Display connected to a Radio.

The Smart Display function as a main display managing the entire user interface. The Smart Display with resistive touch-screen has a rear USB for playback or USB modem connection, it manages the Applications, Phone interface, Audio, Internet and Bluetooth / W-Fi conections.

The Radio is a module capable of managing the audio output of the system to the speakers, containing the tuner (AM, FM, WX), Sirius XM, Front Aux, Rear Aux, USB, CD. It also transmit the audio output from the Smart Display and manage the hard buttons.

System Features and Functions

The DEA601 System implements the following features and functions:

- 7" display with resistive touch-screen.
- Bluetooth & Wi-Fi connectivity
- 4 Integrated Analog Camera Inputs
- Microphone Input (Mono)
- GPS/Navigation Application Compatibility
- Audio Outputs
- Voice Recognition
- Text to Speech
- 1 knob with center push.
- Front Aux Input / Rear Aux Input
- USB compatibility for Apple devices
- CD Playback
- Front USB Connectivity (USB Playback)
- Tuner (AM/FM/WX)
- Sirius XM
- 4/2 Speakers Output
- Steering Wheel Control Compatibility
- Rear Seat Audio Compatibility



Radio

Radio Button Operation

Volume Knob/Power

Press Knob to turn ON the Radio. Rotate to Increase/decrease Volume. Press and hold to turn radio OFF.

One-Hour Timer

With the ignition off, pressing the Volume/PWR button on Radio or center button on RSA will turn on the receiver and activate the receiver's one-hour timer. The receiver will turn off after one hour or by pressing and hold the Volume/PWR or RSA center button.

Eject

Press to eject the CD

Phone

The Phone Call button is used to enable the Phone call functionality.

Dim Day / Night

The Dimming "day" is used to increment the brightness level of the Smart Display and the backlight level of the Radio bezel.

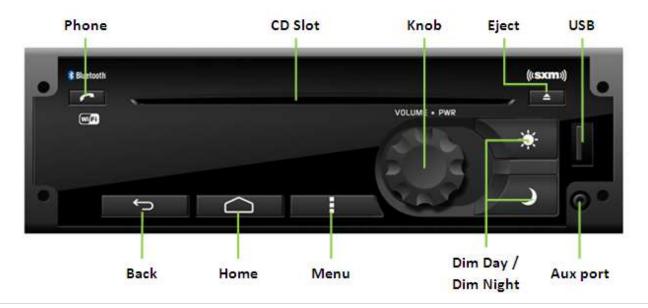
The Dimming "night" is used to decrease the brightness level of the Smart Display and the backlight level of the Radio bezel.

Back / Home / Menu

The **Back** button is used to exit the current screen and open the previous screen.

The **Home** button is used to go directly to the first home screen.

The **Menu** button is used to open the menu related to the current screen. When the system is on Home screen, Menu button open the "System Settings".



Smart Display

Getting Started

Using the touch screen

A Touch over a soft key activates or selects the corresponding function.



Figure 1 The Home screen.

A Swipe action is the case when the system registers a touch and a linear streak movement over the screen.

The movement can be performed to the right, left, up and down. The system is able to sense 4 different types of swipe action.

- Swipe to the Right
- Swipe to the Left
- Swipe to Up
- Swipe to Down

The next to the right screen is presented once the system senses a Swipe to the Left action.

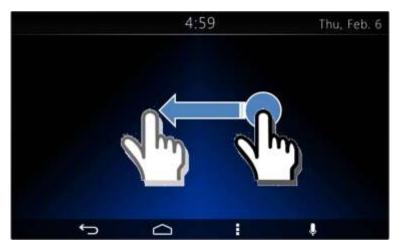


Figure 2: Swipe to the Left action presents right screen.

The next to the left screen is presented once the system senses a Swipe to the Right action.

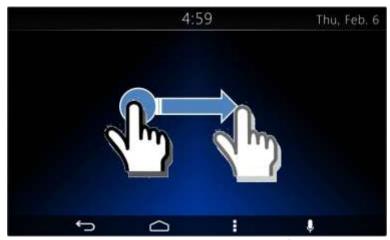


Figure 3: Swipe to the Right action presents left screen.

The next to the top screen is presented once the system senses a Swipe to Down action.

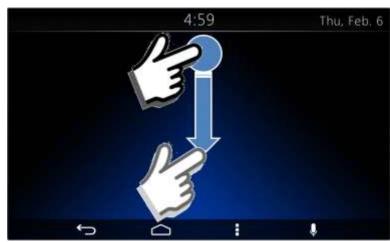


Figure 4: Swipe to Down action presents up screen.

The next to the bottom screen is presented once the system senses a Swipe to Up action.

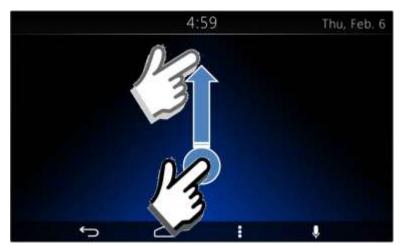


Figure 5: Swipe to Up action presents down screen.

Home screen & Navigation buttons

The installed application icons are presented at the home screen. The home screen is distributed in a main screen and subsequent home screens.

Each of the home screens present 6 application icons maximum plus the Audio widget. The number of the subsequent home screens is relative to the number of installed applications. Each subsequent home screen is added to the right of the main home screen or next to the right of the last subsequent home screen.

In the case the last subsequent home screen is reached and a swipe to the left action is performed the system presents the main home screen. If a swipe to right action is performed from the main home screen the system presents the last subsequent home screen.

An indicator identifies which home screen is displayed. The screen indicator is placed below the top bar of the home screen.

Each application icon in the home screen work as the application activation soft key.

At the top bar of each of the home screens the next information is presented all the time if available:

- Clock
- Alarm
- Warning icons
- Weather information

When the system is turned OFF but IGN and Battery are connected, the clock view is kept small as illustrated on **Figure 6.**

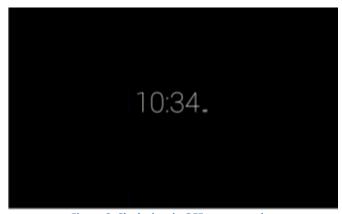


Figure 6: Clock view in OFF power mode.

The alarm setting opens once the system senses a touch over the displayed time area.

The weather information is presented in the Notification Bar; information is updated based on the ambient air temperature reported by the vehicle. The temperature measure units displayed are accordingly to the units selected in the Display Settings menu. Every ignition cycle the system suppresses the weather information until it receives the ambient air temperature from the vehicle information.

The next Applications are presented at the Home Screen as default:

- Cameras Views
- Calculator
- Gauges
- Audio
- Web Browser
- Phone

The system present at the bottom of the screen the four soft keys navigation buttons.

- Back
- Home
- Menu
- Voice Recognition

When the system senses the selection of the Back button the previous screen is presented even if it was in a different app. The Back soft key button doesn't have any effect at the home screen.

When the system senses the selection of the Home soft key button the main home screen is presented.



Figure 7 The Home Screen

When the system senses the selection of the Menu soft key button the settings menu related to the current screen is presented.



Figure 8: Settings menu related to the current screen.

If the Menu button is activated at the home screen, the system settings screen is presented.



Figure 9: The settings screen Part I.



Figure 10: The settings screen Part II

When the system senses the selection of the Voice Recognition soft key the Voice Recognition app is launched.

Notification Icons

The following icons are placed in the Notification Bar in case these are activated.

Icon	Meaning
78°F	Weather Information.
Ø	Alarm Indicator.
1	Installation Icon.
0	CD Indicator.
K	Mute Indicator.
*	Bluetooth Indicator.
ΔĐ	Warning CD Indicator.
₹.4	Signal Strength

Table 1: Icons meaning.

Dim Day / Night

The Dimming level is indicated each time Dim Day or Dim Night buttons are pushed.



Figure 11: The Dimming level indicator pop-up

Volume

Volume level is indicated each time the volume knob is turned.



Figure 12: The Volume level indicator pop-up

Volume mute is also reported with a pop up indicator and on Top bar indicator screen.



Figure 13: The Mute activation indicator icon pop-up



Figure 14: The Mute icon on the Notification Bar

Mute

This feature is used to mute the radio due to an external event in the vehicle. The radio remains MUTE while event is active.

If this event occurs, the Media sources are paused. Once it ends, the systems behave as if a pause was cancelled.

There are some actions that can cancel this mute like: Alarm notification, volume changes, media insertion, BT call, among others.

Reverse Mute

The radio is muted if the reverse gear is selected. This interruption is ignored if the radio is on BT call.

Selecting any transmission gear different than reverse cancels the mute (starts the media).

Audio Application

Open the **Audio App** located on the home screen of the Smart Display. *All Music source are accessed and managed via the Audio app.*



Figure 15 Open Audio App to access Music Sources.

The Audio sources are presented to the user in a Tab-bar at the top of the application screen, each Audio source work as a softkey selector; the selected Audio source icon is highlighted.

The system does not allow the selection of more than one Audio Source option at a time. If the system senses the selection of the current Audio source option no change will take place.

The system support 10 different Audio sources; 6 Media sources and 4 Radio sources.

Media Sources

The system displays the 6 Media sources at the main Audio sources tab-bar.

- USB
- CD
- Aux
- Bluetooth
- Rear Aux
- Wi-Fi



Figure 16: Audio App Media Sources.

If media audio source are not available, the corresponding icons are displayed in gray.

Media Audio Control Softkeys

The system present the next control softkeys as part of the Media sources interface.

- Play/Pause
- Next
- Previous
- Repeat
- Shuffle
- Search
- Views

The softkeys are placed at the bottom of the Audio App screen.

In the case the CD media, USB or the Bluetooth media source is selected, the user interface is illustrated on the **Figure 16.**

The system senses a long press of the next softkey for 2 seconds in order to activate the fast forward function. The system senses a long press of the previous softkey for 2 seconds in order to activate the fast reverse function.

The system displays the track time bar located under the album artwork of the file that is being played.



Figure 17: Track Time Bar

In the case the USB media source is active the system indicates the type of audio file displayed.

The Audio file is identified by one of the following options.

- Song
- Album

Search

If the Search softkey is selected the search screen is displayed with the next elements:

- White Box
- Keyboard

The Keyboard works as the user-system interface to acquire the alpha/numeric search. The white box displays the acquired information. The system continue playing audio while performing the search. The **Figure 18** illustrates the search screen.



Figure 18: The Search screen

Views

The system displays the current playing view as default. The system presents the next view options once the Views softkey is selected.

- Artists
- Albums
- All Songs
- Playlists



Figure 19: Views Soft key

For Apple devices the system supports the following additional views:

- Genre
- Composer
- Audio Books

The Views options replace the Audio Source options in the Media interface. The system displays the song name, artist name and the album image artwork if available.

Artist

The system present the albums allocated by artists as illustrated in **Figure 20**



Figure 20: The Artist view

All the artists work as a softkey. Once an artist option is selected the system present the media files related to the artists selected as illustrated on **Figure 21.**



Figure 21: The Artist Albums view

For Apple devices the artist view screen follows the distribution and styling as the **Figure 22** illustrates.



Figure 22: Apple Artist View.

Once an artist is selected the system displays the list of the contained albums, as shown in the **Figure 23**.



Figure 23: Apple Artist Albums View.

Each item of the list presents the Artist name. The system displays up to 5 items per screen. In the case there are more than 5 songs, the remaining songs are distributed in bottom subsequent screens. All items in the list work as a soft key button selector.

Albums

The albums view screen follows the distribution and styling as the **Figure 24** illustrates.



Figure 24: The Albums view

The system display the albums contained in the media source selected. The albums are displayed in a grid manner. Up to 10 album icons are displayed per screen. In the case there are more than 10 albums, the remaining album are distributed in a next to right subsequent screens.

Each album icon works as a softkey selector. The albums are distributed by 5 columns of two albums per screen. Each Album grid displays the Album image (if available), Album name and Artist name.

If the Album name is not available the label "Unknown" as the album name is displayed. If the Artist name is not available the label "Unknown" as the artist name is displayed.

In the case the system detects the selection of one album the system presents the songs contained in the album as **Figure 25** illustrates.



Figure 25: The Songs contained in the selected album screen

In the case the album artwork is not available the system displays a standard album icon as **Figure 26** illustrates.



Figure 26: The Generic Album Artwork.

For Apple devices the album view screen follows the distribution and styling as the **Figure 23** illustrates.

Once an album is selected the system displays the list of the contained songs.

Each item of the list shall present the Album name. The system displays up to 5 items per screen. In the case there are more than 5 items the remaining items are distributed in bottom subsequent screens.

All items in the list work as a soft key button selector.

All Songs

The all songs view screen follows the distribution and styling as the **Figure 27** illustrates.



Figure 27: The all songs view.

Once the All Songs view is selected the system displays the list of the contained songs. Each item of the list present the Song name and the Artist name. The system displays up to 5 songs per screen. In the case there are more than 5 songs, the remaining songs are distributed in bottom subsequent screens.

All songs in the list work as a softkey button selector. Once a song is selected, the system plays the selection.

Playlists

The system present the playlists contained in the connected device. The system display the playlists distributed as albums.

The Views Button is not available for the next Media sources:

- Aux
- Rear Aux
- Wi-Fi
- CD

In the case the Rear Aux media source is selected, the user interface shall follow the distribution and styling of the **Figure 28.**



Figure 28: The Rear Aux Media source screen.

In the case the Aux media source is selected, the user interface shall follow the distribution and styling of the **Figure 29**.



Figure 29: The Aux Media source screen.

In the case the Wi-Fi media source is selected, the user interface shall follow the distribution and styling of the **Figure 30**.



Figure 30: The Wi-Fi Media source screen.

USB

Playing from a USB

The USB port is in the front of the Radio.

Five volts DC power is limited to one amp from this port. Devices such as iPad that require greater current will not charge from this port.

- Connect the USB.
- 2. The USB Source media is automatically selected and plays the media content of the USB device if no other app of higher priority is in use (I.E. phone call, video, reverse mute....).
- To control and browse the selected media source refer to sections Media Sources and Media Audio Control Softkey for further information.

Drives

The USB MP3 players and USB drives connected must comply with the USB Mass Storage specification:

- MS-Dos partition only.
- Class specification (USB MSC) and supports formats of FAT32, FAT16, NTFS, and HFS+.
- Hard disk drives may be played, but they are not supported.
- The radio will not be able to play back write-protected music.
- MTP players are not supported.

The following guidelines must be met when creating MP3 files; otherwise the files might not play:

For MP3 Files

- **Bit rates:** 32, 40, 48, 56, 64, 80, 96, 112, 124, 160, 192, 224, 256, 320 kbps for MPEG-1 Audio Layer 3.
- **Sampling frequencies:** 32, 44.1 and 48 kHz for MPEG-1 Audio Layer 3.
- Maximum number of folders: Eight folders with 255 files per folder.
- Maximum of 1,000 files on a disc.
- M3u and pls playlist versions supported.
- Recorded on a CD-R or CD-RW with a maximum capacity of 700 MB.

For Unprotected WMA Files

• **Versions:** 1, 2, 7, 8, 9 and 9.1.

Bit rates: 32 - 320 kbps.

Sampling frequencies: 32 - 48 kHz.

Error Messages

If an "UNSUPPORTED" message is displayed, it could be for one of the following reasons:

- When a MTP Player or a USB device with unsupported format or partition is connected.
- When the device is damaged.
- When the connected device was not connected as mass storage device.

If "NO MUSIC" message is displayed, it could be because there are not MP3 or unprotected WMA files that can be played.

iPod

This Radio supports the following iPod models:

- iPod classic[®] (6th generation)
- iPod nano[®] (6G)
- iPod touch[®] (4G)
- iPhone[®] (3G, 3GS, 4, and 4S)

Other iPods may be played, but functionality is not guaranteed.

Radio provides up to 1A of charge, so any device connected to the USB that requires less than 1 A will be charged.

There may be problems with the operation and function in the following situations:

- When connecting an iPod on which a more recent version of the firmware is installed than is supported by the Radio.
- When connecting an iPod with firmware from other providers is installed.

Playing from an iPod

To connect an iPod:

- Connect one end of the standard iPod USB cable to the iPod's dock connector.
- 2. Connect the other end to the USB port in the front of Radio.
- 3. Radio will start playing the USB and shows the track number, Song, Artist, elapsed time, and Album information when available.
- 4. If the iPod is an unsupported model, it can still be listened to in the vehicle by connecting to the auxiliary input jack using a standard 3.5 mm (1/8 in) stereo cable
- To control and browse the selected media source refer to sections Media Sources and Media Audio Control Softkey for further information.

Expected behavior when iPod is connected:

- The iPod battery recharges automatically while the vehicle is on.
- The iPod shuts off and stops charging when the vehicle is shut off.

Error Messages

If an "UNSUPPORTED" message is displayed, it could be for one of the following reasons:

- When the iPod connected is not supported.
- The iPod does not respond to the radio commands, in this case reset the iPod and try again the connection.

If a "NO MUSIC" message is displayed, it could be for one of the following reasons:

There are not any playable files in the iPod.

CD Player

The player can be used for CD and MP3 audio.

With the vehicle on, insert a disc into the slot, label side up. The player pulls it in and begins playing.

The system is capable of playing:

- Most audio CDs.
- CD-R.
- CD-RW.
- MP3 or unprotected WMA formats.

When playing any compatible recordable disc, the sound quality can be reduced due to disc quality, the method of recording, the quality of the music that has been recorded, or the way the disc has been handled.

There can be increased skipping, difficulty in recording tracks, difficulty in finding tracks, and/or difficulty in loading and ejecting.

If these problems occur, check the disc for damage or try a known good disc

To avoid damage to the CD player:

- Do not use scratched or damaged discs.
- Do not apply labels to discs. (The labels could get caught in the player).
- Insert only one disc at a time.
- Keep the loading slot free of foreign materials, liquids, and debris.
- Use a marking pen to label the top of the disc.

To load a disc:

- 1. Turn the vehicle on.
- 2. Insert a disc into the slot, label side up. The player pulls it in the rest of the way. If the disc is damaged or improperly loaded, there is an error on the screen and the disc ejects.
- 3. Press "Eject" to eject a disc from the CD player. If the disc is not removed within a short period of time, it is automatically pulled back into the player.

Playing an Audio CD

- 1. After the CD is inserted, the mode is changed to CD mode, unless any mode with a higher priority is active (I.E. phone call, video, reverse mute....).
- To control and browse the selected media source refer to sections Media Sources and Media Audio Control Softkey for further information.

Error Messages

If "Disc Error" message is displayed and/or the disc comes out, it could be for one of the following reasons:

- The disc has an invalid or unknown format.
- The disc is very hot. Try the disc again when the temperature returns to normal.
- The road is very rough. Try the disc again when the road is smoother.
- The disc is bent.
- The disc is dirty, scratched, wet, or upside down.
- The air is very humid. Try the disc again later.
- There was a problem while burning the disc.
- The label is caught in the CD player.
- If the disc is not playing correctly, for any other reason, try a known good CD.
- If any error continues, contact your dealer.

For MP3 Files

• **Bit rates:** 32, 40, 48, 56, 64, 80, 96, 112, 124, 160, 192, 224, 256, 320 kbps for MPEG-1 Audio Layer 3.

- Sampling frequencies: 32, 44.1 and 48 kHz for MPEG-1 Audio Layer 3.
- Maximum number of folders: Eight folders with 255 files per folder.
- Maximum of 1,000 files on a disc.
- M3U and PLS playlist versions supported.
- Recorded on a CD-R or CD-RW with a maximum capacity of 700 MB.

For Unprotected WMA Files

• Versions: 1, 2, 7, 8, 9 and 9.1.

• Bit rates: 32 - 320 kbps.

Sampling frequencies: 32 - 48 kHz.

Special Considerations

Root Directory:

The root directory is treated as a folder. All files contained directly under the root directory are accessed prior to any root directory folders.

Empty Folders:

If a root directory or folder is empty or contains only folders, the player advances to the next folder in the file structure that contains a compressed audio file. The empty folder(s) are not displayed or numbered.

Front Auxiliary

Front auxiliary input is active when a jack connector is inserted.

After the connector is inserted, the mode is changed to Front Aux mode, unless any mode with a higher priority is active (I.E. phone call, video, reverse mute....).

This operation is not available while the system is in standby power mode.

In front auxiliary mode, you can play an external device such as an iPod[®] or MP3 player via the auxiliary input jack on the front of the receiver.

To use an external device simply connect the device via the auxiliary input jack.

Front auxiliary mode will not be available if no device is connected to the auxiliary input jack on the front of the receiver.

Bluetooth Player

If your connected device supports this feature, it can be used as an audio source input to the radio, allowing you to enjoy the music files stored on your phone.

This feature is recommended to be used with the device default player. Functionality cannot be warranted, when a third party player is used in the connected device. The radio can be out of synchrony if the user alters or command the player within the phone.

Playing Bluetooth Audio

- Pair device to Smart display. Refer to Bluetooth Settings for further information.
- To control and browse the selected media source refer to sections Media Sources and Media Audio Control Softkey for further information.

Notes:

Note 1: Repeat and random functions will only be shown if the cell phone supports these feature.

Note 2: The contacts shown on the radio display will depend on the information received by the radio from the phone device used.

Note 3: Functions may differ depending on the phone.

Please consult your cell phone user guide regarding how to enable it.

Note 4: Some phones will make the radio display BT AUDIO PAUSE while audio is available. This is normal on phones that do not have full compatibility with this radio Bluetooth remote control commands.

Note 5: Some devices will disconnect Bluetooth when a transfer is performed.

Rear Auxiliary

The DEA601 is not safety product.

The cameras and the rear auxiliary inputs are provided for driver conveniences only.

The purpose of this stereo input is to connect the audio output of an external source or a sound channel from a safety system. When the source is an external Navigation audio input the system detects activation of the

navigation system and the Rear Aux is set automatically, if no other source with higher priority is active (I.E. phone call, video, reverse mute....).

During this Mode, the Radio streams the audio from the Navigation system on the speakers (Stereo Signal). This operation is available under the next conditions:

 With Ignition ON and System ON: the radio shall change to REAR AUX IN mode.

If the Navigation audio is deactivated, then the radio shall switch to the last source (if available) if not, the radio shall return to the last tuner mode.

Radio Sources

The system displays the 4 Radio sources into the next to the right subsequent tab-bar as illustrated on **Figure 31**.

- AM
- FM
- Sirius XM
- WX



Figure 31: Audio App Tuner Sources.

The system displays up to 12 presets memories in a tab divider manner at the bottom of the screen interface. Each preset work as softkey button selector. The presets that do not have a frequency assigned display only the number of the grid.

In order to save a station in to a memory:

- Tune the desired station.
- Press and hold one of the 6 presets
- When the selected station is displayed on the preset, the station has been saved in the selected preset.

The system displays the current tuned frequency along with the corresponding radio Band.

The systems display a specific screen interface for the Sirius XM source.

AM/FM

The system presents the next control softkeys as part of the AM/FM radio source interface.

- Next
- Previous
- Scan
- Strong Station list
- Update List

The AM/FM radio sources screens follow the distribution and styling as the **Figure 31** illustrates.

WX

The WX band is for the Governmental weather radio services frequencies; the radio can tune 7 weather channels.

The system presents the next control softkeys as part of the WX radio source interface.

- Next
- Previous
- SCAN

The system presents 7 presets for this application. To save stations in to preset follow the AM-FM instructions.

The WX radio source screen is illustrated in Figure 32.



Figure 32: The WX radio source screen.

Sirius XM

In the case the Sirius XM source is selected the system displays the current tuned channel number and name.

The system present the next control softkeys as part of the Sirius XM interface.

- Category Browse control / Indicator
- 2. Scan Live
- 3. Direct Tuning
- 4. Buffer Indicator Bar
- 5. Replay Control
- Jump to Live Control
- 7. Tune Scan Control

- 8. Channel Browsing
- 9. Presets (Smart Favorites)

The Sirius XM user interface screen is illustrated in Figure 33.

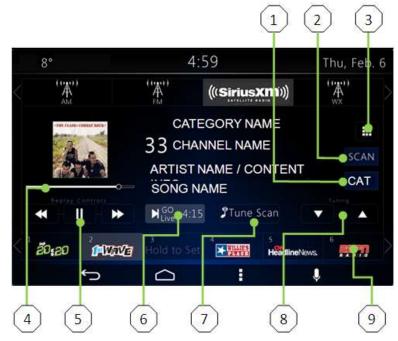


Figure 33: The Sirius XM user interface screen.

The channel number in the screen works as a softkey.

In the case the channel art is not available it's replaced by the Sirius XM logo.

The system activate the Scan function in the case the Scan option is selected.

The system displays up to 18 presets memories in a tab divider manner at the bottom of the screen interface. To save stations in to preset follow the AM-FM instructions.

The system display a pop-up sub menu in the case the Menu button is selected while in this screen.

The pop-up sub menu presents the next options as Figure 34 illustrates.

- Audio Settings
- Sirius XM settings



Figure 34: The pop-up sub menu screen.

Each of the options in the pop-up submenu works as a softkey.

The system open the Audio settings in a separate screen in the case this option is selected.

In the case the Sirius XM settings are selected, the system displays the next configurable options in a separate screen. **Figure 35 & Figure 36** as reference.

- Preset View
- Category Browser
- Category list
- Channel browser Auto select
- Auto select timer

- Tune start
- Reset Default



Figure 35: The Sirius XM Settings screen part I.



Figure 36: The Sirius XM Settings screen part II.

In the case the Category List option is selected, a separate screen opens listing all the available categories. **Figure 37** as reference.



Figure 37: The Category list screen.

The listed elements work as a soft key.

In the case the channel list option is selected, a separate screen open listing all the available channels is presented. **Figure 38** as reference.



Figure 38: The Channel list screen.

The listed elements work as a soft key.

Each of the options in the separate screen works as a softkey.

In the case the "Direct tuning" softkey is selected, a numeric keypad is displayed as **Figure 39** illustrates.



Figure 39: The search virtual button screen

Audio Widget

The Audio widget is displayed at the right of the home screen.

The Audio widget is displayed in case the system is playing Audio at the Audio application and either the Back button of the Home button is pressed.

The Audio widget displays the Media and Radio source in case any is active.

Media source

The Audio widget presents the available song info such as the artist name, album name, and song name. The widget support the following configuration based on the Media sources selected.

- USB
- Bluetooth
- AUX
- Rear Aux
- Wi-Fi
- CD

The Audio widget present the next audio controls for the USB & Bluetooth configurations. **Figure 40** as reference.

- Previous
- Play/Pause
- Next



Figure 40 The Audio widget with available art work screen for USB & Bluetooth.

The Audio widget displays the art work corresponding to the playing song if available. The Audio widget shall display a generic art work in case there is no artwork for the playing song, **Figure 41** as reference.



Figure 41: The Audio widget with no available art work screen for USB & Bluetooth.

The Audio widget present the next audio controls for the CD configuration. **Figure 42** as reference.

- Previous
- Play/Pause
- Next



Figure 42: The Audio widget for the CD configuration screen.

The Audio widget does not present audio controls for the AUX, Rear AUX & Wi-Fi configuration. **Figure 43, Figure 44 & Figure 45** as reference.

The note "Now Playing" shall be displayed only in case an audio file is playing.



Figure 43: The Audio widget for the AUX configuration screen.



Figure 44: The Audio widget for the rear AUX configuration screen.



Figure 45: The Audio widget for the Wi-Fi configuration screen.

Radio source

The Audio widget shall display the next audio controls for the Radio source configuration.

- Previous
- Next

The Audio widget shall present the Radio band selected and the frequency tuned. Illustrated in **Figure 46**, **Figure 47 & Figure 48**.



Figure 46: The Audio widget for the radio band AM screen.



Figure 47: The Audio widget for the radio band FM screen.



Figure 48: The Audio widget for the Weather channel screen.

The Audio widget shall present the next audio controls for the SXM configurations. Illustrated in **Figure 49**.

- Previous
- Play/Pause
- Next



Figure 49: The Audio widget for the SiriusXM configuration screen.

Phone

Once your device is properly paired (see Settings / Bluetooth section), DEA601 System supports Hands Free features if the connected device has that capability.

Open the **Phone App** located on the home screen of the Smart Display as illustrated on **Figure 50**. The system displays the Phone screen interface.



Figure 50: Select Phone App in Home Screen.

The Phone screen interface presents the next elements:

- Numeric Keyboard
- Call Button
- Search Button
- Contacts Button
- Recent Calls Button
- Favorites
- SMS

The Phone screen interface is illustrated on Figure 51.



Figure 51: The Phone screen interface.

The system captures the number to dial from the displayed numeric keyboard. In the case the system detects the activations of the call button the system start with the dial process.

Contacts

The contacts options are open as default option. The system displays up to 4 items per screen. In the case there are more than 4 items, the remaining items are distributed in bottom subsequent screens. **Figure 51** as reference.

A loading image is displayed during the contact list synchronization. **Figure 52** as reference.

Each item in the list works as a softkey.



Figure 52: The contact list synchronization screen.

In the case a failure is present during the contact synchronization a pop-up message is displayed stating "No contact list loaded". **Figure 53** as reference.



Figure 53: The no contact list loaded screen.

The system activates the search function in case one of the next options is selected.

- Magnifying Glass icon
- White box

In the case the search function is activated, the system displays a keyboard. **Figure 54** as reference.



Figure 54: The search contact screen.

The system is able to capture the information introduced. The system performs a contact search based on the captured information. In the case a contact is selected, the system displays the contact information screen.

Contact Information

The contact information displays the next information if available. **Figure 55** as reference.

- Contact photo
- Contact Name
- Company
- Phone 1
- Phone 2

- E-mail
- Address

If the contact photo is not available a generic contact image is displayed. The Phone 1 and Phone 2 items work as a softkey. **Figure 55** as reference.



Figure 55: The Contact information screen.

Favorites

In the case the favorites option is selected, the 8 favorite contacts are displayed as **Figure 56** illustrates.



Figure 56 The 8 favorites contacts screen.

Each of the favorite contacts works as a soft key. In the case a contact is selected, the contact information of the corresponding contact is open.

Making a Call

You can call a contact directly from the previously stored contact information if the item Phone 1 or Phone 2 is selected; the system uses the information there to start the dialing process.

You can also dial a new number directly on the dial pad and tap the green phone soft key; the system uses the information there to start the dialing process. The **Figure 57** illustrates the dialing process

You can also start the call form a connected device.



Figure 57: The dialing process screen.

Recent calls

In the case the recent calls option is selected, the system displays the history of the calls. The system displays up to 4 items per screen. Each listed item presents the following information. **Figure 58** as reference.

- Contact name
- Contact photo if available
- Event indicator; Receive call, Made call or Missed Call
- Time of when the event was performed indicator.



Figure 58 The history of calls screen.

- The Receive call indicator is represented with a Blue arrow.
- The Made call indicator is represented with a Green arrow.
- The Missed call indicator is represented with a Red arrow.

Each contact listed work as a softkey.

In the case a contact is selected, the contact information of the corresponding contact is open. **Figure 55** as reference.

Incoming Call

The "incoming call screen" is displayed in case the system detects an incoming call.

The incoming call displays the next information and softkey selector. **Figure 59** as reference

- Contact photo (if available)
- Contact name
- Contact number
- The "incoming call" label
- Accept call softkey selector
- Reject call softkey selector



Figure 59: The incoming call screen.

In the case the system detect the selection of the Reject softkey the system cancel the incoming call.

In the case the system detects the selection of the Accept softkey the system allow the incoming call. Audio is distributed through Radio to Vehicle speakers.

In the case the system detects the selection of the Accept softkey the system display the current call screen presenting the next information and softkey selectors.

- Contact photo (if available)
- Contact name
- Contact number
- Hang On softkey selector
- Mute softkey selector
- Keyboard activation softkey selector
- Second call
- Transfer call

The current call screen is displayed **Figure 60** as reference.



Figure 60: The current call screen.

In the case the system detects the selection of the Hang On softkey the system terminate the call.

If the Mute softkey is selected, the system disables the microphones.

If the system detects the selection of the Keyboard activation softkey; a popup numeric keyboard is displayed. **Figure 61** as a reference.



Figure 61: The pop-up numeric keyboard screen.

If the system detects the selection of the second call soft key the current call is place on hold allowing dial to another number.

When the second call is activated, a numeric keyboard **shall** be displayed.

The system is able to capture the information introduced. The system uses the capture information to perform a second call.

In the case the system detects the selection of the transfer call softkey, the system transfer the current call to the Phone.

SMS

If the SMS option is selected, the system displays the received text messages in a list manner. **Figure 62** as reference.

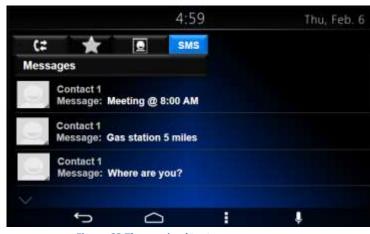


Figure 62 The received text messages screen.

Each item in the list presents the next information.

- Contact name
- Contact photo if available
- Message

Up to 3 messages are displayed at a time. If there are more than 3 messages, the remaining messages are placed in consequent screens.

The system provides the following options upon message notification shown on the screen **Read / Ignore**

The SMS message information is displayed and provides a predefined message list to replay with, as follows. See **Figure 63**:

- Can't talk now I can't answer right now. What's up?
- 2. I'll call you right back.
- 3. I'll call you later.
- 4. Can't talk now. Call me later?
- 5. Write your own...



Figure 63 Predefined message list

The system sends the selected message or opens the message editor or application for the user to write the desired text. See **Figure 64**.



Figure 64 Message editor

While the vehicle is in motion (parking brake is not set or vehicle speed is more than 5 km/h), the Personalize option is disabled.

Apps

Only authorized Applications can be installed on the system. Contact your dealer for further information.

Clock

The **Clock App** presents the following screen. **Figure 65** as reference.



Figure 65: Clock screen

In the case the alarm icon is selected, the system presents the following Screen. **Figure 66** as reference. Following options are presented.

- Alarm list
- Alarm On/Off control
- Alarm sound settings
- New alarm

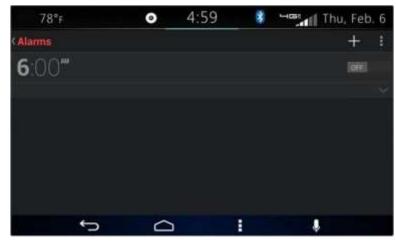


Figure 66 Alarm list

Each item of the alarm list works as a softkey. Each item in the list can be activated or deactivated with the ON/OFF select softkey.

If the + icon a new alarm is added to the list and a numeric pop-up pad is presented. The time set on the numeric pop-up pad is used to set the alarm once the OK softkey is selected. **Figure 67** as reference.



Figure 67 Alarm setup pop-up

If click on the chevron icon the alarm audio settings are presented with the following options **Figure 68** as reference.

- Tone
- Volume
- Repeat

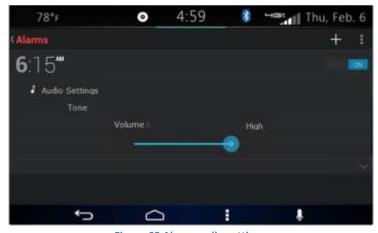


Figure 68 Alarm audio settings

The Tone item work as a softkey. If selected a pop-up menu is presented with the following source options for the alarm mode. **Figure 69**

- Tone
- FM
- AM
- SXM
- USB



Figure 69 Alarm Source Selection

The repeat options allow the user to set the days of the week that the alarm will be activated.

Once the alarm is set, the alarm indicator icon is displayed in the top bar of the home screen. **Figure 70** as reference.



Figure 70: The alarm indicator icon

Once the Alarm is activated a screen with the option to Cancel or Snooze the alarm is presented See **Figure 71**.



Figure 71 Snooze / CAncel Alarm screen

Camera Views

The DEA601 is not a safety product.

The cameras and the rear auxiliary inputs are provided for driver conveniences only.

Open the **Camera Views App** located on the home screen of the Smart Display as illustrated on **Figure 72**. The system displays the Camera Views screen interface.



Figure 72: Open Camera Views App.

Application Interface

The **Camera Views App** present the view of the 4 cameras installed on the vehicle one at a time, each of the camera views option work as a softkey. The system display the camera view corresponding to the soft key selected.

The system present the Reverse view as default once the application is open.

The application presents the next activation softkeys relative to each of the available views. **Figure 73** as reference.

- Reverse View
- Forward View
- Right View
- Left View

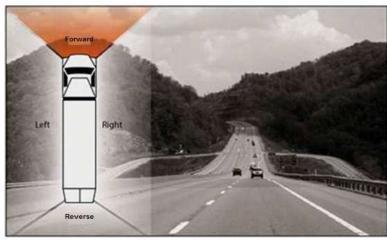


Figure 73: Camera view reference.

This feature may not be available in all vehicles.

The mentioned activation softkeys is presented as part of the standard view of the activation. The user is able to establish the view as full screen mode and to return to the standard view mode.

The application indicates the current activated view. The forward camera image is mirrored (left to right) to provide a correct image.

Automatic Cameras View

The next camera view is activated automatically under certain scenarios:

- Reverse View
- Right View
- Left View

The system activates the Reverse View in case the vehicle is put in reverse (if the automatic view function is activated).

The system activates the Right View in case the right turning signal is activated (if the automatic view function is activated).

The system activates the Left view in case the left turning signal is activated (if the automatic view function is activated).

The system informs the user which camera view is activated. The forward camera view can only be activated manually.

The system provides the Automatic Camera View activation/deactivation configurable options and Camera App Settings by pressing the Menu button on the navigation bar.

Details for the Camera Application Settings are described under the **Settings** section of this document.

Gauges

This feature may not be available in all vehicles.

Open the **Gauges App** located on the home screen of the Smart Display as illustrated on **Figure 74**. The system displays the Gauges screen interface.



Figure 74: Open Gauges App.

The **Gauges app** can handle up to 30 gauges distributed in 5 screens as **Figure 75** represents.



Figure 75 Virtual Gauges Application Layout

Gauges are updated with information collected form vehicle digital buses.

The Virtual Gauges app show the last selected page each time that the application is opened.

The default page (page 1) displayed in the Virtual Gauges app is displayed in the following cases:

- The first time the Virtual Gauges app is opened after an IGN or BATT cycle
- When the last selected page is not available
- When the last selected page does not contain any gauge

Gauges

% Torque Gauge

Gauge display actual engine torque as a percentage of the maximum torque.

- The range of the gauge is 0-100%.
- +5° over scale shall be the maximum needle position
- No warning states.

Oil Temp Gauge

The range of the gauge is from 100-300 °F and 50-150 °C.

The warning inputs are:

- Engine Oil Overtemp (primary warning)
- Stop Engine (secondary warning)
- Warning logic has hysteresis built in to prevent rapid, intermittent activation of this warning. When the message for Oil Temp warning is no longer present then the warning condition becomes inactive.
- English and SI gauges are available.

If "NA" message is transmitted the gauge face be removed leaving only a black background.

Transmission Oil Temp Gauge

The gauge display transmission oil temp as measured at input.

- The range is from 150-300 °F and 70-150 °C.
- +5° over scale is the maximum needle position.
- If "NA" message is transmitted the gauge face be removed leaving only a black background.
- No warning states.

DPF Status Gauge

The range is from clean to full.

Turbo Boost Gauge

Gauge display the turbo boost pressure.

- The range of the gauge is form 0-80 PSI and 0-5.5 BAR.
- +5° over scale is the maximum needle position.
- No warning states.
- English and SI gauges are available.

Fuel Economy Gauge

Digital part of the gauge display calculated average fuel economy from CECU.

Analog part of the gauge displays the instantaneous fuel economy relative to the average fuel economy.

- The symbol "-"represent a 0 MPG (or 0 L/100km).
- The symbol "+"represent 2x the average fuel economy.

In case of missing data or error message the needle is positioned vertically and the digital part of the gauge display "0.0".

Gauge States

Each gauge is capable of 3 different states (when available):

Regular State
 This state include Metric and English rates



Figure 76 Regular KW Oil Temp Gauge state Art Work (°F)

2. Warning States

In this state the Gauges Turn Red

 If Gauge reaches out of range condition, the virtual gauge Pop-Up larger on the screen. Pop-up may return to its original state per user interaction.

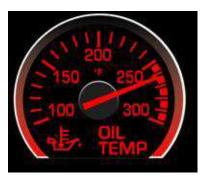


Figure 77 Warning KW Oil Temp Gauge state Art Work

Error States (Needle Deflection)

- If Data is not available, the gauge pointer shall automatically be positioned in - 15° from the Null position and stay in that position until data is available.
- If the gauge is under scaled, the gauge pointer automatically be positioned in - 5° from the Null position and stay in that position until data is rescaled.
- If the gauge is over scaled, the gauge pointer automatically be positioned in + 5° from the Null position and stay in that position until data is rescaled.

Virtual Gauges Pop-Up

All the Virtual Gauges function as softkeys, each Virtual Gauge softkey toggle to a full screen zoom of the gauge when the user presses the Virtual Gauge softkey.

While the Virtual Gauge is toggled to full screen zoom, a press of the screen returns the gauge to its original size.

If the user presses the screen while the Virtual gauge is in process to toggle in a full screen zoom, Virtual Gauges app cancel the full screen zoom toggle.

Gauges are automatically toggled to full screen zoom when a Warning State is present.

If a Virtual Gauge has been toggled to full screen due to a warning condition and another Virtual Gauge presents a warning condition, the first Virtual

Gauge in a warning state will be displayed for at least 3 seconds. After 3 seconds, the Virtual Gauge in a full screen state due to a warning state return to a normal state allowing the second Virtual Gauge in a warning to state to toggle to full screen.

All the Virtual Gauges minimized after being in full screen due to a warning state remain in the warning state in their original size while the warning condition of the gauge persists.

Gauges Settings

Pressing the soft key or hard key the Virtual Gauges app presents a popup menu with the following elements. **Figure 78** as reference.

- Preset 1 Soft key
- Preset 2 Soft key
- Edit Presets
- Load Updates
- Factory Reset

Presets

Presets are used to define personalized views of the gauges. Two presets are available to save different combinations of the available gauges.



Figure 78 Gauges Settings Pop-up

Pressing the "Edit Presets" option from the settings pop-up allows the edition of the Presets. Once the desire modifications are done, select the OK Softkey to save changes or CANCEL softkey to discard changes. **Figure 79** as reference.



Figure 79 Gauges Edit Preset Screen

Preset selection pop-up menu is displayed in order to specify which preset memory should save the new layout. **Figure 80** as reference.



Figure 80 Gauges Save Configuration Pop-up

The General Settings screen show and use the page numbers in their 3 states (Selected, Active and Disabled) as defined for the app.

The default page selected when accessing the General Settings in the Virtual Gauges app is the page 1. The General Settings screen from the Virtual Gauges app show the active virtual gauges.

The Default Virtual Gauges priorities and the User defined Virtual Gauges priorities are saved on the memory

Preset Updates

The Presets soft keys indicate the Preset selected. The preset selected is the target to be updated. **Figure 81** as reference,



Figure 81 Gauges Load Configurations Pop-up

The default preset established is the one selected when the General settings screen is opened.

The Virtual Gauges app allows the selection of one of the Presets at any time by pressing the soft key.

If a Preset is selected while the other preset was active, the Virtual Gauges app save the changes in the Preset previously active and then switch to the selected Preset, updating the position of the active gauges according with the priority level in stored the Preset.

During the saving of a preset or a restoration of the default presets the Virtual Gauges app show a pop-up with the label "Processing..." while the operation is performed.

The Virtual Gauges app update the priority level of the virtual gauges as they are reorganized by the user, changing the priority level of the selected gauge for the priority of the gauge in the target position selected by the user. This will allow the Virtual Gauges app to keep the Virtual Gauges positions as defined by the user without fixing the gauge position to a slot.

All the updates in the virtual gauges priority level are saved in the preset selected as User Defined Virtual Gauges priorities.

The User Defined Virtual Gauges Priorities does not modify the Default Virtual Gauges Priorities.

Gauge Population

Automatic arrangement is used to identify available gauges.

The population of the gauges for the Automatic arrangement is depending on the priority preset selected.

The priority preset is configurable through the Settings menu of the Virtual gauges app.

Automatic Population

The Virtual Gauges are populated by adding gauges if the relative vehicle information is available. The Virtual Gauges app adds available gauges following the priority established.

The actual Virtual Gauges page from the Virtual Gauges app page is highlighted, allowing the user to differentiate it from the disabled pages and from the active pages that are not selected as the actual page.

The Standard Priority list of gauges have a higher priority than the Optional Gauges, even if a given gauge from the Optional gauges shares a priority level with a gauge from the Standard Priority gauges.

If not Available information for a specific Gauge is received from the vehicle information bus is received the related Gauge is hidden. Some virtual gauges show a specific icon in the case of a not available gauge.

The Virtual Gauges app pages for gauges population are disabled if there are no gauges in the page. The disabled Virtual Gauges app pages are displayed in an opaque manner.

The active Virtual Gauges app pages are displayed in clear way which allows the user to differentiate between the actual page and disabled pages.

As the optional virtual gauges become available, they starts to be accommodated from the last active gauge displayed filling the available slots in all the pages in an incremental order and following the preset priority.

The Virtual Gauges app does not allow the user to select the disabled gauge pages until they become available.

Each time a Virtual Gauges app page is filled with gauges, the Virtual Gauges app activate the subsequent page, in an incremental order, to continue placing the active virtual gauges.

Priority presets

Priority Preset 1

Gauge	Priority
Engine Oil Temperature	Page One
Main Trans Oil Temperature	Page One
Manifold Pressure (Boost)	Page One
DPF Status	Page One
Fuel Economy	Page One
Percent Torque	Page One
Percent Horsepower	NA
Idle Time	NA
Idle Fuel	NA
Fuel Usage Rate	NA
Drive Axle #1 (front) Oil Temperature	2
Drive Axle #2 (rear) Oil Temperature	3
Drive Axle #3 (center) Oil Temperature	4
Air Filter Restriction Pressure	6
Fuel Filter Restriction/Fuel Pressure Gauge	7
Ammeter	1
Air Suspension Pressure 1	5
Tractor Brake Application	N/A – In Cluster
Pusher Axle #1 Pressure	8
PTO Hour Meter	9

Priority Preset 2

Gauge	Priority
Engine Oil Temperature	Page One
Main Trans Oil Temperature	Page One
Manifold Pressure (Boost)	Page One
DPF Status	Page One
Fuel Economy	Page One
Percent Torque	Page One

Percent Horsepower	N/A
Idle Time	N/A
Idle Fuel	N/A

Preset Gauges Interaction

The active gauges in the General Settings screen of the Virtual Gauges app are able to move their positions by selecting a gauge and dragging it to a new desired position.

When selecting a gauge and dragging it to a new position in the General settings screen of the Virtual Gauges app, as the gauge moves it snap to the closest gauge slot, even if the slot is occupied with other gauge, to show the user there the new position of the gauge will be when the user deselect the gauge.

While a gauge is being moved and starts snapping in other gauge slots in the General Settings screen of the Virtual Gauges app, the non-moving gauges re-position to give space to the dragged gauge.

The re-positioning of the non-selected gauges from the General Settings screen of the Virtual Gauges app shall be according the following rules:

- Gauges in the preceding slots will shift back one position until the position where the selected gauge was originally is reached.
- Gauges in slots after where the selected gauge snaps will remain unaffected.

Once the user stops pressing the screen, all the gauges moved and the gauge selected keep their new positions.

Only one gauge can be moved at a time to re-positioned in the General Settings screen of the Virtual Gauges app.

While moving a gauge of position in the General Settings screen of the Virtual Gauges app, if the user moves the gauge to one of the sides of the screen, the Virtual gauges app switch to the next/previous page, depending on the side. In this case, right side is related with the next page and the left side is related with the previous page.

The page movement when a gauge is moved to one of the sides of the screen in the General Settings screen in the Virtual Gauges app while the gauge is being moved of position has the following restrictions:

- The page switching shall be restricted to the active pages
- If the gauge is moved to the left side of the screen while in the first page no action shall be performed
- If the gauge is moved to the right side of the screen while in the last active page no action is performed

Reset to Default Screen

If the Reset to Default Soft key from the General Settings of the Virtual Gauges app is depressed, the Virtual Gauges app shall restore the gauge priority list to the Default Virtual Gauges priorities, updating also the position of the gauges in the Settings Screen and in the Virtual Gauges app.

When short pressed, prior to reset to the Default Virtual Gauges priorities the Virtual Gauges app displays the following Pup-up warning. **Figure 82** as reference.



Figure 82 Reset configuration Pop-up

OK and Cancel act as a soft keys in the Pop-up warning.

Pressing OK close the warning Pop-up returning and the General Settings screen and restoring Default Virtual Gauges priorities as well as updating the position of the gauges in the General Settings screen and in the Virtual Gauges app.

Pressing Cancel close the warning Pop-up returning to the General Settings Pop-up menu without changing any configuration.

Voice Recognition

Voice Recognition allows the user to launch applications, perform calls, accept calls, and control actions of DEA601 system hands free.

Once the Voice Recognition function is activated the Voice Recognition indicator is displayed.

The Voice Recognition indicator has two states:

- Active
- Inactive

While the system is capturing voice commands the system display the Voice Recognition indicator in Active state as **Figure 83** illustrates.



Figure 83: Voice Recognition Active screen.

Vocabulary

The DEA601 system is able to recognize the following vocabulary as a Language Model for the Voice Recognition System in the DEA601.

Basic Numbers:

"Zero (Oh), One, Two, Three, Four, Five, Six, Seven, Eight, Nine"

Decimal Numbers:

"Ten, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Sixteen, Seventeen, Eighteen, Nineteen"

Decimals:

"Twenty, Thirty, Forty, Fifty, Sixty, Seventy, Eighty, Ninety"

Centesimal:

"Hundred. Thousand"

Special Characters:

"Number (Hash tag, Hash, Pound, Square), Star (Asterisk), Plus"

Basic disagree command:

"no, incorrect, wrong, negative, none are correct, none of these, not really, no I said, no I did not, nope, na, noway"

Basic cancel command:

"No, Negative, Do not, Don't, Cancel [request], Abort, stop, end"

Basic agree command:

"Yes, correct, that is correct, yeah, ya, yep, yup, sure, right, OK, positive, you got it, probably, you bet"

General Audio Commands:

"Mute. Unmute"

General Options:

"Option (<Basic Numbers | <Decimal Numbers"

Help Command:

"Help"

If any of these is not valid the system says:

-"Sorry, Invalid Command"

Direct Action Commands

Direct action commands refer to commands from the vocabulary that does not need a second action to perform the command. These commands emulate a Softkey press or a Hard Button press in the System.

Time Command

-"What time is it"

The DEA601 show the Time in the Voice Recognition Pop-Up for 5 seconds. After the 5 seconds the Pop-Up is closed.

-"What day is it"

The DEA601 show the Date in full format (It is [Day of the week], [Month] [Day], [Year]) in the Voice Recognition Pop-Up for 5 seconds.

After the 5 seconds the Pop-Up is closed.

Launch

Switch command

-"Switch to ***** or Switch to ***** app"

The DEA601 Open the Application specified by the user.

Open command

-"Open ***** or Launch the ***** app"

The DEA601 Open the Application specified by the user.

General Options

-"Option ######"

In the case the system registers multiple valid results, it display a list of the multiple valid results as **Figure 84** illustrates.



Figure 84: Multiple valid results for the captured voice command screen.

Each item in the list works as a softkey selector.

The system activates one of the listed options by two ways:

- Via a Voice command
- Via the selection of the softkey selector

The system performs the function related to the option selected.

Phone Commands

- "Redial "

If a Bluetooth Phone is paired, the DEA601 open the Phone App and attempt a call to the last number called.

-"Call Back "

If a Bluetooth Phone is paired, the DEA601 open the Phone App and attempt a call to the last received call number.

-"Phone"

-"Call Contact"

After the "Call Contact" command, the DEA601 show a Help message in the Pop-Up to indicate the user the following message.

Who do you want to call?

-" Johnny Cash home"

"***** at Home or ***** Home "

The DEA601 Call the contact specified by the user to the Home phone number specified by the Bluetooth Paired device.

***** at Mobile or ***** Mobile

The DEA601 Call the contact specified by the user to the Mobile phone number specified by the Bluetooth Paired device.

-"Dial Number"

After the "Dial Number" command, the DEA601 show a Help message in the Pop-Up to indicate the user the following message.

What number do you want to call?

"Please say only numbers between 1 and 9"

If no Bluetooth Phones are connected, the DEA601 show an indication that say:

- Title: "Sorry"
- Guideline Command: "No Phone Connected"

While the system is processing the captured voice command the system display the Voice Recognition indicator in Inactive state as **Figure 85** illustrates.



Figure 85: Voice Recognition Inactive screen.

While the system is processing the captures voice command the system display a processing information indicator as **Figure 86** illustrates.



Figure 86: Voice Recognition processing screen

Once the system registers a valid command, the command to be performed is displayed.

Settings

The system presents the next settings options. Figure 87 & Figure 88 as reference:

- Wireless & Networks
- Language & Inputs
- Date & Time
- System Audio
- System Information
- Cameras settings
- Apps
- Keyboard Sound
- Display Settings



Figure 87: The settings screen Part I.



Figure 88: The settings screen Part II

Each option is displayed in a grid manner. Each of the settings options works as a softkey.

The Left upper corner Title indicates which section of the menu the user is currently located. While inside the System Audio Settings, the system continues playing the Audio.

The Menu softkey does not have functionality in this screen.

While inside the settings menus, the system continue showing the current menu even if there is a track change.

Camera Application Settings

In the case the Camera Settings is selected the system display the next information as activation/deactivation controls, **Figure 89** as reference.



Figure 89: The Cameras settings screen.

The next information is presented as read only.

Installed Cameras Video Format

The system display the next activation/deactivation controls.

- Reverse Camera
- Right Camera
- Left Camera

The system displays the next configurable options in case the Reverse camera is activated.

Reverse Automatic Camera View activation.

The system displays the next configurable options in case the left/right camera is activated.

Turn Signal Automatic Camera View activation.

The activation softkey is displayed as a slider control. The slider control has two states.

- On: slide action to the right.
- · Off: slide action to the left.

In the case the system detects an On state the corresponding automatic camera view is activated.

In the case the system detects an Off state the corresponding automatic camera view is deactivated.

This menu may not be available in all vehicles

Display Settings

The system opens the Display Settings section in the case this option is selected at system settings.

Once the Display Settings menu is open the system displays the following configuration options. **Figure 90** as reference.

- Dimming brightness.
- 10% per step
- 25% per step
- Units of measure
- English
- Metric



Figure 90: The Display Settings screen.

Wireless & Networks

The Wireless & Network settings are open once the system senses a touch over the "Wireless & Networks" icon.

The "Wireless & Networks" menu is accessed while the System is ON.

Once the "Wireless & Networks" settings menu is open the next connectivity options list is presented to the user following the next hierarchy: **Figure 91** as reference.

- Wi-Fi
- Bluetooth



Figure 91: The Wireless & Networks settings screen

The Bluetooth & Wi-Fi activation options are presented to the user as a slider controls.

Each slide control has two states.

- On: slide action to the right
- Off: slide action to the left

In the case the system detects an On state the corresponding wireless option is activated.

In the case the system detects an Off state the corresponding wireless option is deactivated.

Wi-Fi

In the case the Wi-Fi option is activated a separate sub screen display the list of the available networks. The WPS activation soft key is present as part of the Wi-Fi interface. The listed items in the available network list work as soft keys.

A password to enable the connection might be required if the network is a limited access network. In the case a password is required a pop-up sub screen along with a virtual keyboard is displayed illustrated in **Figure 92**.

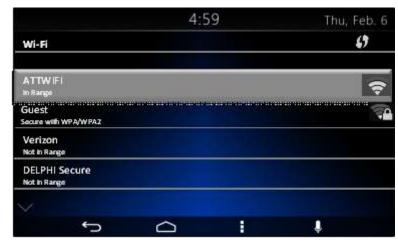


Figure 92: The Wi-Fi menu screen Part I.

The system captures the introduced password. The system uses the captured password for the network connection process.

The system display a pop-up message for 3 seconds in case the captured password is incorrect. **Figure 93** as reference.

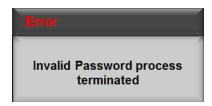


Figure 93: Error - Invalid Password process terminated

The system present the Wi-Fi menu screens following the distribution and styling of the **Figure 94**, **Figure 95**, **Figure 96** & **Figure 97**.



Figure 94: The Wi-Fi menu screen Part II.



Figure 95: The Wi-Fi menu screen Part III.



Figure 96: The Wi-Fi menu screen Part IV.



Figure 97: The Wi-Fi menu screen Part V.

In the case the system detects the activation of the Menu soft or hard key the system display a pop sub menu with the following options, **Figure 98** as reference.

- Scan
- WPS Pin Entry

- Wi-Fi Direct
- Advanced



Figure 98: The Wi-Fi pop-up screen.

In the case the advanced option is selected the system display the standard advanced Wi-Fi menu, **Figure 99 & Figure 100** as references.



Figure 99: The Advanced Wi-Fi menu screen Part I.



Figure 100: The Advanced Wi-Fi menu screen Part II.

Bluetooth

The following profiles are supported by the system:

- Advanced Audio Distribution Profile (A2DP)
- Audio/Video Remote Control Profile (AVRCP)
- Hands-Free Profile (HFP)
- Phone Book Access Profile (PBAP)
- Message Access Profile (MAP)
- Personal Area Networking Profile (PAN)
- Serial Port Profile (SPP)

The system can connect to a Bluetooth Device. To use this functionality your device requires Bluetooth and to be paired and connected to the DEA600. The supported device list is located in the following web page: http://www.panapacific.com/support

Other devices may be connected and played but functionality cannot be guaranteed.

You can connect up to 10 devices to the system; the DEA600 will connect to the first available paired device, starting from the last paired/connected device.

In the case the Bluetooth option is turned ON, a sub screens displayed listing the next options. **Figure 101** as reference.

- "Visible to all nearby Bluetooth devices" option.
- List of the Bluetooth devices available to connect.

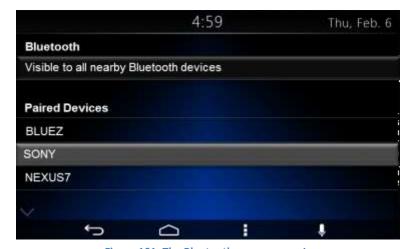


Figure 101: The Bluetooth menu screen I.

The system activates the detection to other Bluetooth devices on the "Visible to all nearby Bluetooth devices" option is activated.

The "Visible to all nearby Bluetooth devices" function is activated for 2 minutes.

Each of the items in the "List of the Bluetooth devices available to connect" works as a softkey. **Figure 102** as reference.



Figure 102: The Bluetooth menu screen II.

In the case one item of the "List of the Bluetooth devices available to connect" is selected, a pop-up screen is displayed presenting the next information and softkeys. **Figure 103** as reference.

Information

- Target device name
- Passkey or White Box to introduce Passkey

Softkeys

- Cancel option
- Pair option



Figure 103: The Bluetooth menu screen III.

If the system detects the selection of the white box a keyboard is displayed.

The system captures in the White Box the introduced Passkey. Figure 104, Figure 105 & Figure 106.



Figure 104: The Bluetooth menu screen IV.

In the case the Pair button is selected, the system starts the connection process.



Figure 105: The Bluetooth menu screen V.

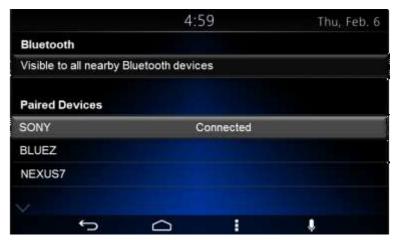


Figure 106: The Bluetooth menu screen VI.

In the case the Cancel button is selected, the system cancels the connection process closing the pop-up screen.

If the connection process is cancelled a pop-up message is displayed stating "Invalid Password process terminated". **Figure 107** as reference.

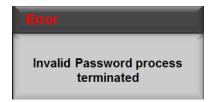


Figure 107: Error - Invalid Password process terminated

The mentioned message is displayed for 3 seconds.

OTA (Over the Air)

The system is capable to manage the next OTA updates having Wi-Fi.

- OS version.
- Applications updates/installations.
- DEA601 system Software Updates

Keyboard Sound

In the case the keyboard sounds option is selected, the system displays the next configurable options illustrated **Figure 108**.

- Dial pad touch tones
- Touch sounds



Figure 108: The Keyboard sound option screen.

The system allows the activation and deactivation of the keyboard sound option.

The system does not produce any audio from the keyboard sounds if this option is not selected.

Date & Time

The system supports the standard Date & Time settings.

In the case the date & time option is selected, the system presents the next configurable options following standard date & time settings functionality.

- Automatic date & time
- Automatic time zone
- Set date
- Set time
- Select time zone
- Use 24-hour format
- Choose date format

The system shall present the following date format options only.

0 12/31/2014

- 0 31/12/2014
- 0 2014/12/31

Applications

The system supports the standard application manager settings.

In the case the Apps option is selected the system present a list of the installed apps illustrated in. **Figure 109**.



Figure 109: The Apps option screen.

Each item in the list works as a softkey. Each item in the list presents the next information.

- Application icon
- Application name
- Application memory space

The system displays up to 5 items per screen. In the case there are more than 5 items the remaining items are displayed in consequent screens.

In the case a listed item is selected, the system presents the following controls and information. Figure 110 & Figure 111 as reference.

Controls:

- Force stop button
- Clear data button
- Clear cache button
- Clear Defaults button if available

Information

- Application name
- Application version
- Application icon
- List of applicable permissions
- Storage information

The controls functions follow the standard apps functionality.



Figure 110 The App controls & information screen Part I.



Figure 111: The App controls & information screen Part II.

System Information

In the case the system information menu is selected, the system displays the next information as Read only:

- IP Address
- Wi-Fi Mac Address
- OS Version/Embedded Animation
- Model Number
- Regulatory Information

The system presents the System Information screen following the distribution and styling of the **Figure 112**.



Figure 112: The System Information screen.

Language & Inputs

In the case the Language & Inputs menu is selected, the system displays the next options:

Each option works as a softkey.

- Language
- Text to speech output

The system present the Language & Inputs options following the distribution and styling of the **Figure 113 & Figure 114**.



Figure 113: The Language & Inputs options screen Part I.



Figure 114: The Language & Inputs options screen Part II.

Language

In the case the Language option is selected, the system displays the next language options:

The System presents the following options under Language:

- English
- Spanish
- Canadian French

Each language option has a checkbox as selector control. The system allows the selection of one option at a time.

If the language is changed to other than English once the Voice Recognition is active, a pop-up message is displayed stating: "Voice Rec function will be inactive". **Figure 115** as reference.



Figure 115: Warning - Voice Rec function will be inactive

As part of the pop-up message, the next two softkeys are displayed:

- Ok to proceed
- · Cancel to not proceed

Text to speech output

The system present the "Text to speech output" as a turn On/Off control. The system presents the following options under the Text to speech output option:

- Speech Rate
- Listen to an Example

If the Speech rate is selected, a pop-up screen is open presenting the following options. **Figure 116** as reference.

- Very Slow
- Slow
- Normal
- Fast

- Faster
- Very Fast
- Rapid
- Very Rapid
- Fastest
- Cancel

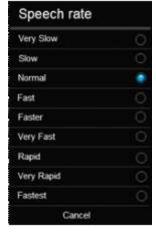


Figure 116: The Speech rate pop-up screen.

The system allows the selection of one option at a time. The system adjusts the Speech rate based on the selected option. The pop-up screen is closed once an option is selected. If the current option is selected, the system closes the pop-up screen. In the case the Cancel option is selected, the pop-up message is closed.

If the Listen to an example option is selected, the system plays a text to speech example.

System Audio

In the case the System Audio is selected, the next configuration options are displayed. **Figure 117** as reference

- Auto Equalization with the selected option
- Manual Equalization
- Fade

- Balance
- Speed Dependent Volume
- 4/2 Speakers Configuration
- Seek Sensitivity



Figure 117: The System audio screen Part I.

The system presents the System Audio user interface following the distribution and styling of the **Figure 118 & Figure 119.**



Figure 118: The System audio screen Part II.



Figure 119: The System audio screen Part III.

The Manual Equalization and the Auto Equalization options work as softkeys.

The Fade and Balance configuration options are presented in a bar selector manner.

While the radio is configured to 2 speakers, the Fade option is unavailable.

Manual Equalization

In the case the Manual Equalization option is selected, the system displays the next configurable options: **Figure 120** as reference.

- Bass
- Middle
- Treble



Figure 120: The Manual equalizer screen.

The system adjust the Bass value accordingly with the selected value in the Bass bar control.

The system adjust the Middle value accordingly with the selected value in the Middle bar control.

The system adjust the Treble value accordingly with the selected value in the Treble bar control.

The scale of the Bars is from -12dB to +12dB.

The system support detection of 24 steps on each of the bars.

The system adjusts 2 dB per step of the corresponding value.

Auto Equalization

In the case the Auto Equalization option is selected, the system displays the next options. **Figure 121 & Figure 122** as reference.

- POP
- ROCK
- COUNTRY
- NEWS

- JAZZ
- CLASSICAL



Figure 121: The Auto equalizer screen Part I.



Figure 122: The Auto equalizer screen Part II.

Each Audio setting section has a checkbox as selector control. The system adjusts the Audio output configuration based on the option selected. The system does not allow selecting more than one Auto Equalization option.

In the case the system detects the selection of the current Auto Equalization option, no change will take place.

Speed Dependent Volume

This function increases the volume level with speed in order to compensate engine or road noise and decreased when slow down.

In the case the Speed Dependent Volume option is selected, the system displays the next configurable options. **Figure 123** as reference.

- Off
- Low
- Mid
- High



Figure 123: The System audio screen Part II.

The system allows the selection of one option at a time.

Speakers Configuration

In the case the Speakers configuration option is selected, the system displays the next configurable options. **Figure 123** as reference.

- 4 Speakers
- 2 Speakers

The system allows the selection of one option at a time.

Seek Sensitivity -6dB to +6dB

The seek sensitivity option is present in a bar selector manner.

The scale of the seek sensitivity Bar is from -6 dB to +6 dB. The system detects 12 steps on each of the bars. The system adjusts 1 dB per step of the corresponding value. As illustrated in **Figure 124**.



Figure 124: Seek sensitivity screen.

Tips and Troubleshooting

Radio

Unable to tune stations

You are in a weak signal area.

 Increase the Seek Sensitivity (see Seek Sensitivity section for details).

Power operation

The system operates at 14Vdc nominal voltage, minimum of 10.5Vdc and a maximum of 16Vdc. The maximum temperature of the system at nominal conditions is 47°C.

If the battery is disconnected before or at the same time as the ignition line, the system does not guarantee the memory retention.

The time of day is be set to the default value when the battery is disconnected.

Installation

It is recommended that the system has an external current protection with a maximum 8A fuse once is installed in the vehicle.

CD

CD player not functioning

Out of the operation range, Operation temperature of the CD is -20°C to 55° C (-4°F to 131° F).

 Allow the vehicle's interior temperature to increase or decrease (depending on the case).

CD Insertion is not possible

A CD is already on the CD player.

Eject the CD and remove it.

iPod

iPod does not play or there is no sound

The iPod has not been recognized.

- Verify that the iPod is supported.
- If the iPod is supported, reset the iPod and re-connect again (see iPod section for details).

iPod not functioning

Out of the operation range, Operation temperature of the iPod player is -20°C to 85°C (-4°F to 185°F).

Allow the vehicle's interior temperature to be in human supportable range.

Bluetooth

My radio doesn't recognize my Bluetooth enabled device.

Try one of the following actions:

- Remove the device, after that pair and connect the device. Refer to DELETE ONE OR DELETE ALL DEVICES and to Pairing a Bluetooth Device and Connecting a Device sections.
- 2. Make sure the device is turned on.
- Make sure the Bluetooth adapter on your radio is enabled, Refer to Bluetooth Enabling/Disabling section.
- 4. The device might be out of range. Try moving it closer.

The device and my radio can't communicate.

Try one of the following actions:

- Make sure that you selected the correct device to be connected to. For example, you might have two or more devices previously paired or connected, so make sure you selected the right device.
- Some devices require a passkey before they can be connected to the radio.
- 3. Probably an incorrect passkey was typed or the time limit expired for typing the passkey. Refer to Connecting a Device section.

4. If the device is close to other devices that use radio frequencies (such as microwave ovens, cordless phones, remote controls for electronics or lighting, or 802.11 wireless networks), those devices might be creating interference. Try moving the device that isn't working farther away from the other devices.

Device music cannot be heard

- 1. Verify the device is paired and connected. Refer to sections: Pairing a Bluetooth Device and Connecting a Device.
- Make sure BT AUDIO Source is selected in the source list menu. Refer to Media Sources section.
- 3. Adjust the Volume on the radio by rotating the knob.
- 4. Verify that your device is not paused.
- 5. Make sure your device has music files.

Rear Seat Audio (RSA)

The RSA shows no link.

The radio requires up to 15 seconds to wake up, so if you wake up the radio using the RSA and the radio is in sleep mode, the RSA will show "no-link" while the radio starts. The communication shall be reestablished after this time lapse expires.

Precautions

The DEA601 is not a safety product. The cameras and the rear auxiliary inputs are provided for driver conveniences only.

Driver Distraction Avoidance

To avoid driver distractions, the System implement two states for the overall functionality of the System:

- Normal Functionality
- Driving State

Normal functionality allows the user to access to all the functionalities of the system; this state is enabled when the parking brake is set and when the vehicle speed is less than 5 Km/h.

Driving state disables some functions/applications that may distract the driver from the road; this state is activated when the parking brake is unset and the vehicle speed is equal or greater than 5 km/h.

Limited Applications/Functionalities

Messaging

The System displays new message warnings with audible feedback activating the TTS functionality while in the Driving Distraction Avoidance Driving State. The audible feedback will read the incoming message using the TTS functionality.

The user is not be allowed by the system to write new messages while in the in the Driving Distraction Avoidance Driving State. The virtual keyboard will be inactive during this state.

The user is only able to respond a message using the options from the predefined messages.

Phone

The System allows the user to answer a call while in the Driving Distraction Avoidance Driving State.

Also, the system allows the user to call using the virtual numeric keypad in the screen.

Other Phone functionalities are restricted while in the Driving Distraction Avoidance Driving State.

System memory

If the battery is disconnected before or at the same time as the ignition line, the system does not guarantee the memory retention.

The time of day is be set to the default value when the battery is disconnected.

Apple devices

Apple devices shall not be connected in the Rear mini USB port.

If not certified accessories are used to connect an Apple device to the DEA600 system, it will not be able to provide Power as required for the Apple device.

Sirius XM

The Sirius XM implementation includes only music.

Warranty Replacement

It is recommended that every time one or both of the modules are replaced in the vehicle, any configurable settings (advanced menu, frequency zone, etc) are configured with both modules connected.

Product Cleaning

Use a soft dry cloth for periodic cleaning, for more severe stains, please dampen the cloth with water only. Anything else might affect the appearance or damage the lens or plastics.

Moisture Condensation

You may notice the CD playback sound wavering due to the water condensation. If this happens please remove the disc from the player and wait about an hour for the moisture to evaporate.

Damage Disc

Don't attempt the following

- To play a cracked, warped or damaged disc. Playing a bad disc could severely damage the playback mechanism.
- To grip or pull out the disc while it is being pulled back into the player by the automatic reloading mechanism.
- To insert a disc into the mechanism when the unit is powered OFF.

Bluetooth

The Message Access Profile features with an Apple device are limited to read/receive messages per Apple devices limitation. Apple devices do not support sending messages through the MAP Bluetooth profile.

Bluetooth Distraction

When using a cell phone, it can be distracting to look too long or too often at the screen of the phone or the infotainment system. Taking your eyes off the road too long or too often could cause a crash resulting in injury or death.

Focus your attention on driving.

<u>Disclaimers, Trademarks and License</u> <u>Agreements</u>

Delphi does not take any responsibility of an incomplete system in the vehicle.



"Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone and has been certified by the developer to meet Apple performance standards.

iPod and iPhone are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.



"SiriusXM" means that the radio has been designed and certified to meet SiriusXM standards

SiriusXM is a trademark of SiriusXM Company registered in the U.S.



"The Bluetooth[®] word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Delphi is under license. Other trademarks and trade names are those of their respective owners."



"The Wi-Fi CERTIFIED™ Logo is a certification mark of Wi-Fi Alliance®."

FCC Information

Radio is complaint with Part 15 of the Federal Communications Commission (FCC) rules and with Industry Canada Standards RSS-GEN/210.

FCC ID: L2C0057TR for USA IC ID: 3432A-0057TR for Canada

Conformity assessment issues

FCC/IC Regulatory Notice

Modification statement

Delphi Electronics & Safety has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

Delphi Electronics&Safety n'approuve aucune modification apportée à l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changement ou modification peuvent annuler le droit d'utilisation de l'appareil par l'utilisateur.

Interference statement

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiation Exposure Statement

This device complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Le présent appareil est conforme à l'exposition aux radiations FCC / IC définies pour un environnement non contrôlé et répond aux directives d'exposition de la fréquence de la FCC radiofréquence (RF) dans le Supplément C à OET65 et RSS-102 de la fréquence radio (RF) IC règles d'exposition. L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur.

FCC Class B digital device notice

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 turning 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.

CAN ICES-3 (B) / NMB-3 (B)

This Class B digital apparatus complies with Canaopedian ICES-003.

Cet appareil numérique de classe B est conforme à la norme canadienne ICES-003.

WARNING! This device must be used at least at 20 cm from the human body