

# DC208BT INSTALLATION/OWNER'S MANUAL

AM/FM/CD Receiver









Bluetooth®





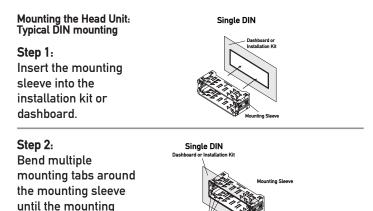
DC208BT INSTALLATION

#### Preparation

Please read entire manual before installation.

#### **Before You Start**

- Disconnect negative battery terminal. Consult a qualified technician for instructions.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight, or where it would be subject to dust, dirt or excessive vibration.



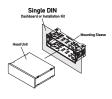
#### Step 3:

Connect all wiring harnesses and slide the head unit into the mounting sleeve until it clicks into place.

sleeve is secure.

Mounting the Head Unit: ISO mounting

Using the existing brackets or the brackets supplied with the installation kit, mount the brackets to the sides of the head unit with the screws supplied with the head unit.

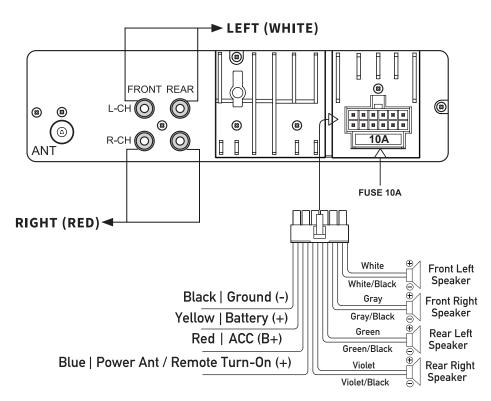


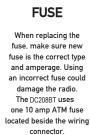


**DC208BT INSTALLATION** 



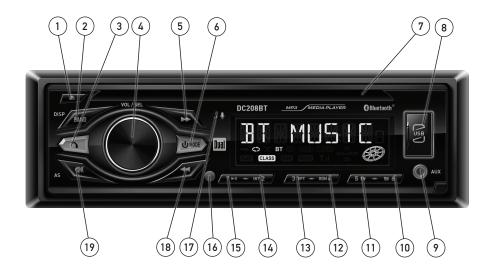
#### Wiring Diagram







#### **Control Locations**

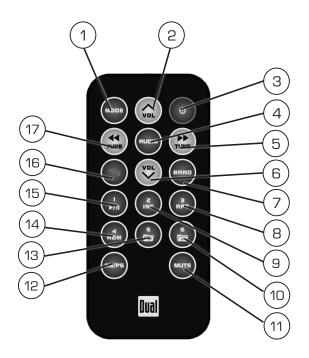


- 1) Eject
- 2) Band / Display
- 3) Bluetooth Talk
- 4 Volume Knob / Select
- 5) Tune / Track Up
- 6) Power / Mode
- 7 Disc Slot
- 8 USB Port
- (9) Auxiliary Input
- (10) Preset 6 / Folder Up

- 11) Preset 5 / Folder Down
- 12) Preset 4 / Random
- 13) Preset 3 / Repeat
- 14) Preset 2 / Intro
- (15) Preset 1 / Play/Pause
- (16) IR Sensor
- (17) Microphone
- 18) Tune / Track Down
- 19) Mute / Auto Store



#### Remote Control



- 1 Mode
- 2 Volume Up
- 3) Power
- 4 Audio
- 5) Tune / Track Up
- 6 Volume Down
- (7) Band
- 8 Preset 3 / Repeat
- 9 Preset 2 / Intro

- (10) Preset 6 / Folder Up
- 11) Mute
- 12) AS/PS
- (13) Preset 5 / Folder Down
- (14) Preset 4 / Random
- (15) Preset 1 / Play/Pause
- (16) Bluetooth Talk
- (17) Tune / Track Down



## **General Operation**

Power On/Off	Press $\bullet$ or any other button (except EJECT) to turn the unit on. Press and hold $\bullet$ to turn the unit off.
Mode	Press <b>MODE</b> to select between Radio, CD player, Bluetooth, auxiliary and USB. Modes of operation are shown in the display.
	<b>NOTE</b> : CD and USB modes will not appear unless a CD is inserted or USB device is connected.
Volume	Adjust volume using volume knob (00-40).
Mute	Press <b>MUTE</b> to silence the audio. Press <b>MUTE</b> again (or rotate the <b>volume knob</b> ) to resume audio.
Reset	Press <b>RESET</b> upon initial installation or if abnormal operation occurs.
Set the Clock	With the unit on, press and hold <b>DISP</b> until the clock begins to flash, then release. Press and hold <b>DISP</b> again. The hour will flash, then turn the <b>volume knob</b> to the right to adjust the hours. Press <b>DISP</b> again. The minutes will flash, then turn the <b>volume knob</b> to the right to adjust the minutes.
Auxiliary Input	The DC208BT offers a 3.5 mm auxiliary input port on the front panel of the unit for connecting an audio device, MP3 player, etc. Press <b>MODE</b> to select auxiliary input mode.
USB Input	The DC208BT offers front panel USB input. When a device is connected, press <b>MODE</b> to select USB mode.
Setup Menu	Press and hold <b>SELECT</b> for more than 3 seconds to access the setup menu. Press <b>SELECT</b> momentarily to select between the menu functions and rotate the <b>volume knob</b> left/right to adjust or activate the desired function.



#### **General Operation - Setup Menu**

Menu Function	Options	Action
Turn On Volume	VOL ADJ	Programs the unit to turn on at a specific volume selected by the user.
	VOL LAST	Programs the unit to turn on at the volume selected at the time the unit was last powered off.
Adjusted Volume	A-VOL #	Enables the user to select the desired volume for each time the unit is powered on. This option only appears when VOL ADJ is selected in the Turn On Volume menu.
Tuner Frequency Spacing	AREA US	Programs the unit to USA tuner spacing. (200kHz for FM and 10kHz for AM). <b>(Tuner mode only)</b>
	AREA EU	Programs the unit to European tuner spacing. (50kHz for FM and 9kHz for AM). <b>(Tuner mode only)</b>
Clock Format	CLOCK 12	Sets the clock display to 12-hour format.
Clock Format	CLOCK 24	Sets the clock display to 24-hour format.
Bluetooth Auto Answer	BT_AUTO	Programs unit to automatically answer every incoming phone call after 2-3 rings.
	BT_MANU	Programs unit to require the $\frown$ button to be pressed to answer incoming phone calls (default).
Beep	BEEP OFF	Disables the confirmation beep.
Confirmation	BEEP ON	Enables the confirmation beep.
Local/Distance Tuning	LOC	Activates distance tuning (Tuner mode only).
	DX	Activates local tuning for strong station reception only (Tuner mode only).
	STERE0	Programs unit for stereo playback (Tuner mode only).
Stereo/Mono	MONO	Programs unit for mono playback ( <b>Tuner mode only</b> ). Selecting MONO can improve listening in areas with a weak FM signal.



### **General Operation**

Audio	Press <b>SELECT</b> momentarily to select between Bass, Treble, Balance, Fader, EQ, Loudness and Dimmer.
Bass	Press <b>SELECT</b> until <b>BASS</b> appears, then rotate volume knob left/right to adjust ( -7 minimum / +7 maximum).
Treble	Press <b>SELECT</b> until <b>TRE</b> appears, then rotate volume knob left/right to adjust ( -7 minimum / +7 maximum).
Balance	Press <b>SELECT</b> until <b>BAL</b> appears, then rotate volume knob left/right to adjust (BAL 10L - BAL 10R). L=R represents equal balance.
Fader	Press <b>SELECT</b> until <b>FAD</b> appears, then rotate volume knob left/right to adjust (FAD 10R - FAD 10F). F=R represents equal fader.
EQ	Press <b>SELECT</b> until <b>EQ</b> appears, then rotate volume knob left/right to select one of the following Equalization Curves: Off, Rock, Pop, Class and Flat.
Loudness	Press <b>SELECT</b> until <b>LOUD</b> appears, then rotate volume knob left/right to turn the Loudness feature on or off.
Dimmer	Press <b>SELECT</b> until <b>DIM</b> appears, then rotate volume knob left/right to select one of the following Dimmer options: Low, Hi or Adjustable.



#### **AM/FM** Tuner Operation

Seek Tuning	Press <b>TUNE I</b> or <b>TUNE I</b> momentarily to seek to the next strong station.
Manual Tuning	Press and hold <b>TUNE</b> ◀◀ or <b>TUNE</b> ►► until "MANUAL" appears, then press <b>TUNE</b> ◀◀ or <b>TUNE</b> ►► momentarily to change radio frequency up or down one step at a time. Press and hold to advance quickly.
Band	Press <b>BAND</b> to select between FM1, FM2, FM3, AM1 and AM2 bands.
Storing and Recalling Station Presets	Up to 18 FM stations and 12 AM stations can be stored. To store a station, select the desired band and station. Press and hold the desired preset button (1-6) for more than 2 seconds. When stored, the preset number will appear in the display. The station can be recalled anytime by pressing the corresponding preset button.
Automatically Store Stations	Press and hold <b>AS</b> for more than 3 seconds to automatically store strong 6 stations in the current band.



### **CD Player Operation**

Insert CD	With the label facing up, insert a standard size CD into the CD slot. The CD will automatically begin playback.
Eject CD	Press <b>EJECT</b> to eject the CD. The unit will change to previous mode of operation. If the disc is not removed within 10 seconds, the unit will reload the disc. The unit does not have to be turned on to eject CD.
Track Select	Press <b>TRACK</b> ►► to skip to the beginning of the next track. Press <b>TRACK</b> ◄◀ to return to the beginning of the current track. Pressing <b>TRACK</b> ◀◀ again skips to the beginning of the previous track.
Fast Forward/Reverse	Press and hold <b>TRACK &gt;&gt;</b> or <b>TRACK &lt;=</b> fast forward or reverse a track.
Pause	Press <b>/III</b> to temporarily stop CD playback. Press <b>/III</b> again to resume playback.
Intro	Press INT to enter the Intro menu, then turn the volume knob to select one of the following options: • ON - Plays the first 10 seconds of each track. • OFF - Cancels the INT function.
Repeat	Press <b>RPT</b> to enter the Repeat menu, then turn the volume knob to select one of the following options: • ONE - Continuously repeats selected track. • ALL - Plays all tracks on CD.
Random	Press <b>RDM</b> to enter the Random menu, then turn the volume knob to select one of the following options: • ON- Plays all tracks in random order. • OFF - Cancels the RDM function.
CD-R/CD-RW Compatibility	Some CD-Rs and CD-RWs may be incompatible with this unit, depending on media type and recording method. In addition, the following CDs may be incompatible with this unit:
	CDs exposed to extreme temperatures or direct sunlight for extended periods of time, CDs recorded in which a recording session failed or a re-recording was attempted and, or encrypted or copy-protected CDs which do not conform to the audio CD-DA red book recording standard.



### CD Player Operation - MP3 Files

Playing an MP3 CD	When an MP3 encoded disc is first inserted, "LOAD" will appear in the display. Depending on the number of files and folders, this may take several seconds.
Displaying Information	Press <b>DISP</b> to select between file name, song title, artist, album, track number and clock/elapsed time.
	NO TITLE, NO ARTIST, NO ALBUM, and ID3 information are not displayed in MP3 File.
	"ROOT" will be displayed if the directory name of a root folder is not labeled.
Character Support	Maximum character display information • Track name – 36 character maximum • Directory name – 10 character maximum • 'Song title – 30 character maximum • 'Artist name – 30 character maximum * Album name – 30 character maximum * Song title, Artist Name and Album Name will only be displayed if included with the MP3 file. When referring to MP3 playback, the following terms are synonymous: • File name and track name • Folder name and directory name



# CD Player Operation - MP3 Files

Media Compatibility	The following types of discs/files are compatible: • CD-ROM (ISO), CD-R, CD-RW • CD-DA • MP3 data
	The following types of discs/files are not compatible: • Discs recorded with Track At Once or packet writing • MP3 PRO format • MP3 playlists • WAV format
Playback Order	MP3 playback sequence is based on recorded order of files and begins in the root folder of the disc. Any empty folders or folders that do not include MP3 files are skipped. This unit may not play files in the order they were recorded in. Refer to your recording software's user's manual for more information.
Compatible Recording Formats	<ul> <li>ISO9660 level 1</li> <li>ISO9660 level 2</li> <li>Yellow Book MODE 1</li> <li>Yellow Book MODE 2 FORM 1</li> <li>Multi session</li> <li>Maximum files - 999</li> <li>Maximum folders - 255</li> <li>Maximum folder levels - 8</li> <li>MPEG-1/2/2.5 Audio Layer-3</li> <li>ISO9660 standards:</li> <li>Maximum nested folder depth is 8 (including the root folder).</li> <li>Valid characters for folder/file names are letters A-Z (all caps), numbers 0-9, and "_" (underscore). Some characters may not be displayed correctly, depending on the character type.</li> <li>This device can play back discs in Joliet, Romeo, and other standards that conform to ISO9660. MP3 written in the formats other than the above may not play and/or their file names or folder names may not be displayed properly.</li> </ul>



### CD Player Operation - MP3 Files

Additional MP3Information	An internal buffer provides ESP (Electronic Skip Protection) to virtually eliminate skipping.
	When playing a disc recorded with regular audio files (CD-DA or .WAV) and MP3 files, the unit will play the MP3 files only.
	Only MP3 files with filename extension (.mp3) can be played.
	Do not attempt to play discs which contain non-MP3 files with the MP3 extension.
Sampling Frequency Rates MP3	8kHz ~ 48kHz
Transfer Bit rates MP3	32kbps ~ 320kbps constant Variable bit rates
	<b>Note</b> : Some files may not play or be displayed correctly, depending on sampling rates and bit rates.
MP3 Tag Display	ID3 tags Version 1.0 to 2.4. This model will not display ID3 Version 2.4 or greater tags.
Recommended Settings	For best results, use the following settings when burning an MP3 disc: 128kbps or higher constant bit rate 44.1kHz or higher sampling frequency



USB Oper	ation
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Connecting a USB Device (sold separately)	To play MP3 files from most USB mass storage devices, line up the USB connector and insert the USB device into the unit's USB port.
Playing Music	When a USB device is first connected, playback will begin momentarily. Depending on the number of files and folders, it may take several seconds for the device to begin playing.
Track Select	Press <b>TRACK</b> ►► to skip to the beginning of the next track. Press <b>TRACK</b> ◀◀ to return to the beginning of the current track. Pressing <b>TRACK</b> ◀◀ again skips to the beginning of the previous track.
Fast Forward and Reverse	Press and hold <b>TRACK &gt;&gt;</b> or <b>TRACK &lt;</b> to fast forward or reverse a track.
Pause	Press ▶/ III to temporarily stop USB playback. Press ▶/ III again to resume playback.
File Search	Use the Folder Up/Folder Down buttons to navigate to the desired folder.
	Press 🖾 to select Folder Up. Press 🐼 to select Folder Down.
	<b>Note:</b> Folder access is only available on devices with more than one folder.



USB Operation		
Displaying Information	When a file is accessed, the clock and elapsed time will be displayed. Press <b>DISP</b> momentarily to select beween file, folder, track number and elapsed time.	
Repeat	<ul> <li>Press RPT to enter the Repeat menu, then turn the volume knob to select one of the following options:</li> <li>ONE - Continuously repeats selected track.</li> <li>FLR - Continuously repeats all files in selected folder.</li> <li>ALL - Plays all tracks on the device.</li> </ul>	
Random	Press <b>RDM</b> to enter the Random menu, then turn the volume knob to select one of the following options: • ON - Plays all tracks in random order. • OFF - Cancels the RDM function.	
	<b>Note:</b> Random mode is retained in memory when selecting between other modes and when the unit is turned on/off.	
Intro	<ul> <li>Press INT to enter the Intro menu, then turn the volume knob to select one of the following options:</li> <li>ON - Plays first 10 seconds of each track.</li> <li>OFF - Cancels the INT function.</li> </ul>	



USB Operation		
Character Support	Maximum character display information • Track name – 36 character maximum • Directory name – 11 character maximum • *Song title – 30 character maximum • *Artist name – 30 character maximum • *Album name – 30 character maximum *Song title, artist name and album name will only be	
Media Compatibility	displayed if included with the MP3 file. The following types of files are compatible: • MP3 data	
	The following types of files are not compatible: • MP3 PR0 format • MP3 playlists • WAV format	
Playback Order	MP3 playback sequence is based on order the files are copied to the USB device and begins in the root folder. Any empty folders or folders that do not include MP3 files are skipped. Depending on your software, the playback order may vary.	
Playback Capacity	<ul> <li>Maximum number of files: 999</li> <li>Maximum number of folders: 255 plus the root directory</li> <li>Maximum number of files in each folder and root: 999</li> </ul>	
	<b>Note</b> : If the number of files/folders exceeds the maximum outlined above, the additional files/folders will be ignored.	
	<b>Note</b> : Devices that exceed the maximum number of files or folders may not function properly.	
USB Device Compatibility	Due to the differences of USB devices, some devices may not be compatible. USB devices must be 'mass storage class' and formatted to the FAT or FAT32 file system in order to ensure compatibility.	



#### **USB Operation**

Additional MP3Information	Only MP3 files with filename extension (.mp3) can be played. Do not attempt to play non-MP3 files with the MP3 extension.
Sampling Frequency Rates MP3	8kHz ~ 48kHz
Transfer Bit rates MP3	32kbps ~ 320kbps constant Variable bit rates
	<b>Note:</b> Some files may not play or be displayed correctly, depending on sampling rates and bit rates.
MP3 Tag Display	ID3 tags Version 1.0 to 2.4



Bluetoothe Operation			
Pairing a New Device	Before you can use a Bluetooth device, it must be paired and connected. Make sure that Bluetooth is activated on your device before you begin the pairing process.		
	The unit broadcasts the pairing signal constantly when no devices are currently connected. Complete the pairing sequence from your Bluetooth device. Refer to the owner's manual for your device for more details.		
	The device name is "DC208BT". The Bluetooth passcode "1234".		
	<b>Note</b> : The unit can be in any mode of operation when pairing is performed.		
Connecting a Paired Device	Most Bluetooth devices support the auto-connect feature, and will connect automatically if the device is in range when the unit is powered-on.		
Redialing the last number	To redial the last phone number, press <b>^</b> from Bluetooth mode. Press <b>^</b> or SELECT again to redial the phone number.		
Receiving a phone call	Incoming phone calls will automatically appear on the display and a ring tone will be heard.		
	<b>Note</b> : The volume of the ring tone depends on the volume level of the unit. The incoming ring tone may not be heard if the volume is set to a low level or mute is activated.		
	<ul> <li>Press  to receive the incoming phone call.</li> <li>Press and hold  to refuse the incoming phone call.</li> </ul>		
	Note: If Auto Answer is set to ON in the setup menu, all phone calls will be received automatically.		
Ending a Phone Call	During an active phone call, press $\uparrow$ to end a phone call. If the phone call was received when listening to music in another mode, the unit will resume the previous mode.		

**Bluetooth®** Operation



#### Bluetooth® Operation

#### **Streaming Audio Operation**

The unit supports A2DP (advanced audio distribution profile) wireless streaming audio from your Bluetooth mobile device directly to your head unit. You can also control your music from the front panel of the head unit using AVRCP (audio video remote control profile).

#### Notes:

- To stream music to your head unit, your mobile device must support the A2DP and AVRCP Bluetooth profiles. Check the owner's manual of your mobile device for details.
- Streaming audio must be enabled from your mobile device. This option will vary depending on the device. Some devices allow streaming audio to be disabled.

After pairing, connecting and enabling streaming audio from a compatible mobile device, begin playing music using the music player on your mobile device. Once the music is playing, the following functions can be used to control the music:

- The **>>** button will skip to the next available audio track.
- The **I** button will skip to the previous audio track.
- The **>/**III button will toggle between play and pause during playback.

Note: Some Bluetooth devices may not fully support these commands.



#### Limited One Year Warranty

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

Dual Electronics Corp. warrants this product to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of the original purchase.

Dual Electronics Corp. agrees, at our option, during the warranty period, to repair any defect in material or workmanship or to furnish an equal new, renewed or comparable product (whichever is deemed necessary) in exchange without charges, subject to verification of the defect or malfunction and proof of the date of purchase. Subsequent replacement products are warranted for the balance of the original warranty period.

Who is covered? This warranty is extended to the original retail purchaser for products purchased from an authorized Dual dealer and used in the U.S.A.

What is covered? This warranty covers all defects in material and workmanship in this product. The following are not covered: software, installation/removal costs, damage resulting from accident, misuse, abuse, neglect, product modification, improper installation, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with the product, or damage occurring during return shipment of the product. Specific license conditions and copyright notices for the software can be found via www.dualav. com.

#### What to do?

- Before you call for service, check the troubleshooting guide in your owner's manual. A slight adjustment of any custom controls may save you a service call.
- If you require service during the warranty period, you must carefully pack the product (preferably in the original package) and ship it by prepaid transportation with a copy of the original receipt from the retailer to an authorized service center.
- 3. Please describe your problem in writing and include your name, a return UPS shipping address (P.O. Box not acceptable), and a daytime phone number with your shipment.
- 4. For more information and for the location of the nearest authorized service center please contact us by one of the following methods:
  - Call us toll-free at 1-866-382-5476
  - E-mail us at cs@dualav.com

Exclusion of Certain Damages: This warranty is exclusive and in lieu of any and all other warranties, expressed or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose and any obligation, liability, right, claim or remedy in contract or tort, whether or not arising from the company's negligence, actual or imputed. No person or representative is authorized to assume for the company any other liability in connection with the sale of this product. In no event shall the company be liable for indirect, incidental or consequential damages.



#### Troubleshooting

Problem	Cause	Action
Unit will not turn on (no power)	Yellow wire not connected or incorrect voltage Red wire not connected or incorrect voltage	Check connections for proper voltage (11~16VDC)
	Black wire not connected	Check connection to ground
	Fuse blown	Replace fuse
Unit has power (but no sound)	Speaker wires not connected	Check connections at speakers
	One or more speaker wires touching each other or touching chassis ground	Insulate all bare speaker wires from each other and chassis ground
Unit blows fuses	Yellow or red wire touching chassis ground	Check for pinched wire
	Speaker wires touching chassis ground	Check for pinched wire
	Incorrect fuse rating	Use fuse with correct rating
Excessive skipping	Unit is not mounted correctly or backstrap is not secure	Check mounting sleeve and backstrap support
	Physical defect in media (CD, CD-R or CD-RW)	Check media for scratches
ERR FILE appears on display	Disc read error	Press eject or <b>RESET</b>
	Focus error or disc is in upside down	Press eject or <b>RESET</b>
NO FILE appears on display	No playable MP3files found on the device	Check the device for valid MP3 files
Unit will not accept a disc	CD mechanism position out of alignment	Press <b>EJECT</b> to reset CD mechanism position
	CD transit screws still in place	Remove 2 transit screws located on top of the unit
NO SUPPORT appears on display	An invalid ID3 tag version is present	Version 1.0 to 2.0 ID3 tags are supported.



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#### **Specifications**

CD Player	Frequency response: <b>20Hz-20kHz</b> Channel separation @ 1kHz: <b>&gt;60dB</b> D/A converter: <b>1 Bit</b>
FM Tuner	Tuning range: <b>87.5MHz-107.9MHz</b> Usable sensitivity: <b>8.5dBf</b> 50dB quieting sensitivity: <b>10dBf</b> Stereo separation @ 1kHz: <b>&gt;30dB</b> Frequency response: <b>30Hz-13kHz</b>
AM Tuner	Tuning range: <b>530kHz-1710kHz</b> Usable sensitivity: <b>&lt;42dBu</b> Frequency response: <b>30Hz-2.2kHz</b>
General	USB Charge: 1A Speaker output impedance: 4~8 ohms Line output voltage: 1.2 Volts RMS Dimensions: 7" x 6.3" x 2" (178 x 160 x 50 mm)
	Design and specifications subject to change without notice.



CEA-2006 Power Standard Specifications (reference: 14.4VDC +/- 0.2V, 20Hz~20kHz)

Power Output: 16 Watts RMS x 4 channels at 4 ohms and  $\leq$  1% THD+N Signal to Noise Ratio: 80dBA (reference: 1 watt into 4 ohms)

#### FCC Compliance

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.

**Warning**: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**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 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.



Dual Electronics Corp. Toll Free: 1-866-382-5476 9AM-5PM EST, Monday-Friday

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