WCP165GH

INSTALLATION/OWNER'S MANUAL

MGR11BT AM/FM Gauge Hole Receiver
and WSM651 6.5" Car Audio Speakers

MP3 **AUX** Rear Inputs **USB**

Bluetooth®

Dual®

Mounting

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.
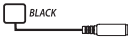
Getting Started
• Once a suitable location has been determined, drill the hole and secure the stereo using the metal mounting bracket. If the bracket needs to be shortened, remove the appropriate number of breakaway segments using a pair of pliers.

Mounting Bracket

Break Lines
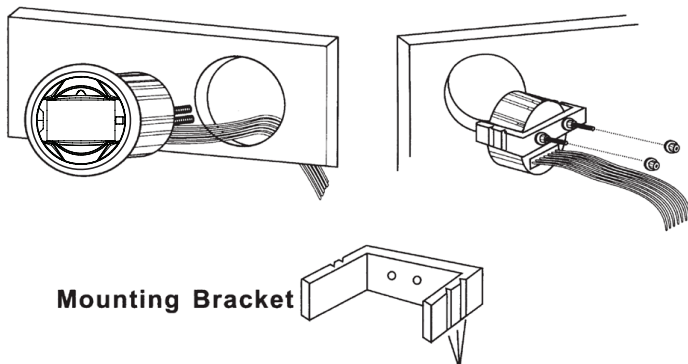
| Color	Connection
Red	12V Ignition / Accessory
Black	Ground
Blue	Remote Turn-on B (+)
Grey	Right Front (+)
Grey/Black	Right Front (-)
White	Left Front (+)
White/Black	Left Front (-)
Violet	Right Rear (+)
Violet/Black	Right Rear (-)
Green	Left Rear (+)
Green/Black	Left Rear (-)

Tip:
When a suitable ground wire is not present in the vehicle wiring harness, connect the black ground wire to the vehicle chassis.

Fuse:
When replacing the fuse, make sure new fuse is the correct type and amperage. Using an incorrect fuse could damage the radio.

USB INPUT

BLACK

USB CONNECTOR

REMOTE INTERFACE

BLACK

REMOTE CONTROL INTERFACE INPUT

Installation
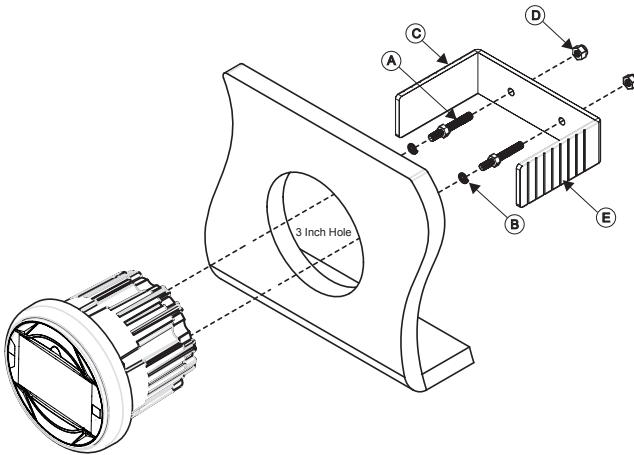
Mounting the Radio

1. Choose a mounting location on the dash board or instrument panel that will allow room behind to run radio cables to the power source. Consider how you will use the AUX IN, LINE OUT and USB connectors and route the appropriate extension cables to an accessible area.

2. Cut a hole in the dash board using the template provided in the back of this manual. At least 3 3/4" depth is needed to mount the radio.
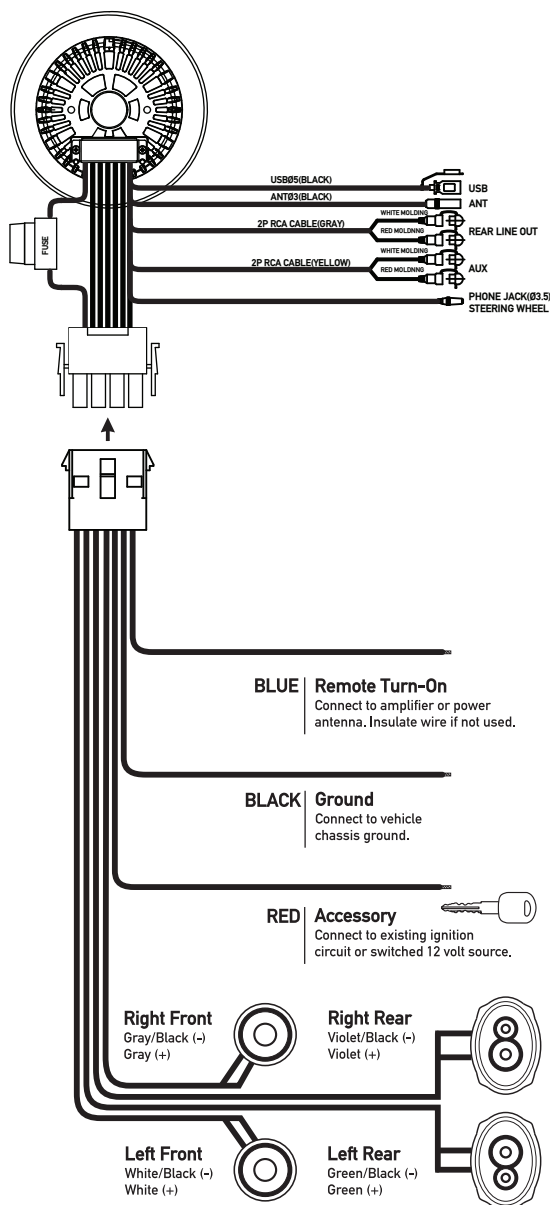
IMPORTANT! Do not mount this unit where it can be submerged in water.

3. Slide the included spring washers (B) over the screw posts (A) and attach the screw posts to the back of the radio.

4. Place the radio in front of the dashboard opening so the wiring can be brought through the opening.

5. After completing the wiring connections, turn the radio on to confirm operation (vehicle accessory switch must be on). If the radio does not operate, recheck all wiring until the problem is corrected. Once proper operation is achieved, turn the accessory switch off and proceed with final mounting of the radio. Refer to the "Wiring Diagram" on page 5.

NOTE: Before final installation, test the wiring connections to make sure the unit is connected properly and the system works.

6. Insert the radio into the mounting hole.

7. Place the "U" bracket (C) over the screw posts and secure the radio to the dash using the included hex nuts (D). If necessary, cut the score marks (E) on either side of the mounting bracket to custom fit the bracket length for your application. See Figure A.

Wiring

USB05(BLACK)
ANT03(BLACK)
WHITE MOLDING
2P RCA CABLE(GRAY)
RED MOLDING
WHITE MOLDING
2P RCA CABLE(YELLOW)
RED MOLDING

FUSE

USB
ANT
REAR LINE OUT
AUX
PHONE JACK(Ø3.5)
STEERING WHEEL

BLUE | **Remote Turn-On**
Connect to amplifier or power
antenna. Insulate wire if not used.

BLACK | **Ground**
Connect to vehicle
chassis ground.

RED | **Accessory**
Connect to existing ignition
circuit or switched 12 volt source.

Right Front
Gray/Black (–)
Gray (+)

Right Rear
Violet/Black (–)
Violet (+)

Left Front
White/Black (–)
White (+)

Left Rear
Green/Black (–)
Green (+)
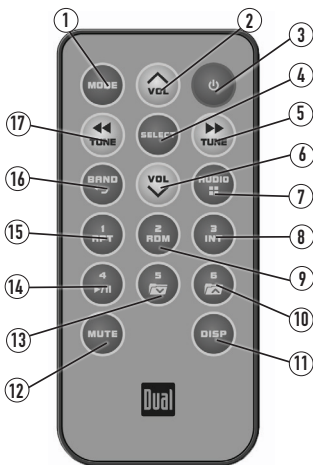
Control Locations

1 Power / Mute
2 Band / Go Back / Display
3 Tune Down
4 Tune Up
5 Play / Pause / Presets
6 Select
7 Volume Up
8 Volume Down
9 Mode
10 Audio / Menu

1	Mode	10	Preset 6 / Folder Up
2	Volume Up	11	Display
3	Power	12	Mute
4	Select	13	Preset 5 / Folder Down
5	Tune / Track Up	14	Preset 4 / Play / Pause
6	Volume Down	15	Preset 1 / Repeat
7	Audio / Menu	16	Band / Go Back
8	Preset 3 / Intro	17	Tune / Track Down
9	Preset 2 / Random		

General Operation

Power On/Off	Press ⏻ to turn the unit on. Press and hold ⏻ to turn the unit off.
Mode	Press **MODE** to select between AM/FM, auxiliary, USB and Bluetooth. Modes of operation are shown in the display.
	NOTE: USB mode will not appear unless a USB device is connected.
Auxiliary Inputs	The MGR11BT offers rear RCA auxiliary input ports for connecting an audio device, MP3 player, etc. Press MODE to select auxiliary input mode.
Volume	Adjust volume using the **VOL+** or **VOL-** buttons.
Display	Press **DISP** to select between clock and different types of information, such as radio frequency or MP song information.
Reset	Press and hold the **PLAY/PAUSE** button for more than 10 seconds to reset the unit to default factory settings.
Setup Menu	Press and hold **AUDIO/MENU** for more than 3 seconds to access the setup menu. Press **AUDIO/MENU** momentarily to select between the menu functions and use the **VOL+** or **VOL-** buttons to adjust or activate the desired function.

General Operation - Setup Menu

Menu Function	Options	Action
Auto Station Store	AUTO STORE	Press **SELECT** to seek and save 6 strong stations in the current band. **(Tuner mode only)**
Local/Distance Tuning	LOCAL OFF	Activates distance tuning **(Tuner mode only)**.
	LOCAL ON	Activates local tuning for strong station reception only **(Tuner mode only)**.
Tuner Frequency Spacing	FREQ USA	Programs the unit to USA tuner spacing. (200kHz for FM and 10kHz for AM). **(Tuner mode only)**
	FREQ EURO	Programs the unit to European tuner spacing. (50kHz for FM and 9kHz for AM). **(Tuner mode only)**
Beep Confirmation	BEEP OFF	Disables the confirmation beep.
	BEEP ON	Enables the confirmation beep.
Programmable Turn On Volume	PRO-VOL #	Programs unit to always turn on at a specific volume (default is OFF). Any volume level 1-40 can be selected.
Low Battery	L-BATT ON	Battery Voltage drops(10.8V+/-0.03V)a Beep will sound.(default)
	L-BATT OFF	Battery Voltage drops(10.8V+/-0.03V)a Beep will not sound.

General Operation

Audio

Press **AUDIO/MENU** momentarily to select between Bass, Middle, Treble, Balance, Fader, Loudness, EQ and Source Volume Level.

➞ BASS ➞ TREBLE ➞ BALANCE ➞ FADER ➞ LOUD ➞ EQ ➞ STEREO

Bass

Press **AUDIO/MENU** until **BASS** appears then press **VOL+** or **VOL-** to adjust (-7 minimum / +7 maximum).

Treble

Press **AUDIO/MENU** until **TREBLE** appears then press **VOL+** or **VOL-** to adjust (-7 minimum / +7 maximum).

Balance

Press **AUDIO/MENU** until **BAL** appears then press **VOL+** or **VOL-** to adjust (BAL LEFT 10 - BAL RIGHT 10).
BAL EVEN represents equal balance.

Fader

Press **AUDIO/MENU** until **FADER** appears then press **VOL+** or **VOL-** to adjust (FADER FRONT 10 - FADER REAR 10).
FADER EVEN represents equal fader.

EQ

Press **EQ,** then then press **VOL+** or **VOL-** to cycle through the following equalization curves: EQ-OFF, Pop, Jazz, Classic, Beat or Rock. Any manual adjustment to the Bass or Treble settings are automatically saved as USER.

Loudness

Press **AUDIO/MENU** until **LOUD** appears then press **VOL+** or **VOL-** to turn the Loudness feature ON or OFF.

Stereo

Select between **STEREO** or **MONO** in FM Radio mode.

AM/FM Tuner Operation

Seek Tuning	Press **TUNE ◄◄** or **TUNE ►►** for more than one second to seek to the next strong station.
Manual Tuning	Press **TUNE ◄◄** or **TUNE ►►** momentarily to change radio frequency up or down one step at a time. Press and hold to advance quickly.
Band	Press **BAND** to select between FM1, FM2, FM3, AM1 and AM2 bands. Up to six presets can be programmed for each band, enabling up to 18 FM stations and 12 AM stations to be stored in memory.
Storing Preset Stations (IR Remote Control Only)	Select the desired band and station. Hold the **P** button, press the **volume up/down** buttons until the desired preset number is highlighted, then press **SELECT** to store the preset.
Recalling Preset Stations	Press the **P** button to cycle through the 1-6 presets in the current band.

Weather Band Operation

Manual Tuning	Press **TUNE ◄◄** or **TUNE ►►** momentarily to seek the next weather band station.
Band	Press **BAND** to select weather band (WB).

USB Operation

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 MGR11BT's USB port.

Playing Music

When a USB device is first connected, "USB READ" will appear in the display and playback will begin momentarily. Depending on the number of files and folders, it may take several seconds for the device to begin playing. If no valid MP3 files are detected, "NO FILE" will be displayed and the last mode will be resumed.

Track Select

Press **TRACK** ▶▶ to skip to the beginning of the next track. Press **TRACK** ◀◀ to return to the beginning of the current track. Pressing **TRACK** ◀◀ again skips to the beginning of the previous track.

Fast Forward and Reverse

Press and hold **TRACK** ▶▶ or **TRACK** ◀◀ to fast forward or reverse a track.

Pause

Press ▶/❚❚ to temporarily stop USB playback.
Press ▶/❚❚ again to resume playback.

File Search

Press **SELECT** to enter the track search mode. A list of all the files from the USB device will be displayed.

Press **SELECT** again. "USB SEARCH" will be displayed momentarily, then the track number will blink.

Use the **VOL+** or **VOL-** buttons to navigate, then press **SELECT** to choose the desired track.

Press **BACK** to exit USB Search Mode.

USB Operation

Displaying Information

When a file is accessed, the clock and elapsed time will be displayed. Press **DISP** momentarily to select beween song title, artist, file name, folder name, track number and clock/ elapsed time.

"NO TITLE" will be displayed if no song title information is available.

"NO ARTIST" will be displayed if no artist information is available.

Song Title Icon

This icon will illuminate when the song title is displayed.

Artist Icon

This icon will illuminate when the artist name is displayed.

Folder Icon

This icon will illuminate when the folder name is displayed.

File Icon

This icon will illuminate when the file name is displayed.

Folder Access

Press to select the previous folder.
Press to select the next folder.

Note: Folder access is only available on devices with more than one folder.

Repeat
(IR Remote Control Only)

Press **RPT** to enter the Repeat menu, then use the **RPT** button to select one of the following options:
• ALL – Plays all tracks on the device.
• TRACK – Continuously repeats selected track.

Random
(IR Remote Control Only)

Press **RDM** to enter the Random menu, then use the **RDM** button to select one of the following options:
• OFF – Cancels the **RDM** function.
• ALL – Plays all tracks in random order.

Note: Random mode is retained in memory when selecting between other modes and when the unit is turned on/off.

Intro
(IR Remote Control Only)

Press **INT** to enter the Intro menu, then use the **INT** buttons to select one of the following options:
• OFF – Cancels the **INT** function.
• ALL – Plays first 10 seconds of each track.

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USB Operation

Character Support

Maximum character display information
• Track name – 32 character maximum
• Directory name – 32 character maximum
• *Song title – 32 character maximum
• *Artist name – 32 character maximum

*Song title and artist ne will only be displayed if included with the MP3 file.

Media Compatibility

The following types of files are compatible:
• MP3 data

The following types of files are not compatible:
• WMA data
• MP3 PRO 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

• Maximum number of files: 50,000
• Maximum number of folders: 255 plus the root directory
• Maximum number of files in each folder and root: 50,000

Note: If the number of files/folders exceeds the maximum outlined above, the additional files/folders will be ignored.

Note: 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

Note: 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

Note: If an invalid ID3 tag version is detected, "NO SUPPORT" will scroll on the display.

Bluetooth Operation

Pairing a Device

Preparation | 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.

Pairing a New Device | The MGR11BT broadcasts the pairing signal constantly when no devices are currently connected. Complete the pairing sequence from your Bluetooth device.

The device name is "MGR11BT". Password is "1234".

Note: The MGR11BT 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 MGR11BT is powered-on.

Streaming Audio | The head unit supports A2DP wireless streaming audio from a Bluetooth mobile device directly to your head unit. The following functions can be used to control the music:
- Press ►► to skip to the next available audio track.
- Press ◄◄ to skip to the previous audio track.
- Press ►/❚❚ to toggle between play and pause during playback.

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
NO FILE appears on display	Selected file is not available in direct or alphanumeric search modes	Repeat search using valid parameters
NO SUPPORT appears on display	An invalid ID3 tag version is present	Version 1.0 to 2.4 ID3 tags are supported.
	An ID3 tag character is not supported	Only ASCII characters are supported.

Speaker Preparation & Installation

Please read entire manual before installation.

Before You Start
- Disconnect negative battery terminal. Consult a qualified technician for instructions.
- Use extreme caution when drilling holes to avoid damaging fuel lines, hydraulic lines or existing wiring.
- If additional wiring is required, we recommend that you run all wires prior to mounting your speaker in place.
- Use the highest quality connectors for a reliable installation and to minimize signal and power loss.
- Use caution before you drill or cut! Be careful not to cut or drill into gas tanks, fuel lines, hydraulic lines, vacuum lines or electrical wiring.
- Avoid running wires over, near, or through sharp edged surfaces. We suggest you also use rubber grommets to protect any wires routed through metal.

Mounting and Installation
- Determine where the speakers will be mounted. Ensure an area large enough for the speaker to mount evenly. Be sure the mounting location is deep enough for the speaker to fit.
- Using an appropriate tool, cut a 5.13" diameter mounting hole.
- Remove grille from speaker by inserting the release key into the locking tab slots located at the top and bottom of the grille. Gently apply pressure towards the center of the grille to release the locking tabs.
- Use the speaker as a template to mark the locations for the mounting screws. Drill the mounting screw holes with a 1/8" pilot bit. Route speaker wires and connect to speakers, observing speaker polarity.
- Install speaker into opening using supplied hardware and test for correct operation.
- Align the speaker grille locking tabs and snap grille into place.

RELEASE KEY
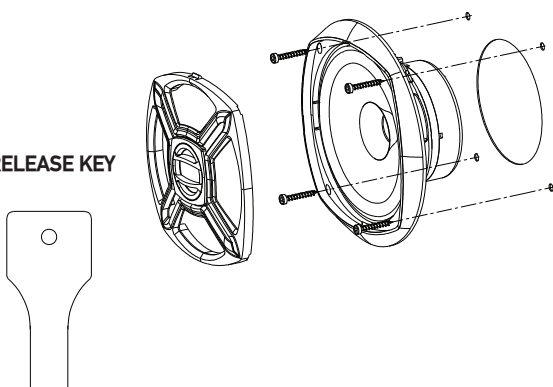
Radio Specifications

FM Tuner	Tuning range: **87.5MHz-107.9MHz**
	Usable sensitivity: **8.5dBf**
	50dB quieting sensitivity: **10dBf**
	Stereo separation @ 1kHz: **>30dB**
	Frequency response: **30Hz-13kHz**
AM Tuner	Tuning range: **530kHz-1710kHz**
	Usable sensitivity: **<42dBu**
	Frequency response: **30Hz-2.2kHz**
General	Speaker output impedance: **4~8 ohms**
	Line output voltage: **2 Volts RMS**
	Dimensions: **7" x 3.8" x 2" (178 x 97 x 50 mm)**

Design and specifications subject to change without notice.

Speaker Specifications

Outside Diameter	7.13"
Mounting Depth	2.13"
Mounting Height	.87"
Cut-out Diameter	5.13"
Frequency Response	45Hz-15kHz
Sensitivity	88dB 1W/1M
Impedance	4 ohms
RMS Power	20 Watts
Peak Power	100 Watts

Design and specifications subject to change without notice.

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 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: 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?
1. 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.

2. 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.

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.

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: **70dBA** (reference: 1 watt into 4 ohms)

Dual

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

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