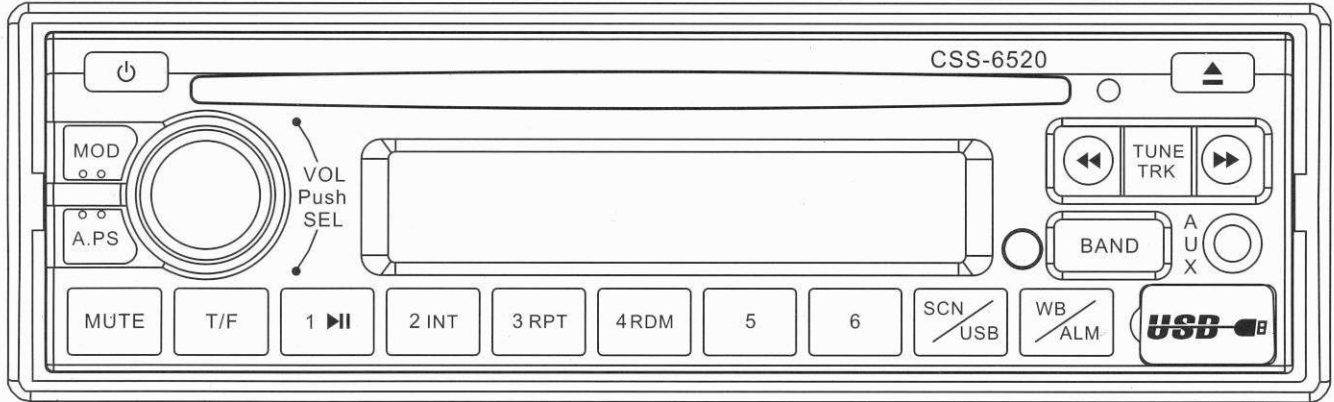


CSS-6520

AM/FM/WB/CD/USB/MP3/WMA
4-CHANNEL, Public Address Capability



Owner's Manual

Custom Radio Corporation

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Please take a few moments to read this manual carefully to ensure you understand the operation of the unit before you start using it.

General Features

This FM/AM/CDP/WB/USB/NAND car audio unit is equipped with the following features.

1. Radio unit (Tuner)

- Electronic station search
- Memory function which you can store 18 FM Stations and 12 AM stations in Memory.
- A.PS (Auto Store) system selects and memorises the stations automatically in order of good reception.

2. COMPACT DISC PLAYER UNIT

- 5-1/4 (12cm) Discs available
- MP3/WMA disc can be applied
- Power Loading System
 - ① When disc is inserted, it starts playing automatically.
 - ② Even if the power is off, the unit is powered on automatically when the disc is inserted, and it will start playing automatically.
- Repeat Function
 - ① You can listen to the same track repeatedly.
 - ② The disc is re-played automatically after listening to all the tracks on the disc.
- CD Intro Button
Press the INT button to automatically play the first 10 seconds of each track which is recorded on the disc.

3. AUX IN

- The radio is equipped with a Auxiliary, that allows the user to listen to external sources, such as MP3 player

4. USB & NAND (512M internal memory)

- The radio is equipped with a USB input jack and a 512M internal memory.

5. Public Address (PA)

- Two four-pin connectors on the rear of panel accept microphone inputs.

6. Others

- Electronic volume control function. ("SEL" Button - DSP, Bass, Treble, Balance, Fader, VOL)
- High-Power external Amp design (35Wx4 channels)

RADIO SYSTEM

(POWER) Button

- Press this button to turn the audio unit ON and OFF.

BAND Button

- During radio operation, each time this button is momentarily pressed, the radio band is changed. The indications



- Will appear on the display panel according to your selection.
- Press this button for more than 2 seconds, it will operate Loudness function.

TUNE TRK Button (SEEK)

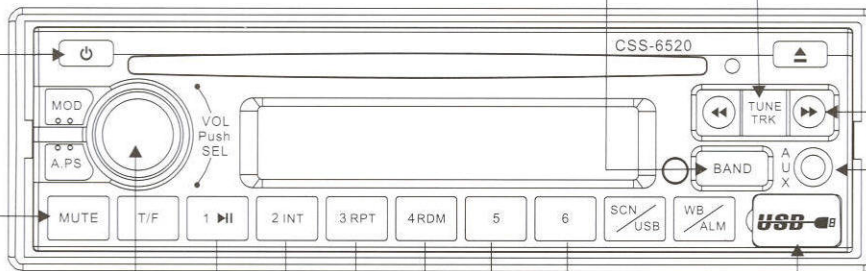
- **AUTO:** Momentarily pressing and releasing either TUNE TRK button will activate the Automatic Seek Tuning function, provided manual tuning mode is not in effect. The radio will seek the next acceptable signal strength station in the + or - direction and the stop and remain at the frequency.

MUTE BUTTON

- Press this button to mutes output.
- Press again to enables output.

MANUAL TUNING

- To manually select a desired frequency, press and hold down TUNE button until radio BEEPS and 'MANU' briefly appears on display. Now use TUNE up/dn button to select desired station. To exit the manual tuning mode, hold down TUNE button for more than 2 seconds until radio BEEPS.



SET (SELECTOR) Button

- Electronic encoder type button which is used to select and control all functions related to the volume and sound quality of the audio unit.
- When you momentarily press this button, you can change the following functions like shown in the order below:



- 【Note】** Once you've selected the function you wish to change, you have 5-seconds to adjust the settings before it automatically switches back to the volume control (Default).

PRESET (1 to 6) Buttons

- Tune the radio to a desired station then press and hold one of the preset buttons for 2 seconds. The desired station will now be stored in memory.

USB

- Select USB by pressing MODE button repeatedly until "USB" appears on display.

AUX IN

- Select AUX IN by pressing MODE button repeatedly until "AUX" appears on display.

Description of Audio Unit Features

◆ RADIO SYSTEM

MODE Button

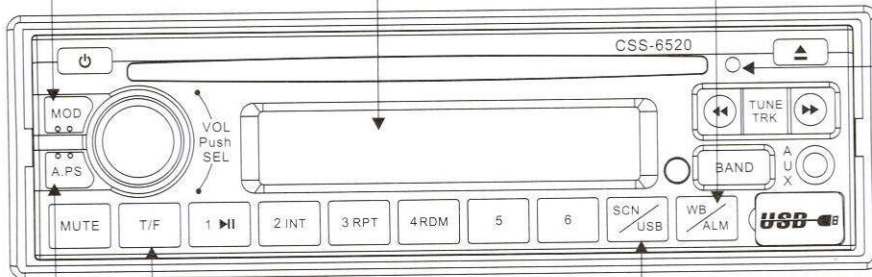
- Press MODE button momentarily to select between Radio, CD play, USB play, MEM play, and Aux.

LIQUID CRYSTAL DISPLAY

- The LCD shows the radio reception information such as the FM, AM, Stereo, Ch No., Reception frequency, Volume, Bass, Treble settings etc...

WB/ALM (Weather Band/Alarm) Button

- **WB:** Simply press the WB button to change the BAND to weather band, then press the presets buttons to listen to the presets WB stations 1-6 and preset 7, press SCN button.
- **ALM:** Press and hold this button for 2 seconds to change into Alarm mode.



Flashing RED LED

- Once the Accessories (IGN) is turned off, this LED will begin to flash. If a Disc in the unit, this LED will indicate green light.

A.PS Button (Auto Preset)

- **PRE-SET SCAN:** Press this button momentarily scans the stations preset 1-6 into each AM band and each FM band. The unit will stop at each preset station for approximately 5-seconds before continuing to the next preset station.
- **AUTO-STORE:** press this button for more than 2 seconds and it will automatically preset 6 stations into memory (presets 1 to 6) in order of strongest signal strength.

T/F (TIME/FREQUENCY) Button

- In any mode, the time display is default indication on LCD. When T/F button is pressed while time is displayed, the current frequency will appear for approximately 8 seconds and then revert to time indication.
- **Setting or Changing the time**
Press and hold the T/F button until time (**HOURL**) begins to flash. Rotate volume control knob clockwise(CW) to increment hour indication, rotate volume control knob counter-clockwise(CCW) to decrement the hour indication. Now press and hold T/F button again until time (**MINUTES**) begins to flash. Rotate volume control knob CW to increment the minute indication, rotate volume control knob CCW to decrement the minute indication. Once time (Hour or Minute) has been adjusted, wait 5 seconds until time stops flashing, time is now set.

SCAN/USB Button

- When you press this button the frequency simply automatically stop at the next broadcast for reception for 5 seconds and then continues to scan.
Note: Pressing SCAN button during scanning, radio will stop at current broadcast.
- In any mode, press and hold this button for about 5 seconds to switch into USB mode.

Description of Audio Unit Features

◆ COMPACT DISC SYSTEM

MUTE Button

- Press this button to 'MUTE' the audio sound.
- Press again to deactivate the 'MUTE' feature.

DISC SLOT

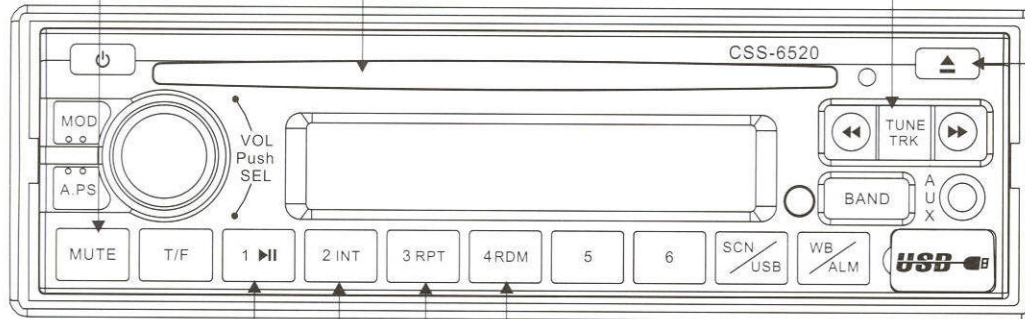
- Insert or remove Disc.

TUNE / TRK BUTTON

- Press the "▶▶" button momentarily to select Tracks on the disc in a forward direction. If you press and hold the "▶▶" button, it will quickly skip through the Track / disc in the forward direction until the button is released.
- Press the "◀◀" button momentarily to select Tracks on the disc in a reverse direction. If you press and hold the "◀◀" button, it will quickly skip through the Track / disc in the reverse direction until the button is released.

EJECT Button

- Press this button to eject the Disc.



PLAY / PAUSE Button

- Press this button to Pause the CD.
- Press the button again to play the CD.

INT Button (INTRO SCAN)

- Press this button to hear the first 10 seconds of each track recorded on the CD. If you find a song you like, simply press the button again to cancel the intro scan feature and to continue playing the whole track.

RPT (REPEAT) Button

- While playing a desired track, press the RPT button to play the track repeatedly.
- Press RPT again to cancel the Repeat feature.

RDM (RANDOM) Button

- While a CD playing, press the RDM button to play all tracks in a random sequence.
- Press RDM again to cancel the feature.

Operation Method

◆ RADIO SYSTEM

1. Listening to the radio

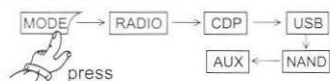
a. PWR button



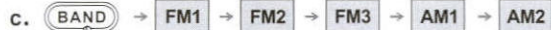
Press the PWR button to turn the unit on; press it again to turn off the unit.

Note: Whenever the unit is powered for the first time, it will default to (tuner mode). After initial power, it will memorize all settings from previous play mode. When Ignition is turned off while radio is operating normally, the unit will automatically power on when Ignition is turned on again and have memorized all settings from previous play mode.

b. MODE button



Press the MODE button to select mode between Radio and AUX.



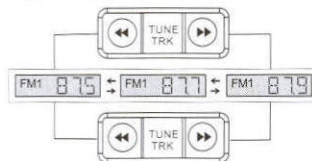
Use the BAND button to select your desired band. (FM or AM)

d. How to select / tune a radio station (seek)

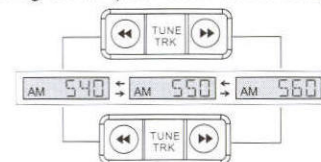
- Manual tuning



- Listening to FM (moves in 200KHz steps)



- Listening to AM (moves in 10KHz steps)



2. Tuning and selecting radio stations



- Auto station tuning (SEEK) AM and FM

When you press the SEEK buttons momentarily (one touch), the frequency will automatically change to the next strong signal station.

- MANUAL station tuning (SEEK) AM and FM

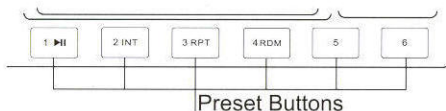
To manually tune a desired radio station, press and hold either "◀" or "▶" buttons until radio BEEPS and icon "MANU" appears on LCD briefly and then release. Now press the "◀" or "▶" button momentarily to move the frequency "UP" or "DOWN" in steps. To return to Auto Seek tuning mode, press and hold "◀" or "▶" buttons until unit beeps. The radio is now in Auto Seek tuning mode.

- PRESET station tuning

To Select a station which is stored in memory, simply momentarily press anyone of the PRESET Buttons 1 to 6. The Station stored in the PRESET button, will automatically be selected.
(The LCD show the CH number and frequency.)

3. Presets

- To store your favorite radio stations into memory, please follow the steps below.
- a. Select a radio station by using the tune buttons.
- b. Once selected, simply hold one of the PRESET buttons down for more than 2 seconds until radio beeps. The station is now stored on the preset selected.



Note: 18 FM stations and 12 AM stations can be stored in memory by using the 6 preset buttons.(each band can store 6 stations.)

4. VERIFYING STATIONS HAVE BEEN STORED IN MEMORY

Once you have completed storing your desired radio stations, simply press each PRESET momentarily to check if the correct stations have been memorized.

5. Weather Band (WB) button

- This audio unit provides access to the weather band for information purposes. When the WB button is pressed, "WB" appears on display and automatically searches and locks in the strongest signal station.
- The default mode of the WB function is seek tuning. In this mode, pressing TUNE buttons, the unit will search weather band for next strongest signal station.
- Pressing and holding down TUNE buttons, to set the WB function to manual tuning, radio beeps and "MANU" appears on the display briefly. To return to WB SEEK mode press and hold down TUNE buttons until radio beeps.
- All 7 WB stations can be accessed by momentarily pressing one of 7 preset buttons.
Note : In WB mode, SCAN button is preset 7 (7th WB station).
- When the WB button is pressed again, radio operation returns to the previous play mode.

Operation method

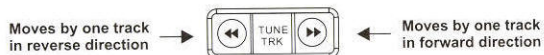
◆ Disc SYSTEM

1. Listening to your Disc

Insert a Disc into the disc slot with the label side facing up. Once the Disc has been inserted, it will automatically start playing Track 1. If there is a Disc already in the unit, simply press the MODE button to select the Disc Function.

a. Track select (UP / DOWN)

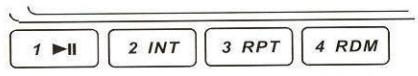
Each time you press the Track UP / DOWN button, it moves in the forward or reverse direction by one track.



Press "◀◀" Button one time



Press "▶▶" Button one time



b. PLAY / PAUSE 1 PAUSE

While a Disc is playing, press this button to PAUSE Play.
Press again to Resume Play.

c. INT. (Intro) 2 INT

Press this button to play the first 10 seconds of each Track recorded on the Disc.

To stop this feature, simply press the button again.

d. RPT. (Repeat) 3 RPT

Press this button to repeat the Track that is currently playing. Press again to cancel the Repeat feature.

e. RDM. (Random) 4 RDM

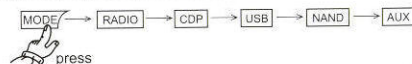
Press this button to randomly play tracks on the disc. Press again to cancel the Random feature.

f. EJECT EJECT

Press this button to EJECT your disc.

◆ AUX IN SYSTEM

Use MODE button to select AUX IN.



- Attain an audio cable with 1/8" (3.5mm) male plug at each end. First connect the cable to the radio, then connect the other end to an external audio device.
- Now press MODE button repeatedly until "AUX" is displayed on the LCD panel.

Important: Before selecting AUX mode, verify the cable connected to both audio device & radio. Since audio devices vary in output amplitude levels. It is recommended that the external audio device not be set at max output volume. Very high output levels from audio devices may cause audio distortion to the output of the radio.

◆ USB & NAND SYSTEM

1. MODE button

Press MODE button repeatedly will display the following:



2. Listen to the USB and NAND

2-1. Simply press the Mode button repeatedly to select USB or NAND mode. After selected, it will automatically play the first track.

Note: You can directly select USB mode by pressing and holding SCN/USB button for more than 3 seconds.

Then use the preset buttons to choose the Play/Pause, Intro, Repeat, and Random function (see Disc operation on page 8).

2-2. Simply press A.PS to the display track number. Turn VOL knob right or left to select the tracks, at your desired track, press SEL or BAND button to confirm the selection. Press and hold the A.PS button to display the folder name. Turn VOL knob right or left to select the folder, at your desired folder, press SEL or BAND button to confirm the selection.

2-3. During a track is playing, shortly press "▶▶" or "◀◀" button to select the next or previous track. Press and hold "▶▶" or "◀◀" to fast-forward or fast-rewind the track. Press the preset button 5 or 6 to select the previous or next folder.

3. Record USB to NAND (512M internal memory)

3-1. Press and hold SEL button during USB playing until "REC ONE" displays on the LCD; use VOL knob to select between "REC ONE" and "REC ALL", then press SEL or BAND button to confirm recording.

a. Record one: If REC ONE were selected, the file would be recorded into Audio Folder. Now "REC xx" displays on LCD. ("xx" shows recording percent.)

b. Record all: If REC ALL were selected, the files would be recorded into USB folder.

Note:

- Recording speed and time require: 48MBIT=600KBYTE

- Compressibility: file copy 1:1.

- During recording, Radio and AUX mode can be select by pressing mode button, but CDP, USB, NAND mode can not be select. And the track can not be heard while it is recording

4. Cancel the recording process:

The are two methods to cancel the recording process.

- If no button pressed in 5 seconds when REC ONE or REC ALL displays, it will automatically revert to former mode.
- Pull USB out or turn ACC off can also cancel recording process.

5. Delete files in NAND (512M internal memory)

In NAND mode, press and hold SEL button until "DEL ONE" displays on the LCD; use VOL knob to select between "DEL ONE" or "DEL ALL", then press SEL or BAND to confirm the selection.

Functions of the SEL Button

1. FUNCTIONS OF "SEL" BUTTON

1) Audio control (VOLUME / BASS / TREBLE / BALANCE / FADER)

Press key quickly to select the following features:

- DSP

- Bass (Press once)

- Treble (Press twice)

- Balance (Press three times)

- Fader (Press four times)

Volume (0 - 30)

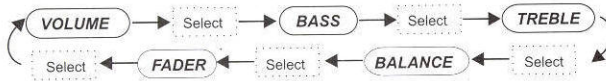
- BEEP on, BEEP 2nd (Press and Hold)

- I-Vol (Press and Hold, then Press Once)

- Area (Press and Hold, then Press Twice)

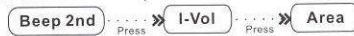
If the key or one of the keys is not pressed within 5 seconds, the radio automatically switches into volume level control mode.

These settings are indicated on the display window.



2) Beep 2nd , I-Vol , Area Selection.

When the button is pressed over 2 seconds, the unit will be operated as:



a. Beep 2nd

On the beep 2nd, you can control the beep on or beep 2nd by turning the spindle knob.

- Beep on : You can hear "beep" sound when you press all buttons.

- Beep 2nd : You can hear "beep" sound when you press the button over 1.5 secs.

b. I-Vol

By pressing the button again, the unit will be into the I- VOL mode. (Initial Volume Level Adjustment). You can adjust the I-Vol of what you want to set by turning the spindle knob and the I-Vol will be set automatically.

After the setting of initial levels, If the volume level is lower than the initial Volume setting when audio unit is turned off. Once the audio unit is switched back on again, the audio unit will remember the lower level and resume volume at that level.

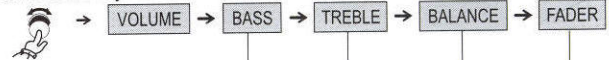
c. Area Selection

By pressing SEL button again, the unit will be in Area Selection mode. Use the spindle knob to choose USA or EUR (Europe). Press and hold the BAND button for 1-2 seconds to set the format.

3). Controlling the Bass, Treble, Balance and Fader

These adjustments are controlled by pressing the "SEL" button.

Note: If no adjustments have been made within 5 seconds, it will automatically switch back to the Volume Control Mode.



2. Bass control

Turn left to decrease the bass.
Turn right to increase the bass.

3. Treble control

Turn left to decrease the treble.
Turn right to increase the treble.

4. Balance control

Turn left to decrease the right speaker volume.
Turn right to decrease the left speaker volume.

5. Fader control

Turn left to decrease the front speaker volume.
Turn right to decrease the rear speaker volume.

Public Address (PA), Setting the Clock & Alarm Programming

- PUBLIC ADDRESS (PA)

- The Radio is equipped with two microphone input for public address purposes.

- MICROPHONE ONE (MIC 1)

When the microphone press-to-talk switch is activated on microphone one(MIC 1), the current program audio output is interrupted, "MIC 1" appears on the display and the microphone voice input can be heard through the speakers. When the microphone switch is released, the previous program audio output is restored and "MIC 1" disappears from display. Output level heard through the speakers, is controlled with MIC 1 volume control.

Note : Mic 1 input uses CSS/CRC-103M series microphones.

- MICROPHONE TWO (MIC 2)

When the microphone press-to-talk switch is activated on microphone two(MIC 2), the current program audio output is interrupted, "MIC 2" appears on the display and the microphone voice input can be heard through the speakers. When the microphone switch is released, the previous program audio output is restored and "MIC 2" disappears from display. Output level heard through the speakers, is controlled with the Radio volume control.

Note : MIC 2 input uses CSS/CRC-105 series and gooseneck type microphone.

MIC 2 volume levels will be memorized by the unit from previous set level during normal operation and when radio is turned off.

- SETTING THE CLOCK

1. Turn vehicle ignition on, then power up the radio.
2. Press and hold the T/F button until the time (hour) display begins to flash.
3. With the hour display flashing, rotate Volume control counterclockwise to decrement hour indication, rotate Volume control clockwise to increment the hour indication.
4. Press and hold the T/F button once again until the minutes display begins to flash. Adjust the minutes display in the same manner described for hours indication in step 3.
5. Five seconds after the last hour or minute adjustment is made, the time will be set into the unit and the time indication remains steady.

- ALARM PROGRAMMING

When the radio is off and the ignition switch is on, the alarm feature of the radio can be programmed as follows:

1. Press and hold the ALM button for about 2-3 seconds, ALARM ON or OFF appears on the display.
2. If the alarm is off, rotate the volume control clockwise to turn on the alarm (ALARM ON).
3. Momentarily press the ALM button again; the hours digit flashes; rotate the volume control to set the hours forward (clockwise) or backward (counter clockwise).
4. Momentarily press the ALM button again, the minutes digit flashes, rotate the volume control to set the minutes forward(CW) or backward (CCW) as desired.
5. Press the ALM button again, and ALM SET will appear on the display.

Tips for Handling the Discs & CD Error Messages

Error Code	Reason
Err	1> Loading is not completed after over 20 secs during the loading operation (* twice trial)
	2> Unloading is not completed after over 35 secs during the unloading operation (* Four times trial)
Err	1> Disc has been inserted upside down. (remove and re-insert the correct way)
	2> Disc is dirty or defective and be can not be read. (Clean DISC and try again.) / (Try another known working Disc.)
Err	1> Pick up cann't move to the most inner cirde after 10 secs. (Poor Quality CD-R)

[Note] Some CD-R's may not play and may cause an ERROR CODE to appear.
 If a CD becomes stuck inside your audio unit, press BAND and MODE buttons simultaneously for about 2 seconds (reset function) or try the EJECT button again.
 If a poor quality CD-R's become stuck inside your audio unit, this will not be covered by Warranty. Contact Your dealership to have the Disc removed.

1. Use only CD's which are marked with the Compact Disc Digital Audio logo as shown.



2. Take care not to cause any damage to the disc while handling. Handle the disc like shown in the diagram below. This may help prevent the disc from being damaged.



3. Do not attach any labels to the top of your Discs. This may cause the Disc to get jammed in your CD player and it's not covered by warranty.



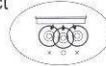
4. Keep the playing surface clean from dust and fingerprints. You can wipe them with a soft cloth before playing. (The wiping direction should be from the center to the outside of the CD as shown).



5. Place your CD's in their protective cover when not being used.



6. Min discs 3" (8cm) may sometimes eject immediately upon inserting if they are inserted unevenly. In this case insert the disc in the central part again.



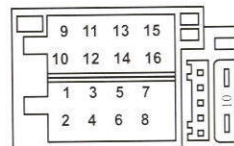
1. Connection diagram (16P)

Please refer below for vehicle's audio connector wiring configuration...

MIC #1



MIC #2



NO	DESCRIPTION
1	SIGNAL
2	GROUND
3	PWR (+8VDC)
4	SWITCH

NO	DESCRIPTION
1	SHIELD
2	SIGNAL
3	GROUND
4	SWITCH

No	NOTE	No	NOTE
1		9	REAR RIGHT SPEAKER +
2		10	REAR RIGHT SPEAKER -
3		11	FRONT RIGHT SPEAKER +
4	IGNITION (+12VDC)	12	FRONT RIGHT SPEAKER -
5	AUTO ANTENNA	13	FRONT LEFT SPEAKER +
6		14	FRONT LEFT SPEAKER -
7	MEMORY (BATTERY)	15	REAR LEFT SPEAKER +
8	GROUND	16	REAR LEFT SPEAKER -

Specifications & Performance

TUNER UNIT		
FM	Reception Frequency	87.5 ~ 107.9MHz
	Effective Sensitivity (MONO) (30dB S/N)	Below 10dBu
	S/N Ratio	Above 52dB
	Stereo Separation (1KHz)	Above 30dB
AM	Reception Frequency	530 ~ 1710KHz
	Frequency Characteristics (-30dB)	30Hz ~ 10KHz
	S/N Ratio	Above 45dB
WB	Reception Frequency	162.40 MHz 162.42 MHz 162.45 MHz 162.47 MHz 162.50 MHz 162.52 MHz 162.55 MHz

AUDIO UNIT	
Maximum Output Power	35W x4CH
Frequency Characteristics (-30dB)	30Hz ~ 10KHz
Bass Control	10dB ± 3dB
Treble Control	10dB ± 3dB

COMPACT DISC UNIT	
Method	Optical
Number of Channels	4 Channels (Stereo)
Dynamic Range	Above 90 dB
S/N Ratio	Above 50 dB
Distortion factor	Below 0.3% (1KHz)
Channel Separation	Above 50 dB
WOW & Flutter	Below measured limit value

POWER UNIT AND SPECIFICATIONS	
Power Supply Voltage	13.8V (10.8 ~ 15.8V) available
Speaker Impedance	4 ohms
Chassis Dimensions (WxHxD)	178 x 50 x 151.7 mm 7.00 x 1.97 x 5.97"
Panel Dimensions (WxHxD)	180 x 50 x 18.5 mm 7.09 x 1.97 x 0.73"
Commercial Fuse Spec.	250V 10A
Weight	Below 2kgs

[Caution] Any changes modifications to this audio unit will void its Warranty.

Custom Radio Corp
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www.customradio.net
