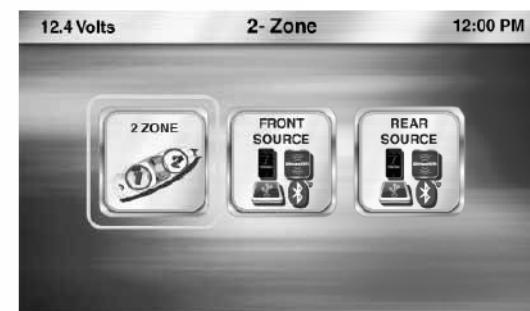


## 2-Zone Operation



## Bluetooth (Microphone Gain)

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the Settings Icon is in the middle of the carousel, Press in on the volume knob to select Settings
4. Once in Settings, rotate the volume knob to Bluetooth
5. Press in on the volume knob to enter Bluetooth Settings
6. Rotate the volume knob and move the halo until it is around the Microphone Gain Icon
7. With the halo around Microphone Gain Icon
8. Press in on the volume knob to select Microphone Gain
9. You will now be taken to the Microphone Gain Adjustment Screen
  - The halo will automatically go around the Microphone Gain Slider
  - You can use the volume knob to move the halo to the Reset Microphone Gain Icon
  - If you Reset the Microphone Gain level, it will default to the middle level (+5)
10. Use the volume knob to adjust the Microphone Gain from "0" to "+10"
11. Press in on the volume knob to select the Microphone Gain level
12. You will return back to the Bluetooth Settings Screen

## Note:

The Bluetooth Microphone is an optional accessory and is not included with this unit.



## 2-Zone (ON / OFF)

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the 2-Zone Icon is in the middle of the carousel, Press in on the volume knob to select 2-Zone
4. Once in 2-Zone, rotate the volume knob until the halo is around 2-Zone
5. Press in on the volume knob to turn the 2-Zone Feature ON or OFF
6. Rotate the volume knob and move the halo until it is around 2-Zone ON or 2-Zone OFF
7. If you select ON, then the 2-Zone Feature will be enabled
8. If you select OFF, then the 2-Zone Feature will be disabled
9. With 2-Zone ON, you will return to the 2-Zone Menu to select Front and Rear Sources
10. With 2-Zone OFF, you will return to the Main Source Menu

## NOTE:

Once a source has been selected for each Zone, you can go to the source for Zone 1 or Zone 2 for operation and functionality.

**2-Zone Operation****2-Zone (Front Source)**

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the 2-Zone Icon is in the middle of the carousel, Press in on the volume knob to select 2-Zone
4. Once in 2-Zone, rotate the volume knob until the halo is around Front Source
5. Press in on the volume knob to select Front Source
6. You will now see the Main Source Menu with a prompt to select the Front Source
7. Use the volume knob to scroll through the Sources you would like to use for the Front Source
8. Once you select a source for the Front Source (Zone 1), you will be taken to the 2-Zone Menu to make a Source selection for the Rear Source (Zone 2)

**2-Zone (Rear Source)**

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the 2-Zone Icon is in the middle of the carousel, Press in on the volume knob to select 2-Zone
4. Once in 2-Zone, rotate the volume knob until the halo is around Rear Source
5. Press in on the volume knob to select Rear Source
6. You will now see the Main Source Menu with a prompt to select the Rear Source
7. Use the volume knob to scroll through the Sources you would like to use for the Rear Source
8. Once you select a source for the Rear Source (Zone 2), you will return to the Play Screen for the Front Source.
9. If you want to change the volume level for Rear Source, You need to press AUDIO Button and select the source 2 Zone. Then it appears the 2 Zone Volume setting and volume can be changed for both Zone 1 and Zone 2 separately. other setting like bass treble will remain same as Zone 1 source and cannot be changed

**Note:** While 2 Zone setting is Turned ON and if you press any other source than (excluding FRONT Source or REAR source) 2 Zone Source, there won't be any response. To select any other source, you need to first Turn OFF the 2 Zone setting and then select any other source to Play. It is not allowed to select same source as FRONT and REAR source. If you select also, there won't be any response from DC.

**AUX 1 and AUX 2 Operation****AUX 1 and AUX 2 (Audio)**

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the AUX 1 or AUX 2 Icon is in the middle of the carousel
4. Press in on the volume knob to select AUX 1 or AUX 2
5. You can now listen to the device that has been connected to the AUX 1 or AUX 2 RCA Inputs

\*\* If you have a device that plays Audio and Video and you are not seeing the video image, please check the video input on the MW4 has been connected to the video output from your Audio and Video Device.

**AUX 1 and AUX 2 (Video)**

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the AUX 1 or AUX 2 Icon is in the middle of the carousel
4. Press in on the volume knob to select AUX 1 or AUX 2
5. You can now watch video from the device that has been connected to the AUX 1 or AUX 2 RCA Inputs

\*\* If you have a device that plays Audio and Video and you are not seeing the video image, please check the video input on the MW4 has been connected to the video output from your Audio and Video Device.

\*\* Verify the Video Interlock Wire has been connected and the correct sequence has been followed.

**Note:** When the video signal is detected in AUX1/AUX2, then the status bar would appear displaying the battery voltage, Source name (AUX1/AUX2) and the clock for 3 seconds and then disappear.

## Camera Operation



### Camera

1. Press the **Source Button (SRC)**
2. Use the volume knob to scroll through the sources
3. When the Camera Icon is in the middle of the carousel
4. Press in on the volume knob to select Camera
5. You can now view the image from the Camera

\*\* If you see a "No Video Signal Detected" message on the screen, please check the Camera RCA input on the MW4 has been connected to the video output from your Rear Vision Camera (Page 88). \*\*  
Verify the Video Interlock Wire has been connected and the correct sequence has been followed.

### Camera (Using Camera Trigger Wire)

1. While in any source, listening to audio from that source and then view Camera Image
2. Provide a +12v signal to the Camera Trigger Wire (Purple) on the MW4 from a +12v Switch or an Open Accessory Switch.
3. When the switch is ON, you can view the Camera Image and listen to the audio source
4. If you want to change channels or any other features for the source that is playing, you can place the Switch to the OFF position and the Camera Image will go away and you will now see the source you Want to adjust or change.
5. To return back to viewing the Camera Image, place the switch to the ON position

\*\* Refer to the Installation Guide for wiring a switch with and without using a SPDT Relay (Page 88).

### 2-Zone with Camera

1. Press the **Source Button (SRC)**
2. Use the volume knob to scroll through the sources
3. When the 2-Zone Icon is in the middle of the carousel
4. Press in on the volume knob to select 2-Zone
5. Select Camera for the Front Source (Zone 1)
6. Select an Audio Source for the Rear Source (Zone 2)
7. You can now view the image from the Camera
8. Audio will only be heard out of the speakers connected to Zone 2.

## Bluetooth Audio Operation



### [◀ SEEK] Seek Back Button

- Press and release button to go back to previous song
- Press and Hold for Three Seconds to scan back through song, release and song will continue playing

### [SEEK ▶] Seek Forward Button

- Press and release button to advance to next song
- Press and Hold for Three Seconds to scan through song, release and song will continue playing

### [▶▮▮] Play / Pause Button

- Press to PAUSE current song
- When track is PAUSED, press again to continue playing current song (iPod, Bluetooth Audio, USB, and Pandora)

### [BACK] Back Button

- Press to go back to previous Menu or Settings Screen
- Press to backwards in multiple Menu Screens
- Press to return to current source play screen from Menu or Settings Screen

### Bluetooth Audio

1. Press the **Source Button (SRC)**
2. Use the volume knob to scroll through the sources
3. When the Bluetooth Audio Icon is in the middle of the carousel
4. Press in on the volume knob to select Bluetooth Audio
5. You will now be taken to the Bluetooth Audio Play Screen

## Bluetooth Audio Operation



### [MENU] Menu Button

Press to access additional options

- Repeat (Song, Playlist, All, Off)
- Random (ON or OFF)
- Shuffle (ON or OFF)
- Folder Browsing
- Paired Devices



### Repeat

1. From the Bluetooth Audio Play Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Repeat Icon is in the middle of the carousel
3. Press in on the volume knob to select Repeat
4. Now a pop-up window will appear with Repeat options:
  - Song (Repeats current song)
  - All (Repeats All songs)
  - Off (Turns OFF the Repeat Feature)
5. After your choice has been made, you will see the Repeat Icon appear on the Bluetooth Audio Play Screen

## Bluetooth Audio Operation



### Random

1. From the Bluetooth Audio Play Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Random Icon is in the middle of the carousel
3. Press in on the volume knob to select Random
4. Now a pop-up window will appear with Random options:
  - ON (Turns the Random Feature ON)
  - OFF (Turns the Random Feature OFF)
5. After your choice has been made, you will see the Random Icon appear on the Bluetooth Audio Play Screen



### Shuffle

1. From the Bluetooth Audio Play Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Shuffle Icon is in the middle of the carousel
3. Press in on the volume knob to select Shuffle
4. Now a pop-up window will appear with Shuffle options:
  - ON (Turns the Shuffle Feature ON)
  - OFF (Turns the Shuffle Feature OFF)
5. After your choice has been made, you will see the Shuffle Icon appear on the Bluetooth Audio Play Screen

### Folder Browsing

1. From the Bluetooth Audio Play Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Folders Icon is in the middle of the carousel
3. Press in on the volume knob to select Folders
4. Now a pop-up window will appear with "AVRCP 1.4 not supported" when connected device does not support AVRCP 1.4 profile
5. When AVRCP 1.4 profile is supported, then list of folder will appear when Folder Option is selected
6. To search the folder, Press Menu and select alphabet/Numbers. Then list of folders starting with entered alphabet/number will appear

## Bluetooth Audio Operation



### Paired Devices

1. From the Bluetooth Audio Play Screen, Press the  **MENU Button**
2. Use the volume knob to scroll through options until the Paired Devices Icon is in the Middle of the carousel
3. Press in on the volume knob to select Paired Devices
4. Now you will see your Paired Device Icons
5. Use the volume knob to move The halo until it is around the Paired Device that you would like to either Switch Connection or Delete
6. Press in on the volume knob to select the Paired Device
7. Once your selection has been made, you will be taken to the Bluetooth Paired/Connected Device Information Screen



### Paired Devices (Paired/Connected Device Information Screen)

This screen is where you can view the Paired Bluetooth Information, Switch Bluetooth connection To a different Paired Device and Delete the Paired Device

## Bluetooth Audio Operation



### Bluetooth (Switch To This Device)

1. When you are at the Paired/Connected Device Information Screen
2. Use the volume knob and move the halo until it is around Switch To This Device
3. Press in on the volume knob to switch Bluetooth Connection to this device
4. Now a pop-up window will appear asking you to Confirm Connection to this Device
5. Use the volume knob to Toggle between "YES" or "NO"
6. Press in on the volume knob to select your choice
7. If you select "YES", then you have now transferred Bluetooth Connection and you will return back to the Bluetooth Audio Settings Screen
8. If you select "NO", then you will return back to the Bluetooth Audio Settings Screen



### Bluetooth (Delete This Device)

1. When you are at the Paired/Connected Device Information Screen
2. Use the volume knob and move the halo until it is around Delete This Device
3. Press in on the volume knob to Delete This Device
4. Now a pop-up window will appear asking you to confirm you want to Delete This Device
5. Use the volume knob to Toggle between "YES" or "NO"
6. Press in on the volume knob to select your choice
7. If you select "YES", then you have now Deleted This Device and you will return back to the Bluetooth Audio Settings Screen
8. If you select "NO", then you will return back to the Bluetooth Audio Settings Screen



### Phone

1. Press the Source Button (SRC)
2. Use the volume knob to scroll through the sources
3. When the Phone Icon is in the middle of the carousel
4. Press in on the volume knob to select Phone
5. You will now be taken to the main Phone Screen



### Speaker

1. While in the main Phone Screen
2. Press the Menu Button
3. You will now see the Phone Menu Options
4. Use the volume knob to move the halo until it is around the Speaker Icon
5. Press in on the volume knob to select Speaker
6. Use the volume knob to change which speaker you would like your Phone Call Audio to be heard from.

\* Default = Right Front Speaker



### Phone Menu

1. While in the main Phone Screen
2. Press the Menu Button
3. You will now see the Phone Menu Options
  - Speaker (Select Left Front or Right Front Speaker for Hands-Free Calling Audio)
  - Contacts (View list of Contact from Paired and Connected Phone)
  - Dial Pad (To Manually Enter in a Phone Number to Call)
  - Call History (View your Missed Calls, Incoming Calls, Outgoing Calls)
  - Paired Devices (View Paired/Connected Phone Information, Switch Paired Device, Delete Device)
4. Press in on the volume knob to make your selection

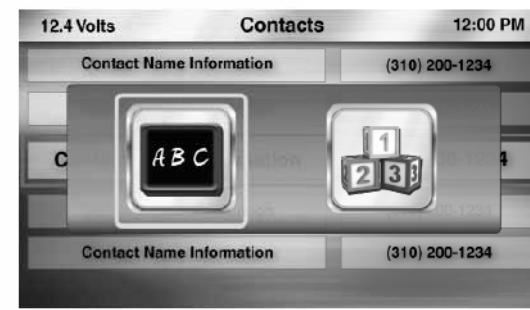


### Contacts

1. While in the main Phone Screen
2. Press the Menu Button
3. You will now see the Phone Menu Options
4. Use the volume knob to move the halo until it is around the Contacts Icon
5. Press in on the volume knob to select Contacts
6. You will now see the list of Contacts that are on the Paired and Connected Phone
7. Use the volume knob to scroll through your list of Contacts
8. By pressing in on the volume knob to select a Contact, you will now place a phone call to that contact

**Phone Operation****Placing a Call from Contact List**

1. While in list of Contacts
2. Use the volume knob to scroll through your list of Contacts
3. When the Contact Person's Information is in the middle of the screen
4. Press in on the volume knob to place a call to that Contact
5. A pop-up window will appear with options to place a CALL or CANCEL
6. If you select CALL, the call will be placed and the display will show "DIALING....", then "CONNECTED"
7. With the phone call in place, the display will show the Caller ID, Timer and a END CALL Button
8. When the call is ended, you will go back to the last played source

**Phone Operation****Contact Search by ABC or 123**

1. From the main Phone Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Contacts Icon is in the middle of the carousel
3. Press in on the volume knob to select Contacts
4. The list of your Contacts will now appear
5. Press the MENU Button
6. Now a pop-up window will appear with two options to choose from: "ABC" or "123"
  - "ABC" is search by Letter
  - "123" is search by Number
7. Use the volume knob to toggle between the two options by moving the halo around the ABC icon
8. Press in on the volume knob to select "ABC" or "123"
9. Now a pop-up window will appear with Letters/Numbers in icons
10. Use the volume knob to scroll through the Letters/Numbers until the Letter/Number you want is in the middle of the carousel.
11. Press in on the volume knob to select that Letter/Number
12. You will now see a list of Contacts
13. Use the volume knob to scroll through the list of Contacts
14. When the Contact you would like to call is in the middle of the screen
15. Press in on the volume knob to dial that Contact
16. A pop-up window will appear with options to place a CALL or CANCEL
17. If you select CALL, the call will be placed and the display will show "DIALING....", then "CONNECTED"
18. With the phone call in place, the display will show the Caller ID, Timer and a END CALL Button
19. When the call is ended, you will go back to the last played source

Note: In all search option (for all source option) , Searching is restricted to starting Alphabet/Number only

**Phone Operation****Phone Dial Pad**

1. From the main Phone Screen, Press the **MENU** Button
2. Use the volume knob to scroll through options until the Dial Pad Icon is in the middle of the carousel
3. Press in on the volume knob to select Dial Pad
4. The Phone Dial Pad will now appear
5. Use the volume knob to scroll through the numbers, and Press in on the volume knob to select one number at a time
6. Select all numbers necessary to place the phone call
7. Once the phone number is complete, use the volume knob to scroll to the bottom of the screen until you place the halo around the **DONE** Button
8. If you input a wrong number, scroll to the bottom of the screen until you place the halo around the **DELETE** Button. Press in on the volume knob to Delete the wrong number, then scroll back to the Numbers and re-enter the correct number
9. If you select the **DONE** Button, you will now be asked to confirm that you would like to dial the number you had entered
10. If you select "YES" the phone call will be placed
11. If you select "CANCEL" you will return back to the Phone Menu Screen

**Phone Operation****Phone Call History**

1. From the main Phone Screen, Press the **MENU** Button
2. Use the volume knob to scroll through options until the Call History Icon is in the middle of the carousel
3. Press in on the volume knob to select Call History
4. The Phone's Call History will now be listed and indicating Missed Call, Incoming Call, Outgoing Call
5. Use the volume knob to scroll through the list of your Call History
6. When the middle of the screen shows a Missed Call, Incoming Call or Outgoing Call that you would like to call
7. Press in on the volume knob to place a call
8. A pop-up window will appear with options to place a **CALL** or **CANCEL**
9. If you select **CALL**, the call will be placed and the display will show "DIALING...", Then "CONNECTED"
10. With the phone call in place, the display will show the Caller ID, Timer and a **END CALL** Button
11. When the call is ended, you will go back to the last played source



**Phone Operation****Paired Devices**

1. From the main Phone Screen, Press the MENU Button
2. Use the volume knob to scroll through options until the Paired Devices Icon is in the middle of the carousel
3. Press in on the volume knob to select Paired Devices
4. Now you will see your Paired Device Icons
5. Use the volume knob to move the halo until it is around the Paired Device that you would like to either Switch Connection or Delete
6. Press in on the volume knob to select the Paired Device
7. Once your selection has been made, you will be taken to the Phone Paired/Connected Device Information Screen

**Paired Devices (Paired/Connected Device Information Screen)**

This screen is where you can view the Paired Bluetooth Information, Switch Bluetooth connection to a different Paired Device and Delete the Paired Device

**Phone Operation****Phone (Switch To This Device)**

1. When you are at the Paired/Connected Device Information Screen
2. Use the volume knob and move the halo until it is around Switch To This Device
3. Press in on the volume knob to switch Phone Connection to this device
4. Now a pop-up window will appear asking you to Confirm Connection to this Device
5. Use the volume knob to Toggle between "YES" or "NO"
6. Press in on the volume knob to select your choice
7. If you select "YES", then you have now transferred Phone Connection and you will return back to the last played source
8. If you select "NO", then you will return back to the Phone Menu Screen

**Phone (Delete This Device)**

1. When you are at the Paired/Connected Device Information Screen
2. Use the volume knob and move the halo until it is around Delete This Device
3. Press in on the volume knob to Delete This Device
4. Now a pop-up window will appear asking you to confirm you want to Delete This Device
5. Use the volume knob to Toggle between "YES" or "NO"
6. Press in on the volume knob to select your choice
7. If you select "YES", then you have now Deleted This Device and you will return back to the Last played source
8. If you select "NO", then you will return back to the Phone Menu Screen

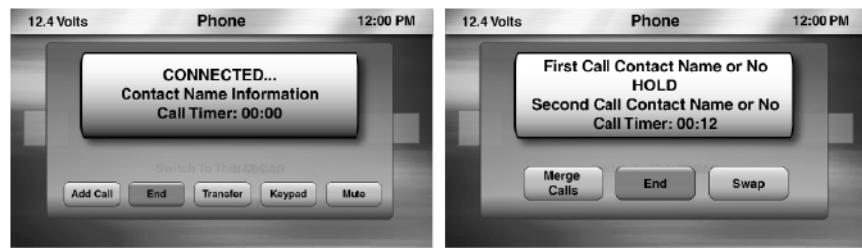
## Phone Operation



### Incoming Call

1. If you receive an Incoming Call while in any source, a pop-up window will appear
2. You can choose to ANSWER or IGNORE the incoming phone call
3. The halo will default to the **ANSWER** Button, so to Answer the call you would just press in on the Volume knob to answer the phone call
4. Use the volume knob to move the halo to the **IGNORE** Button and then press in on the volume knob to ignore the phone call and return to the play screen of the source you are currently using
5. If you answer the phone call, a pop-up window will appear showing the call status and an option To END the phone call
6. While the phone call is in progress, this Call Status window will stay active until you End the phone Call or if the call has been ended by the person calling in
7. When the call has been completed, you will return to the source you are currently using

## Phone Operation



### Make a second Incoming Call (Call Waiting)

1. When you are in the Active call and you want to have a second incoming call
2. Press Answer button the DC when the incoming call screen is appeared
3. Once the 2nd call is answered by press of **ANSWER** button, the first call goes to Hold



### Transfer Call

1. When you are in the Active call press the **TRANSFER** button
2. MW4 supported transfer from Hands Free mode to private mode (MW4 to Mobile Phone)
3. MW4 supported from Private mode to Hands free mode (Mobile Phone to MW4)
4. During an incoming (in band ringtone) or outgoing call the MW4 cannot establish an audio connection with the linked Mobile phone, the MW4 shall transfer to private call
5. When the call is ended, you will go back to the last played source



### Swap Call / Conference Call

1. User can swap the two call by pressing Swap option on Display Controller
2. User can also merge the 3 calls to make it conference call, press merge button on the screen.

## Audio Settings



### Audio Settings

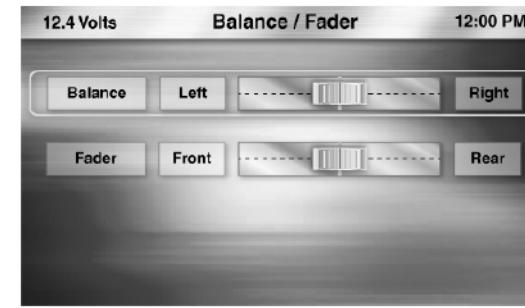
1. Press the **Audio** Button
2. Use the volume knob to scroll through the Audio Settings Carousel
3. Press in on the volume knob to select the Audio Settings you would like to adjust
  - Treble / Mid / Bass (Adjust the Treble, Mid and Bass levels from -10 to 10)
  - Balance / Fader (Adjust the sound position from 0 to 60 from Left to Right and Front to Rear)
  - Equalizer (Adjust the frequency from -10 to 10 and level for 5-bands)
  - Source Volume Control (SVC) (Adjust the volume level for each source from 0 to 60)
  - Subwoofer (Adjust the Volume from 0-60, Frequency and Phase from -10 to 10)
  - 2-Zone (Adjust the volume from 0-60 for Zone 1, Zone 2 and Both)



### Treble / Mid / Bass

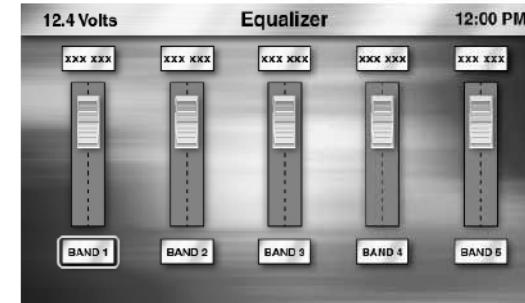
1. Press the **Audio** Button
2. Use the volume knob to scroll until the Treble/Mid/Bass Icon is in the middle
3. Press in on the volume knob to select Treble/Mid/Bass
4. Rotate the volume knob to adjust the Tweeter level (-10 to +10)
5. When you have completed adjusting the Tweeter level, press in on the volume knob
6. You will see the halo around the Mid sound adjustment slider
7. Rotate the volume knob to adjust the Mid Level (-10 to +10)
8. When you have completed adjusting the Mid level, press in on the volume knob
9. You will see the halo around the Bass sound adjustment slider
10. Rotate the volume knob to adjust the Bass Level (-10 to +10)
11. When you have completed adjusting the Bass Level, press in on the volume knob

## Audio Settings



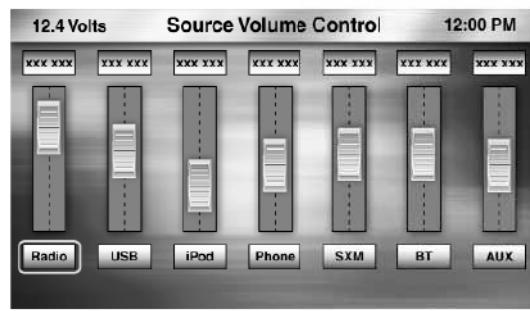
### Balance / Fader

1. Press the **Audio** Button
2. Use the volume knob to scroll until the Balance/Fader Icon is in the middle
3. Press in on the volume knob to select Balance/Fader
4. Rotate the volume knob to adjust the Balance Level (Left, Center, Right)
5. When you have completed adjusting the Balance level, press in on the volume knob
6. You will see the halo around the Fader Level adjust met slider
7. Rotate the volume knob to adjust the Fader Level (Front, Center, Rear)
8. When you have completed adjusting the Fader level, press in on the volume knob
9. You will see the halo around the Reset Button. If you select Reset, all adjustments will Adjust back to the default level (0)
10. Press the **Back** Button to return to the Audio Settings Carousel

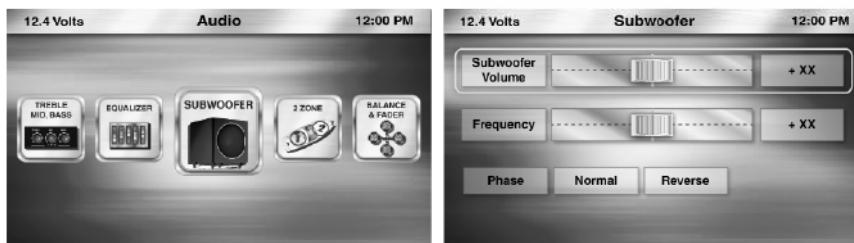


### Equalizer

1. Press the **Audio** Button
2. Press in on the volume knob to switch Equalizer Bands. Each Press of the volume knob will advance you to the next Equalizer Band
3. Adjust the Equalizer Band by rotating the volume knob
4. Once the Equalizer Band has been adjusted, Press in on the volume knob to switch to the next Band
5. If you would like to reset the Equalizer, Press in on the volume knob until the halo is around the Defeat Icon. Then Press in on the volume knob to reset the Equalizer back to Flat (level = 0)
6. Press the **Back** Button to return to the Audio Settings Carousel when finished

**Audio Settings****Source Volume Control (SVC)**

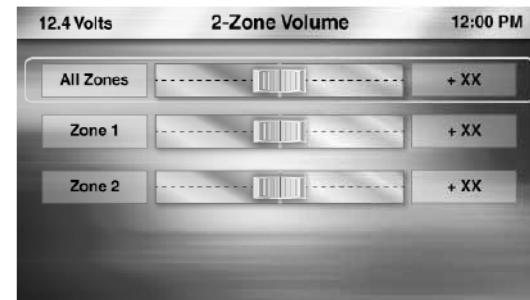
1. Press the **Audio Button**
2. Press in on the volume knob to switch through Sources. Each Press of the volume knob will advance you to the next Source.
3. Adjust the Source Volume by rotating the volume knob
4. Once the Source Volume has been adjusted, Press in on the volume knob to switch to the next Source
5. Press the **Back Button** to return to the Audio Settings Carousel when finished

**Subwoofer**

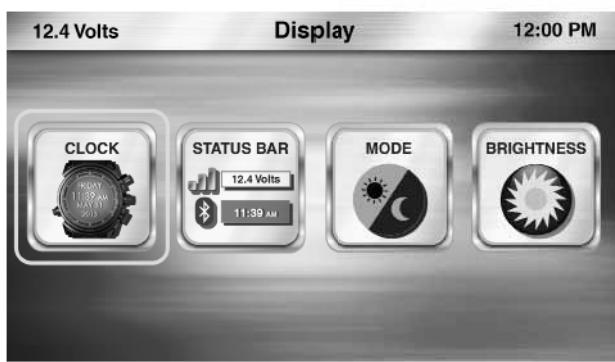
1. Press the **Audio Button**
2. Use the volume knob to scroll until the Subwoofer Icon is in the middle
3. Press in on the volume knob to select Subwoofer
4. Rotate the volume knob to adjust the Subwoofer Volume (-10 to +10)
5. When you have completed adjusting the Subwoofer Volume, press in on the volume knob
6. You will see the halo around the Frequency adjustment slider
7. Rotate the volume knob to adjust the Frequency
8. When you have completed adjusting the Frequency, press in on the volume knob
9. You will see the halo around the Subwoofer Phase
10. Rotate the volume knob to move the halo around Normal or Reverse
11. Press in on the volume knob to select Normal or Reverse Phase (Default = Normal)
12. Press the **Back Button** to return to the Audio Settings Carousel

**Audio Settings****2-Zone**

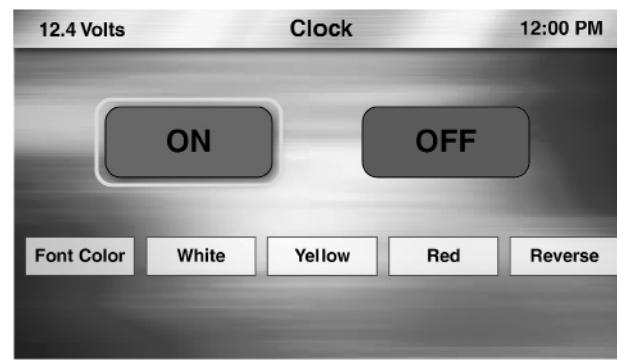
1. Press the **Audio Button**
2. Use the volume knob to scroll until the 2-Zone Icon is in the middle
3. Press in on the volume knob to select 2-Zone
4. Rotate the volume knob to adjust the volume level (-10 to +10) for All Zones (Zone 1 + Zone 2)
5. When you have completed adjusting the volume level for All Zones, press in on the volume knob
6. You will see the halo around the Zone 1 volume adjustment slider
7. Rotate the volume knob to adjust the Zone 1 volume level (-10 to +10)
8. When you have completed adjusting the Zone 1 volume level, press in on the volume knob
9. You will see the halo around the Zone 2 volume adjustment slider
10. Rotate the volume knob to adjust the Zone 2 volume Level (-10 to +10)
11. When you have completed adjusting the Zone 2 volume Level, press in on the volume knob
12. You will see the halo around the **Reset Button**. If you select Reset, all adjustments will adjust back to the default level (0)
13. Press the **Back Button** to return to the Audio Settings Carousel

**Note:**

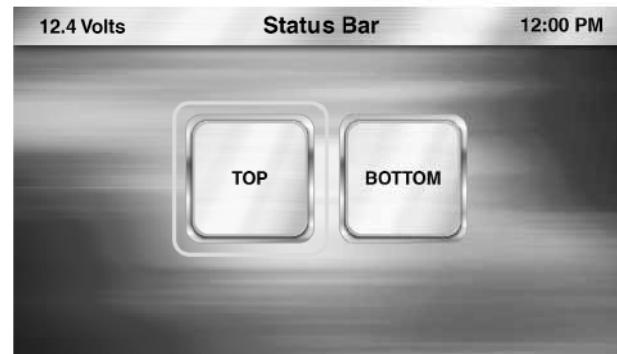
When 2-Zone is ON you cannot select USB as a Front and Rear Source at the same time.

**Display Settings****Display**

1. Press the Display Button
2. Use the volume knob to move the halo to the Display Option you would like to adjust
3. Press in on the volume knob to select the Display Option
  - Clock (Large Clock Display after 25 seconds of no action)
  - Status Bar (View the Status Bar on Top or Bottom of Screen)
  - Mode (Change from Day Mode to Night Mode)
  - Brightness (Adjust the screen Brightness (-10 to +10))

**Display Settings****Clock**

1. Press the Display Button
2. Use the volume knob to scroll until the halo is around the Clock Icon
3. Press in on the volume knob to select Clock
4. Rotate the volume knob to adjust the Clock appearance
  - ON (Default) Large Clock will be displayed after 25 seconds of no action
  - OFF (Large Clock will not be displayed)
  - Font Color (Change the Font Color: White, Yellow, Red and Reverse)
5. Selection of Reverse option changes the background color from Black to White
6. When finished, press the Back Button to return to the Display Settings

**Status Bar**

1. Press the Display Button
2. Use the volume knob to scroll until the halo is around the Status Bar Icon
3. Press in on the volume knob to select Status Bar
4. Rotate the volume knob to change the Status Bar position
  - Top (Default) Status Bar will be displayed on the Top of the Screen
  - Bottom (Status Bar will be displayed at the Bottom of the Screen)
5. When finished, press the Back Button to return to the Display Settings

## Audio Settings



Day Mode



Night Mode

### Mode

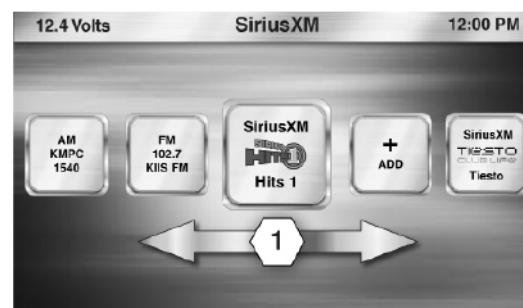
1. Press the **Display Button**
2. Use the volume knob to scroll until the halo is around the Mode Icon
3. Press in on the volume knob to select Mode
4. Rotate the volume knob to change the display Mode
  - Day (Default)
  - Night
5. When finished, press the **Back Button** to return to the Display Settings



### Brightness

1. Press the **Display Button**
2. Use the volume knob to scroll until the halo is around the Brightness Icon
3. Press in on the volume knob to select Brightness
4. Rotate the volume knob to adjust the display Brightness
5. When finished, press the **Back Button** to return to the Display Settings

## Favorites



### Favorites

Rather than using presets, we are providing you with easier access to your favorite stations and contacts

1. Press the **Favorites Button**
2. Use the volume knob to scroll through your saved Favorites
3. Press in on the volume knob to access your saved Favorite
4. It will then change to the source for the Favorite and tune to the saved station

### Save or Replace Station or Channel to Favorites

1. Tune to Radio Station, SiriusXM Channel or Pandora station you would like to save
2. Press the **Favorites Button**
3. Use the volume knob to scroll through Favorites, until you find the Favorite number position you would like to save the station or channel to
4. Press in on the volume knob to save station or channel Favorite numbered position
5. After you are finished saving your Favorite, you will return back to the source you are currently using

### Save Phone Contact to Favorites

1. Scroll through your list of Phone Contacts
2. When the Contact you would like to save as a Favorite is in the middle of the screen;
3. Press the **Favorites Button**
4. Use the volume knob to scroll through Favorites, until you find the Favorite number position you would like to save the Phone Contact to
5. Press in on the volume knob to save the Contact in the Favorite numbered position
6. After you are finished saving your Favorite, you will return back to the source you are currently using

### Delete Favorites

1. Press the **Favorites Button**
2. Use the volume knob to scroll through Favorites, until you find the Favorite you would like to Delete
3. Press in on the volume knob for Three Seconds
4. A pop-up window will appear asking you to confirm you want to Delete the saved Favorite
5. Use the volume knob to scroll through your options
  - YES (Deletes the saved Favorite)
  - CANCEL (Favorite does not get Deleted and you will return to the source you are using)
6. Press in on the volume knob to select your option
7. After your selection has been made you will return to the source you are using

## Understanding the Graphical User Interface (GUI)

This section helps define and explain the operation and functions of the Graphical User Interface.



### Main Menu Screen

This carousel of Sources provides a simple and easy way to view Sources and can be accessed anytime by pressing the Source Button [SRC].

### Status Bar

The Status bar will be displayed on either the Top or Bottom of the screen. The Status Bar will disappear when viewing a video to allow for optimal view area.

The Status Bar provides several icon indicators that will appear when a source or feature requires it.

- Time (Please refer to the Clock Settings to Set the Time)
- Voltage Indication (This displays the voltage based on the Yellow +12v constant wire)
- Bluetooth Logo (When a compatible Bluetooth Device is Paired and Connected)
- Signal Strength Meter (SiriusXM, Phone)
- LO/DX Indicator (Local and Distance for Radio Tuner)
- Favorite Indicator (Star and number will appear if you tune to a station or channel that is a preset and which Favorite Number it is saved)



### Low Battery Voltage Warning

This screen will appear when the Battery Voltage drops to or below 10v.

The audio will stop until voltage increases to 12v or above, then the audio will resume. This will help from draining too much current from the battery until the voltage increases.

## Understanding the Graphical User Interface (GUI)



### Volume

This type of Volume indication provides a simple and easy way to adjust the volume level. Each detent "Click" of the Volume Knob represents one bar for volume indication.

- 0 through 15 (Green)
- 16 through 30 (Yellow)
- 31 through 45 (Orange)
- 46 through 60 (Red)

When in a source play screen and the volume knob is rotated, this will adjust the volume level. After the volume has been adjusted, the volume indicator will stay displayed for 2 seconds, then it will disappear.



### Mute

- When you are in a source play screen and would like to Mute the volume, simply press in and release the volume knob.
- A volume mute indicator will appear letting to know that the volume is on Mute and will stay displayed until it is unmuted.
- When the volume is muted and if user rotates the volume knob, first volume will be unmuted automatically and then the volume should change

**\*\* Be Cautious and Aware of the Volume Level when you Mute and Un-Mute the Volume \*\***

## Understanding the Graphical User Interface (GUI)



### Radio Play Screens

Each Radio Play Screen offers a unique look and visual experience. Radio Channels are changed by pressing the Seek Buttons. Displays RDS Program Type (PTY) Information for easy reference for music/data identification.

### Weather Band

The dial moves according to channel tuning through the Seven NOAA channels.

### FM Band

Digital channel indication

### AM Band

Analog channel tuning



### No Device Detected Screen

This screen will appear if you are trying to use a source that requires a plug in device and or accessory.

- SiriusXM = SXV200 or SXV300
- iPod = iPod or iPhone
- Bluetooth = iPod, iPhone or Smartphone
- Pandora = iPod, iPhone or Smartphone
- Camera = Back up Camera
- USB = USB Flash Drive

## 6. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Unit will not power ON	No Power or Ground	Verify Power Connector to MW4 is connected Properly
	Vessel Battery Switch is OFF Blown Fuse	Verify Battery Switch is ON Check in-line Fuse and Vessel Accessory/Radio
	Bad Grounding Point	Fuse Ground to metal or battery
No Sound	Mute feature is ON	Press in on volume knob To verify if Mute is ON or OFF
	Low volume level	Check volume level
	Speakers and Amplifier	Check speaker connections And make sure Amp is ON
The controller is not Responding	Bad cable connection	Check the CAT5 Ethernet Cable.  Unplug the CAT5 Ethernet Cable, then plug it back in  Verify that you hear a "Click" when connecting the CAT5 Ethernet Cable
My phone is not Working or charging	USB Phone cable is not Connected to USB port	Check the USB Phone Cable is plugged into one of The USB ports
	USB Extension Cable is too Long	The maximum USB length Should not exceed 4-feet. Longer USB extension's Increase the resistance and Will cause the phone to not Work properly. Use the Clarion CCAUSBAV cable

## 6. TROUBLESHOOTING

ADVISORY NAME	RECOMMENDED DESCRIPTION
Check Antenna	<p>The radio has detected a fault with the SiriusXM antenna. The antenna cable may either be disconnected or damaged. Verify that the antenna cable is connected to the SiriusXM Connect Vehicle Tuner. Inspect the antenna cable for damage and kinks. Replace the antenna if the cable is damaged. SiriusXM products are available at your local car audio retailer or online at <a href="http://www.shop.siriusxm.com">www.shop.siriusxm.com</a></p>
Check Tuner	<p>The radio is having difficulty communicating with the SiriusXM Connect Vehicle Tuner. The tuner may be disconnected or damaged. Verify that the SiriusXM Connect Vehicle Tuner cable is securely connected to the radio.</p>
No Signal	<p>The SiriusXM Connect Vehicle Tuner is having difficulty receiving the SiriusXM satellite signal. Verify that your vehicle is outdoors with a clear view of the sky. Verify that the SiriusXM magnetic mount antenna is mounted on a metal surface on the outside of the vehicle. Move the SiriusXM antenna away from any obstructions. Inspect the antenna cable for damage and kinks. Consult the SiriusXM Connect Vehicle tuner installation manual for more information on antenna installation. Replace the antenna if the cable is damaged. SiriusXM products are available at your local car audio retailer or online at <a href="http://www.shop.siriusxm.com">www.shop.siriusxm.com</a></p>
Subscription Updated	<p>The radio has detected a change in your SiriusXM subscription status. Press OK to clear the message. Visit <a href="http://www.siriusxm.com">www.siriusxm.com</a> or call 866-635-2349 if you have any questions about your subscription.</p>

## 6. TROUBLESHOOTING

ADVISORY NAME	RECOMMENDED DESCRIPTION
Channel Not Available	<p>The channel that you have requested is not a valid SiriusXM channel or the channel that you were listening to is no longer available. You may also see this message briefly when first connecting a new SiriusXM Connect Vehicle Tuner. Visit <a href="http://www.siriusxm.com">www.siriusxm.com</a> for more information about the SiriusXM channel lineup.</p>
Channel Not Subscribed	<p>The channel that you have requested is not included in your SiriusXM subscription package or the channel that you were listening to is no longer included in your SiriusXM subscription package. Visit <a href="http://www.siriusxm.com">www.siriusxm.com</a> or call 866-635-2349 if you have questions about your subscription package or would like to subscribe to this channel.</p>
Channel Locked	<p>The channel that you have requested is Locked by the radio Parental Control feature. See the section on Parental Control, page 14 for more information on the Parental Control feature and how to access locked channels.</p>

## 7. SPECIFICATIONS

### FM Tuner with RDS

Frequency Range:	USA	87.9 ~ 107.9MHz (0.2MHz STEP)
	Europe	87.5 ~ 108.0MHz (0.05MHz STEP)
	Australia	87.5 ~ 108.0MHz (0.01MHz STEP)
	Other Countries	87.5 ~ 108.0MHz (0.01MHz STEP)

### AM Tuner

Frequency Range:	USA	530 ~ 1710kHz (10kHz STEP)
	Europe	531 ~ 1602kHz (9kHz STEP)
	Australia	531 ~ 1629kHz (9kHz STEP)
	Other Countries	531 ~ 1629kHz (9kHz STEP)

### Weather Band with RDS (if available)

NOAA Frequency Range:	162.400MHz ~ 162.550MHz
Channel 1:	162.400MHz
Channel 2:	162.425MHz
Channel 3:	162.450MHz
Channel 4:	162.475MHz
Channel 5:	162.500MHz
Channel 6:	162.525MHz
Channel 7:	162.550MHz

### Audio

Maximum Power Output: 50W x 4

Rated Power Output: 21W x 4 (CEA2006) 1% THD, 1 kHz @ 14.4V

High Pass Filter (Front/Rear): 70/105/140/THROUGH (Speaker and RCA) Low Pass Filter (Subwoofer):

50/75/100/THROUGH

BASS Control: 50Hz Frequency, +14dB ~ -14dB

MID Control: 1k Frequency, +14dB ~ -14dB

TREBLE Control: 12kHz Frequency, +12dB ~ -12dB

### General

Power Supply Voltage: 14.4VDC (10.8 to 15.6V allowable)

Grounding System: Negative Ground

Speaker Impedance: 4-8 ohms per channel

Processor: Freescale iMx287 ARM9 454MHz 2GB RAM

ASTM B117 (Salt/Fog Exposure) = Black Box and Controller

ASTM D4329 (UV Exposure) = Black Box and Controller

IP66 (Black Box)

IP67 (Controller)

Dimensions:

Black Box = 2" (H) x 8" (W) x 7" (L)

Controller = 4" (H) x 6" (W) x 1" (D)

Heat Sink: Magnesium/Aluminum

### Supported Audio Formats

USB: MP3 and WMA

### SAE J1939

Broadcast Type: Open Broadcast 29 Bit

Bandwidth: 500KB/Second

Clock: 1MB/Second

### Display Controller

LCD: 4.3" Optically Bonded Color

Resolution: 480 x 272

Luminance: 650 NITS

#### NOTE:

Specifications and Design are subject to change Without notice for further improvement.

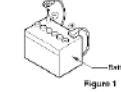
## INSTALLATION AND WIRE CONNECTIONS

### Contents

1. BEFORE STARTING
2. PACKAGE CONTENTS
3. INSTALLATION CAUTIONS
4. BLACK BOX INSTALLATION
5. DISPLAY CONTROLLER INSTALLATION
6. WIRE CONNECTIONS

### 1. BEFORE STARTING

1. Read these instructions carefully
2. This unit has been developed exclusively for use in vessels With a negative ground 12V power (battery/ charging system) source.
3. Be sure to disconnect the battery (-) Negative terminal before starting.  
This is to prevent short circuits during the installation process. (Figure 1)



### 2. PACKAGE CONTENTS

Item	Quantity
1. MW4 Black Box.....	1
2. MW4 Display Controller .....	1
3. 34-Pin Keyed Power/Speaker/RCA Connector/SW1.....	1
4. 26-Pin Keyed Remote/USB1, 2/Wired Remote (MW1,MW2)/ Wired Remote (MW4)/ Display Controller Connector.....	1
5. 34-Pin Keyed AUX/SXM/BT Microphone/Video/J1939.....	1
6. CAT5 Ethernet Display Controller Cable (10-feet).....	1
7. Metal Display Controller Mounting Bracket.....	1
8. Stainless Steel Metric Threaded Studs (M4-.7 @ 4mm-.7 x 38mm) (Controller) .....	2
9. Stainless Steel Metric Lock Washer (5mm) for Controller .....	2
10. Stainless Steel Metric Flanged HEX Nuts (M4-.7 @ 4mm-.7) (Controller) .....	2
11. Stainless Steel Metric Self Tapping Screw (M4) for Mounting Black Box.....	4
12. MW4 Owner's Manual (English/French/Spanish) - CD .....	1
13. MW4 Installation Guide (English) - Printed .....	1
14. MW4 Installation Guide (French) - On Owner's Manual CD .....	1
15. MW4 Installation Guide (Spanish) - On Owner's Manual CD .....	1
16. MW4 Quick Start Guide (English) - Printed.....	1
17. MW4 Quick Start Guide (French) - On Owner's Manual CD.....	1
18. MW4 Quick Start Guide (Spanish) - On Owner's Manual CD .....	1

### 3. INSTALLATION CAUTIONS

1. In order to avoid any interference, do not install the Black Box or Display Controller in the Proximity of the engine compartment.
2. The use of unauthorized parts can cause permanent damage to the unit.
3. Always check your wire connections to ensure proper installation before turning the unit ON.
4. Consult with your nearest dealer for proper installation or if common parts are needed.  
\* Seek professional assistance if modifications or drilling holes in the vessel are needed.
5. Do not install the system where it will be subjected to excessive moisture, dust, dirt, foreign particles or vibration. Areas of high temperature from the engine, direct sunlight, heater or hot Air should be avoided.
6. Do not install the system in a location where it will interfere with the vessels operation, or it will injure the passengers if there is a sudden or emergency stop.

## 4. MW4 BLACK BOX INSTALLATION

1. Select an area with sufficient ventilation for the mounting of the MW4 Black Box in order to prevent the Black Box from overheating. You may mount the Black Box in a horizontal or vertical position. If the Black Box is mounted in a vertical position, do not mount the Black Box with the harnesses directly pointing upwards to prevent water collecting on top of the harnesses.



2. Please refer to the diagram below for the mounting screw hole positions. Always use the provided MW4 Metric Stainless Steel Self Tapping Screws to mount the MW4 Black Box.

3. Extension of the wires/cables may be necessary to route the harness and cable throughout the vessel.

**NOTE: Retain some slack in the harness/cable to prevent damage to the wires.  
It is recommended to relieve the stress on all wires and cables.**



4. Always read through the wiring diagram in this manual first, and then follow all provided wiring diagrams carefully. All connections should be soldered using heat shrink tubing or electrical tape to ensure proper connections. Zip Tie all wires and cables to prevent interference of existing components and or body parts (example: Foot, Arm, Leg, Hand, etc.)

5. Once the wiring connections are completed, re-connect the Negative Terminal on the battery, turn the vessel battery accessory switch ON and power on the unit to check if it is operating correctly.

If abnormalities occur, disconnect the Negative Terminal on the battery, recheck all wiring and Re-connect the Negative Terminal on the battery, turn the vessel battery accessory switch ON, Power ON the unit, verify the system powers ON and is working correctly. Please refer to the Troubleshooting section for assistance.

## 5. DISPLAY CONTROLLER INSTALLATION

### Drilling Holes for Display Controller:

\*\*Place the display controller on the area on the dash that you would like the display controller to be mounted. (Figure 1)  
Check for clearance around the display controller to make sure that it does not interfere with any existing gauges or dash contour.  
\*\* Before drilling any holes, check behind the dash and make sure that the drill bit will not damage any wires or cables behind the dash.

Step 1  
Use masking tape on the area you would like to mount the display controller

Step 2  
Place the display controller on the masking tape and use a pen to draw a line around the display controller

Step 3  
Remove the display controller once the outside line of the display controller is drawn

Step 4  
use a ruler or a straight edge to mark the middle of the display controller (side to side and top to bottom)

Step 5  
Place the flat surface of the mounting bracket on the masking tape in the middle of the display controller area

Step 6  
Use a pen to draw inside of each cut out on the mounting bracket (Left Hole, Middle Hole and Right Hole)(Figure 2)

Step 7  
Remove the mounting bracket

Step 8  
Drill out each hole until the lines are no longer visible. (1/8" for side holes and 1" for center hole)  
(Figure 3)

After holes are drilled, remove the masking tape and proceed to "Mounting Bracket Installation".

Figure 1

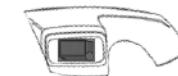


Figure 2

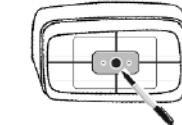
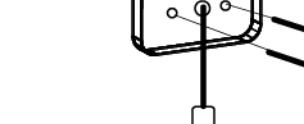
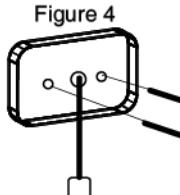
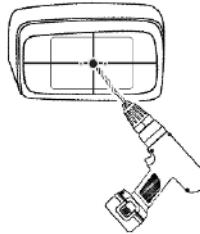


Figure 3



(2) Stainless Steel Metric Threaded Studs (M4-.7 @ 4mm-.7 x 38mm)  
(2) Stainless Steel Metric Lock Washer (5mm)  
(2) Stainless Steel Metric Flanged HEX Nuts (M4-.7 @ 4mm-.7)

### Mounting Bracket Installation:

Step 1  
Place Rubber Neoprene Gasket to back of the Display Controller

Step 2  
Screw Stainless Steel Metric Threaded Posts into the Metric Threaded Inserts on the back of the Display Controller (Figure 4)

Step 3  
Slide the Metric Threaded Posts and Display Controller Cable pigtail that are attached to the Display Controller through the holes in the dash (Figure 5)

Step 4  
With the Display Controller placed flat on the dash, slide the mounting bracket through the Metric Threaded Posts that are sticking out on the backside of the dash (Figure 5)

Step 5  
Slide one lock washer on each Metric Threaded Post (Figure 5)

Step 6  
Fasten one Hex Nut on each Metric Threaded Post and tighten until the display controller does not move around and the back of the display controller is sitting flat on the dash (Figure 5)

## 6. WIRE CONNECTIONS

Please follow these connection diagrams carefully and solder all wire connections.

### CN1 (LEFT) Connection Diagram

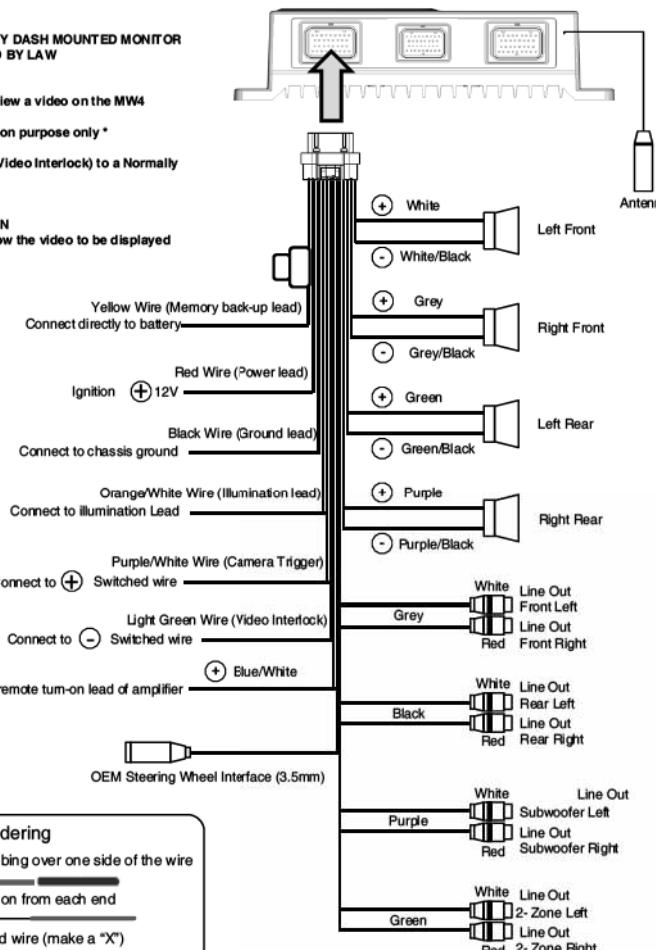
**WARNING**  
VIEWING A VIDEO SIGNAL ON ANY DASH MOUNTED MONITOR WHILE IN MOTION IS PROHIBITED BY LAW

**Video Interlock Wire:**  
These steps must be followed to view a video on the MW4 Display Controller.

\*Switch is NOT included, illustration purpose only \*

1. Connect the Light Green Wire (Video Interlock) to a Normally Open Grounded Switch
2. Switch ON (Ground)
3. Switch OFF (No Ground)
4. Switch ON (Ground), remains ON

Now the RCA Video Inputs will allow the video to be displayed on the MW4 Display Controller.



#### Wire Soldering

Slide a 1" piece of heat shrink tubing over one side of the wire

Strip off 1" of insulation from each end

Cross ends of stripped wire (make a "X")

Wrap ends of wire together

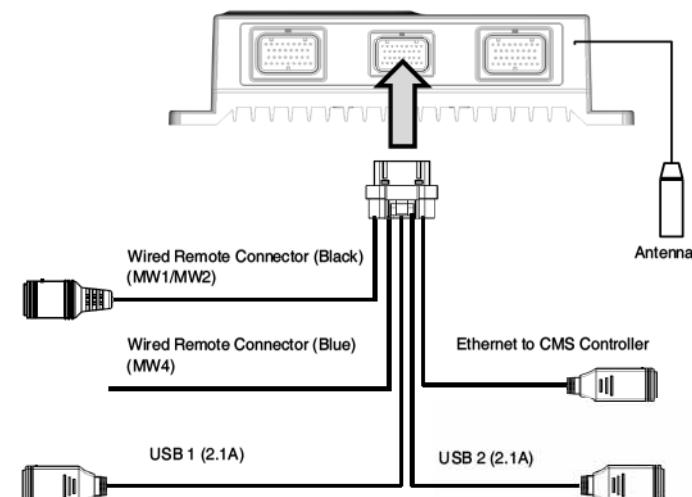
Apply solder to the wrapped wire

Slide heat shrink tubing around soldered wire

## 6. WIRE CONNECTIONS

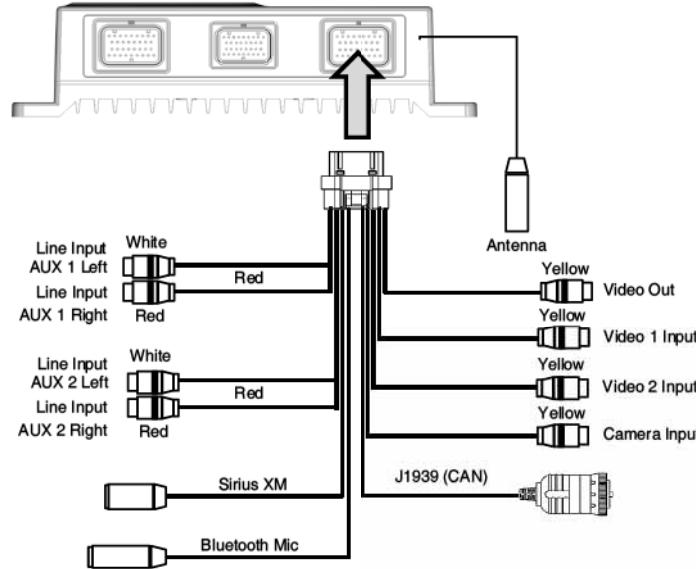
Please follow these connection diagrams carefully and solder all wire connections.

### CN2 (CENTER) Connection Diagram



**6. WIRE CONNECTIONS**

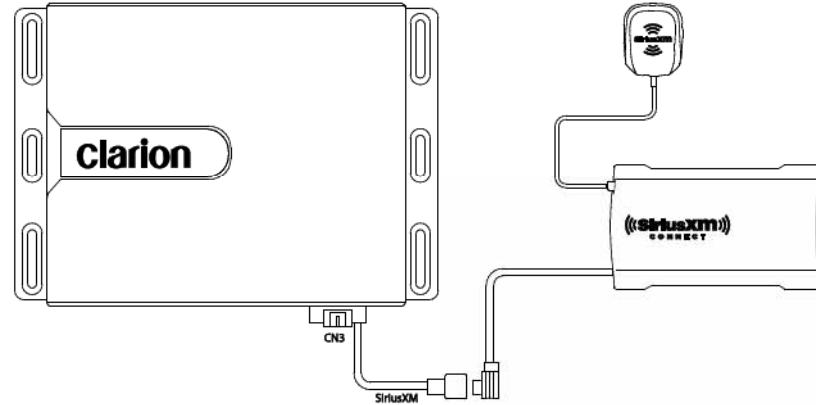
Please follow these connection diagrams carefully

**CN3 (RIGHT) Connection Diagram****6. WIRE CONNECTIONS**

\*\* SiriusXM Satellite Radio Tuner is sold separately \*\*

## SiriusXM Installation:

1. Mount the included SXM Antenna with clear view to the sky
2. Run Antenna Cable to the SXM Tuner location
3. Connect SXM Antenna to the SXM Antenna Connector on Tuner
4. Connect SXM Cable from SXM Tuner to the SXM Connector (CN3) on the MW4 Black Box

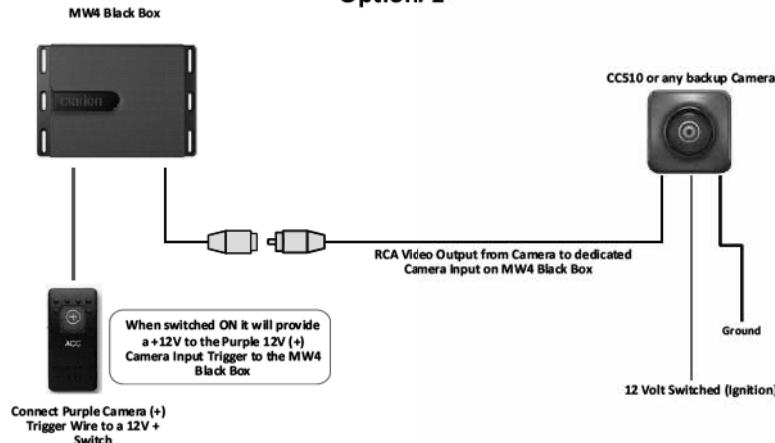


## 6. WIRE CONNECTIONS

Please follow these connection diagrams carefully

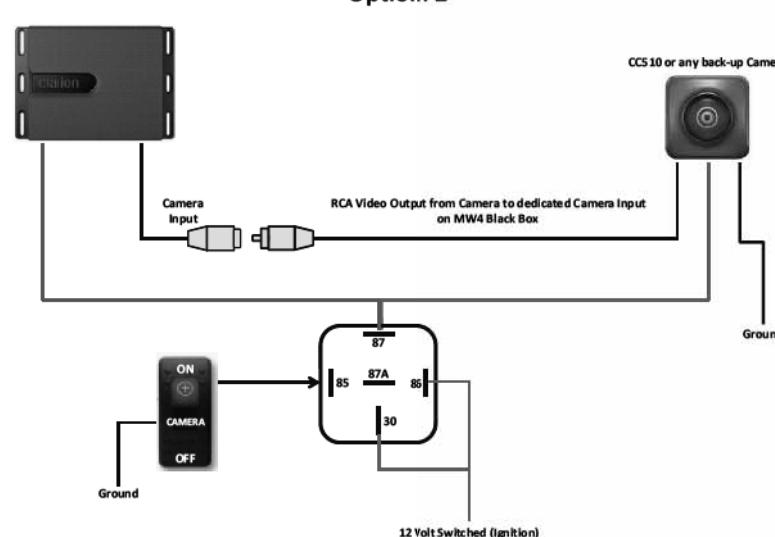
### Rear Vision Camera Connection Diagram

#### Option: 1



### Rear Vision Camera Connection Diagram

#### Option: 2

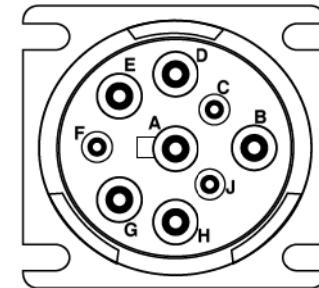


## 6. WIRE CONNECTIONS

Please follow these connection diagrams carefully

### J1939 Connector

#### View: Front of J1939 Connector



Only use this J1939 Connector to compatible Multi-Function Displays (MFD)

PIN NUMBER	NAME	GAUGE	COLOR
A	CAN B -	20	WHITE
B	CAN B +	20	PURPLE
C	CAN HIGH	20	YELLOW
D	CAN LOW	20	GREEN
E	CAN - DRAIN	20	BLACK
F	NOT USED		
G	NOT USED		
H	NOT USED		
J	NOT USED		

#### NOTE:

This J1939 CAN Connector contains insulated twisted wires that are Connected by terminating resistors on the dedicated CAN on the main PCB of the MW4 Black Box.

## **Clarion Corporation of America**

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