



MXCP44

INSTALLATION/OWNER'S MANUAL

Digital Media Marine Receiver with 6.5" Dual Cone Speakers



USB

AUX

Front Panel Input

MP3

WMA





Preparation

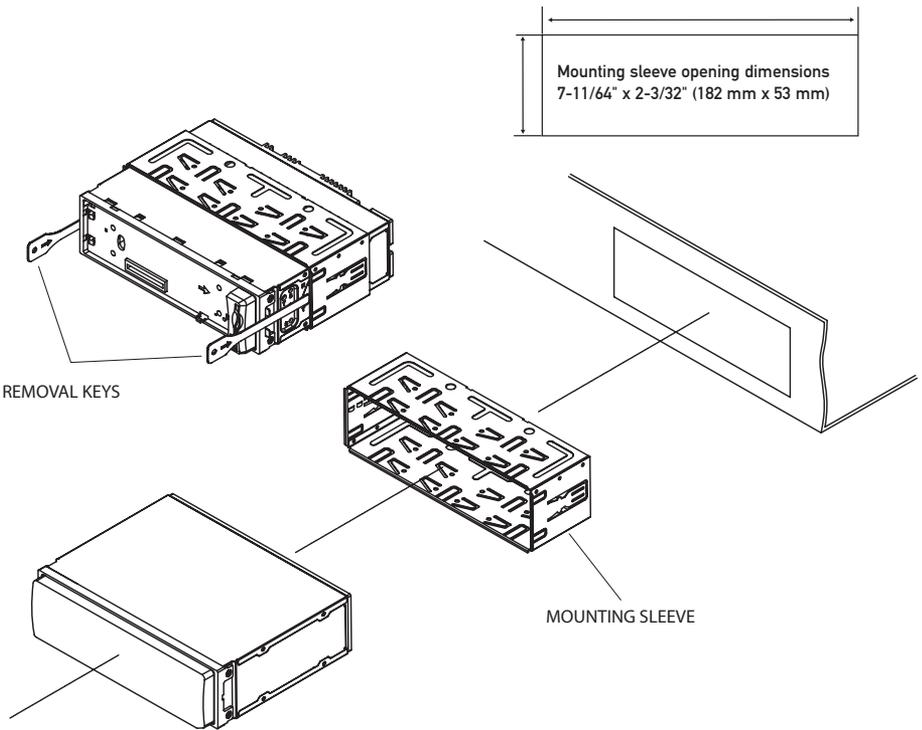
Please read entire manual before installation.

Before You Start

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

Getting Started

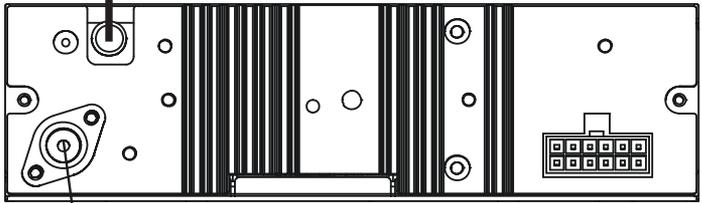
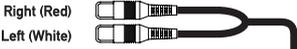
- Insert the supplied keys into the slots as shown, and slide the unit out of the mounting sleeve.
- Install mounting sleeve into opening, bending tabs to secure.
- Connect wiring harness and antenna. Consult a qualified technician if you are unsure.
- Test for correct operation and slide into the mounting sleeve to secure.
- Snap trim ring into place.



TYPICAL MOUNTING METHOD

Wiring Diagram

Rear RCA Output



Antenna Connector

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

BLACK **Ground**
Connect to ground or directly to battery negative terminal.

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

10 AMP
AGC Fuse

YELLOW **Memory**
Connect to battery circuit or constant 12 volt source.

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

Right Front
Gray/Black (-)
Gray (+)

Left Rear
Green/Black (-)
Green (+)

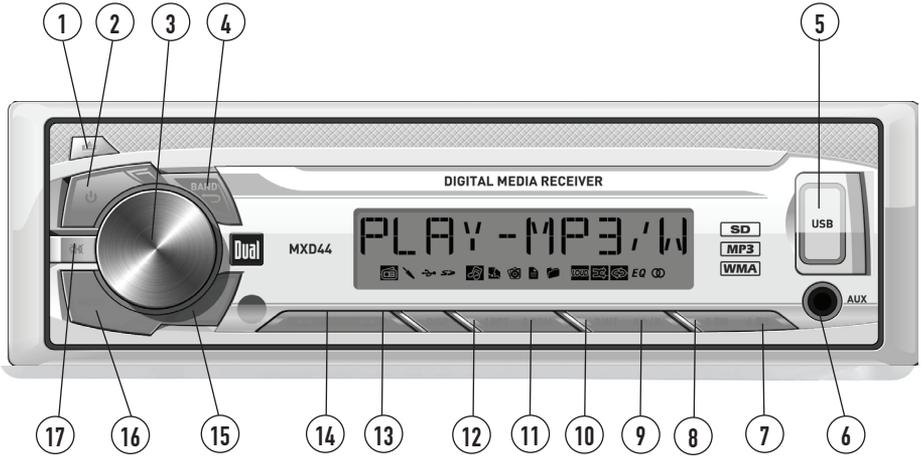
Left Front
White/Black (-)
White (+)

FUSE

When replacing the fuse, make sure new fuse is the correct type and amperage. Using an incorrect fuse could damage the radio. The MXCP44 uses one 10 amp AGC fuse located in-line.

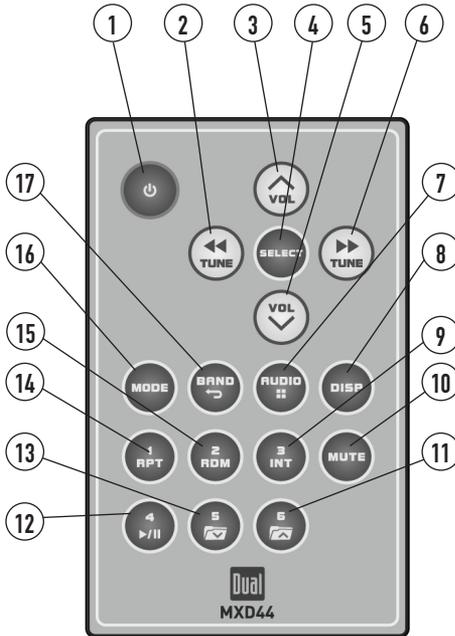


Control Locations - Receiver



- | | |
|--------------------------|---------------------------|
| ① Release | ⑩ Preset 4 / Play / Pause |
| ② Power | ⑪ Preset 3 / Intro |
| ③ Volume Knob | ⑫ Preset 2 / Random |
| ④ Band / Go Back | ⑬ Preset 1 / Repeat |
| ⑤ USB Port | ⑭ Tune / Track Up |
| ⑥ Auxiliary Input | ⑮ Tune / Track Down |
| ⑦ Tune / Track Up | ⑯ Audio |
| ⑧ Preset 6 / Folder Up | ⑰ Mode |
| ⑨ Preset 5 / Folder Down | |

Control Locations - Remote



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



General Operation

Faceplate Removal	Press RELEASE and pull away from the left side to remove. To re-install, insert right side of faceplate first then push left side to secure.
Power On/Off	Press  or any other button to turn the unit on. Press  again to turn the unit off.
Mode	Press MODE to select between AM/FM, USB, SD or auxiliary input modes. Modes of operation are indicated in the display. SD and USB modes will not appear unless an SD Card is inserted or a USB device is connected.
Display	The radio frequency (tuner mode) or MP3/WMA title/track information (USB and SD modes) will be shown by default. Press DISP to display the clock. The default display will return after five seconds.
Info	When in USB or SD mode, press INFO to select between the MP3/WMA information, including file name, song title, artist name, album name and folder name.
Reset	Press RESET upon initial installation or if abnormal operation occurs. Reset button is located behind the front panel.
Set the Clock	Press DISP to display the clock, then press and hold DISP until the hours will flash. Rotate the volume knob to adjust the hours. Press the volume knob , and the minutes will flash. Rotate the volume knob to adjust the minutes.
Auxiliary Input	Insert a 3.5mm connector in the front panel AUX port. Connect the other end of the 3.5mm connector to the headphone output of an audio device, MP3 player, etc.
Volume	Adjust volume using the volume knob (00-40).
Preset EQ Curves	Press EQ to select between the following preset equalization curves: FLAT, POP, JAZZ, ROCK and OFF. Note: Ability to manually adjust Bass and Treble settings is disabled when a preset equalization curve is selected. Setting equalization curves to OFF enables manual Bass and Treble adjustments as outlined on page 7.

General Operation

Audio / Menu	<p>Press the volume knob to select between Bass, Treble, Balance, Fader, Loudness, Distance and Stereo.</p> <p style="text-align: center;">→ BASS → TREBLE → BALANCE → FADER → LOUDNESS → DISTANCE → STEREO →</p>
Bass	<p>Press the volume knob until BAS appears. Rotate the volume knob left/right to adjust. (-7 minimum / +7 maximum)</p>
Treble	<p>Press the volume knob until TRE appears. Rotate the volume knob left/right to adjust. (-7 minimum / +7 maximum)</p>
Balance	<p>Press the volume knob until BAL appears. Rotate the volume knob left/right to adjust. 10L (left) to 10R (right). "L=R" represents equal balance.</p>
Fader	<p>Press the volume knob until FAD appears. Rotate the volume knob left/right to adjust. 10R (rear) to 10F (front) "F=R" represents equal balance.</p>
Loudness	<p>Press the volume knob until LOUD ON or LOUD OFF appears, then rotate the volume knob to select desired option. Activating this feature will enhance the bass and treble frequencies when listening to music at low volumes.</p>
Distance Tuning	<p>From tuner mode only, press the volume knob until DX or LOCAL appears, then rotate the volume knob to select desired option. Selecting LOCAL programs the unit to stop at only strong stations when seek tuning.</p>
Stereo / Mono	<p>From tuner mode only, press the volume knob until STEREO or MONO appears, then rotate the volume knob to select desired option. Selecting MONO can improve listening in areas with a weak FM signal.</p>
Audible Beep	<p>Press and hold the volume knob until BEEP ON or BEEP OFF appears, then rotate the volume knob to select desired option. Activating this feature programs the unit to beep each time certain buttons are pressed.</p>
Area Selection	<p>From tuner mode only, press and hold the volume knob until BEEP ON or BEEP OFF appears. Press the volume knob again to display AREA USA or AREA EURO, then rotate the volume knob to select option appropriate for your location.</p>
12/24-Hour Clock	<p>The clock will display 12-hour AM/PM time in USA frequency spacing mode (PM 10.00). In European frequency spacing mode, the clock will display 24-hour time (22.00).</p>



Tuner Operation

Seek Tuning	Press TUNE ◀◀ or TUNE ▶▶ for more than 2 seconds to seek the next strong station.
Manual Tuning	Press TUNE ◀◀ or TUNE ▶▶ momentarily to change one radio frequency at a time. Press and hold to advance quickly.
Band	Press BAND to select between FM1, FM2, FM3 and AM1, AM2 bands. Six presets can be saved in each band.
Storing and Recalling Station Presets	Up to 18 FM stations and 12 AM stations can be stored. To store a station, select the desired band and station. Press and hold the desired preset button for more than 2 seconds. When stored, the preset number will appear in the display. The station can be recalled anytime by pressing the corresponding preset button.
Automatically Store Stations	Press AS/PS for more than 2 seconds to automatically store all strongest stations in the current band. After the six strongest stations are set, a scan of each stored preset will begin. Press AS/PS or TRACK ▶▶ to cancel.
Preset Scan	Press AS/PS momentarily to scan preset stations for five seconds each. To select a station during the scan, press AS/PS again or press the corresponding preset button.

SD Card / USB Operation

Connecting a USB Device (sold separately)	Play MP3/WMA/WAV files from many mass storage devices by connecting them to the MXCP44's USB port.
Inserting an SD Card (sold separately)	To play MP3/WMA/WAV files from an SD card, insert an SD card into the MXCP44's SD card slot with the label facing left. It will click into place when properly inserted. To remove the card, press in until it clicks, then pull to remove.
Playing Music	When a USB or SD card device is first connected, playback will begin automatically. Depending on the number of files and folders, the device may take several seconds to begin playback. If no valid MP3/WMA/WAV files are detected, "NO FILE" will be displayed.
Track Select	Press TRACK ►► to skip to the beginning of the next track. Press TRACK ◀◀ to return 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 playback. Press ►/ again to resume playback.
Folder Access	Press  to select the previous folder. Press  to select the next folder.
Intro	Press INT to play the first 10 seconds of each track. Press INT again to cancel.
Repeat	Press RPT to continuously repeat the current track. Press RPT again to cancel.
Random	Press RDM to play all the tracks in random order. Press RDM again to cancel.
	Intro, Repeat and Random functions will be kept in memory when selecting between modes or when the unit is turned off/on.



SD Card / USB Operation

Media Compatibility

The following types of files are compatible:

- MP3 audio
- WMA audio
- WAV audio

The following types of files are **not** compatible:

- WMA files that are protected by DRM (Digital Rights Management)
- WMA lossless format
- MP3 PRO format, MP3 playlists
- AAC, protected AAC, M4A format

Playback Order

Playback sequence begins in the root folder. Any empty folders or folders that do not include compatible files are skipped. Depending on your software, the playback order may vary.

Playback Capacity

- Maximum number of files: 9999
- Maximum number of folders: 999
- Maximum number of folder levels (sub folders): 8

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

Device Compatibility

USB device and SD card capacity: ≤ 32 gigabytes.

Due to the differences of USB devices and SD cards, some devices and cards may not be compatible. USB devices and SD cards must be 'mass storage class' and formatted to the FAT or FAT32 file system in order to ensure compatibility.

Sampling Frequency Rates

MP3	8kHz ~ 48kHz
WMA	8kHz ~ 48kHz
WAV	44.1kHz

Transfer Bit Rates

MP3	8kbps ~ 320kbps
WMA	32kbps ~ 384kbps
WAV	1,411kbps

Note: Some files may not play or be displayed correctly depending on sampling frequency rates and transfer bit rates.

SD Card / USB Operation

Displaying Information

When a file is accessed, the display will alternate between track number/elapsed time and available MP3/WMA information, including file name, song title, artist name, album name and folder number.

File Icon

This icon will illuminate when the file name is displayed.

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.

Album Icon

This icon will illuminate when the album name is displayed.

Folder Icon

This icon will illuminate when the folder name is displayed.

Folder Access

Press  to select the previous folder.

Press  to select the next folder.

Notes

Folder access is only available on USB devices and SD cards that include more than one folder.

Song Title, Artist and Album icons will only be displayed if the information is included with the MP3/WMA file.

Only MP3 files with filename extension (.mp3) can be played. Only WMA files with filename extension (.wma) can be played. Only WAV files with filename extension (.wav) can be played. Do not attempt to play non-audio MP3/WMA/WAV files with the .mp3/.wma/.wav extension.



Speaker Preparation/Installation

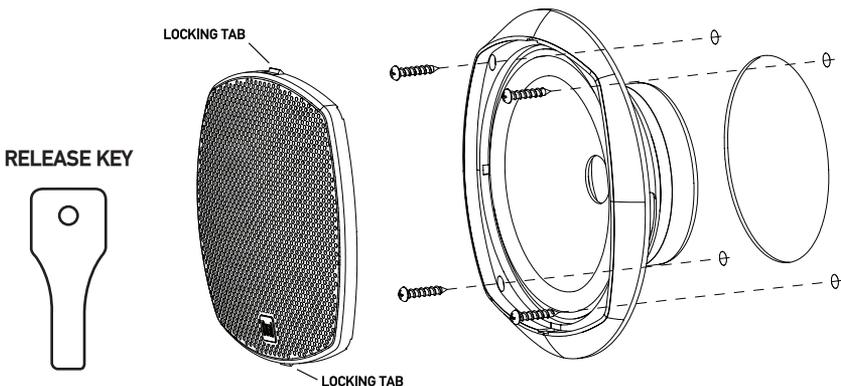
Please read entire manual before installation.

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.



Radio Specifications

FM Tuner	<p>Tuning range: 87.5MHz-107.9MHz Usable sensitivity: 10dBf 50dB quieting sensitivity: 25dBf Stereo separation @ 1kHz: >30dB Frequency response: 30Hz-18kHz</p>
AM Tuner	<p>Tuning range: 530kHz-1710kHz Usable sensitivity: <36dB Frequency response: 80Hz-2kHz</p>
Speakers	<p>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 @ 1kHz Peak Power: 100 Watts @ 1kHz</p>
General	<p>Speaker output impedance: 4~8 ohms Line output voltage: 2 Volts RMS Fuse: 10 amp AGC Dimensions: 7" x 2" x 5" (178 x 50 x 130 mm)</p> <p>Design and specifications subject to change without notice.</p>



CEA-2006 Power Standard Specifications

(reference: 14.4VDC +/- 0.2V, 20Hz~20kHz)

Power Output: 18 Watts RMS x 4 channels at 4 ohms and $\leq 1\%$ THD+N

Signal to noise ratio: 70dB (reference: 1 watt into 4 ohms)



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
"SD ERR" or "USB ERR" appears on display	USB or SD card compatibility issue	Device capacity must be less than 32GB.
		File system is incompatible - it must be FAT or FAT32.

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.

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.



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