



6/10/2024

Quick Start

1. Install the MXT500 PC software and the GD VirtualComDriver.
2. Use a USB C cable to connect the radio to a USB port on your PC.
3. Turn the radio on.
4. Turn the USB function On in the radio menu. Your PC should find the new virtual com port and finish installing the hardware. Note the com port number for the virtual com port.
5. Open the MXT500 PC software.
6. Select Set COM from the PC software Set menu. Select the communication port from drop list.
7. Select Read from Radio from the PC software Program menu.
8. Once the program is read, edit the program as needed.
9. Once the program is edited as needed, Select Write to Radio from the PC software Program menu.



The USB programming function must be enabled in the radio menu each time the radio is connected to the PC. The USB programming function can interfere with certain USB C charging protocols and therefore defaults to OFF each time the radio power is cycled.



The correct MXT500 PC software version to use depends on the firmware loaded in the radio. When attempting to read from the radio, an error message may indicate the PC software and radio firmware are not matched. The error message will indicate the radio type as follows:

MXT500: This radio should use V1 PC software. Current release is 1.04

MXT5A1: This radio should use V2 PC software. Current release is 2.01

MXT5A2: This radio should use V3 PC software. Current release is 3.03

CH Screen

CH	RX Frequency	TX Frequency	CH Name	Step	Channel Spacing	TX Power	CTCSS/DCS Decode	CTCSS/DCS Encode
1	462.56250	462.56250	CH 001	12.5K	12.5K	Low	None	None
2	462.58750	462.58750	CH 002	12.5K	12.5K	Low	None	None
3	462.61250	462.61250	CH 003	12.5K	12.5K	Low	None	None
4	462.63750	462.63750	CH 004	12.5K	12.5K	Low	None	None
5	462.66250	462.66250	CH 005	12.5K	12.5K	Low	None	None
6	462.68750	462.68750	CH 006	12.5K	12.5K	Low	None	None
7	462.71250	462.71250	CH 007	12.5K	12.5K	Low	None	None
8	467.56250	467.56250	CH 008	12.5K	12.5K	Low	None	None
9	467.58750	467.58750	CH 009	12.5K	12.5K	Low	None	None
10	467.61250	467.61250	CH 010	12.5K	12.5K	Low	None	None
11	467.63750	467.63750	CH 011	12.5K	12.5K	Low	None	None
12	467.66250	467.66250	CH 012	12.5K	12.5K	Low	None	None
13	467.68750	467.68750	CH 013	12.5K	12.5K	Low	None	None
14	467.71250	467.71250	CH 014	12.5K	12.5K	Low	None	None
15	462.55000	462.55000	CH 015	12.5K	12.5K	High	None	None
16	462.57500	462.57500	CH 016	12.5K	12.5K	High	None	None
17	462.60000	462.60000	CH 017	12.5K	12.5K	High	None	None
18	462.62500	462.62500	CH 018	12.5K	12.5K	High	None	None
19	462.65000	462.65000	CH 019	12.5K	12.5K	High	None	None
20	462.67500	462.67500	CH 020	12.5K	12.5K	High	None	None
21	462.70000	462.70000	CH 021	12.5K	12.5K	High	None	None
22	462.72500	462.72500	CH 022	12.5K	12.5K	High	None	None
23	462.55000	467.55000	RP 015	12.5K	25K	High	None	None
24	462.57500	467.57500	RP 016	12.5K	25K	High	None	None
25	462.60000	467.60000	RP 017	12.5K	25K	High	None	None
26	462.62500	467.62500	RP 018	12.5K	25K	High	None	None
27	462.65000	467.65000	RP 019	12.5K	25K	High	None	None
28	462.67500	467.67500	RP 020	12.5K	25K	High	None	None
29	462.70000	467.70000	RP 021	12.5K	25K	High	None	None
30	462.72500	467.72500	RP 022	12.5K	25K	High	None	None

The CH screen is shown above. CH 1-22 directly correspond to those default channels on the MXT500. CH 8-14 are configured as receive only channels per FCC rules. CH 23-30 correspond to RP 015-022 on the MXT500. The repeater channels are only displayed on the radio when they are enabled. The repeater channels can be enabled from the radio menu or using the Repeater Channel Display selection on the Function Setup screen.

CH 1-7, CH 15-22 and CH 23-30 (RP 015-022), which constitute the basic GMRS channels for mobile radios, have their frequency programming disabled and are always present in the radio. CH 8-14 and CH 31-128 can be removed by deleting the receive frequency, or re-programmed as additional receive only or duplicated GMRS frequencies.

To edit channel information, double click anywhere on the desired channel row, to bring up the Channel Edit screen. Or place the cursor on the desired row and select CH Edit from the Edit menu.

Channel Edit Screen

The screenshot shows the 'Channel Edit' dialog box with the following fields and options:

- RX Frequency:** 462.56250
- TX Frequency:** 462.56250
- CH Name:** C | H | 0 | 0 | 1 | (seven-character alpha-numeric display)
- Step:** 12.5K (dropdown)
- Channel Spacing:** 12.5KHz (dropdown)
- TX Power:** Low (dropdown)
- CTCSS/DCS Decode:** None (dropdown)
- CTCSS/DCS Encode:** None (dropdown)
- TX Off:** ☐
- Compander:** ☐
- Scan Skip:** ☐
- Reverse:** ☐
- Talk Around:** ☐
- Scrambler Switch:** Off (dropdown)
- Busy Channel Lock-out:** Off (dropdown)
- Buttons:** OK, Cancel

The Channel Edit screen allows per channel options configuration. To open the Channel Edit screen, double click anywhere on the desired channel row of the CH screen. Or place the cursor on the desired row and select CH Edit from the Edit menu.

RX Frequency

The default receive frequency is displayed for the channel. Channels 8-14 and 31-128 will allow any valid receive frequency within the MXT500 UHF receiver's bandwidth to be entered.

TX Frequency

The default transmit frequency is displayed for the channel. Channels 8-14 and 31-128 will allow transmit frequency selection from the 30 predefined GMRS frequencies.

CH Name

A seven-character alpha-numeric channel name may be entered, that will show on the MXT500 display in place of the normal channel number. The characters display as all caps but are best entered without using the shift key on the keyboard.

Step

Unused in the MXT500 application, selection can be left at 12.5 kHz.

Channel Spacing

Selecting 12.5 kHz will set the radio for maximum ± 2.5 kHz deviation, or narrow band mode. Same function as selecting NB-ON in the radio menu. Selecting 25 kHz will set the radio for maximum ± 5 kHz deviation, or wide band mode. Same function as selecting NB-OFF in the radio menu.

TX Power

Allows selection of the channel's transmit power. Same function as the PWR selection in the radio menu. Fixed at low power, 5W, when the TX frequency selected is 462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875 or 462.7125 to comply with FCC rules.

CTCSS/DCS Decode

Allows selection of the receive privacy tone or code. May also be referred to as the repeater output tone or code. Same function as the RCP selection in the radio's PRIVACY menu.

CTCSS/DCS Encode

Allows selection of the transmit privacy tone or code. May also be referred to as the repeater input tone or code. Same function as the TRP selection in the radio's PRIVACY menu.

Scrambler Switch

Unused in the MXT500 application.

Busy Channel Lockout

Allows selection of the conditions when PTT is inhibited.

Off – PTT allowed

Repeater – PTT not allowed when the channel is busy and the programmed CTCSS/DCS decode conditions are not met.

Busy – PTT not allowed when the channel is busy

TX Off

The transmitter is disabled on the channel when checked. Fixed at transmitter disabled when the TX Frequency selected is 467.5625, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875 or 467.7125 to comply with FCC rules.

Comander

The compander circuit is used on the channel when checked. Same function as the COMP selection in the radio menu.

Scan Skip

The channel is not scanned when checked. This function can also be toggled by long pressing the scan button on the MXT500 front panel.

Reverse

The programmed transmit and receive frequencies and privacy codes are reversed when checked.

Talk Around

The programmed receive frequency and privacy code is used for transmitting when checked. This allows for direct radio to radio communication on a channel normally programmed to operate through a repeater. Same function as the TALK selection in the radio menu.

Function Setup Screen

The screenshot shows the 'Function Setup' dialog box with the following settings:

- Starting Display: [][][][][][]
- Display Mode: Channel
- MR Channel: 22
- Squelch Level: 4
- Backlight Brightness: 3
- TBST Frequency: OFF
- Time Out Timer: Off
- Auto Power Off: Off
- Mute: Off
- CSQ Tail Eliminator: Off
- Weather channel number: 1
- Call Tone: Off
- Repeater Channel Display: Off
- Color: Blue
- Rb Tone: Off
- N/R: Off
- Tail Eliminator Type: 55HZ
- Choose TX Power: 50W(UHF)
- ☐ Inhibit Initialize Operation
- ☒ MIC Audio
- ☒ External Audio

Buttons: OK, Cancel

The Function Setup screen allows radio wide options configuration. To open the Function Setup screen, click Function Setup on the tree view or select Function Setup from the Edit menu.

Starting Display

A seven-character alpha-numeric name can be entered to display in place of “WELCOME” when the radio is turned on. The characters display as all caps but are best entered without using the shift key on the keyboard.

Display Mode

If the display mode is selected as Channel, the MXT500 will display the CH Name when one is entered; otherwise, it displays the channel number.

If the display mode is selected as Frequency, the MXT500 will display the CH Name when one is entered; otherwise, it displays the channel frequency.

MR Channel

This is the channel currently selected when the radio was read, and the channel selected after the radio is programmed.

Squelch Level

Selects the relative noise squelch threshold level. Same function as SQL in the radio menu.

Backlight Brightness

Selects the backlight brightness level. Same function as LAMP in the radio menu.

TBST Frequency

Selects the burst tone frequency that might be used to open a repeater. The burst tone is sent by pressing the microphone channel DN button while PTT is pressed.

Time Out Timer

Selects the maximum time for continuous transmission. Same function as TOT in the radio menu.

Auto Power Off

Selects the idle time before the radio will turn off. Same function as APO in the radio menu.

Mute

Selecting On disables the keypad tones. Same function as MUTE in the radio menu.

CSQ Tail Eliminator

Selects the frequency used for squelch tail elimination on carrier squelch channels. 55 Hz matches other Midland FRS and GMRS radios.

Weather Channel Number

Selects a default weather channel.

Call Tone

Selects a call tone sequence. The call tone is sent by pressing the microphone channel UP button while PTT is pressed.

Repeater Channel Display

Selecting On enables the repeater channels in the radio's channel list. Same function as REP in the radio menu.

Color

Selects the backlight color. Same function as COL in the radio menu.

Rb Tone

Selecting On will transmit a short beep at the end of each transmission to alert listeners that the channel is available. Same function as RB in the radio menu.

N/R

Selects the level of noise reduction applied to the transmit and receive audio. This function is only effective when the ANC hardware is installed in the MXT500. Level 1 selects a minimal amount of noise reduction and level 5 selects the maximum amount of noise reduction. Higher amounts of noise reduction can reduce the audio level and affect overall intelligibility. Same function as ANC in the radio menu.

Tail Eliminator Type

Selects the type of squelch tail elimination used on CTCSS channels. 55 Hz matches other Midland FRS and GMRS radios.

Choose TX Power

Selects the maximum transmit power output.

Inhibit Initialize Operation

Check to disable the Factory Restore menu function.

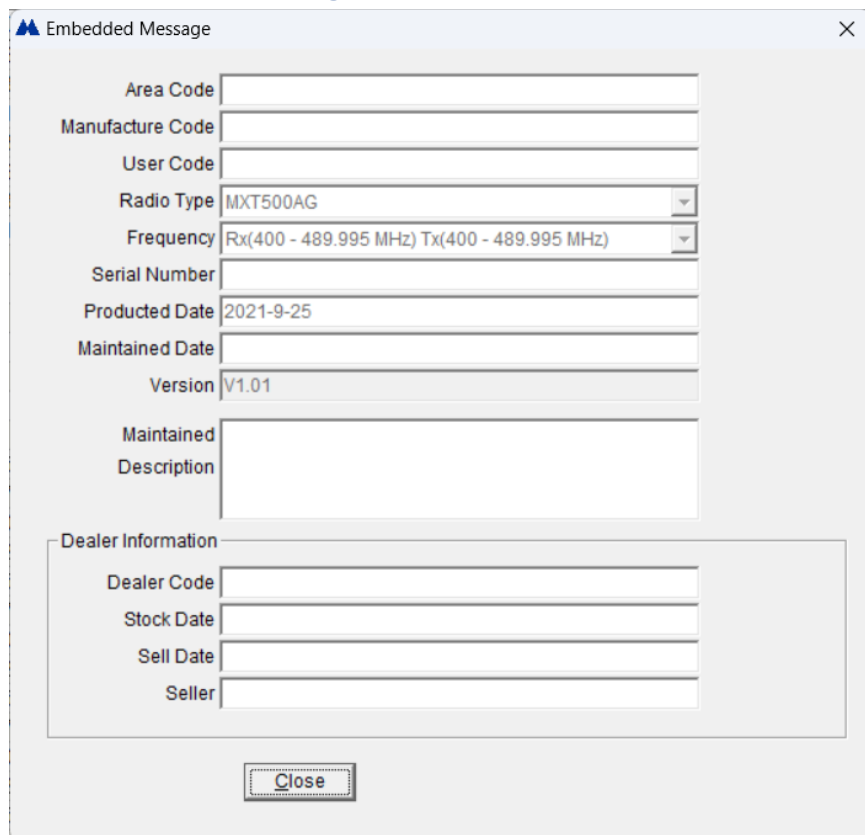
Mic Audio

Check to enable microphone audio to the transmitter from the rear panel intercom jack.

External Audio

Check to enable receive audio out from the rear panel intercom jack.

Embedded Message Screen



The screenshot shows a software window titled "Embedded Message" with a close button (X) in the top right corner. The window contains several input fields and dropdown menus for configuring a radio. The fields are organized into two main sections: a top section for general radio information and a bottom section for dealer information.

Field	Value
Area Code	
Manufacture Code	
User Code	
Radio Type	MXT500AG
Frequency	Rx(400 - 489.995 MHz) Tx(400 - 489.995 MHz)
Serial Number	
Produced Date	2021-9-25
Maintained Date	
Version	V1.01
Maintained Description	

Dealer Information

Field	Value
Dealer Code	
Stock Date	
Sell Date	
Seller	

Close

The Embedded Message screen shows factory configured parameters. To open the Embedded Message screen, click Embedded Message on the tree view or select Embedded Message from the Edit menu.