MB400 PROGRAMMING INSTRUCTIONS

BIZTALK ®
Business Solutions by **MIDLAND** ®

MIDLAND ON-SITE BUSINESS RADIO PROGRAMMING INSTRUCTIONS

INTRODUCTION

The MB400 comes with 16 of the most common frequencies and privacy codes pre-programmed in the radio. You can use the FREE programming software to select from a list of 99 other Business Band frequencies and 142 Privacy codes as well as other settings to customize your radio. The available frequencies and codes are listed in your owner's manual.

You will need the MPC400 programming cable and programming software. The MPC400 programming cable is available at https://midlandusa.com/product/biztalk-mpc400-usb-programming-cable/ and a FREE programing software is available at https://midlandusa.com/biztalk-mb400-business-radio-software-download/.

If at any time during programming you are unsure of what value to use for a setting, use the default value. You can return the radio to all of its default values by using the "Default Setting" command under Settings.

QUICK LINKS

### MINIMUM OPERATING SYSTEM REQUIREMENTS

1. Operating System: Windows XP or higher.
   Note: The software will not run on Apple iOS.

2. Processor Speed: Pentium 4 or higher.

3. Available RAM: 256MB or higher.

4. Internal Storage Memory: 2MB.

5. USB Type A 2.0 port or higher.

INSTALLING THE PROGRAMMING SOFTWARE

1. Go to https://midlandusa.com/biztalk-software-download/ and download the FREE MB400 programming software to a designated folder or your desktop.

2. Follow the on screen instructions to install the program.

   a. Welcome screen. Recommends you close other programs and then click "Next" to continue.
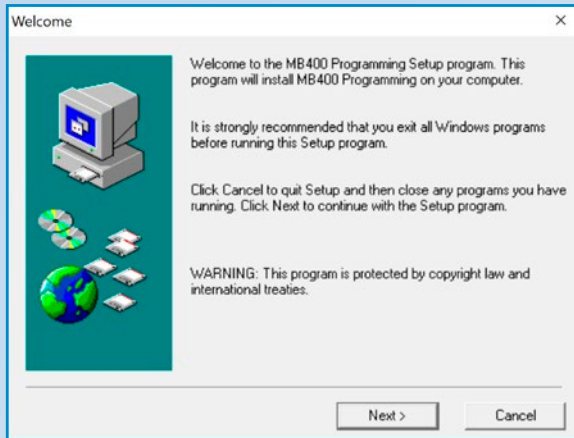
    b. The program will be installed on your computer's hard drive and automatically create a data file for storage. Accept the location by clicking on "Next" (recommended) or select another location that is memorable.
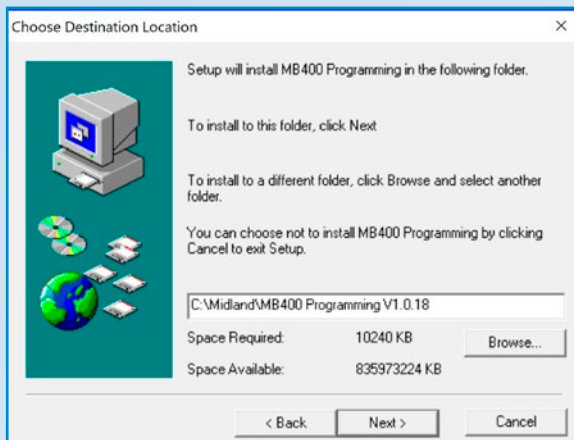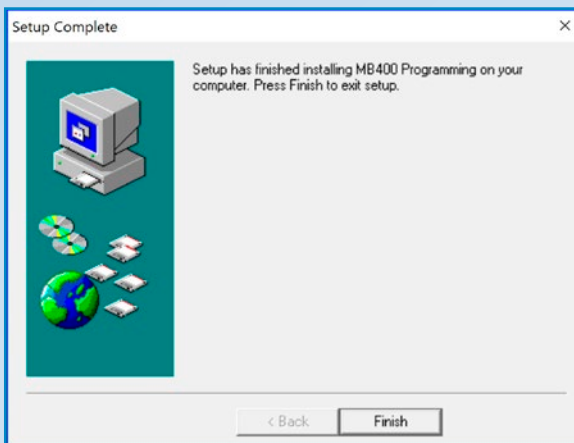

    c. The program will ask if it is ok to install the programs icon on your desktop. Click "NEXT" to accept and move to the next step.
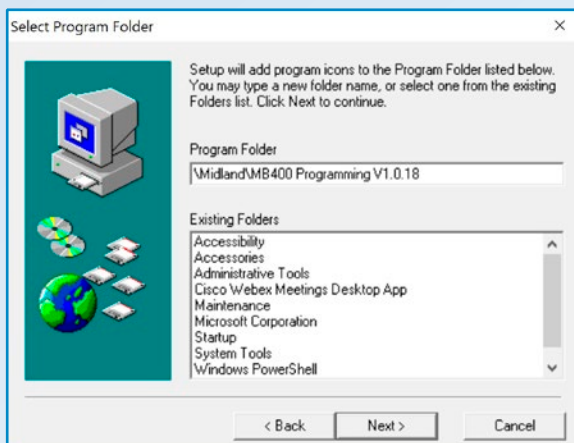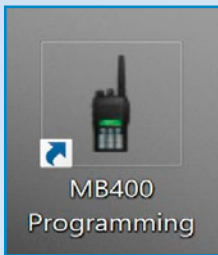
d. The program will confirm it is ready to install. Click "Next" to proceed.
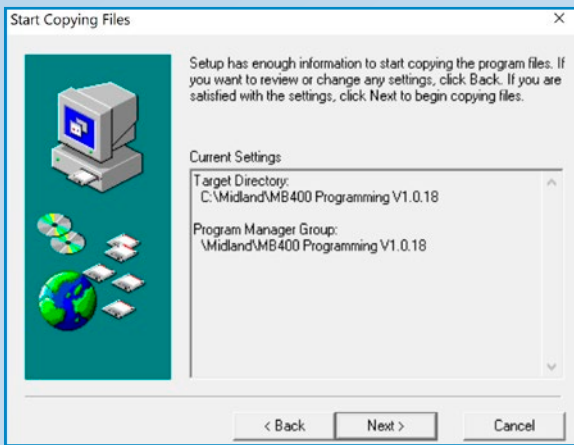
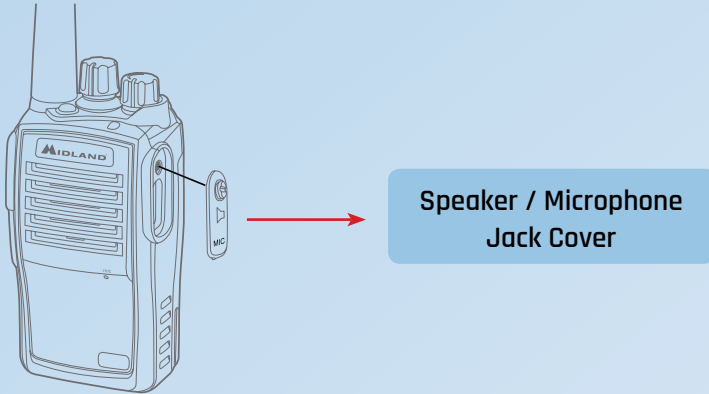**e. The program will install. Click "Finish" to complete the installation.**

3. Once installation is complete, a shortcut icon will appear on your desktop.

PROGRAM A MB400 RADIO

1. Turn the MB400 radio off.

2. Connect the MB400 radio to your computer using the MPC400 programming cable.

    a. Remove the accessory jack cover from the radio.

Speaker / Microphone
Jack Cover

    b. Connect the small jack on the programming cable to the small socket (microphone) on the radio.

    c. Connect the USB plug of the programming cable to a USB port on your computer.

Connect to
microphone
jack on the radio

Connect to a
USB port on
your computer
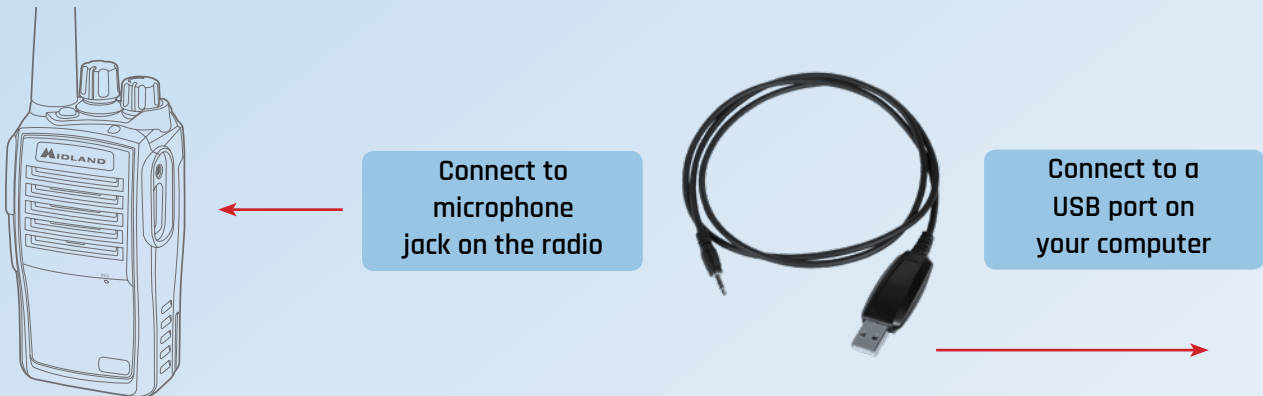
3. Turn the radio on.

    a. You will hear "Midland Ready" with the channel number announcement.

4. Double click on the icon to open the MB400 programming software.

MB400
Programming
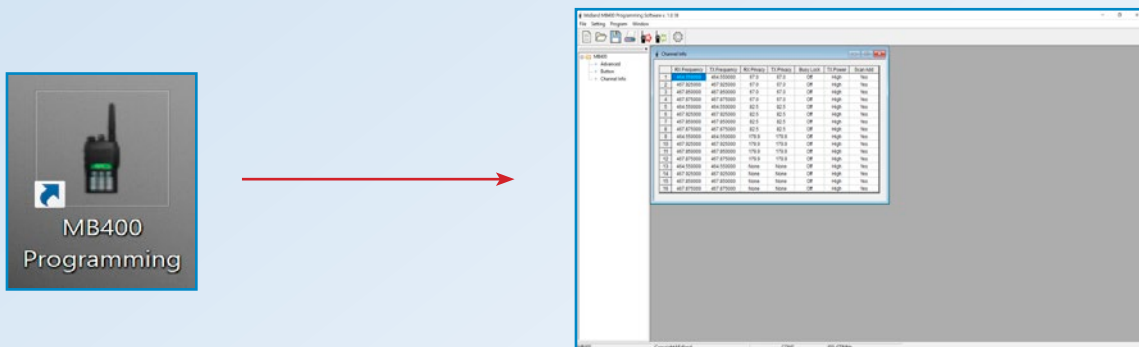
5. Check the COM (Communication) Port setting.

      a. Click on "Settings"

      b. Click on "COM Port"

      c. Make sure "COM Port 3" has been automatically selected, and close the window

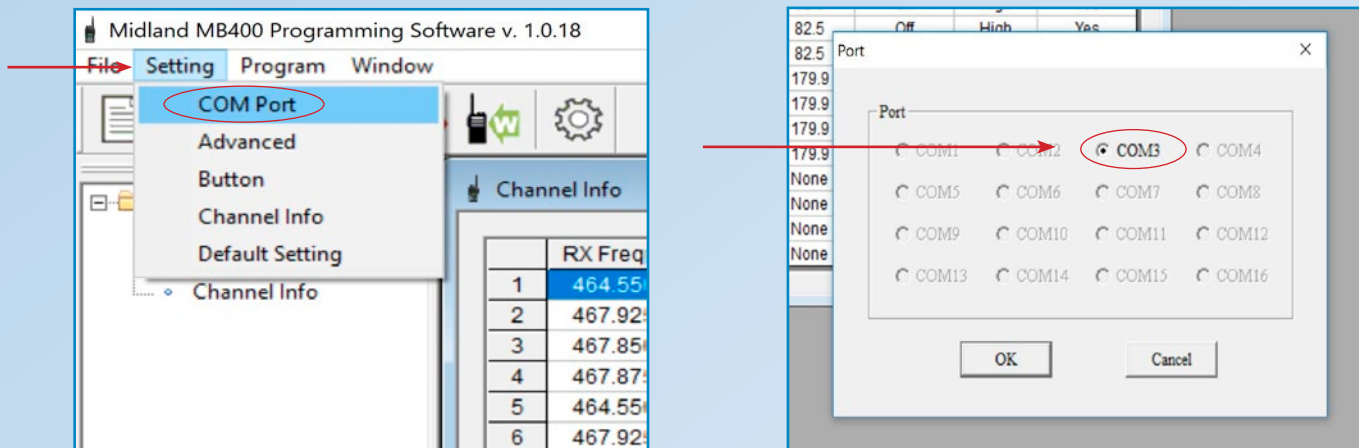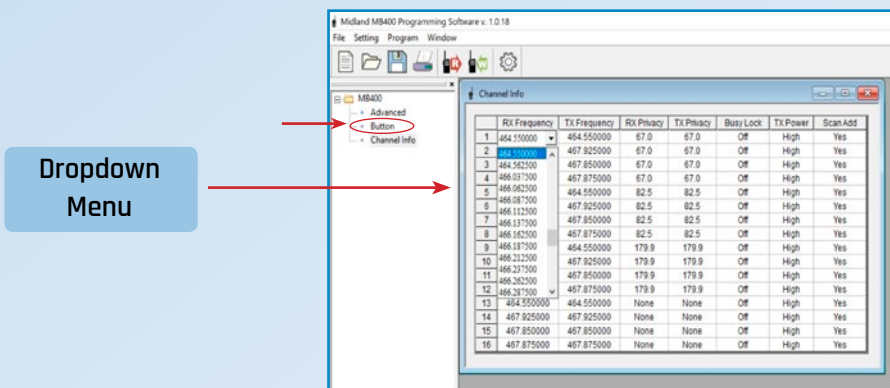> **!** Your computer should have automatically recognized the radio on COM3 and will use it to transfer the programming data to the radio. If the data does not successfully transfer using COM3, try a different COM port.

6. The Channel Screen should be opened when you started up the program.
    If not, open it by clicking on "Channel Info."

Dropdown Menu

7. Using the drop down menus on the Channel Screen, select your desired data for:

      a. RX Frequency

         i. The TX Frequency will automatically change to match your RX selection.

         ii. If programming for a repeater, select a separate TX frequency that matches your TX
            repeater frequency.

> **!** Repeater frequencies are a "matched pair" as assigned and regulated by the FCC. You must be properly licensed by the FCC to operate on a repeater.

      b. RX Privacy Code

         i. The TX Privacy code will automatically change to match your RX selection.

         ii. If programming for a repeater, select a separate TX Privacy code that matches
            your RX repeater code.

c. Set Busy Channel Lock

    i. The recommended (default) setting is "Off" so you do not block any
      transmissions from being received or transmitted on the programmed frequency.

    ii. Use "Carrier" to block all transmissions (send or receive) on the same
      frequency as the channel setting.

    iii. Use "QT/DQT" to allow transmissions (send or receive) on the same frequency
      and privacy tone (CTCSS or CDCSS), and block all other transmissions on that frequency.

d. TX Power

    i. The recommended (default) setting is "High" for all channels to ensure you get maximum range.
    ii. Choosing "Low" will help you conserve battery life, but significantly reduce
      the effective range of your radio. Use this setting only for close range communications.

f. Scan Add

    i. The default value is "Yes" so that you will scan all programmed channels.
    ii. Selecting "NO" will drop that channel from your scan list and will not be
      scanned for activity when the radio is in Scan or Priority Scan mode.

g. Repeat steps a – f for each channel you want programmed. You do not need to
    program all 16 channels. Select "None" in the RX column for unused channels.
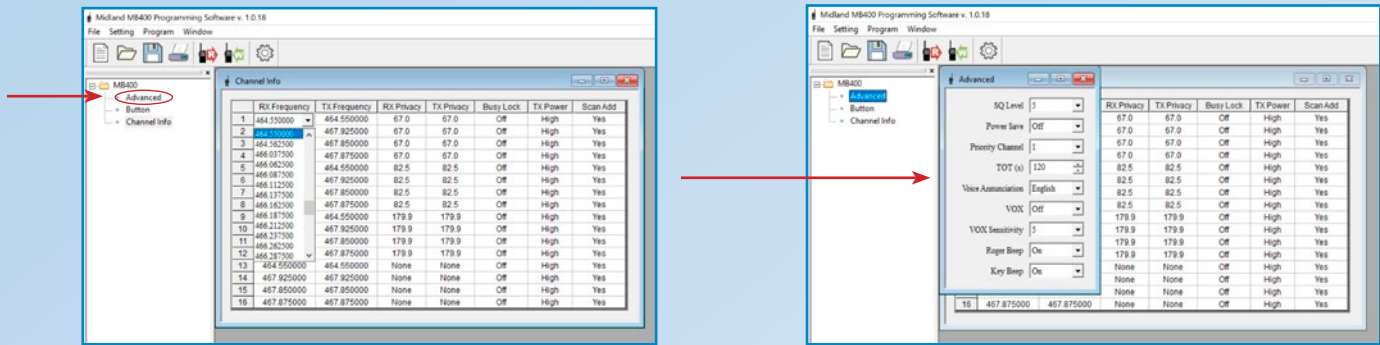
8. Open the "Button" screen to program the Soft Keys.
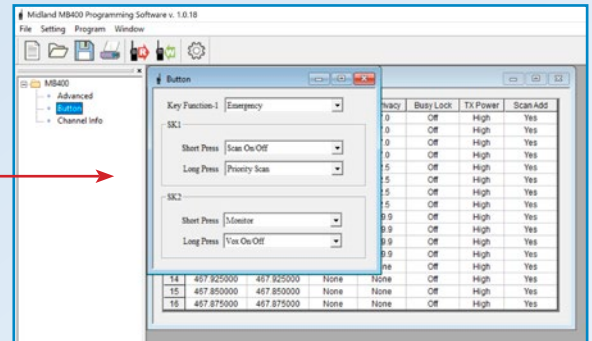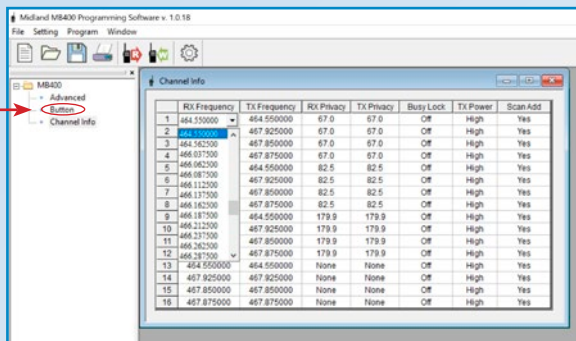
a. Use the drop down menu for each Soft Key and select the feature you want quick
    access to. The default values are:

	SHORT PRESS	LONG PRESS
KEY FUNCTION 1	Emergency	N/A
SK1	Scan On / Off	Priority Scan On/Off
SK2	Monitor	VOX On/Off

9. Open the "Advanced" screen to program the advanced settings of the radio.


a. Use the drop down menu for each setting and select the value that will give you the desired performance. If you are not sure what value to use, use the default value.

| Advanced Settings	Default Value (Recommended)	Settings Range	Comments
SQ Squelch Level	5	0-9	Lower values increases sensitivity to background noise.
Power Save	Off	On/Off	ON will increase battery life, but may cause a small delay in voice response when transmitting as the radio "wakes up".
Priority Channel	1	1-16	Select the channel you want the radio to scan more often.
TOT (Time Out Timer)	120	Off-300	Lower values help prevent the radio from overheating and reduces channel congestion. "Off" is not recommended.
Voice Annunciation	English	English or Spanish	Select the language you desire.
VOX	Off	On/Off	Turn ON if not using one of the soft keys for this feature. A VOX headset is required for this feature.
VOX Sensitivity	5	1-9	Lower values will allow the VOX feature to respond to your voice at a lower volume, but may also respond to background noise more often by accident.
Roger Beep	VT	On/Off	Turn off the "End of Transmission" tone when you release the PTT.
Key Beep	On	On/Off	Turns off the button tones for quite operation.

10. Proofread and save your program.

    a. Use the "Save As" command under "File".
    b. Give your program a name and save it in a memorable location.
    c. Click "Save."
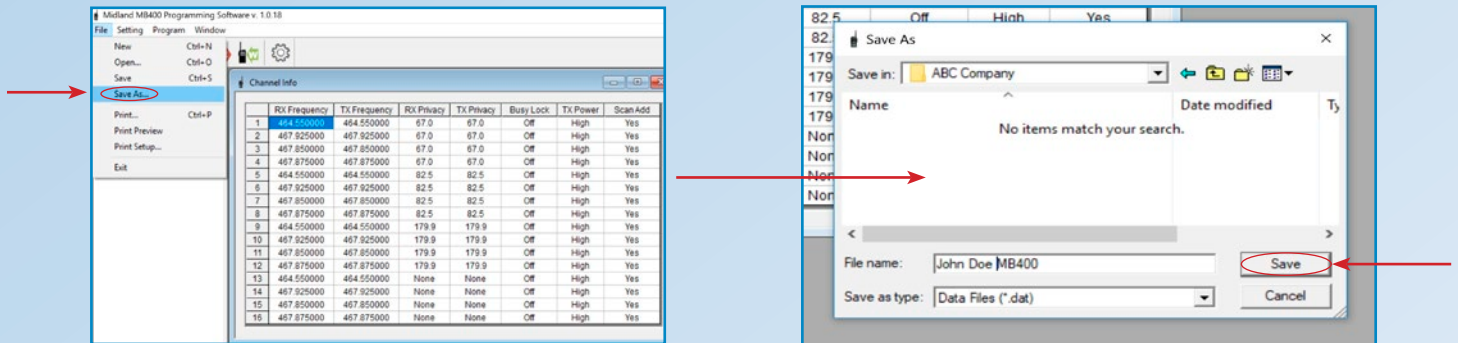
11. Write the program to the radio.

    a. Click on the green "W" icon.
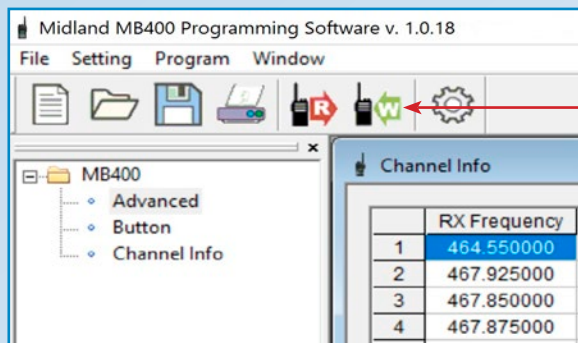
    b. Click on "Start" to send the programming data to the radio.
    c. The radio will return to its normal state after programming is complete. You will hear
      "Midland Ready" with the channel number.
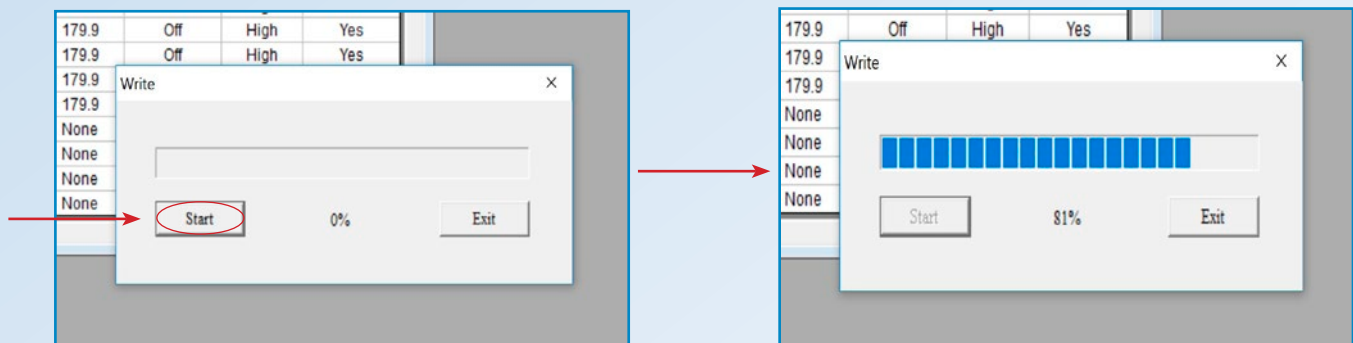
12. Turn the radio off and disconnect the programming cable.

13. Turn the radio on, and test it with other radios to make sure it is working correctly.

14. Write the program to other MB400 radios, or save and close the program.

READ A PROGRAMMED MB400 RADIO

Read a programmed MB400 so you can:
    · Use the same programming values for other MB400 radios.
    · Save the programming file for later use.
    · Check the settings to make sure they are correct and match other radios.
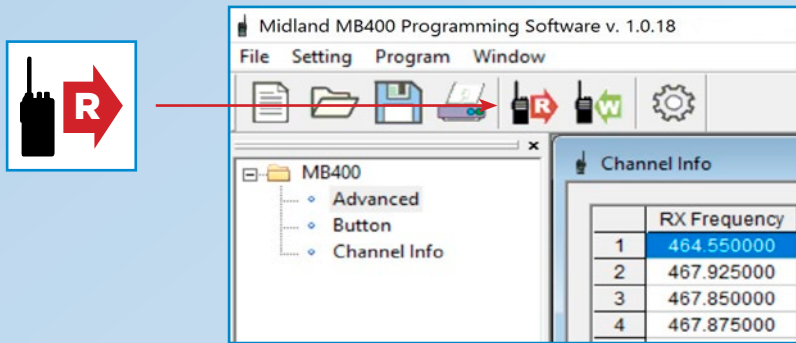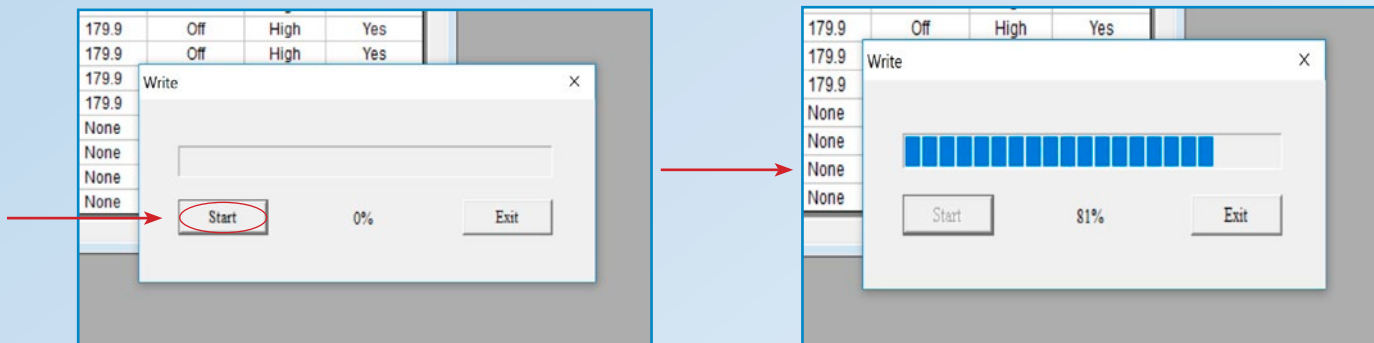
1. Follow steps 1 through 5 above to connect the radio to the computer and open the software.
2. Click on the red "R" icon.

3. Click on "Start" to read the programming data from the radio.

4. The radio will return to its normal state when complete. You will hear "Midland Ready" with the channel number.

5. The programming data will be displayed on their respective program window.

6. Turn off the radio and disconnect the programming cable.

7. With the programming software still open, connect another MB400 radio follow step 11 above to write the same data to additional radios.

8. Or, save your file for later use and close the program.

PROGRAM USING A SAVED FILE

1. Follow steps 1 through 5 above to connect the radio to the computer and open the software.

2. Use the "Open Folder" icon to locate and open your file.
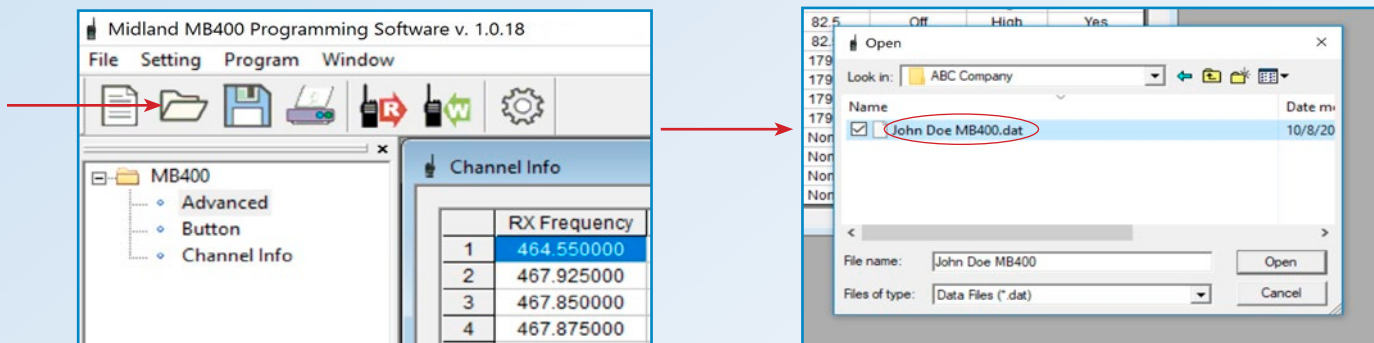
3. The file will automatically populate all settings with the data saved in your file
4. Click on the green "W" icon as described in step 11 above to program the radio.
5. Disconnect the radio and test it with other radios to make sure it is operating correctly.

RESET A RADIO TO ITS FACTORY DEFAULT SETTINGS

1. Follow steps 1 through 5 above to connect the radio to the computer and open the software.
2. Set all programming settings to their default values.
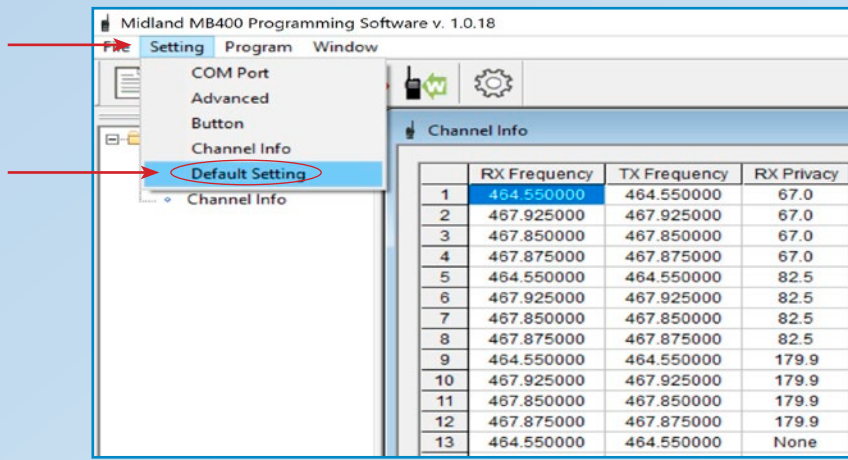   a. Click on "Settings".
      b. Click on "Default Settings". This will automatically populate all settings with the default value.

Midland MB400 Programming Software v. 1.0.18

	RX Frequency	TX Frequency	RX Privacy
1	464.550000	464.550000	67.0
2	467.925000	467.925000	67.0
3	467.850000	467.850000	67.0
4	467.875000	467.875000	67.0
5	464.550000	464.550000	82.5
6	467.925000	467.925000	82.5
7	467.850000	467.850000	82.5
8	467.875000	467.875000	82.5
9	464.550000	464.550000	179.9
10	467.925000	467.925000	179.9
11	467.850000	467.850000	179.9
12	467.875000	467.875000	179.9
13	464.550000	464.550000	None

3. Click on the green "W" icon as described in step 11 above to program the radio.
4. Disconnect the radio and test it with other radios to make sure it is operating correctly.

CLONING RADIOS

The programed settings from a MB400 radio can be directly transferred to another MB400 radio bypassing the need to individually program radios. The MCC400 cloning cable is required and is listed in the back of this manual and available on our website at midlandusa.com

1. Connect the programmed (Host) radio to the radio to be programmed (Clone) using the MCC400 Cloning cable.

2. Turn ON the radio to be cloned.

3. Press and hold Side Key 1 while turning ON the Host radio.

4. The LED will flash orange twice to confirm the Host radio is in clone mode and ready to transfer the data.

5. Press the PTT of the Host radio to send the data to the radio to Clone.

6. The LED on the Host radio will blink red, and the LED on the radio to be cloned will blink green during the data transfer.

7. When the data transfer is complete, the cloned radio will automatically restart.

8. You may clone another radio by disconnecting the cloned radio and connecting another radio to the Host and following the steps above.

9. Or you may disconnect both radios and turn them off, and back on to return to the normal operation.

TROUBLESHOOTING, TIPS AND TRICKS

Most problems can be resolved by following these simple steps. However, if you need additional help, call our Customer Service team at 816-241-8500, ext. 259.

SYMPTOM	SOLUTION
The programming data will not transfer to the radio from the computer, I keep getting an error code when I click "start".	- Make sure the programming cable is correctly installed between the radio and computer. Unplug and re-install the cable, or replace it if necessary. - Make sure the radio has charged battery and is turned on. (Do not program a radio while in the charger) - Install a USB to Serial Port conversion driver. The programming cable includes this driver and should be automatically install on your computer the first time you use it. You can install a standard driver if necessary from: http://www.prolific.com.tw/US/Showproduct.aspx?p_id=225&pcid=41
The programming software will not install or run on my computer.	- Make sure your computer meets the minimum requirements. - Software will not work on an Apple (Mac) computer. Use a Windows PC. - Uninstall and re-install the program. - Check with your IT administrator.
I am not sure what to use for a certain setting.	- Use the default value. (See above) - **TIP:** Reset the radio to its default values as described above and change ONLY the settings necessary, leave all others as is.
I programmed the radio but it still doesn't work with my other radios.	- Use the "Read" function of the software to make sure the data you sent to the radio is correct. - Check the settings on both radios making sure they are the same, especially the TX/RX frequency and Privacy Codes by channel. These must match for the radios to work together.

TROUBLESHOOTING, TIPS AND TRICKS

ΛIDLAND®

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Call 816.241.8500

We'd love to hear from you! Let us know what you
think of your new Midland product at

or by visiting us at
midlandusa.com

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packaging.