



FORWARD

This is a living file and is being updated often. It is by no means a finished product. It is only to help users get their system up and running. As time allows, the image file will be updated to automate most of the workload. PLEASE... read through the entire document BEFORE you start the installation to get yourself familiar with what is happening.

The Following Files Are In The ZIP File

Texas-GMRS-Node-RPi.img....This file is to be burned to a Micro SD Card.

Texas-GMRS-Node-Setup.pdf...This is the instruction file. (can be opened with any PDF reader)

Software

These are suggested software(s) for burning and working with the Texas GMRS Image (IMG) files. Software is available for download on the Main Texas GMRS website under => How To's => GMRS Linking => Software => Downloads

Putty.exe.....Software used to access the Pi command line remotely.

WinSCP.exe.....Software used for SFTP file transfer and editing.

Win32DiskImager.....Software used to install the image to a micro SD Card.

Ports

The port to access your Pi using the Putty software is 222.

(NOTE: the default in most programs is 22; Make sure to change this in Putty.)

Asterisk uses port 4569 UDP for node communication and will need to be added to your internet router for incoming connections. No ports need to be added for outgoing connections.

Supermon, (the "Status Page") port 80 TCP, needs to be added to your internet router to view your Status Page if you choose to use it.

These port(s) are standard, but they can be changed in the Config Files of the Pi. If the node port 4569 is changed, then you MUST notify support@gmrslive.com to inform the Support Team of the change. Your node will NOT work on a different port until the Support Team updates the port(s) in the registration server.

Comments, Questions, and Help

1. There are a couple of ways for you to leave a comment, get help, or if you have any questions.
2. You can also contact the Support Team by emailing them at membersupport@texasgmrs.net
3. Visit the GMRS Live Facebook Page, www.Facebook.com/groups/gmrslive.



NODE SETUP INSTRUCTIONS

NOTE: DO NOT USE THE NUMBER KEYPAD OFF TO THE SIDE OF THE KEYBOARD, ONLY USE THE NUMBER KEYPAD AT THE TOP OF THE KEYBOARD.

STEP 1

1. Download and Unzip the file: Texas-GMRS-Node-RPi.zip
2. Read the Texas-GMRS-Node-Setup.pdf file BEFORE continuing.
3. Use Wiin32DiskImager to burn the image (IMG) file to a micro SD Card.
4. After burning the image to the card, eject the card from your computer, make sure that your Pi is powered down (OFF), and CAREFULLY insert the SD card into the Pi card slot.

1. The easiest way to set up your Pi is to use a monitor and keyboard for your Pi.
2. You may also connect to your Pi using an SSH connection over your network (hard wired) with the Putty or WinSCP software. (NOTE: you will need to know the IP address to your Pi.)
3. Username & Password are: root / texasgmrs
4. Would you like to configure setup now: YES
5. Enter a New Root password (you can make this what you want, DON'T FORGET IT...)
6. Re-enter the root password for verification.
7. Do you want to set up your node: YES
8. Change Time Zone: change this timezone to your timezone. Select NO to leave the default timezone to New York Select Yes to change your timezone. Cursor down to find your timezone, hit the spacebar to place a * in front of your selected timezone. Then select OK.
9. The current hostname is "alarmpi": This is the Pi's name and how it will be viewed on the network, you can change it or simply leave it.
10. IP: Most people leave this as Dynamic, but you can change it to Static if you choose.
11. SSH: Most leave this as 222, so simply select NO.
12. Reboot your Pi and log back in using root as the username and your new password.
13. You will see, This script configures Asterisk, Select YES.
14. Enter your node number: You were issued 5 node numbers by GMRS Live, Erase 1998 that is on this line and enter one (1) of the node numbers that were issued to you by GMRS Live.
15. It will ask you, "Do you really want to change your node number?" Select YES.
16. Is this a private node? Since you have a node number(s) that were supplied to you by GMRS Live, you will select NO, (this will be a public node.)
17. Enter station Call-Sign for your node: Enter the call-sign that was issued to you by the FCC. (or call-sign for the owner of this node.)
18. Pick either Voice or CW id. Voice: An audible voice will announce your call-sign or CW (morse code) ID of your call-sign will be played.
19. Port 4569: (unless you have multiple servers running) Leave this as 4569 and select OK.
20. Duplex Mode: Select 1 for a simplex node or 2 if you are running a repeater.



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21. Node Password: Enter the node password that was supplied to you by GMRS Live, whichever node number you chose for this node you will need to use the password that was assigned for that node number. (Note: again, this is the password that was assigned to you for the node number you are using and NOT the password you are using to access the computer, #5 from above.)
22. IAXPRT: If you are ever planning on connecting to the system with your smartphone, then you would need to set up a password. Most people will not, so the answer to this is NO.
23. SimpleUSB: This configures your sound card adapter to work with your radio. You can configure this now or later. Most select LATER.
24. Restart? Select YES. After all the setup is done, you will need to do the following to configure your node to work with the Texas GMRS Network.

STEP 2

1. Adjust the SimpleUSB settings: You will need to adjust these settings for your radio and for your audio levels. If you are unsure how to do this, you can reach out to us by contacting us at membersupport@texasgmrs.net (*Please understand, we all have full-time jobs and will do our very best to get back to you ASAP.*) Once this is done, you will need to restart your node.

STEP 3

Connecting your node to the network

Once your SimpleUSB settings are done. You are now ready to use your node and connect. Using another radio that has a keypad. You will use the commands listed below to connect. (NOTE: You never use the radio connected to the Pi to enter commands, always use another radio.)

Let's try to connect to the 2250 HUB "Texas GMRS Network - Statewide Link".

While holding down the PTT (Push-to-Talk) button, press the keys listed below. The asterisk (*) enters the command mode.

Example: *32250 - This will connect you to the 2250 HUB.

- a. *1(node number) - This Disconnects the node you are currently connected to..
- b. *2(node number) - This is Monitor mode only. You can listen, but will not be able to talk.
- c. *3(node number) - This will Connect you to the node you entered after the *3.

Again, if you would press and hold the PTT button in, and dial *32250 this will connect you to the 2250 HUB. If you want to disconnect from the 2250, you would press and hold the PTT and dial *12250.

Sometimes the Internet and/or the Network can have hiccups. Those hiccups can disconnect you from a HUB. You would just have to reconnect.



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Permanently Connect

You may find a time that you want to permanently connect to a specific HUB. This can also be done by entering a 7 before the command to connect or disconnecting. A Perk :-), if your node for whatever reason was disconnected from a HUB, this command will usually reconnect you automatically to the HUB you were previously connected to.

- *71(node number) - Permanently disconnects you.
- *72(node number) - Permanently puts you in monitor-only mode.
- *73(node number) - Permanently connects.

Important Note

Make sure that when you are changing to another HUB/Room, that you ALWAYS disconnect from the HUB/Room you were connected to before connecting to a different HUB/Room. We do not allow linking HUBs/Rooms to other ones.

Additional (*) Commands

- *910 Reboot the system. (Raspberry Pi)
- *911 Halt the system. (Shut down the Raspberry Pi)
- *912 Say local IP address to the radio.
- *913 Say public IP address to the radio.
- *914 Say registration status.
- *915 One time parrot mode. (*See Note Below)
- *916 Restart Asterisk.

(***NOTE:** The One Time Parrot mode will allow you to key up your mic, say something and it will repeat what you said, allowing you to hear what you sound like over the system. Each time you want to do this you need to enter the command before you speak. Example: Press and hold the PTT button, enter *915 and speak your message. Then release the PTT button to hear the playback.)