

CHIRP - New Model # 9407

Status:	Closed	Priority:	Normal
Author:	Aurum Rio	Category:	
Created:	09/30/2021	Assignee:	Jim Unroe
Updated:	11/21/2021	Due date:	
Chirp Version:	daily		
Equipment Loan Offered:	No		
Subject:	Radioddity DB25-G		
Description	<p>Hello,</p> <p>I have read through many threads and I am unable to find a fix to program and or download from the Radioddity DB25-G. Thank you. Aurum</p>		

Associated revisions

Revision 3618:368b14dc7e27 - 11/17/2021 07:13 pm - Jim Unroe

[DB25-G] Radioddity DB25-G

This patch adds support for the Radioddity DB25-G GMRS mobile radio.

resolves #9407

Revision 3620:87039272c040 - 11/17/2021 07:34 pm - Dan Smith

Fix missing _gmrs attribute on btech base class

Related to the fix for #9407

History

#1 - 09/30/2021 03:30 pm - Jim Unroe

- Status changed from New to Feedback

The Radioddity DB25-G is not a CHIRP supported radio model. Only the DB25 (no G) is. What error message do you get? Attach a debug.log file.

Jim KC9HI

#2 - 10/01/2021 11:48 am - Aurum Rio

Hello Jim,

Thank you for the response. Using as some suggested for the DB-25 Vendor : QYT Model: KT8900D , The radio says cloning , the radio clicks and turns off and then turns back on and gives an error message stating the program was unsuccessful. I've been out of the Ham business for quite sometime, as I talked on the radio all day in my former career. Now that I'm retired, I'm pretty much starting over. I was just trying to help some friends with their new radio ; add some extra listening rx and features. I appreciate your time. A Rio W7DGM

#3 - 10/01/2021 03:04 pm - Jim Unroe

Open CHIRP (starts a new debug.log file)
Attempt the download using KT8900D (to cause the error)
Close CHIRP (to close the debug.log file)

Attach the debug.log file to this issue. Maybe I can see what the difference is.

Jim KC9HI

#4 - 10/17/2021 11:40 am - RON RUNYAN

- *File debug.log added*

Jim,

Attached is the debug.log file you requested.

Any help will be appreciated.

Ron Runyan

#5 - 10/17/2021 12:54 pm - Jim Unroe

- *File db25-g_test_#1.py added*

Hi Ron,

RON RUNYAN wrote:

Jim,

Attached is the debug.log file you requested.

Any help will be appreciated.

Ron Runyan

Thank you for the debug.log file. Now some progress can be made!

As I was hoping, the DB25-G has an MCU version that CHIRP doesn't know about. I have created a test driver module to see if you can successfully download from your radio. Here is how you use it.

1. Download the **db25-g_test_#1.py** test driver module and save it to a convenient location.

Note: Be sure to left-click the link and then click the **download** link near the top of the page that loads. Right-clicking the link to download the test driver module will not work.

2. Load CHIRP

3. Click **Help** in the menu bar and enable **Enable Developer Functions**

4. Click **File** -> **Load Module** to locate and load the test driver module that was saved in step 1

At this point CHIRP will have a red background to indicate that it is running with an external driver module loaded. With any luck, you should now be able to download from your radio. If successful, please save the newly created tab, unedited, to a CHIRP Radio Images (*.img) file and attach it to this issue so I can use it for further development. If the download fails, close CHIRP and add the debug.log file for me to examine.

Jim KC9HI

#6 - 10/18/2021 08:42 pm - RON RUNYAN

- File *debug.log* added

Hi Jim,

No joy with the test.

Still selecting my radio as KT8900D.

Debug.log attached.

Thanks again.

#7 - 10/19/2021 07:03 am - Jim Unroe

- File *db25-g_test_#2.py* added

RON RUNYAN wrote:

Hi Jim,

No joy with the test.

Still selecting my radio as KT8900D.

Debug.log attached.

Thanks again.

Whoops! I put the test code under KT7900D, instead of KT8900D (which would work for this initial testing). Here is a replacement test driver module with the test code moved to KT8900D.

Jim KC9HI

#8 - 10/19/2021 11:28 am - RON RUNYAN

- File *QYT_KT8900D_20211019.img* added

Jim,

Success!!!

Attached is the .img file.

The only this I noticed missing was the Mic Gain function.

Ron
N6RDR

#9 - 10/19/2021 12:53 pm - Jim Unroe

RON RUNYAN wrote:

Jim,

Success!!!

Attached is the .img file.

The only this I noticed missing was the Mic Gain function.

*Ron
N6RDR*

That is good to see. In the mean time while I am studying this first "image", please attach 2 additional images with the only difference between them being the **Mic Gain** set to **ON** on one and the **Mic Gain** set to **OFF** on the other.

Jim KC9HI

#10 - 10/19/2021 08:11 pm - RON RUNYAN

- File DB25-G w Mic Gain at 0.img added
- File DB25-G w Mic Gain at 127.img added

Jim,

Attached are the two files requested.

Mic Gain is a numeric value between 0 and 127. Thus the two file names.

Mic Gain is function menu #4 within the radio itself.

Hope this helps.

Ron
N6RDR

#11 - 10/19/2021 08:21 pm - RON RUNYAN

Jim,

I forgot to add...

My radio supports three power settings L, M, and H. The software from Radioddity only supports two.

Weird!

Ron
N6RDR

#12 - 10/20/2021 10:37 am - Jim Unroe

RON RUNYAN wrote:

| *Attached are the two files requested.*

Thank you.

| *Mic Gain is a numeric value between 0 and 127. Thus the two file names.*

Yes. I realized my "ON"/"OFF" mistake once I added my reply. I was hoping you would realize the mistake and get me what I needed anyway. You did. Thanks.

| *Hope this helps.*

Yes.

Now I have some questions.

1. The OEM software shows channels 8-14 as being blank. Did you add channels 8-14 yourself or were they already present in the radio when you got it?
2. If channels 8-14 were already present, do they transmit or are they receive only?
3. Do the channels 190-199 (NOAA WX Radio) transmit or are they receive only?
4. Do the channels that you added above 30 transmit or are they receive only?
5. The factory DB25-G software doesn't include a setting for Menu 4 (M-GAIN). It also doesn't include a setting for Menu 57 (PONYEY). Would you include a pair of "images" with this setting set to OFF/ON?

Thanks,
Jim KC9HI

#13 - 10/20/2021 10:42 am - Jim Unroe

RON RUNYAN wrote:

Jim,

I forgot to add...

My radio supports three power settings L, M, and H. The software from Radioddity only supports two.

Weird!

Ron

N6RDR

Either... add 3 images with the only difference being the TXP setting on a single channel
or... add a single image with 3 adjacent channels that are identical except for the TXP setting.

Thanks,
Jim KC9HI

#14 - 10/20/2021 12:27 pm - Jim Unroe

- File db25-g_test_#3.py added

Actually, get images requested above using this latest test driver module: **db25-g_test_#3.py**. This should provide a CHIRP Radio Images (*.img) file with the **Radioddity DB25-G** metadata that I will require for further testing.

It is selected using Vendor: **Radioddity** / Model: **DB25-G**.

Jim KC9HI

#15 - 10/20/2021 05:09 pm - RON RUNYAN

- File Radioddity_DB25-G_w Power Levels.img added
- File Radioddity_DB25-G_w PONYEY=ON.img added
- File Radioddity_DB25-G_w PONYEY=OFF.img added

1. The OEM software shows channels 8-14 as being blank. Did you add channels 8-14 yourself or were they already present in the radio when you got it?

I added them myself. They were NOT present from the factory.

2. If channels 8-14 were already present, do they transmit or are they receive only?

The radio will NOT transmit on any of these low-power channels.

3. Do the channels 190-199 (NOAA WX Radio) transmit or are they receive only?

Receive only

4. Do the channels that you added above 30 transmit or are they receive only?

Receive only

5. The factory DB25-G software doesn't include a setting for Menu 4 (M-GAIN). It also doesn't include a setting for Menu 57 (PONYEY). Would you include a pair of "images" with this setting set to OFF/ON?

Thanks,
Jim KC9HI

Jim,

Channels 91,92,93 are identical except for the power settings 91=Low 92=Medium 93=High

Attached are files with PONYEY on and off. (Whatever PONYEY might be?)

Ron
N6RDR

#16 - 10/20/2021 07:28 pm - Jim Unroe

- File db25-g_test_#4.py added

Ron,

Thank you for the feedback and the files. They are most helpful.

The attached temporary test driver module (**db25-d_test_#4.py**) includes the **Mic gain** and **Auto power-on** settings.

Also note that I have gained enough confidence in the settings that I have decided to enable the ability to upload back to the radio.

I have not done anything to support the 3 TX power levels yet. Is there any way that you can...

1. verify that the radio actually supports 3 TX power levels (measure with a watt meter or at a minimum key up on all 3 power levels to see if the radio puts out RF on all 3 choices)?
2. provide the measured TX power levels (or at least a guesstimate)? The manual shows 5W/25W. So it could be {something}W/5W/25W or 5W/{something}W/25W, etc.

Also would you check to see if you were to copy 1 or more of the 22 original GMRS channels to any of the other channels (31-189), will a valid GMRS frequency on other than the original 22 channels TX or is TX disabled on all but the original channels 1-7 and 15-30? I've got a Retevis radio that you can program a valid GMRS frequency on any of the 99 channels and it will transmit. But any other frequency and it will be TX disabled. Handy for having duplicate repeater frequencies with different PL and DPL tones.

On the UV-5G (a Baofeng handheld GMRS radio sold by Radioddity), I programmed CHIRP to automatically set Duplex = "off" to show TX disabled on the channel to match how it behaves in the radio. I think it should be done the same on the DB25-G. What are your thoughts?

Jim KC9HI

#17 - 10/21/2021 02:31 am - RON RUNYAN

Jim,

I did some testing with my digital wattmeter into my external antenna with a SWR of about 1.3:1

Low = 7.1 watts
Medium = 12.9 watts
High = 18.4 watts

Yes, if you copy a GMRS frequency to ANY of the other memories, it will TX on that channel. I have done this with several local repeaters on the same frequency but with different tones.

The radio will not TX on anything other than GMRS frequencies. And it will not TX on the low-power GMRS channels 8 thru 14.

I believe Duplex should be set to ON. This is how the radio behaves with most GMRS frequencies. I am using the radio for purposes it was not intended. I need to monitor some frequencies other than GMRS ones. The radio lets me monitor four channels at the same time.

Hope this helps.

Ron
N6RDR

#18 - 10/21/2021 02:44 am - RON RUNYAN

Jim,

Another interesting observation...

On the limited-power GMRS channels 1 thru 7, the radio puts out 7.2 watts regardless of the power settings. All three power settings put out 7.2 watts. This complies with the regulations on power output.

Ron
N6RDR

#19 - 10/21/2021 03:09 am - RON RUNYAN

Jim,

More testing...

I was able to download the radio into CHIRP. I then modified several parameters and channels. I then uploaded from CHIRP to the radio. The upload was very slow but was successful.

Interestingly, any channel with Power=Low in CHIRP uploaded to the radio as Power=Medium.

Hope some of this helps.

Ron
N6RDR

#20 - 10/21/2021 05:27 am - Jim Unroe

RON RUNYAN wrote:

I did some testing with my digital wattmeter into my external antenna with a SWR of about 1.3:1

Low = 7.1 watts

Medium = 12.9 watts

High = 18.4 watts

07/04/2022

8/14

Perfect. Just what I was looking for.

Yes, if you copy a GMRS frequency to ANY of the other memories, it will TX on that channel. I have done this with several local repeaters on the same frequency but with different tones.

Nice.

The radio will not TX on anything other than GMRS frequencies. And it will not TX on the low-power GMRS channels 8 thru 14.

All as it should be.

I believe Duplex should be set to ON. This is how the radio behaves with most GMRS frequencies. I am using the radio for purposes it was not intended. I need to monitor some frequencies other than GMRS ones. The radio lets me monitor four channels at the same time.

Right. Any channel using the same frequencies as channels 1-7 and 15-22 would be Duplex = "(None)" {which in CHIRP means simplex}, any channels using the same frequencies as channels 23-30 would be Duplex = "+" and Offset = "5.000000" {repeaters} and any channels using the same channel 8-14 frequencies and frequencies other than GMRS frequencies would be Duplex = "off" {which in CHIRP means TX disabled}. Nothing about how the radio behaves would be changed. The memory editor would just be updated to have what it displays match the way the radio already behaves.

Hope this helps.

Very much so.

Thank you,
Jim KC9HI

#21 - 10/21/2021 05:31 am - Jim Unroe

RON RUNYAN wrote:

Jim,

Another interesting observation...

On the limited-power GMRS channels 1 thru 7, the radio puts out 7.2 watts regardless of the power settings. All three power settings put out 7.2 watts. This complies with the regulations on power output.

Ron

N6RDR

This is very good observation. Thanks.

Jim KC9HI

#22 - 10/21/2021 05:38 am - Jim Unroe

RON RUNYAN wrote:

I was able to download the radio into CHIRP. I then modified several parameters and channels. I then uploaded from CHIRP to the radio. The upload was very slow but was successful.

Unfortunately this is how this driver behaves.

Interestingly, any channel with Power=Low in CHIRP uploaded to the radio as Power=Medium.

Yes. Until I can come up with updated code it is...

High in radio is High in CHIRP

Medium in radio is Low in CHIRP

Low in radio is unavailable in CHIRP

This will be the next thing I try to figure out.

Hope some of this helps.

Yes. It all does. Thanks!

Jim KC9HI

#23 - 10/21/2021 01:26 pm - Jim Unroe

- File db25-g_test_#5.py added

- File db25-g_test_#6.py added

Please check out these updates and provide feedback.

db25-g_test_#5.py

Adds support for 3 transmit power levels (High/Mid/Low).

Note: I called the middle power level "Mid" only because most drivers with 3 power levels call it that. I believe you used "Med" above, so what are the choices in the menu of your radio? Do you have a preference (Mid vs. Med)?

db25-g_test_#6.py

Adds validation to GMRS channels 1-30 so CHIRP displays the per channel values that match how the radio behaves.

- 1-7: Duplex = "(None)" (simplex only), Power = Low (low power only)
- 8-14: Duplex = "off" (TX disabled, RX only)
- 15-22: Duplex = "(None)" (simplex only)
- 23-30: Duplex = "+", Offset = "5.000000" (repeater only)

Adds validation to channels 0 and 31-199 so CHIRP displays the per channel values that match how the radio behaves.

- GMRS frequencies follow the rules above
- All other frequencies: Duplex = "off" (TX disabled, RX only)

Jim KC9HI

#24 - 10/21/2021 08:17 pm - RON RUNYAN

Jim,

Both of these updates seem to work just fine. I did experience one glitch where the power settings for memory 190-199 were written to memory 50-59. It was a one time thing that I can not get to repeat.

I am impressed at how well the software works. And it uploaded to the radio faster today than yesterday. You are my hero.

I will let you know if I run across anything else.

Ron

N6RDR

#25 - 10/22/2021 05:24 am - Jerry Angelo

I'm watching this case and have great interest in this. Where can I get the latest update that has this functionality for the DB25-G in it? I have a friend that just ordered this device and will be helping him configure it. I see the IMG files and the PY files, I loaded the IMG file in the current version of CHIRP to poke around in the config but not sure what radio profile to use to get it to upload. I have several other radios that I'm currently using with CHIRP.

#26 - 10/22/2021 07:34 am - Jim Unroe

Jerry Angelo wrote:

Where can I get the latest update that has this functionality for the DB25-G in it?

There is no CHIRP daily build with this functionality. This is a work in process. Nothing has been submitted for inclusion to CHIRP yet.

I see the IMG files and the PY files, I loaded the IMG file in the current version of CHIRP to poke around in the config but not sure what radio profile to use to get it to upload.

You don't choose a "radio profile" when uploading. The radio Vendor/Model that was used when the "image" was created is embedded into the image's metadata. When uploading, these parameters are automatically selected and cannot be changed.

Also, none of the Radioddity DB25-G images attached to this issue will load into the "current version of CHIRP" without first loading one of the test driver modules (#3-#6). At this point you should be using db25-g_test_#5.py or db25-g_test_#6.py and images beginning with "Radioddity_DB25-G" for testing.

Instructions for how to do this is in comment #5 above (just substitute the current test driver module for "db25-g_test_#1.py" in the instructions.

Jim KC9HI

#27 - 10/22/2021 07:55 am - Jerry Angelo

Jim Unroe wrote:

Jerry Angelo wrote:

Where can I get the latest update that has this functionality for the DB25-G in it?

There is no CHIRP daily build with this functionality. This is a work in process. Nothing has been submitted for inclusion to CHIRP yet.

I see the IMG files and the PY files, I loaded the IMG file in the current version of CHIRP to poke around in the config but not sure what radio profile to use to get it to upload.

You don't choose a "radio profile" when uploading. The radio Vendor/Model that was used when the "image" was created is embedded into the image's metadata. When uploading, these parameters are automatically selected and cannot be changed.

Also, none of the Radioddity DB25-G images attached to this issue will load into the "current version of CHIRP" without first loading one of the test driver modules (#3-#6). At this point you should be using db25-g_test_#5.py or db25-g_test_#6.py and images beginning with "Radioddity_DB25-G" for testing.

Instructions for how to do this is in comment #5 above (just substitute the current test driver module for "db25-g_test_#1.py" in the instructions.

Jim KC9HI

Thanks for the helpful information. I'll give this a try when the equipment is available to test.

#28 - 10/25/2021 10:51 am - Jim Unroe

- Status changed from Feedback to In Progress
- Assignee set to Jim Unroe
- Target version set to chirp-daily

I'm going to try to develop a formal patch and get it submitted today. Any consensus for whether we want the db25-g_test_#5.py version or the db25-g_test_#6.py version? Unless I get some strong arguments otherwise, I am going to go with the db25-g_test_#6.py version.

Jim KC9HI

#29 - 10/25/2021 01:58 pm - Jerry Angelo

I'm fine with the latter test file suggested, but I'm probably not the best judge of this YET. I plan to fully test when the equipment is made available to me.

#30 - 11/02/2021 07:42 pm - RON RUNYAN

Jim,

Why can't we get a file with both the #5 and #6 versions combined?

Ron R.

#31 - 11/03/2021 05:29 am - Jim Unroe

- File db25-g_test_#6.png added

RON RUNYAN wrote:

Jim,

Why can't we get a file with both the #5 and #6 versions combined?

Ron R.

You already have it. It is called **db25-g_test_#6.py**

db25-g_test_#5.py takes **db25-g_test_#4.py** and adds support for 3 TX power levels

db25-g_test_#6.py takes **db25-g_test_#5.py** and adds validation for GMRS channels and frequencies

It wouldn't make sense to support only 2 TX power levels since you have conclusively proven that the radio supports 3 TX power levels.

Jim KC9HI

#32 - 11/03/2021 11:33 am - James Smith

Jim, thanks for working on this. Much appreciated.

I plan on trying out #6 today. Anything you want me to check/confirm?

#33 - 11/03/2021 11:44 am - Jim Unroe

James Smith wrote:

Jim, thanks for working on this. Much appreciated.

I plan on trying out #6 today. Anything you want me to check/confirm?

If you have any BTech, QYT or other supported variants, make sure I didn't break anything adding the DB25-G support. Otherwise, just let me know if anything doesn't work as expected. I don't have a DB25-G so I have had to work solely from downloaded "images" and very helpful feedback from users.

Jim KC9HI

#34 - 11/03/2021 12:47 pm - James Smith

Jim,

Sorry, I do not have any of those other radios so I can not confirm if those were affected.

Just tried it out. Was able to download from the radio, make changes and upload to the radio.

Power level setting shows low, mid and high.

Repeaters have duplex at "+" and offset is "5.00000".

So far, so good. It does take a few minutes to upload to the radio. Not sure if that's normal with this family of radios but uploading is faster with the programming software from Radioddity.

If there's anything else you want me to check, let me know.

#35 - 11/05/2021 06:53 pm - Jim Unroe

- Status changed from *In Progress* to *Resolved*

- % Done changed from 0 to 100

Patch submitted. Support will be in the next CHIRP daily build following acceptance.

In the mean time, continue using **db25-g_test_#6.py**.

Jim KC9HI

#36 - 11/21/2021 04:39 am - Jim Unroe

- Status changed from *Resolved* to *Closed*

The Radioddity DB25-G is now supported in the latest CHIRP daily build.

Jim KC9HI

Files

debug.log	30.1 kB	10/17/2021	RON RUNYAN
db25-g_test_#1.py	153.1 kB	10/17/2021	Jim Unroe
debug.log	33.1 kB	10/18/2021	RON RUNYAN
db25-g_test_#2.py	153.1 kB	10/19/2021	Jim Unroe
QYT_KT8900D_20211019.img	16.2 kB	10/19/2021	RON RUNYAN
DB25-G w Mic Gain at 0.img	16.2 kB	10/19/2021	RON RUNYAN
DB25-G w Mic Gain at 127.img	16.2 kB	10/19/2021	RON RUNYAN
db25-g_test_#3.py	153.9 kB	10/20/2021	Jim Unroe
Radioddity_DB25-G_w Power Levels.img	16.2 kB	10/20/2021	RON RUNYAN
Radioddity_DB25-G_w PONYEY=ON.img	16.2 kB	10/20/2021	RON RUNYAN
Radioddity_DB25-G_w PONYEY=OFF.img	16.2 kB	10/20/2021	RON RUNYAN
db25-g_test_#4.py	154.2 kB	10/20/2021	Jim Unroe
db25-g_test_#5.py	154.4 kB	10/21/2021	Jim Unroe
db25-g_test_#6.py	157.6 kB	10/21/2021	Jim Unroe
db25-g_test_#6.png	51 kB	11/03/2021	Jim Unroe