

ID-880H DR Mode Operation

Programming

1. Download and install the Icom CS-80/880 software available from the Icom website at http://www.icom.co.jp/world/support/download/firm/IC-80AD_E_ID-880H_E/1_00/index.html
2. I recommend finding someone with a *.icf file (this is the type file read by the program you downloaded in step 1). If you cannot, you will have to build your own. You can manually program the radio if you choose. However, starting with the software and building a *.icf file will be much easier. The radio is not difficult to program, but it is **very** time-consuming. If you need to build your own, go to http://www.dstarinfo.com/repeaters/Lists/Icom_ImportRepeaterMemoryRepeater_List.aspx and follow the instructions there. The instructions are accurate.
3. Once you have all of your parameters programmed in the software, write them to the radio. Follow the on-screen instructions.
4. The radio should be back on at this point.
5. Press **[DR]** to enter DR mode.
6. If you need to select the repeater group, press **[BAND]** for 1 second and turn **[DIAL]** to select the appropriate Group. All of my repeaters are in Group 1. Press **[BAND]** to leave the group selection screen.
7. Select the repeater name you want to use.
8. Press **[DR]** for 1 second.
9. Momentarily press the **[BAND]** button until you see "GRP UR." Rotate **[DIAL]** until you see the UR call sign you want.
10. Press **[DR]** again for 1 second to select RPT2 call sign (examples follow):
 - a. NOTUSE = RPT2 empty.
 - b. GW = xx4yyy*G.
 - c. Another port on the repeater.
11. Press **[DR]**.
12. Press **[DR]** again.
13. Press **[CS]** to check call signs and operating frequency.

Test

I will be using the W4KCQ D-STAR repeater and having a UR call as *****E or *****I to test my transmission (* = space). I have already programmed my repeater list and my your call sign list.

NOTE: This could also be setup as XXNYYY*E or XXNYYY*I but would have to be programmed with each repeater call and defeats the purpose of DR Mode.

1. Press **[DR]** to enter DR mode.
2. Rotate **[DIAL]** to select repeater name – I am selecting TCL-C (this setting will vary from user to user).
3. Press **[DR]** for 1 sec.
4. Press **[BAND]** and select "GRP UR."
5. Turn **[DIAL]** to select correct UR call sign – I am selecting *****I.

6. Press **[DR]** for 1 sec. to select RPT2 call sign.
7. Turn **[DIAL]** to select GW. This will populate RPT2 with W4KCQ**G.
8. Momentarily press **[DR]** two (2) times.
9. At this point, you can momentarily press **[CS]** and rotate the dial to verify the correct call signs and repeater frequency. Press **[CS]** again to get back to the DR mode display.
10. Key the mic and see if the repeater's INFO reads back to you.
11. Check at <http://dstarusers.org/> to see if you're making it out over the gateway.

Calling On a Local Repeater

1. If not already in DR mode, press **[DR]**.
2. Press **[BAND]** for 1 sec.
3. Rotate **[DIAL]** to select repeater group.
4. Press **[BAND]**.
5. Rotate **[DIAL]** to select repeater name.
6. Press **[DR]** for 1 sec.
7. Press **[BAND]** and select "GRP UR."
8. Turn **[DIAL]** to select CQCQCQ.
NOTE: IF YOU DO NOT SELECT GRP UR AND TURN THE DIAL TO CQCQCQ, USERS OF THE DVDONGLE WILL NOT BE ABLE TO HEAR YOUR SIDE OF THE CONVERSATION.
9. Press **[DR]** for 1 sec. to select RPT2 call sign.
10. Turn **[DIAL]** to select GW. This will populate RPT2 with your repeater's GW call sign.
11. Press **[DR]** two times to get back to the DR Mode display.
12. Momentarily press **[CS]** and verify call signs and frequency. Press **[CS]** again to get back to DR Mode display.
13. Talk.
14. If you have an Internet connection, you can check and see if you come across at <http://dstarusers.org/>.

Call a Distant Repeater Through Your Local Repeater (not hard-linked)

1. If not already in DR mode, press **[DR]**.
2. Press **[BAND]** for 1 sec.
3. Rotate **[DIAL]** to select repeater group.
4. Press **[BAND]**.
5. Rotate **[DIAL]** to select repeater name.
6. Press **[DR]** for 1 sec.
7. Press **[BAND]** and select "GRP RP."
8. Turn **[DIAL]** until the repeater to which you want to link is selected.
NOTE: THE REPEATER HAS TO BE SAVED IN THE REPEATER LIST BEFOREHAND.
9. Press **[DR]**.
10. Check your settings with **[CS]**. You should have something like:
 - a. UR = /K4DSO*C
 - b. RPT1 = W4KCQ**C
 - c. RPT2 = W4KCQ**G
11. Talk.

Hard-Linking to a Reflector

1. If not already in DR mode, press **[DR]**.
2. Press **[BAND]** for 1 sec.
3. Rotate **[DIAL]** to select repeater group.
4. Press **[BAND]**.
5. Rotate **[DIAL]** to select repeater name.
6. Press **[DR]** for 1 sec.
7. Press **[BAND]** and select "GRP UR."
8. Turn **[DIAL]** to select the reflector you want (ie REF001CL). The "L" in position eight tells the system you want to make a hard link.
9. Press **[DR]** for 1 sec. to select RPT2 call sign.
10. Turn **[DIAL]** to select GW. This will populate RPT2 with your repeater's GW call sign.
11. Press **[DR]** two times to get back to the DR Mode display.
12. Momentarily press **[CS]** and verify call signs and frequency. Press **[CS]** again to get back to DR Mode display.
13. Press the PTT to enter the LINK command.
14. Press **[DR]** for 1 sec.
15. Press **[BAND]** and select "GRP UR." It should already be selected.
16. Turn **[DIAL]** to select CQCQCQ.
17. Talk.
18. When finished, Press **[DR]** for 1 sec.
19. Press **[BAND]** and select "GRP UR."
20. Turn **[DIAL]** to select *****U. This is the unlink command and the "U" is in the eighth position.

NOTE: ALWAYS REMEMBER TO UNLINK ONCE YOU ARE DONE.

21. Press the PTT to enter the UNLINK command.

NOTE: THE SAME SEQUENCE SHOULD WORK IF YOU WANT TO HARD LINK A REPEATER. YOU WILL HAVE TO HAVE THE REPEATER NAME PRE-PROGRAMMED IN THE YOUR CALL SIGN LIST BEFOREHAND.