IMRS LAN Firmware Update

Category: IMRS
November 21, 2022
I don’t know why Yaesu doesn’t make this public, but they don’t. You can download version 1.44 of the IMRS LAN firmware. This solves some problems with LAN connections constantly dropping.

Understanding DGID and IMRS

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DG-ID is like a CTCSS tone, but for digital. It filters out signals with different DGID’s as well as having the ability to do split DG-ID’s (like split CTCSS). DG-ID can be in a state of Rx & TX (DG-ID), Rx Only, Tx Only, and Split Rx & Tx (different DG-ID).

DG-ID servers as a means of selective signaling for access to a repeater or for a WiRES-X node. For the repeater it has a couple of different applications (IMRS and access purposes) while with WiRES-X it offers control of voice and control access.

DG-ID’s cannot be reused within the same configuration or network. For a repeater that means the DG-ID can only be in the LOCAL, RPT GROUP, or GROUP. There will be issues if in an IMRS network has anything with the same DG-ID.

DG-ID Repeater usage

LOCAL DG-ID: There are two factors:
1) The DG-ID it will not be sent down IMRS links and only allow access to the local repeater.
2) In an IMRS set-up, you will always hear the status beeps: One for end conversation; Two for link drop/end; and three for a repeater is not connecting with the DG-ID/IMRS group.

RPT GROUP DG-ID: This offers the ability for an IMRS link to be established in a one-way direction. The DG-ID used is the LOCAL DG-ID of the other repeater that you are calling. If users are using DG-ID Tx AND RX they will not hear beeps the confirmation beeps (see above).

Example of RPT GROUP usage:

San Diego Repeater – Local 1 Los Angeles Repeater – Local 2, RPT GROUP 1

San Diego users using DG-ID 1 stay on San Diego for usage; Los Angeles users use DG-ID 2 stay on Los Angeles for usage. Los Angeles users who use DG-ID 1 will establish a one-way link to San Diego and will communicate with one another until the IMRS TOT is reached. Once the link drops it is reestablished by someone using DG-ID 1 on the Los Angeles repeater group as San Diego cannot establish the link as it is not a RPT GROUP.

GROUP DG-ID: offers the ability for an IMRS link to be established in either direction by any of the repeaters that have it programmed into IMRS. If users are using DG-ID Tx AND Rx they will NOT hear the confirmation beeps.

Example of GROUP usage:

San Diego – Local 1, GROUP 10 Los Angeles Repeater – Local 2, GROUP 10

San Diego users use DG-ID 1 only stay on San Diego for usage. Los Angeles users use DG-ID 2 only stay on Los Angeles for usage. San Diego or Los Angeles users that use DG-ID 10 will connect to one another via IMRS and stay connected till the IMRS TOT times out.

Overall example with LOCAL, RPT GROUP, and GROUP:

San Diego – LOCAL 1 – RPT GROUP (blank), GROUP 10

Los Angeles – LOCAL 2 – RPT GROUP 1 – GROUP 10

San Diego: DG-ID 1 talks locally, using DG-ID 10 talks between San Diego and Los Angeles

Los Angeles: DG-ID 2 talks locally, using DG-ID 10 talks between San Diego and Los Angeles. DG-ID 1 establishes a link between San Diego and Los Angeles.

WiRES-X & DG-ID Local

Using WiRES-X with a DG-ID, it is not recommended to use the LOCAL DG-ID if you have an IMRS setup with a DG-ID. Here’s why: WiRES-X will hear all the confirmation beeps from IMRS (argh!). Also WiRES-X will hear everyone but only talk locally since a LOCAL DG-ID is being used.

Example of WiRES-X and IMRS (with three

repeaters in an IMRS Network)

- San Diego – LOCAL 1 – RPT GROUP (blank) – GROUP 10, 20, 99
- Los Angeles – LOCAL 2 – RPT GROUP 1, 3 – GROUP 10, 30, 99
- Chicago – LOCAL 3 – RPT GROUP (blank) – GROUP 20, 30, 99
- WiRES-X – DG-ID 99
- DG-ID 10 connects San Diego to Los Angeles
- DG-ID 20 connects San Diego to Chicago
- DG-ID 30 connects Los Angeles to Chicago
- DG-ID 99 connects all together along with WiRES-X

In this setting the users can do the following, per repeater, with the DG-ID's.

San Diego:

- DG-ID 1 is local.
- DG-ID 10 establishes a link between San Diego and Los Angeles.
- DG-ID 20 establishes a link between Los Angeles and Chicago.
- DG-ID 99 establishes a link between San Diego, Los Angeles, Chicago and WiRES-X.

Los Angeles:

- DG-ID 2 is local.
- DG-ID 1 establishes a one-way link between Los Angeles and San Diego.
- DG-ID 3 establishes a one-way link between Los Angeles and Chicago.
- DG-ID 10 establishes a link between San Diego and Los Angeles.
- DG-ID 30 establishes a link between Los Angeles and Chicago.
- DG-ID 99 establishes a link between San Diego, Los

Angeles, Chicago and WiRES-X.

Chicago:

- DG-ID 3 is local.
- DG-ID 20 establishes a link between San Diego and Chicago.
- DG-ID 30 establishes a link between Los Angeles and Chicago.
- DG-ID 99 establishes a link between San Diego, Los Angeles, Chicago, and WiRES-X

Once an IMRS link is established ALL the DG-ID’s in the repeater can be used to keep the link active. If in the San Diego example a link is established, then DG-ID’s 1, 10, 20, and 99 can all be used to keep the link alive. DG-ID that established the link is the only one that will be transmitted by San Diego.

If a link established by DG-ID 10 on the San Diego repeater, the repeater will Rx DG-ID’s 1, 10, 20, and 99 but will only transmit back DG-ID 10. Therefore, if you have DG-ID 99 set-up in your radio for Tx & Rx you will be able to talk down the link but you will not hear anything because the repeater is Tx DG-ID 10.

Information from N9UPC.