

DR-2X IMRS

DR-2X IMRS For Dummies

WD6ABC Feb. 2018

Example of 3 DR-2X Repeaters with 5 Groups

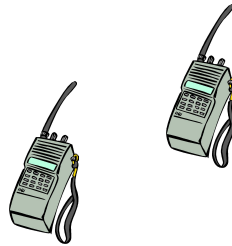
3 repeater system

California

North



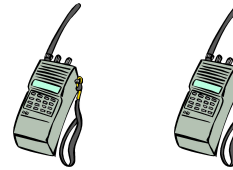
Rpt 1



Central



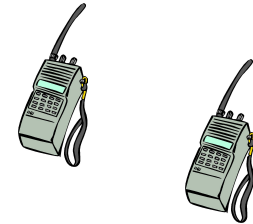
Rpt 2



South



Rpt 3



California

North



Rpt 1



Central



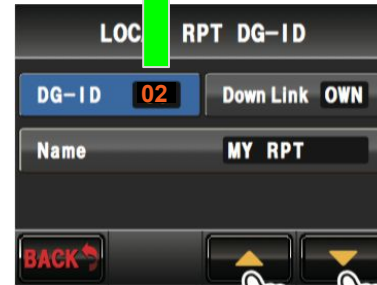
Rpt 2



South



Rpt 3



Program your repeaters with DG-ID numbers. (Plan with others on what numbers will be used in your group) Do not duplicate.

California

North



Rpt 1

DG-ID 1

DG-ID 41

DG-ID 45

Central



Rpt 2

DG-ID 2

DG-ID 41

DG-ID 45

South

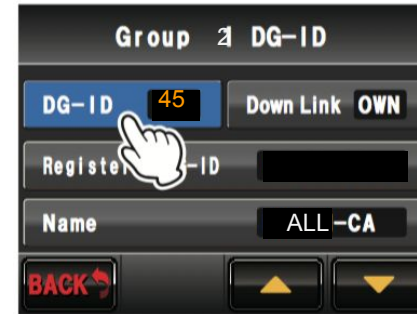


Rpt 3

DG-ID 3

DG-ID 41

DG-ID 45



Next, Program the DG-IDs Groups (#41,45) for linking repeaters (1,2 or 3)

Presently, you do not need to enter anything into Registered DG-ID, but you DO need to put in a name. (Repeater 3 didn't program #41)

{ The Name does not have to match other repeaters }

California

North



Rpt 1

Central



Rpt 2

South



Rpt 3



ALL Repeaters:

Enter into the RPT Group listing, all of the repeater DG-ID numbers.

** Yaesu instructions also have you include your Group DG-ID numbers (41,45), but currently it seems to work without them. **

California

North



Rpt 1

DG-ID 1

DG-ID 41

DG-ID 45

Central



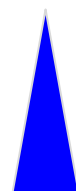
Rpt 2

DG-ID 2

DG-ID 41

DG-ID 45

South



Rpt 3

DG-ID 3

DG-ID 45



2

Go back in the MENU to your Local RPT DG-ID and touch the letters DG-ID to the left of your ID number (Here it's 01)
The background color should turn BLUE.

{Setting your LOCAL RPT ID as DEFAULT}

California

North

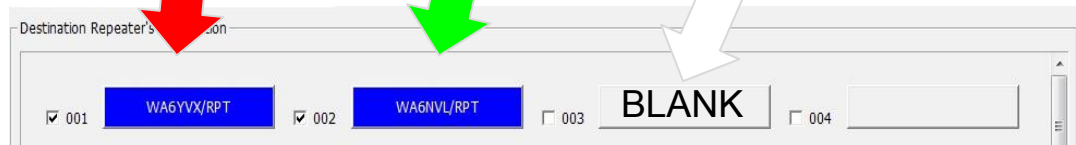
Central

South

Rpt 1

Rpt 2

Rpt 3



Enter other repeaters IP numbers in software.

Example for owner of Repeater # 3:
He only puts his IP info into the
SETTINGS button in the PC
software. (not shown)
Click on Buttons 001 and 002
to enter IP addresses of the other 2
repeaters. (He leaves his repeater
button 003 BLANK)

California

North



Rpt 1

DG-ID 1

DG-ID 41

DG-ID 45

Central



Rpt 2

DG-ID 2

DG-ID 41

DG-ID 45

South

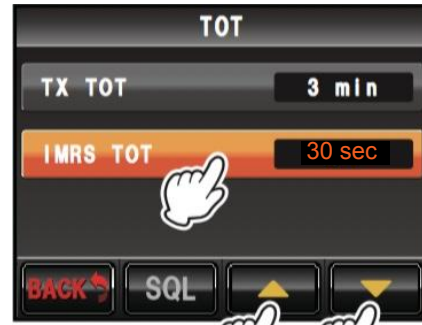


Rpt 3

DG-ID 3

DG-ID 41

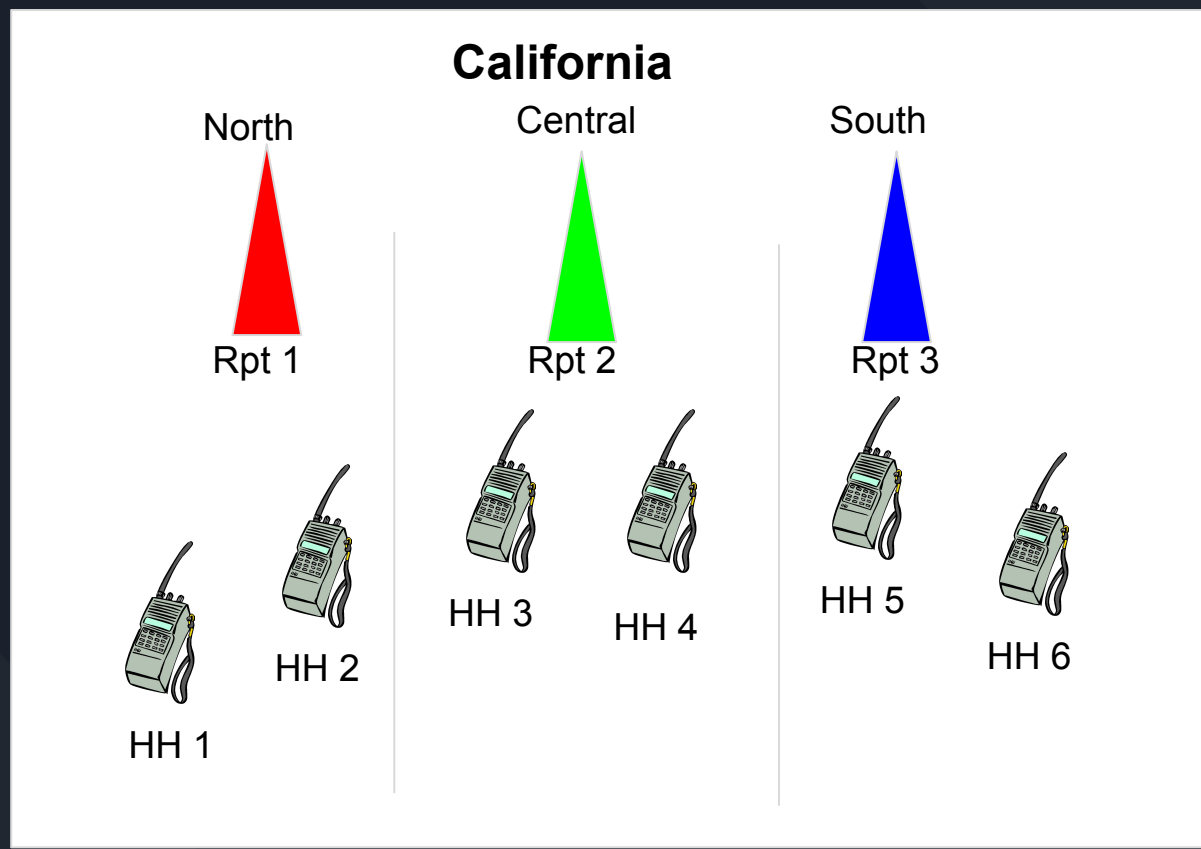
DG-ID 45



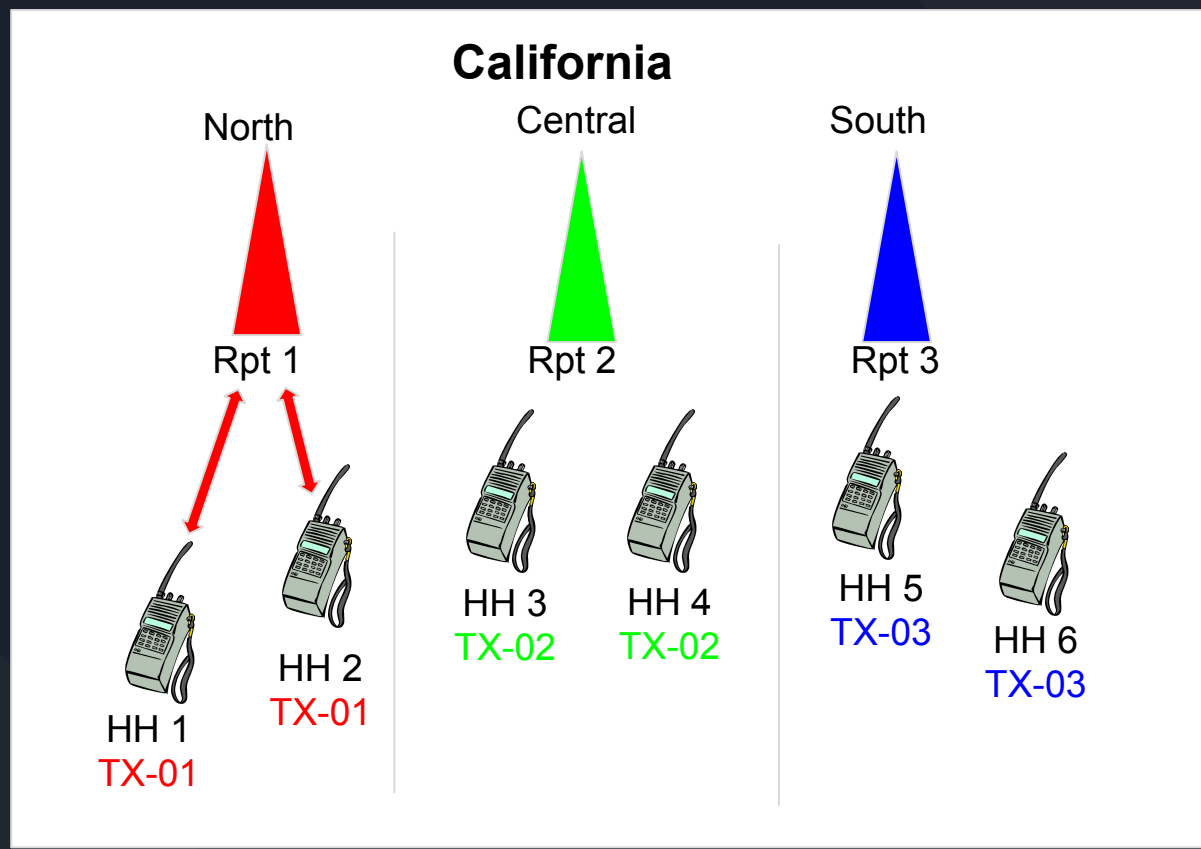
2

In the REPEATER TIMER menu, go to TOT (Time Out Timer) and select IMRS. Set to 30 sec or more.

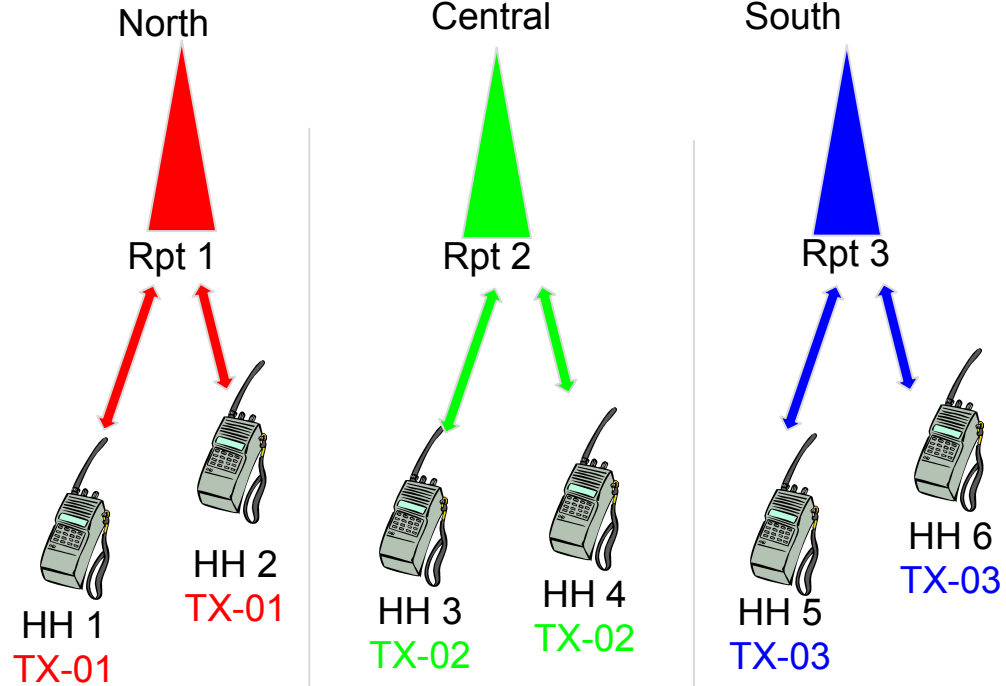
Now, how to use it.



HH 1 and HH 2 select DGID TX-01 in their radios. When they transmit, Rpt 1 works like a normal repeater.



California

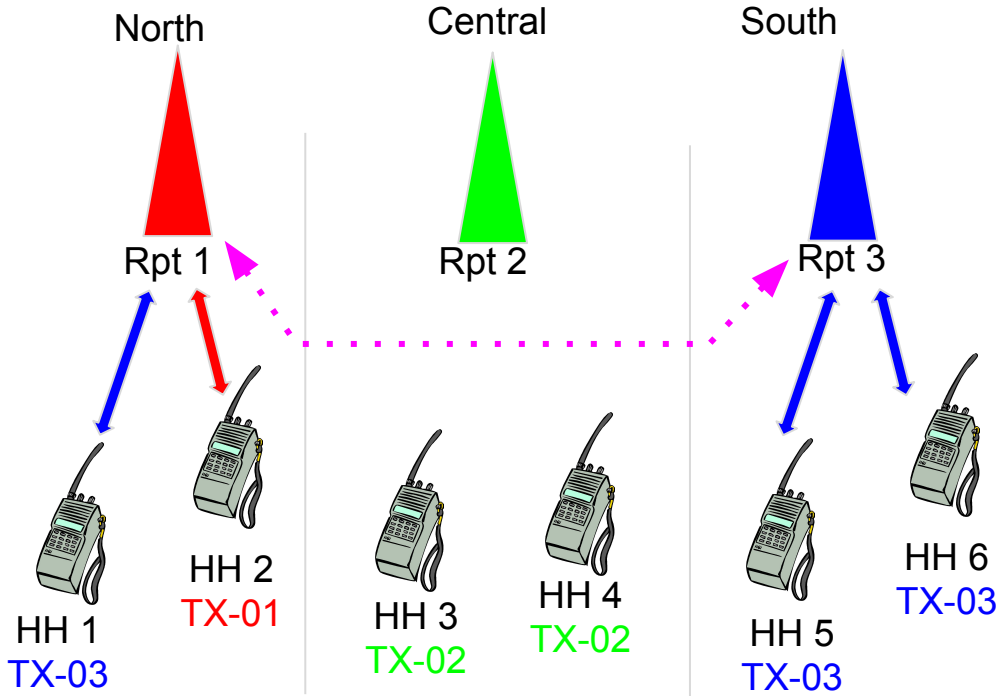


HH 3 and HH 4 select DGID TX-02 in their radios. When they transmit, Rpt 2 works like a normal repeater. HH 5 and HH 6 use TX-03 and talk to each other on Rpt 3.

{ When you set your radio to your Local Repeater number, TOT doesn't start }

WD6ABC Feb. 2018

California

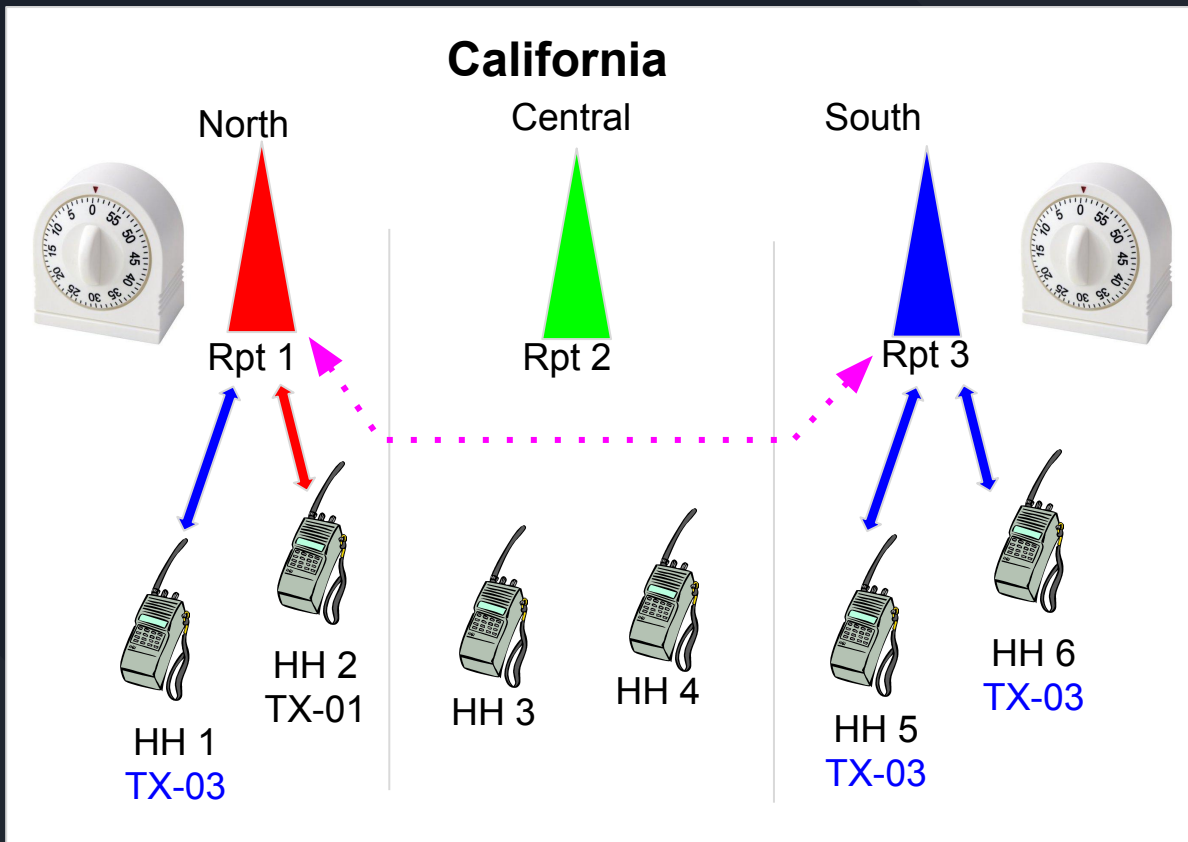


If HH 1 selects DG-ID TX-03 and transmits, Rpt 1 will still repeat, but also goes over the network to key up Rpt 3.

As long as HH 5 & 6 have DG-ID set to RX-00, they can hear HH 1.

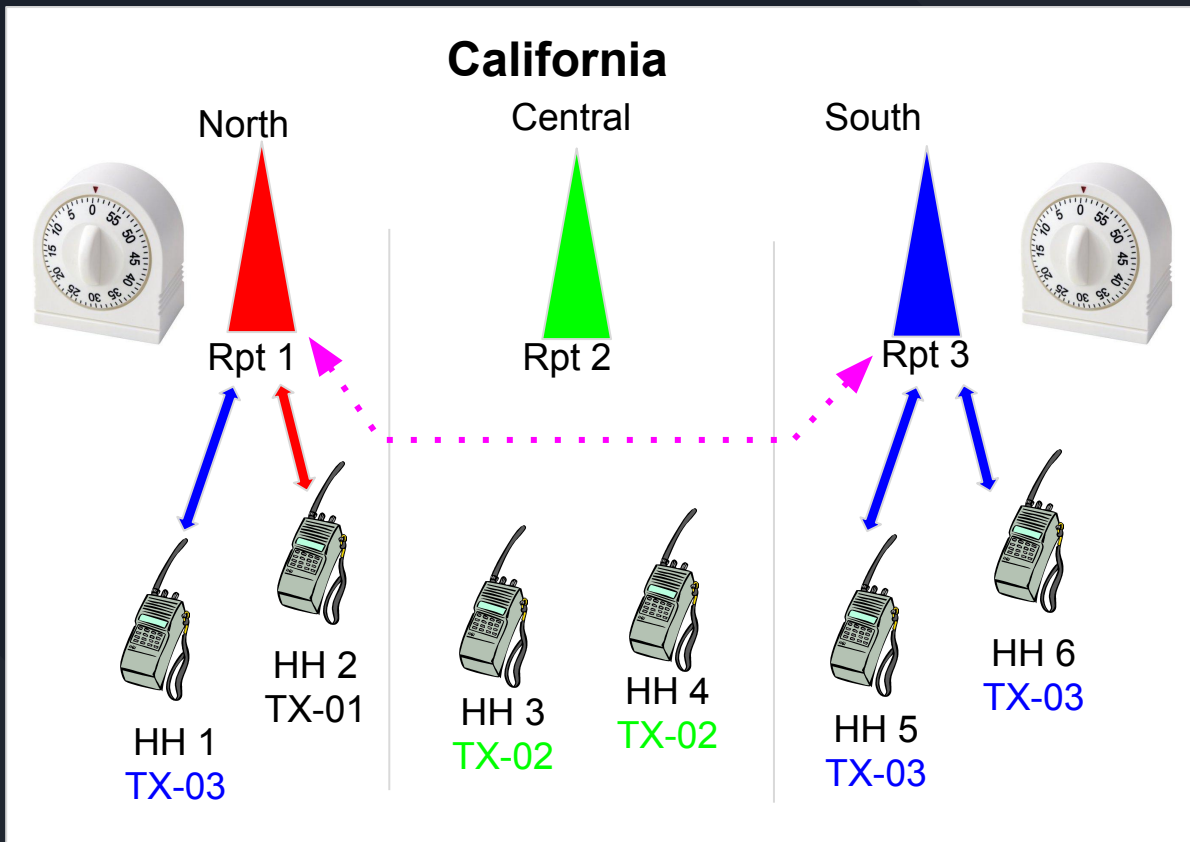
{ RX-00 is like Squelch operated receiver (i.e. no PL decode) }

Because Rpt 1 was set as a Default, and HH 1 selected something different, the TOT will start. The repeater will transmit a Single Beep (TOT started)



{ DG-ID's that are set to the Default # do not start the TOT. }

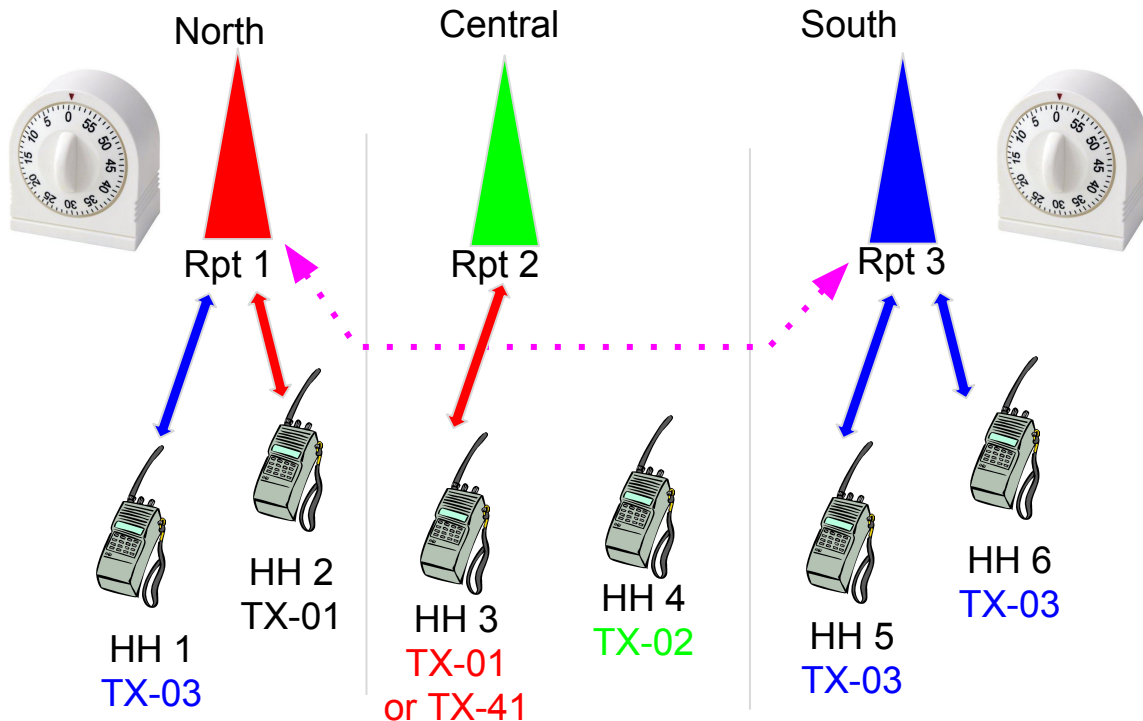
Now that the TOT has started on Rpt 1 and Rpt 3, ANY HH, no matter what their TX DG-ID is set for, will pass thru the system !! HH 2 can join in without changing his DG-ID TX setting.



{ Note: HH 3 & 4 are free to talk to each other. They don't hear anything from Rpt 1 or 3 }

100%

California



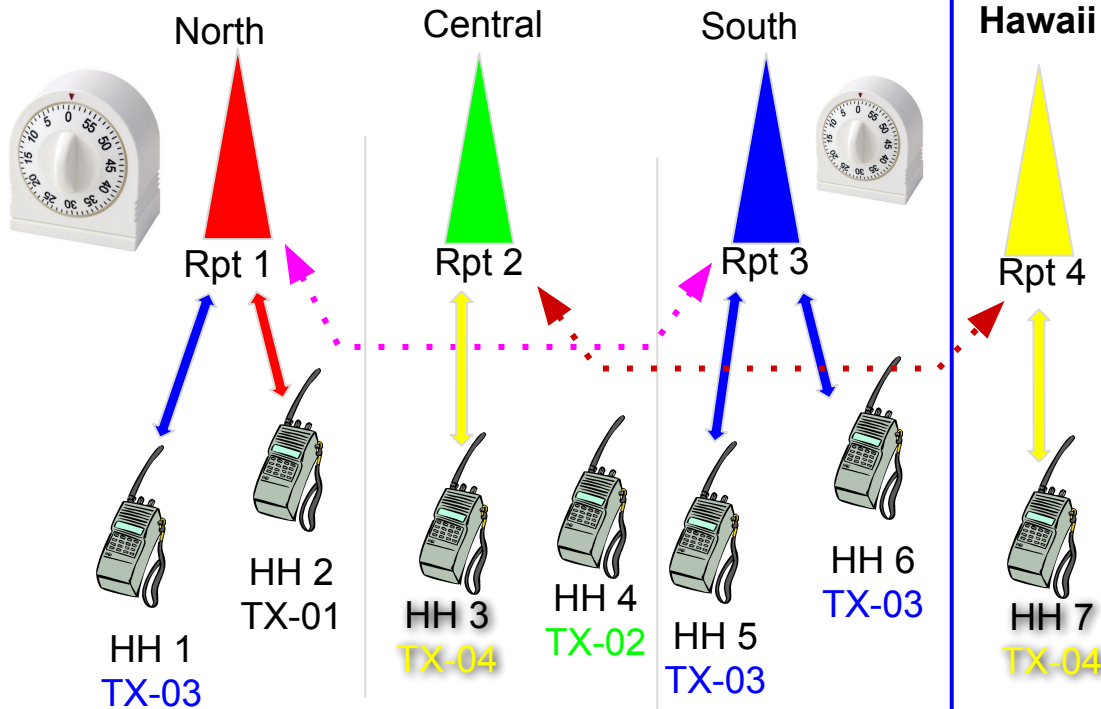
If HH 3 decides he wants to talk to Rpt 1 while their timers are still running, he'll get a Triple Beep. (Not available)



{ Once a Repeater to Repeater link is made and timers are running, other repeaters are locked out }

DR-2X

California



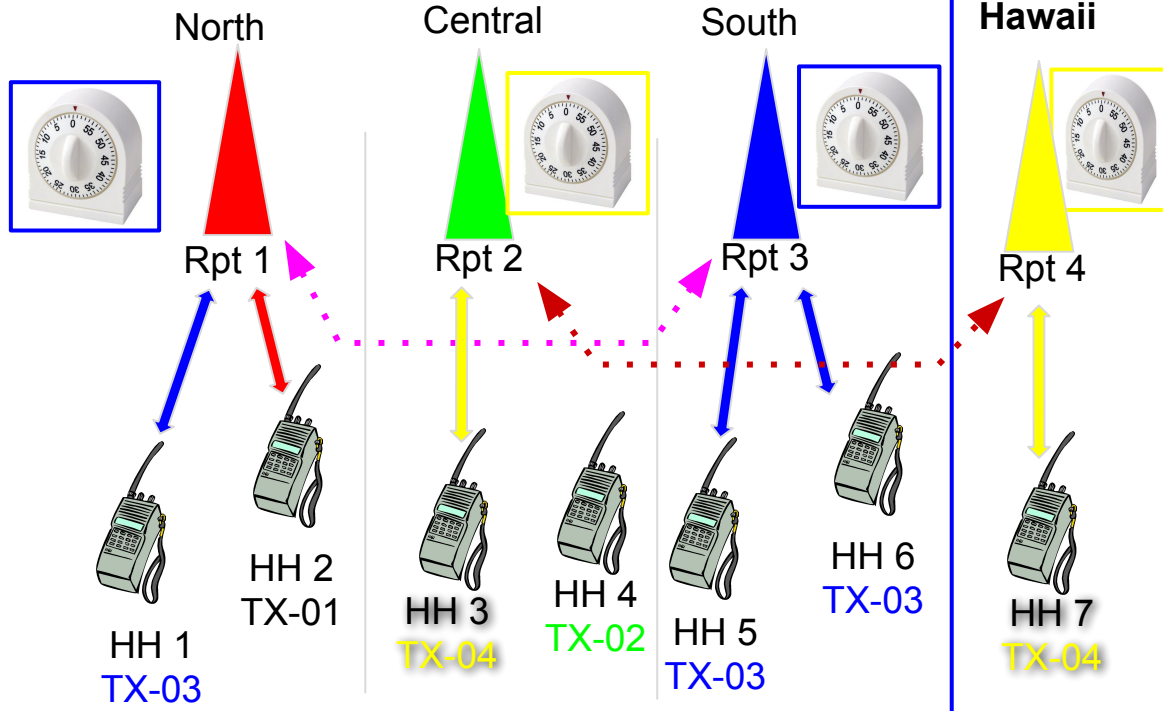
If there were 4 repeaters in the system

If HH 3 decides he wants to talk to Rpt 4 while Rpt's 1 & 3 are tied up, he can call his buddy in Hawaii on Rpt #4 by selecting DG-ID TX-04.

{ As long as your repeaters timer is not running, you can select another repeater by changing the DG-ID number in your radio. }

DR-2X

California



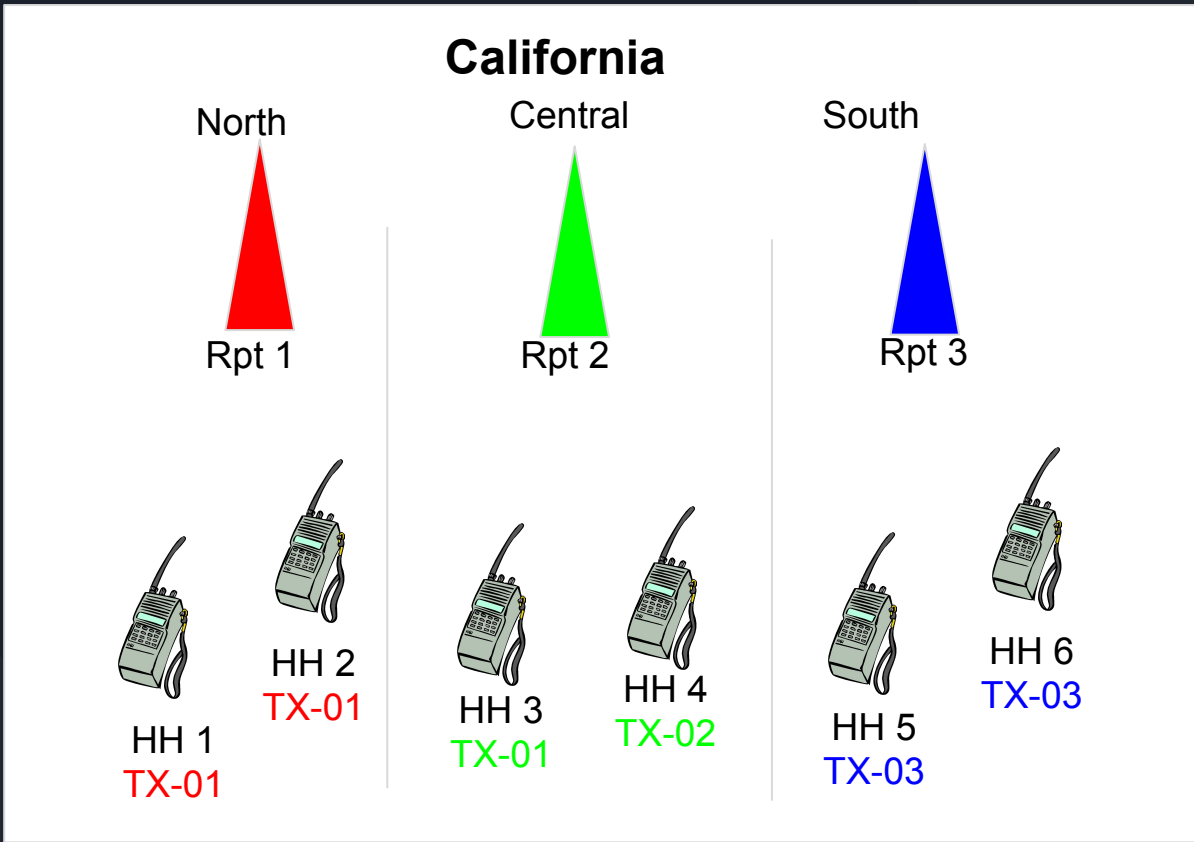
If there were 4 repeaters in the system

Now the timers for repeaters 2 & 4 have started. This now shows how 2 sets of repeaters can independently operate.

{ HH 1 & 2 are in QSO with HH 5 & 6 while HH 3 & 4 chat with HH 7 }

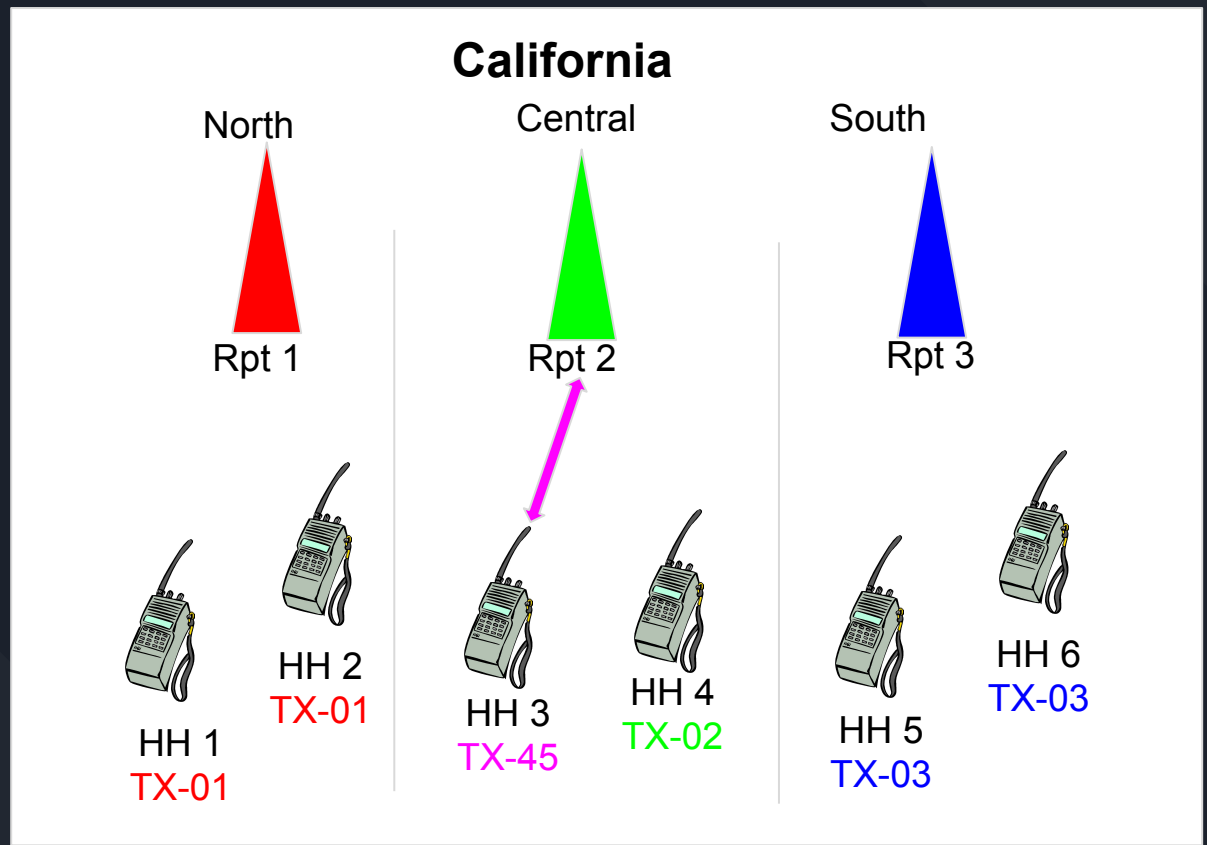
Back to our original 3 repeaters

Now in this example, no one talks for 30 seconds on Rpt 1 2 or 3, so all Repeaters send out a Double Beep notifying the operators that the Time Out Timer (TOT) has Cleared!



{Once Timed out, you can change your DG-ID number to route to somewhere else! }

HH 3 decides he wants to talk to all of the repeaters. He would select DG-ID TX-45 since all the repeaters have DG-ID 45 programmed into them.



California

North



Rpt 1

DG-ID 1

DG-ID 41

DG-ID 45

Central



Rpt 2

DG-ID 2

DG-ID 41

DG-ID 45

South



Rpt 3

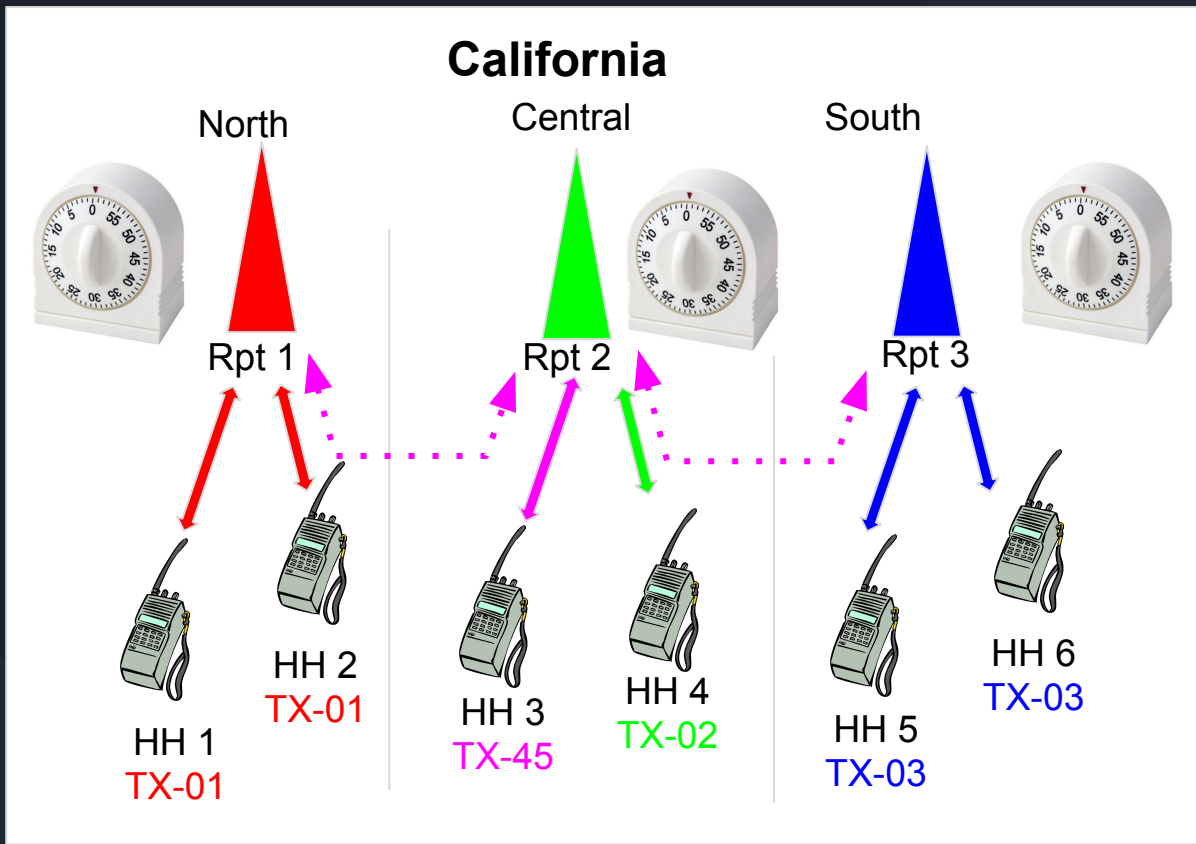
DG-ID 3

DG-ID 45



Remember when we programmed the repeaters. All 3 did 45, only 2 of them did 41.

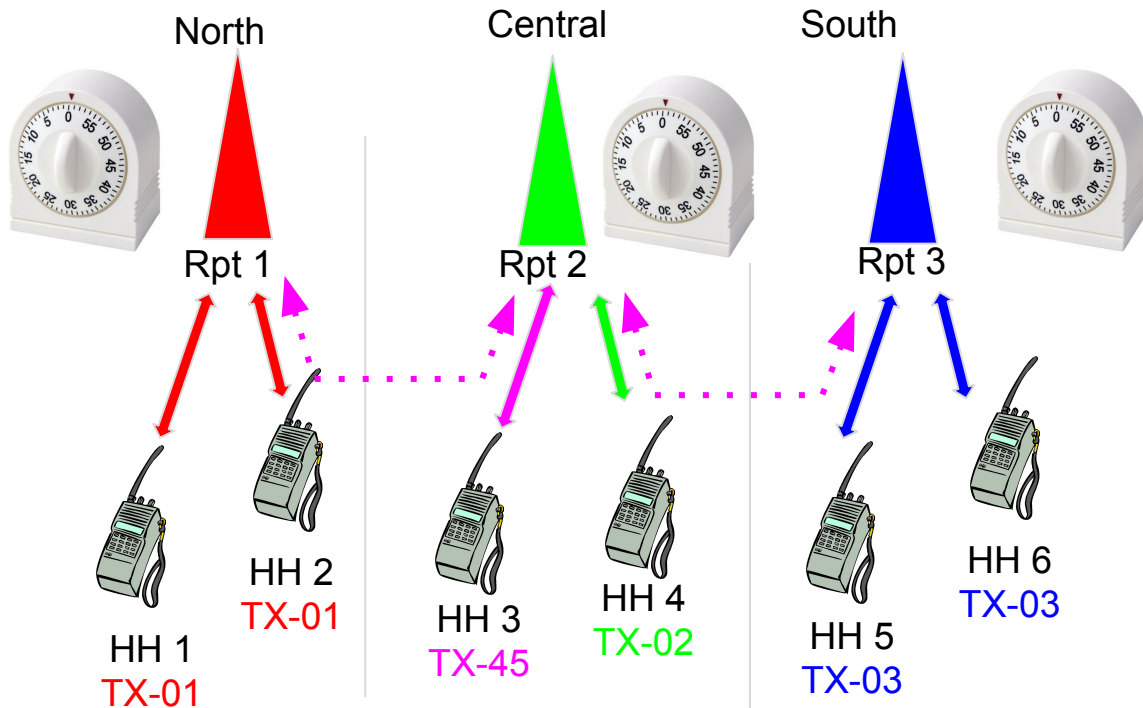
Once HH 3 keys up (and no repeaters had an active TOT,) all the repeater TOT will start, and ALL repeaters will be transmitting. (HH 3 will hear a Single Beep indicating the TOT started.)



{ All Handhelds have their radios DG-ID RX set to 00 (RX-00) }

DR-2X

California



Since ALL the Repeater TOT are activated, any HH, no matter what their DG-ID TX is set for, will be able to reply. (Until the TOT clears)

{ All Handhelds have their radios DG-ID RX set to 00 (RX-00) }

Once there is silence for 30 seconds, all 3 repeaters will transmit a Double Beep, and the Links will be broken.

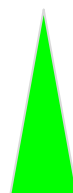
California

North



Rpt 1

Central



Rpt 2

South



Rpt 3



HH 1
TX-01



HH 2
TX-01



HH 3
TX-45



HH 4
TX-02



HH 5
TX-03



HH 6
TX-03

{ All Handhelds have their radios DG-ID
RX set to 00 (RX-00) }

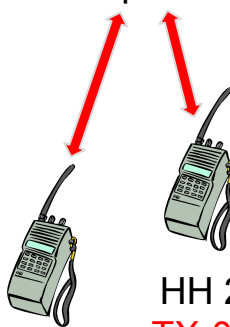
If the Operator of HH 1 left to get coffee just before the QSO's ended and the TOT Double Beeped, he will only be talking thru Repeater 1 if he keys up to say "Where is everyone?"

California

North



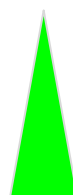
Rpt 1



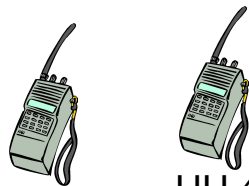
HH 1
TX-01

HH 2
TX-01

Central



Rpt 2



HH 3
TX-45

HH 4
TX-02

South



Rpt 3



HH 5
TX-03

HH 6
TX-03

{ Remember, when no TOT is running, your radio selects the route via your DG-ID TX number in your HH when you key up. }

DR-2X IMRS

Hopefully this brought light as to how the IMRS System works (as far as what we have found in testing.)

We still haven't touched on integrating the WiresX node into the mix.

Much thanks to the hams in this group that started the research and made it possible for me to get enough info from them to make this Presentation.

WA6YVX- Ed, AI5AI- DON, KG5AWL-Felix, KH6TA- Tommy
WA6NVL- Ray, AB8DT- Ron

73's

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