Kenwood TH-D710A Digipeater Setup

WB2LUA - 4/19/11

Secondary Station Identifiers

-0 Home station, or a home station running IGate.
-1 Digipeater, home station running a relay Digipeater and/or WX Digipeater (I use this one WB2LUA-1)
-2 Digipeater on 70 cm
-3 Digipeater
-4 HF to VHF gateway
-5 IGate (not home station)
-6 Operations via satellite
-7 Handheld radios (Kenwood TH-D7, Yaesu VX-8R, ICOM D-Star, etc)
-8 Boats, sailboats and ships (maybe 802.11 in the future)
-9 Mobiles
-10 APRS-IS only - APRS with no radio
-11 APRStouch-tone users (and the occasional balloon)
-12 Portable units such as laptops, camp sites, etc.
-13 *Not defined*
-14 Truckers
-15 HF stations

To Enter the Menu

1. Press the [F] key
2. Press the Tuning button
3. Esc to return to normal mode

Enable Repeater Tone

1. Press [TONE] until the "T" icon appears
2. Press [F] [T.SEL] and rotate tuning control to select tone frequency

Memory Storage

1. Press [VFO] to enter VFO mode and select the frequency of 144.390 MHz.
2. Press [F] and a memory channel appears, rotate tuning control to select
3. Press [M.IN] to store in memory.

Cross Band Repeater Operation

1. Set the transceiver for dual band mode with 440 on the left and make sure the TNC is off
2. Enter Menu 403
3. Set to Cross Band
4. Turn transceiver off
5. Press [TONE] + [Power On], the PTT icon blinks
6. To return to normal operation, repeat step 5.

Setting Time

1. Enter menu 525 and set time
2. Enter menu 526 to set the time zone UTC Offset (New York: EDT=-4.00 hrs, EST=-5.00 hrs)

Monitoring Packets

Press [PMON] to monitor individual packets

Basic Settings

1. Enter menu 600 and enter your station call sign, eg: WB2LUA-1
2. Beacon type should be APRS in the USA.

Setting the Internal TNC

1. Enter menu 601 and set as follows:
   Data Band: A-Band
   Packet Transfer Rate: 1200 BPS
   DCD Sense: D or RxD Band
   Tx Delay: 200 ms

Setting GPS Port

1. Enter menu 602
2. If you don't have a GPS receiver or weather connected, set the input and output to OFF
   If this is set to on, the My Position data will not be used.
3. To set for an external Byonics GPS:
   Baud Rate: 4800
   Input: GPS (the Kenwood manual has this backwards)
   Output: Off

Setting Way Point

1. Enter menu 603
2. Format: NMEA
3. Name: 67-Char
4. Output: All

Com Port On/Off

1. Enter menu 604
2. Leave this off if not connected to a computer or have other output use .

Programming Position Data

1. Enter menu 605
2. Enter name such as WB2LUA-1
3. Enter Longitude
4. Enter Latitude

Set Beaconing Information

1. Enter menu 606
2. Speed: On
3. Altitude: Off, unless you have a GPS receiver connected.
4. Position Ambiguity: Off, unless you want to suppress part of your coordinates.

Setting a Position Comment

1. Enter menu 607
2. Enter "In Service" or anything else you would like.

Setting Packet Filter

1. Enter menu 609
2. You can limit of distance of received packets if you are receiving too many packets from outside of your area.
3. You can also limit the types of stations received. In my area, we have weather stations as close as 1 mile apart. So, I suppressed receiving weather stations.

Selecting Your Station Icon

1. Enter menu 610
2. Select the icon that is appropriate for you station. In this case, select the Digipeater Star

Setting Beacon TX Algorithm

1. Enter menu 611
2. Packet Transmit Method: Auto
3. Initial Interval: 30 min

Programming a Packet Path

1. Enter menu 612
2. Type: *New-N Paradigm
3. Wide1-1: On
4. Total Hops: 2
5. Path is Via: Wide1-1, Wide2-1

Network

1. Enter menu 613
2. Select *APRS

Weather Station Data Output

1. Enter menu 515
2. TX: off or on if you have a weather station connected.
3. TX Interval: 30 minutes

Setting as a Digipeater (My Call)

1. Enter menu 616
2. Adds your call sign to the path if you are the first to receive the beacon
3. Digipeat: On

UICheck

1. Enter menu 617
2. Leave it set to the default 28 sec

UIDigi

1. Enter menu 618
2. Unidigi: On
3. Alias: Wide1-1

UIFlood

1. Enter menu 619
2. When activated, it keeps the beacons within a specified geographical area
3. I set mine to off

UITrace

1. Enter menu 620
2. To view special messages. I set mine to off

Setting Sound

1. Enter menu 624
2. If you don't want to hear beeps for each receive, switch RX Beep: Off

Enable APRS12 Beaconing

1. Press [TNC] on the right side of the panel to enable APRS12
2. Press [Beacon] on the bottom of the screen
3. Decay Algorithm: On
4. Proportional Pathing: On

Setting Screen Brightness Level

1. Aux, Enter Menu 501
1. If the rig is on 24/7, set the brightness level to 1.

Be sure to set the squelch high enough to block the background noise, but not too high to block beacons.

Note: in an emergency, the airwaves may be so saturated with beacons, it may be difficult to impossible to track a vehicle. In this case, you may want to try an alternate frequency and UI View to track them.