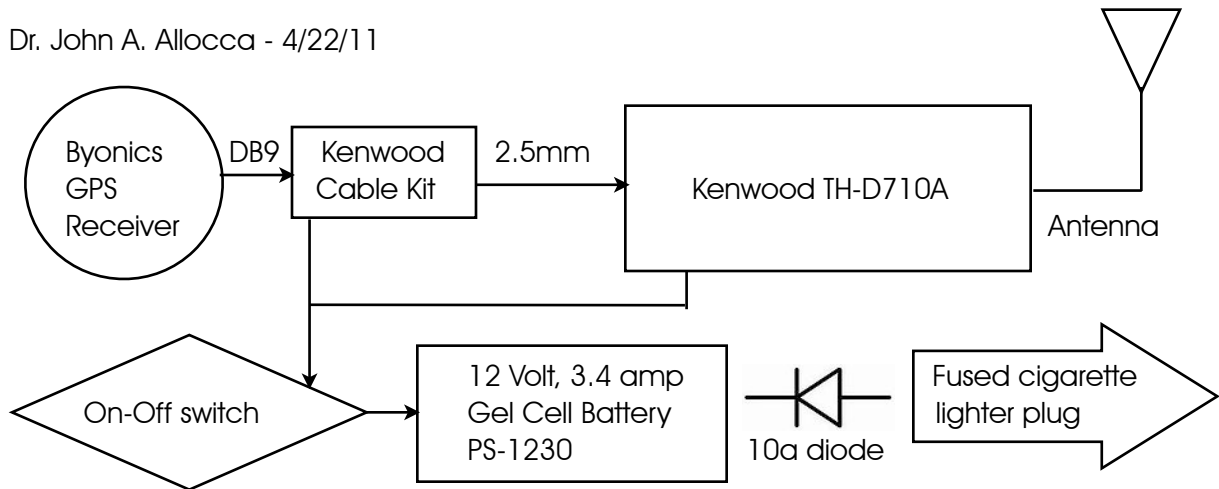


Kenwood TH-D710A APRS Mobile Setup

WB2LUA, Dr. John A. Allocca - 4/22/11



Notes

An on-off switch is necessary because the Kenwood TH-D710A draws a significant amount of power in the off state.

The diode is used to isolate the radio from the car's electrical system.

The battery also isolates the radio from the car's electrical system.

The following settings also apply to the Kenwood TH-72A HT.

Tracking

UIView 32 software with a radio, TNC, and a computer

Google Maps APRS: <http://aprs.fi/?lat=40.8287&lng=-73.3962&timerange=86400>

OpenAPRS - Google Maps APRS: <http://www.openaprs.net/>

Findu (for a specific call sign): <http://www.findu.com/cgi-bin/find.cgi?call=wb2lua-9&terra=4>

GPS Receiver

The Byonics GPS receiver acquires satellites quickly even from inside the car on the floor. You can also order the Kenwood cable kit with power pole connectors or cigarette lighter plug. www.Byonics.com

Power

I set the power of the Kenwood TH-D710A to M (medium - 25 watts)

Antenna

Depending upon your area, you may need a substantial antenna. On my vehicle, there are no places to mount an antenna. I use the Diamond K702M and SG7500A 2m/70cm mobile antenna.

Secondary Station Identifiers

-0 Home station, or a home station running IGate.

-1 Digipeater, home station running a relay Digipeater and/or WX Digipeater

-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-9 (-9 indicates mobile)
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
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-9
3. Enter Longitude
4. Enter Latitude

Set Beacons 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 "En Route" 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 Car icon

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: 5 minutes

Setting Sound

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

Enable APRS12 Beacons

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.