



VX1100-GHT Setup
Addendum to Stevens GHT Instruction
20 April 2006

Note: All commands are entered to the VX1100 and GHT through the use of a terminal program such as Windows Hyperterminal. Settings are 9600 BAUD, 1 stop bit, no parity, no flow control. Connection to the GHT is by means of a straight-through cable. Connection to the VX1100 requires a null modem.

VX1100-

1. The time in the VX1100 must be set to UTC time. Anytime the time in the VX1100 is changed, cycle power to the VX1100 after the time change. The backup battery in the unit should maintain the time. Cycling power will reset the GPS sync time from the GHT, initializing the VX1100 in preparation for the first sync pulse from the GHT. Once this is done and the system is operational, the VX1100 will receive a time sync pulse before every transmission from the GHT to keep its time on track.
2. The essential parameters for setting the VX1100 GOES operation are simply to enable GOES transmissions in the "GOES TIMED" submenu and set the proper time for first transmission. The channel and NESDIS ID information are contained in the GHT, and the entries in the VX1100 are ignored.
3. Do not attempt to load previous VX1100 configurations saved from earlier versions of firmware. They may not be compatible with the new firmware in the VX1100. The user can create new configurations and save them to a PC from a unit with the new firmware, and upload that into other units with the same new firmware.

GHT-

1. The user must set the following parameters to agree with NESDIS information supplied for the site:

- a. NESDIS Channel (CH command)
- b. Transmit interval (IS Command)
- c. Transmit offset (TO command) (Time of first transmission, offset from 00:00 time)
- d. Transmit BAUD (RB command)

2. In addition, the user should verify the wakeup time for triggering a message from the VX1100 is set to 40 seconds (CT Command).

3. The GHT serial port will be active as soon as the unit is powered up. The user can observe the normal initial GPS cycle being displayed on the terminal screen if the terminal is hooked to the GHT. After the GPS cycle is complete (approximately 1 minute 15 seconds), the user can begin entering commands to program the unit. If the GHT has been on without a terminal attached, the user can attach the terminal and cycle power to the GHT to initiate the above cycle, or hit the "ESCAPE" key three times to wake up the GHT. The GHT may take up to 20 –30 seconds to respond to the "ESCAPE" wakeup sequence.

4. After making program changes to the GHT, be sure and enter an SC command (Save Configuration) to save your changes.

Additional Note: *There is no power switch on the GHT. It is powered on as soon as power is connected. It is recommended that all power connections to the system be performed while the power connector to the GHT is removed. Once all connections are made, and the user is ready to power up the VX1100, connect the power to the GHT unit. Upon connecting power, observe that the following light sequence is seen with regard to the front panel lights on the GHT:*

- a. *GPS light comes on solid*
- b. *Fail Safe light flashes approximately once a second for 3 or 4 flashes, then goes out.*
- c. *Power light flashes continuously once a second.*
- d. *After a little over 1 minute, the GPS light should go out.*

This sequence indicates a proper power up of the GHT. IF anything other than this sequence occurs, remove power from the GHT, wait 10 seconds, and re-apply.

After all programming is complete, be sure to connect the DB9 serial cable from the piggy-back board on the front panel of the VX1100 to the serial port of the GHT.

Sequence of Operation

1. Approximately 5 minutes before the GHT is scheduled to transmit, the GPS light on the front panel will come on, indicating the unit is getting a GPS time fix. This light should stay on for a little over 1 minute.
2. Approximately 45 seconds before the scheduled transmission, the GHT "RX" light will come on, indicating the GHT is ready to receive data from the VX1100.
3. Approximately 30 seconds before the scheduled transmission, the VX1100 will format a message and transfer it to the GHT.
4. Approximately 5 seconds before the scheduled transmission, the "RX" light on the GHT will go off.
5. At the time of transmission, the "TX" and "FS" lights on the GHT will come on, and remain on until the transmission is complete.

Note that you must manually set GMT time in the VX1100 when you first set things up, or at least verify that it is correct. It should be maintained by battery backup in the VX1100. Set the GHT wakeup (CTS) time to 40 seconds, and make sure the transmit information in the VX1100 and the GHT are the same (Time interval, Time offset). The GHT does NOT trigger a data transfer from the VX1100. The VX1100 transfers data 30 seconds before the transmit window. It only gets a time sync to keep its clock on time from the CTS signal from the GHT. Once the GHT and VX1100 are in time sync, they should stay that way.