

Working Principle for WH2 transmitter:

1. After power on, the MCU will make a full segment display to test the LCD, and in the mean time HF_DATA is set high so that TX module will be switched on to monitor TX power for production tuning. The above testing mode will be lasted for 3 to 4 seconds.
2. LCD is cleared and TX module tuning mode is off. MCU make a temperature and humidity measurement.
3. Temperature and humidity data is sent out through the HF_DATA port via the ASK TX module.
4. Within the first 16 transmission, the MCU will transmit every 8 seconds. After the initial 16 transmission the MCU will enter normal working mode: temperature data and humidity data will be transmitted every 48 seconds.
5. During the time span of 48s, temperature and humidity is measured periodically.
6. Data is modulated this way: if a 1 is transmitted, the ASK module will be turned on for 0.5ms, and then off for 1mS. If a 0 is transmitted, the ASK module will be turned on for 1.5mS, off for 1mS.
7. The HF circuit is made up with two stage of amplifier: the first stage has the data modulated into the frequency defined by the SAW resonator, and the second stage has the power amplified and transmitted into the air.