DP-866 Operational Description

DP-866 is a Weather Station, it depends on the outdoor temperature sensor with wireless sending. The wireless working freq. is 433.92MHz, used the ASK modulate mode for output. The receiver and transmitter r's working voltage are both DC 3V.

The outdoor transmitter get the data 10 seconds once a time. The sending include handing-sending and auto-sending. The auto-sending include data changing sending mode and fix time sending mode. The sata changing sending mode is when the humidity changed exceed 2% and the temperature changed exceed 1 degree, it will send data to receiver one time every 36s. The fix time sending mode is 2.5 minutes send data to receiver one time. The antenna is a copper wire around to a loop , the wire's diameter is 0.6mm.

Transmitter check the temperature and humidity of the ambience and convert them to corresponding digital dominate signal, such as 25, Add this dominate signal on the base of modulation Triode as the binary system (0, 1). Adjust the low level signal to 433.92MHz and blast-off modulation signal through the antenna.

The receiver can display humidity and temperature, indoor and outdoor. It get the data 10 seconds once a time from indoor, and get the data 500ms once a time from outdoor. The data receive mode include two modes, one is auto-receive mode, when the receiver working in normally mode, it is in auto-receive mode, Auto receive the data 500ms once a time. Another mode is compel-receive mode, in the back of receiver, push the Channel button long time into the compel-receive mode, When get the useful data, then exit this mode. If not got, then incessant this mode unit 3 minutes. The receiver used super-regenerative receiver for the data demodulate and amplify. The receiver's antenna is a 18cm long wire.

Receiver receives the 433.92MHz modulation signal through the receiving antenna, filter the frequency through the RC and mix the frequency throuth the high frequency dynatron. In the end, the receiver demodulates the binary-sytemic low level Triode signal. The LCD screen shows the information according the instruction received by receiver.