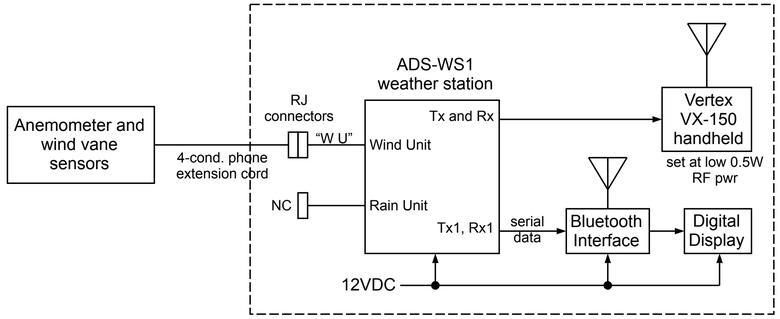
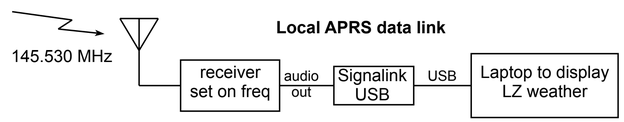
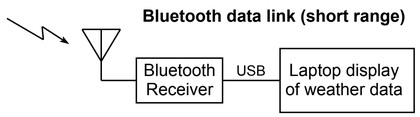
Weather Box



Local APRS data link

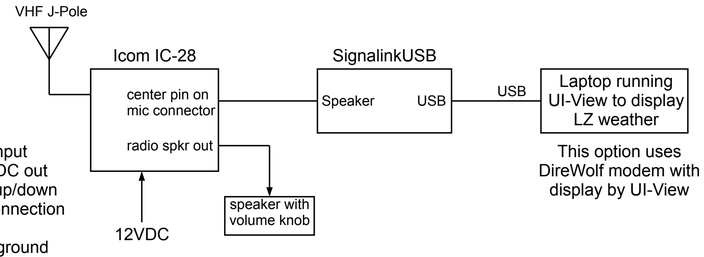


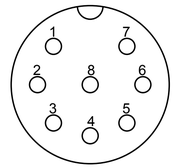
Bluetooth data link (short range)



Wiring from ADS-WS1 to VX150 details

Base unit receiver connection details

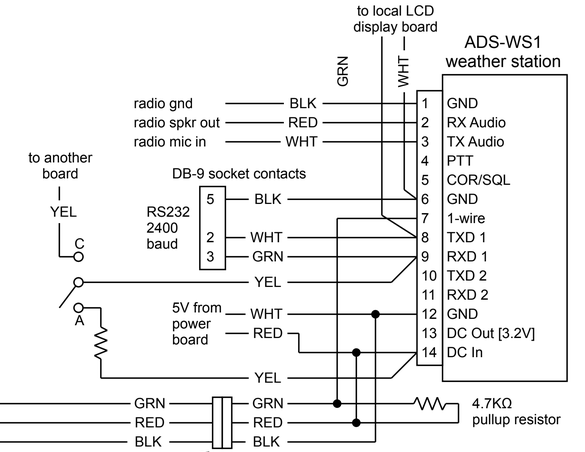




1: mic input
2: +8V DC out
3: freq up/down
4: no connection
5: PTT
6: PTT ground
7: mic ground
8: AF output

Mic receptacle on Icom IC-28 front panel view

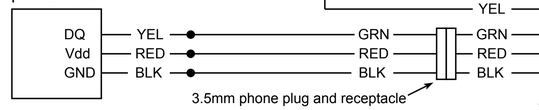
ADS-WS1 connection details

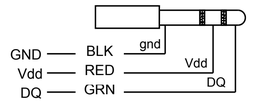


Original DS18B20 temperature sensor probe
Stainless steel shell (6*50mm), lead length 100cm

3.0V ~ 5.5V power supply
9 ~ 12 adjustable resolution
The temperature range of -55 ~ +125

The output leads:
red (VCC)
yellow (DATA)
black (GND)





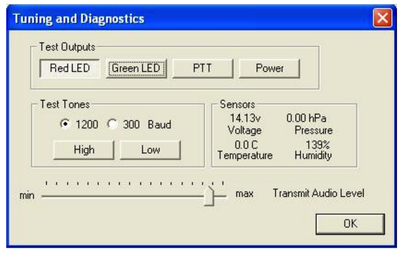
Wiring from DS18B20 to ADS-WS1 details

ADS-WS1 Terminal Block Connections

Pin	Function
1	Ground
2	Receive audio (from radio)
3	Transmit audio (to radio)
4	Push to Talk output
5	COR / Squelch signal from radio
6	Ground
7	1-Wire data bus
8	Serial port 1 TX
9	Serial port 1 RX
10	Serial port 2 TX
11	Serial port 2 RX
12	Ground
13	DC Out (5A max)
14	DC In (5 to 20 VDC, 50 mA)

Weather Box APRS Configuration

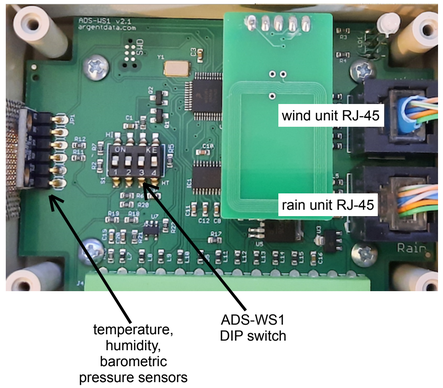
```
Firmware Build 60700          "Send Voltage in Comment" checked
Voice ID (none)               Path WIDE1-1
Callsign (APRS) K6MFW-13      TX Interval 10 seconds
1200 baud                     Quiet Time 1

Comment "Parachute Mobile Weather Box" every 10 APRS transmissions
"Power Control" checked, Power Delay 2 seconds

Position: N37 °, 50.12', W121 °, 38.02' Elevation 76 meters

"Transmit on Wind Changes" not checked
Carrier Detect Mode: "Energy Detect" checked

Radio Interface
     TX a little behind second tick mark from Max
     200 TX Delay (mSec)
     "Don't transmit if supply < 0.00" unchecked

UTC Offset -7.00 hours

Sensor Setup

Internal temperature offset (°F) = 0     Anemometer rate (MPH/closure/sec) = 1.50
Internal humidity offset (%) = 0         Wind vane orientation (degrees) = 0
Interal humidity gain = 1.00             Barometer offset (Pascals) = 0
Rain gauge increment (1/1000 inch) = 11
Remote temperature offset (°F) = 0       Remote humidity gain = 1.00
Remote humidity offset (%) = 0           Remote barometer offset (Pascals) = 0

Data sources

Indoor Temperature = internal        Barometer = internal
Outdoor Temperature = internal       Wind = internal
Indoor Humidity = internal           Rain = internal
Outdoor Humidity = internal

Load Voice Data, Voice Setup not used

Tuning/Diagnostics
```



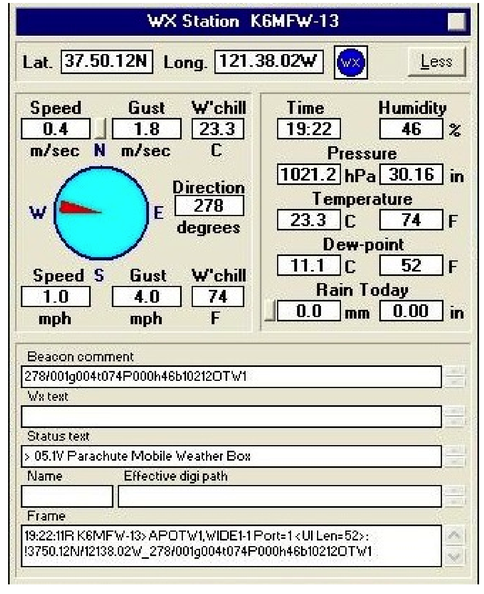
ADS-WS1 DIP Switch Function

1 OFF = Increase audio output level
2 OFF = Increase audio output level
3 OFF = Enable COR pull-up
4 ON = HT push-to-talk mode

Inside Argent Data ADS-WS1 weather station



Laptop APRS UI-View station window of data



Weather Box Bluetooth Configuration

Weather box has an onboard Bluetooth transmitter for additional option of wireless transmission of data. This is detected on small XP laptop as device name of Datasender and service name of SPP. It appears as COM40 which this serial port is selected from PuTTY.

Using another computer to sense Bluetooth, the name of device is ELK-BLEDOM.

Bluetooth data from COM40 from small laptop PuTTY window

```
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
!!W Dir:N W Spd:0  Av Sp:o W deg:0  Temp:70f Bar:30.27in  Hum:55%  r wi:0
LINE!!0000000002BC0000280D02BC022602260000000000000000
```

Drawing Index:

PM-E1000 General Wiring Diagram
PM-E1001 Primary Air-to-Ground Wireless Video Wiring Diagram
PM-E1002 Secondary Air-to-Ground Wireless Video Wiring Diagram
PM-E1003 I-Gate Station Wiring Diagram
PM-E1004 UHF Wireless Video Wiring Diagram
PM-E1005 Video Receive, Select, and Stream Wiring Diagram
PM-E1006 GPS and PulseOx to APRS Transmitter Wiring Diagram
PM-E1007 Weather Station Wiring Diagram
PM-E1008 Jumper 2-Way Radio Communications Wiring Diagram
PM-E1009 Jumper HF Communications Wiring Diagram
PM-E1010 Slow Scan Television SSTV Camera Wiring Diagram
PM-E1011 Eachine Mini Video Recorder for FPV drones Wiring Diagram
PM-E1012 Video Distribution System Wiring Diagram
PM-E1013 RunCam Video Recorder for FPV drones Wiring Diagram
PM-E1014 Rooftop PTZ Camera System Wiring Diagram

REV	DATE	REVISION DESCRIPTION	DRAWN	APP
5	4-6-26	Added 3.5 mm plug and receptacle for DS18B20 sensor	MF Wright	
4	3-31-26	Added DS18B20 temperature sensor	MF Wright	
3	3-25-26	Updated with new ADS-WS1 weather unit	MF Wright	
2	4-4-18	Added ADS-WS1 inside photo, changed APRS freq to 145.530MHz	MF Wright	
1	8-18-17	Update to show APRS data over RF, and other circuit details.	MF Wright	
0	10-13-15	initial release	MF Wright	

NEXT ASSY | USE ON

APPLICATION

PARACHUTE MOBILE "In The Air, On The Air"
www.parachutemobile.org

Parachute Mobile Communication Systems Weather Station Wiring Diagram

DRAWN MF WRIGHT	CHK	INDEX	FSCM. NO.	LIMITS UNLESS NOTED
DESIGN ENGR M. PECHNER	TEAM POSITION Video Ops		DATE 4-6-26	
CONSULTANT M. PECHNER	AS DWG NO Sheet 1 of 1		PM-E1007	REV 5
TEAM COORDINATOR R. FENN	SCALE NONE			

FILE NAME: ParachuteMobile_E1007