

# 600-TWS

## TACTICAL WEATHER STATION

### Applications

- HAZMAT
- Fire Management
- Military / Tactical Weather
- Aviation Weather
- General Meteorology

### Features

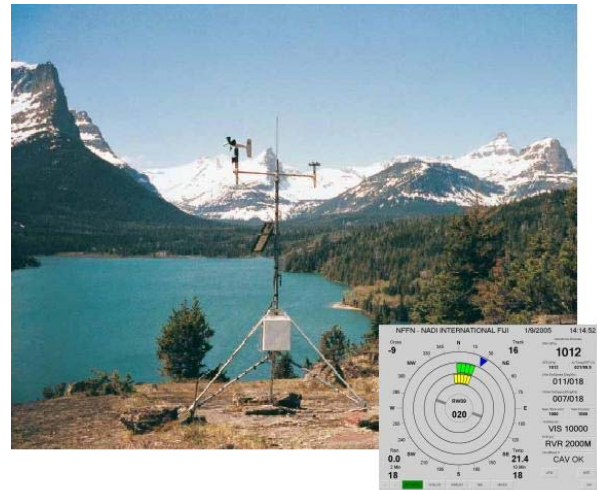
- Highly reliable operation
- Easy and quick setup
- Rugged construction
- Low weight
- Low power consumption
- Fixed or portable design

### Description

The MTECH Systems 600-TWS is a robust and easily deployable tactical weather system stand-alone instrument designed for fixed and mobile installations where accurate and reliable cloud weather information is required. The design is based on a rugged tripod construction and removable and interchangeable modular sensor components. There are many options for communication of the data you have collected. Display and storage is through the MTECH MITAS display software. The whole system is stored within two military specification cases and is easily carried to location and setup within 30 minutes by a single operator.

### Telemetry Options

The TWS has three signal outputs, RS-232 for shorter distances (up to 10 meters), Ethernet for distances up to (100 meters), and RS-422 output for longer runs (up to 1200 meters). Two wireless communications options are available. A UHF radio data modem allowing distances of up to 1-10 Kms (line of sight). Also the wireless data link 1-5 Kms (line of sight) option can allow



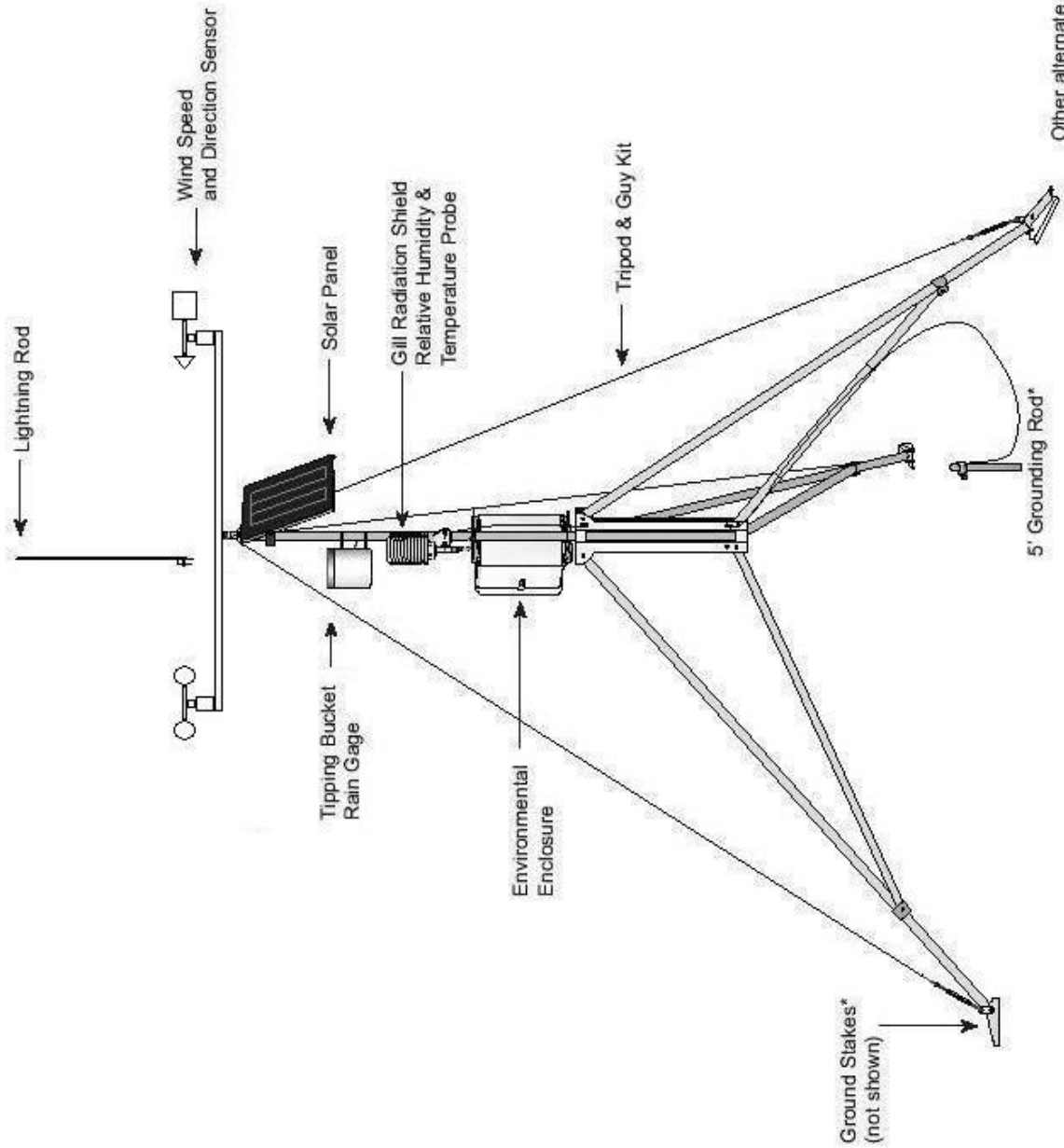
600-TWS in deployed configuration and data display screen.

communication directly into your laptops wireless network card. The whole system is supported by an internal rechargeable battery and optional solar panel. The data logger can be accessed locally via serial cable or Ethernet cable. The data logger has an internal flash memory chip capable of handling “SD” type COTS flash chips between 32 MB and 2 GB. The whole system can run unattended and all data history can be accessed at a later stage.

### Data Presentation

The 600-TWS employs the field tested and proven reliable MITAS software product. This allows the clear display of current weather variables, storage of all weather data and retrieval and reporting at a later stage.

Specifically designed screens cater for the needs of air traffic controllers, fire fighters and military personnel. Clear graphical and textual displays allow rapid understanding of the conditions so that timely and decisive operational choices can be made.



Other alternate sensors available.

## ***HAZMAT***

The 600-TWS is an ideal solution for those situations requiring a quick-response, field-deployable meteorological station. The system can be set up in less than three minutes and start sending critical information on local conditions to any command center within radio range. A range of task specific sensors and software modules can be deployed tailoring the system to any given task it may be assigned to.



## ***Fire Management***

The prevailing weather conditions play a pivotal role in the management of controlled burns and raging forest fires alike. With the system setup near the fire front it will send out real-time wind, temperature and humidity information to the personnel in the field. The use of optional wireless communications can allow fire commanders to monitor weather data from a safer location.



## ***Military/Tactical Weather***

The 600-TWS is in use with various branches of the military around the world. It is currently in use for HAZMAT response, nuclear-biological-chemical (NBC) reconnaissance and response and artillery support. Air force personnel have used the system in remote tactical helicopter and cargo aircraft operations.



## ***Aviation Weather***

The TWS provides an excellent mobile platform for providing basic aviation weather information at temporary or lightly-used airports. The system can also be deployed as an emergency backup system in the place of an inoperative permanent aviation weather station. METAR construction and automated ATIS broadcast are also available capabilities of the system



## ***General Meteorology***

The 600-TWS can also been used for general meteorological uses in a number of diverse applications, including temporary synoptic stations, evaporation monitoring in remote water storage, agro-MET monitoring and many other uses.



## General Specifications

Item	Technical Data
Voltage	11 – 14 VDC
Current	50 mA (Typical without radio comms)
Operating Temperature	-40 to +65 Degrees C
Weight	< 40 Kgs (Basic System)
Colors	White, Aviation Orange / White, Olive.
MTBF & MTTR	MTBF > 10,000 Hrs; MTTR < 1hr

## Communications

Item	Technical Data
Serial	RS-232/485 Baud Rate: 2400 Max Distance:100m/1200m
Ethernet	TCP/IP 10/100 Mbps. Max Distance 100m
Radio	450/900 MHz Unlicensed. Max Distance: 10 Kms
Wireless	2.4 GHz 802.11B/G. 22Mbps Rate adaptive Max distance: 5kms

## Environmental

Item	Technical Data
Operating Temperature	-20 to +65 Degrees C
Operating Humidity	0 to 98% condensing
Operating Wind	> 50 m/s (When pegged down)
Storage Temperature	-40 to +85 degrees
Storage Humidity	0 – 98% non-condensing
System Protection	Lightning Shock & EMI Protection

## Sensor Specifications

Item	Technical Data
Wind Speed	0 – 65 m/s. Resolution: 0.1 m/s (911-WS)
Wind Direction	0 – 359 Degrees. Resolution 1 Degree. (911-WS)
Temperature	-50 to +80 Degrees C. (912-M2)
Humidity	0 - 100%. Non-condensing. (911-M2)
Dewpoint	Resolution: 1 degree C. (911-M2)
Precipitation	Resolution: 1 ml per second. Volume: >200mm/hr (915-RG)
Pressure	Single Transducer 600 – 1100 hPa. Resolution: 0.5 hPa (919-SPS)
Solar Radiation	Range: 0 – 1500 W/m2 Accuracy: +/- 3%
Visibility	Forward Scatter Sensor. Range: 0 – 15Kms
Cloud	3 Layers plus Vertical Visibility. Range:15 – 25,000 Ft
Lightning	Cloud and Ground strikes. Range: 0 – 50 Kms.

## Logger

Item	Technical Data
Memory	32Mb – 2 Gb SD Type Flash Memory (Removable)
Weight	0.8 Kgs
Power	11 – 14 VDC
Inputs	7 Analogue, 2 digital, 1 Aux

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