

**AGRONOMIC INNOVATION
AT YOUR FINGERTIPS**

Weather
Monitoring



Technology



Actionable
Solutions



Turf Health
Management



Irrigation
Measurement



Spectrum[®] Technologies, Inc.

**SERVING YOU
SINCE 1987**



Dear valued customer,

Spectrum Technologies is dedicated to meeting our customers' needs through innovative technologies and unsurpassed engineering design capabilities. Add to that our comprehensive range of customer support services, and you'll find a unique partner willing to find actionable and cost effective plant measurement solutions around the world.

For over 25 years, the most important thing we've built - is relationships. We work closely, listening to our customers to understand their needs, and use our expertise to discover innovative ways to accomplish goals as efficiently and cost-effectively as possible.

As an innovator, Spectrum has developed a broad line of quality products in the area of crop climate monitoring, nutrient management, soil moisture measurement and pest management. I am pleased to introduce our latest technology platform of Retriever & Pups Wireless Sensor Network and SpecConnect, a cloud based crop data management solution. Both have recently won AE50 Awards by the American Society of Agricultural & Biological Engineers.

This could not have occurred without the input from our valued customers and the talents of a passionate product development team. Thank you for your support and commitment to innovation!

Sincerely,

A handwritten signature in black ink that reads "Mike Thurow". The signature is fluid and cursive.

Mike Thurow
President & CEO
Spectrum Technologies, Inc.



EASY TO CONTACT US

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Innovation You Can Count On

Spectrum Technologies aims to consistently deliver the latest in Agronomic technology. Our global sales & marketing, and product development teams are dedicated to building lasting relationships and helping customers be more satisfied, profitable and efficient in the field. Thank you for your business!





Award Winning Products

Since 1987, Spectrum Technologies has won over 21 AE50 Awards from the American Society of Agricultural and Biological Engineers, which demonstrates the deep commitment to innovation and quality.

- 2015 SpecConnect Web Portal
WatchDog® Retriever & Pups Wireless Network
- 2013 FieldScout® GreenIndex+® SmartPhone App
WatchDog Cellular Alert Stations
- 2012 WaterScout® SMEC 300 Soil Moisture/EC/
Temp Sensor
- 2011 WatchDog 1000 Series Micro Station
LightScout® DLI 100 Light Meter
- 2008 WatchDog Sprayer Station
SpecMaps™ Web Mapping Utility Software
- 2007 WatchDog 2000 Series Mini Weather Station
- 2005 SpecWare™ Software
- 2004 FieldScout Direct Soil EC Probe
FieldScout TCM 500 Turf Color Meter
WeatherTracker Greenhouse Growth Tracker
- 2003 WatchDog WeatherTracker
FieldScout SC 900 Soil Compaction Meter
- 2002 WatchDog Weather Station
FieldScout TDR 300 Soil Moisture Meter
- 2001 FieldScout CM 1000 Chlorophyll Meter
- 2000 WatchDog Data Logger
- 1999 StarLogger Data Logger
Investigator Soil Compaction Meter
WatchDog Leaf Wetness/Temperature Logger

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SpecConnect Integrated Wireless Solution

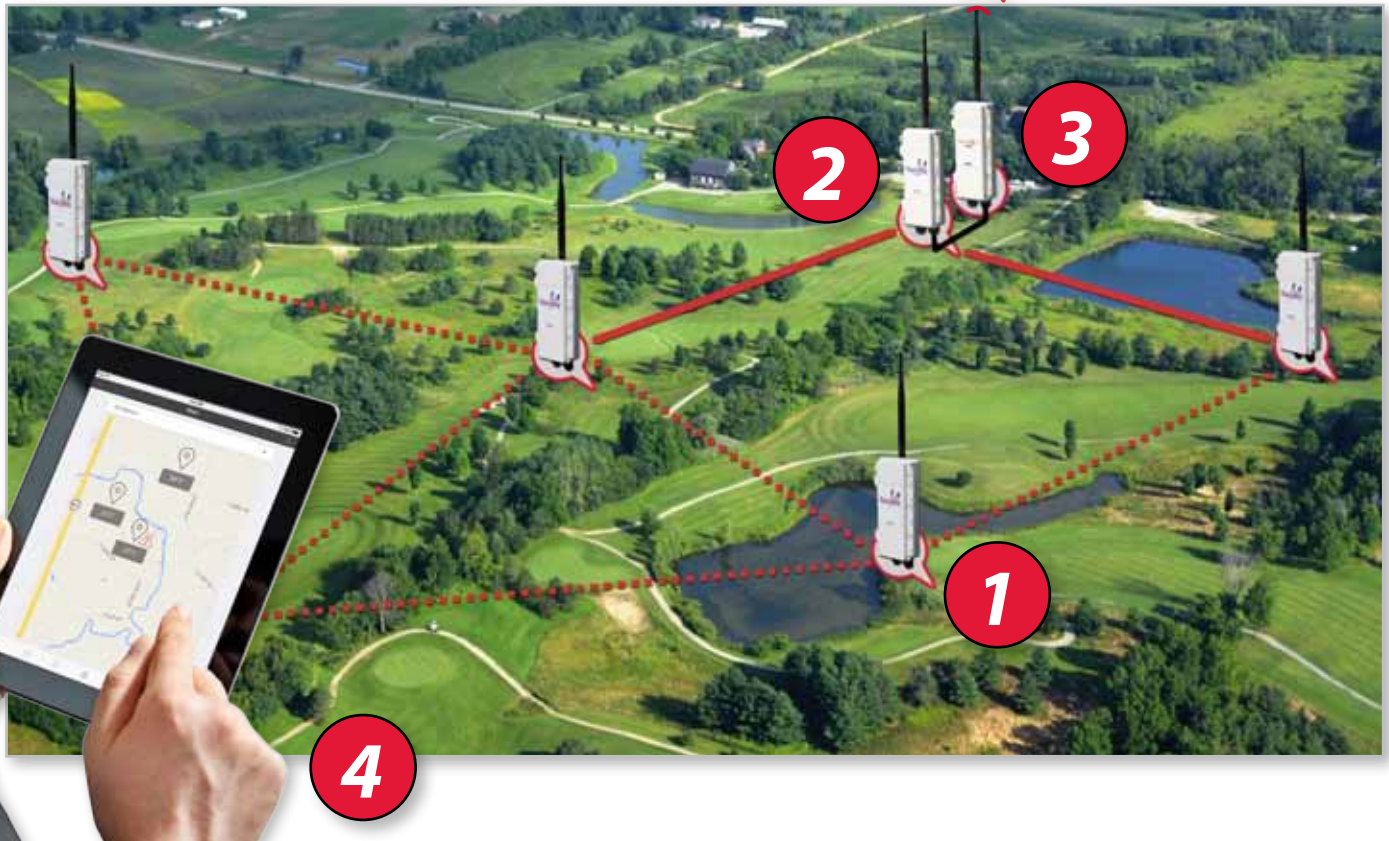
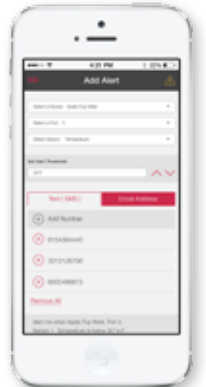
Your Course. Your Data. Better Decisions.

Monitor your course from wherever you are with Spectrum's new WatchDog Retriever & Pups Wireless Network & SpecConnect Web Portal



How It Works:

- 1 WatchDog Pup**
 - Capture real-time, site-specific data with customized nodes
 - Each Pup can be configured with up to 4 sensors
 - All data is sent wirelessly to the Retriever
 - Maintain data integrity through "self-healing" mesh network
- 2 WatchDog Retriever**
 - Receives all data from Pup network
 - One Retriever can support up to 16 Pups per network
- 3 DataScout™ Modem**
 - Connects to the Retriever and communicates Pup data to the web
 - Choose from a variety of cellular and Wi-Fi models
 - Solar powered option, never worry about battery drain
- 4 SpecConnect Web Portal Cloud Solution**
 - Real-time data viewable on your computer, smart phone, or tablet
 - Simple to use and 100% customizable dashboard
 - Send custom threshold alerts via text message or email
 - Configure your network from your computer, smart phone, or tablet





WatchDog Pups

Each Sensor Pup within the network is compatible with a diverse number of sensors and offers flexibility by allowing the superintendent to monitor the sensor inputs they require.

- Pups are available in 3 types: Sensor Pup, Station Pup, and Repeater Pup
- Single button operation: check battery status, signal strength, and join sensor network
- Tri-colored LEDs indicate battery level, signal strength, and data communication status
- Includes six non-rechargeable AA batteries (8 months typical life)
- Communication range of 2,500 ft (about 1/2 mile), line-of-sight installation recommended between Pups or Retriever
- Pups are 900 MHz; 2.4 GHz also available for international use - Call for details

Sensor Pups

- Connect up to 4 external sensors via 2.5mm stereo-plug (see page 12 for sensor options)
- Can monitor high, low, current, and average values for each sensor during each logging period

Station Pups

- Connects to your existing WatchDog 2000 Series Full and Mini Weather Stations (see page 10 for firmware requirements)
- Sends all Weather Station sensor data to your Retriever network
- No external sensors, can only be connected to another device

Repeater Pups

- Provide added range to WatchDog Retriever networks
- Serves as a "hopping node" around buildings or obstacles, or over high sections of your course
- No external sensors can be connected



NEW

WatchDog Retriever & Pups
See page 9
for ordering information

NEW

WatchDog Retriever

Retriever logs sensor data from its network of Pups (max 16 Pups per network).

- Single button operation: switch modes, download data, upload configuration, and check battery status
- Tri-colored LEDs indicate mode, battery level, data communication status, and configuration status
- Non-volatile memory preserves your logged data, even when the batteries are removed
- Transfer data or configuration information via flash drive or direct PC connection
- Internal flash memory on the Retriever will hold approximately 6 months of data for a 10 Pup network using 15 minute logging intervals
- Spectrum-supplied USB flash drive will hold several years of data at the Retriever for a 10 Pup network using 15 minute logging intervals
- 3.5mm stereo port for computer connection USB cable (included)
- AUX port for wireless (DataScout Cellular or WiFi modem, see page 10) communication connection
- Includes six non-rechargeable AA batteries (8 months typical life)
- DC port for optional AC/DC power adapter (Max 17VDC)
- Optional solar package includes rechargeable battery pack (2200 mAh, 7.2V NiMH), and 5W solar panel
- Retrievers are 900 MHz; 2.4 GHz also available for international use - Call for details
- Retriever & Pups Launch Utility software included on USB flash drive



SpecConnect Web Portal & Mobile App



- www.SpecConnect.net - Central point for viewing and evaluating real-time data instantaneously on the internet for better decisions to improve course quality, conserve resources, and increase profits
- Cloud-based data analysis tool to deliver summarized data to end users - annual subscription required
- Collects in-field data from FieldScout mobile devices via Bluetooth and the FieldScout mobile app (see page 32) for remote monitoring
- View map-centric data on web/mobile devices
- Utilize GPS/cellular information to geo-locate Pups & Stations using the mobile app
- View current conditions and monitor weather factors that increase risk
- Allows easy creation of reports and charts
- Offers alert capabilities that notify users via text and/or email when user-defined critical sensor thresholds have been breached
- Creates a level of customization to provide end-users the data they need upon login
- Can support multiple users at the same time



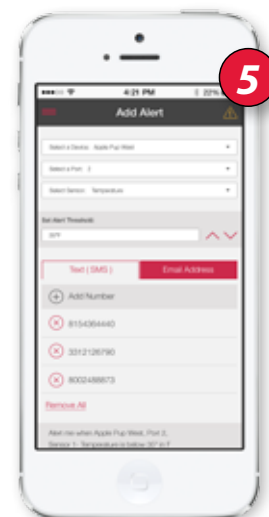
1 Dashboard
- Customizable layout tabs for multiple views

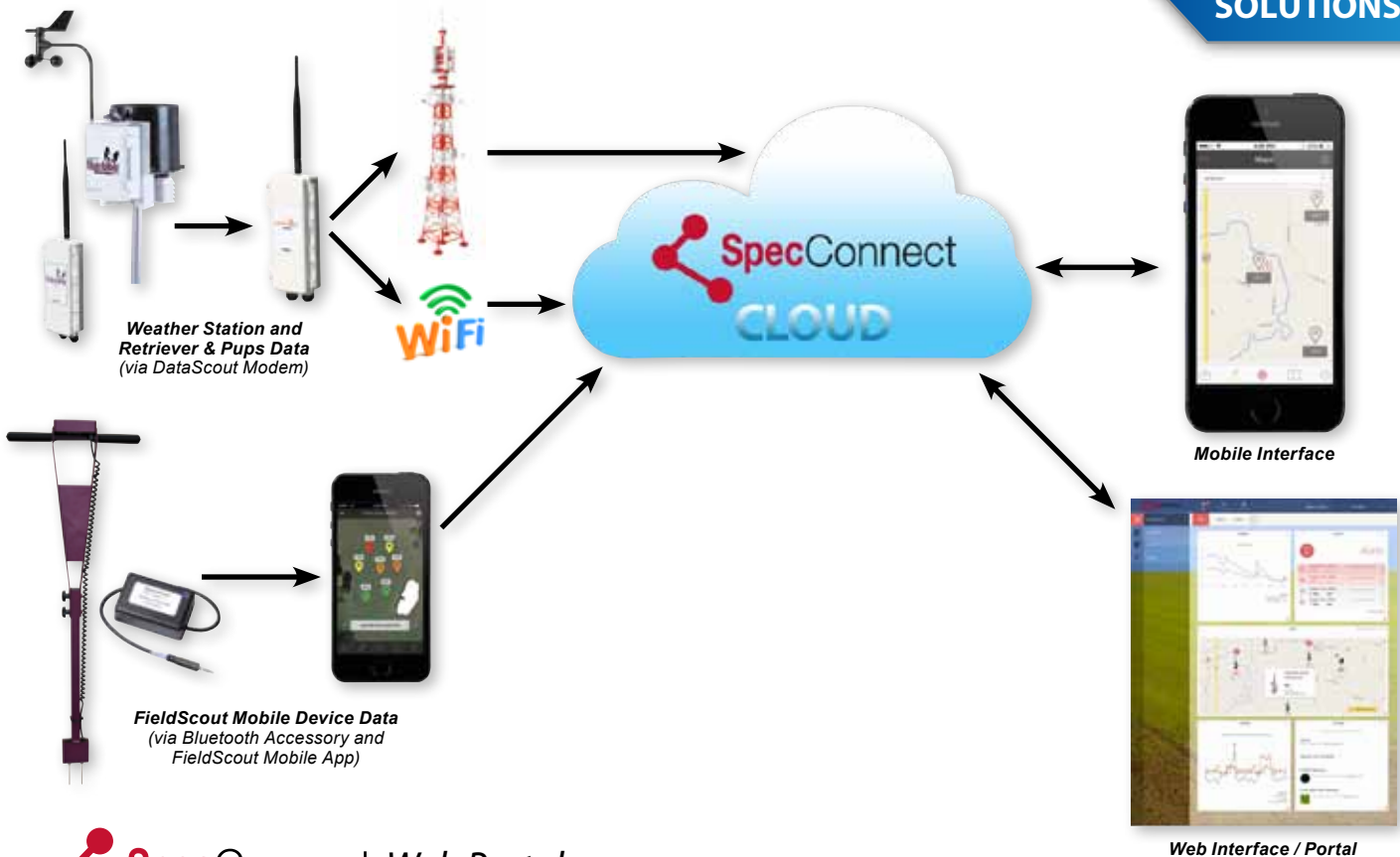
2 Alerts
- Create custom alerts, configure up to 4 phone numbers for text messages and 4 email addresses - additional subscription required
- View alert summary right on the Dashboard

3 Map View
- See all of your station locations, along with current conditions
- Hover over a station to view expanded details
- See if any stations are in an alert state

4 Equipment View
- See real-time weather information, including current readings for all external sensors
- View data in column format or line graph

5 Mobile App
- Free fully-functional mobile app for your smart phone and tablet - iOS and Android versions
- View all data, and configure stations, sensors, alerts, and basic reports





SpecConnect Web Portal

- Web Portal connection requires a WatchDog Retriever & Pup network or a 2000 Series Full or Mini Weather Station to collect and log data, and DataScout Modem to send data to the internet
- Free SpecConnect Mobile app available for both iOS and Android devices

Initial Setup Fee

Item 3000 SpecConnect Set-up Fee
Per device with modem

Subscriptions (all subscriptions include one device)

Item 3005 SpecConnect Basic 1-yr Subscription - Cellular
For WatchDog devices, includes cellular plan

Item 3010 SpecConnect Pro 1-yr Subscription - Cellular
For WatchDog devices, includes cellular plan

Item 3025 SpecConnect Basic 1-yr Subscription - WiFi

Item 3030 SpecConnect Pro 1-yr Subscription - WiFi

Item 3035 SpecConnect FieldScout Pro 1-yr Subscription

Add-on Services

Item 3040 Additional Login (1-yr)

Item 3045 Additional WatchDog Device - Cellular (1-yr)
Needed per Pup or Station, includes cellular plan

Item 3055 Additional WatchDog Device - WiFi (1-yr)
Needed per Pup or Station

Item 3060 Additional FieldScout Device (1-yr)
Needed per device

Item 3070 Alerts Function (1-yr)
Needed per device

Item 3065 API Service (1-yr)

SpecConnect BASIC VS. PRO SUBSCRIPTIONS

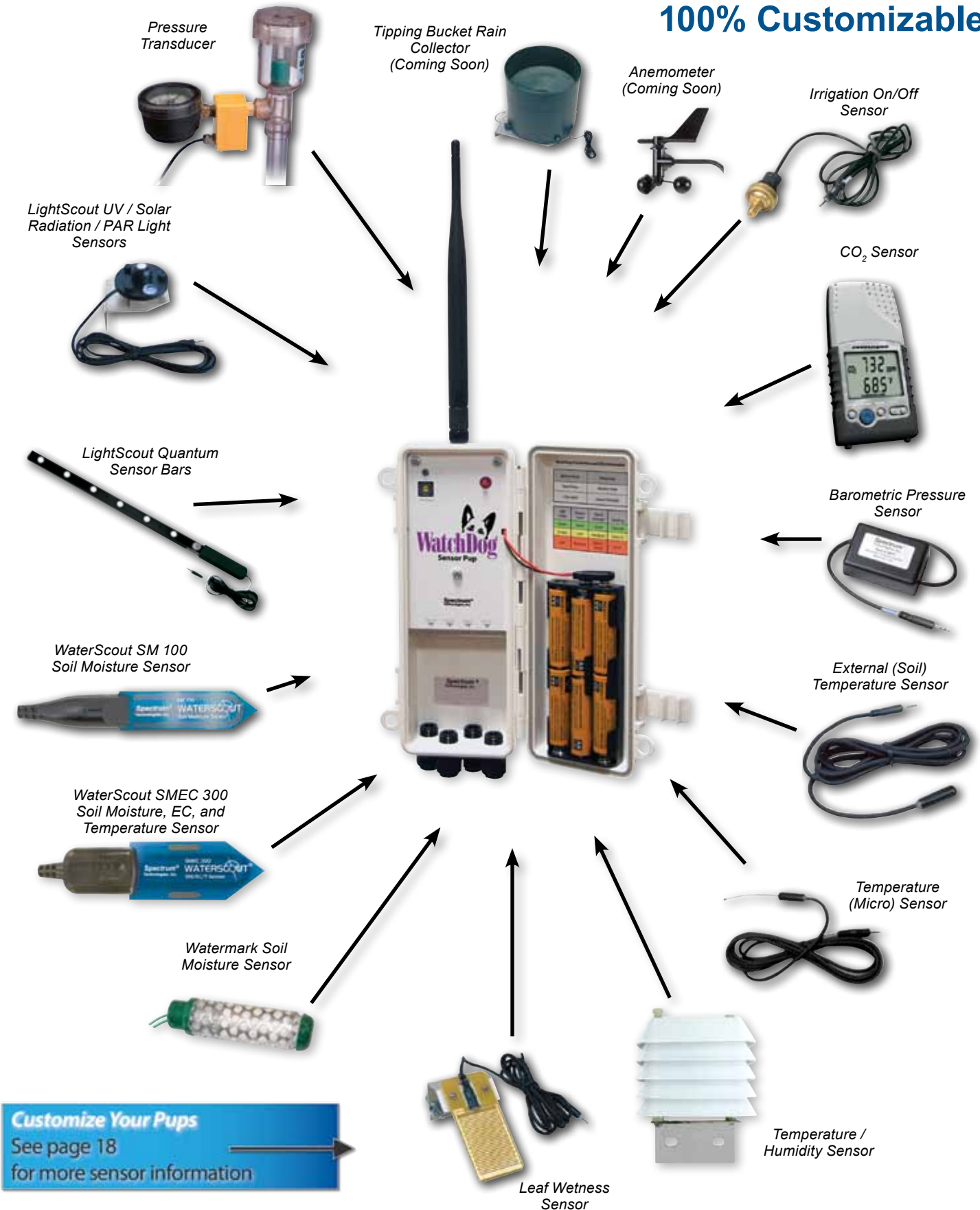
	Basic	Pro
Customizable Dashboard	✓	✓
Current Conditions	✓	✓
Basic Wind Speed/Direction & Temp Gauges	✓	✓
Advanced Wind Rose*		✓
Data Storage	✓	✓
Mapping	✓	✓
Disease Models* (additional fee)		✓
Reports		
Basic Reporting	✓	✓
Evapotranspiration (ET) Reports*		✓
Degree Days Reports		✓
Daily Light Integral (DLI) Reports		✓
Wind Chill Reports		✓
Dew Point Reports		✓
Other		
Alerts (additional fee)	✓	✓
API Service (additional fee)	✓	✓

* Coming soon



SpecConnect Mobile App

100% Customizable



Customize Your Pups
See page 18
for more sensor information



WatchDog Retriever & Pups Network Components

Step 1
Choose a Retriever

WatchDog Retriever

- Receives all data from Pup network, supports up-to 16 Pups

- Item 3910** **WatchDog Retriever - 900 Mhz**
Includes USB Flash Drive, USB data cable, and Standard Non-Rechargeable Batteries
- Item 3910S** **WatchDog Retriever - 900 Mhz - Solar Powered**
Includes USB Flash Drive, USB data cable, Solar Panel, and Rechargeable Battery Pack
- Item 3911** **WatchDog Retriever - 2.4 GHz**
Includes USB Flash Drive, USB data cable, and Standard Non-Rechargeable Batteries
- Item 3911S** **WatchDog Retriever - 2.4 GHz - Solar Powered**
Includes USB Flash Drive, USB data cable, Solar Panel, and Rechargeable Battery Pack

Step 2
Choose which type of Pup

WatchDog Sensor Pup

- Up to 4 sensor inputs (sensors not included), see pages 22-23
- Transmits data to Retriever (directly or hopping via other Pups)

- Item 3900** **WatchDog Sensor Pup - 900 Mhz**
Includes Standard Non-Rechargeable Batteries
- Item 3905** **WatchDog Sensor Pup - 2.4 GHz**
Includes Standard Non-Rechargeable Batteries

WatchDog Station Pup

- Allows users to plug in existing WatchDog weather stations and transmit all sensor data to the network

- Item 3901** **WatchDog Station Pup - 900 Mhz**
Includes Standard Non-Rechargeable Batteries
- Item 3906** **WatchDog Station Pup - 2.4 GHz**
Includes Standard Non-Rechargeable Batteries

WatchDog Repeater Pup

- Serve as hopping nodes to help provide a path for the transmission signal around obstacles, no sensor inputs

- Item 3902** **WatchDog Repeater Pup - 900 Mhz**
Includes Standard Non-Rechargeable Batteries
- Item 3907** **WatchDog Repeater Pup - 2.4 GHz**
Includes Standard Non-Rechargeable Batteries

Step 3
Need additional accessories?

Optional Accessories

- Item 3396TPS** **Tripod Mount**
- Item 3664** **Sensor Extension Cable - 20 ft (6.1 m)**
- Item 3925** **Antenna Extension Cable - 10 ft (3 m)**
Includes Mounting Bracket and Hardware
- Item 3388USB** **Replacement USB Flash Drive (for Retriever)**
- Item 3297** **PC Direct Connection Cable - 50 ft**
Includes AC/DC power cable
- Item 3926** **AC/DC Power Cord for Retriever**

Step 4
Choose which communication options you need (see page 10)

SpecWare Software

- SpecWare Pro Software (see page 20) may be used to view Pup data
- If you are using SpecConnect Web Portal (see pages 6-7), then all data will be viewed online

- Item 3654P9** **Spec 9 Pro Software**

Step 5
Customize each Pup with plug-in sensors (see left page)



DataScout Modem mounted with a WatchDog Retriever

DATAScout® Modems

- Communicates data to the web via Cellular or Wi-Fi options
- Single button operation: test communications, pair with station, and check battery status
- Tri-colored LEDs indicate battery level, data communication, and wireless signal/connection status
- DC port for optional AC/DC power adapter (Max 17VDC)
- Solar powered - includes rechargeable battery pack (2200 mAh, 7.2V NiMH), and 5W solar panel
- Includes SIM card, Cellular Data Plan required (see pages 6-7)
- Four different network options
- Required for connection to SpecConnect (see pages 6-7), sold separately

Connecting to a WatchDog Retriever

- Order Item 3910 (900 Mhz) or 3911 (2.4 GHz) WatchDog Retriever (with non rechargeable batteries). The DataScout Modem and the Retriever will share the power from the solar panel

Connecting to a WatchDog 2000 Series Weather Station

- The station must be running firmware version 7.6 or above. Call for details

Connecting to a WatchDog 2000 Series Mini Station

- The station must be running firmware version 4.1 or above. Call for details

- | | |
|-------------------|---|
| Item 3921 | Model 120 GSM/GPRS Cellular Modem - Solar Powered
GSM/GPRS Cellular (International customers)
Includes Solar Panel and Rechargeable Battery Pack |
| Item 3920S | Model 140 Wi-Fi Modem - Solar Powered
Includes Solar Panel and Rechargeable Battery Pack |
| Item 3920 | Model 140 Wi-Fi Modem - AC/DC Powered
Includes universal AC/DC Power Cord |

Satellite

The WatchDog Satellite communications system gets your weather data to the web – anywhere there's sky

- Ideal for extremely remote locations with limited or no cellular signal
- Includes satellite modem and solar panel with mounting brackets
- Fully-charged power supply can operate 28 days without recharge
- Option to power weather station with modem solar panel power supply
- Iridium or Orbcomm data subscription required

Item 3388SI **WatchDog Comm Satellite**



DATASCOOUT Modems



*DataScout Model 140 Wi-Fi Modem
with Solar Powered Battery Pack*

*DataScout Modem mounted with
a WatchDog 2000 Series Full
Weather Station*

Wireless - Direct to your PC

Mid Range Wireless - up to 2 mi (3 km) - Requires line of sight from Station to Base

Experience the advantages of real-time weather information by connecting your 2000 Series Remote Weather Stations to a PC up to 2 mi (3 km) away

- Base station features a weatherproof case and 50 ft (15 m) cable (terminating in a 9-pin serial connection) to allow high mounting for the greatest range
- Remotes include whip antenna, solar panel, and rechargeable batteries
- **Requires SpecWare™ 9 Pro (page 20)**

- Item 3393B Mid Range Wireless Base Station - 900 MHz**
- Item 3393W Mid Range Wireless For Remote Station - 900 MHz**
- Item 3391B24 Mid Range Wireless Base Station - 2.4 GHz**
- Item 3391W24 Mid Range Wireless For Remote Station - 2.4 GHz**

Optional Yagi antennas increase line of sight range to 7 mi (11 km) - 900 MHz only

- Item 3390YAGI8 8.2 DBi Yagi Antenna (cable required)**
- Item 3390CABLE10 Yagi Antenna Cable - 10 ft (3 m)**
- Item 3390CABLE20 Yagi Antenna Cable - 20 ft (6 m)**



WatchDog® 2000 Series Weather Stations

Base your growing decisions on your weather, not the airport's

- Full-featured weather stations measure temperature, humidity, rainfall, wind, and solar radiation (varies by model). Also monitors degree day models and chill hour data.
- Customize your station with plug-in sensors to meet your needs
- Accurate, real-time weather information directly from your course
- Monitor, record, and analyze over a dozen important environmental inputs
- Log your data in fail-safe, non-volatile memory
- Choose measurement intervals from 1 to 60 minutes (holds 183 days of data with a 30 minute interval)
- Multiple PCs can access the station without impacting data collection
- Use the LCD display to check all current and daily high/low readings without a PC
- Communicate via wireless, cellular, shuttle, or direct connect (see page 10-11), also compatible with the new WatchDog Station Pups, DataScout™ Modems (see pages 4-11)
- Powered by four AA batteries - 10 months with alkaline (included), 12 months with lithium
- **Requires SpecWare™ Pro software (see page 16)**



Model 2900ET
Shown with optional Tripod Mount

Customize Your Station
See page 18 for our WatchDog Sensors and Accessories

Tripod not included

Model 2900ET

- The most powerful package for optimizing your irrigation and IPM decisions
- Measures wind direction, wind speed, air temperature, relative humidity, dew point, rainfall, solar radiation, evapotranspiration, and 5 available external sensor ports

Item 3350WD2 WatchDog® 2900ET Weather Station

Model 2700

- Affordable and versatile solution for growers, researchers, and consultants
- Measures wind direction, wind speed, air temperature, relative humidity, dew point, rainfall, and 6 available external sensor ports

Item 3340WD2 WatchDog 2700 Weather Station

Model 2550

- Ideal for fast, on-demand deployment without measuring rainfall
- Measures wind direction, wind speed, air temperature, relative humidity, dew point, and 6 available external sensor ports

Item 3320WD2 WatchDog 2550 Weather Station

Model 2800

- Ideal where multiple sensor measurements are required for temperature, soil moisture, crop canopy light, or leaf wetness data
- Plug in up to 8 external sensors, plus 1 optional rainfall sensor

Item 3345WD2 WatchDog 2800 Weather Station



Model 2800

Model 2550

WATCHDOG 2000 SERIES WEATHER STATION FEATURES

Sensors	2900ET	2700	2550	2800	Specifications	Accuracy
Wind Direction	✓	✓	✓		1°	±3°
Wind Speed	✓	✓	✓		0, 1 to 200 mph (0, 1 to 322 km/h)	±2 mph (±3 km/h) , ±5%
Air Temperature	✓	✓	✓	OPT	-25° to 212°F (-32° to 100°C)	±1°F (±0.5°C)
Relative Humidity	✓	✓	✓		10% to 100% @ 5° to 50°C	±3% at 20% to 100% and 25°C
Dew Point	✓	✓	✓		-99° to 140°F (-73° to 60°C)	±4°F (±2°C)
Rainfall	✓	✓		OPT	0.01 in (0.25 mm)	±2% at < 2 in (5 cm) per hour
Solar Radiation	✓	OPT	OPT	OPT	0 to 1500 W/m ²	±5%
Evapotranspiration	✓					
External Sensor Ports	5	6	6	9		
Available ports for SMEC 300 Sensors	1	2	2	2		
Operating temperature range: -22 to 130°F (-30 to 55°C)						



WatchDog® 2000 Series Mini Stations

Monitor microclimates with up to 4 external sensor channels

- Same power, flexibility, and accuracy as the 2000 Series Weather Stations
- Measure temperature, humidity, quantum light, and more (varies by model). Also monitors degree day models and chill hour data.
- Customize your Mini Station with 1 to 4 plug-in sensors to meet your needs
- Accurate, real-time weather information directly from where you grow
- Log your data in fail-safe, non-volatile memory
- Choose measurement intervals from 1 to 60 minutes (holds 198 days of data with a 30 minute interval). Capacity is 89 days when using WaterScout SMEC 300 sensors
- Reliable NEMA-4 type IP 66 enclosure and weatherproof connectors
- Use the LCD display to check current and daily high/low readings without a PC
- Run disease models on the station, providing field viewing of disease severity indicators
- Use the optional alarm output module (see website) to warn if a sensor exceeds high and low limits
- Communicate via wireless, cellular, shuttle, or direct connect (see page 10-11), also compatible with the new WatchDog Station Pups, DataScout™ Modems (see pages 4-11)
- 12-month battery power source (four AA alkaline batteries included)
- **Requires SpecWare Basic or Pro software (see page 16)**



LCD display on all 2000 Series Mini Stations

Model 2475 Plant Growth Station

- Ideal for greenhouses - includes sensors for quantum (PAR) light, air temperature, relative humidity, and 1 available external sensor port
- Computes and displays Daily Light Integral (DLI), dew point, and degree days, live display of current light and cumulative light over the day
- Computes and displays DIF – Average day/night temperatures differences
- Computes and displays VPD – Vapor Pressure Deficit (upgrade required for pre-2013 stations)

Item 3686WD WatchDog® 2475 Weather Station



Model 2475

Model 2450 Temperature/RH Station

- Measures air temperature, relative humidity, dew point, and 2 available external sensor ports

Item 3684WD WatchDog 2450 Weather Station

Model 2425 Temperature Station

- Measures air temperature and 3 available external sensor ports

Item 3683WD WatchDog 2425 Weather Station

Model 2400 External Sensor Station

- Ideal where multiple sensor measurements are required for temperature, soil moisture, crop canopy light, or leaf wetness data
- Plug in up to 4 external sensors

Item 3685WD WatchDog 2400 Weather Station

Customize Your Station
See page 18 for our
WatchDog Sensors and Accessories



Model 2400

WATCHDOG 2000 SERIES MINI WEATHER STATION FEATURES

Sensors	2475	2450	2425	2400	Specifications	Accuracy
Air Temperature	✓	✓	✓	OPT	-25° to 212°F (-32° to 100°C)	±1°F (±0.5°C)
Relative Humidity	✓	✓			10% to 100% @ 5° to 50°C	±3% at 20% to 100% and 25°C
Dew Point	✓	✓			-99° to 140°F (-73° to 60°C)	±4°F (±2°C)
Quantum Light (PAR)	✓	OPT	OPT	OPT	0 to 2500 μmol·m ⁻² ·s ⁻¹	±5%
External Sensor Ports	1	2	3	4		
Available ports for SMEC 300 Sensors	1	2	3	4		
Operating temperature range:	-22 to 130°F (-30 to 55°C)					

WatchDog 1000 Series Micro Stations



Micro Stations offer a cost-effective way to record multiple environmental conditions

- Internal sensors can include temperature and humidity (radiation shield recommended (see page 18))
- With up to 4 external sensor ports, you choose the sensors you need
- Up to 8 sensor values with the Model 1650 using the WaterScout® SMEC 300 Soil Moisture/EC/Temperature Sensor (page 39)
- LCD displays current sensor readings and battery level
- Select measurement intervals from 1 to 60 minutes
- Log 10,584 (8,064 with SMEC 300) intervals (220 days at 30 minute intervals)
- Data is stored in fail-safe non-volatile memory
- Water-resistant case (radiation shield or enclosure recommended for outdoor use)
- 12-month battery life (CR2450, included)
- Transfer data with a direct-connect cable or Data Shuttle (page 19)
- **Requires SpecWare™ 9 Basic or Pro software (page 16)**

Operating temperature range: -4 to 130°F (-20 to 55°C)

Temperature range: -40 to 185°F (-40 to 85°C)

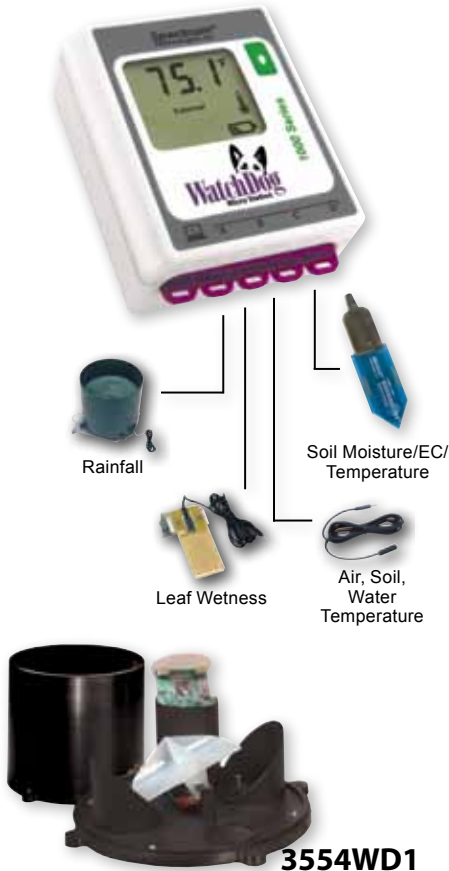
Accuracy: ±1°F (±0.5°C) at -4 to 122°F (-20 to 50°C), else ±2.2°F (±1.2°C)

RH range: 0 - 100%, Accuracy: ±3% at 77°F (25°C, 10 - 90%), else ±5%

Customize Your Station

See page 18 for our
WatchDog Sensors and Accessories

DESCRIPTION	INTERNAL SENSOR	EXTERNAL PORTS	MAX. NUMBER OF SMEC 300 SENSORS
MODEL 1650 Item 3688WD1	TEMPERATURE RELATIVE HUMIDITY	4	2
MODEL 1525 Item 3687WD1	TEMPERATURE	4	2
MODEL 1450 Item 3684WD1	TEMPERATURE RELATIVE HUMIDITY	2	1
MODEL 1425 Item 3683WD1	TEMPERATURE	3	1
MODEL 1400 Item 3685WD1	NONE (EXTERNAL ONLY)	4	2
MODEL 1250 Item 3682WD1	TEMPERATURE RELATIVE HUMIDITY	NONE	0
MODEL 1225 Item 3681WD1	TEMPERATURE	1	0
MODEL 1200 Item 3680WD1	NONE (EXTERNAL ONLY)	2	1
MODEL 1120 Item 3554WD1	RAINFALL (SEE BELOW FOR DETAILS)	NONE	0
MODEL 1115 Item 3635WD1	REQUIRES EXTERNAL RAINFALL (SEE WEBSITE FOR DETAILS)	1	0



WatchDog 1120 Data-Logging Rain Gauge

High accuracy, low-maintenance tipping bucket rain collector

- Meets NWS guidelines with an 8 in (20.5 cm) diameter collector
- The included data logger can log up to 10,584 intervals
- Select intervals from 1 to 60 minutes [maximum 10.23 in (26.0 cm) per interval]
- Rain collector mounting bracket and hardware included
- Record rainfall in either metric (mm) or US (in) units
- Accuracy: ±2% at < 2 in (5 cm) per hour
- **Requires SpecWare 9 Basic or Pro (page 16)**

Item 3554WD1 Data-Logging Rain Gauge

WatchDog A-Series Data Loggers

- The most affordable way to track environmental conditions for analysis
- Measure temperature, humidity, leaf wetness and CO₂
 - LCD display confirms logger operation and displays last sensor readings
 - Select measurement intervals from 1 to 120 minutes
 - Log 4,000 to 8,000 intervals in fail-safe EEPROM data memory
 - Water-resistant case (IP65 for A150 and A110, IP54 for A125 and A130); A160 is for indoor use only and must be protected from moisture
 - Removable soft caps keep ports clear of debris
 - Includes CR2 battery, 12-month life (except A160, which requires A/C; international adapter included)
 - **SpecWare™ 9 Basic or Pro (page 16) and the A-Series PC Connection Cable are required**

Operating temperature range: -22 to 140°F (-30 to 60°C); A160: 32 to 122°F (0 to 50°C)
 Temperature range: -40 to 185°F (-40 to 85°C); A160: 14 to 140°F (-10 to 60°C)
 Accuracy: ±1.1°F (±0.6°C) at -4 to 122°F (-20 to 50°C), else ±2.2°F (±1.2°C); A160: ±1.0°F (±0.6°C)
 RH range: 0 to 100%, Accuracy: ±3% from 10-90% at 77°F (25°C), else ±5%
 CO₂ range: 0 to 9999 ppm, Accuracy: ±50 ppm ±5% of reading (0 to 2000 ppm), else unspecified

DESCRIPTION	INTERNAL SENSOR	INTERVALS	RADIATION SHIELD
MODEL A160 Item 3611A	AIR TEMPERATURE RH, CO ₂	5,333	INDOOR USE ONLY (NO SHIELD AVAILABLE)
MODEL A150 Item 3612A	AIR TEMPERATURE RELATIVE HUMIDITY	5,333	OPTIONAL
MODEL A130 Item 3610A	AIR TEMPERATURE EXTERNAL LEAF WETNESS	4,000	INCLUDED
MODEL A125 Item 3617A	AIR TEMPERATURE EXTERNAL TEMPERATURE	4,000	RECOMMENDED
MODEL A110 Item 3618A	AIR TEMPERATURE	8,000	OPTIONAL

- Item 3661A WatchDog A-Series PC Connection Cable - USB
 Item 3663A Radiation Shield (needed for outdoor use)



3612A



3611A



3617A



WatchDog B-Series Button Loggers

- Space efficient and inexpensive logging technology
- Ideal for shipping containers or situations where multiple areas need to be monitored
 - Choose from temperature-only or temperature/humidity models
 - Water resistant (IP56) stainless steel case
 - Select measurement intervals from 1 to 120 minutes
 - Log 2,000 to 8,000 intervals
 - Integral non-replaceable battery
 - **SpecWare Basic or Pro software (page 16) and the B-Series Docking Station are required**

DESCRIPTION	INTERNAL SENSOR	INTERVALS	LCD DISPLAY
MODEL B102 T/RH Item 3621WD	TEMPERATURE RELATIVE HUMIDITY	4000	NO
Temp Range: -4 to 185°F (-20 to 85°C) Temp Accuracy: ±1.1°F from 5 to 149°F (±0.6°C from -15 to 65°C) Humidity: 0 to 100%, ±5%			
MODEL B101 8K Item 3620WD	TEMPERATURE	8000	NO
Range: -40 to 185°F (-40 to 85°C) Accuracy: ±1.1°F from 5 to 149°F (±0.6°C from -15 to 65°C)			
MODEL B100 2K Item 3619WD	TEMPERATURE	2000	NO
Range: -40 to 185°F (-40 to 85°C) Accuracy: ±1.8°F from -22 to 158°F (±1.0°C from -30 to 70°C) Use included plastic bag when measuring soil temperature			

Docking Stations

- Item 3655K1 WatchDog B-Series Docking Station - USB*
 Item 3655K WatchDog B-Series Docking Station - Serial

*Requires SpecWare 9 (v9.1 or later)



B102



B101



B100

Ideal for soil temperature



Software Updates
Stay up to date to ensure compatibility with the latest WatchDog models - download free updates at specmeters.com/updates



Spec 9 Pro Software

- Powerful analysis tools that are easy to use
- Graph on-the-fly with an interactive graphing window
 - Build, customize and save your most important report formats or choose from 13 standard reports
 - Add optional insect and disease models to forecast pest pressures and reduce pesticide costs; produce reports with graphs for each pest
 - Set a frost alarm that will call your mobile phone or pager at frost temperatures or other sensor conditions
 - Automate logger downloads with wireless or directly connected stations
 - Generate scheduled log files for data-to-web applications or create an XML file that can be posted on the web
 - Find and use data easily with an open file management system - all logger data is stored in one file per month, simplifying data sharing and exporting
 - Import data files from other applications
 - International features include handling date, time, and numbers with regional formats, and Metric or US measurements
 - Includes CD, USB cable, and manual (see page 19 for more cable options)

- Item 3654P9 Spec 9 Pro Software
- Item 3654P9X Spec 9 Pro Extra User License
- Item 3654P9U Spec 9 Pro Upgrade*
- Item 3654P9U8 Spec 9 Pro Upgrade from Spec 8 Pro*
- Item 3661U USB-to-3.5mm-Stereo-Plug Adapter

* Does not include USB cable

COMPARING SPEC 9 BASIC TO SPEC 9 PRO

	Basic	Pro
View Data		
On-demand graphing	✓	✓
Manage Data		
Calibration adjustment		✓
Automatic data append	✓	✓
Single file per logger	✓	✓
International data format	✓	✓
Reports		
Standard reports	✓	✓
Custom reports		✓
Sensor (frost) alarm		✓
Disease & Insect models		OPT
"Pest Alert" report models		OPT
Communications		
Direct connect or modem	✓	✓
Wireless capability		✓
Dial up modem		✓
Auto download		✓
Supported Products		
2000 Series Full Stations		✓
2000 Series Mini Stations	✓	✓
Retriever & Pups		✓
1000 Series Micro Stations	✓	✓
A-Series & B-Series	✓	✓

SpecWare™ 9 software is compatible with Windows XP and later.

Pest Prediction Models

- Item 3656TU Turf Alert Package
- Required Sensors:** Air and soil temperature, relative humidity, and rain
Models Included: Brown Patch (Schumann)
 Pythium (Nutter, Schein)
 Dollar Spot (Hall, Mills/Rockwell)
 Insect Models



photo courtesy of Derek Settle

Spec 9 Basic Software

- Easily download, analyze, and produce basic reports from the weather data collected on your WatchDog® Micro Stations and data loggers
- Eliminate valuable time exporting the data and performing calculations in tedious spreadsheet programs
- Spec 9 Basic automatically assigns each WatchDog Data Logger Station to its own "logger location" directory, which is appended every time you download new data
- Includes CD, USB cable, and manual (see page 19 for more cable options)

Spec 9 Basic does not support disease models or the 2000 Series Full or Mini Weather Stations, or Retriever & Pups

- Item 3654B9 Spec 9 Basic Software
- Item 3654B9X Spec 9 Basic Extra User License
- Item 3654B9U Spec 9 Basic Upgrade*
- Item 3661U USB-to-3.5mm-Stereo-Plug Adapter

* Does not include USB cable

IPM Scope

Portable digital microscope solution at an affordable price. The IPM Scope combines a digital camera, precision optics, and LED lighting into a powerful handheld microscope that connects to your computer's USB port.

- 40x and 140x magnification
- Requires computer connection to operate
- View magnified image right on your computer screen
- Included software allows you to customize your images with labels, markers, time stamps, and measurement scales
- Archive still images or send files via e-mail
- Video software upgrade provides the ability to capture live videos and time lapse sequences of insect movement

- Item 2860 IPM Scope
- Item 2860V Video Software Upgrade
- Item 2860UV IPM Scope-Ultra Violet
- Item 2860MP IPM Scope-Mega Pixel
- Item 2860HS Plastic Horseshoe-3D images
- Item 2860MAC Software for Mac Computers

Go to www.specmeters.com for more models and accessories

SPECIFICATIONS FOR IPM SCOPE	
Image Sensor: 1/3 in CMOS	Pixels: 640 x 480
Power: USB Port	Light Source: Super-bright LEDs
Field of View: @40x: 7.5 x 10 mm	Resolution: 4 microns
@140x: 1.8 x 2.5 mm	

IPM Scope CAM2

View images in the field with a portable camera/scope. The 2 megapixel IPM Scope CAM2 allows you to capture high resolution pictures and videos in the field.

- View pictures instantly on the built-in LCD display and then transfer them via USB cable to a PC
- LED lighted unit features 10x and 40x optical zoom and up to 200x digital zoom
- Battery life of up to 5 hours
- Includes an adjustable-height stand
- 2.8 inch LCD display
- 2GB internal flash memory
- Easy to use touch pad controls
- 4 built in white-light LEDs with brightness control
- Rechargeable lithium ion battery (included)

- Item 2862 IPM Scope CAM2

SPECIFICATIONS FOR IPM SCOPE CAM2	
Image Sensor: 2M Pixel	
Power: Rechargeable lithium	
Magnification: Optical zoom: 10x or 40x , Digital zoom: up to 200x	
Light Source: 4 white LED	



Macroscopes

Identify pests and diseases up close

- Macroscope 25 provides 25X magnification over a wide 5 mm (3/16 in) field of view
- Macroscope 45 provides 45X magnification over a wide 3 mm (2/16 in) field of view
- Positionally correct image includes an interchangeable scale
- Incorporates a measuring scale providing measurements in inches or millimeters
- Can be used for distance viewing when close-up lens is removed

- Item 2851 Macroscope 25 with hard carrying case
- Item 2852 Macroscope 45 with hard carrying case



IPM Scope shown with optional Plastic Horseshoe to view 3D images

Image taken by IPM Scope



Image taken by IPM Scope - Mega Pixel



Soil Sensors



6470-6



6460



6450WD



3667

WaterScout® SMEC 300 Soil Moisture/EC/Temperature Sensor

Measures soil moisture (Volumetric Water Content), EC, and temperature. Range: VWC: 0 to saturation (typically 50%), Accuracy: $\pm 3\%$; EC: 0 to 10 mS/cm, Accuracy: $\pm 2\%$. May require WaterScout Calibration Device. See page 35 for more information. *Compatible with WatchDog 2000 Series Stations (Full and Mini), 1000 Series Micro Stations, and Pups*

- Item 6470-6 WaterScout SMEC 300 Sensor with 6 ft (1.8 m) Cable
- Item 6470-20 WaterScout SMEC 300 Sensor with 20 ft (6.1 m) Cable
- Item 6470CAL3V WaterScout Calibration Device

WaterScout SM 100 Soil Moisture Sensor

Measures soil moisture (Volumetric Water Content) with little or no disturbance to the root zone. Range: 0 to saturation (typically 50%), Accuracy: $\pm 3\%$. Optional WaterScout Calibration Device. See page 34 for more information. *Compatible with WatchDog 2000 Series Stations (Full and Mini), 1000 Series Micro Stations, and Pups*

- Item 6460 WaterScout SM100 Sensor with 6 ft (1.8 m) Cable
- Item 6460-20 WaterScout SM100 Sensor with 20 ft (6.1 m) Cable
- Item 6470CAL3V WaterScout Calibration Device

Watermark Soil Moisture Sensor

Measures soil moisture tension from 0 to 200 centibars. Range: 0 to 200 centibars. May require Watermark Adapter to connect original Watermarks to stations. *Compatible with WatchDog 2000 Series Stations (Full and Mini), 1000 Series Micro Stations, and Pups*

- Item 6450WD Watermark Sensor with 11 ft (3.3 m) Cable
- Item 6450WD20 Watermark Sensor with 25 ft (7.6 m) Cable
- Item 6450AH Watermark Adapter

External (Soil) Temperature Sensor

Measure soil, air, or water temperature with a resistance-based sensor. Range: -25 to 212°F (-32 to 100°C). Accuracy: $\pm 1^\circ\text{F}$ ($\pm 0.5^\circ\text{C}$). *Compatible with WatchDog 2000 Series Stations (Full and Mini), 1000 Series Micro Stations, and Pups*

- Item 3667 External (Soil) Temperature Sensor with 6 ft (1.8 m) Cable
- Item 3667-20 External (Soil) Temperature Sensor with 20 ft (6.1 m) Cable

Environmental Sensors



3666



3612RHS

Leaf Wetness Sensor

Measure leaf wetness with a resistance-based sensor designed to replicate a leaf. Range: 0 (dry) to 15 (wet). *Compatible with WatchDog 2000 Series Stations (Full and Mini), 1000 Series Micro Stations, and Pups*

- Item 3666 Leaf Wetness Sensor

Replacement RH Sensor

Replace your RH sensor and return to like-new accuracy. Range: 10 to 100% at 5 - 50°C, Accuracy: $\pm 3\%$ RH. *Compatible with WatchDog 2000 Series Stations (Full and Mini) and 1000 Series Micro Stations*

- Item 3612RHS Replacement RH Sensor for 2000/1000 Series

Accessories

3396TPS



3658A



3664



3659WD1

Tripod Mount

Rugged galvanized steel folding tripod and 3 ft (1 m) pole.

- Item 3396TPS Tripod Mount with Stakes

Radiation Shield

Protect your Micro Station or logger from rain and measurement-distorting solar radiation. *Compatible with 1000 Series Micro Stations and A-Series Data Loggers*

- Item 3663A Radiation Shield

Sliding Enclosure

Water resistant - mounts to pole or post. *Compatible with 1000 Series Micro Stations*

- Item 3658A Sliding Enclosure

Waterproof Enclosure

Clamshell enclosure. *Compatible with 1000 Series Micro Stations (Models 1400 or 1200, plus soil sensors)*

- Item 3659WD1 Waterproof Enclosure

Sensor Extension Cable

20 ft (6 m) extension for all sensors (except Item 3613, Temp/RH), connect up to 3 cables per sensor.

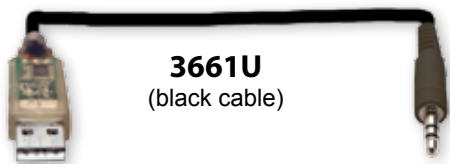
- Item 3664 Sensor Extension Cable

WatchDog® 1000/2000 Series Data Shuttle

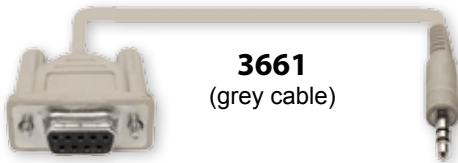
Transport weather data from your 2000 Series Stations or 1000 Series Micro Stations to your host PC

- Holds data for multiple stations (up to 5 Full, 10 Mini, or 12 Micro Stations)
- Includes soft-sided case (also available separately as Item 7500, see page 35)
- **Requires SpecWare 8 Basic or Pro or greater (page 16)**

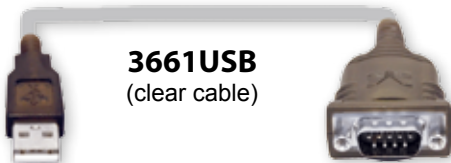
Item 3679WD1 WatchDog 1000/2000 Data Shuttle



3661U
(black cable)



3661
(grey cable)



3661USB
(clear cable)

Other Communication Options

USB-to-3.5mm-Stereo-Plug Adapter

- Connect WatchDog and FieldScout® devices directly to your computer's USB port

Item 3661U USB-to-3.5mm-Stereo-Plug Adapter

9-Pin-Serial-to-3.5mm-Stereo-Plug Adapter

- Connect WatchDog and FieldScout devices directly to your computer's 9-pin Serial Port

Item 3661 9-Pin-Serial-to-3.5mm-Stereo-Plug Adapter

USB-to-9-Pin-Serial Adapter

- Connect 9-pin Serial cables (such as Item 3661) directly to your computer's USB port

Item 3661USB USB-to-9-Pin-Serial Adapter

Short Range Modem Pair

- Use short-range modems to maintain signal on wired connections up to 4,000 ft (1.2 km)

- Has 9-pin serial connection on PC end

Item 3365WD2 Short Range Modem Pair

Direct Connect Cable for Weather Stations

- Connect your WatchDog Weather Station directly to your PC
- 75 ft (22.8 m) cable
- Has 9-pin serial connection on PC end, may require USB adapter
- Includes surge protectors for both ends of the cable connection

Item 3660-75SP 75 ft (22.8 m) Direct Connect Cable

Direct Connect Cable for Retriever

- Connect your WatchDog Retriever directly to your PC
- 50 ft (15.2 m) power and data cables
- Includes AC/DC power cable and DC plug adapter

Item 3927 PC Direct Connection Cable - 50 ft



3660-75SP



Vantage Pro 2

Economical weather station

- Innovative, integrated sensor suite combines a rain collector, temperature/humidity sensor, and an anemometer into one package, allowing for easy setup and improved performance and reliability
- Temperature and humidity sensors are housed inside a radiation shield for improved accuracy
- Also measures barometric pressure and dew point, and user-set audible alarms for frost
- Forecasting, on-screen graphing, and much more
- Quick view icons show the forecast at a glance while a moving ticker-tape display gives details
- Transmits wirelessly up to 1,000 ft (300 m)
- Cabled station includes 100 ft (30 m) cable from console to sensor suite

Item 3340CVP2 Vantage Pro 2 Cabled
Item 3340WVP2 Vantage Pro 2 Wireless

VANTAGE PRO 2 AND VUE SPECIFICATIONS

	Accuracy
Wind: Direction: 1°	±3°
Speed: 1 to 180 mph (1 to 290 km/h)	±5%
Wind Chill: -134° to 140°F, -92° to 60°C	±4°F, ±2°C
Humidity: Inside: 0% to 100%	±3%
Outside: 0% to 100%	±3%
Barometer: 6 in to 32.50 in Hg (410 to 820 mm Hg)	±0.03 in Hg, ±1.3 mm Hg
Temperature: Inside: 32° to 140°F, 0° to 60°C	±1°F, ±0.5°C
Outside: -40°F to 150°F, -40° to 65.5°C	±1°F, ±0.5°C
Rainfall: Daily: 0 to 199.99 in (0 to 6553 mm)	±4%
Accumulation: 0 to 199.99 in (0 to 6553 mm)	±4%
Time & Date: 12 or 24 Hour Clock, Time Alarm and Date	

Vantage Vue

Basic weather station

- Compact, self-contained, and easy to install
- Combines a rain collector, temperature/humidity sensor, and an anemometer into one package
- Also measures barometric pressure and dew point, and user-set audible alarms for frost
- Transmits wirelessly up to 1,000 ft (300 m)
- Includes console

Item 3340VV Vantage Vue

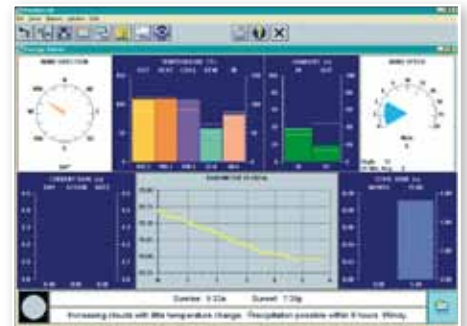


WeatherLink – Windows version

Upgrade your Vantage Pro 2 or Vantage Vue Station to track and record weather history on your PC

- The included data logger fits neatly into the weather station console, storing weather data at user-defined intervals, even when it's not connected to your PC
- Download the data and create graphs, generate summaries, and more
- Plot daily, weekly, monthly, and annual data, as well as track degree-days (Item N0006 required for degree-days)
- Depending on the logging interval, store up to six months of data
- One WeatherLink required for each console connected to a PC
- Includes USB or serial port adapter, 8 ft (2 m) cable, software, and manual

Item 3362VP2 WeatherLink for Vantage - USB
Item 3362VP2S WeatherLink for Vantage - Serial Port
Item N0006 Growing Degree Day Software Upgrade



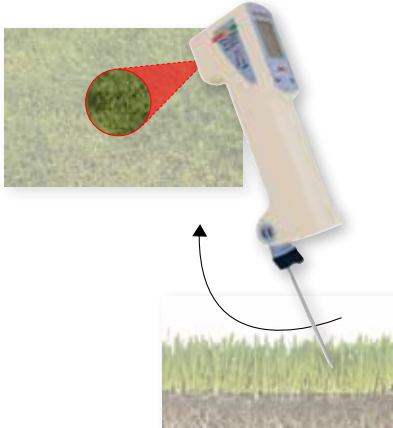


IR Crop Temp Meter

Affordable tool for measuring the temperature of turf and plant canopies to help detect plant stress

- Infrared technology makes difficult measurements fast, easy, and affordable
- Use selectable laser pointer to identify target spot
- Backlit LCD display
- Includes 9V battery, wrist strap, and case
 - Distance to Target Ratio: 8:1
 - Fixed emissivity: 0.95
 - Temperature: -40 to 600°F (-40 to 316°C), Accuracy: $\pm 2\%$ or $\pm 3.6^\circ\text{F}$ ($\pm 2^\circ\text{C}$)

Item 2956 IR Temp Meter



IR Crop Temp/External Soil Temp Meter

Easily measures both leaf and soil temperatures in one handheld device

- Backlit LCD display
- Includes 9V battery, wrist strap, and case
 - Distance to Target Ratio: 3:1
 - Fixed emissivity: 0.97
 - IR Temperature: -40 to 149°F (-40 to 65°C), Accuracy: $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$)
 - Probe Temperature: 23 to 149°F (-5 to 65°C), Accuracy: $\pm 1^\circ\text{F}$ ($\pm 0.6^\circ\text{C}$); -40 to 23°F (-40 to -5°C), Accuracy: $\pm 2^\circ\text{F}$ ($\pm 1^\circ\text{C}$)

Item 2958 IR Temp/External Temp Meter

Soil Thermometers

Pocket-sized meters built of tough, corrosive-resistant stainless steel

- Digital meter (model 6300)
 - Dual-mode LCD updates in 1 or 15 second intervals
 - Adjustable nut provides quick calibration
 - Measures from 0° to 160°F (-17° to 71°C)
 - Accuracy $\pm 2^\circ$
- Analog meter (model 6305)
 - Easy-to-read dial
 - Measures (Fahrenheit only) from 25° to 125°F
 - Accuracy $\pm 1^\circ$
- Digital meter, Long-Stem (model 6310)
 - Extended 8 in (20 cm) stem
 - Measures from -58° to 302°F (-50° to 150°C)
 - Accuracy $\pm 1.8^\circ$

Item 6300 Digital Temperature Tester
 Item 6305 Analog Temperature Tester
 Item 6310 Long-Stem Thermometer

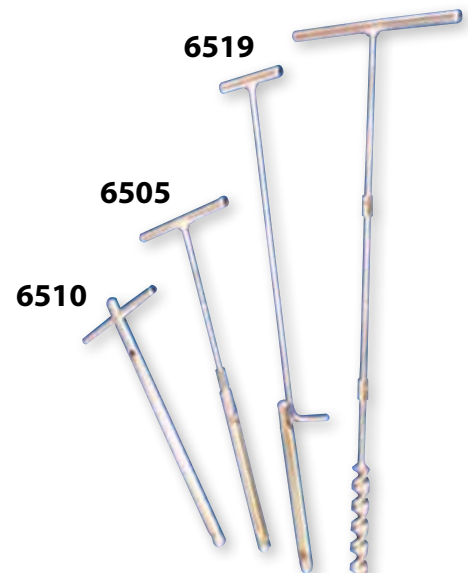


Soil Sampler Probes

Draw uniform samples for use with your own on-site tests or to send to a lab

- Model HC: overall length of 20.5 in (50 cm), an 18 in (46 cm) sampling tube and an 8 in (20 cm) wide handle
- Model J: overall length of 24 in (61 cm), a 12 in (30 cm) removable sampling tube and an 8 in (20 cm) wide handle
- Model LS: 3 ft (1 m) heavy-duty sampler with an 11 in (28 cm) sampling tube, cut-out sleeve and foot step
- Auger Tube Kit: overall length of 3 ft (1 m) assembled with 8 in (20 cm) auger length and 12 in (30 cm) wide handle, hole width 1-1/4"

Item 6510 Model HC Soil Sampler
 Item 6505 Model J Soil Sampler
 Item 6519 Model LS Soil Sampler
 Item 6500 Auger Tube Kit





3412

LIGHTSCOUT® Red/Far-Red Meter

Plants use the Red/Far-Red light ratio to determine how crowded they are, which affects how tall or full they grow

- Cost-effective Red/Far-Red measurement
- Displays the Red/Far-Red ratio on the LCD screen
- Press a button to display 660 nm and 730 nm readings
- Includes soft-sided case (also available separately as Item 7500, see details on page 35)

Item 3412 LightScout® Red/Far-Red Meter

LIGHTSCOUT® Quantum/PAR Meters

Measure the light used for plant growth - PAR is a more valuable measurement than foot-candles, as it measures only the light used by plants for photosynthesis

- Measures photosynthetically active radiation (PAR) from 400 to 700 nm
- Range of 0 to 2,000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
- Available in a variety of configurations for your convenience

- Item 3415F LightScout Quantum Meter
 - Item 3415FSE LightScout Dual Solar/Electric Quantum Meter
 - Item 3415FXSE LightScout Dual Solar/Electric Quantum Meter - External Sensor
 - Item 3415FQF LightScout Quantum and Foot-Candle Meter
 - Item 7500 Soft-Sided Carrying Case
- Sold separately (page 35)



3415FXSE

LIGHTSCOUT® External Light Sensor Reader

Reads any of Spectrum's light sensors

- Plug in a sensor, choose it on the LCD, and start measuring UV, Quantum Light, or Solar Radiation
- Sensors can also be used with WatchDog® Weather, Mini, and Micro Stations
- LightScout® External Light Sensor Reader includes soft-sided case (also available separately as Item 7500, see details on page 35)

Item 3415FX LightScout External Light Sensor Reader

Light sensors sold separately:

- Item 3668I LightScout Quantum Light Sensor (PAR Light)
- Item 3668I3 LightScout Quantum Light 3 Sensor Bar
- Item 3668I6 LightScout Quantum Light 6 Sensor Bar
- Item 3670I LightScout Silicon Pyranometer Sensor (Solar Radiation)
- Item 3676I LightScout UV Sensor



3415FX



3670I



3668I6

Visit
www.specmeters.com
 and view our
 "Measuring Light"
 Brochure





Simple way to monitor shaded or full sun golf greens

Actual Size



LIGHTSCOUT® DLI 100 Light Meter

Measure the light “falling” on your plants

- Increase plant growth and quality
- Simultaneously compare light between multiple locations
- Simple, one button operation
- Affordable, first step in measuring light
- Meter runs for 24 hours and calculates the Daily Light Integral (DLI)
- Real-time intensity levels are shown in $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ every 4 seconds over the course of a day
- Measures PAR light (Photosynthetically Active Radiation)
- Battery included; water resistant

Item 3405B3 LightScout® DLI 100 Meter (set of 3)

Item 3405B LightScout DLI 100 Meter (1 unit)

GENERALIZED PLANT RESPONSES TO DIFFERENT LIGHT LEVELS

Relative Light Level	DLI* - Daily Light Integral	Light Intensity** at Noon	Generalized Plant Growth Response
Very Low	2 to 5	100 to 200	Poor quality
Low	5 to 10	200 to 400	Minimum acceptable
Medium	10 to 20	400 to 800	Good quality
High	20 to 30	800 to 1,200	Excellent quality
Very High	30 to 60	1,200 to 2,000	Excellent quality

* Moles
** Micromoles ($\mu\text{mol}/\text{m}^2\cdot\text{s}$)

Note: It is not possible to make a direct conversion between an instantaneous light measurement and the Daily Light Integral. Also, temperature is a key factor in plant quality and growth. Source: Hamrick, Debbie, ed. *Ball Red Book*. Batavia, IL: Ball Publishing, 2003.



FIELDSCOUT® GreenIndex+® Turf

The FieldScout® GreenIndex+® Turf app utilizes the latest advancements in smartphone camera technology to measure turf health via the chlorophyll content (relative greenness) of turf. The app captures turfgrass images with an iPhone, iPod Touch, or iPad, calculates the Dark Green Color Index (DGCI), and displays a visual rating. Measurements can be compared to identify variability or trends in turf health across golf course greens, fairways, and research plots, providing valuable data for decisions regarding fertilization and irrigation.

- Quantify turf color and quality
- Identify turf stress before it's too late
- Make critical decisions in real time without high up-front costs
- Customize the visual rating calculation for different species of grass and specific plots of land
- Data is logged and geo-referenced, and can be emailed to a personal computer for further analysis

iOS Device not included.



[FieldScout GreenIndex+ Turf App](#)

Item 2910T

[FieldScout GreenIndex+ Turf Board](#)

Order from Spectrum, online or by phone

SPECIFICATIONS FOR GREENINDEX+ TURF	
Compatible Devices:	Apple iPhone 3GS and newer
	Apple iPad, 2nd generation and newer
	Apple iPod Touch, 4th generation and newer
Operating System Required:	iOS 4.3.5 and above
GPS:	Devices with built-in GPS will embed location metadata
Board:	9 x 11.5 in (23 x 29 cm) aluminum



Unique color reference board eliminates subjective measurements



Capture



Process



Instant Results



Adjust the visual rating scale for specific grass varieties to match your rating protocol

TCM 500 NDVI Turf Color Meter

Helps diagnose plant health based on color

- Measures reflected light from approximately a 3 inch (7.6 cm) diameter section of turfgrass
- Uses an internal light source to negate the effect of sunny versus cloudy conditions
- Measures reflectance in the red (660 nm) and near infrared (850 nm) spectral bands
- Displays result as NDVI, percent reflectance, or as a user-adjustable grass index from 1 to 9
- Connects to any GPS receiver that has a serial output option*
- Equipped with internal data logger and RS-232 port
- Records 3,250 measurements (1,350 with added GPS/DGPS option)
- Configure and download meter with FieldScout® software (included)**
- Compatible with SpecMaps™ online web-mapping application, create 2-dimensional maps of your data (see website for details)
- Includes hard carrying case, batteries, and TCM 500 T-Handle (item 2975H)

* GPS interface requires two cables. The GPS/DGPS cable (item 2950CV5) is available from Spectrum. A PC serial interface cable supplied by the manufacturer of the GPS receiver is also required.

** PC cable connects to a computer USB port. See our website for other cable connection options.

- Item 2975NDVI** **FieldScout TCM 500 NDVI Turf Color Meter**
Includes TCM 500 T-Handle
- Item 2975H** **FieldScout TCM 500 Replacement T-Handle**
- Item 2950CV5** **GPS/DGPS Cable**



SPECIFICATIONS FOR TCM 500

Measurement Sample: Turf grass canopy

Measurement System: Reflectance of red (660 nm) and NIR (850 nm) light

Measurement Area: Approx. 3.0 in (7.6 cm)

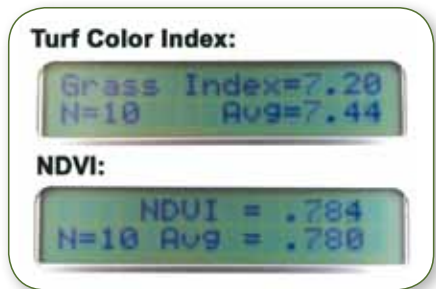
Measurement Units: Percent reflectance (0.0 to 99.9) of Red and NIR

NDVI (0.000 to 1.000)

Grass Index (1.00 to 9.00)

Power Source: 1 9 V alkaline battery (included); approx. 3,000 measurements

Repeatability: ± 5% of measurement



Displays Turf Color Index and NDVI on the LCD

FIELDSCOUT® SoilStik pH Meter

Easy to use and cost-efficient meter

- Flat surface electrode measures pH in soils, semi-solids, solids, and liquids - no more electrode breakage or clogged junctions
- RENEW indicator tells you when it's time to replace your electrode - eliminates guesswork
- CAL alert tells you it's time to recalibrate to ensure accuracy
- Memory records and recalls 15 sequentially tagged readings, allowing detection of changes over time
- 1- or 2-point calibration: automatically recognizes buffer solutions
- Automatic temperature compensation
- Simultaneous display of pH and temperature
- Display indicates when the reading has stabilized
- Data Hold, auto power off, and low battery indication
- Waterproof design (IP57) floats in water and protects the meter in wet environments
- Includes protective sensor cap, rinse bottle, two CR2032 batteries, pH 4 & 7 standard solutions, and soft case

Item 2105
Item 2106
Item 2110

FieldScout® SoilStik pH Meter
Flat Sensor, Replacement
Refill Solutions - pH 4 and 7, 60 mL ea.

SPECIFICATIONS FOR SOILSTIK pH METER

pH: 0.00 to 14.00 pH

Temperature: 23°F to 194°F (-5°C to 90°C)

Resolution: 0.01 pH, 0.1°

Accuracy: ±0.01 pH, ±1.8°F/±1°C

Dimensions: 1.4 x 6.8 x 1.6 in (35.6 x 172.7 x 40.6mm)

Weight: 3.8 oz (110 g)



Flat end electrode works in liquids, semi-solids, and soils



SoilStik shown in use with Item 6510, Model HC Soil Sampler

LAQUA Twin pH Meter

Ideal for testing irrigation and pesticide water

- Professional-grade meter
- Dual-action sensor guard protects the electrode and helps capture samples from buckets and bodies of water
- Waterproof pocket-sized meter with digital calibration
- Flat sensor allows measurement of small samples
- Auto calibrates to pH 4 and 7 standard solutions
- Sensor is replaceable and stores dry
- Automatic temperature compensation, waterproof, auto power-off
- pH range: 2.0 to 12.0 (Accuracy/Repeatability: ±0.1 pH)
- Includes case, two 3V batteries and pH 4 & 7 standards

Item 2103AL
Item 2110
Item 2143L
Item 2135L

LAQUA Twin pH meter
Refill Solutions - pH 4 and 7, 60 mL ea.
LAQUA Twin pH Replacement Sensor
Sampling Sheets - 100 pieces





FIELDSCOUT[®] Direct Soil EC Meter

Instant and accurate direct EC measurement

- Professional-grade meter
- No need to prepare samples - simply sample through the profile
- Patented paired sensor tip provides maximum soil-sensor contact and higher accuracy
- Sample directly in plug trays, pots, containers, solutions, or ground soils
- 0 to 19.9 mS/cm (Accuracy $\pm 1\%$, resolution 0.01 mS/cm)
- Automatic temperature compensation, long lasting, and waterproof
- Includes battery and EC calibration standard

8 in (20 cm) Probe Option

Item 2265FS FieldScout[®] Direct Soil EC Meter w/ 8 in Probe
Includes Carrying Case and 2.76 Standard

Item 2265PROBE FieldScout EC 8 in Probe (Replacement)

Item 2254 Conductivity Standard, 2.76 mS/cm, 250 mL

Item 2251 Conductivity Standard, 1.41 mS/cm, 250 mL

24 in (60 cm) Probe Option

Item 2265FSTP FieldScout Direct Soil EC Meter w/ 24 in
T-Handle Probe and Replaceable Tip

Item 2265FST24P FieldScout T-Handle EC 24 in Probe
w/ Replaceable Tip

Item 2266 Replaceable Tip For T-Handle EC Probe

Item 2254 Conductivity Standard, 2.76 mS/cm, 250 mL

Item 2251 Conductivity Standard, 1.41 mS/cm, 250 mL



FieldScout Direct Soil EC Meter with
24 in (60 cm) T-Handle





Waterproof EC Meter

Economic meter for measuring salinity

- Measures four parameters; conductivity, TDS, salinity, and temperature
- 6 units of measurement: $\mu\text{S}/\text{cm}$, mS/cm , ppm, ppt, mg/L , and g/L
- Internal memory stores up to 15 labeled readings for easy recall
- Adjustable conductivity-to-TDS ratio factor (0.4 to 1.0)
- Accuracy: $\pm 2\%$
- Automatic temperature compensation
- Measurement ranges:
 - Conductivity: 0.00 to 199 $\mu\text{S}/\text{cm}$, 200 to 1,999 $\mu\text{S}/\text{cm}$, or 2.00 to 19.99 mS/cm
 - TDS: 0 to 99.9 mg/L , 100 to 999 mg/L , or 1.00 to 9.99 g/L
 - Salinity (fixed ratio of 0.5): 0 to 99.9 ppm, 100 to 999 ppm, or 1.00 to 9.99 ppt
 - Temperature: 32 to 194°F (0.0 to 90.0°C)
- Includes conductivity cell, protective sensor cap, sample cup with cap, four SR44W button batteries, and 48 in (1.2 m) neckstrap
- Calibration standard sold separately

Item 2246

Waterproof EC Meter

Item 2246SENSOR

Replacement Sensor

Item 2251

Conductivity Standard, 1.41 mS/cm , 250 mL



Economy pH/EC Meter

Affordable way to monitor pH and EC levels in any liquid

- Combination pH and electrical conductivity (EC) probe
- 150-hour battery life
- Automatic temperature compensation
- 0.68 TDS ratio calculation
- Accuracy: ± 0.2 pH and 2% EC scale
- Range: 0 - 6 mS/cm
- Includes handheld meter, probe, calibration solutions, and carrying case

Item 2182A

Economy pH/EC Meter

Item 2183A

Replacement pH/EC Probe

Item 2110

Refill Solutions - pH 4 and 7, 60 mL ea.

Item 2251

Conductivity Standard, 1.41 mS/cm , 250 mL



LAQUA Twin EC Meter

Measure the EC levels in your irrigation water

- Professional-grade meter
- Ultra-slim design features push-button auto-calibration and automatic temperature compensation
- Waterproof pocket-sized meter with digital calibration
- Accurately measures even a single drop of saturated media extract
- Accuracy of $\pm 2\%$
- Measurement ranges:
 - 0 to 199 $\mu\text{S}/\text{cm}$ (resolution 1 $\mu\text{S}/\text{cm}$)
 - 0.20 to 1.99 mS/cm (resolution 0.001 mS/cm)
 - 2.0 to 19.9 mS/cm (resolution 0.1 mS/cm)
 - 20 to 199 mS/cm (resolution 1 mS/cm)
- Includes two CR2032 batteries, case, and solution standard

Item 2205L

LAQUA Twin EC Meter

Item 2210L

Conductivity Standard, 1.41 mS/cm

(6 - 14 mL bottles)

Item 2242L

Replacement Sensor



FIELDSCOUT® TDR 100

Obtain soil moisture readings at the press of a button

- Instantaneous readings of root zone soil moisture
- Ideal for measuring containers on benches
- Probe block comes with a 5 ft (1.5 m) cable
- Configure meter with FieldScout® software (included)*
- Variable length rods sold separately (see below)
- See specifications on page 30

* PC cable connects to a 9-pin serial port. USB-Serial adapter (item 3661USB) required for connection to computers with only USB ports.

- Item 6440FS** **FieldScout® TDR 100 Soil Moisture Meter**
Includes hard-sided carrying case
- Item 6440FSS** **Replacement TDR 100 Probe Block**
(with cable)
- Item 6440CASE** **TDR 100 Carrying Case**
- Item 3661USB** **USB-to-9-Pin-Serial Adapter**



TDR Rods

Multiple depth options for varying root zones

- Sturdy stainless-steel construction
- Field replaceable
- Rods must be fully inserted for valid measurements

- Item 6428FS3** **Two 1.5 inch (3.8 cm) Rods**
- Item 6429FS3** **Two 3 inch (7.5 cm) Rods**
- Item 6431FS3** **Two 4.8 inch (12 cm) Rods**
- Item 6432FS** **Two 8 inch (20 cm) Rods**

- Item 6430PH** **Pilot Hole Maker for TDR Meters**
Includes two 3 inch (7.5 cm) rods



Pilot Hole Maker for TDR Meters



Field replaceable rods



Exclusive Paired Sensor



FIELDSCOUT® TDR 300

Portable soil moisture meter to help manage water responsibly and reduce operating expenses

- Instantaneous readings of root zone soil moisture
- **New** - FieldScout Bluetooth Device connects to the FieldScout Mobile App, instantly see your data on your smart phone or tablet (see page 32)
- Compatible with SpecMaps™ online web-mapping application, create 2-dimensional maps of your data (see website for details)
- Connects to a GPS receiver that has a serial output option (GPS required with SpecMaps*), we recommend the Garmin 72H GPS unit (see below)
- Equipped with internal data logger and RS-232 port
- Configure and download meter with FieldScout® software (included)**
- Rods sold separately (page 29)

* GPS interface requires two cables. The GPS/DGPS cable (item 2950CV5) and the PC serial interface cable (Item 7072CABLE).

** PC cable connects to a 9-pin serial port. USB-Serial adapter (item 3661USB) required for connection to computers with only USB ports.

- | | |
|-----------------------|---|
| Item 6430FS | FieldScout® TDR 300 Soil Moisture Meter
Includes soft-sided carrying case |
| Item 6453BT | FieldScout Bluetooth Device |
| Item 7072 | Garmin 72H GPS Unit |
| Item 7072CABLE | Garmin 72H PC Serial Interface Cable |
| Item 2950CV5 | GPS/DGPS Cable |
| Item 7250 | GPS Unit Mounting Bracket |
| Item 3661USB | USB-to-9-Pin-Serial Adapter |
| Item 3661U | USB-to-3.5mm-Stereo-Plug Adapter |
| Item 6430CASE | TDR 300 Carrying Case |



SPECIFICATIONS FOR TDR SOIL MOISTURE METERS

Measurement Principle: Time-domain measurement methods
Measurement Units: Percent volumetric water content
Resolution: 0.1% volumetric water content
Accuracy: ±3.0% volumetric water content with electrical conductivity < 2 mS/cm
Range: 0% to saturation (Saturation typically around 50% volumetric water)
Battery/Life: 4 AAA alkaline batteries; approximately 12-month battery life
Data Logger: (TDR 300) 3,250 measurements without GPS; 1,350 with GPS/DGPS



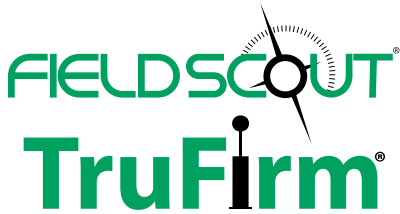
LCD display shows current measurement, rod length, number of readings, and running average

FIELDSCOUT® Mobile

NEW

Download the FieldScout Mobile App (more information on page 32) to capture and analyze measurements on your turf using Bluetooth wireless technology on a FieldScout TDR 300 Soil Moisture Meter and the FieldScout TruFirm Turf Firmness Meter. Available in two versions, Basic and Pro. Works on iOS and Android devices. TDR 300 requires the FieldScout Bluetooth Device for connection.





Based on technology developed by the United States Golf Association (USGA), the FieldScout® TruFirm® offers a quick, easy, and affordable method to measure the firmness of turf and bunker sands. Data acquired from the device allows researchers and turf management professionals to measure the relationship between the compaction of the soil and the moisture level.

- Evaluate trends and monitor sections of turf relative to one another
- **New** - FieldScout Mobile App, instantly see your data on your smart phone or tablet (see page 32)
- The lower the value, the firmer the turf
- Easy-to-use design provides instantaneous measurements
- Logged data can be sent via Bluetooth to a mobile/handheld Android device for plotting specific greens or other surfaces
- Lightweight design results in an easily portable device without the need for extra parts
- Includes soft-sided carrying case

Item 6490S **FieldScout TruFirm Turf Firmness Meter with Bluetooth Smart**

Item 6490 **FieldScout TruFirm Turf Firmness Meter**
Base model without Bluetooth

Item 6491S **Bluetooth Smart Upgrade for TruFirm***

* Requires the customer to ship the unit back to Spectrum to perform a factory installed upgrade.



SPECIFICATIONS FOR TRUFIRM

Power: 2 AA batteries (included)
Weight: 4.3 lb (1.95 kg)
Height: 27 in (69 cm)
Diameter of Hammer: 1.68 in (4.45 cm)
Measurement Units: Depth of travel (inches)
Range: 0.1 in - 1.5 in (2.54 mm - 38.1 mm)
Resolution: 0.01 in at 1.00 in - 1.50 in (0.25 mm at 25.4 mm - 38.1 mm) 0.003 in at 1.100 in - 0.999 in (0.076 mm at 27.9 mm - 25.4 mm)
Display: LCD with backlight





Pro Version
Showing Soil Moisture



Basic Version
Showing Soil Moisture



Basic Version
Showing Turf Firmness



FIELDSCOUT MOBILE APP BASIC vs. PRO

	Basic	Pro
Basic Grid of Zones	✓	✓
Change Number of Zones	✓	✓
Customizable Google Map Image		✓
Saves the Average Measurement by Zone	✓	✓
Email the Map/Results View	✓	✓
Note Different Surface Types	✓	✓
Freeform Mode		✓
Guided Mode (Auto-Advancing through Zones)		✓
SpecConnect Data Sharing		✓
Auto-Upload to SpecConnect		✓
Add User Note or Comment to Individual Reading or Zone		✓

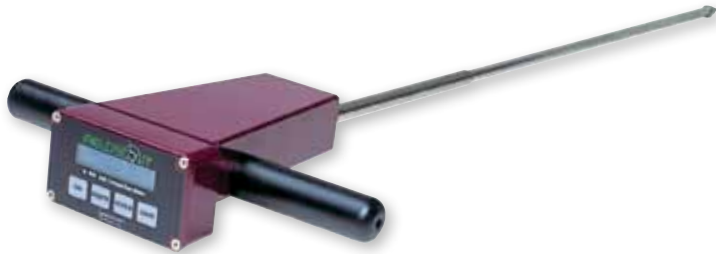
- Collects data from FieldScout TDR 300 Soil Moisture Meter (Bluetooth device required) and FieldScout TruFirm Turf Firmness Meter using Bluetooth Smart connection
- Uses your smart phone for time-stamping and geo-referencing the data
- Export for further analysis by uploading to SpecConnect (see pages 8-9)
- On-the-go means of collecting data from FieldScout meters
- Color coded to represent a scale of turf firmness or moisture
- Eliminates the need for a computer, cable, and GPS accessory
- Visualize readings in real time
- E-mail relevant information
- FieldScout TDR 300 requires new FieldScout Bluetooth Device
- Compatible with iOS and Android smart phones and tablets, device requires Bluetooth Smart Ready
- Free download from App Store or Google Play, Pro version requires a SpecConnect subscription (see below)



[FieldScout Mobile App](#)

Item 6453BT
Item 3035
Item 3060

FieldScout Bluetooth Device for TDR 300
SpecConnect FieldScout Pro Subscription (1-yr)
SpecConnect Additional FieldScout Device (1-yr)



FIELDSCOUT® SC 900 Soil Compaction Meter

Help make decisions regarding areas of the course that require aerification, changes to traffic rotation, or soil/turf amendments

- Includes 1/2 in and 3/4 in cone tip
- Takes compaction readings to a depth of 18 in (45 cm)
- Exclusive ultrasonic depth sensor captures readings in 1 in (2.5 cm) increments
- Penetration resistance measured by internal load cell
- Compaction data is displayed in PSI or kPa (1 psi = 6.9 kPa)
- Connects to any GPS receiver that has a serial output option*
- Equipped with internal data logger and RS-232 port
- Configure and download meter with FieldScout® software (included)**
- Compatible with SpecMaps™ online web-mapping application, create 2-dimensional maps of your data (see website for details)
- Includes USB cable, carrying case, and depth target

* GPS interface requires two cables. The GPS/DGPS cable (item 2950CV5) is available from Spectrum. A PC serial interface cable supplied by the manufacturer of the GPS receiver is also required.

** PC cable connects to a computer USB port. See our website for other cable connection options.

- Item 6110FS** **FieldScout® SC 900 Soil Compaction Meter**
- Item 2950CV5** **GPS/DGPS Cable**
- Item 7250** **GPS Unit Mounting Bracket**
- Item 6110FST** **Replacement Depth Target with Hole for 3/4 in Tip**
- Item 6106** **1/2 in Replacement Tip (Fine soils)**
- Item 6107** **3/4 in Replacement Tip (Coarse soils)**



SPECIFICATIONS FOR FIELDSCOUT SC 900	
Measurement Units:	Cone Index (PSI or kPa)
Resolution:	1 in (2.5 cm), 5 PSI (35 kPa)
Accuracy:	±0.5 in (1.25 cm) Depth, ±15 PSI (103 kPa) Pressure
Range:	0 to 18 in (0 to 45 cm), 0 to 1,000 PSI (0 to 7,000 kPa)
Battery/Life:	4 AAA alkaline batteries; approximately 12-month life
Data Logger Capacity:	772 profiles without GPS; 579 profiles with GPS

Soil Compaction Tester

Economical way to measure soil compaction

- 24 in stainless steel rod with adjustable shock collar to prevent damage to the gauge during transport or storage
- Easy to read, color-coated, stainless steel dial that is liquid filled to reduce shock
- Durable molded housing with rubber grip handles
- Large and small tip included with convenient storage in tester housing
- Penetration Depth: Up to 24 in (60 cm) in 3 in (7.6 cm) increments

- Item 6120** **Soil Compaction Tester**
- Item 6121** **1/2 in Replacement Tip (Fine Soils)**
- Item 6122** **3/4 in Replacement Tip (Coarse Soils)**





Actual size

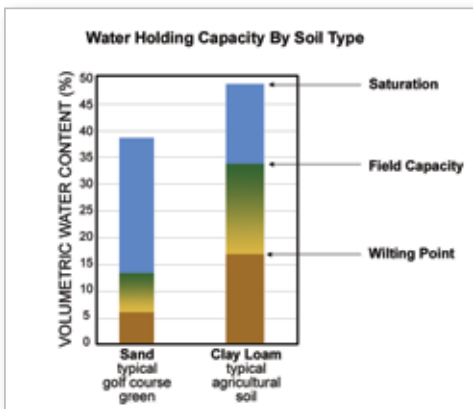
WATERSCOUT SM 100 Soil Moisture Sensor

Place at multiple depths to help determine both when and how much to water

- Measures Volumetric Water Content (VWC) of soil
- Capacitance-type sensor responds immediately to changes in soil moisture content for better irrigation decisions
- Calibrated for mineral soils or soilless media
- Installs easily into 3/4 in (1.9 cm) hole
- Install permanently or use to take spot measurements
- Can be read with the FieldScout® Soil Sensor Reader (Item 6466) or WatchDog® 2000, 1000 Series Stations, and WatchDog Pups
- Connect up to 8 sensors to one station
- WaterScout Calibration Device can be used to reset the baseline reading

- Item 6460 WaterScout® SM 100 Sensor - 6 ft (1.8 m)
- Item 6460-20 WaterScout SM 100 Sensor - 20 ft (6 m)
- Item 6470CAL3V WaterScout Calibration Device

SPECIFICATIONS FOR WATERSCOUT SM 100 SENSOR	
Standard Interface:	WatchDog weather station, Pups, and FieldScout soil moisture reader
Range:	0% VWC to saturation
Power Requirements:	3 to 5V @ 6 to 10 mA
Output:	Analog voltage 0.5 - 1.5V for a 3V excitation (ratiometric for other excitation voltages)
Resolution:	0.1% VWC
Cable Length:	6 ft (1.8 m) and 20 ft (6 m) standard, extendable up to 50 ft (15 m)
Accuracy:	3% VWC @ EC < 8 mS/cm
Sensing Area:	2.4 in (6 cm) x 0.8 in (2 cm)



Economy Soil Moisture Tester

Analog soil moisture meter measures any type of soil with just one calibration

- Resistance-type sensor located at the tip of the shaft
- Provides instant results ranging from 0 (dry) to 10 (saturated)
- 3-month warranty

- Item 6400 9 in (22 cm) Soil Moisture Tester
- Item 6405 24 in (60 cm) Soil Moisture Tester



WATERSCOUT *SMEC 300 Soil Moisture/EC/
 Temperature Sensor*

Identify situations where soil salinity is an issue or where certain moisture and temperature conditions facilitate soil-borne diseases

- Capacitance-type soil moisture sensor
- Carbon ink electrodes provide large measuring surface for electrical conductivity (EC)
- Easy, 1-step EC calibration process
- Can be read with the FieldScout® Soil Sensor Reader (Item 6466) or WatchDog® 2000, 1000 Series Stations, and WatchDog Pups
- Connect up to 4 sensors per station (see WatchDog Station pages 12-14 for details). Recommended placement of sensors is 10 feet separation to prevent interference unless in different containers (horticulture/greenhouse)
- WaterScout® Calibration Device required unless using Soil Sensor Reader (Item 6466)

WatchDog Stations sold prior to 2012 must be upgraded. (Call for support)

- Item 6470-6** WaterScout SMEC 300 Sensor - 6 ft (1.8 m)
- Item 6470-20** WaterScout SMEC 300 Sensor - 20 ft (6 m)
- Item 6470CAL3V** WaterScout Calibration Device
- Item 2251** Conductivity Standard, 1.41 mS/cm, 250 mL



Actual size

SPECIFICATIONS FOR WATERSCOUT SMEC 300

Standard Interface: WatchDog weather station, Pups, and FieldScout soil moisture reader
Range: WVC: 0% WVC to saturation, EC: 0 to 10 mS/cm, Temp: 33 - 175°F (0.5 - 80°C)
Resolution: WVC: 0.1%, EC: 0.01 mS/cm, Temp: 0.1°F (0.1°C)
Accuracy: WVC: 3%, EC: ±2%, Temp: ±1°F (0.6°C)
Cable Length: 6 ft (1.8 m) and 20 ft (6 m) standard, extendable up to 50 ft (15 m)
Power Requirements: 3V @ 6 to 10 mA
Output: Analog voltage, time division multiplexed
Sensing Area: 2.25 in. x 0.75 in.

FIELDSCOUT *Soil Sensor Reader*

Spot-check WaterScout SM 100 and SMEC 300 sensors in the field

- Also reads Watermark sensors (may require separate adapter)
- Includes soft-sided case (also available separately)

- Item 6466** FieldScout® Soil Sensor Reader
- Item 6450FSADPT** Watermark Adapter for Soil Sensor Reader

- Item 7500** Soft-Sided Carrying Case*

* Item 7500 will also fit the WatchDog 1000/2000 Series Data Shuttle (Item 3679WD), LightScout Red/Far-Red Meter (Item 3412), LightScout Quantum Light Meters (four models) and the LightScout External Light Sensor Reader (Item 3415FX)



7500



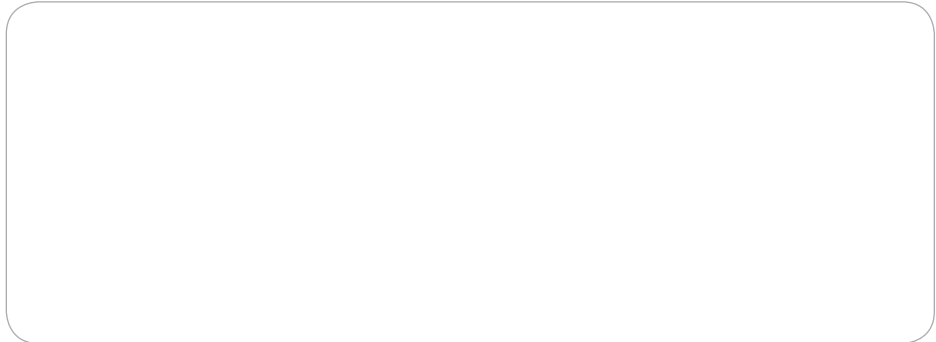
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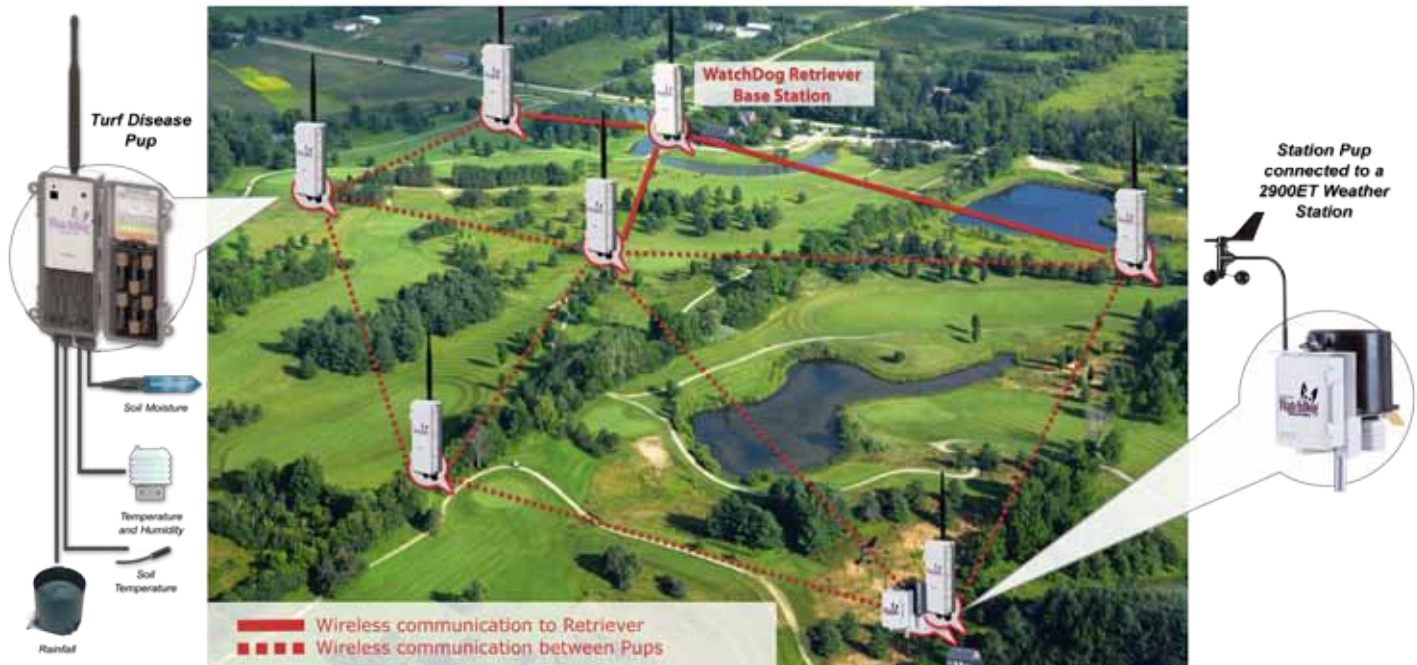


Introducing SpecConnect Integrated Wireless Solution

Your Course. Your Data. Better Decisions.

Monitor your course from wherever you are with Spectrum's new
WatchDog Retriever & Pups Wireless Network & SpecConnect Web Portal

See page 4 for more details



Visit us online at:
www.specmeters.com/SpecConnect



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