TH550

Digital Temperature, Humidity, Dew Point Monitor

Operation Manual

Range:
Temperature-
 -22 to +122°F, (-30 to +50°C)

Humidity-
 0 to 95% RH (non-condensing)

Dew Point-
 -22 to +122°F, (-30 to +50°C)

Resolution:
 1% RH, 1°

Accuracy:
Temperature- ±1.8°F (±1.0°C)

Humidity-
 ±2% RH from 0 to 60%, ±3% RH
 from 61 to 95% at +73°F

Humidity Sensor:
 Thin film capacitor

Dew Point Accuracy:
 ±3.6°F (±2°C)

Temperature Sensor:
 Thermistor

Sample Rate:
 Approx. 1 per second

Average Response Time:
 5 seconds to move 60% of full
 scale in air moving 15'/second

Ambient Operating Conditions:
 +32 to +122°F (0 to +50°C)
 0 to 90% RH (non-condensing)

Power Supply:
 One 9V alkaline battery.
 Battery life approx. 80 hours.

Dimensions: 6.25" x 2.5" x 1.9"
 (160mm x 65mm x 45mm)

Probe Dimensions:
 .92" diameter (23mm), 5.9"
 (149mm) long on a 6' (183cm)
 cord

Weight: 11oz. (.31 kg)

Instrument Anatomy

Wand
Sonda
Embout
Lesekopf

Display Area
Pantalla
Ecran d'affichage
Anzeigefeld

On/Off Key
Botón de encendido y apagado
Touche On/Off
Ein-/Aus Schalter

Min/Max Key
Botón de min./máx
Touche Min/Max
Taste Min/Max

Rh/Dew Pt. Key
Botón de humedad relativa/punto de rocío
Touche Rh/Dew
Taste Rh/Dew

Hold Key
Botón de retención
Touche hold
Taste Hold

°C/°F Key
Botón de °C/°F
Touche °C/°F
Taste °C/°F

Strain Relief
Alivio de tensión
Soulagement de Traction
Zugentlastung

Battery Compartment
Compartimiento de la pila
Compartiment à' pile
Batteriefach

5' Long Cord (154 cm)
Cordón de 154 cm (5')
Gordon de 154 cm de long
Spiralschnur, 154 cm

1. **On/Off**
 Press to turn unit on or off.

2. **Set Celsius or Fahrenheit Mode**
 Press "°C/°F" key to choose Celsius
 or Fahrenheit.

3. **Set Humidity or Dew Point Mode**
 Press "Rh/Dew" key to choose Humidity or Dew Point.
 Note: Dew Points below freezing should be converted to frost points.

```
 25°C        77°F
 37rh        24dP
```

4. **Set Wand Position**
 Slide wand upward to first notch or remove wand completely from
 cradle. Avoid breathing on or touching wand end as this could distort
 readings.

5. **Update Indicator**
 Karet moves up or down each time the unit
 takes a new reading, approximately once every
 second.
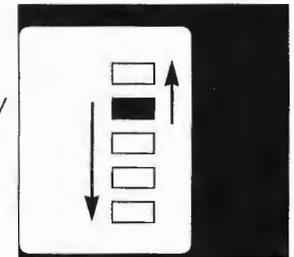
6. **Hold**
 Press this key to lock in current reading. The
 "Hold" symbol in the display will light up,
 indicating that the instrument is in the "Hold"
 mode. To resume reading, press the "Hold"
 key again.

```
 HOLD
 78°F
 22rh
```
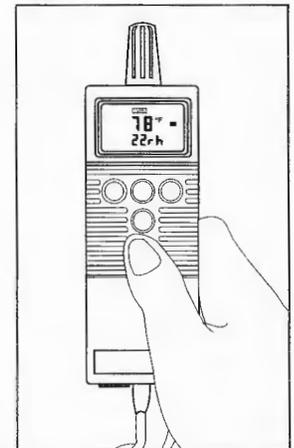
Operating Instructions, Ctd.

7. **Automatic Shutoff** This instrument will automatically shut down after ≈ 34 minutes if no keys are pressed.

8. **Automatic Shutoff Override**
You may override the automatic shutoff feature at startup by pressing down the "Hold" key, and the "On" key at the same time. The letter "T" will light up in the display, indicating that the shutoff timer is in the override mode.

```
T
    8 1°F ▪
    28rh
```
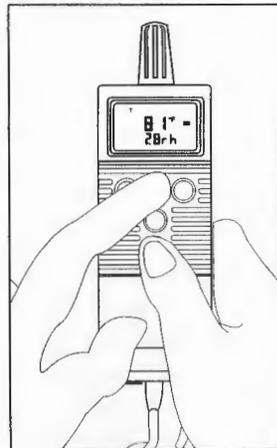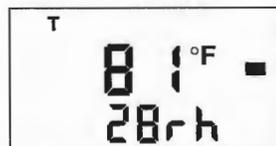
9. **Minimum/Maximum**
Press "Min/Max" once and the minimum values will be displayed for approximately 7 seconds.

Press "Min/Max" again during this time and the maximum values will be displayed for 7 seconds.

Press "Min/Max" a third time during this period and the unit will return to normal operation.

Unit will always return to normal operation after 7 seconds if no keys are pressed.
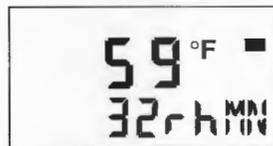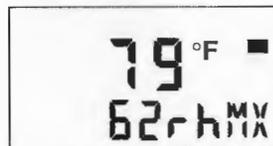
**Note:** Turning the unit off resets the minimum and maximum values.

```
    59°F ▪
    32rhMN
```
Minimum Display

```
    79°F ▪
    62rhMX
```
Maximum Display

Battery Installation

Battery should be replaced as soon as possible after low battery indication to maintain rated accuracy of unit.

```
    62°F ▪
    22dP
```
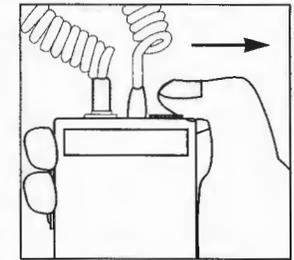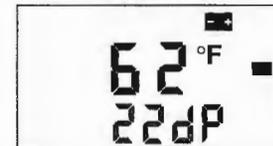
Calibration

Your instrument was carefully tested and calibrated before being shipped from the factory. Additional calibration is not required. However, should calibration be desired in the future, follow these procedures:

1. Identify a standard that is more accurate than this unit. Factory supplied calibration salts or electronic instruments recently calibrated at a certified lab are recommended. Sling psychrometers and instruments using mechanical sensing elements (human hair, wood elements, etc.) are NOT recommended. These instruments can be subject to great inaccuracies due to the nature of mechanical measurement.

2. Place the probe of the unit into the calibration salt capsule or into a controlled environmental chamber and allow for complete stabilization. For best results, calibrate the unit at levels typically monitored during normal

operation. Calibration in an open room without the salt capsule or a chamber is not recommended as temperature and humidity can vary greatly within a very small area.

3. To activate the calibration mode, turn the unit off. Now press the "On/Off" key and the "C/F" key at the same time. A small "J" will appear in the display to indicate you are in the calibration mode.
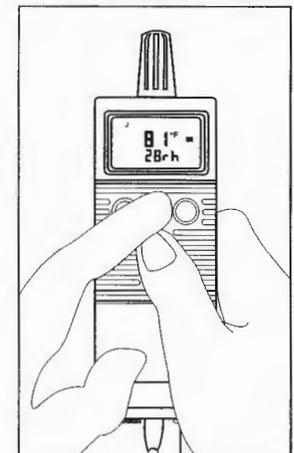
Step 3: Activating Calibration Mode

4. To lower the humidity or dew point reading, press the "RH/Dew" key. To raise the humidity or dew point reading, press the "Min/Max" key.

5. To lower the temperature reading, press the "Hold" key. To raise the temperature reading, press the "°C/°F" key.

6. When calibration is complete, simply turn the unit off to exit the calibration mode.

Notes: This procedure allows for a 10 digit change in readings. If greater change is required, there is either a need for factory service or the standard being used is inaccurate.

For most accurate full scale calibration, factory service is recommended.
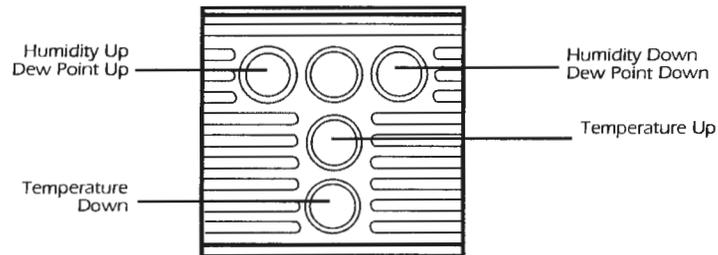
Keypad Functions in Calibration Mode

Humidity Up
Dew Point Up

Humidity Down
Dew Point Down

Temperature Up

Temperature Down

Troubleshooting

Problem	Solution
Inaccurate Reading	Allow indicator to stabilize. Check battery power (LO BAT). Incorrect reference being used. Out of calibration. Check manual for calibration procedure.
Display won't change,	Unit in "HOLD" mode (press HOLD again) **or** is locked up (Turn indicator OFF, remove battery, re-install battery & turn ON)
"E" appears in display	Component failure. Contact factory.
Display fading	Weak battery. Change battery.
"Err" appears	Bad cord connection or out of range. Pull rubber boots off wand and unit, check for proper connections. Check to see that environment measured is within operating range of unit—check manual p.2 - ambient operating conditions.
LO BAT symbol appears	Replace battery
Probe exposed to environments exceeding 95% RH for extended period	Probe should be dried out under normal ambient conditions - Time required varies on temperature, RH & air flow

Parts List

Some parts are easily replaced on site. Please refer to table below.

Description	Part #
Accessories	
Calibration Kit (11% and 75%)	A834
NIST Traceable Certificate, 3-point*	N3TH5
NIST Traceable Certificate, ULTIMA*	N4TH5

*Must be requested when ordering, add one week to delivery time.

Factory Service and Returns

We recommend that damaged instruments be returned to our factory for complete repair. Before returning any instrument or package, **please call for a Return Authorization (RA) Number.**

When calling, please have the following information available:

1. P.O. number for out-of-warranty units.

2. Serial number of unit.

3. Model number of unit.

4. The problem you're experiencing with unit.

The Dickson Warranty

Dickson warrants that the TH550 will be free from defects in material and workmanship for a period of twelve months after delivery. In the event of a claim under this warranty, the product or part must be returned to the factory for repair or replacement (shipping prepaid) with a Return Authorization Number (See "Factory Service & Returns information above). It will be repaired or replaced at Dickson's option without charge.

The foregoing warranty and remedy are exclusive and in lieu of all other warranties either expressed or implied.

Dickson shall not be liable for consequential or incidental damages resulting from failure or malfunction of its products. Products not manufactured by Dickson are excluded from this warranty.

Dickson manufactures a complete line of temperature, humidity, air quality & pressure instruments. Send or call for a free catalog of Dickson products.
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Especificaciones

Intervalos:
- **Temperatura-**
  -30°C a 50°C, (-22°F a 122°F)
- **Humedad-** 0 al 95% (sin condensación)
- **Punto de rocio-**
  -30°C a 50°C, (-22°F a 122°F)
- **Resolución:**
  1% de humedad relativa, 1°
- **Precisión de laTemperatura:**
  ±1°C (±1,8°F)
- **Precisión de la Humedad:**
  2% from 0 to 60%, ±3% from 61 to 95% RH 23°C (73°F)
- **Precisión del Punto de rocío:**
  2°C (3,6°F)
- **Detector de humedad:**
  tipo capacitancia
- **Detector de temperatura:**
  termistor
- **Muestras:** aproximadamente 1 por segundo
- **Fuente de alimentación:** una pila alcalina de 9 voltios. La duración de la pila es de unas 80 horas.
- **Intervalo de operación ambiental (cuerpo):**
  0°C a 50°C (32°F a 122°F) 0a 90% HR
- **Tamaño:** 159 x 159 x 48 mm
- **Probe Dimensions:**
  92" diameter (23mm), 5,9" (149mm) long on a 6' (183cm) cord
- **Peso:** 0,31 Kg

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