SENCOR

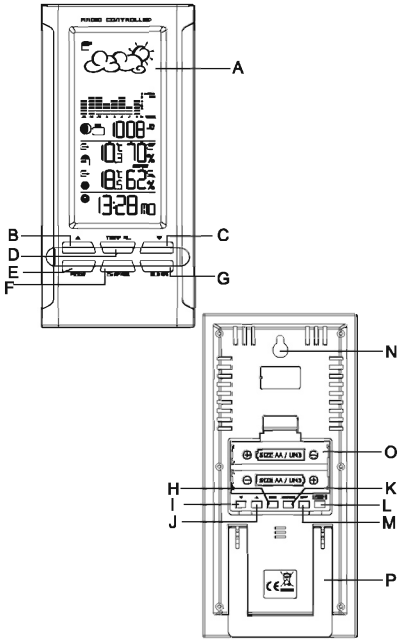
WEATHER FORECAST WITH HYGROMETER, CABLE FREE IN-OUT THERMOMETER AND RADIO CONTROLLED CLOCK

SWS 150

USER'S MANUAL

INTRODUCTION

The basic package comes with a main unit, which is the weather forecast station and, a remote unit, the thermo hygrometer sensor.
The main unit is capable of keeping track of the maximum and minimum temperature of different sites. And no wire installation is required and operates at 433MHz.
Apart from temperature shows the indoor and indoor and outdoor relative humidity and rates the comfort level. It also retains the maximum and minimum relative humidity readings. A remote thermo-hygro sensor is included with the unit is able to receive and display readings from up to 3 remote sensors.
The built-in barometer enables to display the atmospheric pressure with user-selectable altitude adjustment. A bar graph will show the pressure trend of the last 24 hours.
What is more, is equipped with a moon phase scanner, which lets you check the moon phase of the forward & backward 39 days.



A DISPLAY
Facilitates easy reading of weather forecast, indoor & outdoor humidity, remote and indoors temperatures and calendar clock, weather weather forecast, Atmospheric pressure chart and moonphase.

B UP (▲) BUTTON
Advances the value of a setting

C DOWN (▼) BUTTON
Decreases the value of a setting

D TEMPERATURE ALARM BUTTON
Displays the temperature alarm or sets the upper or lower limit.

E MODE BUTTON
Toggles the display modes and confirms entry while setting the values for display

F CHANNEL BUTTON
Displays different sensor temperature & humidity

G ALARM BUTTON
Displays the alarm time or sets the alarm status

H MEMORY [MEM] BUTTON (INSIDE BATTERY DOOR)
Recalls the maximum or minimum temperature and humidity of main and remote unit

I DOWN (▼) BUTTON (INSIDE BATTERY DOOR)
Display the moonphase of previous days or sets the altitude or sea level pressure.

J UP (▲) BUTTON (INSIDE BATTERY DOOR)
Display the moonphase of following days or sets the altitude or sea level pressure.

K HISTORY BUTTON (INSIDE BATTERY DOOR)
Displays the pressure history of previous hours.

L PRESSURE / ALTITUDE BUTTON (INSIDE BATTERY DOOR)
Toggles the display between local pressure, sea level pressure and altitude.

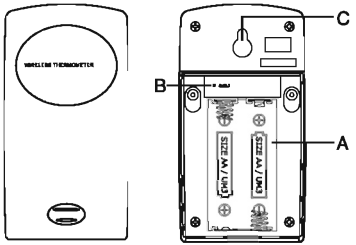
M UNIT BUTTON (INSIDE BATTERY DOOR)
Sets the unit of altitude or pressure

N WALL-MOUNT RECESSED HOLE
For mounting the main unit on a wall

O BATTERY COMPARTMENTS
Accommodates two UM-3 or "AA" size 1.5V batteries

P TABLE STAND
For standing the main unit on a flat surface

MAIN FEATURES: REMOTE UNIT



A BATTERY COMPARTMENT
Accommodates two AA-size batteries

B RESET BUTTON
Press to reset all setting if you have selected different channel.

C WALL-MOUNT RECESSED HOLE
Supports the remote until in wall-mounting

BEFORE YOU BEGIN

For best operation,

1. Insert batteries for remote units before doing so for the main unit.
2. Position the remote unit and main unit within effective transmission range, which, in usual circumstances, is 20 to 30 meters.
   Note that the effective range is vastly affected by the building materials and where the main and remote units are positioned.
   Try various set-ups for best result.
   Though the remote units are weather proof, they should be placed away from direct sunlight, rain or snow.

BATTERY INSTALLATION: REMOTE UNIT

1. Remove the screws on the battery compartment.
2. Install 2 batteries (UM-3 or "AA" size 1.5V) strictly according to the polarities shown.
3. Replace the battery compartment door and secure its screws.

BATTERY INSTALLATION: MAIN UNIT

1. Open the battery compartment door.
2. Install 2 batteries (UM-3 or "AA" size 1.5V) strictly according to the polarities shown.
3. Replace the battery compartment door.

LOW BATTERY WARNING

When it is time to replace batteries for the remote sensor, the respective low-battery indicator [ ] will show up on the indoor or outdoor temperature & hygrometer display.

HOW TO USE THE TABLE STAND OR WALL MOUNTING

The main unit has a removable table stand, which when connected, can support the unit on a flat surface. Or you can remove the stand and mount the unit on a wall using the recessed screw hole.

GETTING STARTED

1. SETTING UP THE BAROMETER

a. When batteries are installed, the display will shows the "hPa" and "mBar". User should press the "Unit" key to the unit of pressure, it will shows "0" and "meter".
User can use the **UP [▲]** or **DOWN [▼]** keys to change to "feet", or use the "Unit" key to confirm the unit.

b. After user confirmed the unit of height, it will shows "10" with "meter" or "32" with "feet". User can use the **UP [▲]** or **DOWN [▼]** keys to change to height of the place, and use the "Unit" key to confirm the height.

Remark: The default unit of pressure is hPa/mBar, unit of height is meter, height is 10 meters. It will use the default value if no key is pressure for 60 seconds.

2. SETTING UP THE REMOTE TEMP. AND RC CLOCK

a. Once batteries are in place for the remote unit, they will start transmitting temperature and humidity readings at around 45 seconds intervals.
The main unit will also start searching for signals for about two minutes once batteries are installed. 10 seconds upon successful reception, the outdoors temperatures and humidity will be displayed .The main unit will automatically update its readings at about 45-second intervals.

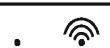
b. If no signals are received, blanks "-- -" will be displayed, hold **DOWN [▼]** for 3 seconds to enforce another search for about 2 minutes. This is useful in synchronizing the transmission and reception of the remote and main units.
c. When remote signal reception is finished, it will automatically synchronize its current time and dated when brought within rang of the DCF77 RF signal.
Repeat this step whenever you find discrepancies between the reading shown on the main unit and that on the remote unit.

HOW TO CHECK REMOTE AND INDOOR TEMPERATURES

The wave display on the outdoors temperature indicates the reception of the remote unit is in good order.
If no readings are received from the remote unit for more than two minutes, blanks "-- -" will be displayed until further readings are successfully searched. Check the remote unit is sound and secure. You can wait for a little while or hold **DOWN [▼]** for 3 seconds to enforce an immediate search. If the temperature or humidity goes above or below than the measuring range of the main unit or the remote unit (stated in specification), the display will show "-- -" & "HHH" or "LLL" respectively.

HOW TO READ THE KINETIC WAVE DISPLAY

The kinetic wave display shows the signal receiving status of the main unit. There are three possible forms:

The unit is in searching mode.	
Temperature readings are securely registered.	
No signals.	

MAXIMUM AND MINIMUM TEMPERATURES AND HUMIDITY

The maximum and minimum recorded indoor temperature, humidity and outdoor temperatures, humidity will be automatically stored in memory. To display them, Press **[MEM]** once to display the minimum readings and again the maximum readings.
The respective indicators, **[MIN]** or **[MAX]** will be displayed.
To clear the memory, hold **[MEM]** for 3 seconds.
The maximum and minimum readings will be erased.
If you press **[MEM]** now, the maximum and minimum readings will have the same values as the current ones until different readings are recorded.

TEMPERATURE AND HUMIDITY TREND

The trend indicator shows the trend of temperatures and humidity collected at that particular remote sight.
Three trends: rising, steady, and falling will be shown.

Arrow indicator			
Temperature Humidity Trend	Rising	Steady	Falling

WEATHER FORECAST

The unit is capable of detecting atmospheric pressure changes. Based on collected data, it can predict the weather for the forthcoming 12 to 24 hours.

Indicator displays on the unit					
Forecast	Sunny	Slightly Cloudy	Cloudy	Rainy	Snowy

NOTE:

1. The accuracy of a general pressure-based weather forecast is about 70%.
2. The weather forecasts. It may not necessarily reflect the current situation.
3. The "Sunny" icon, as applies to night time, implies clear weather.

ATMOSPHERIC PRESSURE

The atmospheric pressure indicator, in the weather forecast window, uses arrows to indicate if the atmospheric pressure is increasing, remaining stable, or decreasing.

Arrow indicator			
Pressure Trend	Rising	Steady	Falling

COMFORT LEVEL INDICATORS

The comfort level indicators COM, WET or DRY will tell you if the current environment is comfortable, too wet or too dry. The comfort indicators will appear on the display of the main unit when the following conditions are satisfied:

Indicator displays on the unit	**Temperature Range**	**Humidity Range**	**Shows that the Current Environment**
COM	20°C to 25°C (68'F to 77°F)	40%RH-70%RH	Ideal range for both relative humidity and temperature
WET	-5°C -+ 50°C (23°F - 122°F)	OVER 70%RH	Contains excess moisture
DRY	-5°C -+ 50°C (23'F - 122'F)	Below 40%RH	Contains inadequate moisture
No Indicator	Less than 20°C (68°F) or More than 25°C (77°F)	40%RH to 70%RH	No comment

HOW TO CHECK THE BAROMETRIC PRESSURE

The current and historical barometric pressure is shown on the atmospheric pressure window.

For user staying at a higher altitude such as in the mountain area, see-level barometric pressure applies. Use **PRESSURE/ ALTITUDE** key to toggle the display to sea level pressure display.

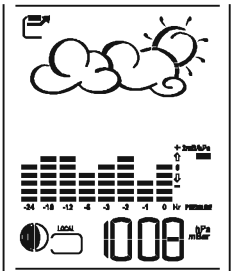
Press and hold the **PRESSURE/ALTITUDE** key to enter the sea level pressure adjusting mode.

Use the **UP [▲]** or **DOWN [▼]** key to enter sea level pressure and use **PRESSURE/ALTITUDE** to confirm.

The atmospheric pressure can be displayed in mb/hPa or inHg. To change the pressure unit, press and hold the Unit key at sea level pressure display and use **UP [▲]** or **DOWN [▼]** key to select. Press the **UNIT** key to confirm.

If you want to check the pressure history for a particular hour during the past 36 hours, press the **HISTORY** button. Each press on the button will go back by an hour.

The recorded atmospheric changes for the past 24 hour are displayed in a bar chart above the atmospheric pressure window.



HOW TO USE AND SCAN THE MOON PHASE

TE688NL is equipped with a moon phase display and scanner with which eight moon phases are displayed on the screen from new moon to waning crescent. The one falls on the current day will flash on the screen.

If it is a full moon or new moon day, the icon will flash faster.

The eight phases are:

New Moon | Waning Crescent | First Quarter | Waxing Gibbous | Full Moon | Waning Gibbous | Last Quarter | Waning Crescent

To check the moon phase for a particular day, press the **UP [▲]** or **DOWN [▼]** button once. The clock will enter moon phase scanning mode.

Use the **UP [▲]** or **DOWN [▼]** button to locate the date you want to check. The calendar will be day-driven in this mode. You can go back 39 days travel to next 39 days.

The corresponding moon phase will appear immediately on the screen.

The unit will return to the last display mode when the **UP [▲]** and **DOWN [▼]** buttons are left idle for 2 seconds.

DISCONNECTED SIGNALS

If without obvious reasons the display of the outdoor temperature goes blank, hold **DOWN [▼]** for 2 seconds to enforce an immediate search. If that fails, check:

1. The remote unit is still in place.
2. The batteries of both the remote unit and main unit. Replace as necessary.

Note: When the temperature falls below freezing point, the batteries of outdoor units will freeze, lowering their voltage supply and the effective range.

3. The transmission is within range and path is clear of obstacles and interference. Shorten the distance when necessary.

TRANSMISSION COLLISION

Signals from other household devices, such as door bells, home security systems and entry controls, may interfere with those of this product and cause temporarily reception failure. This is normal and does not affect the general performance of the product. The transmission and reception of temperature readings will resume once the interference recedes.

HOW TO SET THE RADIO CONTROLLED CLOCK

1. After the batteries are installed. The clock will automatically search the radio signal. It takes about 3-8 minutes to finish this process.
2. If user wishs to disable the auto-reception feature, holds the **UP [▲]** front panel) for 2 seconds to disable it.
3. To enable the auto-reception feature again, holds the **UP [▲]** for 2 seconds again to force it receive and allow it receive at desired time.
4. If the radio signal is received, the date & time will be set automatically with radio control signal icon [📡] turns on.
5. If the clock fails to receive the time signal, it will be show as [▲] icon. Then user can set the time manually.

CALENDAR CLOCK DISPLAY MODES

The clock and the calendar share the same section of the display. The calendar is displayed in a day-month format. Each press on the **MODE** button will change the display between clock with second, clock with day of week, zone time with day of week.zone time with second and day-month.

HOW TO SET THE CLOCK MANUALLY

To set the clock manually, hold **MODE** for 3 seconds, the day of the week will be flashing. Press **UP [▲]** or **DOWN [▼]** keys to select between English, German, French, Italian, Spanish, Dutch and Swedish. Press **MODE** to confirm. Repeat the same procedure to set, °C/°F, year, month, date, date-month format, 12/24, hour and minute.

During the setting, press and hold **UP [▲]** or **DOWN [▼]** will increase or decrease the value rapidly.

If there is an item you do not wish to change, simply press **[MODE]** to bypass the item.

When you finished the change, press **[MODE]** to exit.

The display will return to the clock mode.

HOW TO SET AND ARM THE ALARM

To set an alarm,

1. Press **[ALARM]** once to display alarm time. If the alarm is disarmed, the time will be displayed as "OFF".
2. Hold **[ALARM]** for two seconds. The hour digits will blink.
3. Enter the hour using **UP [▲]** or **DOWN [▼]**.
4. Press **[ALARM]**. The minute digits will blink.
5. Enter the minutes using **UP [▲]** or **DOWN [▼]**.
6. Press **[ALARM]** to exit.
7. Repeat the same procedure to set single alarm.

HOW TO SET THE ZONE TIME

To set the zone time,

1. Press **[MODE]** until at zone time display mode,
2. Hold **[MODE]** for 3 seconds, the zone time offset will be displayed.
3. Enter the offset using **UP [▲]** or **DOWN [▼]**.
4. Press **[MODE]** to exit.

The alarm "((•W" "((•S" and "Pre-AL" icons will be displayed indicating which alarm is armed. You can also arm or disarm an alarm by pressing the **UP [▲]**, **DOWN [▼]** button at alarm display mode.

Press **MODE** to return to clock display mode.

HOW TO STOP AN ALARM

Press **[ALARM]** on the unit to stop an alarm.

ALARM FEATURE

* Weekday Alarm
  The alarm sound will be activated and the icon will be flashed on weekday when it is armed and the alarm time is reach.
* Single Alarm
  The alarm sound will be activated and the icon will be flashed once when it is armed and the alarm time is reach. Once it finished, it will be disabled automatically.
* Pre-Alarm
  The pre-alarm sound will be activated and the icon will be flashed if outdoor temperature under or equal two degree C. Which is programmable 15, 30, 45, 60 or 90 minutes earlier than the weekday alarm or single alarm time.

HOW TO CHANGE THE TEMPERATURE ALARM SETTING

1. Press once **[TEMP AL.]** button,
2. Then Press and hold **[TEMP AL.]** button for 2 seconds.
3. Enter the Hi or Lo temperature alert setting value by using [▲] or [▼] button.
4. Press **[TEMP AL.]** once to exit.

PRECAUTIONS

This product is engineered to give you years of satisfactory service if you handle it carefully. Here are a few precautions:

1. Do not immerse the unit in water.
2. Do not clean the unit with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive force, shock, dust, temperature or humidity, which may result in malfunction, shorter electronic life span, damaged battery and distorted parts.

4. Do not tamper with the unit's internal components. Doing so will invalidate the warranty on the unit and may cause unnecessary damage. The unit contains no user-serviceable parts.
5. Only use fresh batteries as specified in the user's manual. Do not mix new and old batteries as the old ones may leak.
6. Always read the user's manual thoroughly before operating the unit.

SPECIFICATIONS

Temperature Measurement
Main unit
Indoor Temperature measurement

Proposed operating range	: -5.0°C to +50.0°C 23.0°F to 122.0°F
Humidity Measuring range	: R.H. 25% to 90% at 25°C(77°F)
Temperature resolution	: 0.1 °C 0.2°F
Humidity resolution	: 1%R.H.

Remote unit

Proposed operating range	: -10.0°C to + 60.0°C 14.0°F to 140.0°F
Temperature resolution	: 0.1 °C 0.2°F
RF Transmission Frequency	: 433 MHz
Maximum No. of Remote unit	: 3
RF Transmission Range	: Maximum 30 meters (open area)
Temperature sensing cycle	: around 43~47 seconds

Relative Humidity Measurement
Remote relative humidity measurement range
: 25% RH to 90% RH
Resolution : 1% RH
Barometric Pressure Measurement

Pressure measuring range	: 750 to 1100 mb/hPa at 25°C (22.15 to 32.49 inHg)

Pressure sampling cycle	: 20 minutes
Moon Phase Functions	
Moon Phase Scanner Range	: forward/backward 39 days

Calendar Clock
12/24 h display with hh : mm
Date Format: Day - Month or Month-Day.
Day of week selectable in 7 language (English, German, French, Italian, Spanish, Dutch and Swedish)
Dual 2-minute crescendo alarm

Power

Main unit	: use 2 pcs UM-3 or "AA" 1.5V battery
Remote sensing unit	: use 2 pcs UM-3 or "AA" 1.5V battery

Weight

Main unit	: 198g (without battery)
Remote sensing unit	: 62g (without battery)

Dimension

Main unit	: 88(L) x 185(H) x 28(D) mm
Remote sensing unit	: 55.5(L) x 101(H) x 24(D) mm

CAUTION
- The content of this manual is subject to change without further notice.
- Due to printing limitation, the displays shown in this manual may differ from the actual display.
- The contents of this manual may not be reproduced without the permission of the manufacturer.

INSTRUCTIONS AND INFORMATION REGARDING THE DISPOSAL OF USED PACKAGING MATERIALS

Dispose of packaging material at a public waste disposal site.

DISPOSAL OF USED ELECTRICAL AND ELECTRONIC APPLIANCES

The meaning of the symbol on the product, its accessory or packaging indicates that this product shall not be treated as household waste. Please, dispose of this product at your applicable collection point for the recycling of electrical & electronic equipment waste. Alternatively in some states of the European Union or other European states you may return your products to your local retailer when buying an equivalent new product. The correct disposal of this product will help save valuable natural resources and help in preventing the potential negative impact on the environment and human health, which could be caused as a result of improper liquidation of waste. Please ask your local authorities or the nearest waste collection centre for further details. The improper disposal of this type of waste may fall subject to national regulations for fines.

For business entities in the European Union

If you wish to dispose of an electrical or electronic device, request the necessary information from your seller or supplier.

Disposal in other countries outside the European Union

If you wish to dispose of this product, request the necessary information about the correct disposal method from local government departments or from your seller.

CE This product meets all the basic EU regulation requirements that relate to it.

Changes to the text, design and technical specifications may occur without prior notice and we reserve the right to make these changes.

Hereby FAST ČR a.s., declares that this SWS 150 is in compliance with the essential requirements and other relevants provisions of Directive 1995/5/EC. The device can be operated freely in the EU.

The full text of the Declaration of Compliance can be found at www.sencor.cz.