

## Unpacking Inspection

Open the package case and take out the Meter. Check the items shown on Table 1-1 carefully to see any missing or damaged part:

Table 1-1. Unpacking Inspection

Item	Description	Qty
1	English Operating Manual	1 piece
2	Test Lead	1 pair
3	K-Type (nickel chromium ~ nickel silicon) Point Contact Temperature Probe (It is only suitable for measuring temperature under 230 oC)	1 piece
4	Alligator Clip	1 piece
5	Test Clip	1 pair
6	USB interface cable	1 piece
7	CD-ROM (Installation Guide & Computer Interface Software)	1 piece
8	Carrying Bag	1 piece
9	Power Adaptor (UT71E only)	1 piece
10	9V Battery (NEDA 1604, 6F22, 006P)	1 piece

In the event you find any missing or damage, please contact your dealer immediately.

### Safety Information

This Meter complies with the standards IEC61010 safety measurement requirement: in pollution degree 2, overvoltage category (CAT. III 1000V, CAT.IV 600V) and double insulation.

CAT. III: Distribution level, fixed installation, with smaller transient overvoltage than CAT. IV

CAT.IV: Primary supply level, overhead lines, cable systems etc.

Use the Meter only as specified in this operating manual, otherwise the protection provided by the Meter may be impaired.

In this manual, a Warning identifies conditions and actions that may pose hazards to the user, or may damage the Meter or the equipment under test.

A Note identifies the information that user should pay attention to.


International electrical symbols used on the Meter and in this Operating Manual are explained on page 9.

### Rules For Safe Operation

#### Warning

To avoid possible electric shock or personal injury, and to avoid possible damage to the Meter or to the equipment under test, adhere to the following rules:









- 1 Before using the Meter inspect the case. Do not use the Meter if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.
- 1 Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity. Replace damaged test leads with identical model number or electrical specifications before using the Meter.
- 1 Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and grounding.
- 1 The rotary switch should be placed in the right position and no any changeover of range shall be made during measurement is conducted to prevent damage of the Meter.

- 1 When the Meter working at an effective voltage over 60V in DC or 30V rms in AC, special care should be taken for there is danger of electric shock.
- 1 Use the proper terminals, function, and range for your measurements.
- 1 If the value to be measured is unknown, use the maximum measurement position.
- 1 Do not use or store the Meter in an environment of high temperature, humidity, explosive, inflammable and strong magnetic field. The performance of the Meter may deteriorate after dampened.
- 1 When using the test leads, keep your fingers behind the finger guards.
- 1 Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes.
- 1 Before measuring current, check the Meter's fuses and turn off power to the circuit before connecting the Meter to the circuit.
- 1 Replace the battery as soon as the battery indicator  appears. With a low battery, the Meter might produce false readings that can lead to electric shock and personal injury.
- 1 When servicing the Meter, use only the same model number or identical electrical specifications replacement parts.
- 1 The internal circuit of the Meter shall not be altered at will to avoid damage of the Meter and any accident.
- 1 Soft cloth and mild detergent should be used to clean the surface of the Meter when servicing. No abrasive and solvent should be used to prevent the surface of the Meter from corrosion, damage and accident.
- 1 The Meter is suitable for indoor use.
- 1 Turn the Meter off when it is not in use and take out the battery when not using for a long time.
- 1 Constantly check the battery as it may leak when it has been using for some time, replace the battery as soon as leaking appears. A leaking battery will damage the Meter.

## International Electrical Symbols

Symbols used on the Meter and in this manual are explained in Table1-2.

**Table 1-2. International Electrical Symbols**

	AC or DC
	DC Measurement
	AC Measurement
	Grounding
	Double Insulated
	Warning. Refer to the Operating Manual
	Deficiency of Built-In Battery
	Conforms to Standards of European Union

## Chapter 2 Getting Acquainted

### Turning the Meter On

To turn the Meter on, turn the rotary switch from OFF to any switch setting.

### Battery Considerations

The Meter uses one 9V Battery (NEDA 1604, 6F22, 006P). The following paragraphs describe several techniques used to conserve battery power.

### Automatic Power Off

The display blanks and the Meter goes into a "sleep" mode if you have not changed the rotary switch position or pressed a button for a set period. While in Sleep mode, pressing the blue button or turning the rotary switch could turn the Meter on. The Meter then returns to the display for the function selected with the rotary switch; all previously activated button features are discarded.

The automatic power off is preset to 10 minutes. From the Setup menu (see Chapter 5), you could specify a time (10 minutes, 20 minutes, 30 minutes or OFF). If you set to OFF, the Meter retains on until you turn the rotary switch to OFF or the battery becomes too weak.


### Automatic Backlight Off

Press **LIGHT** button to turn the backlight on and press **LIGHT** again to turn it off. Press **EXIT** to exit the feature.


Press **LIGHT** to select the backlight level (low or high).

In Setup menu (see Chapter 5), you could specify a time to automatically turn off the backlight (10 seconds, 20 seconds, 30 seconds or OFF). If the period is set to OFF, the backlight feature is disabled.

### Low Battery Indication

A constant battery icon (  ) in the upper left corner of the display notifies you that the batteries are low and should be replaced.

### Warning

To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the battery icon (  ) appears.

### The Meter Structure

The Figure 2-1 shows the Meter structure.

1. LCD Display
2. Functional Buttons
3. Rotary Switch
4. Input Terminals

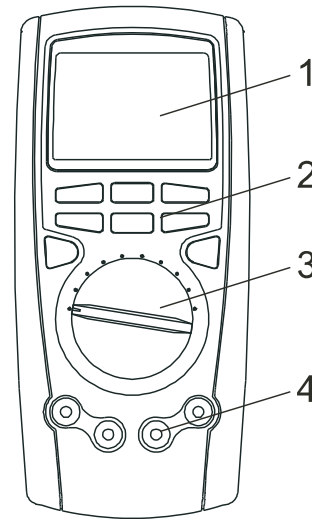


Figure 2-1. Meter Structure

### Rotary Switch








Turn the Meter on by selecting any measurement function. The Meter presents a standard display for that function. The display may also be influenced by some of the choices made in Setup.

Use the blue button to select any rotary switch alternate function (labeled in blue letters).




When you turn the rotary switch from one function to another, a display for the new function appears. Button choices made in one function do not carry over into another function.

The Table 2-1 described each rotary switch position

Table 2-1. Rotary Switch Selections

Rotary Switch Position	Rotary Switch Function	Blue Key Function
OFF	Turn the Meter off	None
V  (UT71A/B/C/D )	DC voltage measurement	None
V  (UT71A/B/C/D )	AC voltage measurement	None
V  (UT71E only)	AC or DC voltage measurement	Toggle between AC or DC voltage measurement
Hz % mV  (UT71B/C/D)	DC millivoltage measurement	1 Frequency measurement 1 Frequency signal duty cycle measurement
mV  (UT71A/E)	DC millivoltage measurement	None
 $\Omega$	Resistance measurement	1 Diode test 1 Continuity test
W (UT71E only)	Power measurement	None
	Capacitance measurement	None
°C °F (UT71B/C/D )	Centigrade temperature measurement	Fahrenheit temperature measurement



Rotary Switch Position	Rotary Switch Function	Blue Key Function
<b>Hz %</b> <b>C F</b> (UT71E only)	Centigrade temperature measurement	1 Fahrenheit temperature measurement 1 Frequency measurement 1 Frequency signal duty cycle measurement
<b>μA</b> 	AC or DC current measurement (400μA ,4000μA)	Toggle between AC or DC current
<b>mA</b>  <b>(4~20mA)</b> <b>%</b>	AC or DC current measurement (40mA ,400mA)	Toggle between AC or DC current 4~20mA loop current as % reading
<b>A</b> 	AC or DC current measurement (10A)	Toggle between AC or DC current

## Functional Buttons

The buttons activate features that augment the function selected with the rotary switch. The buttons are shown in Table 2-2.



Press the button once to access the main feature (e.g. STORE).

To access the first additional feature of the button (e.g. RECALL), press and hold the button for over 1 second to access this additional feature. This additional feature appears right above or on the left hand side of the appropriate keys.

To access the second additional feature of the button (e.g. ◀), press once the button again while the Meter has already entered the first additional feature (e.g. RECALL). The second additional feature appears on the right hand side above the appropriate keys.

The RANGE and EXIT buttons has only one additional feature.

**Table 2-2. Functional Buttons**





Button	Description	Access Method
	<p>Range feature:</p> <p>Exit AUTO and enter MANUAL ranging. In MANUAL, select next input range. EXIT to return to AUTO. AUTO is default.</p>	Press the button once.
	<p>Testing resistance signal from calibrator:</p> <p>When testing resistance signal from calibrator, it is necessary to press this button to change the maximum display to 4000 counts but the accuracy remains unchanged.</p>	Press and hold the button while turning on the Meter
	<p>Setup feature:</p> <p>Access Setup selections, the display shows "SET".</p> <p>In the Setup mode, each press of <b>SETUP</b> button steps to the next Selection</p>	Press and hold the button for more than 1 second
	<p>Store feature:</p> <p>Store the current measurement value. Press <b>EXIT</b> to exit the Store feature.</p>	Press the button once.

Table 2-2. Functional Buttons

Button	Description	Access Method
	<p>Recall feature:</p> <p>Recall the stored value. Press <b>EXIT</b> to exit the Recall feature.</p>	Press and hold the button for over 1 second
	<p>Setup feature:</p> <p>In Setup, press to select OFF at the selection of HIGH and LOW</p>	Press the button once after entering Setup mode.
	<p>Hold feature:</p> <p>Press <b>HOLD</b> to freeze the displayed value. Press <b>EXIT</b> to release the display.</p>	Press the button once.
	<p>Peak Hold feature:</p> <p>Press to access Peak Hold feature, the primary display shows PEAK HOLD. Press EXIT to exit.</p>	Press and hold the button for over 1 second.
	<ul style="list-style-type: none"> <li>1 In Setup, each press to select the digit you want to edit.</li> <li>1 In Recall, press to enable SEND feature</li> <li>1 In Store, press to toggle between clearing all the stored reading or start storing reading from the current index number.</li> </ul>	Press the button once after entering Setup or Recall or Store mode.