Quick Start

Your KTx recorder has been preset to operate using the most popular settings:

**KTx**
- Recording Time: 7 day
- Temperature Range: 0 to 100˚F/C

**KTxE**
- Recording Time: 7 day
- Temperature Range: 0 to 1000˚F/C

**KTxA**
- Recording Time: 7 day
- Temperature Range: 0 to -100˚F/C

A set of batteries, a pen and a chart have already been installed for your convenience. All you need to do is start using your KTx recorder with the settings listed is follow these quick start instructions.

1. Plug in AC adapter
2. Plug in thermocouple probe
3. Set the appropriate time by inserting a coin into the groove in the chart hub and turning clockwise until the correct hour and day on the chart is referenced to the timing clip. (see Instrument Anatomy, p. 3, fig. 1)
4. remove the protective pen cap, and insert on Pen Cap Holder
5. Press the “ON/OFF” key to turn instrument on. Press the “PEN HOME” key to move pens to current reading.

Specifications

<table>
<thead>
<tr>
<th>KTx Temperature Ranges:</th>
<th>0 to +100˚F/C, -50 to +50˚F/C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to +250˚F/C, 0 to +500˚F/C</td>
</tr>
<tr>
<td>KTxE Temperature Ranges:</td>
<td>0 to +250˚F/C, 0 to +500˚F/C</td>
</tr>
<tr>
<td></td>
<td>0 to +1000˚F/C, 0 to +2000˚F</td>
</tr>
<tr>
<td>KTxA Temperature Ranges:</td>
<td>0 to -100˚F/C, 0 to -150˚F/C</td>
</tr>
<tr>
<td></td>
<td>+20 to -120˚F/C, +150 to -250˚F</td>
</tr>
<tr>
<td>Temperature Accuracy:</td>
<td>±0.3% of reading, ±1.0˚C (±1.8˚F)</td>
</tr>
<tr>
<td>KTx Temperature Sensor:</td>
<td>Beadwire probe, Type K-thermocouple</td>
</tr>
<tr>
<td>KTxE Temperature Sensor:</td>
<td>High temperature basic probe</td>
</tr>
<tr>
<td>KTxA Temperature Sensor:</td>
<td>Beadwire probe, Type K-thermocouple</td>
</tr>
<tr>
<td>NOTE: The beadwire probe (KTx &amp; KTxA) included with unit has an operation range of -300’ to +500˚F. The High Temp Basic probe (KTxE) included with unit has an operation range of -300’ to +2100˚F.</td>
<td></td>
</tr>
<tr>
<td>Recording Times:</td>
<td>24 hour, 7 day, 14 day and 31 day</td>
</tr>
</tbody>
</table>

Display Resolution:
- 1˚F (1˚C)

Chart:
- 8” diameter (20.3 cm)

Power Supply:
- 120V AC adapter with 4 “D” batteries for back-up power

Alarms:
- Audio/Visual - high and low alarms

**KTx Default Alarms:**
- 40˚F Min & 110˚F Max

**KTxE Default Alarms:**
- 100˚F Min & 1200˚F Max

**KTxA Default Alarms:**
- -100˚F Min & +100˚F Max

Dimensions:
- 10.5” x 13.2” x 2.8”
- (26.7 cm x 33.5 cm x 7.1 cm)

Weight:
- Approx. 7 lbs. (3.2 kg) with batteries

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

NOTE: Response time is slower when using battery power source.

Operating Information

Probe
A submersible K-thermocouple probe is supplied with your unit. This probe may be used as a disposable attachment and re-ordered when needed.

Power Supply
We recommend using AC power with four “D” batteries installed as a back-up power source. This ensures that your recording will not be interrupted when there is a power failure. The AC adapter plugs into the back of the recorder beneath the probe.

NOTE: If batteries are used as the main power source, the recorder will update temperature readings at a much slower rate.

Door Lock
The KTx is equipped with a locking door. This is an important security feature because it will allow you to set the dip switches and then lock the recorder door to prevent tampering.
Keypad Operations

**On/Off**
- When you press the “ON/OFF” key the pens will move to the correct reading.

**Alarm Set**
- The alarm set keys are labeled with arrows that point up and down. You can set a minimum and maximum alarm.
  1. To set the alarms press the “ALARM SET” key.
  2. Use the “UP ARROW” button to increase the minimum alarm and the “DOWN ARROW” to decrease the minimum alarm setting.
  3. Press “ALARM SET” key a second time. The MAX symbol will appear and the temperature will flash indicating that you can now set the maximum alarm. Use the same procedure as in step #2 above for setting the temperature maximum alarm setting.
  4. When you have set alarms press “ALARM SET” a final time to lock in setting.

**Minimum**
- This symbol is displayed when you are setting a minimum alarm or when you have pressed the “MIN/ MAX” key and the minimum value is being displayed.

**Alarm ON/OFF**
- This button turns the alarms on and off. When alarms are “ON” the alarm symbol appears on the display when alarm sounds will sound audibly for approximately 1 minute and then it will stop.
- For a visual alarm the display will flash until the alarm is reset.

**Pen Home**
- Press the “PEN HOME” key while the unit is operating and the pens move to the outside of the chart. Press the “PEN HOME” key again and the pens will return to the current reading points on the chart.

**Display Change**
- Press the “DISPLAY” key and the display will change.

**Alarm Set**
- Press the “UP ARROW” button to increase the minimum alarm or when you have pressed the “MIN/ MAX” key and the maximum value is being displayed.

**Temperature Range**
- KTx dip switches for ranges
  - 0 to 50˚F  
  - 0 to 250˚F  
  - 0 to 1000˚F  
  - 0 to 2000˚F

**Display ON/OFF**
- Dip switch #7 will allow you to turn the display on and off.

**Keypad Lock**
- For security purposes it is possible to lock the keypad with the use of dip switch #8.

**Calibration**
- Your instrument was carefully tested and calibrated before being shipped from the factory. For greatest accuracy, we recommend factory re-calibration every 6-12 months. Call customer service at 630-543-3747. If you wish to do your own calibration, follow these procedures.
  1. Identify a standard that is more accurate than this unit.
  2. Place the probe of the unit and the standard into a controlled environment, allowing the unit to stabilize. For best results, calibrate the unit at levels typically monitored during normal operation.
  3. To activate the calibration mode, turn the unit off. Press the “ON/OFF” key and the “UP ARROW” key at the same time. The “UC” symbol will appear in the upper right portion of the display to indicate you are in the “USER CALIBRATION” mode. Match the reading of the recorder to the reading of the referenced standard.
  4. To raise the temperature press the “UP ARROW” key. To lower the temperature press the “DOWN ARROW” key.
  5. When calibration is complete press the “ON/OFF” key to save the calibration settings.

Calibration is stored in memory even after you turn the unit off. User calibration information will not be lost if AC power fails.
## Chart Installation

1. Press the pen home key to make pen move to the outside of the chart.
2. Press the pen lifting bar to raise the pen.
3. Place the new appropriate chart on the chart hub - being certain that the edge of the chart slides under the chart guide clips located at the outside of the chart. **NOTE:** The chart should stay flat on the dial face.
4. Set time by inserting a coin into the groove in the chart hub and turning clockwise until the correct hour (and day if applicable) on the chart is referenced to the timing clip.
5. Lower the pen lifting bar so that the pen tip rests firmly on the paper.
6. Press the pen home key to return the pen to position. At the end of tone recording time cycle, simply repeat steps 1-5, replacing the used chart with a new one.

## Pen Installation

1. Press the “PEN HOME” key to return pen to the home position.
2. Use the “PEN ARM” lifter to raise the pens.
3. Simply slide used pen cartridge off and slide new one on. Lower pen arm lifter.
4. Press the “PEN HOME” key to return pen to chart position.

## Replacement Parts

<table>
<thead>
<tr>
<th>Charts (60/pack)</th>
<th>24 hour chart</th>
<th>7 day chart</th>
<th>31 day chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTx Ranges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-50 to +50°F/C</td>
<td>C411</td>
<td>C414</td>
<td>C406</td>
</tr>
<tr>
<td>0 to +100°F/C</td>
<td>C412</td>
<td>C414</td>
<td>C409</td>
</tr>
<tr>
<td>0 to +250°F/C</td>
<td>C432</td>
<td>C439</td>
<td>C407</td>
</tr>
<tr>
<td>0 to +500°F</td>
<td>C428</td>
<td>C459</td>
<td>C408</td>
</tr>
<tr>
<td>KTx Ranges</td>
<td></td>
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<tr>
<td>0 to +500°F</td>
<td>C428</td>
<td>C459</td>
<td>C408</td>
</tr>
<tr>
<td>0 to +100°F/C</td>
<td>C441</td>
<td>C440</td>
<td>C408</td>
</tr>
<tr>
<td>0 to +200°F</td>
<td>C443</td>
<td>C444</td>
<td>C444</td>
</tr>
<tr>
<td>KTx Ranges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to -100°F/C</td>
<td>C410</td>
<td>C412</td>
<td>C409</td>
</tr>
<tr>
<td>0 to -150°F/C</td>
<td>C425</td>
<td>C435</td>
<td>C409</td>
</tr>
<tr>
<td>+20 to -120°F/C</td>
<td>C415</td>
<td>C417</td>
<td>C480</td>
</tr>
<tr>
<td>+150 to -250°F</td>
<td>C442</td>
<td>C452</td>
<td>C452</td>
</tr>
</tbody>
</table>

**NOTE:** If you will be using the 14 day recording time, you can use a 7 day chart in the range desired and divide up each day by two.

## Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Check/Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pen trace too fine or absent.</td>
<td>Tip too sharp, cartridge dried out</td>
<td>Sand tip, moisten or replace</td>
</tr>
<tr>
<td>Readings of pen and display do not match exactly.</td>
<td>Hysteresis or Wrong chart</td>
<td>Hysteresis is a naturally occurring mechanical discrepancy up to 2% of range. Check to see that proper chart is installed</td>
</tr>
<tr>
<td>Display not lit.</td>
<td>Display disabled</td>
<td>Switch dip switch #7 off</td>
</tr>
<tr>
<td>Rectangle on the left portion of the display is lit.</td>
<td>System Error</td>
<td>Send to factory for repair. (see back cover for repair procedure)</td>
</tr>
<tr>
<td>Display keys not working.</td>
<td>Keypad is locked</td>
<td>Switch dip switch #8 off</td>
</tr>
<tr>
<td>PROB displayed</td>
<td>Probe not plugged into recorder</td>
<td>Plug “K-thermocouple” into back of recorder. (see diagram, p. 3)</td>
</tr>
<tr>
<td>ERR displayed</td>
<td>Error</td>
<td>Change dip switch combination.</td>
</tr>
<tr>
<td>Out of Calibration or Questionable accuracy</td>
<td>Harsh environments, stressful conditions, or time.</td>
<td>See Calibration Procedure on p. 5 or Return to factory for recalibration.</td>
</tr>
</tbody>
</table>

## Factory Service & 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.

**Clearly mark the RA number on the outside of the package and return the instrument, shipping prepaid. Delivery will be refused for packages sent without RA numbers.**

## The Dickson Warranty

Dickson warrants the KTx line of instruments will be free from defects in material and workmanship or accidental damage 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 repair information above). It will be repaired or replaced at Dickson’s option without charge. This warranty does not cover routine calibration, pen, chart and battery replacement. 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 or its products. Dickson makes no warranty for products not manufactured by it or for any products modified by buyer, or subject to misuse or neglect.

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