Step 11. Enter to the Thermocouple Type Input Submenu
Press to display flashing, previously selected Thermocouple type.

Step 12. Scroll through available selection of TC types
Press to sequence thru flashing Thermocouple types, (select for type "K" CHROMEL/ALUMEL OMEGA) J K T E N D I N J R S B C - TC types
J k t e n d j r s b c - Display

Step 13. Store TC type
After you have selected the Thermocouple type press to store your selection, the instrument automatically advances to the next menu item.

Step 14. Enter to the Control Configuration Menu
The display shows flashing Configuration, which is the top menu for 4 submenus: Decimal Point, Degree Units, Filter Constant and Input/Resistance Units.

Step 15. Enter to Decimal Point Submenu
Press to display Decimal Point.

Step 16. Display the Decimal Point position
Press to again display the flashing Decimal Point position.

Step 17. Select the Decimal position
Press to select Decimal Point position.

Step 18. Store selected Decimal position
By pressing momentarily the Decimal position point will be stored and the instrument will go to the next menu item.

Step 19. Enter to Temperature Unit Submenu
Display shows flashing Temperature Unit.

Step 20. Display available Temperature Units
Press to display the flashing Degree.

Step 21. Scroll through Temperature Units selection
Press to select Degree.

Step 22. Store the Temperature Unit
Press to display momentarily that the Degree Unit has been stored and the instrument will go automatically to the next menu item.

Step 23. Enter to the Filter Constant Submenu
Display shows flashing Filter Constant Submenu.

Step 24. Display the Filter Constant Value Submenu
Press to display the flashing, previously selected Filter Constant.

Step 25. Scroll through available Filter Constants
Press to sequence thru Filter Constants 0.0001, 0.001, 0.01, 0.1, 1.0, 10, 100, 1000, 000.0, 000.1, 001.0, and 1.00.

Step 26. Store the Filter Constant
Press momentarily to store Filter Constant and the instrument will automatically go to the next menu item.

Step 27. Enter Alarm
The display will show flashing the top menu for Alarm 1. In the following steps we are going to enable Alarm 1, Deviation, Unlatch, Normally Open, Active Above, Enable Power on and +2°F High Alarm i.e. Process Value > Setpoint 1 Value +2°F will activate Alarm 1.  

If Analog Output Option is installed and enabled, the controller will skip Alarm 1 Menu item to Analog Output.

Step 28. Enter Alarm 1 Enable/Disable Submenu
Press to display flashing Alarm 1 Enable.

Step 29. Enable Alarm 1 Submenu
If flashing is displayed, press ; otherwise press until flashing is shown. Now press to store and go to next menu item.

Step 30. Select the Deviation Control Type Submenu
Press to display flashing Deviation Control Type, otherwise press until flashing is shown. Now press to store and go to next menu item.

Step 31. Select the Lagged Type Submenu
Press to display flashing Lagged Type, otherwise press until flashing is displayed. Press to store and advance to next menu item.

Step 32. Select the Normally Open Type of Contact
Press if flashing is displayed, otherwise press until flashing is displayed. Press to store and advance to next menu item.

Step 33. Select the Above Type of Active Submenu
Press if flashing is displayed, otherwise press until flashing is displayed. Press to store and advance to next menu item.

Step 34. Enable Alarm 1 at Power On
Press if flashing is displayed, otherwise press until flashing is displayed. Press to store and advance to next menu item.

Step 35. Enter Alarm 1 High Submenu
Press to freeze to display Alarm 1 Low value. Press to set value to display UNLT. Press to save.

Step 36. Set the Alarm 1 High (UNLT)
Press or until value set to display UNLT. Press to save.

Step 37. Enter the Alarm 2 Menu
The display will show flashing the top menu for Alarm 2. Repeat steps from 26 to 35 to set for Alarm 2 the same conditions as for Alarm 1.

Step 38. Skip the Loop Break Time Menu
Press to go to the Output 1 Menu item.

Step 39. Configuration the Output 1 Menu
Set Alarm 1 Disabled (Step 29) to be able to Enable Output 1.

.Confirm Output 1 as [RED], [GREEN], [AMBER] Press to return to Display Color Selection Menu.

Step 40. Configuration of Display Color Selection
Press until the Output Color Selection menu appears on the Display. Configure as desired: 
- RED (red), GREEN (green), AMBER (amber). Please refer to the operator’s manual if needed.

For color change on Setpoints refer to Owners Manual Section 2.

Step 41. Run a Test
Press to reset the controller and return to RUN mode to display flashing Ambient Temperature. Now you are ready to check the ambient temperature as displayed. Touch the tip of the Thermocouple to raise the temperature above the Alarm 1 High value +2°F and AL1 will turn on, and Display Color will change from Green to Amber and Back, then touching the tip to raise the temperature above the Alarm 1 High value +2°F and Display Color will change from Amber to Red. Annunciator “1” is turning on and off displaying output 1.

SPECIFICATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Temperature Unit</td>
<td>°C, °F</td>
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<tr>
<td>Resolution</td>
<td>0.01°C/0.02°F</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.05 mV (typical)</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01°F</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001°</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.0001°F</td>
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</tbody>
</table>

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This Quick Start Reference provides information on setting up your instrument for basic operation. The latest complete Communication and Operational Manual as well as free Software and ActiveX Controls are available at www.newportUS.com or on the CD-ROM enclosed with your shipment.

SAFETY CONSIDERATION

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN 61010-1:2001, electrical safety requirements for electrical equipment for measurement, control and laboratory. Remember that the unit has no power-on switch. Building installation should include a switch or circuit-breaker that must be compliant to IEC 947-1 and 947-3.

SAFETY:

- Do not exceed voltage rating on the label located on the back of the instrument casing.
- Always disconnect power before changing signal and power connections.
- Do not use this instrument on a work bench without its case for safety reasons.
- Do not operate this instrument in flammable or explosive atmospheres.

EMC:

- Whenever EMC is an issue, always use shielded cables.
- Never run signal and power wires in the same conduit.
- Use signal wire connections with twisted-pair cables.
- Install Ferrite Bead(s) on signal wire close to the instrument if EMC problems persist.

**MOUNTING**

Mounting Big Display Through Panel:
1. Using the panel cutout diagram shown, cut an opening in the panel.
2. Remove six screws at the back of the display and back cover.
3. To remove the Big Display from the bail, unscrew the two knobs at each end of the mounting brackets.
4. The display can be rotated for the best viewing angle.

**WIRING**

Wiring the instrument according to the Input and Output Wiring Connections described in your Operator’s Manual.

**FLOW CHART**

Connect the main ac power connections as shown in the figure below.

**OPERATION - (For Thermocouple Input)**

1. **Step 1. Apply Power to the Instrument**
   When your device is first powered up it will display the ambient temperature (assume 75°F).

2. **Step 2. Enter Setpoint 1 Menu**
   Press one time from run mode to get to Setpoint 1 Menu.

3. **Step 3. Enter the Setpoint 1 Value Submenu**
   Press to display the previous selection of Setpoint 1.

4. **Step 4. Change the Setpoint 1 Value**
   Press or twice will cause the display to flash its case for safety reasons.

5. **Step 5. Store the Setpoint 1 Value**
   Press to store Thermocouple Input. The display will stop flashing and show the top menu for Thermocouple types. If you press controller will step to next menu item (Skip to Step 14).

6. **Step 6. Store the Setpoint 2 Value**
   Repeated steps 3 and 4. Set the Setpoint 2 to 5 degree higher than Process value (SP2 = 80) and press to store, display flashes message and advances to Configuration Menu.

7. **Step 7. Enter the Input Type Menu**
   Press to enter Input Type Menu.

8. **Step 8. Enter to the submenu items of Input Menu**
   Press until desired value is displayed.

9. **Step 9. Scroll through available selection of Input Menu**
   Press to display Input: Process, RTD or Thermocouple. If flashing is displayed press and proceed to Step 11.

10. **Step 10. Enter to the Thermocouple Input Submenu**
    Press to store Thermocouple input. The display will stop flashing and show the top menu for Thermocouple types. If you press controller will step to next menu item (Skip to Step 14).

**SAFETY:**

Warning: Do not connect ac power to your device until you have completed all input and output connections. This device must only be installed by a specially trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury!

Underline denotes factory default setup