

Manual Supplement

Manual Title:	744 Users	Supplement Issue:	9
Part Number:	691287	Issue Date:	3/15
Print Date:	September 1998	Page Count:	10
Revision/Date:	1, 2/99		

This supplement contains information necessary to ensure the accuracy of the above manual.

Change #1

On page 78, replace step 24, and delete step 25.

24. Exercise the switch by varying the applied pressure. Adjust the switch until the set point is correct.

On page 112, change the second and third entries,

From: 11.00 Hz to 109.99 Hz 0.01 Hz

To: 11.00 Hz to 109.99 Hz 0.1 Hz

From: 110.0 Hz to 1099.9 Hz 0.01 Hz

To: 110.0 Hz to 1099.9 Hz 0.1 Hz

On page 113, change the **Type E**, third entry,

From: -200 to -100 0.5 0.8 0.3 0.4

To: -100 to 600 0.3 0.4 0.3 0.4

On page 116, change the **Range** on the 120 Ω Ni(672) Type,

From: -200 to 260

To: -80 to 260

On page 117, change the **Range** on the 100Ω Pt(3916) Type,

From: 0 to 360

To: 0 to 630

Change #2

On page 99, under **Calibration Data**, replace the first sentence with:

The date the calibrator was last calibrated shows on the calibration sticker. The date the calibrator was last adjusted is shown on the last screen in Setup mode.


Change #3

On page 101, add the following to Table 9:

Hart Communication Cable	689653
Serial Cable	943738

Change #4



On page 34, replace step 3 with the following:

3. Press . Choose "TC", then the display prompts you to select the thermocouple type.


On page 38, replace step 2 with the following:

2. Press . Choose "RTD", then the display prompts you to select the RTD type.

On page 46, replace step 2 with the following:

2. Press  for current,  for dc voltage,  for frequency, or  for resistance.

On page 55, replace step 3 with the following:

3. Press , then select "TC" from the menu. The display prompts you to enter thermocouple type.

On page 56, replace step 2 with the following:

2. Press , then select "RTD" from the menu.

On page 59, before **Source Scale**, add the following:

Sourcing Temperature using a Hart Scientific Drywell

The Fluke 744 can source temperature using a Hart Scientific Drywell. The following models are supported:

9009 (Dual Well)

9100S

9102S

9103

9140

9141

The drywell driver is able to talk to other drywells from Hart Scientific, provided that they respond to Hart Scientific's standard serial interface commands.

Connect the 744 to the drywell by plugging the drywell interface cable into the pressure module connector as shown in Figure A. If the drywell has a DB9 connector, plug the drywell interface cable directly into the drywell using the DB9 Null Modem adapter. Drywells with the 3.5 mm jack connector need to use the serial cable supplied with the drywell in addition to the 744 drywell interface cable. Join the DB9 connectors of the two cables, and connect the 3.5 mm jack to the drywell.

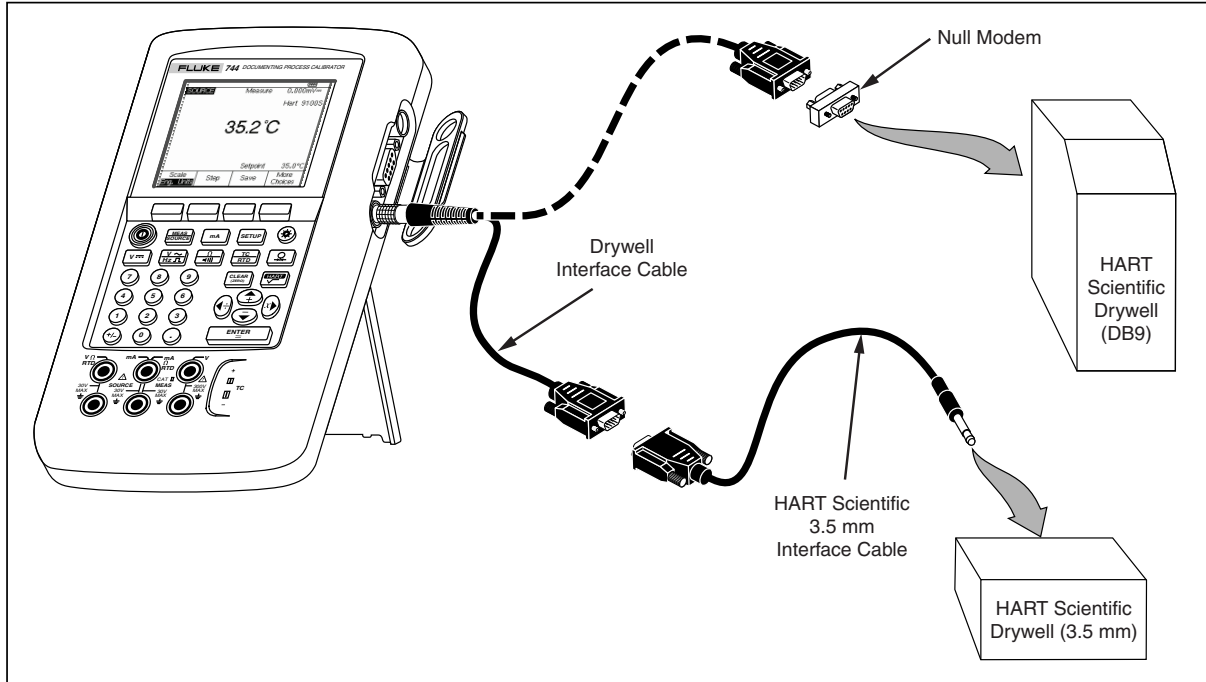






Figure A. Sourcing Temperature using Drywell

ot99.eps

Be sure the drywell is configured for serial communication at 2400, 4800, or 9600 bits per second. Other rates are not supported by the 744.

Proceed as follows to source a temperature using a drywell:

1. If necessary, press  for SOURCE mode.
2. Press the  button to display the temperature mode menu.
3. Select "Drywell" from the list of options, and press .
4. The calibrator will begin searching for a drywell. If the 744 shows "Attempting connection" for more than 10 seconds, double check your cable connections and drywell configuration.
5. If a dual well is recognized, a menu will pop up allowing selection of the "hot" or "cold" side of the dual well. Only one side of the drywell may be controlled at a time. Switching sides requires the drywell to be reconnected, by disconnecting the serial cable or by leaving drywell source mode and selecting it again.
6. When the drywell is connected, the primary display will show the actual temperature of the drywell, as measured by the drywell internally. The drywell model number will appear above the primary reading. The setpoint for the drywell is displayed in the secondary display, at the bottom of the screen. Initially, the setpoint will be set to the value already stored in the drywell.
7. Enter the temperature you wish to source and press .

The settled indicator will be cleared when the actual temperature is within one degree of the setpoint, and the actual temperature is not changing quickly. Refer to the drywell documentation for that model's recommendations for stabilization time.

The upper temperature limit is restricted by the "High Limit" setting stored in the drywell. If the 744 will not set the drywell to temperatures within the drywell spec, refer to the drywell manual to check the "High Limit" setting.

Note

When the 744 is set to display temperatures in Kelvin, the drywell readout will show Celsius, and when the 744 shows Rankine, the drywell will show Fahrenheit.

Change #5, 45265, 490

On page 112, under **Frequency Sourcing**, replace the bottom portion of the table with the following:

Waveform Choices: Zero-symmetric sine or positive square wave, 50 % duty cycle.

Amplitude: 0.1 to 10 V pk (square wave, 0 V reference)

0.1 to 10 V p-p (sinewave)

Amplitude Accuracy: S/N 9095999 or earlier:

0 Hz to 1099 Hz: 3 % of output + 0.5 % f.s.

1.1 kHz to 10.9 kHz: 10 % of output + 0.5 % f.s.

11 kHz to 50 kHz: 30 % of output + 0.5 % f.s.

Amplitude Accuracy: S/N 9096000 or later:

0 Hz to 50 kHz: 30 % of output + 0.5 % f.s.

Maximum Input Voltage: 30 V dc

Change #6

On page 108, under **Minimum Amplitude for Frequency Measurement (square wave)** change the second entry:

From: **1 kHz to 30 kHz:** 4 mV p-p

To: **1 kHz to 30 kHz:** 1.4 V p-p



Change #7

On page 20, under **Charging the Battery**, replace the the first paragraph with the following:


⚠ Before you use the calibrator for the first time, charge its battery pack in the external battery charger, Model BC7217.

On page 22, replace the **Battery Life** section with the following:

Battery Life

A battery gauge bar graph  shows on the upper right of the display. Table 4 shows the typical operating time for a new, fully charged NiMH (Nickel-Metal Hydride) battery pack. Calibrator performance is guaranteed to meet specifications until the battery gauge reads empty (). To replace the battery, refer to “Replacing the Battery Pack”.

On page 23, replace the **Preserving Battery Life**, paragraph with the following:

An optional **Auto Battery Save** feature turns the calibrator off after a selected idle time. The default setting for **Auto Battery Save** is **Off**. The setting is preserved after you turn off the power. When using the battery eliminator, **Auto Battery Save** works the same and the  symbol slows in the upper right corner. Turn on the **Auto Battery Save** feature as follows:

On page 98, under **Replacing the Battery Pack** replace the third sentence with the following:

To order a replacement battery, order Model BP7235 Nickel-Metal Hydride Battery Pack.

Under the **Note**, delete *Nickel-Cadmium* from the first sentence.

On page 100, under **Service Center Calibration or Repair**, delete nickel-cadmium from the first paragraph.

On page 103, delete the following:

- BP7217 Ni-Cd Battery Pack