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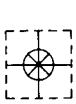
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Find the *OMEGA CT88D-45-90F/7D* at our website: *Click HERE*



User's Guide



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CT88 Series
Temperature Recorder

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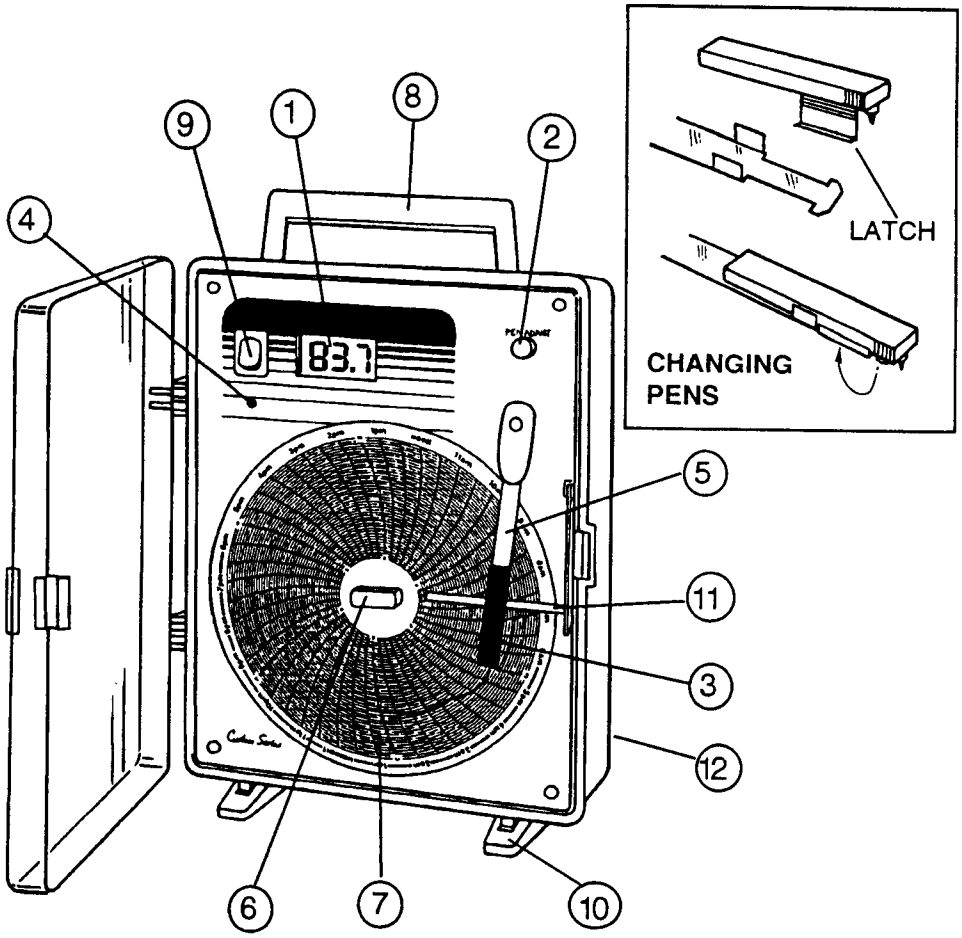
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WARNING: These products are not designed for use in, and should not be used for, patient connected applications.

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INSTRUCTION MANUAL

INTRODUCTION

The CT88 Temperature Recorder is an instrument which monitors and records temperature on a 6" circular paper chart. The CT88 may be carried as a portable instrument or wall-mounted to serve in an industrial control environment.



NOTE: Keyhole slots are located on back of the case, and are provided for optional wall or panel mounting.
The notch on the rear compartment cover allows the compartment to be closed with the power cord retracted out from it while the CT88 is in operation.

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CT88 FEATURES AND CONTROLS

1. The 3 digit temperature display provides precision temperature reading of the environment monitored.

2.The pen position adjustment knob allows the user to adjust the position of the chart pen to match that of the digital display.
Usually this adjustment will be required after replacing the chart pen. (loosen knob to move left or right, then retighten knob.)

3. The recording pen contains special ink. The pen has a wrap-around-arm latch which makes pen replacement easy.
To replace the pen, lift up the pen arm using the pen lifter (see no.11), release the pen latch by pushing it down, and remove the pen; place a new pen on top of the pen arm, align the notches on the pen arm with the notches on the pen latch and close the latch by wrapping it around the pen holder until it is secure.
REPLACE CAP ON THE PEN TIP WHEN THE CT88 IS NOT IN USE to insure longer pen life.

4. The blinking light identifies when unit is turned on and battery or adapter is properly in place. Light blinking slowly or not at all, will identify a weak battery.
(Normal is aprox. 9 blinks/15 seconds)

5. The pen arm serves a double role. First, it serves as a pen holder and second, it prevents the paper chart from falling off the chart spindle. The pen arm is made out of a special alloy which acts like a flat spring in order to insure the proper pen-to-chart pressure. The pen arm is fastened to the shaft with a set screw. It does not normally require removal. If removal becomes necessary, use an Allen .035 Hex Wrench

6. The chart spindle holds and rotates the chart during the recording operation.

7. The paper chart is 6" in diameter. Replacement charts are available from OMEGA in a box of 100 charts each. The chart part numbers are listed on page 4. To install a new chart... Gently lift the pen arm (using pen lifter-see 11). Remove the old chart. Slide a new chart under the pen holder (making sure that the pen does not touch the paper), and align the chart with the chart spindle. Rotate the chart until the point of the pen aligns with the line on the chart which represents the right time of day. Lower the pen lifter. Adjust the pen lifter so that it does not touch the paper chart. If necessary, adjust the pen position according to the front panel reading (pen adjustment knob).

8. The handle for carrying, folds toward the back of the case to be out of the way when the CT88 recorder is wall mounted.

9. The power switch will turn the unit on and off. (See page 5 for power connection options.)

10. The special "Snap-On legs" provides added stability for bench-top use.

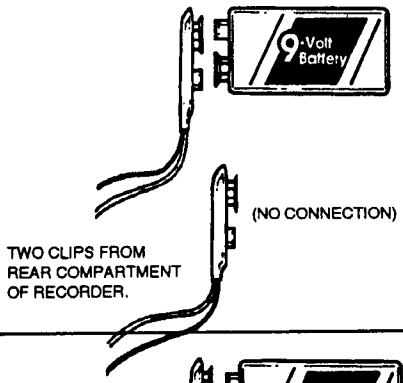
11. The pen lifter allows you to lift the pen arm for easier access to chart.

12. The rear compartment allows access to power connections.
(see power options on page 3.)

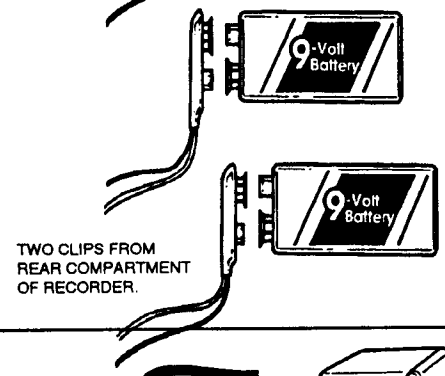
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POWER CONNECTION OPTIONS

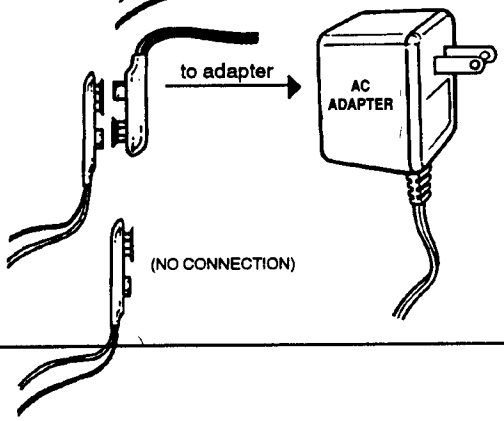
Adapter or battery can be connected to either of the two battery clip connections in rear compartment.



1 ■ THIS CONNECTION ALLOWS OPERATION FOR THE WORKING LIFE OF ONE 9-VOLT BATTERY.

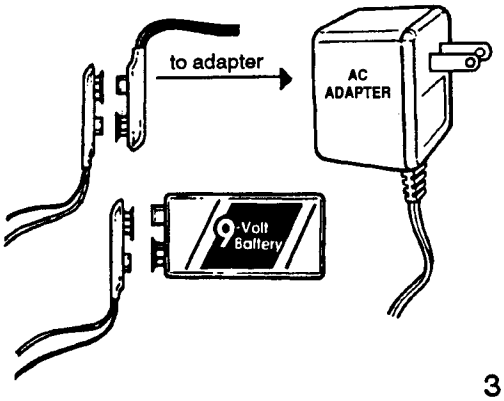


2 ■ THIS CONNECTION ALLOWS OPERATION FOR THE WORKING LIFE OF TWO 9-VOLT BATTERIES.



3 ■

4 ■ THIS CONNECTION ALLOWS FOR CONTINUOUS RUN. ***(BATTERY ACTS AS BACK-UP, AND WILL RECORD DURING POWER FAILURES).***



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RECORDER WITHOUT DISPLAY

PART NUMBER	TEMP RANGE	RECORD TIME
CT88N --30 -50C/7D	-30 TO 50 C	7 DAY
CT88N --30 -50C/24H	-30 TO 50 C	24 HR
CT88N -0 -45C/7D	0 TO 45 C	7 DAY
CT88N -0 -45C/24H	0 TO 45 C	24 HR
CT88N --20 -120F/7D	-20 TO 120 F	7 DAY
CT88N --20 -120F/24H	-20 TO 120 F	24 HR
CT88N -0 -100F/7D	0 TO 100 F	7 DAY
CT88N -0 -100F/24H	0 TO 100 F	24 HR
CT88N -45 -90F/7D	45 TO 90 F	7 DAY
CT88N -45 -90F/24H	45 TO 90 F	24 HR

*NOTE FOR 220VAC ADD -220 TO PART NUMBER

RECORDER WITH DISPLAY

PART NUMBER	TEMP RANGE	RECORD TIME
CT88D --30 -50C/7D	-30 TO 50 C	7 DAY
CT88D --30 -50C/24H	-30 TO 50 C	24 HR
CT88D -0 -45C/7D	0 TO 45 C	7 DAY
CT88D -0 -45C/24H	0 TO 45 C	24 HR
CT88D --20 -120F/7D	-20 TO 120 F	7 DAY
CT88D --20 -120F/24H	-20 TO 120 F	24 HR
CT88D -0- 100F/7D	0 TO 100 F	7 DAY
CT88D -0 -100F/24H	0 TO 100 F	24 HR
CT88D -45 -90F/7D	45 TO 90 F	7 DAY
CT88D -45 -90F/24H	45 TO 90 F	24 HR

*NOTE FOR 220VAC ADD -220 TO PART NUMBER

SPECIFICATIONS

CHART SPEED ACCURACY ..... +/- 1.5%
CHART DIAMETER ..... 6 INCHES
TEMPERATURE DISPLAY ..... 3 1/2 DIGIT LCD 0.5" (SD series only)
TEMPERATURE ACCURACY ..... +/- 2 DEGREES F.
TEMPERATURE SENSOR ..... BIMETAL
RECORDING PEN ..... INK TYPE
POWER SUPPLY ..... 9 VOLT BATTERY OR
120VAC 50/60 Hz POWER ADAPTER OR
220VAC 50/60 Hz POWER ADAPTER
(-220 AFTER A PART NO. DESIGNATES 208/240 VOLT MODEL)

OPERATING AMBIENT
TEMPERATURE RANGE ..... -20 F to +120 F (-30 C to +50 C)
RELATIVE HUMIDITY ..... 96% MAX.
DIMENSIONS ..... 9 1/4" x 7 1/4" x 2 3/4"
WEIGHT ..... 3 LBS.

CHARTS AND ACCESSORIES

CHART PART NUMBER	TEMP RANGE	RECORD TIME
CT88CH --30 -50C/7D	-30 TO 50 C	7 DAY
CT88CH --30 -50C/24H	-30 TO 50 C	24 HR
CT88CH -0 -45C/7D	0 TO 45 C	7 DAY
CT88CH -0 -45C/24H	0 TO 45 C	24 HR
CT88CH --20 -120F/7D	-20 TO 120 F	7 DAY
CT88CH --20 -120F/24H	-20 TO 120 F	24 HR
CT88CH -0 -100F/7D	0 TO 100 F	7 DAY
CT88CH -0 -100F/24H	0 TO 100 F	24 HR
CT88CH -45 -90F/7D	45 TO 90 F	7 DAY
CT88CH -45 -90F/24H	45 TO 90 F	24 HR

REPLACEMENT PENS
CTH89-PEN-RED

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WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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