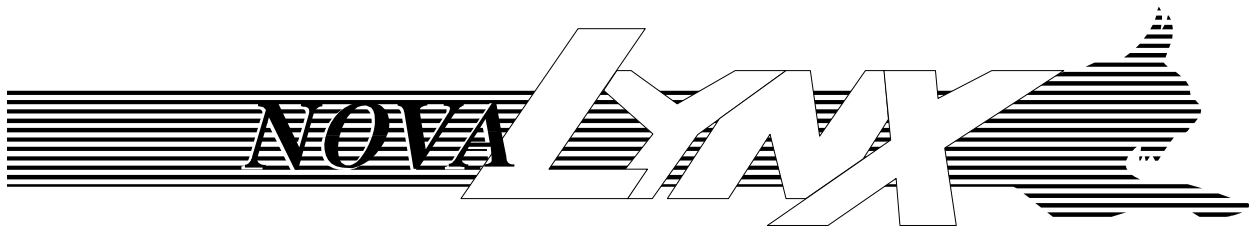


# NOVALYNX CORPORATION

MODEL 260-6113-A  
EVENT RECORDER

INSTRUCTION MANUAL



## **Receiving and Unpacking**

Carefully unpack all components and compare to the packing list. Notify NovaLynx Corporation immediately concerning any discrepancy. Inspect equipment to detect any damage that may have occurred during shipment. In the event of damage, any claim for loss must be filed immediately with the carrier by the consignee. Damages to equipment sent via Parcel Post or UPS require the consignee to contact NovaLynx Corporation for instructions.

## **Returns**

If equipment is to be returned to the factory for any reason, call NovaLynx between 8:00 a.m. and 4:00 p.m. Pacific Time to request a Return Authorization Number (RA#). Include with the returned equipment a description of the problem and the name, address, and daytime phone number of the sender. Carefully pack the equipment to prevent damage or additional damage during the return shipment. Call NovaLynx for packing instructions in the case of delicate or sensitive items. If packing facilities are not available take the equipment to the nearest Post Office, UPS, or other freight service and obtain assistance with the packaging. Please write the RA# on the outside of the box.

## **Warranty**

NovaLynx Corporation warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from the date of shipment from the factory. NovaLynx Corporation's obligations under this warranty are limited to, at NovaLynx's option: (i) replacing; or (ii) repairing; any product determined to be defective. In no case shall NovaLynx Corporation's liability exceed product's original purchase price. This warranty does not apply to any equipment that has been repaired or altered, except by NovaLynx Corporation, or that has been subjected to misuse, negligence, or accident. It is expressly agreed that this warranty will be in lieu of all warranties of fitness and in lieu of the warranty of merchantability.

## **Address**

**NovaLynx Corporation**  
**4055 Grass Valley Highway, Suite 102**  
**Auburn, CA 95602**  
**Phone: (530) 823-7185**  
**Fax: (530) 823-8997**  
**Email: [nova@novalynx.com](mailto:nova@novalynx.com)**  
**Website: [www.novalynx.com](http://www.novalynx.com)**

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# TABLE OF CONTENTS

Section No.	Page No.
1.0 INTRODUCTION .....	1
1.1 General Description .....	1
1.2 Theory of Operation .....	1
1.3 Specifications .....	1
2.0 INSTALLATION .....	2
2.1 Set-up .....	2
3.0 CALIBRATION .....	3
4.0 MAINTENANCE .....	3

# MODEL 260-6113-A EQUIPMENT CONFIGURATION AND IDENTIFICATION

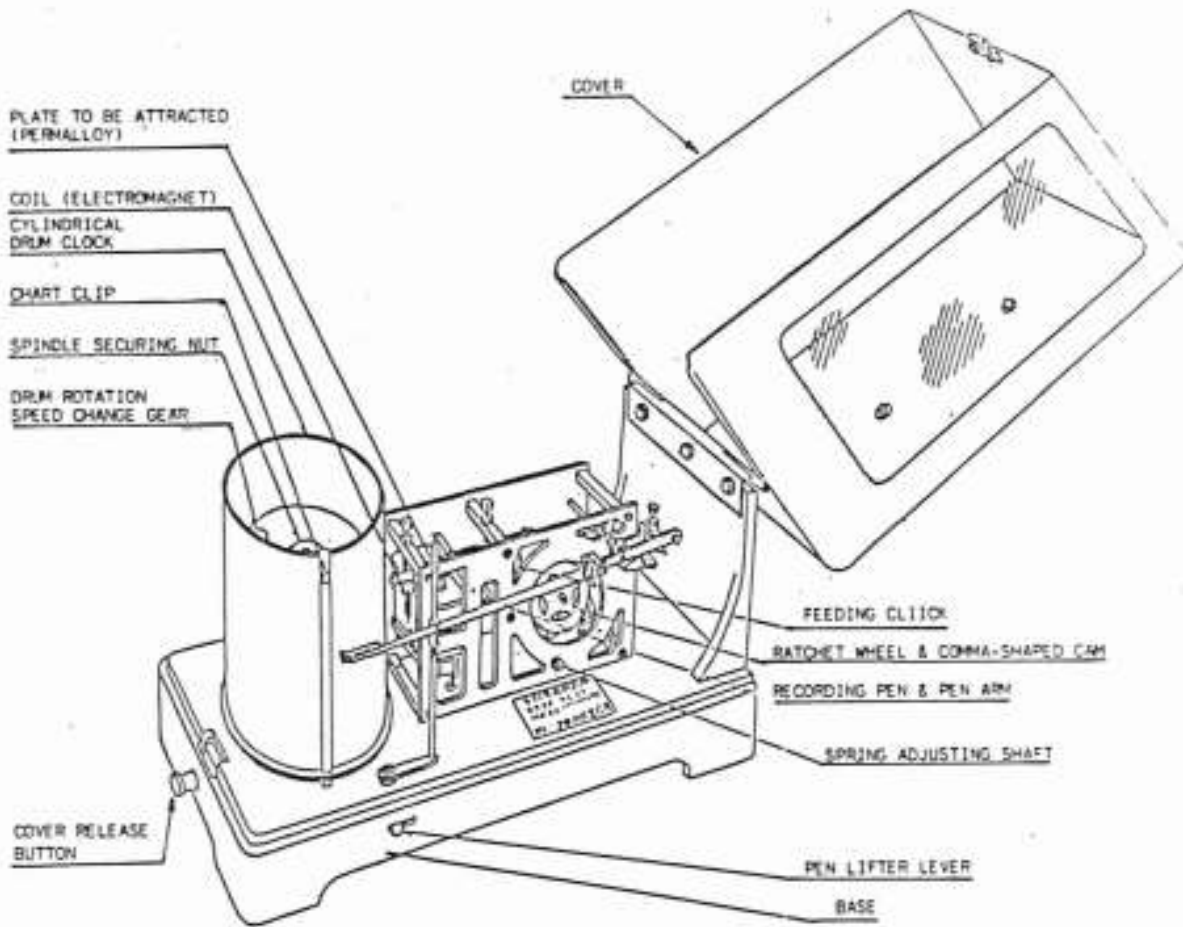


FIGURE 1

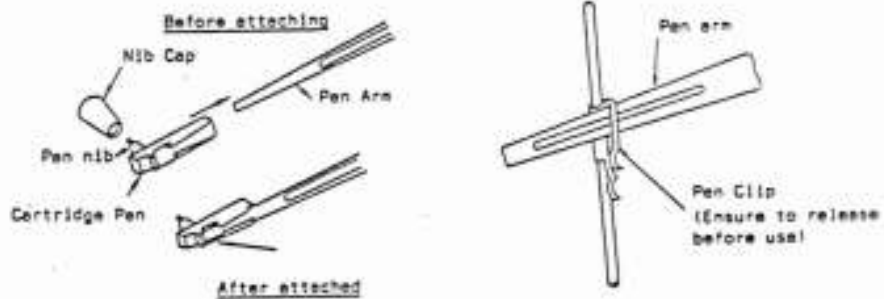


FIGURE 2

# **NovaLynx Corporation**

## **Model 260-6113-A Event Recorder Instruction Manual**

### **1.0 INTRODUCTION**

#### **1.1 General Description**

The Model 260-6113-A Event Recorder is designed primarily to record precipitation data from a tipping bucket rain gauge. It can also be used with other instruments that provide switch closure outputs, such as totalizing anemometers.

The pen is advanced by a stepping motor with each switch closure, usually 0.01" precipitation, 100 steps up the chart. On the next event after reaching the top of the chart, the pen drops to the base line of the chart and repeats. The drum clock is a high-quality movement supplied with 1-day, 7-day, and 31-day rotation. It operates on two "D" cell, 1.5 Vdc batteries for approximately one year. For outdoor use, the recorder should be placed in a suitable shelter.

#### **1.2 Theory of Operation**

A momentary contact closure from the sensing device completes a circuit through a battery and energizes a solenoid. The solenoid drives a ratchet that steps a 100-tooth gear. The gear is connected directly to a cam formed in the shape of a spiral or archimedes. The cam raises the pen arm as the spiral increases to a larger radius. After 100 counts the pen arm drops off the largest radius of the spiral and returns to the smallest. A dash pot fluid dampens the fall of the pen arm, returning it smoothly to the bottom of the chart.

#### **1.3 Specifications**

Range: 0-100 counts, continuously recycling

Input: Contact closure

Pen control: Electromagnet activated ratchet and cam

Coil operating voltage: 3.0 Vdc to 6.0 Vdc (two 1.5 Vdc "D" cell batteries)

Coil resistance: approximately 30 ohms

Clock rotation: 26 to 176 hours according to selection

Chart size: 4.9" H x 13.5" L, 50 graduations, 2 events per graduation

Recorder size: 13" L x 9.25" H x 5.75" W (330 x 325 x 146 mm)

Pen type: Cartridge

Weight/shipping: 9 lbs/13 lbs

## 2.0 INSTALLATION

This instrument has been tested and calibrated at the factory and is ready for installation.

### 2.1 Set-up

Remove dash pot from back of the recorder and fill it approximately three-quarters full with silicon oil. Carefully replace the dash pot and place the plunger into it. The oil should be approximately one-half inch from the top of the dash pot.

Remove the clock from packing box. Carefully remove the drum from the clock mechanism by twisting the drum counter-clockwise and lifting up. Use the switch to select the correct chart time interval. Place two "D" cell batteries into the battery holder located beneath the recorder housing. The clock has a quartz mechanism and is self starting. After checking mechanism for movement, replace the clock drum over the clock mechanism and rotate it clockwise.

Remove the chart clip from side of clock drum. Select the appropriate chart and fill in the station number and date the chart will start. Place the right hand margin of the chart in line with the right side of the chart clip notch. Wrap the chart around the drum in a clockwise motion. The left hand edge of the chart should overlap the right hand edge. Place the chart clip over both layers of the chart and seat it in the notch provided on the clock drum. Remove the two hex nuts from the clock shaft. Place the clock/clock shaft assembly through the base of the instrument and tighten both hex nuts. Be sure that the spacer bushing is between the clock assembly and the base of the instrument. Turn the clock assembly so that the pen is set to the correct time.

Remove pen tip cover from the pen. Remove the shipping clip on the pen arm. Place the pen onto the chart using the pen lift lever mounted on the base of the instrument. Close and lock the instrument cover.

If the instrument is located outdoors, it should be placed in a suitable instrument shelter to protect it from rain and dust.

Connect the rain gage to the event recorder. An external 6 volt battery may be connected in series with one wire from the rain gage. Refer to Figure 3. Internal 1.5 Vdc batteries (two "D" cells) can be used in place of an external battery. Simply install the batteries into the battery holder beneath the recorder housing.

Remove the cover from the rain gage and manually operate the bucket assembly to check for proper recorder operation. Increment the instrument to the correct starting value. Ensure that pen is on the correct time line.

### **3.0 CALIBRATION**

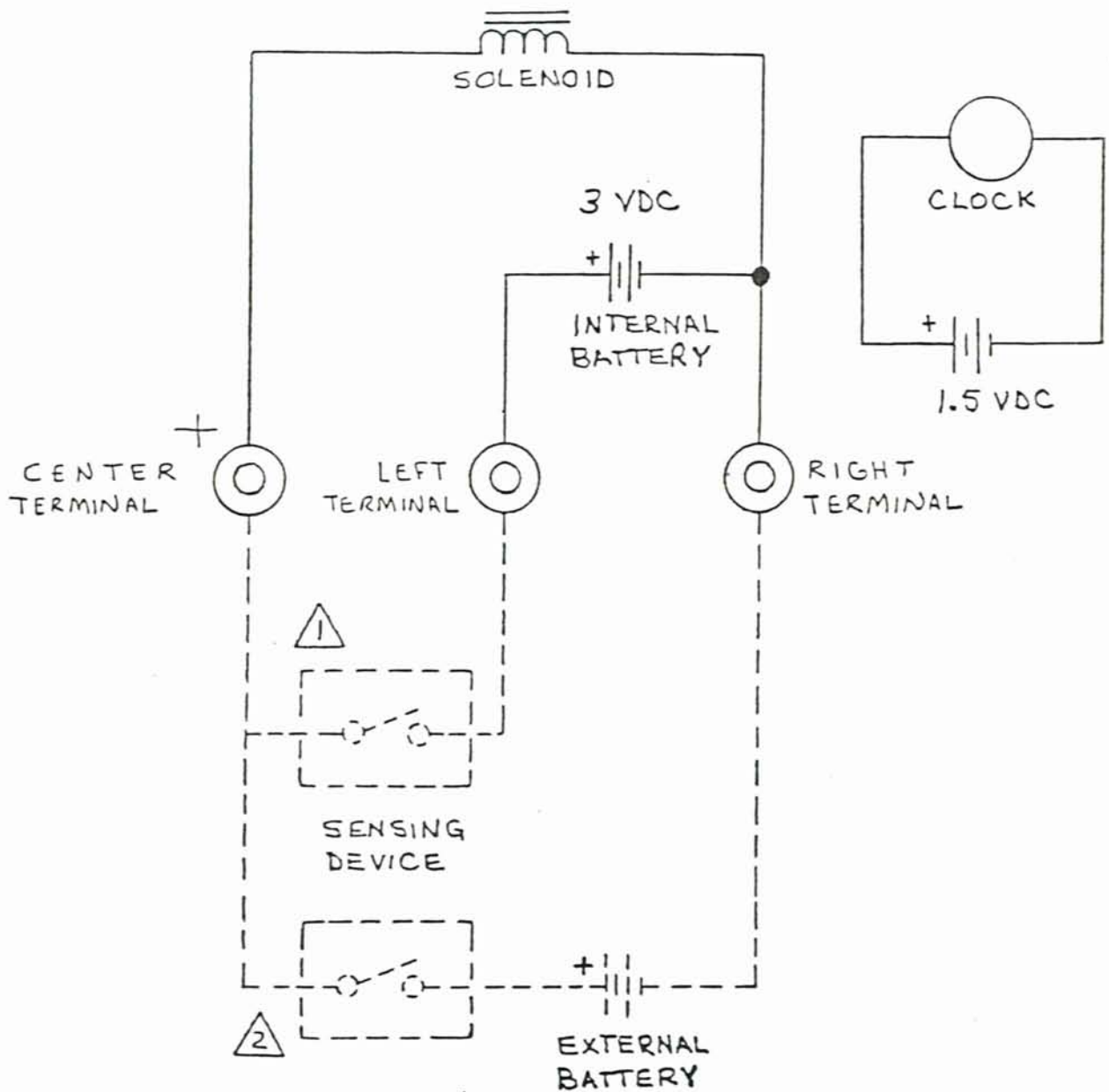
Because this instrument uses a mechanical linkage system of fixed rotation, only one adjustment is required. The baseline, or zero event line, on the event recorder should be set as follows: Place the new chart on the clock drum as described above. Increment the solenoid/pen assembly forward until the pen arm drops to the lowest level. Loosen the knurled nut at the pen arm swivel joint and adjust the knurled screw until the pen rests on the zero line of the chart. Re-tighten the knurled nut.

No adjustment is required on the quartz electric clocks. Calibration of the clocks can be made by a local watch maker or NovaLynx factory technician.

### **4.0 MAINTENANCE**

Maintenance must be performed on a periodic but regular basis to ensure continuous operation and reliable data. The best time for regular maintenance is during the changing of the chart paper. Visually inspect the instrument and remove any dust and debris from the mechanism.

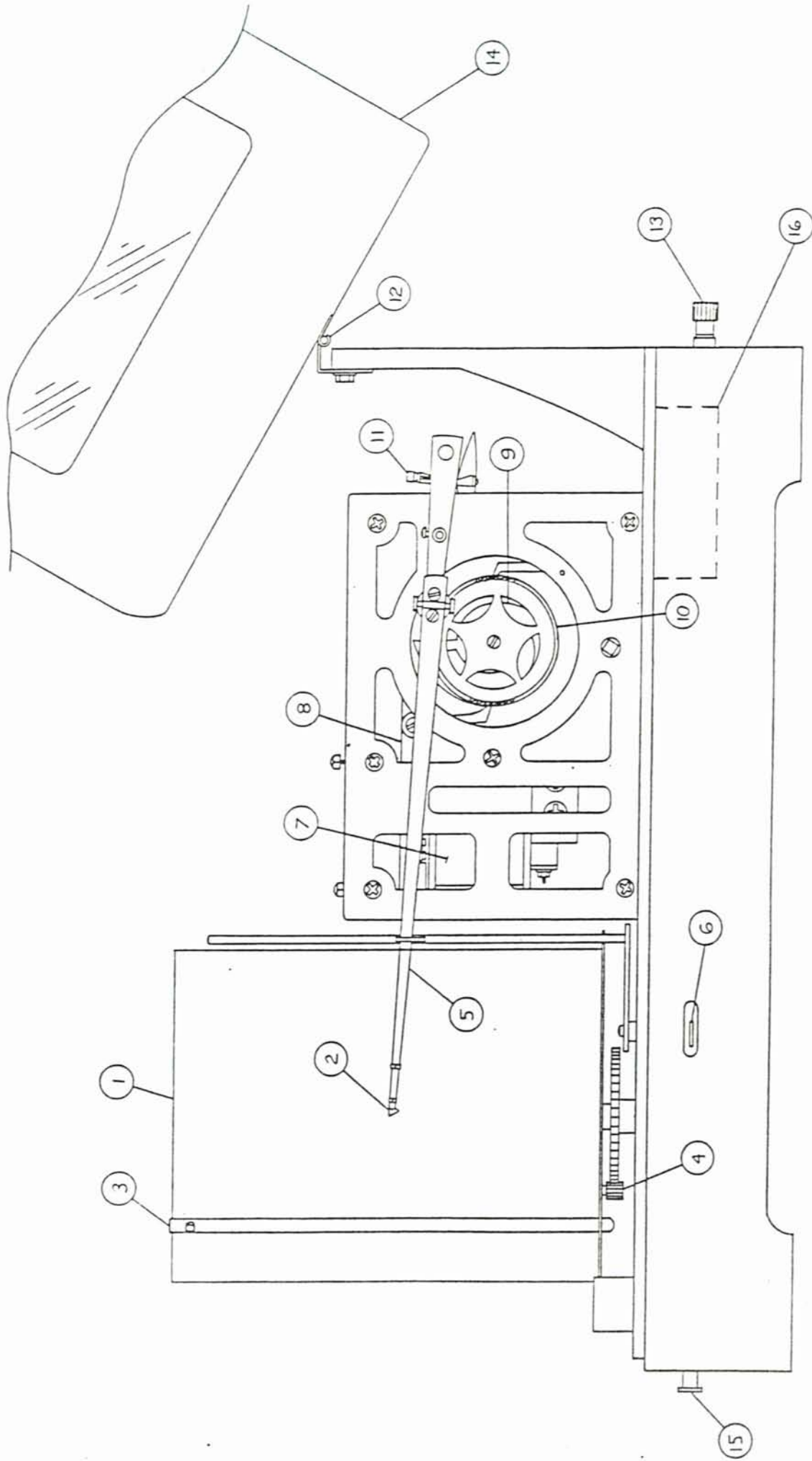
The instrument should be thoroughly cleaned at least once a year. In dusty environments it should be cleaned more often. Clean all mechanical parts with a soft brush using alcohol as solvent. After drying, use a lightweight oil (sparingly) to lubricate all moving joints.



- △ 2 WHEN USING EXTERNAL BATTERY, SENSING DEVICE CONNECTS IN SERIES WITH BATTERY AND BETWEEN CENTER AND RIGHT HAND TERMINALS.
- △ 1 WHEN USING INTERNAL BATTERY, SENSING DEVICE CONNECTS BETWEEN CENTER AND LEFT HAND TERMINALS

REV	ECN	DATED	QTY	NEXT	ASM	TOLERANCES UNLESS OTHERWISE NOTED: XXX = ±.005 XX = ±.010 FRACTIONS = ±.02 ANGLES = X° CONCENTRICITY = .003 TIR		WEATHER MEASURE / WEATHER SERVICES Instruments and Controls Division 2713 Orange Grove Avenue Sacramento, California 95840 U.S.A.	
						MATL		NOMENCLATURE SCHEMATIC	
						FINISH		EVENT RECORDER	
						ENGR		MOD. USAGE 6113, 6114, 6115 SHEET 1 OF 1	
						APPRO		BY WSH DT 4-1-83	
								SCALE DWG NO. 6113 04 A	





REV	ECN	DATED	QTY	NEXT	ASM

TOLERANCES UNLESS OTHERWISE NOTED:  
 XXX - ± .005 XX - ± .010 FRACTIONS - ± .02  
 ANGLES ± ° CONCENTRICITY - .003 TIR

MATL \_\_\_\_\_  
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 APPRO \_\_\_\_\_ DT \_\_\_\_\_

**QUALIMETRICS, Inc.**  
 MEASUREMENT SYSTEMS / INSTRUMENTS DEPARTMENT  
 Instrumentation and Systems Division  
 3113 Orange Grove Avenue  
 Marietta, Georgia 30066 U.S.A.

**NOMENCLATURE OUTLINE**  
 EVENT RECORDER

MOD. USAGE 5113 6114 6115 SHEET 1 OF 1  
 BY J.G. SCALE DWG NO. 6113-03  
 DT 3-13-79 DT NO. 6113-03 C

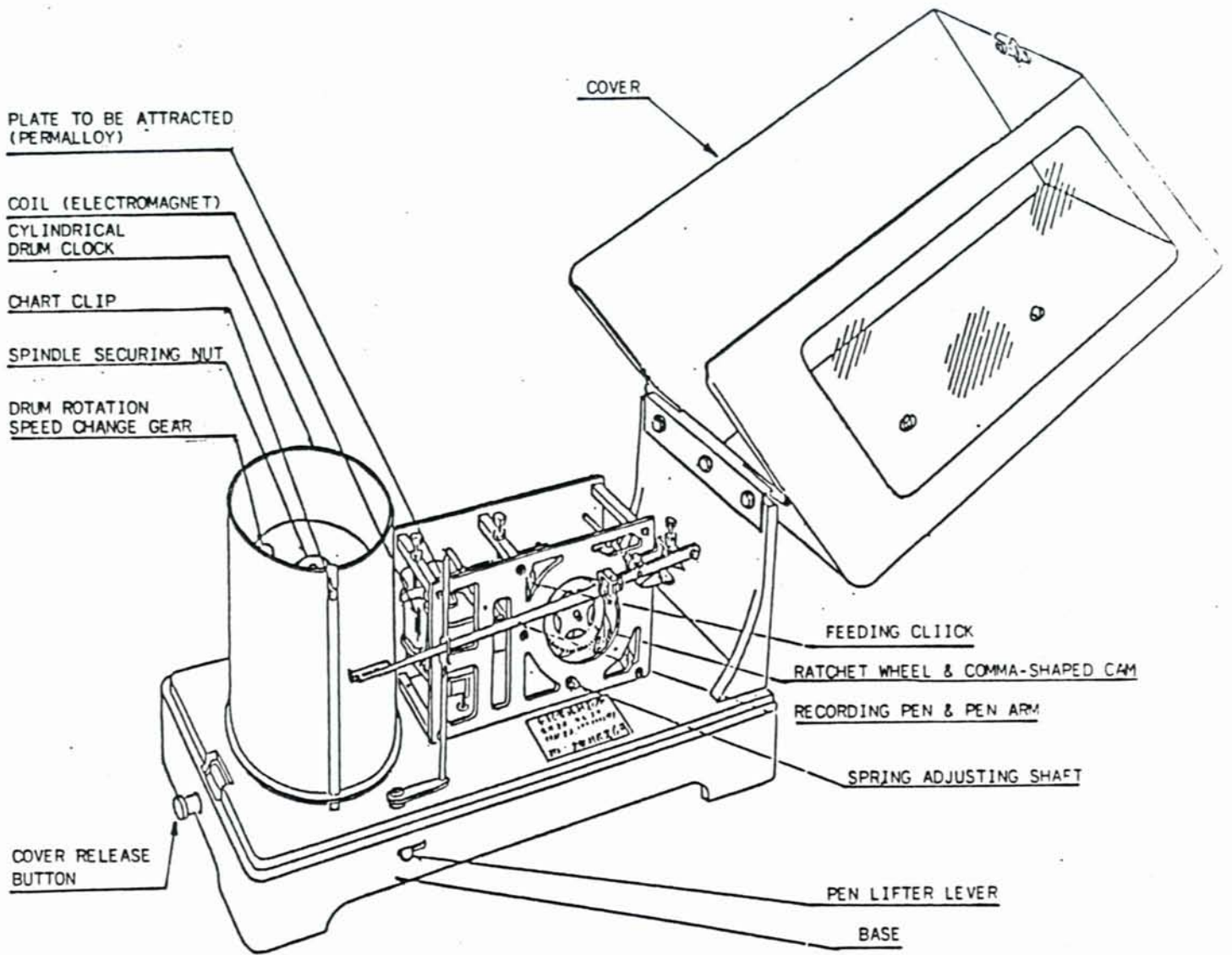


FIGURE 1

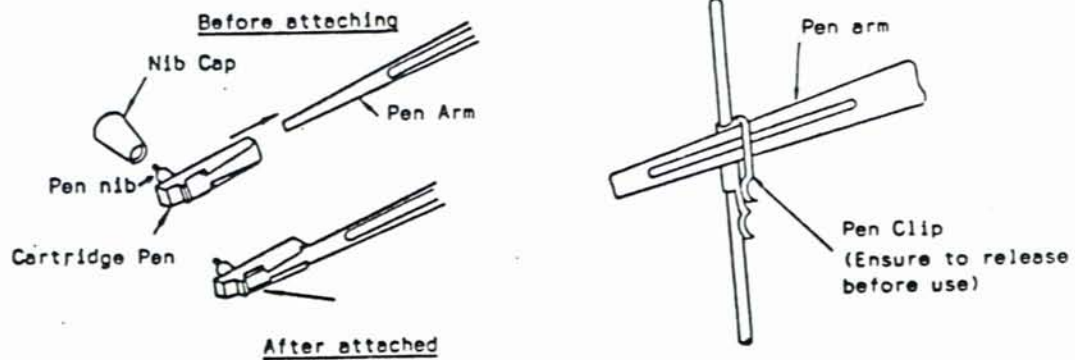
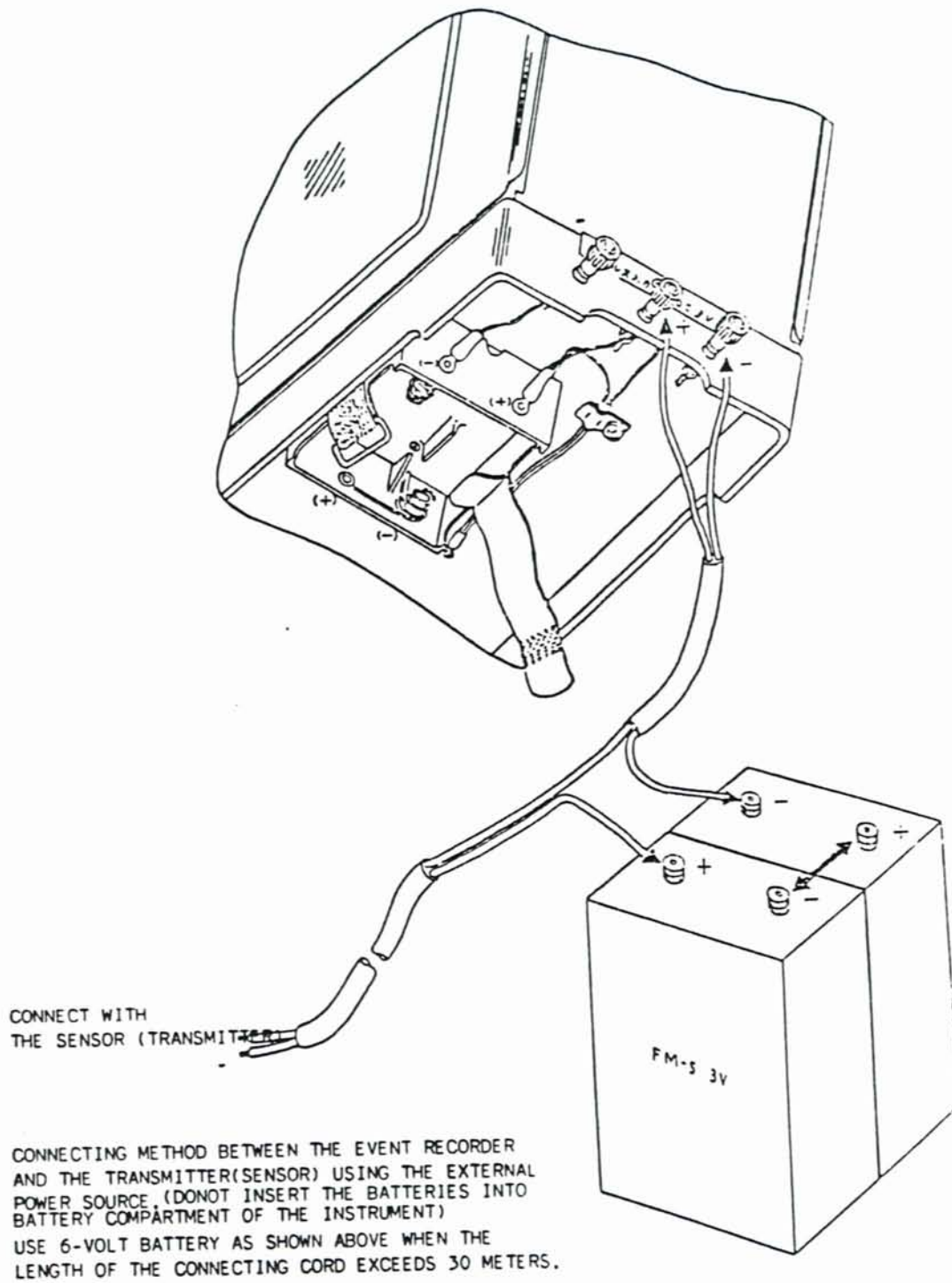


FIGURE 2



**FIGURE 3**