MANUAL
FOR
11" PLASTIC RAIN GAGE
MODEL 6330
6331

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MANUAL NO: 6330-001
DATE: MAY 1984
ECN: 2125

11" PLASTIC RAIN GAGE
MODEL 6330
6331

1.0 INTRODUCTION

1.1 The Model 6330 and 6331, 11" Rain Gage is a precision instrument carefully designed to give accurate precipitation measurement. It is composed of three parts: The top portion, or receiving funnel, the measuring tube, and the outer cylinder.

2.0 SPECIFICATIONS

2.1

Capacity - Model 6330	11.00 inches
Model 6331	280.0 mm
Resolution - Model 6330	0.01 inches
Model 6331	0.2 mm
Size	4"dia x 14"H (102 x 356 mm)
Weight/Shipping	2 lbs/4 lbs (0.9 kg/1.8 kg)

3.0 INSTALLATION

3.1 This instrument is thoroughly tested and fully calibrated at the factory and is ready for installation. Please refer to the return authorization card included in the packing box if damage has occurred. Also, notify Qualimetric's, Inc.

3.2 The rain gage comes with a one piece, sturdy, rust-proof mounting bracket. This mount should be fastened to a sturdy, upright 4" x 4" post so that the tip of the gage will be about 5 or 6 inches above the post. The gage should rest firmly in the support in a upright position with the top of the funnel level. The post should be located in an area that you walk by each day to remind you to take a reading.

3.3 It is important that the gage have the correct exposure to insure accuracy of catch. Place as far away from buildings, trees, etc., as practical, and where possible, no closer to tall objects or obstructions than twice the height of the object above the gage. Low bushes, fences or walls in the vicinity of the gage, however, are generally not objectionable, as these usually help to break up the force of the wind near the instrument.

4.0 THEORY OF OPERATION

4.1 The funnel receives the rainfall and transmits any liquid precipitation into the measuring tube. The area ratio between the funnel and the measuring tube is exactly 10 to 1. This results in a 10 to 1 magnification of water flowing into the measuring tube, and thus allows accurate measurement of each hundredth inch of rain. When the measuring tube is filled to the top graduation, exactly 1.00 inch of rain has fallen. The hole near the top of the cylinder allows precipitation in excess of an inch to flow into the outer cylinder.

4.2 Measurements of more than 1.00 inch - Anytime that more than one inch of rain has fallen (25.4 millimeters on metric gages), there will be water in the outer cylinder. When this occurs, carefully lift the measuring tube from the outer cylinder and empty the measuring tube containing the first 1.00 inch of rain. Then insert the funnel into measuring tube, and pour remaining water from outer cylinder into the measuring tube. Note the exact reading, and add to the first inch of rain. For more than two inches of rain, repeat the above process. Capacity is approximately 11 inches of rain.

4.3 Metric scale gages - Most countries of the world, outside the United States and Canada, keep precipitation records in metric units -- that is, in millimeters, or millimeters and tenths. The metric scale is calibrated in millimeters and tenths, with distance between each graduation representing 0.2 (two-tenths) millimeters. Total capacity of the measuring tube is 25.4 millimeters. Total capacity of the gage is about 280 millimeters. Use the same procedure as indicated above for measuring and recording rain. Although graduations are for each 0.2 millimeter, rain can be measured to 0.1 mm by interpolating between markings on measuring tube.

4.4 Snow or sleet - In colder climates, during the winter months, the funnel and measuring tube should be removed and only the outer cylinder exposed to catch precipitation which is likely to fall as snow. To measure the water equivalent of snow for entry on your Daily Precipitation Log measure a quantity of hot water (any temperature up to 175°F) into the measuring tube (noting amount carefully) and pour this into the outer cylinder which contains snow to be measured. After the snow has melted, pour the contents from outer cylinder back into the measuring tube, and measure in the same manner as for rainfall. Subtract the amount of hot water used to melt the snow; the remainder is the water equivalent of the snow, and the figure to enter on the Daily Precipitation Log.

4.5 Daily Precipitation Log - Establish an observation time and take readings daily at the established time whenever precipitation has occurred. The measurements are entered on the forms for the day on which the observation is taken, even though it is known that some, or perhaps all, of the rain has fallen on the preceding day, after the regular measurement time. Make entries on the charts included with the gage. Enter the amount of precipitation in hundredths of an inch -- for example: .01; .16; .99; 1.86; 2.09 etc. When less than half a hundredth of an inch occurs, enter "T" for Trace (an amount too small to be significant). For metric scale gages - Record precipitation in millimeters and tenths. Example: 0.8; 2.4; 10.7; 25.1; 75.4 103.6, etc.

5.0 CALIBRATION

5.1 This instrument does not require any scaling or calibration.

6.0 MAINTENANCE

6.1 Care - The gage is made of clear, tough, butyrate. Even though it is unusally strong, care should be taken against extreme rough usage of charp impacts, particularly to the sharply beveled edges. An ordinary bottle brush is useful in cleaning any collection of dust or dirt at the bottom of the measuring tube. Gage may be cleaned with use of mild soap or detergent and water. Do not use abrasive or solvents. With proper care this gage will give years or satisfactory service.

7.0 WARRANTY

7.1 All instruments are warranted for one year, unless otherwise specified, against defects in material or workmanship. Should any instrument prove to be defective within the warranty period, upon written notice and return of the instrument freight prepaid, Qualimetrics will, at its option, repair or replace the defective unit and return it freight collect. Instruments abused, improperly used or installed, and modified or altered by others, may cancel warranty.

NAME _____ G.B.S. TIME _____ SECTION ☐☐ RANGE ☐☐ YEAR _____

ADDRESS _____ COUNTY _____ TOWNSHIP _____

	Jan.	Feb.	Mar.	Apr.	May	June	Remarks – Severe Weather – Storm Damage
1							
2							
3							
4							
5							
6							
7							
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9							
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11							
12							
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24							
25							
26							
27							
28							
29							
30							
31							
Total							

Instructions:

1. Try to record precipitation each day at the same time.
2. Record precipitation to the nearest 1/100 of an inch. (.01, .31, 1.31 etc.)

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Remarks – Severe Weather – Storm Damage
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
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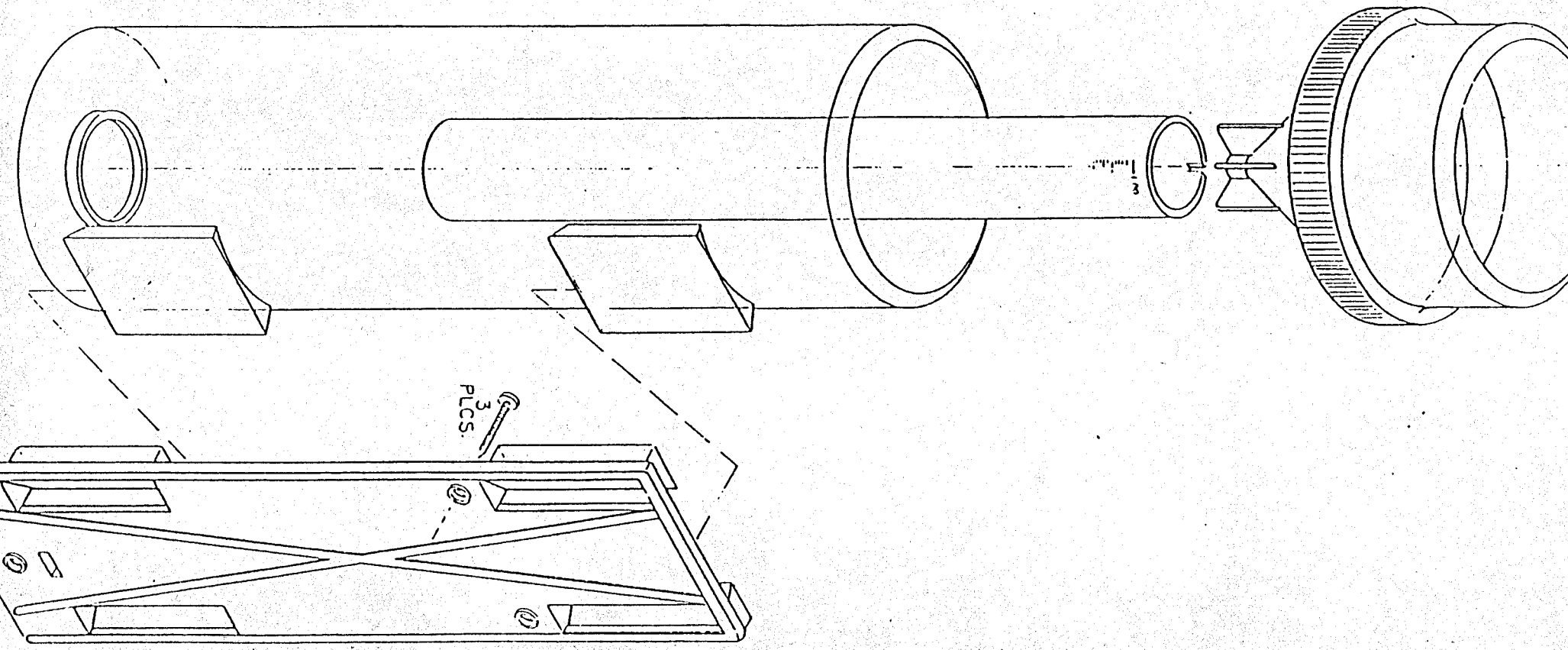
26							
27							
28							
29							
30							
31							
Total							

DWG. NO.



REV	ECN	DATED	QTY	NEXT ASM
	2125	8/23/85		

TOLERANCES UNLESS OTHERWISE NOTED:
XXX= ± .005 XX= ± .010 FRACTIONS= ± .02
ANGLES ± ½° CONCENTRICITY= .003 TIR

MATL
CLEAR BUTYRATE

FINISH

ENGR		DT
APPRO		DT

WeatherMeasure
WEATHERtronics
Division of QUESTRONICS, Inc.

NOMENCLATURE
RAIN GAGE ASSEMBLY

MOD USAGE

SHEET 1

BY WEBER

SCALE

DWG NO

BILL OF MATERIALS

DESCRIPTION PLASTIC RAIN GAGE

DATE 9/3/85

Item No.	Part No.	Suffix	Qty.	Unit	Description	Referenc
1	T960090		1	ea	Inner Tube English	6330
2	T960091		1	ea	Inner Tube Metric	6331
3	T960092		1	ea	Funnel	
4	T960093		1	ea	Outer Tube	
5	T960094		1	ea	Mounting Bracket	

				Rev.	Date	
A	6330	01	MANUAL			Orig. RN
B	6330	03	ASSY. DWG.			Engr.
C		04	SCHEMATIC			Appv.
D						Doc. No. 6330 -C

WEATHERtronics

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ECN 2125

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