



RECORDING SET,AN/GSH-18

**FUNCTIONAL DESCRIPTION**

Recording Set, Graphic, AN/GSH-18, for use with Coast Guard Loran-C System.

This system consists of a rectilinear Oscillograph Recording System with eight analog and two event marking channels utilizing a pressurized fluid writing system. The Recorder features high-torque pen motors in a closed loop pen position feedback system.

Primary Use

Recording cycle and envelope data from electronic equipment used in the Coast Guard Loran-C System.

Secondary Uses

1. Investigation of unusual equipment phenomena.
2. Maintenance and adjustment of complex Loran-C equipment.

**DESCRIPTION OF COAST GUARD ELECTRONIC EQUIPMENT**

UNCLASSIFIED

## ELECTRICAL AND MECHANICAL CHARACTERISTICS

1. Number of channels -8 analog, 2 event, true Rectilinear.
2. Analog channel width - 40mm, 50 divisions.
3. Input signal range - 50 millivolt per division to 500 volts full scale.
4. Frequency Range - D.C. to 60 cps, 50 lines peak to peak; to 120 cps, 10 lines peak to peak.
5. Writing Method - Forced fluid, closed system, permanent ink record on paper (patented).
6. Chart Capacity - High contract - 500 feet (Approximately 8 hours at 5 mm/sec. chart speed).
7. Linearity - A.C. - 0.5% full scale; D.C. - 0.5% full scale.
8. Power Source Required - 115 volts A.C., Single Phase, 60 cycle ( $\pm 10\%$  voltage,  $\pm 5\%$  frequency). 50 cps conversion optional.
9. Overall Dimensions - (Cabinet)
  - 21.06 Wide
  - 28.50 Depth at Base
  - 23.50 Normal Depth
  - 68.75 High

## MANUFACTURERS DATA

Brush Instruments  
 Division of Clevite Corporation  
 37th and Perkins  
 Cleveland 14, Ohio

Recording Set Graphic AN/GSH -18

Contract Tcg 07484-A Dated 29 December,  
 1964 Purchase Description NO. EEE-20-65

## TUBE AND SEMICONDUCTOR COMPLEMENT

Oscillograph

<u>Nomenclature</u>	<u>Brush Part No.</u>	<u>Type</u>
Transistor	240236	2N1303
Transistor	240237	2N1302

Drive Amplifier

<u>Nomenclature</u>	<u>Brush Part No.</u>	<u>Type</u>
Transistor	240332	2N1371
Transistor	242323	NPN
Transistor	129064-2	2N268A
Tube	125833	12AT7
Tube	125835	12AX7

Filament Regulator

<u>Nomenclature</u>	<u>Brush Part No.</u>	<u>Type</u>
Transistor	232211	2N176

20 KC Power Supply

<u>Nomenclature</u>	<u>Brush Part No.</u>	<u>Type</u>
Transistor	240332	2N1371
Transistor	247149	PNP
Transistor	242323	NPN
Transistor	129064-2	2N268A
Transistor	240237	2N1302

150 Volt Power Supply

<u>Nomenclature</u>	<u>Brush Part No.</u>	<u>Type</u>
Tube	232914	OG3

## REFERENCE DATA AND LITERATURE

Technical manual for Recording Set, AN/GSH-18.  
 Laminated plastic schematic diagrams.

## DESCRIPTION OF COAST GUARD ELECTRONIC EQUIPMENT

## SHIPPING DATA

Number of Boxes	Contents	Volume (Cu. Ft. )	Length x Width x Height (Inches)	Weight Packed (Pounds)
1	Cabinet, Elec. Equip. CY-4714/GSH-18	50.7	73 x 40 x 30	345
1	Oscillograph, RD-292/GSH-18	10.9	35 x 23 x 23.5	185
1	Control Attenuator, C-6668/GSH-18  Power Supply rack mount assembly 862789, containing power supply, 150 volt, PP-4392/GSH- 18 and power supply, 24 volt, PP-4391/GSH- 18.  Excitation Power Supply PP-4394/GSH- 18 in rack adapter 449357	10.8	30 x 26 x 20	154
1	Technical Manual, 2 ea.  Inspection Report  Master Power Switch Asm, 442074- 915-3558  Amplifier, Electronic Control, AM-4638/ GSH-18, containing 1 ea. Frame 441567- 915 and 4 ea. Ampli- fier 442398-915.  Regulator, Voltage, CN-1076/GSH-18	10.8	30 x 26 x 20	119

## DESCRIPTION OF COAST GUARD ELECTRONIC EQUIPMENT

## SHIPPING DATA (cont)

Number of Boxes	Contents	Volume (Cu.Ft.)	Length x Width x Height (Inches)	Weight Packed (Pounds)
	Power Supply PP-4393/ GSH-18  Blower Panel RA- 1502-00-3558.  Signal Input and Reference Voltage Panel Asm. 861131  Main Connector Pa- nel and Harness Asm. 441571-915-3558  Accessory Package #1, containing the following:  2 ea. Pen Adjust- ment Tool 1-120922- 18  2 ea. Sandpaper 141119  2 ea. Roll Adjust- ment Tool 242723- 910  2 ea. Gram Gage, 240601-910  1 ea. Cable & Plug Asm. 232888-910  1 ea. connector, AN - 3106-18-1S, 122105  1 ea. Adapter, Con- nector, 126294			

## DESCRIPTION OF COAST GUARD ELECTONIC EQUIPMENT

## SHIPPING DATA (cont)

Number of Boxes	Contents	Volume (Cu.Ft.)	Length x Width x Height (Inches)	Weight Packed (Pounds)
	1 ea.Connector, AN-3106-20-27P, 124799			
	1 ea.Connector AN-3106-18-1P			
	2 ea.Clamp, 119993-110			
	1 ea.Clamp, 119993-112			
	1 ea.Cable extension, 442190-910			
	1 ea.Strip, fanning, 17 pin, 261289			
	1 ea.Strip, fanning, 6 pin, 261290.			
	Accessory Package #2, containing the following:			
	1 ea.Supply roll shaft, 342167-910			
	1 ea.Internal Take-up Shaft, 442338-910			
	1 ea.External Take-up Shaft, 646253			
	1 ea.Take-up Core, 104278-2			
	1 ea.Protective Screen, 461140			

## DESCRIPTION OF COAST GUARD ELECTRONIC EQUIPMENT

## EQUIPMENT SUPPLIED

QTY per Equip.	Nomenclature	Length x Width x Height (Inches)	Weight (Pounds)
1	Cabinet, Elec. Equipment, CY-4714/GSH-18	31.5 x 21 x 68.75	216
1	Oscillograph, RD-292/ GSH-18, with external Chart Take-up, 11-2402- 50-3558 installed.	25.5 x 19 x 15.72	125
1	Control, Attenuator, C-6668/GSH-18	6.87 x 19 x 10.50	21
1	Master Power Switch Asm., 442074-915-3558	2.25 x 19 x 1.75	2
1	Amplifier, Electronic Control, AM-4638/GSH- 18	13.60 x 19.39 x 8.62	14
1	Power Supply, PP-4391/ GSH-18	11 x 10 x 6.26	24
1	Power Supply, PP-4392/ GSH-18	9.75 x 8 x 5.5	9
1	Power Supply, PP-4393/ GSH-18	2.5 x 19 x 3.5	2.4
1	Regulator, Voltage, CN- 1076/GSH-18	3 x 19 x 2	2.2
1	Blower Panel, RA-1502- 00- 3558	8.2 x 19 x 5.25	10.4
1	Power Supply, PP-4394/ GSH-18	16.75 x 8.35 x 5.18	40
2	Technical Manual		
1 Lot	Equipment Maintenance Parts		

## DESCRIPTION OF COAST GUARD ELECTRONIC EQUIPMENT

EQUIPMENT SUPPLIED (CONT)

QTY per Equip.	Nomenclature	Length x Width x Height (Inches)	Weight (Pounds)
2 sets	Servicing Diagrams, Plastic laminated.		
2 sets	Operating Instruction Sheets, Plastic Laminated.		
2 sets	Special Tools		