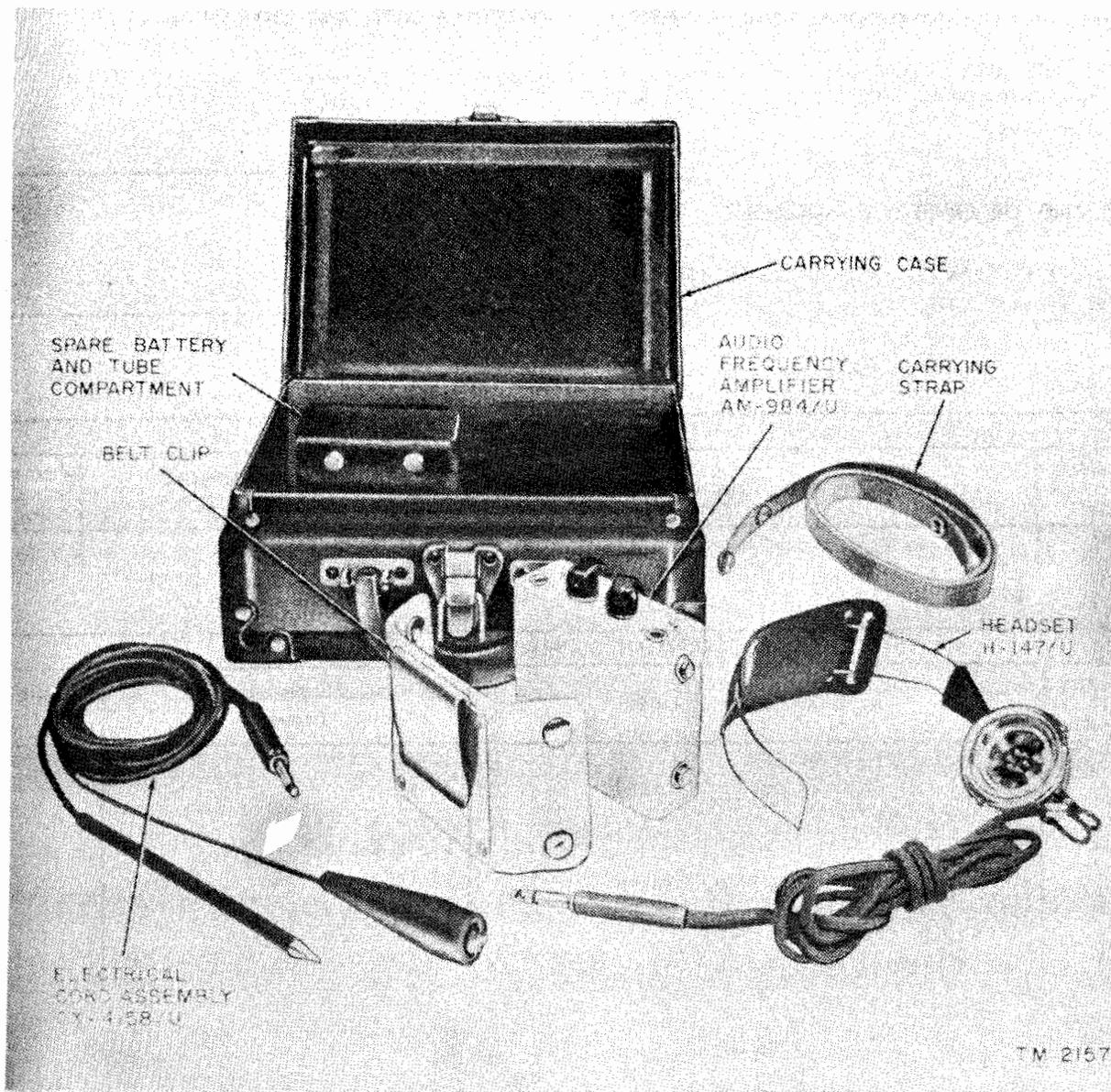


TELEPHONE TEST SET



Telephone Test Set AN/PTM-5

FUNCTIONAL DESCRIPTION

The AN/PTM-5 is a portable, lightweight, battery operated cable splicer's test set that will detect and amplify weak tone signals. It is used to identify single leads or pairs in a cable without breaking the individual conductor insulation. It can be used with either a test probe or an exploring coil.

No field changes in effect at time of preparation (8 July 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Battery B³-261, (2) Battery BA-58 or (1) BA-272/U, (1) Audio Oscillator.

TELEPHONE TEST SET

ELECTRICAL AND MECHANICAL CHARACTERISTICS

INPUT IMPEDANCE: 1000 ohms or 2 megohms.
POWER REQUIREMENTS: 22.5 and 1.5 v dry cell
batteries.

REFERENCE DATA AND LITERATURE

TM11-2157: Technical Manual for Telephone
Test Set AN/PTM-5.

TUBE AND/OR CRYSTAL COMPLEMENT

(1) CK533AX (2) CK534AK
Total Tubes: (3)

TYPE CLASSIFICATION DESIGN COGNIZANCE TASSA PROCUREMENT COGNIZANCE STOCK NO. R.D.B. IDENT. NO.
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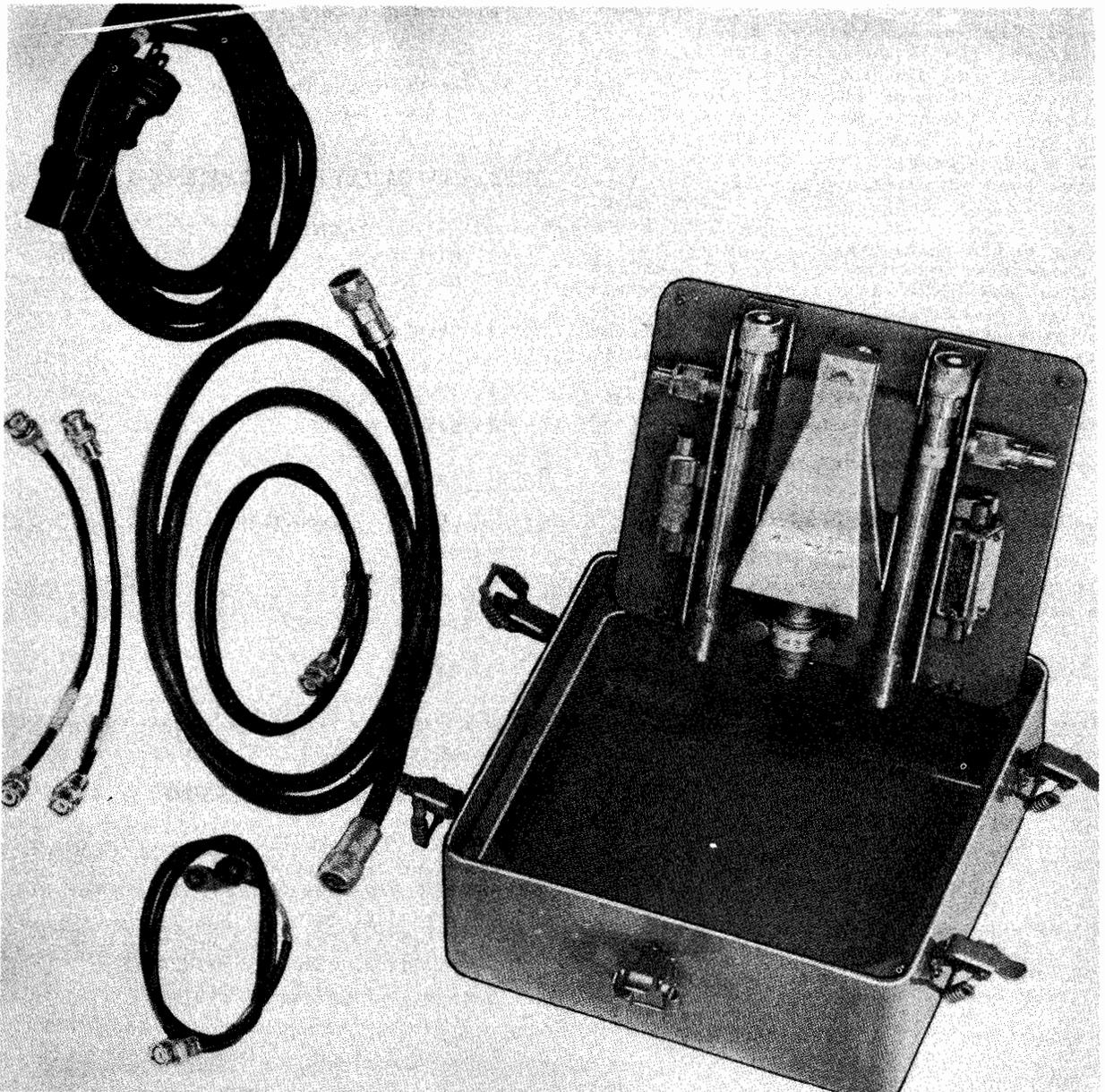
SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Telephone Test Set AN/PTM-5	0.4	6 X 10 X 12	6.5

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	AF Amplifier AM-984/U	1-1/2 X 4 X 4	1.25
1	Electrical Cord Assembly CX-4158/U	84 lg	0.25
1	Headset H-147/U	3 X 5 X 7-1/2	0.50
1	Belt Clip	1/2 X 3-1/2 X 7	0.38
1	Carrying Strap	40 lg	0.25
1	Case	5-3/8 X 9 X 11-1/4	2.38
2	Technical Manual TM11-2157	1/8 X 5-7/8 X 9-1/8	0.25
1	Set of Running Spares		

April 1958

DETECTOR-AMPLIFIER ASSEMBLY AN/UPA-1,-1A,-1B

Detector-Amplifier Assembly AN/UPA-1,-1A,-1B

FUNCTIONAL DESCRIPTION

The AN/UPA-1, -1A and -1B are each intended for use with test oscilloscopes and synchrosopes. A wide band of frequencies, modulated with short RF pulses, can be detected and then amplified for viewing on the oscilloscope screen. Frequencies above 15

megacycles are detected before being amplified, but lower frequencies can be directly amplified by a video amplifier. A crystal rectifier is used for detection of all modulated frequencies above 15 megacycles, including short RF pulses down to 0.1 microsecond, which have high-frequency harmonics.

Test-Amplifying

AN/UPA-1,-1A,-1B**DETECTOR-AMPLIFIER ASSEMBLY**

April 1958

The video amplifier has a low impedance output. The voltage gain is approximately 100 times, and is adjustable to any value between 1 and 100 times. The broadband characteristics of the amplifier result principally from the use of degenerative feed back, and excellent gain stability is also obtained as a result.

Two test antennas are provided for frequencies in the range of 1000 and 11000 megacycles.

The AN/UPA-1B is basically similar to its predecessors, Detector-Amplifier Assemblies AN/UPA-1 and AN/UPA-1A, except for reduction in size, weight and power consumption. The test antennas, RF power attenuators, and the antenna cable may be used with all three equipments. However, no other components in the three equipments may be used interchangeably.

No field changes in effect at time of preparation (13 December 1957).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied:
Test Oscilloscope or synchroscope with which the detector-amplifier is to be used.

ELECTRICAL AND MECHANICAL CHARACTERISTICS**VIDEO AMPLIFIER**

AN/UPA-1: 100 cps to 6 mc.
AN/UPA-1A: 170 cps to 6 mc.
AN/UPA-1B: 175 cps to 8 mc.

MAX GAIN: 40 db.

OUTPUT IMPEDANCE: 120 ohms.

INPUT IMPEDANCE: 1000 ohms.

RF PROBE

FREQ RANGE: 35 to 11000 mc.

INPUT IMPEDANCE: 50 ohms.

LOAD IMPEDANCE: 1000 ohms.

MAX INPUT: 250 mv across 50 ohms.

POWER SOURCE REQUIRED

AN/UPA-1: 115 v, 50 to 70 cps, 53.5 W.

AN/UPA-1A: 115 v, 50 to 1700 cps, 50 W.

AN/UPA-1B: 115 v, 50 to 1000 cps.

ANT CHARACTERISTICS**FREQ RANGE**

AS-23/AP: 1550 to 5200 mc.

AT-48/UP: 5000 to 11000 mc.

TYPE

AS-23/AP: Two element directive.

AS-48/UP: Pyramidal horn type director w/vert ant in its' throat.

MANUFACTURER'S OR CONTRACTOR'S DATA

Hazeltine Electronics Corp, Little Neck,
N.Y.
Contract NObsr-39332.

Belmont Radio Corp, Chicago, Ill.

Contract NObsr-69265 dated 17 August
1944.

Kardon Mfg Corp, New York, N.Y.

Contract NObsr-52180.

TUBE AND/OR CRYSTAL COMPLEMENT**AN/UPA-1**

(1) OC3W (1) 5Y3WGTB
(3) 6AC7WA (1) 6AG7Y

Total Tubes: (6)

AN/UPA-1A

(3) 5654/6AK5W (2) 6J6WA
(1) 6X4WA

Total Tubes: (6)

AN/UPA-1B

(1) 5Y3WGTB (3) 5654/6AK5W
(1) 5678WA (1) 6J6WA

Total Tubes: (6)

(1) 1N23B

Total Crystals: (1) (Per Equipment)

REFERENCE DATA AND LITERATURE

SHIPS 271: Technical Manual for Detector-Amplifier Assembly AN/UPA-1.

NAVSHIPS 91049: Technical Manual for Detector-Amplifier Assembly AN/UPA-1A.

NAVSHIPS 91473: Technical Manual for Detector-Amplifier Assembly AN/UPA-1B.

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE
STOCK NO.
R.D.B. IDENT. NO.

UNCLASSIFIED

Test-Amplifying

April 1958

DETECTOR-AMPLIFIER ASSEMBLY AN/UPA-1,-1A,-1B

SHIPPING DATA

NUMBER OF BOXES	CONTENTS AND IDENTIFICATION	VOLUME (Cu.Ft.)	OVERALL DIMENSIONS (inches)	WEIGHT PACKED (lbs.)
1	Detector-Amplifier Assy*	6.12	14-1/2 X 26-1/2 X 27-1/2	124
3	Accessories*	10.01	36 X 60 X 72	236
1	Detector-Amplifier Assy AN/UPA-1B w/Accessories	1.34	12-1/4 X 13-1/2 X 14	30

NOTE: *AN/UPA-1, -1A only.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Amplifier AM-73/UPA-1*	10-3/4 X 12 X 18-1/2	55
1	Video Amplifier AM-242/UPA-1A**	6-11/16 X 9-5/8 X 15-1/2	21
1	Video Amplifier AM-647/UPA-1B***	10-1/2 X 10-1/2 X 10-1/2	23
1	R.F. Probe DT-31/UPA-1A	5/8 dia X 2-3/4	0.19
1	Crystal Detector Unit 1N23*	1 X 1-3/4 X 5/8	0.125
1	Pick-Up Ant AT-48/UP	2 X 2-1/2 X 5-1/2	0.5
1	Ant Assy AS-23/AP	1-1/8 X 2-1/4 X 3-7/8	0.19
2	R.F. Attenuator		
	(1) TPS-51-P8/10*	5/8 dia X 5	0.25
	(1) TPS-51-P8/20*	5/8 dia X 5	0.25
2	Attenuators CN-86/U** and CN-87/U**	13/16 dia X 8-5/16	0.44
1	Attenuator CN-25/UPA-1*	1 X 1 X 5-1/8	0.28
1	Set of Accessories		

NOTES: *AN/UPA-1 only
 **AN/UPA-1A only
 ***AN/UPA-1B only

UNCLASSIFIED

4 April 1962

VIDEO AMPLIFIER UNIT CAQI-526A

Cog Service:

FSN:

Functional Class:

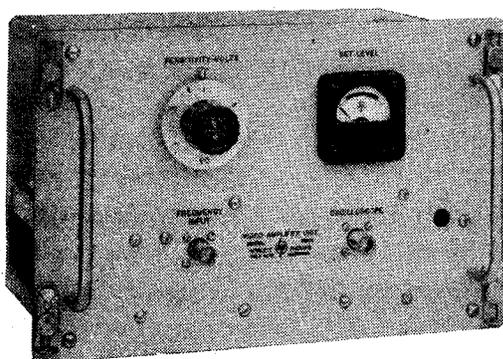
USA

USN

USAF

TYPE CLASS:

MANUFACTURER'S NAME/CODE NUMBER: Hewlett-Packard Co.



Video Amplifier Unit CAQI-526A

FUNCTIONAL DESCRIPTION:

Video Amplifier Unit CAQI-526A increases the counter's 10 cps to 10 mc sensitivity to 10 millivolts for frequency measurement at low power levels. A special probe assembly simplifies remote pickup at high impedance levels. An oscilloscope output terminal allows visual monitoring of the input waveform.

No field changes in effect at time of preparation (6 June 1961).

TECHNICAL CHARACTERISTICS:

RANGE: 10 cps to 10.1 mc.

ACCURACY: Retains accuracy of 524 counter.

INPUT VOLTAGE: 10 mv rms min.

LEVEL CONTROL: Meter indicates input signal level, correct voltage adjustment.

CAQI-526A VIDEO AMPLIFIER UNIT

OUTPUT TERMINAL: Provides 10 times input voltage from 93 ohm source, for oscilloscope monitoring of input signal without loading circuit.

RELATION TO OTHER EQUIPMENT: None.

EQUIPMENT REQUIRED BUT NOT SUPPLIED:

(1) Electronic Counter CAQI-524 series.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (INCHES)	WEIGHT (LBS)
1	Video Amplifier Unit CAQI-526A		8 x 9 x 12	5

REFERENCE DATA AND LITERATURE:

Operating and Servicing Manual for 526A Video Amplifier.

TUBE, CRYSTAL AND/OR SEMI-CONDUCTOR DATA:

TUBES: Data not available.

CRYSTALS: Data not available.

SEMI-CONDUCTORS: Data not available.

SHIPPING DATA

PKGS	VOLUME (CU FT)	WEIGHT (LBS)
1		8

PROCUREMENT DATA

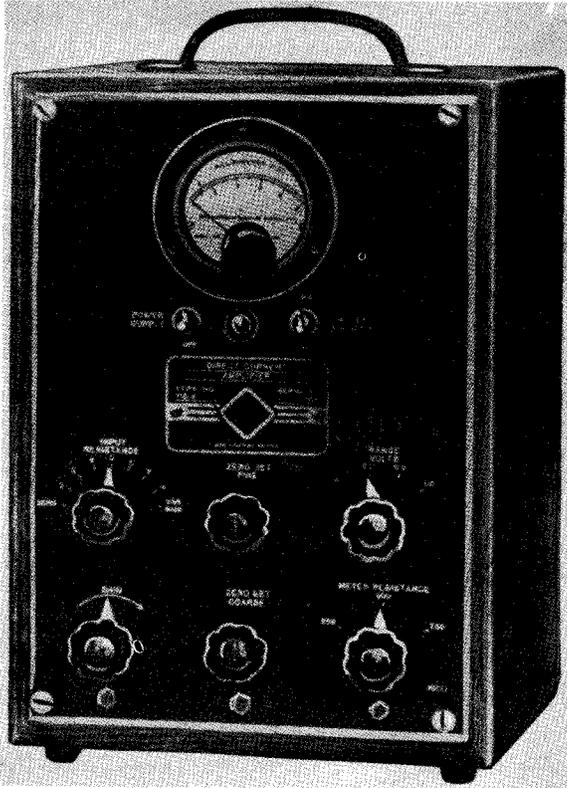
PROCURING SERVICE:
SPEC &/OR DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX. UNIT COST
Hewlett-Packard Co. Model no. 526A	Palo Alto, Calif.	N0bsr-75865, 22 June 1959 N0bsr-81371, 3 June 1960	\$162.15 \$161.23

DIRECT CURRENT AMPLIFIER

TS-580/U



Direct Current Amplifier TS-580/U

FUNCTIONAL DESCRIPTION

The TS-580/U is a highly stable alternating-current operated instrument designed primarily for use with the Esterline-Angus, 5 milliamperere recorder. The combination is capable of accurately recording small DC voltages and currents. It has been used for the recording of frequency, recording the modulation level of broadcast transmitters, recording the insulation resistance of electrical machinery during dehydration, measurement of the emf of electro-chemical cells, recording of life tests on vacuum tubes, and the recording of sound and vibration intensities. It may equally well be used to operate from photoelectric cells,

resistance strain gauges, resistance thermometers, and similar devices.
No field changes in effect at time of preparation (24 July 1957).

RELATION TO OTHER EQUIPMENT

The TS-580/U is the same as General Radio Type 715-AM.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

- INPUT VOLTAGE: 0.1 to 1.0 v.
- INPUT RESISTANCE: 100 ohms to 10 megohms in powers of 10.
- GIRD CURRENT: Less than 0.002 ua in input circuit.
- CALIBRATION ACCURACY: 1% of full scale.
- OUTPUT: 5 ma linear output in recorder circuit of 1000 ohms.
- POWER REQUIREMENTS: 105 to 125 v or 210 to 250 v, 60 cps, 35 w.

MANUFACTURER'S OR CONTRACTOR'S DATA

General Radio Company, Cambridge, Mass.
Approximate Cost \$340.00 with equipment spares.

TUBE AND/OR CRYSTAL COMPLEMENT

- (2) 6J7G
- (1) 6F6G
- (1) 6X5G
- (1) 105-30
- (1) 4A1

Total Tubes: (6)
Total Crystals: (1)

REFERENCE DATA AND LITERATURE

TM11-487H: Directory of Signal Corps Equipment, Test Equipment.
Nomenclature Card for Direct Current Amplifier TS-580/U.

TYPE CLASSIFICATION
DESIGN COGNIZANCE TASSA
PROCUREMENT COGNIZANCE
STOCK NO.
R.D.B. IDENT. NO. 7.1

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIP	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Direct Current Amplifier TS-580/U	8-1/2 x 9 x 15-1/4	22.25

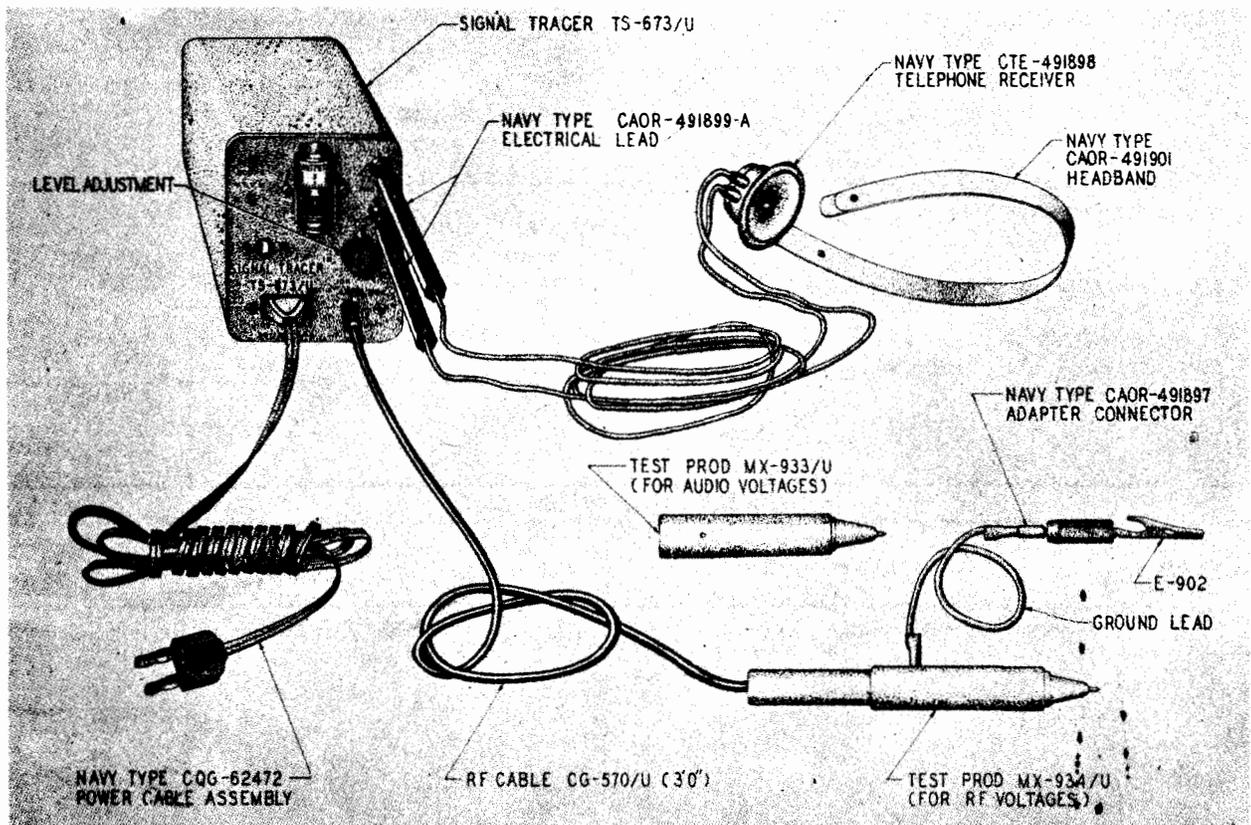
UNCLASSIFIED

March 1957

Test-Amplifying

SIGNAL TRACER

TS-673/U



Signal Tracer TS-673/U

FUNCTIONAL DESCRIPTION

The TS-673/U is a portable test equipment designed for detection and indication of signals in electronic circuits, and it contains provisions for connecting an oscilloscope, an earphone or an electronic voltmeter to the output. The TS-673/U is also a part of Test-Tool Set AN/USM-3 and AN/USM-3A.

No field changes in effect at time of preparation (10 October 1956).

RELATION TO OTHER EQUIPMENT

Equipment Required but not Supplied: (1) Power Cable Assembly NT-62472, (2) Lead, Electrical, NT-491899-A, (1) RF Cable Assembly CG-570/U(3'0"), (1) Test Prod MX-933/U, (1)

Test Prod MX-934/U, (1) Lead, Electrical, NT-491895 with Adapter Connector NT-491897 and Alligator Clip, (1) Telephone Receiver NT-491898.

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RESPONSE

AC VOLTAGES: 47 to 15000 cps.

AUDIO MODULATION VOLTAGES: 15 kc to 400 mc.

SENSITIVITY DATA

AUDIO: 0.002 v audible in earphones, 0.004 v for 1/2 scale on meter.

RF: 0.005 v of 50% modulated RF audible in earphone, 0.05 v of 50% modulated RF for 1/2 scale on meter.

POWER REQUIREMENTS: 105 to 125 v, 50 to 1600 cps, single ph, 7 W.

UNCLASSIFIED

4.7 TS-673/U: 1

Test-Amplifying

UNCLASSIFIED

March 1957

TS-673/U

SIGNAL TRACER

MANUFACTURER'S OR CONTRACTOR'S DATA

Radio Frequency Laboratories Inc, Boonton,
N.J.

Contract NObsr 42100, dated 17 Feb-
ruary 1948.

Approximate Cost: \$58.00 with equip-
ment spares.

REFERENCE DATA AND LITERATURE

NAVSHIPS 91146: Technical Manual for Test-
Tool Set AN/USM-3.

TUBE AND/OR CRYSTAL COMPLEMENT

(2) 12AX7

(1) 6AL5

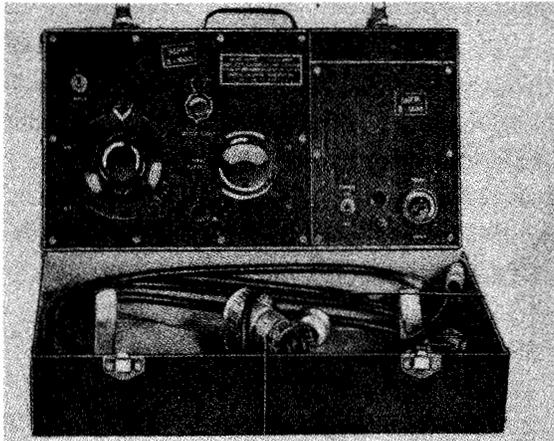
Total Tubes: (3)

TYPE CLASSIFICATION
DESIGN COGNIZANCE BUSHIPS
PROCUREMENT COGNIZANCE CS-838
STOCK NO.
R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIPT	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Signal Tracer TS-673/U	3 x 3-1/2 x 5-11/16	2

December 1956

AMPLIFIER ALIGNMENT UNIT**TS-92/AP***Double Peaking Tester-TS-92/AP***FUNCTIONAL DESCRIPTION**

The TS-92/AP is a portable special test set for alignment and adjustment of the amplifier stages of special jamming radar transmitters. The Amplifier Alignment Unit TS-92/AP is a special superheterodyne receiver consisting of an untuned crystal mixer, a low pass filter, vacuum tube mixer, IF stages and a diode peak detector.

No field changes in effect at time of preparation (30 July 1956).

ELECTRICAL AND MECHANICAL CHARACTERISTICS

FREQUENCY RANGE (INPUT): 15 to 500 mc.
 ACCURACY OF DIAL CALIBRATION: 0.125 mc.
 SIGNAL INPUT: 100 mc to 2 v (any excess will damage crystal).
 SENSITIVITY: 100 mv unmodulated signal per

half scale deflection of output meter.
 BANDWIDTH ADJUSTMENT RANGE: 0.5 to 7 mc.
 SELECTIVITY: 3 db down at 50 kc from resonance.

OUTPUT INDICATOR METER: 0 to 1 ma DC.
 TEMPERATURE RANGE: 40° C to 55° C.
 INPUT IMPEDANCE: 150 ohms.
 POWER REQUIREMENTS: 115 v, 50 to 1200 cps single ph.

MANUFACTURER'S OR CONTRACTOR'S DATA

Hudson American Corp., New York, N. Y.
 Sig C Order No. 668-Day-44
 Sig C Order No. 1499-Day-44

TUBE AND/OR CRYSTAL COMPLEMENT

(1) 5Y3GT/G (2) 6AC7 (1) 6SA7
 (1) 6H6 (1) 6J5
 Total Tubes: (6)

(1) 1N21B
 Total Crystals: (1)

REFERENCE DATA AND LITERATURE

AN 16-35 TS92-2: Technical Manual for Double Peaking Tester TS-92/AP.

TYPE CLASSIFICATION
DESIGN COGNIZANCE USAF
PROCUREMENT COGNIZANCE 71-5082
STOCK NO.
R.D.B. IDENT. NO.

EQUIPMENT SUPPLIED DATA

QUANTITY PER EQUIP	NAME AND NOMENCLATURE	OVERALL DIMENSIONS (inches)	WEIGHT (lbs.)
1	Amplifier Alignment Unit TS-92/AP including:	7-3/4 x 8-1/4 x 16-1/8	32
1	Cord GG-153/U	72 lg	
1	Probe Antenna AS-122/AP	72 lg	
1	Loop Probe AS-142/AP	72 lg	
1	Cable Adapter AN-3057-12		
1	Allen Wrench #6		
1	Allen Wrench #8		
1	Technical Manual AN16-35TS92-2		

