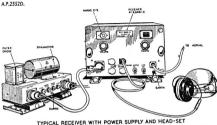
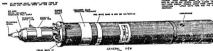
AIR MINISTRY Stores Ref. No. 110D/990 Stores Ref. No. 110D/991 Stores Ref. No. 1100/1053 For further information see

SONOBUOY, ARI.5286

Receiver R-2/ARR-3 supplied with AN/ARR-3A Receiver R-2A/ARR-3 supplied with AN/ARR-3B Sonobuoy transmitter equipment AN/CRT-I





. TRANSMITTER AN/CRT-IB

Function of transmitters

Transmit by radio the waterborne sounds of submerged submarines to aircraft or ship. Sonobuoy is launched from aircraft by selfcontained parachute

Frequency range

AN/CRT-IA (Black band) 67-7 to 71-7 Mc/s in six bands AN/CRT-IB (White band) 62.9 to 66.9 Mc/s in six bands

Aerial Duration of signal 30 in, telescopic Two to four hours

Type of wave Sonic listening range Frequency modulation Range varies with condition of sea and depth of submarine. Slowmoving submarines \(\frac{1}{2} \) to \(\frac{1}{2} \) mile from buoy, fast-moving submarine up to \(\frac{3}{2} \) miles.

RESTRICTED

Power supply			2 batteries BA-51 67	J .OIL			
Dimensions and weigh	Length (aerial collapsed) 45 in. Length (aerial extended) 75 in.		45 in.				
		erial extended)	75 in.				
	Diameter	A Real bounds					
		ncluding batteries	24 lb.				
	Batteries, Carton co batterie	entaining 3 units					
		entaining I unit a	nd 18 lb.				
Functions of receivers	To enable members of aircraft crews or ships to listen by radio to the waterborne sounds of submerged submarines as transmitted from Sonobuoys						
Frequency range	R2/ARR-3: continuously variable from below 67-7 Mc/s to above 71-7 Mc/s						
	R2A/ARR-3: continuously variable from below 62-9 Mc/s to above 71-7 Mc/s						
Type of demodulator	FM discriminator						
Aerial	Recractable whip						
Radio receiving range	Sonobuoy to aircraft receiver varies from 10 miles when the aircraft is at 400 ft, to 35 miles when the aircraft is at 5,000 ft, but the usable range is considered to be between 5 and 10 miles.						
Receiver differences	R-2/ARR-3. Tuning range 67-2 to 72-0 Mc/s in six channels. Four output jacks are provided on the front panel. Locally controlled superheterodyne. Will receive the FM signals of transmitter AN/CRT-IA						
	Two out	R-3. Tuning ran	ge 62-4 to 72-0 Mc/s icks are provided on the and a gain control. V /CRT-IA and IB				
Power supply HT	Two out an inter- signals o Rotary t	R-3. Tuning ran put headphone ja phone input jack f transmitters AN randormer (Dyna 5A at 28 volts fro 100 mA at 190 vol	icks are provided on to and a gain control. V /CRT-IA and IB motor) m aircraft 24-volt suppl	Vill rece			
Power supply HT	Two out an incer- signals of Rotary t Input 1 · Output RPM 3,6	R-3. Tuning ran put headphone ja phone input jack f transmitters AN randormer (Dyna 5A at 28 volts fro 100 mA at 190 vol	icks are provided on to and a gain control. V /CRT-IA and IB motor) m aircraft 24-volt suppl	Vill rece			
	Two out an incer- signals of Rotary t Input 1 · Output RPM 3,6	R-3. Tuning ran put headphone ja phone input jack f transmitters AN andormer (Dyna 5A at 28 volts fro 100 mA at 190 vol 00	icks are provided on to and a gain control. V /CRT-IA and IB motor) m aircraft 24-volt suppl	y Weight	paner, aso ive the FM		
LT	Two out an incer signals of Rotary tinput I-Output RPM 3,6	R-3. Tuning ran put headphone ja- phone input jack f transmitters AN ransformer (Dyna: 5A at 28 volts fro 100 mA at 190 vol 00 (numinal) from ai	cks are provided on the and a gain control. V (CRT-IA and IB motor) maircraft 24-volt supplies craft installation Dimensions 14 jin. x 11 ½in. x 9 ½in.	y Weight Ib. 18-72	Stores Ref.		
LT Main items of installation,	Two out an inter signals of Rotary t input 1- Output RPM 3,6 24 volts Unit	R-3. Tuning ran put headphone ja phone input jack f transmitters AN ran-former (Dyna: SA at 28 volts fro 100 mA at 190 vol 0' (numinal) from ai Nomencloture	cks are provided on to and a gain control. V /CRT-IA and IB motor) me aircraft 24-volt supplies ircraft installation Dimensions	y Weight lb. 18-72	Stores Ref. 110D/990 110D/991		
LT	Two out an interpretation of the control of the con	R-3. Tuning ran put headphone is phone input jack f transmitters AN anuformer (Dyna Az 28 volts fro 100 mA at 190 vol C' (numinal) from ai Nomenclature R-2/ARR-3 or	cks are provided on the and a gain control. V (CRT-IA and IB motor) maircraft 24-volt supplies craft installation Dimensions 14 jin. x 11 ½in. x 9 ½in.	y Weight lb. 18-72	Stores Ref.		
LT Main items of installation,	Two out an inter signals o Rotary t Input I- Output RPM 3,6 24 volts Unit Radio receiver Receiver mounting	R-3. Tuning ran put headphone ip- put headphone ip- put headphone ip- put jack (transmitters AN and, former (Dyna SA at 28 volts fro 100 mA at 190 vol (numinal) from ai Nomencloture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3	cks are provided on it can a gain control. V (CRT-IA and IB motor) m aircraft 24-volt suppl crcraft installation Dimensions 14jin. x 11jin. x 9jin. 13jin. x 10jin. x 2jin.	y Weight lb. 18-72 18-72 1-22	Stores Ref. 110D/990 110D/991		
LT Main items of installation,	Two out an inter signals of Rotary t Input I Output RPM 3,6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting	R-3. Tuning ran put headphone ip- put headphone ip- put headphone ip- put jack (transmitters AN and, former (Dyna SA at 28 volts fro 100 mA at 190 vol (numinal) from ai Nomencloture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3	cks are provided on it and a gain control. V (CRT-IA and IB motor) maintraft 24-volt supplies CRT in the control of the contro	Weight lb. 18-72 1-22	Stores Ref. 110D/990 110D/991 110A/1144		
LT Main items of installation,	Two out an interriginals of Rotary It input I Output RPM 3.6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mou	R-3. Tuning ran put headphone is phone input jack transmitters AN mandormer (Dyna: SA at 28 volus fro 100 mA at 190 vol co (numinal) from ai Nomencloture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3 DY-5A/ARR-3 MT-13/ARR-3 MT-13/ARR-3	cicks are provided on it vand a gain control. V (CRT-IA and IB mootor) m aircraft 24-volt supplist control in the control in t	Weight lb. 18-72 1-22 6-91 0-84	Stores Ref. 110D/990 110D/991 110A/1144		
LT Main items of installation,	Two out an inter- signals or Rotary t Input 1- Output RPM 3.6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting Dynamotor Aerial	R-3. Tuning ran put headphone is phone input pack for transmitters. Nandormer (Dyna: SA at 28 volts for 100 mA at 190 vol Cr (numinal) from ai Nomencloture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3	cicks are provided on it vand a gain control. V (CRT-IA and IB mootor) m aircraft 24-volt supplist control in the control in t	Weight lb. 18-72 1-22 6-91 0-84	Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145		
LT Main items of installation,	Two out an inter- signals of Rotary t Input 1 - Output RPM 3.6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting Dynamotor Aerial Headests	R-3. Tuning ran put headphone is phone input jack transmitters AN mandormer (Dyna: SA at 28 volus fro 100 mA at 190 vol co (numinal) from ai Nomencloture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3 DY-5A/ARR-3 MT-13/ARR-3 MT-13/ARR-3	cicks are provided on it vand a gain control. V (CRT-IA and IB mootor) m aircraft 24-volt supplist control in the control in t	Weight lb. 18-72 1-22 6-91 0-84 2-23	Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145		
LT Main items of installation,	Two out an interriginals of Retary t Input 1 - Output RPM 3,6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting Dynamotor Aerial Headsets order the Receiver Headsets order the Reserver Headsets order the R	R-3. Tuning ran put headphone ja phone input jack (transmitter) A at 28 votta fro mA at 150 volt (cominal) from ai Nomencleture R-2/ARR-3 or R-2A/ARR-3 MT-11/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight lb. 18-72 1-22 6-91 0-84 2-23 1-06	Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145 110B/510 110A/1146		
LT Main items of installation,	Two out an interriginals of Retary t Input 1 - Output RPM 3,6 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting Dynamotor Aerial Headsets cords Plug, receiver power input Plug, Jynamotor Plug, Jynamotor Plug, Jynamotor Plug, Jynamotor Manager State	IR-3. Tuning ran put headphone ja phone input jack transmitters input jack transmitters input transmitters input transmitters input transmitters input transmitters input transmitters input Nomencloture R-2/ARR-3 or R-2/ARR-3 MT-11/ARR-3 DY-5A/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3 AT-3A/ARR-3 AN-3108-22-55	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight lb. 18-72 1-22 6-91 0-84 2-23 1-06 0-31 0-23	Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145 110B/1104 110H/4011 105X/839		
LT Main items of installation,	Two out an interpretation of the control of the con	IR-3. Tuning ran put headphone is shone input lack (ransmitters AN nandormer (Dyna SA at 28 volts fro 100 mA at 190 vol (cuminal) from ai Nomencland R-2/ARR-3 or R-2A/ARR-3 or R-2A/ARR-3 MT-13/ARR-3 CX-3/ARR-3	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight Ib. 18-72 1-22 6-91 0-84 2-23 1-06 0-31 0-23 0-14	Stores Ref. Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145 110B/110 110A/1145 110B/110 110A/1141 110X/839		
LT Main items of installation,	Two out an interpretation of the control of the con	IR-3. Tuning ran put headphone is shone input lack (ransmitters AN nandormer (Dyna SA at 28 volts fro 100 mA at 190 vol (cuminal) from ai Nomencland R-2/ARR-3 or R-2A/ARR-3 or R-2A/ARR-3 MT-13/ARR-3 CX-3/ARR-3	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight Ib. 18-72 1-22 6-91 0-84 2-23 1-06 0-31 0-23 0-14	Stores Ref. Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145 110B/110 110A/1145 110B/110 110A/1141 110X/839		
LT Main items of installation,	Two out an locar signals of Rozary rights of Rozary rights of Rozary rights. Radio receiver Receiver mounting Dynamotor unit produced to the Receiver mounting Dynamotor unit produced to the Receiver power input Plug, receiver power input Plug, dynamotor output Plug, dynamotor output Plug, dynamotor plug, dynamotor plug, dynamotor plug, dynamotor plug, dynamotor dynamotor plug, dynamotor dynamotor plug, dynamotor dynamotor dynamotor plug, dynamotor plug, dynamotor plug, dynamotor plug, dynamotor plug, dynamotor	R-3. Tuning ran purk hadphone in plus hadphone in plus Jack creamitters. An analysis of the plus Jack creamitters. An at 28 volts fix at 28 volts fix at 28 volts from 100 ma x 1190 volt (numinal) from at Momendature R-2/ARR-3 prompts from 24 volts fix at 28 volts fix at 28 volts fix at 28 volts from 24 volts from 25 volts	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight 16. 18-72 18-72 1-22 6-91 0-84 2-23 1-06 0-31 0-23 0-14 0-14 0-05 0-08	Stores Ref. 110D/990 110A/1144 110K/1645 110A/1146 110A/1146 110A/1146 110A/1146 110A/1146 110A/1146 110X/1148 105X/1814 110X/1148		
LT Main items of installation,	Two out an inter- ignals or Rocary or input it input it input it RPM 3.4 24 volts Unit Radio receiver Receiver mounting Dynamotor unit Mounting Dynamotor Dynamotor Headset Headset Headset Headset Rocary	R-3. Tuning ran purchasiphone in purchasiphone in purchas	cids are previded on it (CAT-1A and 1B and 1B (CAT-1A and 1B and 1	Weight receipt 18-72 1-8-72 1-9-8-70 1-9-8-72 1-9-9-9-9-9-9-9-9-9-9-9-9-9-9-9-9-9-9-9	Stores Ref. 110D/990 110D/991 110A/1144 110K/1601 110A/1145 110B/510 110H/4011 105X/839 105X/1148 110SX/1148		
LT Main items of installation,	Two out an incer signific of Rozary register of Roz	R-3. Tuning rangue the solution is provided by the solution in providing the solution in providing the solution in the solutio	cts are provided on the control of t	Weight 16. 18-72 18-72 1-22 6-91 0-84 2-23 1-06 0-31 0-23 0-14 0-14 0-05 0-08	Stores Ref. 110D/990 110D/991 110A/1145 1108/1601 110A/145 110B/1601 110A/145 110B/1601 110A/1145 110B/1601 110A/1148 110B/1601 110A/1148 110B/1601 11		

	Unit	Nomenclature	Dimensions	Weight Stores Ref. Ib.
Main items of installation, weight and dimensions		RG-11/U	20ft.	0.096 per ft.
(enetd.)	Clamps, cable	AN-3057-12		0-061 105X/1404

instructions

This leaf issued with A.L. No. 21, September, 1949.

Variants of sonobuoy

Test equipment

Handbook of operating

Hockok test meter Type 1338

AN-08-30

Transmitter Type T.1596

Transmitter Type T.1901

causes buoy to sink Sonobuoy AN/CRT-4

harraries sinks at and of transmirrion

ARR 3.7

Wavemeter Type LMB

T.1901 is a conversion of existing equipment AN/CRT-IA or 1B converted by kits conversion, Type T.1901, Ref. No. 10D/17128, The conversion increases the period of transmission from 3 hours to 3 days. When air-launched, parachute is lettisoned on impact with water. Rod aerial less than quarter-wave fitted to specially designed aerial insulator. At end of transmission flooding direct

AN/CRT-4 is a directional transmitter which indicates the direction of the submarine. It is longer than the non-directional type and transmits over a range of twelve frequencies, one frequency to each buoy. Air-launched either manually or automatically. Contains buoy. Air-launched either manually or automatically. Contains fluorescent dye marker. Operates for 2 to 4 hours, powered by

A.P.2276A(2), Vol. 1, Sect. 2, Sheet No. 29

Ref. No. 110T/33

Ref No 1105/NIV

Ref. No. 100/2782 T.1596 is a conversion of existing equipment, AN/CRT-IA or IB, converted by kits, converson, Type T.1596 Ref. No. 10D/2783. The conversion increases the period of transmission from 3 hours to 3 days and renders the equipment suitable for launching from surface vessels. At end of 3 days flooding device causes buoy to sink

Ref. No. 10D/17127.

Ref. No. 110D/1138.

0-19

