

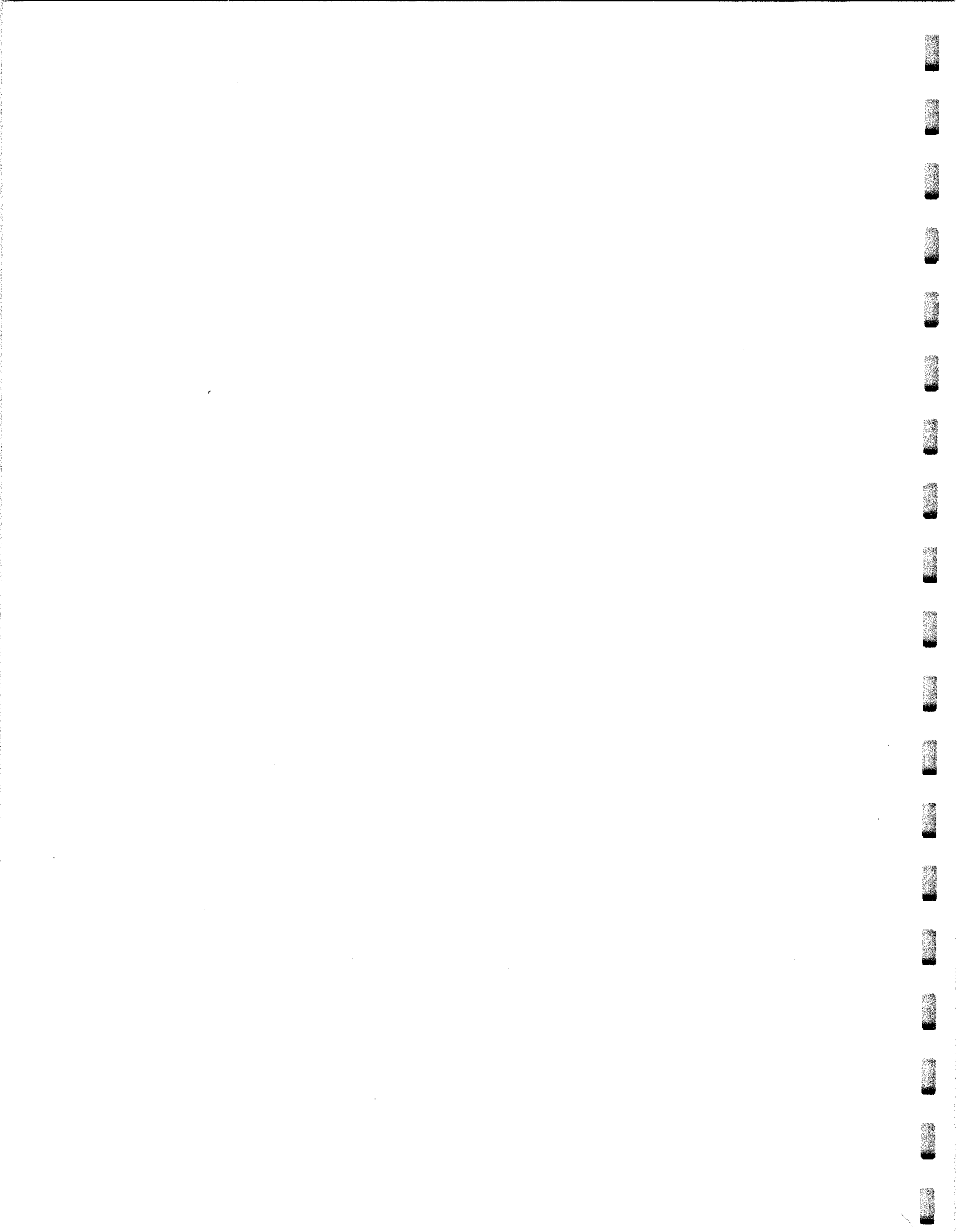
*Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels*

CLASS 50

**AMPLIFIERS, MODULATOR
COUPLER UNITS
ELECTRONIC CONVERTERS
MIXING PANELS**

CONFIDENTIAL

NAVSHIPS 900,109



**Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels**

3.50-1

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
CC-50000	TBC	XA-8139	CRV 50008	RAE		CRV 50015	UA	
AMPLIFIER POWER			AMPLIFIER COMBINING UNIT.			AMPLIFIER - LINE WITH TYPE 53023 FILTER.		
12/29/31 NOV. 41		M-7350404-G-1 T-7659030	12/13/32 NOV. 41	EA-38A1 MI-8620		5/15/33 NOV. 41		
CC-50001	TBB	XA-8211	CRV 50009	RAE		CRV 50016	RC-3	
POWER AMPLIFIER 115 V. UNIT.			AMPLIFIER - LINE RECORDER.			AMPLIFIER-RADIO FREQUENCY TUNED.		
Ø OUTLINE P-7760209 3/4/32 NOV. 41		RT-144-A Ø SEE ABOVE	12/13/32 NOV. 41	ES-9A1		9/8/33 NOV. 41		(2512)
CC-50002	TBB	XA-8211	CBY 50010	JK		CBM 50017	QB	
POWER AMPLIFIER 230 V. UNIT.			AMPLIFIER SOUND RECEIVER.			AMPLIFIER SOUND RECEIVER.		
Ø OUTLINE P-7760209. 3/4/32 NOV. 41		RT-144-B Ø SEE ABOVE	5/8/33 NOV. 41			2/1/34 NOV. 41		
CBM 50003	JL-1 & JL-2	55RE50F1079	CBY 50010-A	JK		CBM 50018	QC	55RE50F1082
AMPLIFIER FOR SOUND COMPENSATOR.			RECEIVER AMPLIFIER 15 TO 55 KC OPERATES FROM 110 TO 120 VOLTS. SINGLE PHASE 60 CYCLES.			AMPLIFIER SOUND RECEIVER.		
3/26/32 NOV. 41	#514	SK. #2355	NOV. 41			2/1/34 NOV. 41	568	
RW-50004	JC & JC	RW 50F 442	CRV 50011	UA		CBM 50019	QC	55RE50F1081
AMPLIFIER			AMPLIFIER - LINE WITH TYPE 53019 FILTER.			SENSITIVITY CONTROL FOR USE WITH CBM-50018.		
6/9/32 NOV. 41			5/15/33 NOV. 41			2/1/34 NOV. 41	455E	
RW-50005	JC & JC	RW 50F 443	CRV 50012	UA		CBM 50020	NM	55RE50F1083A
AMPLIFIER - CABINET FOR TYPE 50004 AMPLIFIER.			AMPLIFIER - LINE WITH TYPE 53020 FILTER.			AMPLIFIER SOUND RECEIVER		
8/11/32 NOV. 41			5/15/33 NOV. 41			2/1/34 NOV. 41		
CTW 50006	JK		CRV 50013	UA		CBM 50021	NM	
AMPLIFIER - SOUND RECEIVER.			AMPLIFIER - LINE WITH TYPE 53021 FILTER.			SENSITIVITY CONTROL FOR USE WITH CBM-50020.		
11/29/32 NOV. 41			5/15/33 NOV. 41			2/1/34 NOV. 41		
CC-50007	RAF	XA-8454	CRV 50014	UA		CRV 50022	RAA-1	
AMPLIFIER - LINE			AMPLIFIER - LINE WITH TYPE 53022 FILTER.			AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.		
12/9/32 NOV. 41		M-7461148	5/15/33 NOV. 41			3/6/34 NOV. 41		

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DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER
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3.50-2

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CRV 50022-A RAA-3 AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.			CRV 50024-C RAB-3 AMPLIFIER AUDIO FREQUENCY			CBM 50031-A JK-2a AMPLIFIER SAME AS 50031 EXCEPT OMITTS "RED-LIGHT" OUTPUT.		55RE50F1093
11/18/35 NOV. 41			11/18/35 NOV. 41			12/10/35 603-A NOV. 41		
CRV 50023 RAB-1 AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.			CBM 50025 NM-1 AMPLIFIER SOUND RECEIVER.		55RE50F1080A	CBM 50032 NM-1a AMPLIFIER		
3/6/34 NOV. 41			3/21/34 NOV. 41			12/20/34 574F NOV. 41		
CRV 50023-A RAB-2 AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.			CRV 50026 RAE-1 AMPLIFIER - COUPLING			CRE 50033 QA AMPLIFIER - R.F. 25 - 35 KILOCYCLES.		
1/10/35 NOV. 41			5/5/34 FA41A1 NOV. 41 MI-8622		T-601311	4/15/35 NOV. 41		
CRV 50023-B RAB-2a AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.			CBM 50027 QC-2 AMPLIFIER			CBM 50034 JL-4 AMPLIFIER A.C. SUPPLY.		
1/10/35 NOV. 41			7/7/34 568A NOV. 41			4/18/35 514-C NOV. 41		
CRV 50023-C RAB-3 AMPLIFIER ASSEMBLY INTERMEDIATE AND AUDIO FREQUENCY.			CBM 50028 NM-2 AMPLIFIER			CRY 50035 QC-3&NM-5 AMPLIFIER		
11/18/35 NOV. 41			7/7/34 NOV. 41			5/8/35 NOV. 41		K-823552
CRV 50024 RAA-1&RAB-1 AMPLIFIER AUDIO FREQUENCY			CBM 50029 QC-1 AMPLIFIER			CRY 50036 TBH-1 & 2 AMPLIFIER - AUDIO INPUT IMPEDANCE 250 OHMS; OUTPUT IM- PEDANCE 500 OHMS; 90 DB MAX. GAIN; MAX. OUTPUT 50 MILLIWATTS. PLUS OR MINUS 1 DB. 60-8000 C.P.S.		
3/14/34 NOV. 41			11/28/34 568D NOV. 41			12/4/35 OP-4 NOV. 41		T-600934
CRV 50024-A RAB-2a AMPLIFIER AUDIO FREQUENCY.			CBM 50030 NG-2 AMPLIFIER			CBM 50037 QC-4 RECEIVER AMPLIFIER		
1/10/35 NOV. 41			12/14/34 599 NOV. 41			12/10/35 599-E NOV. 41		
CRV 50024-B RAA-3 AMPLIFIER AUDIO FREQUENCY			CBM 50031 JK-2&QB-1 AMPLIFIER		55RE50F1093A	CBM 50038 NM-4 RECEIVER AMPLIFIER		
11/18/35 NOV. 41			12/14/34 598A NOV. 41			12/10/35 599-D NOV. 41		

**Class 50—Amplifier, Modulator and Coupler Units—Electronic
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3.50-3

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CBM 50039 AMPLIFIER	NH-5	55RE50F1095A	CBM 50046 AMPLIFIER - 18 KC FOR RATHBURNE.	NH 4a		CRR 50054 COUPLER UNIT MTC BASE WITH RUBBER SHOCK REDUCERS - FOR TYPE -50051 UNIT.		
2/26/36 574-G NOV. 41			12/28/36 599F NOV. 41			1/19/38 A-C55253-1 NOV. 41		A-C55253-1
CBM 50039-A AMPLIFIER - FOR CONVERSION OF DESD1V 19. QC-1a EQUIPMENTS FOR 18 KC OPERATION. SAME AS 50039 EXCEPT PHONE RELAY OMITTED.		55RE50F1096A	CRR 50047 AMPLIFIER ASSEMBLY FOR INTERPHONE SYSTEM.	CXT		CRV 50055 SPEECH AMPLIFIER FREQUENCY RANGE 300 TO 3000 KC.		
12/28/36 568 H NOV. 41			7/10/37 282 NOV. 41			3/25/38 NOV. 41		P-717164 REV 0
CBM 50040 REC-AMPLIFIER SIMILAR TO CBM-50039 EXCEPT FOR FRE- QUENCY (24 KCS) AND ADDITION OF PHONE SHUNTING RELAY. (REASSIGNED NAVY TYPE -46097).		QC-5 & QC-5a 55RE50F1095A	CBM 50048 BINAURAL AMPLIFIER FIRST USED IN OUTPUT OF ---41005 COMPENSATOR.	JL-5	55RE50J1100A	CG- 50056 POWER AMPLIFIER FREQUENCY RANGE: 4 TO 26 MC; OUTPUT: 50 TO 40 KW.		
2/23/36 568-F NOV. 41			11/22/37 742A NOV. 41			10/18/38 4A13A1 NOV. 41		
CBM 50041 REC - AMPLIFIER SIMILAR TO -50040 EXCEPT 18 KCS.		QC-5b	CRV 50049 LINE AMPLIFIER SAME AS 50009 EXCEPT WITHOUT BAND PASS FILTER.	NOS-57888		RA- 50057 LOOP COUPLING UNIT 15 KC TO 120 KC.		
2/23/36 568-G NOV. 41			12/20/37 NOV. 41			2/3/39 NOV. 41		
CBM 50042 AMPLIFIER - 17-1/2 KC ± 8%. (RECTIFIER UNIT 20050.)		NH-6, 6a, -7	CRR 50050 COUPLER UNIT 220 TO 8000 KC.	DU		RA- 50058 AMPLIFIER UNIT 1 KW OUTPUT; BUILT-IN RECTIFIER UNIT FOR OPERATION FROM 440 VOLT, 3 PHASE, 60 CYCLES.		
4/23/36 721 NOV. 41			1/19/38 L-70416-1 NOV. 41		L-70416-1	5/12/39 NOV. 41		
CW- 50043 AMPLIFIER UNIT 1F-AF RANGE: 200 - 1500 KC.		RAM	CRR 50051 COUPLER UNIT 220 TO 1500 KC.	DV		CRV 50059 GENERAL USE RE 13A 567A VACUUM TUBE KEYS UNITS; AMPLIFIER CONVERTER AC TO DIFFERENTIAL DC. SIGNAL FREQ 300 TO 10,000 CY. PER SECOND. MAX KEYING SPEED 500 WORDS PER MINUTE. INPUT 110 TO 120 VOLTS 50 TO 60 CY. AC. OUTPUT DC, 1 WATT, 1600 OHMS. TO PERFORM SAME FUNCTION AS -50009.		
4/24/36 NOV. 41			1/19/38 N-90161-1 NOV. 41		N-90161-1	6/27/39 NOV. 41		
CW- 50044 AMPLIFIER UNIT 1F-AF RANGE: 1500 - 13,575 KC.		RAM	CRR 50052 COUPLER UNIT 220 TO 1500 KC.	DW		CJF 50060 RECORDER PRE-AMPLIFIER FREQUENCY RANGE 0 TO 200 CYCLES. FOR OPERATION FROM 115 VOLTS, 60 CYCLES. INCLUDES VOLTAGE REGULATOR CIRCUITS. SAME AS 50109.		
4/24/36 NOV. 41			1/19/38 N-70416-2 NOV. 41		N-70416-2	7/25/39 OCT. 42	CYCLORAY AMPLIFIER	CJF:P-39579 SUB 0
CRR 50045 DIRECTION FINDER COUPLING UNIT. 220 TO 1500 KC.		DS	CRR 50053 COUPLER UNIT MTC BASE FOR USE WITH TYPE -50050 & 50052 UNITS.	DU & DW		CRR 50061 COUPLER UNIT FREQUENCY RANGE 200 TO 1500 KC.		
8/4/36 NOV. 41			1/19/38 A-A11827 NOV. 41		A-A11827	4/24/40 NOV. 41		L-71901 REV B
				ASSIGNED ISSUED			ASSIGNED ISSUED	
DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER

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3.50-4

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CRR 50062	DU-1 & DH-1		VOLTAGES.	CAY-50065-A 1		50068	* SEE BELOW	RA46F289A
COUPLER UNIT MOUNTING BASE						RECEIVER COUPLING UNIT - RAA/RAB. FREQUENCY RANGE: 150 TO 200 KC, 200 TO 4000 KC AND 4000 TO 30,000 KC ARRANGED FOR MOUNTING ON A VERTICAL SURFACE. USES ONE NAVY TYPE CW-47171 TRANSFORMER. * BB55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
4/24/40		A-27518 REV A				50069	* SEE BELOW	RE46F291A
NOV. 41						RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
CHE 50063	* SEE BELOW		CAY- 50065-B TBM SERIES (SHORE)			HORIZONTAL SURFACE.		
SINGLE PRESELECTOR FREQUENCY RANGE 550 TO 32000 KC IN 6 BANDS. INCLUDES INTERNAL RECTIFIER FOR OPERATION FROM 110 V. SINGLE PHASE, 60 CYCLES, MOUNTED IN A STEEL CABINET. * GENERAL USE (NOS-97767). 6/10/40 DB-20 CATALOG MAR. 42			MODULATOR UNIT: SUPPLY: 115V DC, 230V DC, 220/3/60 OR 440/3/60. SAME AS -50065-A EXCEPT THYRATE DISCS HAVE BEEN ADDED TO THE HIGH VOLTAGE MODULATION TRANSFORMER TO REDUCE NEGATIVE PEAK VOLTAGES. SIMILAR TO NAVY TYPE -50261 MODULATOR UNIT. 6/6/44 MAY 45			50069		
CRV 50064	* SEE BELOW		CAY 50066 TBM-6			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
SPEECH INPUT EQUIPMENT CONSISTING OF THE FOLLOWING ITEMS: ONE CRV-50055 SPEECH AMPLIFIER; ONE CRV-51011 CHEST MICROPHONE ASSEMBLY; TWO CRV-29017 RECEIVER INPUT ATTENUATORS; & TWO CRV-51008 HANDSET ASSEMBLIES. * TBL-2, TBL-3, TBL-4 & TBL-5. 6/18/40 NOV. 41			MODULATOR UNIT FOR OPERATION FROM 220 VOLTS, 3 PHASE, 25 CYCLES. 7/31/40 P-7706949 SUB 3 NOV. 41			50069		
CQE 50064-A	*SEE BELOW		CAY- 50066-A TBM SERIES			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
SPEECH INPUT EQUIPMENT CONSISTS OF (1) NAVY TYPE CRV-50055 SPEECH AMPLIFIER, (1) NAVY TYPE CRV-51008 HANDSET ASSEMBLY AND (2) NAVY TYPE CRV-29017 RECEIVER INPUT ATTENUATORS. SAME AS CRV-50064 EXCEPT FOR *FOR USE WITH TBL SERIES. 10/12/43 MAY 45			MODULATOR UNIT SUPPLY: 220/3/25. SAME AS -50066 EXCEPT FOR EMISSION SWITCH, WHICH HAS SAME ELECTRICAL RATING BUT REQUIRES A SLIGHTLY LARGER SHAFT HOLE AND MOUNTS BY 3 SCREWS INSTEAD OF ONE. 6/6/44 MAY 45			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
		CQE50064-A	CAY- 50066-B TBM SERIES (SHORE)			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
OMISSION OF THE NAVY TYPE CRV-51011 CHEST MICROPHONE ASSEMBLY AND ONE NAVY TYPE CRV-51008.			MODULATOR UNIT: SUPPLY: 220/3/25. SAME AS -50066-A EXCEPT EXTRA ROTARY SWITCH HAS BEEN ADDED TO CUT OUT A RELAY ON THE LAND LINE CONTROL UNIT. 6/6/44 NOV. 44			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
CAY 50065	TBM-4, 5 & 6		50067	* SEE BELOW	RA66F208B	RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
MODULATOR UNIT ADJUSTABLE FOR OPERATION FROM 115 VOLTS DC; 230 VOLTS DC; 220 VOLTS 3 PHASE, 60 CYCLES OR 440 VOLTS, 3 PHASE 60 CYCLES. 7/31/40 P-7706949 NOV. 41 SUB 3			ANTENNA COUPLING UNIT FREQUENCY RANGE: 150 TO 200 KC; 200 TO 4000 KC AND 4000 TO 30,000 KC; USES ONE NAVY TYPE CW-47171 TRANSFORMER. * BB55 & 56 ANT. SYSTEM 8/28/40 NOV. 41			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
CAY 50065-A	TBM-7, 8		50067-A	* SEE BELOW	RA66F208E	RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
MODULATOR UNIT ADJUSTABLE FOR OPERATION FROM 115 V DC, 230 V DC, 220/3/60 OR 440/3/60. SAME AS -50065 EXCEPT EMISSION SWITCH, WHICH HAS SAME ELECTRICAL RATING BUT REQUIRES A SLIGHTLY LARGER SHAFT HOLE & MOUNTS BY THREE SCREWS INSTEAD OF ONE. 10/2/41 P-7706949 SUB 3 DEC. 41			ANTENNA COUPLING UNIT FREQUENCY RANGE: 150 TO 200 KC; 200 TO 4000 KC; AND 4000 TO 30,000 KC. ARRANGED FOR MOUNTING ON A VERTICAL SURFACE. USES ONE NAVY TYPE CW-47171 TRANSFORMER. SAME AS BASIC NUMBER * BB55 & 56 ANT. SYSTEM. 6/30/41 NOV. 41			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
CAY- 50065-A1	*SEE BELOW		EXCEPT FOR DIFFERENT END	50067-A		RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		
MODULATOR UNIT: ADJUSTABLE FOR OPERATION FROM 115V DC, 230V DC, 220/3/60, OR 440/3/60. SAME AS -50065-A EXCEPT HAS ADDED THYRISTE DISCS TO HIGH VOLTAGE MODULATION TRANSFORMER TO REDUCE THE HIGH PEAK NEGATIVE *TBM-7 THROUGH 11 3/17/44 MAY 45			SEAL SPECIFICATION TO FACILITATE LINE INSTALLATION AND A NEW TYPE BOX LID CONSTRUCTION TO MINIMIZE GAS LEAKAGE. 11/28/40 4A13B2 P-7763143 REV 0 NOV. 41			RECEIVER COUPLING UNIT - RAK/RAL. FREQUENCY RANGE: 150 TO 200 KC 200 TO 4000 KC & 4000 TO 30,000 KC. USES ONE NAVY TYPE CW-47171 TRANSFORMER. ELECTRICALLY THE SAME AS NAVY TYPE -50068 EXCEPT ARRANGED FOR MOUNTING ON A * 88 55 & 56 ANT. SYSTEM. 8/28/40 NOV. 41		

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3.50-5

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RW-50075	GENERAL USE	RM46F265 REV 0	RW-50080-A	GEN. USE		RW-50086	* SEE BELOW	RW 52F 250A
MIXER & KEY CLICK ELIMINATOR. THREE CHANNEL MIXER WITH IMPULSE SUPPRESSOR CIRCUIT.			DIVERSITY MIXER: INCLUDES LIMITING DEVICES WHICH GREATLY INCREASE RANGE OF INPUT SIGNAL. INCLUDES ISOLATING METHODS WHICH PRACTICALLY ELIMINATE INTER-CHANNEL INTERFERENCE. INCLUDES IMPROVED IMPULSE SUPPRESSING AND SIGNAL EXPANDING METHODS WHICH GREAT-			TRANSMISSION LINE COUPLING		RW 50A 491
1/15/41 NOV. 41			3/28/45	APR. 45	RMS0F194D ALT D	KC. FOR COUPLING MODELS SERIES TAF AND TBK RADIO TRANSMITTING EQUIPMENT TRANS-		MISSION LINE TO ANTENNA.
						* TBK & TBK SERIES.		7/25/41 MAR. 43
RW-50076	RAC-1	RW 50F 475	ILY INCREASE FLEXIBILITY	RM-50080-A		CTF 50087	AYC	
BARRAGE UNIT FOR COUPLING LOOP AND ANTENNA TO RF AMPLIFIER.			AND RANGE OF CONTROL. PROVIDES FOR SUB- STITUTION OF db METERS FOR MILLIAMMETERS AND REARRANGEMENT OF FRONT PANEL AND WIRING CHANGES: USES ONLY ONE POWER SUP- PLY INSTEAD OF 2. HAS GREATER SENSITIVI- TY TO INPUT SIGNALS. SERVES SAME FUNC- TION AS TYPE -50080 BUT IS AN IMPROVED MODEL. MOUNTS ON 19 INCH RELAY RACK PANEL.			DUAL AUDIO AMPLIFIER PROVIDES AMPLIFICATION OF DUAL 500 CYCLE FIELD RADIATED BY GROUND SYSTEM.		
2/7/41 DEC. 41						10/6/41 DEC. 41		
RW-50076-A	RAC-1a		CG-50081	TCG		RW-50088	GENERAL USE	RW 50A 265A
BARRAGE UNIT FOR COUPLING LOOP AND ANTENNA TO RF AMPLIFIER. SAME AS BASIC NUMBER EXCEPT FREQUENCY RANGE EXTENDED TO COVER 16 TO 150 KC.			50 KW POWER AMPLIFIER FREQUENCY RANGE: 50 TO 150 KILOCYCLES; OUTPUT 50 KW CW(A1). OPERATES FROM 230 VOLTS, 3 PHASE, 60 CYCLES.			DIPLEX ANTENNA COUPLING UNIT; CONSISTS OF AN ADJUSTABLE INDUCTOR AND TWO NAVY TYPE CIM-481274 CAPACITORS.		
1/22/44 MAR. 44			3/31/41	NOV. 41	4A14A1 T-7966321 REV 0	7/31/41 MAR. 42		
RW 50077	RAC-1	RW 50F 476	RA-50082	XAQ		RW-50088-A	RW50F497A	RW 50F 497
RF AMPLIFIER FREQUENCY RANGE: 12 TO 80 KCS. INCLUDES DETECTOR.			MODULATOR UNIT PROVIDES MODULATION FOR TYPE RA-52200 RADIO TRANSMITTER AT 175 TO 225 KCS.			DIPLEX ANTENNA COUPLING UNIT; SAME AS -50088 EXCEPT FRAME AND COVER MADE OF STEEL INSTEAD OF ALUMINUM, AND CASE IS 1/2" LESS IN DEPTH.		
2/7/41 DEC. 41			4/21/41 NOV. 41			3/5/43 AUG. 43		
RW-50077-A	RAC-1a		CBY 50083	ATA		CG-50089	TCC-1	
RF AMPLIFIER FREQUENCY RANGE: 16 TO 80 KC. SAME AS BASIC NUMBER EXCEPT FOR FREQUENCY RANGE.			MODULATOR UNIT: USES NAVY TYPE CBY-21626 DYNAMOTOR. PLUG-IN FOR OPERATING FROM 28 (22 TO 30) VOLTS DC, 5.8 AMP FOR VOICE AND 7.8 AMP FOR CW. HAS RECEPTACLES FOR INTERCONNE- CTION WIRING TO TRANSMITTER REMOTE CON- TROL UNIT, AND TRANSMITTERS. USED IN			50 KW POWER AMPLIFIER FREQUENCY RANGE 50 TO 150 KCS. OUTPUT 50 KW. CW(A1). EQUIPMENT POWER SUPPLY 440 VOLTS, 3 PHASE, 25 CYCLES.		
1/22/44 MAR. 44			5/20/41 AUG. 43		CBY:5013-4-E CBY:7797-4-A	8/11/41	NOV. 41	NOV. 41
RW-50078	RAC-1	RW 50F 477	SCREEN MODULATION OF NAVY TYPES CBY- 52208 TO -52211 INCL. AND CBY-52232.			7661556	REV 0	
AF AMPLIFIER INCLUDES TONE FILTERS FOR 800 AND 1000 CYCLES.			6/27/41 NOV. 41			7661556	REV 0	
2/7/41 DEC. 41								
CNA 50079	RBE	RE 13A 594A	CBY 50084	ATA		CME 50090	RBE	
DIVERSITY COMBINING UNITS MOUNTS ON STANDARD RELAY RACK. OPERATES FROM 115 V, 58/62 CYCLES AC. COMBINES THE OUTPUT OF THREE RADIO RECEIVERS FOR DIVERSITY RECEPTION. AUDIO INPUT 1 V AT 600 OHMS.			MODULATOR UNIT MOUNTING BASE. PROVIDES ANTI-SHOCK MOUNTING FOR TYPE CBY-50083 MODULATOR.			PRESELECTION, SINGLE FREQUENCY RANGE 550 TO 32000 KC IN SIX BANDS. CONSISTS OF A TYPE DB-20 PRE- SELECTION MOUNTED ON 19" X 10-1/2" STEEL PANEL. OPERATES FROM 110 V 60 CYCLES SINGLE PHASE.		
3/6/41 MAR. 42			5/20/41 MAR. 42		7058-2-C	9/18/41	MAR. 42	10/21/41
RW-50080	GENERAL USE	RM 50F 191B	CN-50085	GENERAL USE	RA 50F 243A RA 50A 244A	CRM 50092	RAZ SERIES	
MIXER AND KEY-CLICK ELIMINATOR. THREE CHANNEL MIXER WITH IMPULSE SUPPRESSOR CIRCUIT. MOUNTS ON A STANDARD 19" RELAY RACK, USES BETTER COMPONENT PARTS, CHANGES IN WIRING, BUT OTHERWISE SIMILAR TO -50075.			COUPLER UNIT FOR COUPLING A SUBMARINE LOOP TO A RADIO RECEIVER. FREQUENCY 15 TO 35 KC.			PRESELECTION UNIT FREQUENCY RANGE 15 TO 600 KC IN FOUR BANDS. OBTAINS POWER FROM RECEIVER POWER UNIT.		
3/13/41 NOV. 41			6/27/41 NOV. 41			11/25/41	AR 8503 P	K-143 SUB 0
						DEC. 41		

CONFIDENTIAL

NAVSHIPS 900,109

**Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels**

3.50-7

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
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CFT 50107 YA-1
AUDIO AMPLIFIER:
FREQ. RANGE: 100 TO 4000 CPS. INPUT 100 TO 125 VOLTS/1/50 TO 60, 2.1 AMPS., 22 WATTS, INPUT IMPEDANCES 25 OR 600 OHMS. OUTPUT IMPEDANCE IS 600 OHMS. MAX. UNDISTORTED OUTPUT .06 WATTS. GAIN 40 TO 70 DB.
5/8/42 131A CFT:F-35770-2A
NOV. 43

CFT 50107-A YA-2
AUDIO AMPLIFIER
FREQ RANGE: 100 TO 4000 CPS. INPUT: 100 TO 125/1/50 TO 60, 2.1 AMPS., 24 WATTS. INPUT IMPEDANCE: 25 OR 600 OHMS. OUTPUT IMPEDANCE: 600 OHMS. MAXIMUM UNDISTORTED OUTPUT IS 0.06 WATTS. GAIN 40 TO 70DB. SAME AS BASIC NUMBER EXCEPT EMPLOYS 11/5/43 131B CFT:F-35770-2A
NOV. 43

CFT 50107-A
AMERICAN WAR STANDARD METERS AND MAY USE GLASS INSTEAD OF METAL TUBE.

CFT 50108 YA-1
CONSTANT OUTPUT AMPLIFIER:
FREQ. RANGE: 100 TO 4000 CPS. INPUT: 100 TO 125 VOLTS. 1/1/50 TO 60, 2.3 AMPS., 24 WATTS. INPUT AND OUTPUT IMPEDANCE IS 600 OHMS. MAX. UNDISTORTED OUTPUT 0.006 WATTS GAIN 5 TO 50 DB.
20 DB.
5/8/42 132A CFT:F-35771-2 A
NOV. 43

CFT 50108-A YA-2
CONSTANT OUTPUT AMPLIFIER
FREQ RANGE: 100 TO 4000 CPS. INPUT: 100 TO 125/1/50 TO 60, 2.3 AMPS 24 WATTS. INPUT AND OUTPUT IMPEDANCE IS 600 OHMS. MAXIMUM UNDISTORTED OUTPUT IS 0.006 WATTS. GAIN: 5 TO 50DB. SAME AS BASIC NUMBER EXCEPT EMPLOYS WAR STANDARD TYPE 11/5/43 132B CFT:F-35771-2A
NOV. 43

CFT 50108-A
METERS AND MAY USE GLASS INSTEAD OF METAL ENCLOSED TUBES.

CJF 50109 RAU-2
RECORDER-AMPLIFIER:
FREQ. RANGE: 0 TO 200 CYCLES. INCLUDES AN INTEGRAL RECTIFIER TO PERMIT OPERATION FROM A REGULATED SUPPLY OF 115 V (±1/2%) SINGLE PHASE, 60 CYCLES. SAME AS TYPE CJF-50060.
5/20/42 CJF:P-39579
OCT. 42 SUB 0

CCS 50110 PD
TRANSCRIBER-REPRODUCER
AMPLIFIER:
POWER INPUT: 115 AC/6.3 AC/6.3AC/260 DC VOLTS. 2.0/5.0/1.5/0.30 AMPS. POWER OUTPUT: 115/1/60, 2 AMPS. HAS 5 600 OHM 3-5000 OHM AND 1-50 OHM INPUT LINES HAS 2 AMPLIFIERS; ONE FOR TRANSCRIBING
5/22/42
MAR. 43

AND THE OTHER FOR REPRODUCING EACH INDEPENDENT OF THE OTHER BUT MOUNTED ON THE SAME CHASSIS. UNIFORM RESPONSE FROM 200 TO 3000 CYCLES. 25 DB VOLUME RANGE. HAS 8" BUILT IN DYNAMIC SPEAKER AND HEADPHONE JACK.
CCS50110

CCS 50110A PD-1
TRANSCRIBER-REPRODUCER
AMPLIFIER: INPUT 6.3AC/6.3AC/115AC/260 V DC. 1.5/5/2/3 AMPS. OUTPUT 115/1/60, 1.7 AMPS, 160 WATTS. HAS 5-600 OHM, 3-5000 AND ONE 50 OHM INPUT LINES. HAS 2 AMPLIFIERS. ONE FOR TRANSCRIBING AND THE OTHER FOR REPRODUCING EACH INDEPENDENT
1/6/42 6-569A 14.12
AUG. 43

50110A
OF THE OTHER BUT MOUNTED ON THE SAME CHASSIS, UNIFORM RESPONSE FROM 200 TO 3000 CY. 25 DB VOLUME RANGE. HAS 8" BUILT-IN DYNAMIC SPEAKER AND HEADPHONE JACK. SAME AS BASIC NAVY TYPE EXCEPT FOR CHANGE IN AVC CIRCUIT AND THE USE OF NAVY APPROVED COMPONENTS. WEIGHT 65 LBS.

CG 50111 TBC-4
POWER AMPLIFIER:
FREQUENCY RANGE 4 TO 26 MC. OUTPUT 50 TO 40 KW, AT. SIMILAR TO CG-50071 BUT WILL OPERATE ON 50 TO 60 CYCLES, 230 VOLTS, 3 PHASE.

5/28/42 4A1383 CG:P-7765906
AUG. 43 REV 0

CG-50111-A TBC-5
POWER AMPLIFIER:
FREQ RANGE: 4 TO 26 MC. OUTPUT 50 TO 40 KW, AT. SUPPLY: 230 VOLTS, 3Φ, 50 OR 60- SAME AS CG-50111 EXCEPT FOR SUBSTITUTION OF A U.S. GAUGE FLOW METER FOR THE G.E. TYPE FLOW METER.

5/21/43 CG:4A13C1 CG:P-7765906
AUG. 43 REV 0

CW 50112 *SEE BELOW
SENDING VOICE CHANNEL
TERMINAL PANEL: COILS PAD, VOLUME LIMITER AND JACKS; FOR A SINGLE VOICE CHANNEL. (USED IN S6, S7). FREQ RANGE 300 TO 3300 CPS.

*UAF REMOTE CONTROL CIRCUITS
5/29/42 X-63605P LIST 1 ES-712764
MAR. 43 FIG 1

CQA 50113 JN-1 RE 13A 647
AUDIO AMPLIFIER: INTERNAL
BATTERY SUPPLY ONE 6 V "A" BATTERY 4F4H AND 4 BURGESS INTERNAL BATTERY SUPPLY; ONE 6 V "A" BATTERY, BURGESS 4F4H AND 4 BURGESS NO. 5308 45 V BATTERIES. AMPLIFIER HAS GAIN OF 80 DB AND FREQ CHARACTERISTIC IS FLAT (±3 DB) FROM 500 TO 10,000 CY. HAS TWO
6/12/42
AUG. 42

CQA 50113
TELEPHONE JACKS FOR HEADPHONE OUTPUT IMPEDANCE. APPROX 600 OHMS FROM 900-1200 CY. INPUT LEVEL CONTROL CUTS IN A 20 DB PAD GAIN CONTROL. RANGE IS APPROX 60 DB IN STEPS NOT GREATER THAN 2 DB FOR ANY CONSTANT VALUE. INPUT IMPEDANCE 50, 125, 200, 250, 330, 500 OHMS. EQUIPPED WITH PROVISIONS FOR EXTERNAL 6 V BATTERY.

CBM 50114 QFB
PRE-AMPLIFIER:
USED FOR AMPLIFYING THE IMPULSE FROM THE PHOTO-CELL IN THE TYPE CBM-55086 PLAN INDICATOR TO THE CBM-50119 AMPLIFIER. INPUT: 115/1/60 AT 0.55 AMPS AND 30 WATTS. OUTPUT IMPEDANCE: 5000 OHMS.

6/21/42 905 CBM:5K-5386
OCT. 42 ALT 0

CBD 50115 JO RE 13A 647
AUDIO AMPLIFIER: FREQUENCY RANGE 500 TO 10,000 CYCLES WITHOUT FILTER OR 2000 TO 10,000 WITH FILTER. INPUT 115/1/60 AND 15 WATTS. PROVIDED WITH TERMINALS FOR CONNECTION TO BATTERIES.

6/22/42 C-41 CBD:13777
MAR. 43

CBD 50116 JN RE 13A 647A
AUDIO AMPLIFIER: FREQUENCY RANGE 500 TO 10,000 CPS. 3 STAGE, SINGLE CHANNEL, LOW INPUT IMPEDANCE TO MATCH NAVY TYPE CBD-51031 HYDROPHONE. INCLUDES TWO JACKS FOR 600 OHM MAGNETIC HEADPHONES AND 2 JACKS FOR HIGH IMPEDANCE CRYSTAL HEADPHONES. SUPPLY INTERNAL
7/2/42 C-39 *SEE PLATE 2
MAR. 43

CBD50116

BATTERIES.

*CBD:13778 DATED 7/17/42 & 13779 DATED 7/15/42

C1:50117 R3F-1
AUDIO AMPLIFIER AND LOW VOLTAGE RECTIFIER: INPUT 105-120/1/50-60 3.35 AMPS. AUDIO OUTPUT 2 W. RESPONSE 600 TO 12,000 CYCLES. SUPPLIES POWER FOR THE AF AMPLIFIER AND THE SWITCHING GEAR OF NAVY TYPE CIA-23318 SWITCHING AND HV RECTIFIER UNIT. HAS BUILT-IN LOUDSPEAKER
7/20/42
MAR. 43

50117

OUTPUT 6.3 VOLTS, 30 AMPS AC AND 150 VOLTS, .48 AMPS DC,

CG 50118 TBA-8
TRANSMISSION LINE COUPLING UNIT: FREQ RANGE 4 TO 26 MC. PROVIDES FOR SWITCHING THE TRANSMITTER OUTPUT TO A SINGLE WIRE ANTENNA OR TO A BALANCED 600 OHM TRANSMISSION LINE. INCLUDES NECESSARY TUNING ELEMENTS AND TRANSMISSION LINE CURRENT METERS.
8/6/42 4LC1A1 M-7468097 REV 0
AUG. 42

CBM 50119 QFA-1, QFB
AMPLIFIER: SIMILAR IN APPEARANCE TO, AND FRONT PANEL CONTROLS EXCEPT THE TUNING CONTROLS PERFORM THE SAME FUNCTION AS CBM-46061. INCLUDES CIRCUITS FOR MODULATING THE INCOMING SIGNAL WITH ALL THE NOISES DUE TO SHIP'S SPEED, SUBMARINE SPEED, PROJECTION BEAR-
8/24/42 CBM:755K CBM:60191
OCT. 42 ALT 0

DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER
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CONFIDENTIAL

NAVSHIPS 900,109

3.50-8

Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
INC, REVERBERATION, OOPPLE' EFFECT, AND SEMI-FIXED CONTROLS TO VARY NOISE AS DICTATED BY PROBLEM CONDITIONS. OPERATED FROM NAVY TYPE CBM-20062-A POWER SUPPLY. INPUT 30/270/270/270 V DC, AT .002/.003/.03/.04 AMPS AND 5.2/115 V AC AT 4/.1 AMPS. OUTPUT IMPEDANCE 600 OHMS.		CBH50119	THROUGH 1800 OHMS FOR DRIVING A BOEHM TYPE 4G RECORDER. TONE LEVEL 0 VU ACROSS 500 OHMS. INCLUDES BIAS VOLTAGE CONTROL TO BIAS OUT NOISE. SIMILAR TO CW-50103.		CW-50124	ADDITIONAL ELECTROLYTIC CAPACITOR IS PROVIDED TO SUPPRESS RF INTERFERENCE CREATED BY DYNAMOTOR (5) SPARE DYNAMOTOR BRUSHES ARE MOUNTED IN LID.		CHX50128-A
CRV 50120 RBP SIGNAL CONTROL PANEL: FOR COMBINING THE OUTPUT SIGNALS OF THE DIVERSITY RECEIVERS, THE RESULTANT OUTPUT BEING FED TO THE TONE KEYS TYPE CRV-35007 ON AUDIO AMPLIFIERS TYPE CRV 50098. INCLUDES 3 PLATE MILLIAMMETERS TO INDICATE OUTPUT OF UP TO 3 RECEIVERS. 11/11/42 CRV:M1-7566A CRV:T-620680 AUG. 43 SUB 3		50120	CG-50125 TCG-2 POWER AMPLIFIER: POWER OUTPUT: 50 KW. CW(A1). FREQ RANGE: 50 TO 150KC. OPERATES FROM 220/3/50 TO 60. SAME AS -50081 EXCEPT FOR OPERATING FREQUENCY.	1/7/43 CG:4A15A3 SEPT 43	CG:T-7661556 REV 6	COL 50129 TDH MODULATOR: INPUT: 230/3/60 AND ALSO DC SUPPLIES. INPUT IMPEDANCE IS 500 OHMS. AUDIO POWER OUTPUT IS 2000 WATTS AND FREQUENCY RESPONSE SHALL NOT VARY MORE THAN 3DB WITHIN RANGE OF 150 TO 3500 CYCLES. CONTAINS THE SPEECH AMPLIFIER, AUDIO DRIVER 1/20/43 COL:1025-4 COL:425E AUG. 43 REV 0		COL 50129
ONE MILLIAMMETER TO INDICATE COMBINED OUTPUT, AND OUTPUT METER CALIBRATED -20 TO +6db FOR ZERO LEVEL OF 1.9 VOLTS IN 600 OHM LINE. SAME AS CRV-50099 EXCEPT FOR ENGRAVING OF IDENTIFICATION LABELS.		50120	CG-50125-A TCG-3 POWER AMPLIFIER: POWER OUTPUT: 50 KW. A1 EMISSION. FREQ RANGE 50 TO 150KC. OPERATES FROM 220/3/50 TO 60. SAME AS BASIC NUMBER EXCEPT HAS U.S. GAUGE TYPE FLOW METER. OUTPUT CIRCUIT DESIGNED TO FEED 600 OHM TRANSMISSION LINE.	6/11/43 CG:4A15C1 SEPT 43	CG:T-7661556 REV 7	MODULATOR TUBES, & VENTILATING BLOWER.		COL 50129
CRV 50121 NMC DRIVER AMPLIFIER: FREQ RANGE 17 TO 27 KC. OUTPUT 200 WATTS AT 18 KC INTO 100 OHMS. INPUT 115/1/60 5 AMPS, 575 WATTS. EXCITATION RECEIVED FROM OSCILLATOR IN CRV-43033 RECEIVER-OSCILLATOR-INDICATOR-RECORDER. SAME AS CRV-50093 EXCEPT (1) SWITCH USED FOR 10/3/42 MI-16710 W-305824-3 MAR. 43 REV 1		50121	CW-50126 QBF DRIVER AMPLIFIER: FREQ CONTINUOUSLY VARIABLE FROM 100.5 TO 300.5KC. OUTPUT IS 150 WATTS APPROX. THE OUTPUT STAGE OF THE DRIVER IS AN AMPLIFIER USING 6 SMALL POWER PENTODES CONNECTED PUSH-PULL AND OPERATED CLASS B. INTERNAL PROVISIONS FOR 600 V PLATE 1/3/42 CW:D-163459 SEPT 43		CH:ESX-641266 ISSUE 1	CG-50130 NXs-6985 SYNCHRO AMPLIFIER: INPUT: STATOR EXCITATION FOR A SCT SYNCHRO TRANSFORMER AND 0.2 AMP 115 V 60 CY FROM STATOR BUS OF SYSTEM SUPPLYING STATOR EXCITATION: 2.5 AMP 115 V 60CY TO EXCITE THE FOLLOW-UP AMPLIFIER. THE 7G TRANSMITTING SYNCHRO AND THE PILOT 1/22/43 CG:DL-8026906 CG:P-8244723 AUG. 44 REV 2 REV 2		CG-50130
"BROAD" AND "SHARP" IS NOT CONNECTED. (2) SWITCHING OF "SHALLOW" AND "DEEP" PROJECTORS IS PERFORMED ON CRV-43033. AND (3) MATCHING CAPACITORS BETWEEN THIS UNIT AND PROJECTORS ARE OF DIFFERENT VALUES TO MATCH THE PROJECTORS AT 18 KC.		50121	SUPPLY & BIASING POTENTIALS.		CH-50126	LIGHT. OUTPUT: STATOR OF A 7G (SU05671) TRANSMITTING SYNCHRO. CONNECTED TO AN OVERLOADED SYNCHRO BUS. PROVIDES OUTPUT OF A 7G WHILE DRAWING ONLY 40MA FROM STATOR CIRCUIT AND 0.2 AMP FROM THE ROTOR CIRCUIT.		CG-50130
CNU 50122 AUDIO AMPLIFIER: INPUT: 115/1/60 AMPS, 50 WATTS. OUTPUT: 25 WATTS MAX. FREQ RANGE 50 TO 10,000-2100.		50122	CBM 50127 QFB-1 AMPLIFIER: SIMILAR TO TYPE -50119 EXCEPT THAT IT INCLUDES A NEW TYPE FREQUENCY SHIFTING RELAY AND TWO NEW ROTARY SWITCHES FOR TIMING.	1/13/43 CBM:755AK AUG. 43	CBM:60191 ALT 0	CH-50131 *SEE BELOW RE 13A 714A AMPLIFIER: MODIFIED Ø RECEIVES SIGNALS FROM 2-SCT SYNCHROS. AMPLIFIES THESE SIGNALS TO SUPPLY THE POWER FOR THE CONTROL PHASE SERVO MOTOR IN NAVY TYPE CH-211103 SYNCHRO-AMPLIFIER. DERIVES 115/1/60 VOLT POWER FOR TUBE *EN28/3483-43/SHIPS CH:CAL-25274 ALT 1 3/30/43 G/4RE2121603 MAY 45.		CH-50131
11/30/42 CNU:M15-A SEPT 43		50122	CHX 50128 NXs-20701 INTERPHONE AMPLIFIER: OPERATES FROM 12 V DC. THREE INPUT CHANNELS. ONE OUTPUT CHANNEL. INCLUDES NAVY TYPE -21400 DYNAMOTOR.	1/16/43 CHX:70005202 SEPT 43	CHX:0595260	OPERATION AND SYNCHRO INPUT FROM NAVY TYPE CH-211103 AND FEEDS AMPLIFIED SYNCHRO SIGNAL BACK TO THIS UNIT.		CH-50131
CDI 50123 NXs-15641 RE 13A 670A AUDIO AMPLIFIER: FREQ RANGE 70 TO 12,000 CPS ± 3DB FROM 1000 CYCLE RESPONSE. INPUT IMPEDANCE 200 OHMS. OUTPUT IMPEDANCES: 50 AND 80,000 OHM FOR HEADPHONE, 15.50 AND 500 OHM FOR SPEAKER. INPUT 200 V DC AT 180 MA 1.0 WATT. 12/4/42 CDI:214-K MAR. 44 ISSUE 2		50123	CH-50131-A GEN RADAR USE RE 9351A INTERPHONE AMPLIFIER: SUPPLY: 12 VOLTS DC; SAME AS 50128 EXCEPT (1) NO SHOCK MOUNTS PROVIDED FOR DYNAMOTOR (2) ALL FIXED RESISTORS ARE MOUNTED ON A RESISTOR BOARD (3) ALL RECEPTACLES ARE MOUNTED ON A REMOVABLE PLATE (4) AM NXs-49686 5/1/44 CHX:X700173 SEPT. 44		CHX:25274 ALT 1 4/6/44 CH:CAL-19125 ALT 0 *			CH-50131
CW-50124 *SEE BELOW DEMODULATOR: CONSISTS OF VACUUM TUBE AMPLIFIER AND RECTIFIER TYPE PANEL SUITABLE FOR FURNISHING 25MA POSITIVE AND NEGATIVE DC (HAS PROVISIONS FOR CHANGING THIS BIPOLAR TO A SINGLE POLARIZED OUTPUT) *UHF REMOTE CONTROL CIRCUIT NXs-19854 12/16/42 CW:63603T CW:ES-804568 SEPT 43 LIST 1 ISSUE 1		50124	CH-50131-A GEN RADAR USE RE 9351A INTERPHONE AMPLIFIER: SUPPLY: 12 VOLTS DC; SAME AS 50128 EXCEPT (1) NO SHOCK MOUNTS PROVIDED FOR DYNAMOTOR (2) ALL FIXED RESISTORS ARE MOUNTED ON A RESISTOR BOARD (3) ALL RECEPTACLES ARE MOUNTED ON A REMOVABLE PLATE (4) AM NXs-49686 5/1/44 CHX:X700173 SEPT. 44		CHX:25274 ALT 1 4/6/44 CH:CAL-19125 ALT 0 *			CH-50131

**Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels**

3.50-9

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
CH-50131-A			CH-50135-A	AN/FCC-18		CDI 50140	JP	
TUBE OPERATION AND SYNCHRO INPUT FROM NAVY TYPE CM-211103-A AND FEEDS AMPLIFIED SYNCHRO SIGNAL BACK TO THIS UNIT. SAME AS CM-50131 EXCEPT FOR CIRCUIT CHANGES.			FREQUENCY CONTROL UNIT: SAME AS NAVY TYPE CH-50135 EXCEPT INCLUDES A SWITCH TO CUT OUT THE WIDE BAND TUNING FEATURE OF THIS UNIT.			AUDIO AMPLIFIER: FREQ RANGE: 70 TO 12000 CPS ±3.0DB. INPUT: 12 VOLTS AT 1.05 AMPS DC AND 175 V AT 30 MADDC. OUTPUT: 1 WATT MAX.		
			1/15/45			4/23/43		
			APR. 45			SEPT 43		
CH-50132	NX88-20953*		CH-50136	NX88-20953*		CBY 50141	ATA-3	
CURRENT LIMITER UNIT: USED TO COMPENSATE FOR THE VARYING SIGNAL STRENGTH DUE TO FADING. THIS UNIT MAINTAINS A SUBSTANTIALLY CONSTANT OUTPUT OF -6DBM IF THE INPUT EXCEEDS -40DBM			RECEIVER CONTROL UNIT: MODULATES THE 50KC ± 425 CYCLE INPUT SIGNAL BY A 52550 CYCLE OSCILLATOR OUTPUT WHICH RESULTS IN 2550 ± 425 CYCLES BEING DELIVERED TO THE CURRENT LIMITER. THIS ESTABLISHES THE "MARKING" FREQ OF *AN/FCC-1A			MODULATOR UNIT: USES NAVY TYPE CBY-21026 DYNAMOTOR, PLUG-IN FOR OPERATING FROM 28 (22 TO 30) V DC. HAS RECEPTACLES FOR INTERCONNECTION WIRING TO THE TRANSMITTER REMOTE CONTROL UNIT AND TRANSMITTERS. INCLUDES MICROPHONE AND KEY CONNECTIONS. USED IN		
CM: X-61790J-1 ISS. 1, B-405440 ISS. 2			4/1/43	CM: X-61790-B-1 B-405450		4/29/43		
*AN/FCC-1A			MAR. 44	LIST 1	ISSUE 1	SEPT 43		
4/1/43	CM: X-61790J-1	SEE ABOVE						
MAR. 44	LIST 1							
CH-50133	AN/FCC-1A*		CH-50136			CBY 50141		
DETECTOR UNIT: CONSISTS OF A MARKING AND SPACING DETECTOR IN PARALLEL. A FILTER AT THE INPUT OF THE MARKING DETECTOR PASSES "MARKING" SIGNALS AND EXCLUDES ALL OTHER FREQUENCIES. A SIMILAR SPACING DETECTOR SELECTS "SPACING" FREQUENCIES. THESE SIGNALS ARE RECTIFIED AND AMPLIFIED TO A CARRIER CURRENT (DC PULSES) OF APPROX 15MA FOR EACH MARKER CHANNEL. MARK AND SPACE FREQUENCIES ARE 2125 AND 2975 CYCLES RESPECTIVELY.			2125 CY & THE "SPACING" FREQ AS 2975 CY. THIS UNIT ALSO KEEPS THE 2125 CY VERY CLOSE TO ITS NOMINAL VALUE BY THE BUILT-IN 400KC OSCILLATOR THE FREQ OF WHICH IS CONTROLLED BY CH-50135. HAS SWITCHES FOR CONTROLLING OPERATION OF RECEIVERS AND TONE KEYS. RECEIVES FILAMENT POWER FROM CH-23365, 130 V POWER FROM CH-20216.			PLATE PLUS SCREEN MODULATION OF NAVY TYPES CBY-52302 TO CBY-52209 INCLUSIVE.		
4/1/43	CM: X61790G-1	B-405443						
AUG. 44	LIST 1B	ISS. 2						
CH-50133			CH-50137	JQ		CKB 50142	*FOR USE WITH	
DETECTOR UNIT: CONSISTS OF A MARKING AND SPACING DETECTOR IN PARALLEL. A FILTER AT THE INPUT OF THE MARKING DETECTOR PASSES "MARKING" SIGNALS AND EXCLUDES ALL OTHER FREQUENCIES. A SIMILAR SPACING DETECTOR SELECTS "SPACING" FREQUENCIES. THESE SIGNALS ARE RECTIFIED AND AMPLIFIED TO A CARRIER CURRENT (DC PULSES) OF APPROX 15MA FOR EACH MARKER CHANNEL. MARK AND SPACE FREQUENCIES ARE 2125 AND 2975 CYCLES RESPECTIVELY.			AUDIO AMPLIFIER: FREQUENCY RANGE 500 CYCLES TO 20 KC IN TWO BANDS 500 CYC. TO 15 KC. 15 KC TO 20 KC. INPUT 6 VOLTS DC 2.6 AMPS. HAS METER FOR VISUAL INDICATION OF SUPersonic SIGNALS. FOR HEADPHONE OPERATION ONLY.			NOISE PEAK LIMITER: LIMITS PEAKS OF NOISE BY PROCESS OF WASSMANSDORFF-HALL NOISE LIMITING CIRCUIT. REPLACES SECOND DETECTOR OF RECEIVER.		
4/1/43	CM: X61790G-1	B-405443	4/6/43		CM: 26171	*RAS		
AUG. 44	LIST 1B	ISS. 2	MAR. 44		ALT B	5/1/43	#17	17-0A007-2
						SEPT 43		ALT 0
CH-50133-A	AN/FCC-18		50138	JP-1		CKB 50143	*	RE 9137
DETECTOR UNIT: SAME AS NAVY TYPE CH-50133 EXCEPT ADDITIONAL WIRING LEADS ARE BRIDGED ON THE OUTPUT SIDE OF EACH OF THE MARKING AND SPACING CHANNEL BAND-PASS FILTERS AND RUN TO TERMINAL PUNCHINGS AT TOP OF NAVY TYPE CH-83000-A FOR CONNECTION TO AN			AUDIO AMPLIFIER: INPUT: 110 (90 TO 130) V DC AT 0.35 AMPS WIDE BAND AMPLIFIER. OVERALL GAIN APPROX 106DB WITH APPROX 100 Mw OUTPUT. INPUT IMPEDANCE 50 OHMS AT 900 CYCLES. OUTPUT IMPEDANCE 300 OHMS FOR LOUDSPEAKER AND/OR HEADPHONES AND APPROX 8000 OHMS FOR			NOISE PEAK LIMITER: LIMITS PEAKS OF NOISE BY PROCESS OF WASSMANSDORFF-HALL NOISE LIMITING CIRCUIT USED BETWEEN SECOND DETECTOR AND FIRST AUDIO.		
1/15/45	CM: X-61790W-L1		4/3/43	CDI: 50138	CDI: 216-0	*FOR USE WITH RCF SERIES		
APR. 45			SEPT 43			5/1/43		CKB: 31-004134-2
						AUG. 44		
CH-50133-A			CDI 50138			RW-50144	*SEE BELOW	RW 50F 498
OSCILLOSCOPE.			HIGH IMPEDANCE HEADPHONES. WEIGHT 55 POUNDS.			TRANSMISSION LINE COUPLING UNIT: FREQ RANGE: 2000 TO 18100KC. FOR COUPLING TRANSMISSION LINES TO ANTENNA. SIMILAR TO RW-50086 EXCEPT FOR SUBSTITUTION OF STEEL FOR ALUMINUM AND MINOR MECHANICAL CHANGES.		
						*T8K, TAF, T6A SERIES		
						5/10/43		SEPT 43
CMX 50134	NX88-20701		CG-50139	TCK-4		RW-50145	GEN USE	RW 50F 497
INTERPHONE AMPLIFIER: OPERATES FROM 24 V DC. THREE INPUT CHANNELS, ONE OUTPUT CHANNEL. INCLUDES NAVY TYPE CBY-21531 DYNAMOTOR. MECHANICALLY SAME SIZE AS 50128.			TRANSMISSION LINE COUPLING UNIT: FREQ RANGE: 2 TO 18.10MC. USED TO COUPLE TRANSMITTER TO EITHER AN ANTENNA OR A BALANCED TRANSMISSION LINE WITHIN THE FOLLOWING RANGES: FOR RESISTANCE RANGE 26 TO 50 OHMS ±400 OHMS REACTANCE; FOR RESISTANCE RANGE 50 TO 100			DIPLEX ANTENNA COUPLING UNIT: CONSISTS OF AN ADJUSTABLE INDUCTOR AND TWO NAVY TYPE CM-481274 CAPACITORS. SIMILAR TO RW-50088 EXCEPT FOR SUBSTITUTION OF STEEL FOR ALUMINUM & BRASS AND MINOR MECHANICAL CHANGES.		
2/18/43			4/15/43	CG: 4HY63A1	CG: T-7602914	5/10/43		
AUG. 44			SEPT 43		REV 0	SEPT 43		
CH-50135	NX88-20953*		CG-50139			CG-50146	TCC-35782	
FREQ CONTROL UNIT: USED TO MAINTAIN THE "MARKING" AUDIO FREQUENCY CLOSE TO 2125 CYCLES.			OHMS, ±800 OHMS REACTANCE; FOR RESISTANCE RANGE 100 TO 500 OHMS, ±1000 OHMS REACTANCE; FOR RESISTANCE RANGE 500 TO 3500 OHMS, ±2000 OHMS REACTANCE.			AUDIO AMPLIFIER: CONSISTS OF TWO IDENTICAL AUDIO AMPLIFIERS IN A CASE. CONTROLS ON FRONT PANEL ARE: FOUR TOGGLE SWITCHES, TWO GAIN CONTROLS-ONE FOR EACH AMPLIFIER, ONE GAIN CONTROL COMMON TO EACH AMPLIFIER, ONE PUSH BUTTON SWITCH, TWO INPUT		
*AN/FCC-1A						5/12/43	CG: DL4H294A	CG: SK-714329-
4/1/43	CM: X-61790E-1	B-405444				SEPT 43		100 REV 0
MAR. 44	LIST 1	ISSUE 2						
			ASSIGNED			ASSIGNED		
DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER

CONFIDENTIAL

NAVSHIPS 900,109

Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
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CDI 50179 JP-2 RQ50F126A
AUDIO AMPLIFIER
INPUT 110 (90 TO 130) VOLTS DC. AT 0.35 AMPS. WIDE BAND AMPLIFIER. OVERALL GAIN APPROX. 106db WITH APPROX 100 MW OUTPUT. INPUT IMPEDANCE 50 OHMS AT 900 CYCLES. OUTPUT IMPEDANCE 300 OHMS FOR LOUDSPEAKER AND/OR HEADPHONES AND APPROX 8000 OHMS
3/21/44
DEC 44

RQ 50179
FOR HIGH IMPEDANCE PHONES. THIS IS A MODIFIED CDI-50140. IS ELECTRICALLY INTERCHANGEABLE WITH -50133, IS OF IMPROVED DESIGN. MECHANICALLY INTERCHANGEABLE EXCEPT FOR J-105 RECEPTACLE.

CANV- 50180 QJB
TRAINING CONTROL AMPLIFIER:
CONSISTS OF VOLTAGE REGULATING TRANSTAT WHICH SUPPLIES 115 VOLTS TO TWO INDEPENDANT VACUUM TUBE RECTIFIER EACH OF WHICH IS CAPABLE OF FURNISHING 350V DC AT 200 MA. A VACUUM TUBE VOLTAGE REGULATOR CIRCUIT TO REGULATE THE NEGATIVE
4/21/44 (CW)D-168460 (CW)ESX-658976
JULY 44 ISSUE 7

CANV -50180
120V DC SUPPLY AND AN AC OPERATED SINGLE STAGE PUSH-PULL AMPLIFIER USED TO CONTROL AN EXTERNAL TRAINING MOTOR. ALL MOUNTED ON A METAL CHASSIS HAVING A FRONT PANEL. A PART OF THE -23430 CONTROL CONSOLE.

CW- 50181 QJB
DRIVER AMPLIFIER:
CONSISTS OF A SINGLE STAGE. PARALLEL PUSH-PULL CLASS B AMPLIFIER AND ITS ASSOCIATED POWER SUPPLIES ALL MOUNTED ON A METAL CHASSIS HAVING A FRONT PANEL AND PROVIDED WITH A PLUG FOR REAR CONNECTION A PART OF THE -23430 CONTROL CONSOLE.
4/21/44 D-168462 ESX-658976
JULY 44 ISSUE 7

CW- 50182 PL
VOICE FREQUENCY AMPLIFIER:
TWO STAGE AMPLIFIER WITH TWIN OUTPUTS. MAX. GAIN ABOUT 40 DB. FOR USE ON 600 OHM BALANCED INPUT AND OUTPUT.
4/24/44
JULY 44

CW- 50183 PL
CHANNEL MODULATOR:
INCLUDES INPUT CIRCUIT. LEVEL INDICATOR. DUAL MODULATOR CIRCUIT. CRYSTAL FILTER. HIGH FREQUENCY AMPLIFIER DEMODULATOR CIRCUIT. AND OUTPUT CIRCUIT. USED TO SHIFT VOICE CHANNEL FROM ONE POSITION IN AUDIO RANGE TO ANOTHER BY MODULATING
4/24/44
JULY 44

CW- 50183
VOICE FREQUENCIES WITH IN CARRIER FREQUENCIES. SELECTING THE DESIRED SIDE BAND BY MEANS OF A 3 KC CHANNEL BANDPASS FILTER. AMPLIFYING THESE SIGNALS AND DEMODULATING TO THE AUDIO RANGE AGAIN.

CW- 50184 REA
H.F. AMPLIFIER & DETECTOR:
CONTAINS 2 HF AMPLIFIERS AND 2 FIRST DEMODULATORS. ONE HF AMPLIFIER COVERS 4 TO 10 MC RANGE AND THE OTHER COVERS 10 TO 22 MC RANGE. CONTROLS ARE PROVIDED FROM ONE RANGE TO THE OTHER. TUNING CONDENSORS FOR INPUT AND OUTPUT CIRCUIT OF
4/24/44 D-169178
FEB. 45

CW- 50184
HF AMPLIFIERS ARE GANGED WITH A PANEL CONTROLLED FINE ADJUSTMENT CONDENSOR IN THE INPUT CIRCUIT.

CW- 50185 REA
I.F. AMPLIFIER & DETECTOR:
CONTAINS INTERMEDIATE FREQUENCY BAND FILTER. FIRST INTERMEDIATE FREQUENCY AMPLIFIER STAGE AND THE BALANCED SECOND DEMODULATOR. ELEMENTS ARE ARRANGED FOR OPERATION AT APPROXIMATELY 3 MC.
4/24/44 D-169187
FEB. 45

CW- 50186 REA
CHANNEL AMPLIFIER:
TWO ARE PROVIDED: ONE FOR CHANNEL A AND ONE FOR CHANNEL B. EACH CONTAINS A 3 STAGE AMPLIFIER, A BALANCED THIRD DETECTOR AND A VOICE FREQUENCY AMPLIFIER.
4/24/44 D-169181
FEB. 45

CW- 50187 REA
CHANNEL "B" AMPLIFIER:
CANCELLED 1/16/45
4/24/44
FEB. 45

CW- 50188 REA
CARRIER AMPLIFIER:
CONTAINS 3 CARRIER BRANCH AMPLIFIER STAGES. THE AUTOMATIC VOLUME CONTROL RECTIFIER AND A RECONDITIONED CARRIER AMPLIFIER STAGE.
4/24/44 D-169183
FEB. 45

CHS- 50189 UK
ENTRANCE BOX UNIT:
CHASSIS HAS 4 SHIELDED COMPARTMENTS WITH SHIELDED ENCLOSURE. PROVIDES ENTRANCE TERMINAL & DISTRIBUTION FACILITY TO LORAN TUNER SHIELDED ROOMS. CONTAINS SINGLE STAGE WIDE BAND UNTUNED ATTENUATOR AMPLIFIER, WHICH RECEIVES EXCITATION FROM TERMINATED 50 OHMS COAXIAL TRANSMISSION LINE ISOLATED FEEDS PROVIDED FOR 4 LOW GAIN RECEIVERS INPUTS FROM 1 EXTERNAL SUPPLYING SOURCE. MAIN POWER SWITCH PROVIDED ON THIS UNIT FOR MODEL UK EQUIPMENT. REQUIRES 115V, 60 CYCLES AT 3 V.A.; PLUS 200 VOLTS AT 10 M.A.

CHS 50189
TUNER FROM TERMINATED 50 OHMS COAXIAL TRANSMISSION LINE ISOLATED FEEDS PROVIDED FOR 4 LOW GAIN RECEIVERS INPUTS FROM 1 EXTERNAL SUPPLYING SOURCE. MAIN POWER SWITCH PROVIDED ON THIS UNIT FOR MODEL UK EQUIPMENT. REQUIRES 115V, 60 CYCLES AT 3 V.A.; PLUS 200 VOLTS AT 10 M.A.

CHS- 50190 UK
DISCRIMINATOR UNIT:
CONTAINED IN CHASSIS WITH CLAMP-ON SHIELD COVER. CONTAINS ATTENUATOR AMPLIFIER WITH BIAS CONTROL DRIVER & LOW IMPEDANCE CATHODE FOLLOWER OUTPUT. FOUR TERMINATED COAXIAL INPUTS PROVIDED TO SUPPLY POSITIVE ATTENUATING PULSES TO DRIVE AMPLIFIER TUBES BEYOND CUT-OFF. KEEPS TRANSMITTER FROM BLOCKING RECEIVER. FOUR OUTPUTS PROVIDED FROM CATHODE FOLLOWER WITH OFF-ON SWITCH IN EACH CIRCUIT. REQUIRES 115 VOLTS 60 CYCLES AT 50 V.A.
5/27/44 CDU:C-2A CDU:DD-3297-C-1
FEB. 45

CHS- 50190
EXCITER DRIVER UNIT:
AMPLIFIES AND SHAPES OUTPUT CONTROL PULSE FROM NAVY TYPE CWV-25440 CENTRAL UNIT. CONTAINS FILAMENT TRANSFORMER TYPE 2050 VACUUM TUBE, PULSE OUTPUT TRANSFORMER & NET WORK OF RESISTORS & CAPACITORS.
6/3/44 CDU:DD-5000-B
FEB. 45

CAON- 50191 UJ
EXCITER DRIVER UNIT:
AMPLIFIES AND SHAPES OUTPUT CONTROL PULSE FROM NAVY TYPE CWV-25440 CENTRAL UNIT. CONTAINS FILAMENT TRANSFORMER TYPE 2050 VACUUM TUBE, PULSE OUTPUT TRANSFORMER & NET WORK OF RESISTORS & CAPACITORS.
6/3/44 CDU:DD-5000-B
FEB. 45

RA- 50192 FOR USE WITH XCE RE 13A 892A R.F. SWEEP CONTROL UNIT
AUTOMATICALLY SWEEP RF FREQUENCY AT AN AUDIO RATE. USED TO VARY THE CARRIER FREQUENCY AT A RANDOM RATE. WIDTH OF SWEEP PLUS OR MINUS 0 TO 1500 CYCLES. OPERATES FROM 110/1/60 HAVING AN INTEGRAL RECTIFIER POWER SUPPLY. APPROX
6/21/44 RA-X50192
MAR. 45

RA- 50192
100 WATTS. FOR USE WITH TBK-5 UP. TB3-3 UP. TCK. TDE OR OTHER M.O. XNITERS.

CRV- 50193 ASEE BELOW
MODULATOR UNIT:
CLASS "B" MODULATOR. OUTPUT OF 250 WATTS FOR PLATE MODULATING TO 100% TBK SERIES WHEN OPERATED AT 1/2 POWER. PUSH PULL. DRIVEN BY -50055 SPEECH AMPLIFIER. INPUT 1500 VOLTS AT 300 MA AND 115/1/60.
*FOR USE WITH TBK SERIES.
7/3/44 HI-8855 T-617659
SEPT. 44 SUB 0

CRV- 50194 ASEE BELOW RE94688
MODULATOR ASSEMBLY:
CONSISTS OF ONE -50193 MODULATOR UNIT. ONE -51008-A HAND TELEPHONE ASSEMBLY. ONE -50055 SPEECH AMPLIFIER.
*FOR USE WITH TBK SERIES
7/3/44 HI-8855 CRV:T-617656
SEPT. 44 REV 0

CRV- 50195 WCA CONVERSION
CONVERTER-AMPLIFIER:
CONVERTS ANY 5 KC BAND WIDTH IN THE RANGE OF 8 KC TO 60 KC TO THE AUDIO BAND OF 0 TO 5000 KC. CONVERSION IS ACCOMPLISHED BY A DOUBLE HETERODYNE MIXING CIRCUIT. DIAL CALIBRATIONS MARK FREQUENCIES WHICH WILL GIVE ZERO BEAT. SUPPLY:
8/5/44
SEPT. 44

DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER
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3.50-14

Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
CM- 50208			RW- 50212	FSC		CW- 50217	UM	
MOTOR. USED IN TYPE -50202 AND -50203 DG SYNCHRO AMPLIFIERS.			MIXER UNIT:			MODULATOR		
						FREQ. RANGE: 425 TO 4675 CPS. CONSISTS OF VACUUM TUBE TYPE PANEL SUITABLE FOR KEYING A TONE SIGNAL OF 0 DBM BY MEANS OF AN ELECTRONIC RELAY. SIMILAR TO -50102 EXCEPT HAS PROVISIONS FOR TONE POLAR & CONTACT KEYING. POLAR KEYING		
			11/25/44		RW 60F505	1/5/45		
			DEC. 44			JAN. 45		
CG- 50208-A * SEE BELOW RE9597			CHG- 50212-A	FRC-1				
SERVO AMPLIFIER			MIXER UNIT:			RANGE FROM	CW-50217	
SUPPLY: 115/1/60 AT 0.6 AMPS AND CT ROTOR SYNCHRO SIGNALS AT 1-36 SPEED FROM THE SYNCHROS IN THE OSC & DTC SYSTEM. AMPLIFIES & SHIFTS PHASE OF THESE SIGNALS AND FEEDS ONE PHASE OF A 2 PHASE *FOR GENERAL RADAR USE			CONTAINS TWO IDENTICAL DEMODULATORS WHICH SEPARATE THE MARK AND SPACE TONES AND COMBINE THE RECEIVER OUTPUTS. OUTPUTS ARE FED INTO TYPE CHG-53215-A FILTER UNIT. SAME AS -50212 EXCEPT FOR COMPONENTS.			17 TO 100V DC. TONE KEYING RANGE IS -20 TO 0 DBM.		
11/14/44 DL-8236505G1			5/17/45					
DEC. 44			JUN. 45					
50208-A			GCM- 50213	X-OCF				
SERVO MOTOR. USED IN TYPE -50202-A AND -50203-A DG SYNCHRO AMPLIFIERS. SAME AS -50208 EXCEPT FOR COMPONENTS.			OSCILLATOR-AMPLIFIER UNIT:			CW- 50218	TEF	
			INPUT: 115/1/60. FREQ. RANGE 7 TO 70 KC. INCLUDES DB METER, LOUDSPEAKER AND SELECTOR SWITCH WITH 5 POSITIONS 2 SEND, 2 RECEIVE AND 1 BEAT. RESISTIVE COMPONENT OF OUTPUT OR INPUT IMPEDANCE IS 60 OHMS. POWER OUTPUT ON "SEND" POSITION IS			MODULATOR (1A)		
			12/1/44			CONTAINS A BALANCED MODULATOR WHICH TRANSLATES AUDIO FREQUENCIES 125KC TO A BAND OF 125.1 TO 131 KC. SAME AS NAVY TYPE -50248 EXCEPT FOR ONE TRANSFORMER WHICH ENABLES OPERATION ON 119 TO 124.9 KC.		
			DEC. 44			1/17/45		
						MAR. 45		
CBM- 50209	WFA		GCH- 50213					
TRANSFER RELAY & BDI			APPROX. 1.0 WATTS.			CW- 50219	TEF	
AMPLIFIER: CONSISTS OF TWO AMPLIFIER DETECTORS (PALS) A TRANSFER RELAY RACK AND THREE POWER SUPPLY UNITS. EACH PAL CONSISTS OF TWO CHANNELS TO BE CONNECTED TO OUTPUT OF A SPLIT HYDROPHONE. OUTPUT OF CHANNELS IS FED INTO A BDI. TRANS-						DOUBLE SIDEBAND INPUT PANEL		
11/8/44 1014		SK-6213 ALT 2				CONTAINS AN AUDIO AMPLIFYING STAGE, A 125 KC OSCILLATOR, A MODULATOR WITH A 125 KC CARRIER OUTPUT A CARRIER FREQUENCY MODULATOR DEVICE, AND A SWITCHING CIRCUIT FOR SELECTION OF SINGLE OR DOUBLE SIDEBAND OPERATION.		
DEC. 44						1/17/45		
						MAR. 45		
CBM- 50209			CAOR-50214	080	RE13A854	CW- 50220	TEF	
FER RELAY RACK IS DESIGNED FOR SWITCHING AND TRANSFERRING TOP AND BOTTOMSIDE PROJECTORS AND RECEIVER AMPLIFIERS AND DRIVERS FROM TRANSMIT TO RECEIVE AND VICE VERSA. ALSO FUNCTIONS AS CONTROL TRANSFER FROM FORWARD TOPELDO ROOM TO CONNING TOWER.			DC AMPLIFIER			MULTI-CIRCUIT LOW FREQUENCY		
			DC LOW FREQUENCY, RESISTANT-COUPLED. INCLUDES CONVERTER AND INTEGRATING CIRCUIT. SUPPLY: 110/1/60.			PANEL: CONTAINS A CRYSTAL CONTROLLED 625 KC OSCILLATOR, A 125 KC MULTIVIBRATOR AND AMPLIFIER, A 125 KC CARRIER REINSERTION AMPLIFIER, A MODULATOR WITH A 2625 KC OUTPUT, A 2500 KC HARMONIC GENERATOR, AND A BALANCED SECOND MODU-		
			12/19/44			1/17/45		
			JAN. 45			MAR. 45		
-50210	GEN. RADIO USE		CTF- 50215	PQ	16R6(RE)			
AUDIO AMPLIFIER:			AMPLIFIER			LATOR TRANSLATING THE CARRIER FREQUENCY	CW-50220	
FREQ. RESPONSE 250-4000 CPS. 2 WATTS OUTPUT 5% HARMONIC DISTORTION AT 400 CPS. SUPPLY: 115/1/60. 5 CHANNEL AUDIO INPUT. DRIPPROOF ENCLOSURE. DESIGNED FOR BULKHEAD MOUNTING. SHOCK PROOF. INPUT IMPEDANCE IS 600 OHMS. OUTPUT IMPED-			SUPPLY: 115/1/60. AMPLIFIES THE OUTPUT VOLTAGE BETWEEN 10 VOLTS AND 150 VOLTS OF MODELS RDC, RDG OR RDM PANORAMIC SEARCH RECEIVERS. OUTPUT VOLTAGES RANGE BETWEEN 30 AND 450 VOLTS.			FROM 125 KC TO 2625 KC.		
11/10/44			12/20/44					
DEC. 44			JAN. 45					
-50210			CDU- 50216	UJ		CW- 50221	TEF	
ANCE IS 600 OHMS FOR LINE AND 15 OHMS FOR VOICE COIL.			AUXILIARY DISCRIMINATOR			AMPLIFIER 2		
			UNIT: RECEIVES SIGNALS FROM TYPE -50190 DISCRIMINATOR UNIT AND ATTENUATES THEM BEFORE FEEDING THEM TO THE REMOTE ANTENNA INPUT TERMINAL OF THE TYPE -46249 RECEIVER, ON THE REAR OF WHICH UNIT IT IS MOUNTED. RECEIVES FILAMENT & PLATE			CONTAINS A SINGLE TUBE RADIO FREQUENCY AMPLIFIER WITH SIX PRETUNED PLATE CIRCUITS.		
			1/4/45		DD-5181-C-2	1/17/45		
			JAN. 45			MAR. 45		
CS- 50211	DBE	RE 13A 944				CW- 50222	TEF	
SWEEP & AMPLIFIER UNIT:						AMPLIFIER 3		
INCLUDES VIDEO AMPLIFIER AND PROVIDES SWEEP VOLTAGES AND OTHER DEFLECTION VOLTAGES FOR CATHODE RAY TUBE. PART OF TYPE -46265 LORAN RECEIVER-INDICATOR. CANCELLED						CONTAINS RADIO FREQUENCY AMPLIFIER WITH TWO PENTODES IN PUSH-PULL WITH VARIABLE INDUCTANCE TUNING. PLATE TERMINALS ARE IN TYPE CW-50223 AMPLIFIER 4.		
11/22/44 651013						1/17/45		
MAY 45						MAR. 45		

**Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels**

3.50-15

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
CW-50223 TEF AMPLIFIER 4 CONTAINS A RADIO FREQUENCY AMPLIFIER WITH 2 PENTODES IN PUSH-PULL WITH VARIABLE INDUCTANCE TUNING. HAS PROVISIONS FOR THE PLATE TERMINALS OF TYPE CW-50222 AMPLIFIER 3 AND THE GRID TERMINALS OF TYPE CW-50224 AMPLIFIER 5. 1/17/45 MAR. 45			CW-50227 UP TELEGRAPH ORDER WIRE PANEL CONSISTS OF STEEL PANEL EQUIPPED WITH FILTER, COILS, CAPACITORS, RESISTORS & A POLAR RELAY. PROVIDES FOR TELEGRAPH ORDER WIRE FACILITIES OVER A SINGLE TONE CHANNEL OF THE SYSTEM USING A FREQ. OF 2465. POWER REQUIRED IS +130 VOLT 1/18/45 H-327-205 H-327-205 MAR. 45 FIG E U ISS 1			CW-50231 UP MARK CHANNEL TERMINAL (CHANNEL 2-765 CYCLES): SAME AS TYPE CW-50229 EXCEPT IS OPERATES ON A FREQUENCY OF 765 CYCLES. OMOD. BY H-327-100, LIST 3 1/18/45 J700478-1 LISIS J700478-1 MAR. 45 1.2.7,22 & C Θ ISS 14		
CW-50224 TEF AMPLIFIER 5 CONTAINS THE RADIO FREQUENCY OUTPUT AMPLIFIER WITH 2 TRIODES IN PUSH-PULL WITH VARIABLE INDUCTANCE TUNING. GRID TERMINALS ARE IN TYPE CW-50023 AMPLIFIER 4 1/17/45 MAR. 45			CW-50228 UP BASE FREQUENCY AMPLIFIER USES 2 POWER PENTODE TUBES CONNECTED IN PUSH-PULL. USED TO RAISE ENERGY LEVEL OF TYPE CW-35068 BASE FREQUENCY OSCILLATOR TO PROTECT IT AGAINST CHANGES IN LOAD IMPEDANCE. POWER REQUIRED: 24V DC FOR FILAMENT AND 130V DC FOR PLATE. MOUNTED 1/18/45 J70036H-1 J70036H-1 MAR. 45 LIST 1 OR, ISS 4	CW-50227 TELEGRAPH BATTERY.		CW-50232 UP SPACE CHANNEL TERMINAL (CHANNEL 2-935 CYCLES): SAME AS TYPE CW-50230 EXCEPT IT OPERATES ON A FREQUENCY OF 935 CYCLES. OMOD. BY H-327-100, LIST 4 1/18/45 J700478-1, LISTS J700478-1 MAR. 45 1.8,22 & C Θ ISS 14		
CW-50225 UP AUDIO FREQUENCY AMPLIFIER SINGLE STAGE AMPLIFIER USING A PENTODE VACUUM TUBE WITH MAX. GAIN OF 35 db SUBSTANTIALLY FLAT OVER VOICE FREQ. RANGE. INPUT & OUTPUT IMPEDANCES 600 OHMS. EQUIPPED WITH TEST & MONITORING JACKS. MOUNTED ON A STEEL PANEL. OPERATED FROM 1/18/45 J68635E-1 MAR. 45 LIST 1 & MB			CW-50228 UP ON STEEL PANEL. SAME AS TYPE -50100 EXCEPT FOR FILAMENT POWER REQUIREMENTS.			CW-50233 UP CURRENT LIMITER UNIT IS ARRANGED TO DELIVER A NEARLY CONSTANT OUTPUT WITH WIDE VARIATIONS OF INPUT. TWO VACUUM TUBES USED: ONE USED AS LIMITER AND ONE AS AMPLIFIER. POWER REQUIRED: 24V DC FOR FILAMENT AND 130V DC FOR PLATE. MOUNTED ON A STEEL PANEL. 1/18/45 H-327-120 J700473-1 MAR. 45 LIST 1 ISS 14		
		CW50225 TYPE CW-20366 POWER SUPPLY UNIT.				CW-50234 UP MARK CHANNEL TERMINAL (CHANNEL 3-1105 CYCLES): SAME AS TYPE CW-50229 EXCEPT IT OPERATES ON A FREQUENCY OF 1105 CYCLES. OMOD. BY H-327-100, LIST 3 1/19/45 J700478-1 LISTS J700478-1 MAR. 45 1.2,9,22 & C Θ ISS 14		
CW-50225-A UP AUDIO FREQUENCY AMPLIFIER SINGLE STAGE AMPLIFIER USING A PENTODE VACUUM TUBE WITH MAX. GAIN OF 35 db SUBSTANTIALLY FLAT OVER VOICE FREQ. RANGE. INPUT & OUTPUT IMPEDANCES 600 OHMS. EQUIPPED WITH TEST & MONITORING JACKS. MOUNTED ON STEEL PANEL. OPERATES 1/18/45 J68635E-1 MAR. 45 LISTS 1 & MA			CW-50229 UP MARK CHANNEL TERMINAL (CHANNEL 1-425 CYCLES): MARKING, SENDING & RECEIVING CHANNEL TERMINAL FOR CHANNEL 1-425 CYCLES. CONSISTS OF A MODULATING CIRCUIT IN THE SENDING END AND A TWO STAGE A-C AMPLIFIER IN RECEIVING END. OMOD. BY H-327-103 LIST 3 1/18/45 J700478-1 LISTS J700478-1 MAR. 45 1.2,5,22 & C Θ ISS 14			CW-50235 UP MARK CHANNEL TERMINAL (CHANNEL 3-1275 CYCLES): SAME AS TYPE CW-50230 EXCEPT IT OPERATES ON A FREQUENCY OF 1275 CYCLES. OMOD. BY H-327-100, LIST 4 1/19/45 J700478-1 LISTS J700478-1 MAR. 45 1.10,22 & C Θ ISS 14		
		CW-50225-A FROM TYPE CW-20356 POWER SUPPLY UNIT. SAME AS TYPE -50225 EXCEPT IT HAS ONE ADDITIONAL LEAD.	CW-50229 ING-BRANCH. OUTPUT OF AMPLIFIER IS RECTIFIED & RESULTANT DC CURRENT IS AMPLIFIED USING A PENTODE. OUTPUT OF AMPLIFIER OPERATES A RECEIVING RELAY WHICH REPEATS SIGNALS INTO THE DESIRED TYPE DC TELEGRAPH SIGNALS. INPUT 24V DC FILAMENT. 130V DC PLATE AND ±130 VOLTS TELEGRAPH DC SUPPLY.			CW-50236 UP MARK CHANNEL TERMINAL (CHANNEL 4-1445 CYCLES): SAME AS TYPE CW-50229 EXCEPT IT OPERATES ON A FREQUENCY OF 1445 CYCLES. OMOD. BY H-327-100, LIST 3 1/19/45 J700478-1 LISTS J700478-1 MAR. 45 1.2,11,22 & C Θ ISS 14		
CW-50226 UP MONITOR AMPLIFIER SINGLE STAGE AMPLIFIER USING PENTODE VACUUM TUBE WITH MAX. GAIN OF 35 db SUBSTANTIALLY FLAT OVER VOICE FREQ. RANGE. INPUT & OUTPUT IMPEDANCES 600 OHMS. SIMILAR TO TYPE -50225-A AMPLIFIER EXCEPT THE TEST & MONITORING JACKS ARE OMITTED 1/18/45 J68635F-1 J68635F-1 MAR. 45 LISTS 1 & MA OR, ISS 12			CW-50230 UP SPACE CHANNEL TERMINAL (CHANNEL 1-595 CYCLES): SPACING, SENDING & RECEIVING CHANNEL TERMINAL FOR CHANNEL 1-595 CYCLES. CONSISTS OF A MODULATING CIRCUIT IN THE SENDING END AND A TWO STAGE A-C AMPLIFIER IN RECEIVING END. OMOD. BY H-327-100, LIST 4 1/18/45 J700478-1 LISTS J700478-1 MAR. 45 1.6,22 & C Θ ISS 14			CW-50237 UP SPACE CHANNEL TERMINAL (CHANNEL 4-1615 CYCLES): SAME AS TYPE CW-50230 EXCEPT IT OPERATES ON A FREQUENCY OF 1615 CYCLES. OMOD. BY H-327-100, LIST 4 1/19/45 J700478-1 LISTS J700478-1 MAR. 45 1.12,22 & C Θ ISS 14		
		CW-50226 AND THE AMPLIFIER IS ARRANGED TO OPERATE ON 24 VOLT AND 130 VOLTS DC.	CW-50230 BRANCH. OUTPUT OF AMPLIFIER IS RECTIFIED AND RESULTANT DC CURRENT IS AMPLIFIED USING A PENTODE. OUTPUT OF AMPLIFIER OPERATES A RECEIVING RELAY WHICH REPEATS SIGNALS INTO THE DESIRED TYPE DC TELEGRAPH SIGNALS. INPUT 24V DC FILAMENT. 150V DC PLATE AND ±130V TELEGRAPH DC SUPPLY.			CW-50238 UP MARK CHANNEL TERMINAL (CHANNEL 5-1785 CYCLES): SAME AS TYPE CW-50229 EXCEPT IT OPERATES ON A FREQUENCY OF 1785 CYCLES. OMOD. BY H-327-100, LIST 3 1/19/45 J700478-1 LISTS J700478-1 MAR. 45 1.2,13,22 & C Θ ISS 14		

DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER
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CONFIDENTIAL

NAVSHIPS 900,109

Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
CW-50239 UP SPACE CHANNEL TERMINAL (CHANNEL 5-1955 CYCLES): SAME AS TYPE CW-50230 EXCEPT IT OPERATES ON A FRE- QUENCY OF 1955 CYCLES.	1/19/45	J700478-1	CW-50245 GAIN MAY BE ADJUSTED IN 2 db STEPS; HAS FREQ. RANGE FROM 30 TO 10,000 CYCLES. MOUNTED ON DEPRESSED TYPE STEEL PANEL WITH FRONT MAT & IS ARRANGED FOR MOUNTING ON A 19" RELAY RACK.	1/19/45	J700478-1	CW-50250 FOR USE WITH UN FOUR WIRE TERMINATING AND SIGNALING RAY: CONSISTS OF THE FOLLOW- ING NAVY TYPES (1) CW-20387 RECTIFIER POWER UNIT, (4) CW-23486 SIGNALING AP- PLYING UNIT (20 CYCLE), (4) CW-35089 RINGING OSCILLATORS, (1) CW-35090 RINGING SUPPLY UNIT, (2) CW-50249 FOUR WIRE TER- MINATING UNITS. MOUNTED IN A STEEL CABI- NET. WILL ACCOMMODATE (4) FOUR WIRE CIR- CUITS TO (4) TWO-WIRE TERMINATIONS. OPE- RATES FROM 110 TO 125/150 TO 60.	1/19/45	J700478-1
ΘMOD. BY H-327-100, LIST 4 1/19/45 J700478-1 MAR. 45 1,14,22 & CΘ ISS 14								
CW-50240 UP MARK CHANNEL TERMINAL (CHANNEL 6-2125 CYCLES): SAME AS TYPE CW-50229 EXCEPT IT OPERATES ON A FREQUENCY OF 2125 CYCLES.	1/19/45	J700478-1	CW-50246 TEF MODULATOR (1B) CONTAINS A BALANCED MODULATOR WHICH TRANSLATES AUDIO FREQUENCIES 125 KC TO A BAND OF 119 TO 124.9 KC. SAME AS NAVY TYPE -50218 EXCEPT FOR ONE TRANSFORMER WHICH ENABLES OPERATION ON 125.1 TO 131 KC.	1/19/45	J700478-1	CW-50250 MINATING UNITS. MOUNTED IN A STEEL CABI- NET. WILL ACCOMMODATE (4) FOUR WIRE CIR- CUITS TO (4) TWO-WIRE TERMINATIONS. OPE- RATES FROM 110 TO 125/150 TO 60.	1/19/45	J700478-1
ΦJ700478-1, LISTS 1,2,15,22&C MOD BY H-327-100, LIST 5 1/19/45 ΦSEE ABOVE J700478-1 MAR. 45 ISSUE 14								
CW-50241 UP SPACE CHANNEL TERMINAL (CHANNEL 6-2295 CYCLES): SAME AS TYPE CW-50230 EXCEPT IT OPERATES ON A FREQ. OF 2295 CYCLES.	1/19/45	J700478-1	CG-50247 UM DISCRIMINATOR UNIT CONTAINS 2 PARALLEL CIRCUITS, ONE TO AT- TENUATE THE LOCAL SIGNAL IN STEPS OF 10 db ±2 db. 500 OHMS INPUT AND 50 OHMS OUTPUT; THE OTHER BRANCH IS A SIGNAL AMPLIFIER WITH A BIAS DRIVER STAGE TO PROVIDE ATTENUATION TO THE LOCAL SIGNAL.	1/19/45	J700478-1	CFD-50251 LX-1 MODULATOR: INPUT: 6.3/150V DC, 0.15/0.008 AMPS. 0.25 MEGOHMS AUDIO INPUT IMPEDANCE AND 12 VOLTS FOR EXT. MODULATION. OUTPUT: 0-75 VOLTS FOR 75% MODULATION. INT. MODULATION 1000 CPS±5%. EXT. MODULATION 100 CPS TO 20 KC. FREQUENCY RESPONSE: 3/22/45 CFD-180-591-1 APR. 45	1/19/45	J700478-1
ΦJ700478-1 LISTS 1,16,22 & C MOD. BY H-327-100, LIST 4 1/19/45 ΦSEE ABOVE J700478-1 MAR. 45 ISSUE 14								
CW-50242 UP CHANNEL SHIFTER CONSISTS OF COILS, FILTERS & COPPER OXIDE VARISTOR MOUNTED ON STEEL PANEL. USED IN CONNECTION WITH TYPE CW-35083 CHANNEL OSCILLATOR TO INVERT & SHIFT PART OF ENERGY FROM SENDING TERMINAL TO FREQ. RANGE FROM 2505 CYCLES TO 4845-.	1/19/45	J68314A-1	CG-50247 THE GAIN OF THE AMPLIFIER FOR THE RE- MOTE SIGNAL IS 6 db ±2 db AT 1850 KC AND FROM 1700 TO 2000 KC. GAIN VARIATION DOES NOT EXCEED ±1 db WHEN TERMINATED IN A 150 OHM NON-REACTIVE LOAD. SUPPLY 115/155 TO 65. 1.2 AMPS 125 WATTS.	1/19/45	J68314A-1	CFD-50251 FLAT WITHIN ±1 DB OVER 200-10000 CPS; FLAT WITHIN ±3 DB OVER 100-20000 CPS.	1/19/45	J68314A-1
1/19/45 J68314A-1 J-68314A-1 MAR. 45 LIST 1 ISSUE 4								
CW-50243 UP CHANNEL RESTORER PANEL A STEEL PANEL EQUIPPED WITH COILS, CAPACITORS, RESISTORS AND VARISTORS. USED IN CONJUNCTION WITH TYPE CW-35084 CHANNEL OSCILLATOR TO RESTORE DIVERSITY FREQUENCIES TO ARRANGE FROM 756 CYCLES TO 2805 CYCLES.	1/19/45	J686314C-1	CRV-50248 MAR MODULATOR-DYNAMOTOR UNIT INCLUDES MODULATOR WITH PROVISIONS FOR A MICROPHONE AND HEADSET OR FOR HEADSET ONLY. HAS TERMINATION FOR ONE MILE FIELD WIRE COMMUNICATION. HAS EQUIPMENT ON-OFF SWITCH. ALSO INCLUDES DYNAMOTOR FOR HIGH VOLTAGE SUPPLY OF TRANSMITTER, MODULATOR	1/19/45	J686314C-1	CKB-50252 PR RE 13A1077A AMPLIFIER UNIT: ADJUDGUM 1 INPUT CONSISTS OF THREE 50/250/500 OHM CHANNELS, ONE 600 OHMS CHANNEL AND ONE 5000/500,000 OHM CHANNEL. POWER OUTPUT: 60 WATTS AT 1000 CPS. FREQUENCY RESPONSE ±5 db OVER FREQUENCY RANGE OF 50 TO 800 CYCLES. OUTPUT IMPEDANCE: 3/23/45 41.0A0A242-5 APR. 45	1/19/45	J686314C-1
1/19/45 J686314C-1 MAR. 45 LIST 1								
CW-50244 UP REGENERATOR REPEATER SYNCHRONIZER UNIT: A STEEL PANEL EQUIPPED WITH CAPACITORS, KEYS, LAMPS, JACKS, POTENTIOMETERS, RELAYS, RESISTORS AND ONE VACUUM TUBE. APPARATUS & CON- TROLS ARE ON FRONT OF PANEL WITH ALL OF WIRING AT REAR. TERMINAL STRIPS ARE PRO-	1/19/45	X-666918-1	CRV-50248 AND RECEIVER. INCLUDES COMPARTMENT FOR ACCESSORIES AND SPARES. SUBVERSION PROOF WITH CARRYING HANDLES ON SIDE.	1/19/45	X-666918-1	CKB-50252 50/30/15/3/4/2.5 OHMS. 5% MAXIMUM DISTORTION. MOUNTED IN A CASE. OPERATES FROM TYPE C6K-20403 RECTIFIER POWER UNIT.	1/19/45	X-666918-1
1/19/45 X-666918-1 X-666918-1 MAR. 45 LIST 1 ISSUE 2								
CW-50244 VIDED FOR EXTERNAL CONNECTIONS.			CW-50249 CW-50250 FOUR WIRE TERMINATING UNIT THIS UNIT MOUNTS TWO SECTIONS, EACH OF WHICH IS USED TO CONNECT A FOUR WIRE RA- DIO OR LAND-LINE CIRCUIT TO A TWO-WIRE SWITCHBOARD OR STATION TERMINATION. EACH TRANSMITTING & RECEIVING LINE INCLUDES A WESTERN ELECTRIC TYPE 29N(C35) PLUG-IN	3/6/45	J68732C-2	CW-50253 AN/TPS-1B I.F. AMPLIFIER: BAND WIDTH 60 MC TO 0.6 MC ±0.1 MC. POWER OUTPUT 4 VOLTS ACROSS 10,000 OHMS. NORMAL GAIN 90 db GAIN CONTROL RANGE 20 db TO 115 db. PLUG-IN TYPE WITH COILS RESISTORS, CAPACITORS AND EIGHT VACUUM TUBES WITH SHIELDS ASSEMBLED IN A METAL 3/29/45 BX-416400 BX-416400 APR. 45 ISS. 6	3/6/45	J68732C-2
CW-50245 GCS & UP AUDIO FREQUENCY AMPLIFIER A TWO-STAGE AMPLIFIER WITH BUILT-IN POWER SUPPLY UNITS: MAY BE OPERATED FROM EXTERNAL POWER SUPPLY 105 TO 125/150 TO 60. HAS GAIN OF 45 db WHEN CONNECTED TO A 600 OHM INPUT AND 20db WHEN OPERATED AS A HIGH (10,000 OHMS) BRIDGING AMPLI- 1/19/45 D-152801 MAR. 45			CW-50249 PAD.			CW-50253 CHASSIS, TROPICALIZED.		

**Class 50—Amplifier, Modulator and Coupler Units—Electronic
Converters—Mixing Panels**

3.50-17

NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION	NAVY TYPE DESIGNATION	FIRST ASSIGNED FOR	NAVY DRAWING OR SPECIFICATION
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CRV- 50254 GEN. RADIO USE RE 13A9038
SPEECH INPUT EQUIPMENT:
INPUT 110/1/50 OR 50. INPUT LEVEL: ZERO
DB (0.006 WATT) FROM A 35 OHM CARBON
MICROPHONE OR 200 OR 500 OHM AUDIO LINES.
FREQUENCY RANGE: 300 TO 3500 CYCLES.
NORMAL OUTPUT LEVEL: 1.6 WATTS INTO A
500 OHM LOAD. HAS AUTOMATIC GAIN CON-
TROL. 3/30/45 MI-24750 CRV:W-131514
APR. 45 REV 3

CRV- 50254
TROL. PROVIDES A SOURCE OF 12V DC POWER
FOR OPERATION OF MICROPHONES, INDICATORS
AND RELAYS. HOUSED IN AN ALUMINUM ALLOY
CABINET EQUIPPED WITH TYPE CAU-51062
HANDSET.

CG- 50255 JT
SERVO AMPLIFIER:
CONTROLS THE FIELD OF -21ACN MOTOR DYNA-
MO AMPLIFIER UNIT. SUPPLY 115/1/60 AND
OUTPUT OF 5CT SYNCHROS. CONTAINS TWO
6L6 TUBES.

*T-8673954 REV 2 CRV:W-131112 SUB D
4/10/45 *SEE ABOVE
APR. 45

CW- 50256 QDA
DRIVER AMPLIFIER UNIT
A SINGLE STAGE, CLASS AB2 AMPLIFIER USING
SIX 807 TUBES IN PARALLEL PUSH-PULL
HAVING APPROXIMATELY 150 WATTS OUTPUT.
COMPONENTS MOUNTED ON A HINGED PANEL AND
FRAMEWORK WHICH IS MOUNTED IN TYPE CW-
10534 TRANSMITTER-RECEIVER CABINET.
4/28/45 D-171069 B-158005
MAY 45 ISSUE 1

CW- 50256
HINGED FRONT PANEL IS ARRANGED WITH AN
A-C DISCONNECT SWITCH AND A REMOTE
GUARD LAMP SWITCH. PART OF TYPE CW-43068
TRANSMITTER-RECEIVER ASSEMBLY.

CW- 50257 QDA
TILT CONTROL AMPLIFIER UNIT
UNIT IS USED TO PROVIDE POWER TO DRIVE
A 0.5 HP LOW INERTIA MOTOR ON THE TYPE
78249 HOIST TILT MECHANISM WHICH MAIN-
TAINS PROJECTOR AT THE ANGLE DETERMINED
BY THE COMPUTER. PROVIDES EXCITATION
VOLTAGES FOR CERTAIN SYNCHRO GENERATORS
4/28/45 D-171077
MAY 45

CW- 50257
IN THE COMPUTER AND MISCELLANEOUS VOLT-
AGES FOR THE TYPE CW-55183 RECORDER AND
CONTROL CONSOLE.

CG- 50258 TEH 16T13(RE)
LOW POWER AMPLIFIER
INPUT: 230/1/50 OR 60. 5 KVA. FREQUENCY
RANGE 1700 KC TO 2000 KC. HAS BUILT IN
POWER SUPPLY. OUTPUT: 150 KW-NOMINAL
PEAK.
PART OF TYPE CG-52359 TRANSMITTER AS-
SEMBLY
5/2/45 CG:SK-62647-13-
JUN. 45 107

CG- 50259 TEH 16T13(RE)
HIGH POWER AMPLIFIER
FREQUENCY RANGE: 1700-2000 KC. OUTPUT:
1000 KW. NOMINAL.

PART OF TYPE CG-52359 TRANSMITTER AS-
SEMBLY
5/2/45 CG:SK-62647-13-
JUN. 45 107

CANY- 50260 DBD RE13A1073A
GONIOMETER & COUPLING UNIT
CONTAINS CONNECTORS USED IN MAKING CON-
NECTIONS TO ALL OTHER UNITS OF THE
EQUIPMENT: A GONIOMETER SYSTEM; AND AMP-
LIFIER & POWER SUPPLY FOR ENERGIZING AN
OSCILLOSCOPE IN TYPE CANY-23505 REMOTE
CONTROL UNIT. UNIT IS FED 115/1/400 BY
5/7/45
JUN. 45

CANY- 50260
ROTATING MACHINES. CONNECTION TO TYPE
CANY-46280 RADIO RECEIVER MADE BY MEANS
OF CONNECTORS AT TOP OF UNIT & CONNec-
TIONS TO POWER SOURCE. ANTENNA SYSTEM
AND TYPE CANY-23505 BY AN CONNECTORS ON
FRONT PANEL.

CAY- 50261 TBM-13
MODULATOR UNIT
SUPPLY: 115V AC. 230V DC. 220/3/60 OR
440/3/60. SAME AS NAVY TYPE -50065-8 EX-
CEPT USES JAN GRADE 1. CLASS 1 RESISTORS
AND WHEREVER POSSIBLE JAN COMPONENTS
USING STANDARD VALUES. ALSO HAS SMOOTH
GRAY FINISH.
5/8/45
JUN. 45

CM- 50262 GEN. RADAR USE 16A19(RE)
DC SYNCHRO AMPLIFIER
MIXES SYNCHRO SIGNALS IN STANDARD SERVO
SYNCHRO SYSTEM FOR USE WITH RADAR EQUIP-
MENT. CONSISTS OF A 115/2/60 SERVO
MOTOR, TWO 5CT SYNCHROS AT 1-36 SPEED
AND A SERVO AMPLIFIER FOR INPUT AND A
60G SYNCHRO AT 1 SPEED FOR OUTPUT. SAME
5/8/45
JUN. 45

CM- 50262
AS -50202 EXCEPT 70G SYNCHRO REMOVED AND
60G SYNCHRO CAPACITOR ADDED.

CDE- 50263 YR
DRIVER AMPLIFIER
INCLUDES A CONSTANT OUTPUT AMPLIFIER, A
COMPRESSION METER, A SPEECH ATTENUATOR,
AND A MASTER ATTENUATOR. THE UNIT PRO-
VIDES THE NECESSARY DRIVING POWER FOR
THE 849 MODULATOR TUBES.

JUN. 45

CDE- 50264 YR
POWER AND CONTROL ASSEMBLY
CONSISTS OF ONE EACH OF THE FOLLOWING
NAVY TYPES: -20428, -20429, -20430,
-29551, -35100, -50263.

CDE- 50265 YR
SPEECH INPUT AMPLIFIER
CONSISTS OF A MICROPHONE MATCHING INPUT
TRANSFORMER AND A THREE STAGE AMPLIFIER
WITH AN OUTPUT TRANSFORMER FOR COUPLING
TO A TELEPHONE LINE. ALSO CONTAINS AN
ATTENUATOR AND AN OUTPUT LEVEL METER.
SELF-CONTAINED POWER SUPPLY; GETS POWER
5/12/45
JUN. 45

CDE- 50265
SUPPLY FROM NAVY TYPE -23506 REMOTE CON-
TROL UNIT.

CTH- 50266 NXsr-47382
AUDIO AMPLIFIER
INPUT: 110 TO 120V, 1 PHASE, 50 TO 60
CYCLES, 105 WATTS. OUTPUT: 10 WATTS UN-
DISTORTED OR +32.2 db. HAS ONE MEDIUM
LEVEL INPUT CIRCUIT FOR HIGH IMPEDANCE
CRYSTAL OR MAGNETIC PHONO PICKUP. 82 db
GAIN. MEASUREMENTS BASED ON 100,000 OHMS
5/19/45 T-31W10
JUN. 45

CTH- 50266
INPUT IMPEDANCE. OUTPUT IMPEDANCES
AVAILABLE AT 6, 8, 16, 250 OR 500 OHMS.
FREQUENCY RESPONSE WITHIN ± 1 db FROM 30
TO 15,000 C/P'S. 14" LONG, 7 7/8" HIGH,
8" DEEP.

CUZ- 50267 NXsr-91905 16A16(RE)
NOISE PEAK LIMITER
LIMITS PEAKS OF NOISE GREATER THAN SIG-
NAL BY RENDERING RECEIVER INOPERATIVE
DURING PEAKS. PLUGS INTO SOCKET OF SEC-
OND DETECTOR OF THE 8C-639A ARMY RECEIV-
ING EQUIPMENT. INCLUDES A 6H6 NOISE LI-
MITER DIODE AND A TOGGLE SWITCH TO DIS-
5/28/45 N11 CUZ:NPL-1
JUN. 45 ALT 0

CUZ- 50267
CONNECT NOISE PEAK LIMITER FROM RECEIVER
CIRCUIT.

DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED	ISSUED	DATE	MANUFACTURER'S DESIGNATION	MANUFACTURER'S DRAWING NUMBER	ASSIGNED	ISSUED
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