

CABLE TYPE: *NF 1001*
2x0.5

CABLE NO.: *6*

REMARKS:

Cable Diagram see DWG. No 5447-5E

FROM

TO

UNIT: *3120 Cu*

PLUG CONSTRUCTION TYPE:

PLUG TYPE:

PLUG POS. NO.:

TERMINAL POS. NO.: *TB 2*

UNIT: *Ext. Loudspeaker OR HEADPHONE* *Socket FOR*

PLUG CONSTRUCTION TYPE:

PLUG TYPE:

PLUG POS. NO.:

TERMINAL POS. NO.:

CONTACT/TERMINAL NO.

CORE COLOUR

FUNCTION

CONTACT/TERMINAL NO.

9

WH

NF

10

BN

NF L

GROUND

SCREEN

GROUND

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				Datum	Name	MHFIHF RADIOTELEPHONE 3120		
				Gezeichnet	<i>13 6 86</i>	<i>li</i>	CONNECTION TABLE CABLE NO. <i>6</i>	
				Geprüft		<i>Ha</i>		
				Bearbeitet				
				Norm				
DEBEG						Zchngs.-Nr.	<i>5447-6E</i>	Maßstab <i>/</i>
								Blatt <i>6</i>
<i>2</i>	<i>13458</i>	<i>2.9.86</i>	<i>Ha</i>	Ursprung	Ersatz für <i>5447-4E</i>	Ersetzt durch	<i>9</i> Blatt	

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CABLE TYPE: NF 7214
12x0,5

CABLE NO.: 7

REMARKS: Cable length max. 15m
Cable Diagram see DWG. No. 5447-5E

FROM

TO

UNIT: 3120 Tx/Rx
PLUG CONSTRUCTION TYPE:
PLUG TYPE:
PLUG POS. NO.:
TERMINAL POS. NO.: TB 3

UNIT: Coupler 3120 ATU
PLUG CONSTRUCTION TYPE:
PLUG TYPE:
PLUG POS. NO.:
TERMINAL POS. NO.: TB 2

CONTACT/TERMINAL NO.	CORE COLOUR	FUNCTION	CONTACT/TERMINAL NO.
1	GN	G	1
2	RD	+ 24V	2
3	BL	RST	3
4	BK	G	4
5	BN	TUNE	5
6	VI	READY	6
7	OR	OL	7
8	PI	2182	8
9	GN	Tx TUNE	9
10	GR	KEY	10
11	YE	KEY G	11
12	WH	G	12
GROUND	SCREEN	GROUND	GROUND

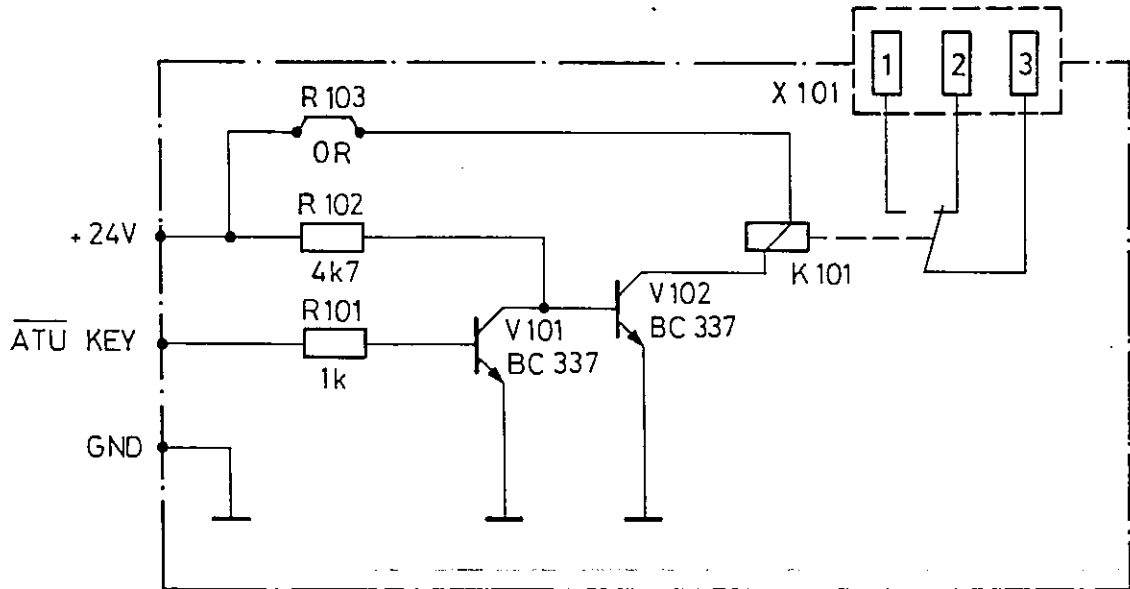
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		Datum	Name	MHF/HF RADIOTELEPHONE 3120			
		Gezeichnet	13.6.86	li	CONNECTION TABLE CABLE NO. 7		
		Geprüft		lha			
		Bearbeitet					
		Norm					
			DEBEG	Zchns.-Nr.	5447-6E		
2	13458	2.9.86		lha	Blatt	7	
Ausgabe	Ander-Nr.	Datum	Name	Ursprung	Ersatz für: 5447-4E	Ersetzt durch:	9 Blätter

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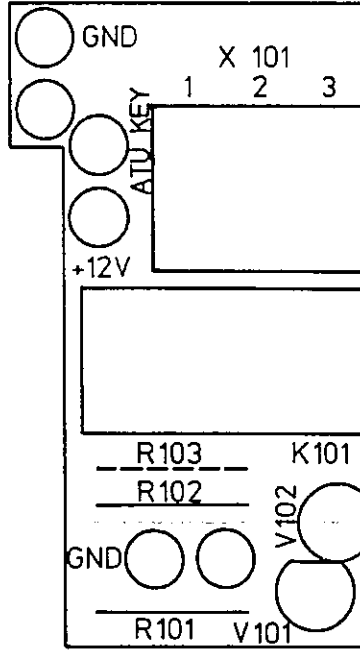
TERMINAL TB3 CONTACT 2 +24V
CONTACT 10 ATU KEY

hierzu gehört: Stückliste Mat.-Nr. 031 6741

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				Datum	Name	RADIO TELEPHONE 3120 NL	
			Gezeichnet	1.10.87	Bo	Schaltbild CIRCUIT DIAGRAM	
			Gepüft		<i>[Signature]</i>	Relaisplatine RELAY PLATINE	
			Bearbeitet			Maßstab	
			Norm			·	
DEBEG						Zchngs.-Nr. 7455-1	
						Blatt	
Ausgabe	Änder-Nr.	Datum	Name	Ursprung	Ersatz für	Ersetzt durch	Blätter

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hierzu gehört: Leiterbild : Zchns.-Nr. 7455-2 Bl. 1 u. 2
 Lötstopmaske : Zchns.-Nr. 7455-2 Bl. 2
 Bearbeitungszeichnung : Zchns.-Nr. 7455-3

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				Datum	Name	RADIO TELEPHONE 3120NL	
			Gezeichnet	28-09-87	<i>[Signature]</i>	Bestückungsdruck Relaisplatine	Maßstab
			Geprüft		<i>[Signature]</i>		2:1
			Bearbeitet				
			Norm				
DEBEG						Zchns.-Nr.	7455-3
Ausgabe	Änder-Nr.	Datum	Name	Ursprung	Ersatz für:	Ersetzt durch:	Blätter

STÜCKLISTE
PARTS LIST

A C H T U N G !

Bei Materialbestellungen bitten wir um folgende Angaben:

1. Ausgabedatum der Stückliste
2. Gerätetyp
3. Position lt. Stückliste
4. Materialnummer lt. Stückliste
5. Benennung lt. Stückliste

A T T E N T I O N !

If you want to order some spares, please let us know following details:

1. Edition of the Parts List
2. Type of Set
3. Position (according to the Parts List)
4. Partnumber " " " " "
5. Description " " " " "

[AUSGABE: 07/91
EDITION:

<u>Spare Part No.</u>	<u>Description</u>
	CONTROL UNIT:
271.202264	PCB CONTROL SECTION CU
271.202265	PCB AF-SECTION CU
271.202266	PCB DISPLAY BOARD CU
271.202268	PCB CONTROL JUNCTION BOARD
	EXCITER UNIT:
271.202271	PCB T/R CONTROL
271.202272	PCB SYNTHESIZER (PLL)
271.202273	PCB RX-EXCITER
271.202278	PCB JUNCTION BOARD
271.202279	PCB PRESELECTOR BOARD
271.202311	PCB HANDSET FILTER BOARD
271.202308	LOW PASS FILTER MODULE
271.202276	PCB LOW PASS FILTER
271.202307	RF POWER AMPLIFIER MODULE
271.202274	PCB RF POWER AMPLIFIER 5PO2033
271.245246	PCB RF POWER AMPLIFIER 5PO3008
271.202277	POWER SUPPLY MODULE
271.202306	PCB A1 POWER SUPPLY
271.202329	PCB A2 POWER SUPPLY
271.202330	PCB A3 POWER SUPPLY
	ANTENNA TUNING UNIT:
271.202310	LC-NETWORK WITH UP-CONTROL MODULE
271.202269	PCB ATU UP-CONTROL
271.202270	PCB LC-NETWORK

PARTS LIST

1. System diagram
2. General diagram
3. Control unit
4. Control section
5. AF section
6. Display section
7. Handset filter
8. Remote control diagram
9. Junction board (for remote control)
10. T/R control
11. RX/Exciter
12. Frequency synthesizer
13. Pre-selector
14. Power amplifier
15. Low-pass filter
16. Power supply main circuit
17. Power supply A1 control
18. Power supply A2 DC/DC converter
19. Power supply A3 line interface
20. Junction board
21. ATU diagram
22. LC network
23. ATU control

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RECORDS
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AMERICA
1862-1863

PARTS LIST FOR
SYSTEM DIAGRAM

A1
A2

TRANSCEIVER UNIT

ANTENNA TUNING UNIT

PARTS LIST FOR GENERAL DIAGRAM

A1	CONTROL UNIT	
A2	T/R CONTROL	
A3	RX/EXCITER	
A4	FREQUENCY SYNTHESIZER (PLL)	
A5	PRE SELECTOR	OPTION
A6	JUNCTION BOARD	
A7	POWER AMPLIFIER	
A8	LOW-PASS FILTER	
A9	POWER SUPPLY	
J1	M - R 2503 5/8 - 24UNEF - 2A	
J2	BNC - PJ 894 50 ohm	Included W2
P1	BNC - P - 3	Included W1
P2	TMP - P01X - B1	Included W2
P3	HNC2 - 2.5S - 3 3 poles	Included W3
P4	HIF3BA - 16D - 2.54R 16 poles	Included W4
P5	HIF3BA - 16D - 2.54R 16 poles	Included W4
P6	TMP - P01X - A1	Included W5
P7	TMP - P01X - A1	Included W5
P8	HIF3BA - 60D - 2.54R 60 poles	Included W6
P9	HIF3BA - 60D - 2.54R 60 poles	Included W6
P10	HIF3BA - 34D - 2.54R 34 poles	Included W7
P11	HIF3A - 34D - 2.54R 34 poles	Included W7
S1	ET103A32	

PARTS LIST FOR CONTROL UNIT

A1	CONTROL SECTION		
A2	AF SECTION		
A3	DISPLAY BOARD		
A4	KEY BOARD		
A5	HANDSET FILTER BOARD		
J1	5051 - 10	10 poles	included W1
J2	5051 - 12	12 poles	included W2
J3	HIF3C - 20D - 2.54C	20 poles	included W3
J4	5051 - 02	2 poles	included W4
J5	5051 - 04	4 poles	included W5
J7	3C - 30	2 poles	
SP1	77R01	2 W max	
S1	SRN1026N		
S2	SRN1025S		
RV1	K16110 - 10KB	10 Kohm	1/10 W
RV2, 4	V16L4S(C26)15F B10 Kohm	10 Kohm	1/10 W
		with switch	
RV3	K162A0 - 10KB +1 K Ω		1/10 W
W1	4645P00702		
W2	4645P00703		
W3	4645P00704		
W4	4645P00705		
W5	4645P00706		

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PARTS LIST FOR CONTROL SECTION

Printed Circuit Board Control Section 5P01765A Version 2

BATT1	GF50 - 3SA		3.6 V	
C1, 15, 16, 52 - 54, 81 - 84, 105 - 107, 112 - 114, 118, 120 - 122, 124 - 127	0.1 μ F	+ 80 % - 20 %	50 V	CER
C2 - 14	1000 PF	\pm 10 %	50 V	CER
C17 - 22, 85, 86, 88 - 90	0.01 μ F	+ 80 % - 20 %	50 V	CER
C23 - 51 55 - 80, 94 - 102	330 PF	\pm 10 %	50 V	CER
C87, 93, 103	10 μ F	\pm 20 %	25 V	AL
C104, 111 , 115 , 116, 123	47 μ F	\pm 20 %	10 V	AL
C108	10 μ F	\pm 20 %	16 V	AL
C117, 119, 128	47 μ F	\pm 20 %	16 V	AL
C109, 110	22 PF	\pm 5 %	50 V	CER
D1 - 14 , 17 - 19	1S1588			
D15	1SS97			
D16	HZ2B - 1		1.9~ 2.6 V	

PARTS LIST FOR CONTROL SECTION

IC1 , 16, 17	TD62503P			
IC2	74LS14			
IC3, 14, 15	74HC138P			
IC4	74HC32P			
IC5	∞PD7810G - 36			
IC6	74HCT373P			
IC7	MBM27128 - 20	with IC26 - 2806 - GS4		
IC8, 9	MBM2764 - 20	with IC26 - 2806 - GS4		
IC10	TC5564PL - 15			
IC11	74HC273P			
IC12	74HC374P			
IC13	74HC95P			
J1	HIF3H - 34DA - 2.54DSA		34 poles	
J2	HIF3H - 16DA - 2.54DSA		16 poles	
P1	HIF3H - 50PA - 2.54DSA		50 poles	
P2	FH1 - 12S - 2.54DSA		12 poles	
P3	5046 - 12A		12 poles	
P4	5046 - 10A		10 poles	
TR1	2SC1959 - Y			
TR2 - 14	2SA1020 - 0			
TR15	2SA1015 - Y			
TR16	2SC2786KF			
TH1	D33A			
R1	330 ohm × 7	±5 %	1/8 W	FRN
R2	10 ohm × 8	±5 %	1/8 W	FRN
R3, 4	1 Kohm × 7	±5 %	1/8 W	FRN
R5, 6	10 Kohm × 7	±5 %	1/8 W	FRN
R7	10 Kohm × 6	±5 %	1/8 W	FRN
R8	47 ohm × 7	±5 %	1/8 W	FRN
R9	10 Kohm × 8	±5 %	1/8 W	FRN
R10	47 ohm × 8	±5 %	1/8 W	FRN

PARTS LIST FOR CONTROL SECTION

R11, 12, 19, 21, 22	1 Kohm	±5 %	1/6 W	CAR
R13, 15	47 ohm	±5 %	1/6 W	CAR
R14	100 ohm	±5 %	1/6 W	CAR
R16	10 Kohm	±5 %	1/6 W	CAR
R17	15 Kohm	±5 %	1/6 W	CAR
R18, 20	4.7 Kohm	±5 %	1/6 W	CAR
R23	220 ohm	±5 %	1/6 W	CAR
R24	820 ohm	±5 %	1/6 W	CAR
X1	4515P00342	6.5536 MHz		
PCB1	8545P01765A			

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PARTS LIST FOR AF SECTION

Printed Circuit Board AF SECTION 5P01545B Version 2

C1, 5, 7, 8, 15, 25, 32, 35, 36, 38, 39, 46, 47, 56, 57, 87, 89, 96, 98, 102, 103, 104	10 μ F	$\pm 20 \%$	25 V	AL
C2	100 μ F	$\pm 20 \%$	25 V	AL
C3, 4, 6, 61, 70, 72, 73, 77	1000 PF	$\pm 10 \%$	50 V	CER
C9, 54, 55, 60	1 μ F	$\pm 20 \%$	50 V	AL
C10, 11, 13	0.01 μ F	$\pm 10 \%$	50 V	FILM
C12, 17 - 20	0.022 μ F	$\pm 10 \%$	50 V	FILM
C14, 21	10 μ F	$\pm 20 \%$	25 V	TAN
C16, 22, 28 - 30, 45, 48 51 - 53, 58	4.7 μ F	$\pm 20 \%$	50 V	AL
C26	2.2 μ F	$\pm 20 \%$	16 V	TAN
C27	4700 PF	$\pm 10 \%$	50 V	FILM
C31	100 PF	$\pm 5 \%$	50 V	CER
C37, 49	68 PF	$\pm 5 \%$	50 V	CER
C41 - 44, 59, 71, 74 - 76, 78, 79 - 86, 88, 90 - 95, 97, 99 - 101	0.01 μ F	+ 80 % - 20 %	50 V	CER
C62, 65 - 68	470 μ F	$\pm 20 \%$	25 V	CER
C63, 69	0.1 μ F	$\pm 10 \%$	50 V	FILM
C64	470 μ F	$\pm 20 \%$	10 V	AL
D1, 12	HZ6C - 1		5.8 - 6.1 V	
D2, 3	HZ3C - 1		3.1 - 3.3 V	

PARTS LIST FOR AF SECTION

D4 - 7, 10, 11	1S1588			
D8, 9	HZ3A - 1		2.5 - 2.7 V	
D13 - 15	1SS97			
D16, 17, 20, 21	S5500B			
D18	HZ5C - 1		4.9 - 5.1 V	
D19	1S2471			
IC1	IR2433			
IC2	NJM2903D			
IC3	NJM082D			
IC4	SL6270C - DP			
IC5, 6	NJM4556D			
IC7	μ PC2002H			
IC8 - 10	TC4066BP			
IC11	TC4001BP			
IC12	TC4011UBP			
IC13	NJM7815A		15 V	
IC14	TA78L075AP		0.75 V	
J1	HIF3H - 50DA - 2.54DSA		50 poles	
P1	HIF3F - 34PA - 2.54DSA		34 poles	
P2	5046 - 4A		4 poles	
P3	HIF3F - 20PA - 2.54DSA		20 poles	
P4	5046 - 2A		2 poles	
K1	MR62 - 12SR	12 V		
L1 - 5	220 μ H	\pm 10 %		
R1	10 Kohm \times 8	\pm 5 %	1/8 W	FRN
R2, 4, 68, 84, 110, 46	15 Kohm	\pm 5 %	1/4 W	CAR
R3, 9, 12, 18, 19, 30, 38, 80, 94, 109	4.7 Kohm	\pm 5 %	1/4 W	CAR

PARTS LIST FOR AF SECTION

R5, 6, 11, 13, 22, 23, 66, 67, 75, 81, 87, 90, 96, 104, 83	10 Kohm	$\pm 5\%$	1/4 W	CAR
R7, 60, 89, 91	47 Kohm	$\pm 5\%$	1/4 W	CAR
R8, 93	22 ohm	$\pm 5\%$	1/4 W	CAR
R10, 32, 40, 80	2.2 Kohm	$\pm 5\%$	1/4 W	CAR
R14, 15, 17, 21, 24, 28, 36, 55	1 Kohm	$\pm 5\%$	1/4 W	CAR
R16, 44	330 ohm	$\pm 5\%$	1/4 W	CAR
R20, 43, 45	27 Kohm	$\pm 5\%$	1/4 W	CAR
R25, 26, 33, 34	2.7 Kohm	$\pm 5\%$	1/4 W	CAR
R27, 35, 59, 82, 97	6.8 Kohm	$\pm 5\%$	1/4 W	CAR
R29, 37	1.2 Kohm	$\pm 5\%$	1/4 W	CAR
R31, 39	180 ohm	$\pm 5\%$	1/4 W	CAR
R41, 58, 70, 92	22 Kohm	$\pm 5\%$	1/4 W	CAR
R42, 74, 105	3.3 Kohm	$\pm 5\%$	1/4 W	CAR
R53	68 ohm	$\pm 5\%$	1/4 W	CAR
R54, 86	1 Mohm	$\pm 5\%$	1/4 W	CAR
R56, 57, 61, 72, 73, 76	100 Kohm	$\pm 5\%$	1/4 W	CAR
R62	39 Kohm	$\pm 5\%$	1/4 W	CAR
R64, 71, 107	680 ohm	$\pm 5\%$	1/4 W	CAR
R65, 69	1.5 Kohm	$\pm 5\%$	1/4 W	CAR
R78, 79, 85, 95	560 ohm	$\pm 5\%$	1/4 W	CAR
R98, 99	10 ohm	$\pm 5\%$	3 W	METAL
R100	220 ohm	$\pm 5\%$	1 W	METAL
R101	2.2 ohm	$\pm 5\%$	1/4 W	CAR
R102	220 ohm	$\pm 5\%$	1/4 W	CAR
R103	1 ohm	$\pm 5\%$	1 W	METAL
R106	18 Kohm	$\pm 5\%$	1/4 W	CAR
R108	470 ohm	$\pm 5\%$	1/4 W	CAR
R111	47 ohm	$\pm 5\%$	1/4 W	CAR



PARTS LIST FOR DISPLAY

Printed Circuit Board Display 5P01544A

D1, 4	GL4PR5		red	
D2	GL4PG5		gre	
D3, 19 - 43	GL4HY5		yel	
D5 - 17	TLY333T	7 segments	yel	
D18	GL112H9	12 segments	yel	
P1	HIF3H - 34PB - 2.54DSA		34 poles	
P2	HIF3H - 16PB - 2.54DSA		16 poles	
R1, 2	1 Kohm	$\pm 5 \%$	1/4 W	CAR
R3 - 7	680 ohm	$\pm 5 \%$	1/4 W	CAR
PCB1	8545P01544A			



PARTS LIST FOR HANDSET FILTER BOARD

Printed Circuit Board
Handset Filter Board 5P02038 Version 2

C1 - 6	0.01 μ F	+ 80 % - 20 %	50 V	CER
L1 - 3	220 μ H	\pm 10 %		
J6	1506 - L	6 poles		
PCB1	8545P02038			



PARTS LIST FOR REMOTE CONTROL UNIT

A1	JUNCTION BOARD	
P1	HIF3BA - 34D - 2.54R	Included W1
P2	HIF3 A - 34D - 2.54R	Included W1
P3	5.5 - 250B	Included W2
P4	5.5 - 6	Included W2
P5	171511 - 1	Included W3
P6	171512 - 3	Included W3
W1	4645P00778A	
W2	4645P00815A	
W3	4645P00820	



PARTS LIST FOR
JUNCTION BOARD
(Remote Control)

Printed Circuit Board
Junction Board 5P01555B Version 2

J1	HIF3BA - 34PA - 2.54DS	34 poles
TB1	S - 306 - 24P	24 poles
TB2	S - 306 - 10P	10 poles
TB3 - 5	P - 91	with LTO - 81T - 250N
PCB1	8545P01555B	



PARTS LIST FOR T/R CONTROL

Printed Circuit Board
T/R CONTROL 5P01738A Version 2

C1, 59, 116, 117, 122, 128, 137, 138, 142, 144, 159	10 μ F	\pm 20 %	25 V	AL
C59, 121	10 μ F	\pm 20 %	35 V	AL
C129	33 μ F	\pm 20 %	16 V	AL
C134, 135	33 μ F	\pm 20 %	35 V	AL
C2 - 8, 18 - 38, 40, 41 48 - 55, 57, 58, 61 - 73, 75 - 80, 84, 86 - 89, 92 - 115, 127, 139, 141, 143, 145, 160, 161	0.1 μ F	+ 80 % - 20 %	50 V	CER
C10 - 17	470 PF	\pm 10 %	50 V	CER
C42 - 47, 60, 81 - 83, 118 - 120	0.01 μ F	+ 80 % - 20 %	50 V	CER
C90, 91, 123, 124, 140	1000 PF	\pm 10 %	50 V	CER
C130, , 133, 136, 146 - 158	0.47 μ F	+ 80 % - 20 %	50 V	CER
C131, 132	22 PF	\pm 5 %	50 V	CER
C162	0.18 μ F	\pm 10 %	50 V	CER
C126	3.3 μ F	\pm 20 %	25 V	TAN
C163, 164, 167, 168	0.1 μ F	\pm 10 %	50 V	CER
C165, 166	1 μ F	\pm 10 %	50 V	CER

PARTS LIST FOR T/R CONTROL

D1, 10, 12, 14 - 17, 21, 26, 28 - 33	1S1588		
D2 - 9	HZ5B - 1	4.6 - 4.8 V	
D22	1SS97		
D23	HZ5C - 1		
D24	1S2471		
D25, 27	HZ6C - 1		
IC1, 4	74HC244P		
IC2, 5, 8, 13	74HC273P		
IC3, 7, 9, 10, 14, 15, 22, 27	TD62003P		
IC11	74LS14		
IC16	μ PD7810G - 36		
IC17	74HCT373P		
IC18	MBM2764 - 20 with IC26 - 2806 - GS4	28 poles	
IC19	M5L8155P		
IC20	NJM082D		
IC21	NJM2901N		
IC23, 24, 26	4066		
IC25	NJM7812A	12 V	
IC28	HD14584B		
IC29	TC40018P		
IC30	74HC157P		
L1 - 4, 6 - 8, 10 - 13	220 μ H	$\pm 10 \%$	
L5, 9	10 mH	$\pm 10 \%$	
J1	HIF2B - 34D - 2.54RA	34 poles	included W1
J2	HIF2B - 10D - 2.54RA	10 poles	included W2
J3	HIF2B - 20D - 2.54RA	20 poles	included W3
J4	HIF3H - 50DA - 2.54DSA	50 poles	

PARTS LIST FOR T/R CONTROL

P1	HIF3BA- 60PA - 2.54DSA		60 poles	
P2	HIF3BA- 34D - 2.54R		34 poles	included W1
P3	HIF3BA- 10D - 2.54R		10 poles	included W2
P4	HIF3BA- 20D - 2.54R		20 poles	included W3
R1 - 8, 11 - 30, 40, 60, 62, 64, 66, 68, 117	470 ohm	$\pm 5 \%$	1/6 W	CAR
R9, 10, 72, 73, 75 - 80, 96, 97, 100, 101, 103, 104, 106, 108, 112, 113, 118, 148, 150, 152, 154, 156, 158	1 Kohm	$\pm 5 \%$	1/6 W	CAR
R41 - 59, 61, 63, 65, 67, 69	47 ohm	$\pm 5 \%$	1/6 W	CAR
R70	3.3 ohm	$\pm 5 \%$	2 W	METAL
R71, 81, 82, 87, 95, 98, 99, 132, 134	10 Kohm	$\pm 5 \%$	1/6 W	CAR
R74, 85, 90 - 91, 121, 149	22 Kohm	$\pm 5 \%$	1/6 W	CAR
R83, 93, 94, 109 - 111, 114, 166, 167	4.7 Kohm	$\pm 5 \%$	1/6 W	CAR
R84, 135, 136, 138	100 Kohm	$\pm 5 \%$	1/6 W	CAR
R86, 89, 141 - 146, 31 - 36, 38, 39	100 ohm	$\pm 5 \%$	1/6 W	CAR
R88, 119	3.3 Kohm	$\pm 5 \%$	1/6 W	CAR
R102, 105, 107, 124	1.5 Kohm	$\pm 5 \%$	1/6 W	CAR
R115, 120, 122, 131, 133	2.2 Kohm	$\pm 5 \%$	1/6 W	CAR

PARTS LIST FOR T/R CONTROL

R116, 137, 153, 92	47 Kohm	±5 %	1/6 W	CAR
R123	12 Kohm	±5 %	1/6 W	CAR
R125, 127	4.7 Kohm × 8	±5 %	1/8 W	FRN
R139, 140 , 155	27 Kohm	±5 %	1/6 W	CAR
R151	82 Kohm	±5 %	1/6 W	CAR
R161	33 Kohm	±5 %	1/6 W	CAR
R162 - 165	75 Kohm	±5 %	1/6 W	CAR
R147	68 Kohm	±5 %	1/6 W	CAR
RV1 - 3	50 Kohm	±20 %	0.3 W	VAR
TR1, 5, 9, 10	2SA1015 - Y			
TR2, 4, 8, 11	2SC1815			
TR3	2SC1959 - Y			
TR6	2SC3299			
TP1	TP - 8G			
X1	4515P00342	6.5536 MHz		
PCB1	8545P01738A			
W1	4645P00707C			
W2	4645P00708C	OPTION		
W3	4645P00709C			

PARTS LIST FOR RX/EXCITER

Printed Circuit Board
RX/EXCITER 5P02077 Version 2

C1, 3, 4, 8, 12, 13, 191, 217, 234, 236, 238, 240 - 242, 244, 372, 373, 376, 377	10 μ F	\pm 20 %	25 V	AL
C2, 30, 32 - 34, 36, 37, 39, 41 - 45, 153, 154, 156, 157 - 161, 163, 164, 165, 302, 305 - 313, 318, 330	4700 PF	+ 80 % - 20 %	50 V	CER
C5 - 7, 9 - 11, 14, 15, 17 - 24 - 27, 35, 40, 81, 83, 169, 174, 175, 178 - 180, 182, 185, 201, 202 - 204, 206, 207 - 209, 213, 214, 215, 218, 220, 221, 228, 229, 231, 233, 246, 247, 250, 317, 319 - 322, 324, 327, 328, 331, 341 - 366, 21, 22	0.022 μ F	+ 80 % - 20 %	50 V	CER
C16, 23, 28, 29, 31, 54 - 80, 82, 84 - 86, 108, 109, 114, 115, 121, 122, 127, 128, 133, 134, 136, 141, 142, 147, 148, 150 - 152, 170, 171, 173, 181, 186 - 190, 205, 20	0.1 μ F	+ 80 % - 20 %	50 V	CER

PARTS LIST FOR RX/EXCITER

C212, 216, 219, 224, 232, 235, 239, 243, 245, 248, 251, 301, 315, 323, 325, 326, 332 - 334, 367, 370, 374, 375, 378 - 381	0.1 μ F	+ 80 % - 20 %	50 V	CER
C38, 155, 162	15 PF	\pm 5 %	50 V	CER
C46	68 PF	\pm 5 %	50 V	CER
C47, 222	47 PF	\pm 5 %	50 V	CER
C48, 52	56 PF	\pm 5 %	50 V	CER
C49, 50	82 PF	\pm 5 %	50 V	CER
C51, 107, 110	180 PF	\pm 10 %	50 V	CER
C53, 117, 123, 143 - 146, 149, 167, 168, 210, 211	0.47 μ F	+ 80 % - 20 %	50 V	CER
C104	150 PF	\pm 5 %	50 V	CER
C105	120 PF	\pm 5 %	50 V	CER
C106	220 PF	\pm 10 %	50 V	CER
C111	560 PF	\pm 10 %	50 V	CER
C112	330 PF	\pm 10 %	50 V	CER
C113, 116, 117, 118, 192, 225	1000 PF	\pm 10 %	50 V	CER
C119	1500 PF	\pm 10 %	50 V	CER
C120	1800 PF	\pm 10 %	50 V	CER
C124, 126	4700 PF	\pm 10 %	50 V	CER
C125	3300 PF	\pm 10 %	50 V	CER
C130, 132	5600 PF	\pm 10 %	50 V	CER
C131	0.015 μ F	\pm 10 %	100 V	CER
C137, 139	0.039 μ F	\pm 10 %	50 V	CER
C138	0.01 μ F	\pm 10 %	50 V	CER
C166, 176, 177, 183, 184	390 PF	\pm 10 %	50 V	CER
C226, 227, 369	47 μ F	\pm 20 %	25 V	AL

PARTS LIST FOR RX/EXCITER

C237	100 PF	± 5 %	50 V	CER
C303, 304	39 PF	± 5 %	50 V	CER
C314, 316	27 PF	± 5 %	50 V	CER
C368	47 μ F	± 20 %	50 V	AL
C371, 172	0.1 μ F	± 10 %	50 V	CER
D1 - 13, 21 - 32, 36 - 38, 42 - 44, 58, 60	1S2588			
D14, 45, 46, 53, 54, 57, 76	1SS97			
D15, 16, 47, 49, 50, 52, 55, 56, 59, 62 - 75, 77	1S1588			
D17 - 20	MI402			
D33 - 35, 39 - 41	MI204			
D48	HZ2B - 1		1.9 - 2.6 V	
D51	HZ9B - 2		8.5 - 8.9 V	
D61	HZ6C - 2		6.0 - 6.3 V	
FL1	4515P00345		70.455 MHz	
FL2	MF - 455 - 12GZ			
FL3	MF - 33C		with matching transformer (T10, 11)	
FL4	MF - 32C		with matching transformer (T12, 13)	

PARTS LIST FOR RX/EXCITER

IC 3 - 6, 8	TC4066BP	
IC2	SN16913P	
IC7	NJM4556D	
IC9	L3K	
IC10	TA78L075AP	0.75 V
IC11	4155P00445	
IC12	NJM7815A	15 V
IC13	HD14584BP	
L1	10 mH	± 10 %
L2, 18, 23, 29, 52, 55	220 μ H	± 10 %
L3, 4, 19, 56, 57	2.2 μ H	± 20 %
L5, 8 - 10, 17	0.33 μ H	± 20 %
L6, 7	0.1 μ H	± 20 %
L11 - 13	47 μ H	± 10 %
L14	0.47 μ H	± 20 %
L15, 22	0.56 μ H	± 20 %
L16	0.27 μ H	± 20 %
L20	1.0 μ H	± 20 %
L21	1.5 μ H	± 20 %
L24	18 μ H	± 10 %
L25, 50, 51	4.7 μ H	± 10 %
L26	3.9 μ H	± 10 %
L27, 28	2.7 μ H	± 20 %
L30	100 μ H	± 10 %
L31, 33	6.8 μ H	± 10 %
L32, 37	10 μ H	± 10 %
L34, 39	1 mH	± 10 %
L35, 49	470 μ H	± 10 %
L36, 38	27 μ H	± 10 %
L40, 44, 45, 47, 48	2.2 mH	± 10 %
L41, 43	22 μ H	± 10 %
L42	82 μ H	± 10 %

PARTS LIST FOR RX/EXCITER

L53	0.18 μ H	$\pm 20\%$		
L54	0.12 μ H	$\pm 20\%$		
R14, 126	180 ohm	$\pm 5\%$	1/6 W	CAR
R1, 3	750 ohm	$\pm 5\%$	1/6 W	CAR
R2, 19, 362	2.7 Kohm	$\pm 5\%$	1/6 W	CAR
R4, 10, 16, 127	680 ohm	$\pm 5\%$	1/6 W	CAR
R5, 17, 31, 36, 40, 74, 76, 120, 122, 140, 142, 150, 210, 220, 226, 240, 257, 266, 281	100 ohm	$\pm 5\%$	1/6 W	CAR
R6, 7, 18, 41, 85, 113, 116, 119, 133, 136, 139, 145, 251, 280	1 Kohm	$\pm 5\%$	1/6 W	CAR
R8, 23, 24, 37, 38, 57, 67, 69, 70, 77, 80, 92, 125, 148, 158, 159, 327, 241, 261, 306, 307, 315, 325	2.2 Kohm	$\pm 5\%$	1/6 W	CAR
R128	15 ohm	$\pm 5\%$	1/6 W	CAR
R9, 28, 35, 39, 42, 53, 62, 78, 164, 165, 227 - 229, 255, 262, 263, 279, 329, 337	4.75 Kohm	$\pm 5\%$	1/6 W	CAR
R48, 102 - 104, 106, 108, 110, 209, 219	220 ohm	$\pm 5\%$	1/6 W	CAR
R12, 13, 43, 44, 63, 123, 203, 213, 249, 259, 268, 273, 276, 324, 331, 332, 335, 352	10 Kohm	$\pm 5\%$	1/6 W	CAR

PARTS LIST FOR RX/EXCITER

R156	150 Kohm	± 5 %	1/6 W	CAR
R15	62 ohm	± 5 %	1/6 W	CAR
R20, 21, 26, 27, 151 - 154, 157, 160, 163, 166, 205, 271, 272, 274, 282	100 Kohm	± 5 %	1/6 W	CAR
R22, 25, 155, 161, 162, 167, 168, 258, 349	3.3 Kohm	± 5 %	1/6 W	CAR
R29, 30, 46, 91, 94 - 96, 98, 99, 202, 207, 212, 217, 221, 222, 235, 238, 239, 248, 345 - 348, 356 - 358	22 Kohm	± 5 %	1/6 W	CAR
R83, 121, 141	120 ohm	± 5 %	1/6 W	CAR
R32, 224, 267, 316	1.5 Kohm	± 5 %	1/6 W	CAR
R33	10 ohm	± 5 %	1/6 W	CAR
R34, 129	39 ohm	± 5 %	1/6 W	CAR
R45, 206, 216	120 Kohm	± 5 %	1/6 W	CAR
R47, 72, 84, 90, 131, 146, 149	22 ohm	± 5 %	1/6 W	CAR
R49, 66, 114, 115, 132, 134, 135, 147, 204, 208, 214, 218, 237, 242, 243, 250, 305	47 ohm	± 5 %	1/6 W	CAR
R50, 52, 58, 60, 71, 73, 79	270 ohm	± 5 %	1/6 W	CAR
R51, 59	18 ohm	± 5 %	1/6 W	CAR
R55	51 ohm	± 5 %	1/6 W	CAR
R61, 65, 310, 318	390 ohm	± 5 %	1/6 W	CAR
R64, 81, 82	3.3 ohm	± 5 %	1/6 W	CAR
R75	68 ohm	± 5 %	1/6 W	CAR

PARTS LIST FOR RX/EXCITER

R86, 230, 232, 235	330 ohm	± 5 %	1/6 W	CAR
R87, 278, 328	560 ohm	± 5 %	1/6 W	CAR
R88, 309, 317	6.8 ohm	± 5 %	1/6 W	CAR
R93, 302, 312, 323	1 Mohm	± 5 %	1/6 W	CAR
R97, 144, 201, 211, 215, 340, 341	15 Kohm	± 5 %	1/6 W	CAR
R117, 137, 247	220 Kohm	± 5 %	1/6 W	CAR
R118, 124, 138, 143, 264	6.8 Kohm	± 5 %	1/6 W	CAR
R350, 359 - 361	12 Kohm	± 5 %	1/6 W	CAR
R11, 68, 256, 265, 301, 313, 322, 333, 334	470 ohm	± 5 %	1/6 W	CAR
R236, 254, 269, 270	47 Kohm	± 5 %	1/6 W	CAR
R233	390 ohm	± 5 %	1/6 W	CAR
R246, 253, 336, 363	33 Kohm	± 5 %	1/6 W	CAR
R252	470 Kohm	± 5 %	1/6 W	CAR
R260, 275	5.6 Kohm	± 5 %	1/6 W	CAR
R308, 319, 321	56 ohm	± 5 %	1/6 W	CAR
R330	620 ohm	± 5 %	1/6 W	CAR
R342, 277	39 Kohm	± 5 %	1/6 W	CAR
R343	3.3 Kohm	± 5 %	1/6 W	CAR
R351	1.8 Kohm	± 5 %	1/6 W	CAR
R89	56 ohm	± 5 %	1/4 W	CAR
R111	820 ohm	± 5 %	1/4 W	CAR
R112	560 ohm	± 5 %	1/4 W	CAR
R56	750 ohm	± 5 %	1/4 W	CAR
R353	10 Kohm × 8	± 2 %	1/8 W	FRN
R354	10 Kohm × 6	± 5 %	1/8 W	FRN
R355	10 Kohm × 5	± 5 %	1/8 W	FRN
RV1	1 Kohm	± 20 %	0.3 W	VAR
RV2, 4, 8	500 ohm	± 20 %	0.3 W	VAR

PARTS LIST FOR RX/EXCITER

RV3	5 Kohm	$\pm 20 \%$	0.3 W	VAR
RV6	50 Kohm	$\pm 20 \%$	0.3 W	VAR
RV7, 9, 10	10 Kohm	$\pm 20 \%$	0.3 W	VAR
T1, 7, 8	4455P00215			
T2	4455P00220			
T3	4455P00359			
T4	4455P00222			
T5	4455P00223			
T6	4455P00224			
T9	4455P00218			
T10, 11	ROE45134X			
T12, 13	ROE45133X			
T14 - 16	4495P00063			
T17	E14P - 101	$600 : 600 \text{ ohm}$		
T18	4495P00487			
TH1, 2	D - 61A			
TR1, 2, 8, 11, 12, 16, 17, 24 - 26, 28, 29, 32, 35 - 37, 40, 42, 44 - 46, 49	2SC2786KF			
TR3, 22, 23	3SK73GR			
TR4	2SC1906			
TR5	2SC2053			
TR6, 13, 41, 43	2SC1426			
TR7, 30, 31, 47, 50	2SC1959 - Y			
TR9, 10, 34, 48, 51 - 57	2SA1015 - Y			
TR14, 15, 18 - 21	2SK125			
TR33, 38, 39	2SK30ATH - Y			

PARTS LIST FOR
RX/EXCITER

TP1 - 12
TP13 - 20

WT - 8 - 3
TP - 8G

J1 - 5
J6
J7

TMP - J01X - V2
HIF3F - 34PA - 2.54DSA
HIF3F - 20PA - 2.54DSA

34 poles
20 poles

M1,2

M8 - 8P

SH1,2

MC203B840

PCB1

8545P02077

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PARTS LIST FOR FREQUENCY SYNTHESIZER (PLL SECTION)

Printed Circuit Board
PLL SECTION 5P02078 Version 2

C1, 9 - 11, 14, 15, 18 , 22, 24, 38, 40, 45, 46, 49, 52, 68, 88, 90 - 92, 94, 100, 107, 151, 160 - 162, 164, 189, 201, 223, 237 - 239, 241, 254, 255	0.1 μ F	+ 80 % - 20 %	50 V	CER
C2	6800 PF	\pm 10 %	50 V	CER
C3	6200 PF	\pm 5 %	50 V	CER
C4, 8, 185, 203	10 μ F	\pm 20 %	25 V	AL
C5	9100 PF	\pm 5 %	50 V	CER
C6	3900 PF	\pm 10 %	50 V	CER
C7, 17, 21, 23, 53, 89, 184, 190, 196, 202, 208, 215, 216, 221, 225, 242, 250	0.47 μ F	+ 80 % - 20 %	50 V	CER
C12	390 PF	\pm 10 %	50 V	CER
C13	680 PF	\pm 10 %	50 V	CER
C16, 243	270 PF	\pm 10 %	50 V	CER
C19, 20	330 PF	\pm 10 %	50 V	CER

PARTS LIST FOR FREQUENCY SYNTHESIZER (PLL SECTION)

C25 - 28, 34, 37, 43, 44, 47, 50, 57, 58, 60, 61, 63, 65 - 67, 70, 74, 75, 78, 82, 83, 95, 97, 101, 102, 103, 108, 109, 110, 113, 114, 117, 118, 121 - 124, 128, 129, 130, 134, 135 - 137, 139, 140, 143, 144, 147, 148, 152, 153, 154, 187, 193, 199, 205, 209, 211, 213, 218, 219, 226, 227 - 229, 231, 232 - 235, 240, 244, 249, 251, 252, 253	0.01 μ F	+ 80 % - 20 %	50 V	CER
C29 - 32	27 PF	\pm 5 %	50 V	CER
C33, 35, 73, 76	220 PF	\pm 10 %	50 V	CER
C36, 157	27 PF	\pm 5 %	50 V	CER
C39, 41, 42, 51, 54, 55, 56, 59, 71, 79, 80, 81, 86, 87, 93, 96, 98, 99, 112, 155, 163, 169, 175, 188, 195, 200, 207, 212, 214, 236, 245, 246 - 248	1000 PF	\pm 10 %	50 V	CER
C62, 126	0.5 PF	\pm 0.25 PF	500 V	CER
C64, 69, 116, 120, 125, 132, 138, 142, 149, 150, 182	47 PF	\pm 5 %	50 V	CER
C72	47 PF	\pm 5 %	50 V	CER
C77, 191, 197, 217, 224	47 μ F	\pm 20 %	25 V	AL
C84, 85, 170, 177	18 PF	\pm 5 %	50 V	CER
C104, 106, 111, 133, 186, 192, 198, 204, 210	100 PF	\pm 10 %	50 V	CER

PARTS LIST FOR FREQUENCY SYNTHESIZER (PLL SECTION)

C105	2 PF	± 0.25 PF	50 V	CER
C115, 119, 141, 145	1 PF	± 0.25 PF	50 V	CER
C127, 171, 176	33 PF	± 5 %	50 V	CER
C131	10 PF	± 0.5 PF	50 V	CER
C146, 158	5 PF	± 0.25 PF	50 V	CER
C156, 159	12 PF	± 5 %	50 V	CER
C165	2.2 μ F	± 20 %	25 V	TAN
C166	0.1 μ F	± 10 %	50 V	CER
C167, 174	0.01 μ F	± 10 %	50 V	CER
C168	8 PF	± 0.5 PF	50 V	CER
C172, 178, 230	1 μ F	+ 80 % - 20 %	50 V	CER
C173	3 PF	± 0.25 PF	50 V	CER
C181, 183	22 PF	± 5 %	50 V	CER
C220	33 μ F	± 20 %	16 V	AL
C222	47 μ F	± 20 %	50 V	AL
CV1 - 4	20 PF	± 20 %		VAL
D1	HZ3A - 1		2.5 - 2.7 V	
D2 - 7, 13, 16	1S2588			
D8 - 10, 12, 15	1SS97			
D11, 14	1SV54GC			
D17	HZ6B - 2		5.6 - 5.9 V	
D18	1S1588			
FL1	4515P00344		16.9 MHZ	
IC1, 3	4155P00451			
IC2, 4	4155P00452			
IC5	4155P00453	OPTION		
IC6, 8, 10 - 13	μ PB552C			
IC7, 9	μ PB551C			
IC14, 16 - 20	SN16913P			

PARTS LIST FOR FREQUENCY SYNTHESIZER (PLL SECTION)

IC15	4155P00454			
IC21	NJM78L12A		12 V	
IC22	NJM082D			
IC23	TD62503P			
IC24	TC4072BP			
IC25	NJM7815A		15 V	
IC26	NJM78L05A		5 V	
L1 - 3, 7, 20	470 μ H	$\pm 10 \%$		
L4, 12, 15	22 μ H	$\pm 10 \%$		
L5	220 μ H	$\pm 10 \%$		
L6	12 μ H	$\pm 10 \%$		
L11, 19	4455P00236			
L13, 16	1.8 μ H	$\pm 20 \%$		
L17, 18	0.12 μ H	$\pm 20 \%$		
L8, 9	1.2 μ H	$\pm 20 \%$		
OSC1	4515P00346	10 MHz	1ppm	
R1, 4, 5, 7, 27, 46, 69, 72, 80, 86, 124, 132, 141, 146, 178, 179, 188, 189, 202, 207	4.7 Kohm	$\pm 5 \%$	1/6 W	CAR
R2, 15, 17, 22, 23, 42, 47, 48, 94, 130, 137, 151, 152, 165, 194, 195	10 Kohm	$\pm 5 \%$	1/6 W	CAR
R3, 6, 33, 34, 43, 59, 75, 82, 87, 89, 95, 109, 120, 126, 134, 143	22 Kohm	$\pm 5 \%$	1/6 W	CAR

PARTS LIST FOR
FREQUENCY SYNTHESIZER
(PLL SECTION)

R31	680 ohm	$\pm 5\%$	1/6 W	CAR
R9, 10, 12, 13, 55	470 Kohm	$\pm 5\%$	1/6 W	CAR
R55, 70, 104	1 Mohm	$\pm 5\%$	1/6 W	CAR
R11, 20, 29, 35, 64, 65, 79, 90, 99, 121, 148, 155, 170, 171, 173, 180, 181, 183, 190, 191	100 ohm	$\pm 5\%$	1/6 W	CAR
R14, 18, 19, 30, 32, 45, 52, 53, 73, 100, 103, 106, 114, 136, 145, 150, 153, 157, 175 - 177, 186, 187, 203, 204, 101, 185 211, 212	1 Kohm	$\pm 5\%$	1/6 W	CAR
R16	6.8 Kohm	$\pm 5\%$	1/6 W	CAR
R21, 24, 49, 78, 85, 98, 107, 110, 116, 117, 123, 129, 50, 131, 135, 138, 139, 147, 154, 159, 161, 163	220 ohm	$\pm 5\%$	1/6 W	CAR
R25, 37, 162	22 ohm	$\pm 5\%$	1/6 W	CAR
R26, 77, 84, 149	680 ohm	$\pm 5\%$	1/6 W	CAR
R8, 158, 172, 182, 196, 199	3.3 Kohm	$\pm 5\%$	1/6 W	CAR
R28, 38, 39, 40, 41, 54, 60, 63, 93, 156, 200	2.2 Kohm	$\pm 5\%$	1/6 W	CAR
R36, 57, 61, 67, 68, 102, 113, 115	560 ohm	$\pm 5\%$	1/6 W	CAR
R44, 66, 88, 92, 97, 164	47 ohm	$\pm 5\%$	1/6 W	CAR

PARTS LIST FOR FREQUENCY SYNTHESIZER (PLL SECTION)

R56, 58, 71, 74, 81, 108, 119, 125, 133, 142, 166, 168	47 Kohm	$\pm 5\%$	1/6 W	CAR
R112, 127	82 ohm	$\pm 5\%$	1/6 W	CAR
R62, 96, 122, 128	1.5 Kohm	$\pm 5\%$	1/6 W	CAR
R76, 83, 174, 184	10 ohm	$\pm 5\%$	1/6 W	CAR
R91, 167, 169	470 ohm	$\pm 5\%$	1/6 W	CAR
R111	1.2 Kohm	$\pm 5\%$	1/6 W	CAR
R144	33 ohm	$\pm 5\%$	1/6 W	CAR
R160	15 ohm	$\pm 5\%$	1/6 W	CAR
R192	330 ohm	$\pm 5\%$	1/6 W	CAR
R105, 197	12 Kohm	$\pm 5\%$	1/6 W	CAR
R198	1.8 Kohm	$\pm 5\%$	1/6 W	CAR
R51, 118	1 Kohm	$\pm 5\%$	1/4 W	CAR
R205, 206	100 ohm	$\pm 5\%$	1/4 W	CAR
R201	4.7 Kohm $\times 8$	$\pm 5\%$	1/8 W	FRN
RV1	5 Kohm	$\pm 20\%$	0.3 W	VAR
RV2	20 Kohm	$\pm 20\%$	0.3 W	VAR
P1	HIF3H - 50PA - 2.54DSA		50 poles	
P2	TMP - P01X - B1			Included W1
P3	TMP - P01X - B1			Included W2
P4	TMP - P01X - B1			Included W3
T1 - 4, 19	4455P00227			
T5, 6	4455P00230			
T7 - 10	4455P00235			
T11, 12, 13	4455P00229			

PARTS LIST FOR
 FREQUENCY SYNTHESIZER
 (PLL SECTION)

T16 - 18 4455P00228
 T14, 15 4455P00231

TR1, 2, 5, 7, 10 - 14,
 17 - 19, 21 - 30 2SC2786KF

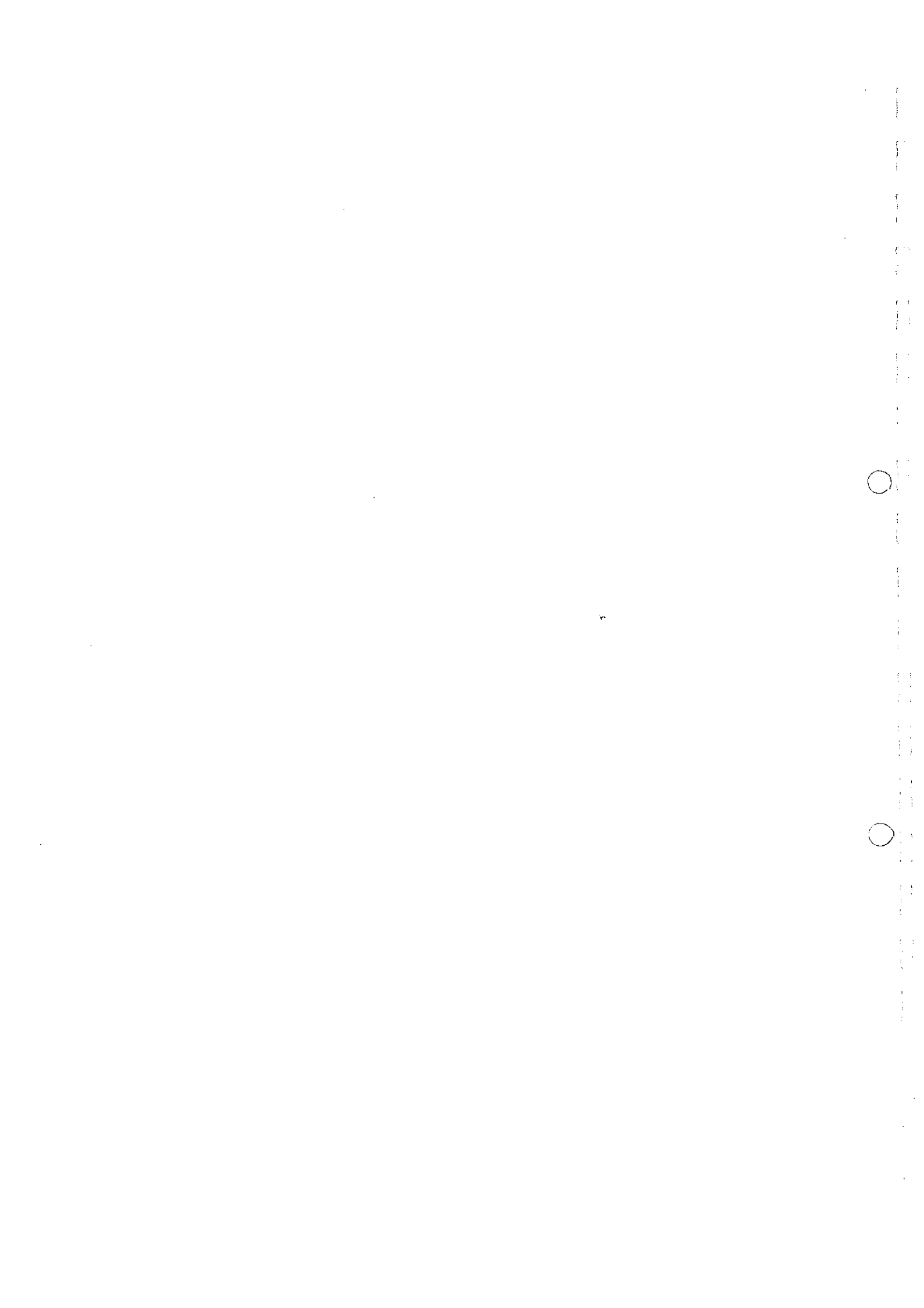
TR3, 33 - 35 2SA1015 - Y
 TR4 2SC1959 - Y
 TR6 3SK73GR
 TR8, 9, 15, 16, 20 2SC1906
 TR31, 32 2SK125
 TR36 2SC3299

X1	4515P00339	10.4565 MHz
X2	4515P00338	10.4535 MHz
X3	4515P00337	10.455 MHz
X4	4515P00340	10.4567 MHz
X5	70N20A	70 MHz
X6	4515P00341	16.7 MHz

TP1 - 17 TP - 8G

W1 4645P00722C
 W2 4645P00723C
 W3 4645P00721C
 W4 DFS020

PCB1 8545P02078



PARTS LIST FOR PRE-SELECTOR

C58, 65	220 PF	± 10 %	50 V	CER
C25, 31	270 PF	± 10 %	50 V	CER
C91, 95	470 PF	± 10 %	50 V	CER
C142	10 μ F	± 20 %	16 V	AL
C138, 141	47 μ F	± 20 %	50 V	AL
D1 - 4	MI402			
D5, 6, 9, 12, 15, 16, 19, 22, 25, 26, 29, 32, 35, 36, 43, 46, 53, 54, 61, 64, 71, 72, 87, 88, 99, 100, 101, 104, 105, 106, 117	1S2588			
D7, 8, 10, 11, 13, 14, 17, 18, 20, 21, 23, 24, 27, 28, 30, 31, 33, 34, 37 - 42, 44, 45, 47 - 52, 55 - 60, 62, 63, 65 - 70, 73 - 86, 89 - 98, 102, 103, 107 - 116	SVC333B			
D118	HZ5C - 1		4.9 - 5.1 V	
IC1, 2	TC4028BP			
IC3, 4	TD62503P			
J1	TMP - J01X - A2			
J2	HIF3BD - 10PA - 2.54DSA		10 poles	
P1	TMP - P01X - B1			Included W1
TP1 - 12	WT - 8 - 3			
TP13 - 16	TP - 8G			

PARTS LIST FOR PRE-SELECTOR

Printed Circuit Board
PRE-SELECTOR 5P02039 Version 2

C1, 3, 9, 15, 103, 112	0.47 μ F	+ 80 % - 20 %	50 V	CER
C74, 78, 82 - 90, 96 - 102, 105, 108 - 110, 113 - 135, 137, 139, 140, 143 - 146	0.1 μ F	+ 80 % - 20 %	50 V	CER
C2, 4, 7, 10, 11, 14, 16 - 23, 26, 28 - 30, 33 - 41, 43, 45 - 47, 49 - 57, 59, 62 - 64, 66 - 73, 76, 79, 80, 94	0.022 μ F	+ 80 % - 20 %	50 V	CER
C136	0.01 μ F	+ 80 % - 20 %	50 V	CER
C8	8 PF	\pm 0.5 PF	50 V	CER
C5, 13	10 PF	\pm 0.5 PF	50 V	CER
C61	12 PF	\pm 5 %	50 V	CER
C27	18 PF	\pm 5 %	50 V	CER
C24, 32, 107	33 PF	\pm 5 %	50 V	CER
C92	36 PF	\pm 5 %	50 V	CER
C44	39 PF	\pm 5 %	50 V	CER
C93	47 PF	\pm 5 %	50 V	CER
C75, 81	56 PF	\pm 5 %	50 V	CER
C77	91 PF	\pm 5 %	50 V	CER
C60	100 PF	\pm 5 %	50 V	CER
C42, 48	120 PF	\pm 10 %	50 V	CER
C6, 12	150 PF	\pm 10 %	50 V	CER
C104, 106, 111	180 PF	\pm 10 %	50 V	CER

PARTS LIST FOR PRE-SELECTOR

L1, 4	1.8 μ H	$\pm 20 \%$		
L5, 8	3.3 μ H	$\pm 10 \%$		
L9, 12	5.6 μ H	$\pm 10 \%$		
L14, 17	12 μ H	$\pm 10 \%$		
L13	18 μ H	$\pm 10 \%$		
L18	100 μ H	$\pm 10 \%$		
L19, 22	120 μ H	$\pm 10 \%$		
L2, 3	220 μ H	$\pm 10 \%$		
L6, 7, 23, 33	470 μ H	$\pm 10 \%$		
L27, 32	680 μ H	$\pm 10 \%$		
L10, 11	1 mH	$\pm 10 \%$		
L26, 31	1.5 mH	$\pm 10 \%$		
L15, 16, 24	2.2 mH	$\pm 10 \%$		
L25, 30	3.3 mH	$\pm 10 \%$		
L20, 21	10 mH	$\pm 10 \%$		
L28, 29	33 mH	$\pm 10 \%$		
L34 - 36	22 mH	$\pm 10 \%$		
R1, 2	1 Kohm	$\pm 5 \%$	1/4 W	CAR
R3, 13, 14, 16, 26, 27, 35, 36, 44, 45, 53, 54, 60, 69	1.2 Kohm	$\pm 5 \%$	1/4 W	CAR
R85	3.9 Kohm	$\pm 5 \%$	1/4 W	CAR
R61	4.7 Kohm	$\pm 5 \%$	1/4 W	CAR
R84	330 ohm	$\pm 5 \%$	1/6 W	CAR
R70 - 75	470 ohm	$\pm 5 \%$	1/6 W	CAR
R6, 10, 19, 23, 29, 33, 38, 42, 47, 51, 63, 67, 76 - 81	4.7 Kohm	$\pm 5 \%$	1/6 W	CAR
R83	10 Kohm	$\pm 5 \%$	1/6 W	CAR
R89 - 97	22 Kohm	$\pm 5 \%$	1/6 W	CAR
R15, 86, 87	47 Kohm	$\pm 5 \%$	1/6 W	CAR

PARTS LIST FOR PRE-SELECTOR

R4, 5, 7 - 9, 11, 12, 17, 18, 20, 21, 22, 24, 25, 28, 30 - 32, 34, 37, 39 - 41, 43, 46, 48 - 50, 52, 55 - 59, 62, 64 - 66, 68, 82	100 Kohm	$\pm 5\%$	1/6 W	CAR
R88	10 Kohm $\times 6$	$\pm 5\%$	1/8 W	CAR
T2, 3	4455P00331			
T4, 5	4455P00334			
T6, 7	4455P00337			
T12, 13	4455P00343			
T8	4455P00347			
T11	4455P00348			
T14	4455P00349			
T17	4455P00350			
T9, 10	4455P00384			
T15, 16	4455P00385			
T18, 19	4455P00386			
T1	4495P00487			
TR1	2SC2786KF			
W1	4645P00697			
PCB1	8545P02039			

PARTS LIST FOR POWER AMPLIFIER

Printed Circuit Board
PA 5P02033 Version 2

C21 - 24, 31 - 35, 42, 70, 75, 79, 83, 87, 94	1 μ F	\pm 5 %	63 V	FILM
C1, 2, 8, 9, 11, 13, 16, 17, 71, 76, 80, 84, 88, 93, 95, 96	0.1 μ F	\pm 5 %	100 V	FILM
C25, 27	0.1 μ F	\pm 5 %	250 V	FILM
C72, 77, 81, 85, 89, 92	0.01 μ F	\pm 5 %	250 V	FILM
C14, 15	2200 PF	\pm 10 %	400 V	FILM
C19, 73, 78, 82, 86, 90, 91	1000 PF	\pm 10 %	400 V	FILM
C10, 12	820 PF	\pm 10 %	50 V	CER
C3, 5, 7, 43, 48, 55, 58, 59, 63 - 68	0.01 μ F	+ 80 % - 20 %	50 V	CER
C45 - 47, 49 - 52, 54, 60 - 62	0.1 μ F	+ 80 % - 20 %	50 V	CER
C26	560 PF	\pm 5 %	300 V	MICA
C36, 37	220 PF	\pm 5 %	1 KV	MICA
C28, 29	3300 PF	\pm 5 %	300 V	MICA
C38 - 41	30000 PF	\pm 5 %	300 V	MICA
C4, 6, 44, 53, 56, 57	10 μ F	\pm 20 %	50 V	AL
C30, 33	33 μ F	\pm 20 %	50 V	AL
C74	100 μ F	\pm 20 %	50 V	AL
C18, 20	47 μ F	\pm 20 %	35 V	AL
C69	100 μ F	\pm 20 %	63 V	AL

PARTS LIST FOR POWER AMPLIFIER

L3, 4, 7, 8	4495P00330			
L9, 10	4495P00331A			
L1	4495P00358			
L2	4495P00359			
L13, 14	4495P00360			
L5, 6	4495P00453			
L11, 12	4495P00483			
L15, 16	100 μ H	$\pm 10 \%$		
R34, 43	22 ohm	$\pm 5 \%$	1/6 W	CAR
R47	47 ohm	$\pm 5 \%$	1/6 W	CAR
R30, 44	100 ohm	$\pm 5 \%$	1/6 W	CAR
R60, 61	270 ohm	$\pm 5 \%$	1/6 W	CAR
R56	390 ohm	$\pm 5 \%$	1/6 W	CAR
R45	820 ohm	$\pm 5 \%$	1/6 W	CAR
R49	2.2 Kohm	$\pm 5 \%$	1/6 W	CAR
R55	3.3 Kohm	$\pm 5 \%$	1/6 W	CAR
R48, 50, 52	4.7 Kohm	$\pm 5 \%$	1/6 W	CAR
R4, 29, 33, 36, 39, 40, 46	10 Kohm	$\pm 5 \%$	1/6 W	CAR
R37	22 Kohm	$\pm 5 \%$	1/6 W	CAR
R57	27 Kohm	$\pm 5 \%$	1/6 W	CAR
R51	51 Kohm	$\pm 5 \%$	1/6 W	CAR
R35	100 Kohm	$\pm 5 \%$	1/6 W	CAR
R2	6.8 ohm	$\pm 5 \%$	1/4 W	CAR
R5, 7, 31, 41	100 ohm	$\pm 5 \%$	1/4 W	CAR
R8	270 ohm	$\pm 5 \%$	1/4 W	CAR
R1, 3, 17, 18	820 ohm	$\pm 5 \%$	1/4 W	CAR
R12 - 14	3.9 ohm	$\pm 5 \%$	1/2 W	CAR
R10, 11	4.7 ohm	$\pm 5 \%$	1/2 W	CAR
R15, 16	22 ohm	$\pm 5 \%$	1/2 W	CAR
R25 - 28	100 ohm	$\pm 5 \%$	1/2 W	CAR
R6	820 ohm	$\pm 5 \%$	1/2 W	CAR

PARTS LIST FOR POWER AMPLIFIER

R54	3.3 Kohm	± 5 %	1/2 W	CAR
R9	2.7 ohm	± 5 %	2 W	METAL
R19 - 22	6.8 ohm	± 5 %	2 W	METAL
R23, 24	22 ohm	± 5 %	2 W	METAL
R58, 59	820 ohm	± 5 %	2 W	METAL
R32	1 Kohm	± 5 %	2 W	METAL
R38, 53	1.8 Kohm	± 5 %	2 W	METAL
R42	2.2 Kohm	± 5 %	2 W	METAL
TR11	2SA429(G)0 - TH			
TR1, 8	2SA1015 - Y			
TR2 - 4	2SC2098			
TR5, 6	2SC2652			
TR10, 14	2SC2786KF			
TR9, 12	2SC3299			
TR7, 13	2SD1590			
T4	4495P00323A			
T6	4495P00324A			
T1	4495P00325			
T3	4495P00328			
T7	4495P00361			
T2	4495P00408A			
T5	4495P00418			
T8	4495P00419			
T9	4495P00484A			
T10	4495P00485A			
RV1, 2	200 ohm	± 20 %	0.5 W	VAL
IC1	TLP504A			
IC2	NJM78L08A	8 V		
IC3	NJM2903D			

PARTS LIST FOR POWER AMPLIFIER

D1	1SS101		
D2, 4	1S1588		
D3	HZ20 - 3	20.2 - 21.1 V	
S2	OHD3 - 100M		
S1	OHD3 - 110M		
TP1 - 4	TP - 8G		
J1	JMP - J01X - A2		
P1	HIF2B - 10D - 2.54RA	10 poles	Included W3
P3	1 - 480319 - 0		Included W1
P4	1 - 480319 - 0		Included W2
P6	BNC - LP - 3	50 ohm	Included W4
P7	HIF3BA- 10D - 2.54R	10 poles	Included W3
W1	4645P00710C		
W2	4645P00711C		
W4	4645P00713C		
W3	4645P00718C		
PCB1	8545P02033		

PARTS LIST FOR
POWER AMPLIFIER

Printed Circuit Board (Version 2) 5P03008A

C2,8,9,13,11,16,17 25,27,28,29,31,32 53,71,76,80,84,88 93	0.1 μ F	$\pm 5 \%$	100V	FILM
C3,5,7,43,48,55,58 59,63-68,97-105	0.01 μ F	+ 80 % - 20 %	50V	CER
C4,6,44,56,57	10 μ F	$\pm 20 \%$	50V	AL
C10,12	820 pF	$\pm 10 \%$	50V	CER
C14,15	2200 pF	$\pm 10 \%$	400V	FILM
C18,20,	47 μ F	$\pm 20 \%$	35V	AL
C19,73,78,82,86,90 91	1000 pF	$\pm 10 \%$	400V	FILM
C21,22,34,35,42,70 75,79,83,87,94	1 μ F	$\pm 10 \%$	63V	FILM
C23,24	2700 pF	$\pm 10 \%$	50V	CER
C36,37	220 pF	$\pm 5 \%$	1kV	MICA
C38-41	0.03 μ F	$\pm 5 \%$	300V	MICA

PARTS LIST FOR
POWER AMPLIFIER

C45-47,49-52,54,60 61,62	0.1 μ F	+80 % -20 %	50V	CER
C69	100 μ F	\pm 20 %	63V	AL
C72,77,81,85,89,92	0.01 μ F	\pm 10 %	400V	FILM
C74	100 μ F	\pm 20 %	50V	AL
D1,10	1SS101			NEC
D2,4,11,12	1S1588			TOSHIBA
D3	HZ20-3	22-24V	ZENER	HITACHI
D5-9	1S1887			TOSHIBA
IC1	TLP504A	OP/C \times 4		TOSHIBA
IC2,4	78L08	AVR + 8V		
IC3,5	NJM2903D	COMPLATOR		new JRC
IC6	TC4013BP	D/FF		TOSHIBA
J1	TMP-J01X-A2	50 Ω	COAX.	

PARTS LIST FOR
POWER AMPLIFIER

L1	4495P00358A				
L2	4495P00359A				
L3,4	4495P00330A				
L5,6	4495P00453				
L7	3.3 μ H	$\pm 20 \%$			
L11,12	4495P00483A				
L13,14	4495P00360A				
R1,3,17,18	820 Ω	$\pm 5 \%$	$\frac{1}{4}$ W	CAR	
R2	6.8 Ω	$\pm 5 \%$	$\frac{1}{4}$ W	CAR	
R4,29,33,36,39,40,46 66,67	10k Ω	$\pm 5 \%$	$\frac{1}{6}$ W	CAR	
R5,7,31,41	100 Ω	$\pm 5 \%$	$\frac{1}{4}$ W	CAR	
R6	820 Ω	$\pm 5 \%$	$\frac{1}{2}$ W	CAR	
R8	270 Ω	$\pm 5 \%$	$\frac{1}{4}$ W	CAR	
R9	270 Ω	$\pm 5 \%$	2 W	METAL	

PARTS LIST FOR
POWER AMPLIFIER

R10,11	4.7 Ω	$\pm 5\%$	$\frac{1}{2}$ W	CAR
R12,13,14	3.9 Ω	$\pm 5\%$	$\frac{1}{2}$ W	CAR
R15,16	22 Ω	$\pm 5\%$	$\frac{1}{2}$ W	CAR
R19,21	1k Ω	$\pm 5\%$	$\frac{1}{4}$ W	CAR
R20,22	15 Ω	$\pm 5\%$	2 W	METAL
R23,24	1.2 Ω	$\pm 5\%$	2 W	METAL
R25-28	100 Ω	$\pm 5\%$	$\frac{1}{2}$ W	CAR
R30	100 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R32	1k Ω	$\pm 5\%$	2 W	METAL
R34	22 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R35	100k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R37,64,65,70	22k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R38,53	1.8k Ω	$\pm 5\%$	2 W	METAL
R42	2.2k Ω	$\pm 5\%$	2 W	CAR
R43	820 Ω	$\pm 5\%$	2 W	CAR

PARTS LIST FOR
POWER AMPLIFIER

R44	1.5k Ω	$\pm 5\%$	$\frac{1}{4}$ W	CAR
R45	820 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R47,68	47 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R48,50,52,63	4.7k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R49	2.2k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R51	51k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R54	3.3k Ω	$\pm 5\%$	$\frac{1}{2}$ W	CAR
R55	3.3k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R56	390 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R57	27k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R58,59	15k Ω	$\pm 5\%$	$\frac{1}{4}$ W	CAR
R60	270 Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R62	120 Ω	$\pm 5\%$	2 W	CAR
R69	1.5k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR
R71	270k Ω	$\pm 5\%$	$\frac{1}{6}$ W	CAR

PARTS LIST FOR
POWER AMPLIFIER

RV1	200 Ω	
RV2	5k Ω	
RV3	10k Ω	
S1,2	110°C	SWITCH
T1	4495P00325	
T2	4495P00408A	
T3	4495P00328	
T4	4495P00326A	
T5	4495P00327B	
T6	4495P00324A	
T7	4495P00361	
T8	4495P00419A	
T9	4495P00484B	
T10	4495P00485B	

PARTS LIST FOR
POWER AMPLIFIER

TR1,8	2SA1015-Y	TOSHIBA
TR2,3,4	2SC2098	TOSHIBA
TR5,6	MRF150MP	MOTOROLA
TR7	2SD1590	NEC
TR9,12	2SC3299	TOSHIBA
TR10,14	2SC2786KF	NEC
TR11	2SA429(G)0-TM	TOSHIBA
TR15	2SC1590	TOSHIBA
W1	4645P00710C	
W2	4645P00711C	
W3	4645P00718C	
W4	4645P00713H	



PARTS LIST FOR LOW PASS FILTER

Printed Circuit Board
L. P. F. 5P02034 Version 2

C22	27 PF	$\pm 5\%$	1 KV	MICA
C35,36	33 PF	$\pm 5\%$	1 KV	MICA
C54	39 PF	$\pm 5\%$	1 KV	MICA
C6	43 PF	$\pm 5\%$	1 KV	MICA
C1,3,15	220 PF	$\pm 5\%$	1 KV	MICA
C26	51 PF	$\pm 5\%$	1 KV	MICA
C20	56 PF	$\pm 5\%$	1 KV	MICA
C24,7	68 PF	$\pm 5\%$	1 KV	MICA
C40	75 PF	$\pm 5\%$	1 KV	MICA
C33	82 PF	$\pm 5\%$	1 KV	MICA
C2	91 PF	$\pm 5\%$	1 KV	MICA
C27	100 PF	$\pm 5\%$	1 KV	MICA
C23,25,38	110 PF	$\pm 5\%$	1 KV	MICA
C43	120 PF	$\pm 5\%$	1 KV	MICA
C4,41	130 PF	$\pm 5\%$	1 KV	MICA
C39,50	150 PF	$\pm 5\%$	1 KV	MICA
C9,37	160 PF	$\pm 5\%$	1 KV	MICA
C49,55	180 PF	$\pm 5\%$	1 KV	MICA
C16,52	200 PF	$\pm 5\%$	1 KV	MICA
C5	240 PF	$\pm 5\%$	1 KV	MICA
C18	270 PF	$\pm 5\%$	1 KV	MICA
C29	300 PF	$\pm 5\%$	1 KV	MICA
C21,28	330 PF	$\pm 5\%$	1 KV	MICA
C47,51	390 PF	$\pm 5\%$	1 KV	MICA
C31,53	430 PF	$\pm 5\%$	1 KV	MICA
C34,48	510 PF	$\pm 5\%$	1 KV	MICA
C13,17,45	560 PF	$\pm 5\%$	1 KV	MICA
C19	620 PF	$\pm 5\%$	1 KV	MICA
C11,14,42	750 PF	$\pm 5\%$	1 KV	MICA
C30	820 PF	$\pm 5\%$	1 KV	MICA

PARTS LIST FOR LOW PASS FILTER

Printed Circuit Board
L. P. F. 5P02034 Version 2

C32	910 PF	± 5 %	1 KV	MICA
C8, 46	1200 PF	± 5 %	1 KV	MICA
C44	1300 PF	± 5 %	1 KV	MICA
C12	1600 PF	± 5 %	1 KV	MICA
C10	1800 PF	± 5 %	1 KV	MICA
C56	1 μ F	± 5 %	100 V	FILM
C57, 60	0.1 μ F	± 5 %	100 V	FILM
C58, 59	0.01 μ F	± 5 %	250 V	FILM
C61 - 86	0.01 μ F	+ 80 % - 20 %	50 V	CER
C87 - 97	0.1 μ F	+ 80 % - 20 %	50 V	CER
D1 - 8	S5500B			
D9, 10	1SS101			
J1, 2	BNC - LR	50 ohm		
P1	HIF3F - 16PA - 2.54DS		16 poles	
T1, 2	4495P00419			
K1 - 16	MR301 - 24HS		24 V	
R1 - 4	100 ohm	± 5 %	1/2 W	CAR
R5, 6	10 Kohm	± 5 %	1/6 W	CAR
PCB1	8545P02034			

PARTS LIST FOR
LOW PASS FILTER

L25,26	4495P00337B
L27	4495P00338A
L8,9	4495P00339A
L10,15,16	4495P00341A
L24	4495P00344B
L7	4495P00345A
L5	4495P00346A
L1,4	4495P00410
L17	4495P00412
L22	4495P00413
L6	4495P00415
L23	4495P00416
L2,3	4495P00420
L11-13	4495P00422
L14	4495P00424
L19,20,21	4495P00425
L18	4495P00426

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PARTS LIST FOR POWER SUPPLY UNIT

Power Supply Main Circuit NJD-1966B

C1 - 3	330 μ F	$\pm 20 \%$	50 V	AL
C4, 5	1 μ F	$\pm 5 \%$	50 V	FILM
C8A, B	4700 μ F	+ 50 % - 10 %	35 V	AL
C9	0.001 μ F	$\pm 10 \%$	630 V	FILM
D1A, B	30BL11			
D2, 3	W03C			
F1	QAD25 - 100			
K1	MB3D12			
K2	G5D - 1011H			
L1	T - 24B - 125			
L2	4476P03860A			
R1 x3	330 ohm	$\pm 5 \%$	3 W	METAL
R2	10 ohm	$\pm 5 \%$	2 W	METAL
ST1	5003F	110°C/M - 1		
P1	HIF3C - 20D - 2.54C		20 poles	
P2	171822 - 6		6 poles	
P3	1 - 171822 - 0		10 poles	
P4	171822 - 5		5 poles	
P5	171822 - 4		4 poles	
P6	1 - 171822 - 0		10 poles	
P7	171822 - 3		13 poles	
P8, 9	170148 - 2			

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PARTS LIST FOR POWER SUPPLY-A1 CIRCUIT

Printed Circuit Board Power Supply-A1 P06192B

C1A ~T	0.0022 μ F	$\pm 10 \%$	50 V	FILM
C2	0.022 μ F	$\pm 10 \%$	400 V	FILM
C3A ~J, 20A ~B, 21A~B ,26	100 μ F	$\pm 20 \%$	63 V	AL
C4	2200 μ F	+ 50 % - 10 %	63 V	AL
C5	100 μ F	$\pm 20 \%$	63 V	AL
C6	100 μ F	$\pm 20 \%$	35 V	AL
C7, 14	100 μ F	$\pm 20 \%$	25 V	AL
C8	47 μ F	$\pm 20 \%$	25 V	AL
C9, 18	0.047 μ F	$\pm 5 \%$	50 V	FILM
C10, 11, 13, 17	0.01 μ F	$\pm 10 \%$	50 V	FILM
C12, 30 - 35	0.0047 μ F	$\pm 10 \%$	50 V	FILM
C15	10 μ F	$\pm 20 \%$	100 V	AL
C16	1 μ F	$\pm 20 \%$	50 V	AL
C19	220 μ F	$\pm 20 \%$	16 V	AL
C22, 27~29	0.047 μ F	$\pm 10 \%$	50 V	FILM
C23, 24 ,36	0.1 μ F	$\pm 5 \%$	50 V	FILM
C25	10 μ F	$\pm 20 \%$	50 V	AL
CR1, 2	03P2M			
D1	W03C			
D2	HZ12B - 2		12.6~13.1 V	
D3, 8	HZ3A - 1		2.5~ 2.7 V	
D4, 7, 9, 14, 15, 16, 19, 21, 22	1S953			
D5, 10, 11	HZ6C - 2		6.0~ 6.3V	
D6, 12	HZ9C - 3		9.3~ 9.7 V	
D17, 18, 20	CTG - 22			
F1	T - MF61NR15A			
F2	T - MF60NR0.5A			
FS1, 2	TS - 04 - P - SN			

PARTS LIST FOR POWER SUPPLY-A1 CIRCUIT

IC1	MB3759				
J2	171825 - 6			6 poles	
J3	1 - 171825 - 0			10 poles	
J4	171825 - 5			5 poles	
J5	171825 - 4			2 poles	
L1 A~T	4476P03861				
L2	H7A - T14.5 - 20 - 7.5				
R1A ~T	3.3 Kohm	± 5 %	1/4 W		CAR
R2, 8, 11, 13, 14, 24, 25, 28	1 Kohm	± 5 %	1/4 W		CAR
R3	10 ohm	± 5 %	2 W		METAL
R4A ~B	10 mohm				
R5	1.5 Kohm	± 5 %	2 W		METAL
R6, 16, 27, 30, 38, 40, 46	10 Kohm	± 5 %	1/4 W		CAR
R7	330 Kohm	± 5 %	1/4 W		CAR
R9, 10, 33, 34, 41	2.2 Kohm	± 5 %	1/4 W		CAR
R12	39 Kohm	± 5 %	1/4 W		CAR
R15, 50	33 Kohm	± 5 %	1/4 W		CAR
R17, 31, 37, 39, 42, 43, 45, 49	4.7 Kohm	± 5 %	1/4 W		CAR
R18, 47	12 Kohm	± 5 %	1/4 W		CAR
R19	220 Kohm	± 5 %	1/4 W		CAR
R20, 29, 32, 44	100 ohm	± 5 %	1/4 W		CAR
R21	51 Kohm	± 5 %	1/4 W		CAR
R22	5.6 Kohm	± 5 %	1/4 W		CAR
R23, 48	3.9 Kohm	± 5 %	1/4 W		CAR
R26	470 ohm	± 5 %	1/4 W		CAR
R35, 56	6.8 Kohm	± 5 %	1/4 W		CAR
R36	1.8 Kohm	± 5 %	1/4 W		CAR
R51	39 ohm	± 5 %	1/4 W		CAR
R52	220 ohm	± 5 %	1/4 W		CAR
R53	560 ohm	± 5 %	1/4 W		CAR
R54A~B	820 ohm	± 5 %	2 W		METAL
R55	56 Kohm	± 5 %	2 W		METAL

PARTS LIST FOR POWER SUPPLY-A1 CIRCUIT

TR1A~T	2SK532			
TR2	2SD717			
TR3	2SA1015 - Y			
TR4, 7, 9, 10, 11, 13	2SC1815			
TR5	2SC1173			
TR6	2SA1012			
TR8	2SD1164			
TR12	2SK30A			
VR1	1 Kohm	±20 %	0.25 W	VAR
VR2	500 ohm	±20 %	0.25 W	VAR
PCB1	3546P06192B			

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PARTS LIST FOR POWER SUPPLY-A2 CIRCUIT

Printed Circuit Board Power Supply-A2 P06193

C1	2200 μ F	+ 50 % - 10 %	63 V	AL
C2	0.1 μ F	\pm 5 %	50 V	FILM
C3, 4, 13	0.0047 μ F	\pm 10 %	50 V	FILM
C5, 6, 7	1000 PF	\pm 10 %	630 V	FILM
C8	220 μ F	\pm 20 %	35 V	AL
C9 A~ B	470 μ F	\pm 20 %	25 V	AL
C10 A~ B	1000 μ F	\pm 20 %	10 V	AL
C11, 16, 24	10 μ F	\pm 20 %	50 V	AL
C12	0.047 μ F	\pm 5 %	50 V	FILM
C14, 18	0.001 μ F	\pm 5 %	50 V	FILM
C15, 22	100 μ F	\pm 20 %	25 V	AL
C17	0.0022 μ F	\pm 10 %	630 V	FILM
C19, 20, 21	0.01 μ F	\pm 10 %	50 V	FILM
C21	100 μ F	\pm 20 %	10 V	AL
C23	0.1 μ F	\pm 5 %	50 V	FILM
DS1, 2	10DL2C41			
DS3	ESAC82 - 004			
F1	T - MF60NR3A			
FS1	TS - 04 - P - SN			
IC1	μ PC1042C			
L1	CY13 \times 8 \times 4.5P			
L2, 3	CY13 \times 8 \times 4.5A			

PARTS LIST FOR POWER SUPPLY-A2 CIRCUIT

R1	82 Kohm	±5 %	1/4 W	CAR
R2 A~B	0.22 ohm	±5 %	1 W	METAL
R3, 4, 12, 15, 18, 22 - 25, 27 - 30, 35	1 Kohm	±5 %	1/4 W	CAR
R5	100 ohm	±5 %	2 W	METAL
R6	3.3 ohm	±5 %	2 W	METAL
R7	33 ohm	±5 %	2 W	METAL
R8 , 36, 38 - 40	10 Kohm	±5 %	1/4 W	CAR
R9	100 ohm	±5 %	1 W	METAL
R10, 11, 16	2.2 Kohm	±5 %	1/4 W	CAR
R13	12 Kohm	±5 %	1/4 W	CAR
R14	100 Kohm	±5 %	1/4 W	CAR
R17	100 ohm	±5 %	1/4 W	CAR
R20	8.2 Kohm	±5 %	1/4 W	CAR
R21, 26, 34	4.7 Kohm	±5 %	1/4 W	CAR
R31	22 ohm	±5 %	1 W	METAL
R32, 33, 37	39 ohm	±5 %	1/4 W	CAR
TR1, 2	2SK525			
TR3 , 10	2SA1015 - Y			
TR4, 7, 11	2SC1815			
TR5, 8	2SC2655			
TR6, 9	2SA1020			
T1	4416P05730A			
VR1	1 Kohm	±20%	0.25 W	VAR
PCB1	3546P06193			

PARTS LIST FOR POWER SUPPLY-A3 CIRCUIT

Printed Circuit Board Power Supply-A3 P06318

C1 - 6	0.1 μ F	$\pm 5 \%$	50 V	FILM
C7	470 μ F	$\pm 20 \%$	16 V	AL
D1	HZ9C - 1 - L - TA			
D2, 3	1S953			
J6	1 - 171825 - 0	10 poles		
J7	171825 - 3	3 poles		
PC1, 3	TLP521 - 2			
R1A ~B, 2A ~B, 4, 8	4.7 Kohm	$\pm 5 \%$	1/4 W	CAR
R3, 7	1 Kohm	$\pm 5 \%$	1/4 W	CAR
R9	220 ohm	$\pm 5 \%$	1/4 W	CAR
R10	120 ohm	$\pm 5 \%$	1/4 W	CAR
R11	10 Kohm	$\pm 5 \%$	1/4 W	CAR
R12	12 Kohm	$\pm 5 \%$	1/4 W	CAR
TR1, 2	2SC1815			
PCB1	4546P06318			

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PARTS LIST FOR JUNCTION

Printed Circuit Board
Junction 5PO1764A Version 2

C1	0.1 μ F	+ 80 % - 20 %	50 V	CER
C2, 4	1 μ F	+ 80 % - 20 %	50 V	CER
C3	0.01 μ F	+ 80 % - 20 %	50 V	CER
F1	T - HF60NR	2A		
FS1	F - 711			
P1	HIF3BA - 60PA - 2.54DSA		60 poles	
P2	HIF3BA - 34PA - 2.54DSA		34 poles	
P3	HIF3BA - 20PA - 2.54DSA		20 poles	
P4	HIF3BA - 16PA - 2.54DSA		16 poles	
P5	HIF3BD - 10PA - 2.54DSA		10 poles	
P6	HNC2 - 2.5P - 3DS		3 poles	
R1	12 Kohm	\pm 5 %	1/6 W	CAR
R2	1 Kohm	\pm 5 %	1/6 W	CAR
TB1	TW - 8145 - 24P		24 poles	
TB2, 3	TW - 8145 - 12P		12 poles	
TB4 - 6	P - 90 with LTO - 81T - 250N		1 pole	
PCB1	8545PO1764A			

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PARTS LIST FOR LC NETWORK

Printed Circuit Board
LC NETWORK 5P01553B Version 2

C1	30 PF	± 5 %	1KV	MICA
C2	60 PF	± 5 %	1KV	MICA
C3	120 PF	± 5 %	1KV	MICA
C4, 13	240 PF	± 5 %	1KV	MICA
C5, 14	480 PF	± 5 %	1KV	MICA
C6, 15	960 PF	± 5 %	1KV	MICA
C7	1900 PF	± 5 %	1KV	MICA
C8	3800 PF	± 5 %	1KV	MICA
C9, 118	30 PF	± 5 %	2.5 KV	MICA
C10, 11, 119	60 PF	± 5 %	2.5 KV	MICA
C12, 117	120 PF	± 5 %	2.5 KV	MICA
C16 - 23, 32 - 34, 37 - 74, 77 - 87, 89 - 93, 95, 97, 100 - 105, 25-30 107, 108, 110 - 114, 121	0.1 μ F	+ 80 % - 20 %	50 V	CER
C122 - 124	0.022 μ F	+ 80 % - 20 %	50 V	CER
C88	1000 PF	± 10 %	50 V	CER
C94, 96, 99, 116	47 μ F	± 20 %	50 V	AL
C115	2 PF	± 0.25 PF	500 V	CER
C120	10 PF	± 0.5 PF	500 V	CER
C98	short			
K1, 35	MR72C - 24S	+24 VDC		
K2 - 9, 11 - 16, 18 - 20, 26 - 32	MR71C - 24S	+24 VDC		
K23 - 25, 33	R09 - 1020			
K34	R09 - 1107			
D14, 15, 17	HLMP - 6208	red 8 elements		
D16	HLMP - 6205	red 5 elements		
D18 - 36, 39 - 45, 53, 55	1S2471			
D47	1SS101			

PARTS LIST FOR LC NETWORK

D48	GL112H9	yel	12 segments	
D49	GL3PG7	green		
D50	GL3PR7	red		
IC1	NJM7812A	+12 V		
IC2	NJM7805A	+ 5 V		
T1-2	4455P00298			
T3	4455P00293			
P1,3	HIF3H - 20D - 2.54DSA		20 poles	
P2	HIF3H - 60D - 2.54DSA		60 poles	
TB1,3 - 6	P - 90 with LTO - 81T - 250N			
TB2	S - 306 - 12 P		12 poles	
J1	M - R 2503 5/8 - 24UNEF - 2A			
J2	BNC- PJ - 1.5			Included W2
L1	4455P00281			
L2	4455P00282			
L3	4455P00283			
L4	4455P00284			
L5	4455P00285			
L6	4143T00089			
L7	4143T00090			
L8	4143T00091			
L9	4143T00092			
L10	4143T00093			
L11	4143T00094			
L12	47 μ H			

PARTS LIST FOR LC NETWORK

S1, 2	MTA206N - P			
S3	BP1F - 2H4	with button 8Z0082		
S4, 5	BT1D - 2H4			
S6, 7, 9	DSS708			
S8	DSS705			
R1, 50	300 ohm	$\pm 2\%$	10 W	WW
R2, 51	75 ohm	$\pm 2\%$	10 W	WW
R3	150 ohm	$\pm 2\%$	10 W	WW
R6	47 ohm	$\pm 50\%$	1 W	METAL
R7	10 Mohm	$\pm 10\%$	5 W	CAR
R9, 18 - 26,	10 ohm	$\pm 5\%$	1/4 W	CAR
R10 - 17, 29 - 35	10 ohm	$\pm 5\%$	1/6 W	CAR
R37	390 ohm	$\pm 5\%$	1 W	METAL
R40, 41, 43	4.7 Kohm $\times 8$	$\pm 5\%$	1/8 W	FRN
R42	4.7 Kohm $\times 5$	$\pm 5\%$	1/8 W	FRN
R44	100 ohm	$\pm 5\%$	1/4 W	CAR
R45	2.7 Kohm	$\pm 5\%$	1/4 W	CAR
R46	270 ohm	$\pm 5\%$	1/4 W	CAR
R47, 48	47 ohm	$\pm 5\%$	3 W	METAL
R52	220 ohm	$\pm 5\%$	1/4 W	CAR
R53	10 Kohm	$\pm 5\%$	1/4 W	CAR
R55, 57	33 Kohm	$\pm 5\%$	1/4 W	CAR
R56, 58	4.7 Kohm	$\pm 5\%$	1/4 W	CAR
R59	47 ohm	$\pm 5\%$	1/4 W	CAR
TR1, 2	2SC1959 - Y			
W1	HC2L - 2			
W2	4645P00812A			
PCB1	8545P01553B			

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PARTS LIST FOR ATU CONTROL

Printed Circuit Board
ATU Control 5P01749A Version 2

C1, 2, 19, 21	470 PF	± 10 %	50 V	CER
C3, 4, 29, 32	1000 PF	± 10 %	50 V	CER
C5, 6, 35, 39, 40, 68	0.01 μ F	+ 80 % - 20 %	50 V	CER
C7, 11, 14, 16 - 18, 20, 22, 23, 26 - 28, 30, 31, 34, 37, 38, 41 45 - 48, 50 - 58, 60 - 62, 64 - 67, 69 - 74	0.1 μ F	+ 80 % - 20 %	50 V	CER
C8, 9	22 PF	± 5 %	50 V	CER
C10, 49	10 μ F	± 20 %	35 V	AL
R12, 13, 24, 25, 33, 42 - 44	10 μ F	± 20 %	25 V	AL
C15	1 μ F	± 20 %	50 V	AL
C63	47 μ F	± 20 %	25 V	AL
D1, 5, 12 - 15	1S2471			
D2	HZ6C - 2		6.0 - 6.3 V	
D3, 7, 8, 11	1S8101			
D4	HZ9C - 3		9.3 - 9.7 V	
D6	HZ2B - 1		1.9 - 2.6 V	
D9, 10	HZ5B - 1		4.6 - 4.8 V	
D16	1S897			
D17	1S1588			
L1, 2	100 μ H	± 10 %		
IC1	μ PD7810G - 36			
IC2	74HCT373P			
IC3	MBM2764 - 20		with IC26 - 2806 - GS4	
IC4	74HC273P			
IC5	74HC00P			
IC 6 - 9	TD62003P			
IC10	IR - 2433			

PARTS LIST FOR ATU CONTROL

IC11, 12	NJM2904D			
IC13, 14	NJM2903D			
IC15	NJM78L06A		6 V	
TR1 - 3, 6, 7, 9, 10	2SC1959 - Y			
TR5	2SC2298			
TR8	2SA1015 - Y			
J1, 3	HIF3H - 20PA - 2.54DSA		20 poles	
J2	HIF3H - 60PA - 2.54DSA		60 poles	
M1, 2	M8 - 8P			
R1 - 29, 94, 95	10 ohm	$\pm 5\%$	1/6 W	CAR
R30, 32, 35, 42, 66, 69, 98	10 Kohm	$\pm 5\%$	1/6 W	CAR
R31, 41	47 Kohm	$\pm 5\%$	1/6 W	CAR
R33	470 ohm	$\pm 5\%$	1/6 W	CAR
R34	18 Kohm	$\pm 5\%$	1/6 W	CAR
R36, 44 - 47, 49, 65, 68, 83, 85, 87, 89, 106, 107	1 Kohm	$\pm 5\%$	1/6 W	CAR
R43, 109	2.7 Kohm	$\pm 5\%$	1/6 W	CAR
R48, 50, 103	22 Kohm	$\pm 5\%$	1/6 W	CAR
R51, 91 - 93, 96, 99, 100, 105, 112	4.7 Kohm	$\pm 5\%$	1/6 W	CAR
R52	27 ohm	$\pm 5\%$	1/6 W	CAR

PARTS LIST FOR ATU CONTROL

R53, 54	18 ohm	± 5 %	1/6 W	CAR
R55, 57, 58, 60, 70, 108	100 ohm	± 5 %	1/6 W	CAR
R56, 59	68 ohm	± 5 %	1/6 W	CAR
R61, 111	120 ohm	± 5 %	1/4 W	CAR
R62	240 ohm	± 5 %	1/6 W	CAR
R63	62 ohm	± 5 %	1/6 W	CAR
R64, 67	56 ohm	± 5 %	1/6 W	CAR
R71, 72, 101, 102	5.6 Kohm	± 5 %	1/6 W	CAR
R75, 77	680 ohm	± 5 %	1/6 W	CAR
R79, 81	820 ohm	± 5 %	1/6 W	CAR
R97	33 Kohm	± 5 %	1/6 W	CAR
R104	47 ohm	± 5 %	1/6 W	CAR
R110	33 ohm	± 5 %	1/6 W	CAR
R113	1 Kohm	± 5 %	1/4 W	CAR
X1	4515P00342	6.5536 MHz		
PCB1	8545P01749A			

