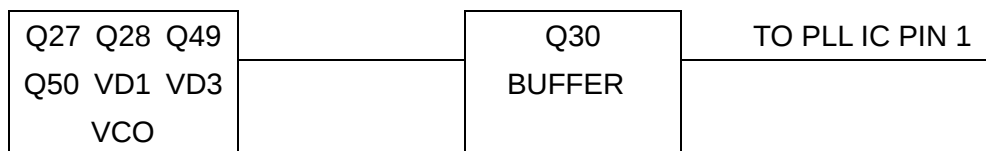


MIDLAND220 (10W/4W) MULTI CIRCUIT DESCRIPTION

INTRODUCTION

THE FREQUENCIES FOR TRANSMITTER AND RECEIVER LOCAL FREQUENCIES ARE ALL DRIVEN FROM A SINGLE 10.240MHz CRYSTAL (X1) BY MEANS OF A PHASE LOCKED LOOP.

THE FIRST LOCAL OSCILLATOR FREQUENCIES ARE 14.915MHz(Poland-400CH CH.1) TO 20.875MHz(Sweden CH.24) FOR RECEIVER. THE SECOND LOCAL FREQUENCY IS FIXED AT 10.240MHz(X1) TO GENERATE SECOND IF 455 [KHz] . DURING TRANSMIT, THE VCO OF THE PLL OPERATES 12.805MHz TO 15.785MHz.



RX LOCAL FREQUENCY : 14.915MHz(Poland-400CH CH.1) TO 20.875MHz (Sweden CH. 24)

TX FREQUENCY : 12.805MHz TO 15.785MHz

THE VCO OPERATING FREQUENCY FOR THE RECEIVER IS 14.915 MHz (Poland-400CH CH. 1) TO 12.805MHz (Sweden CH. 24) AS THE FIRST LOCAL OSCILLATOR, INJECTED THROUGH THE BUFFER AMP Q30 INTO THE FIRST TR MIXER Q3 Q4.

DESCRIPTIONS OF EACH BLOCK

INTRODUCTION

THE SYNTHESIZER IS IMPLEMENTED WITH THE FOLLOWING COMPONENTS : PLL IC(U13), CRYSTAL(X4) VCO, VARI_CAP DIODE(VD1)

THE U13 is a high performance dual frequency synthesizer with two integrated high frequency pre-scalers for RF operation up to 1.1GHz.

THE Q27, Q28,,Q48,Q51, T3, C108, VD1, C109, C105, C106, C107 ARE CLAP OSCILLATOR CIRCUIT TO OPERATE AS A VCO OF THE U13.

THE Q31 IS A SWITCHING DIODE TO CONNECT OR DISCONNECT THE TUNING CAPACITOR IN THE VCO OSCILLATOR TANK CIRCUIT FOR TRANSMITTER OR RECEIVER.

THE Q30 WORKS AS A BUFFER AMP FOR RX LOCAL FREQUENCIES AND TX CARRIER GENERATING FREQUENCIES.

THE Q49 Q50 IS A SWITCHING DIODE TO CONNECT OR DISCONNECT THE TUNING CAPACITOR IN THE VCO OSCILLATOR TANK CIRCUIT FOR BAND SELECTS.

REFERENCE FREQUENCY (CRYSTAL)

THE CRYSTAL, X4(10MHZ) AND OTHER COMPONENTS AS PIN.3 OF U13 AND U9 CAN MAKE A REFERENCE FREQUENCY OSCILLATOR WITH CK (Pin6), DATA (Pin7), EN (Pin8) terminals in U13 are used for MCU serial data interface . THIS SET IS USED EXTERNAL CLOCK SOURCE BY THE CRYSTAL. THE REF_FREQUENCY(10MHz) IS ADJUSTED BY TC1 EXACTLY.

VCO

THE Q 2 7 Q 2 8 AND SURROUNDING PARTS ARE CONSISTING A CLAPP OSCILLATOR WORKS AS A VCO OF U13 WITH APPROPRIATE CONTROL VOLTAGE ON VD1.THE VCO CAN BE OSCILLATE OVER THE REQUIRES RANGE OF 12.805MHz TO 20.875MHz .

PHASE DETECTOR AND VCO CONTROL

THE PHASE DETECTOR IS A DIGITAL PHASE COMPARATOR WHICH COMPARES THE PHASE OF THE REFERENCE SIGNAL WITH PROGRAMMABLE DIVIDER OUTPUT SQUARE WAVES AND DEVELOPS A SERIES OF PULSE WHOSE DC LEVEL DEPENDS ON THE PHASE ERROR OF EACH SIGNAL.

THE PHASE DETECTOR PULSE OUTPUT IS FED TO AN ACTIVE LOW PASS FILTE

R, AND FED TO VARI_CAP VD1 CONTROL THE VCO FREQUENCY.

SWITCHING OF TUNING CAPACITOR IN VCO

THE VCO CIRCUIT MUST USE WITH A WIDE RANGE OF FREQUENCIES 12.805 MHz TO 15.785MHz FOR TRANSMITTER AND 14.915MHz(CH.1) TO 20.875MHz FOR RECEIVER.

TO COMPLY ABOVE RANGE OF VCO, THE TUNING CAPACITANCE SHOULD SWITCHED FOR TRANSMISSION OR RECEPTION.

THE TUNING CIRCUIT CONSISTS WITH C119, Q31 WHEN THE VCO IS WORKING AS A RECEIVER, WHEN TRANSMITTING MODE, C119, Q31 BECOMES TURN ON. WHEN RECEIVING MODE, C119, Q31 BECOMES OFF, T3 AND THE VD1 CAPACITANCE OF MAKE TUNING FUNCTION.

RECEIVER LOCAL OSCILLATOR OUTPUTS

1ST MIXER : THE OUTPUT SINGLES OF Q28 IS INJECTED TO THE SOURCES OF 1ST MIXER Q3 Q4 IN THE 1ST IF MIXER SECTION.

2ND MIXER : THE OUTPUT OF 10.240MHz OSCILLATOR CIRCUIT WITH X1 IS INJECTED INTO THE U1. INCOMING IF SIGNAL AND 10.695MHz SIGNAL ARE MIXED INSIDE THE U1 TO EXTRACT 2ND IF SIGNAL 455 [KHz] .

DESCRIPTION OF OTHER CIRCUITS

TRANSMITTER

RF AMPLIFICATION

THE OUTPUT OF BUFFER AMP Q40 IS FED THROUGH TUNING C111,L10,L11 TO THE BASE OF PRE DRIVER AMP Q42(BAND CONTROL Q41). THE PRE DRIVER AMP OUTPUT SIGNAL FED THROUGH TO DRIVER AMP(Q43), FED THROUGH TO POWER AMP(Q65) TO THE ANTENNA.

CIRCUIT FOR SUPPRESSION OF SPURIOUS RADIATION

THE TUNING CIRCUIT BETWEEN THE OUTPUT OF FINAL AMP Q65 AND ANTENNA, 3 STAGE "LPF TYPE" NETWORK L16, L22, L20, C99, C100, C125, C180 C181,ANT(180PF); SERVES AS A SPURIOUS RADIATION SUPPRESSOR.

THIS NETWORK ALSO SPURIOUS RADIATION SUPPRESSOR.

THIS NETWORK ALSO SERVES TO MATCH THE IMPEDANCE BETWEEN TX POWER TR Q44 AND ANTENNA.

MAXIMUM MODULATION CONTROL

MODULATION SIGNALS ARE FILTERED WITH RC NETWORK AND GOES TO THE AUDIO_AMP IC(U6) TO MAKE NOMINAL SIGNAL LEVEL TO ACHIEVE WANTED MODULATION.

TO CONTROL INCOMING AUDIO SIGNAL BY ALC CIRCUIT. THE ALC ARE Q17,Q18 Q12,D16,VR5, THAT'S CIRCUIT CONTROL MAXIMUM MODULATION CAPABILITY AND MAXIMUM MODULATION LIMITTING.

RECEIVER

(1) RF AMP Q1 AMPLIFY RF SIGNAL FROM ANTENNA(Q52 Q53 BAND CONTROL), AND THEN THE AMPLIFIED RF SIGNAL IS FED THROUGH MIXER(Q3 Q4) TO THE BASE OF MIXER Q3 Q4, ALSO VCO SOURCE'S FREQUENCY LOWER 10.695MHz THAN THE FREQUENCY OF EACH CHANNEL IS SUPPLIED TO MIXER.

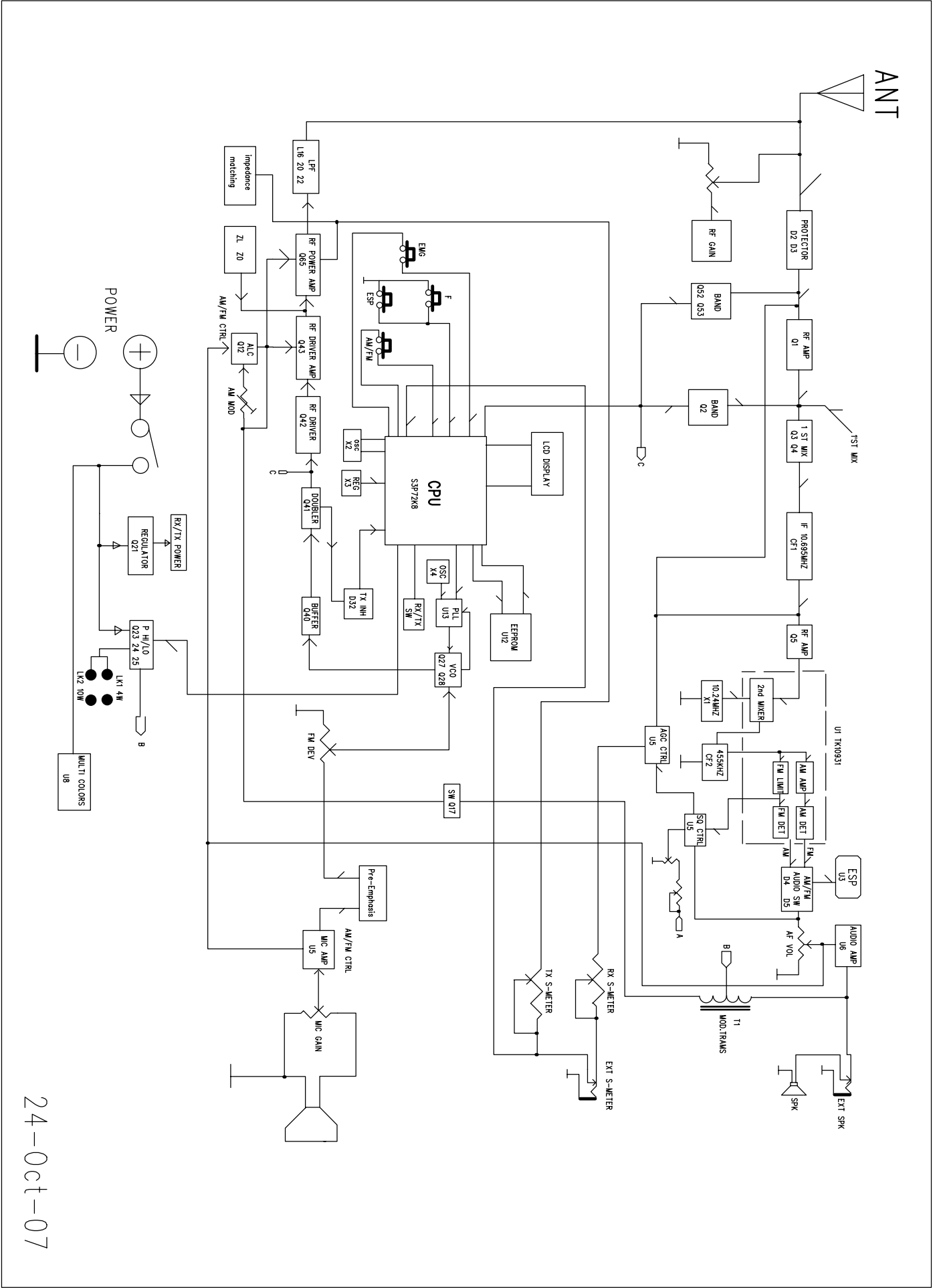
(2) THE SOURCE OF 10.695MHz FREQUENCY IS FED THROUGH CF1 TO 2'ND MIXER U1.

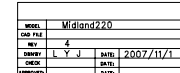
(3) THE 455 [KHZ] FREQUENCY SIGNAL IS PRODUCED FROM U1 BY MIXING THE OUTPUT SOURCE OF CF1 10.695MHz FILTER AND THE SOURCE OF 10.24MHz FREQUENCY FROM CRYSTAL OSCILLATOR X1.

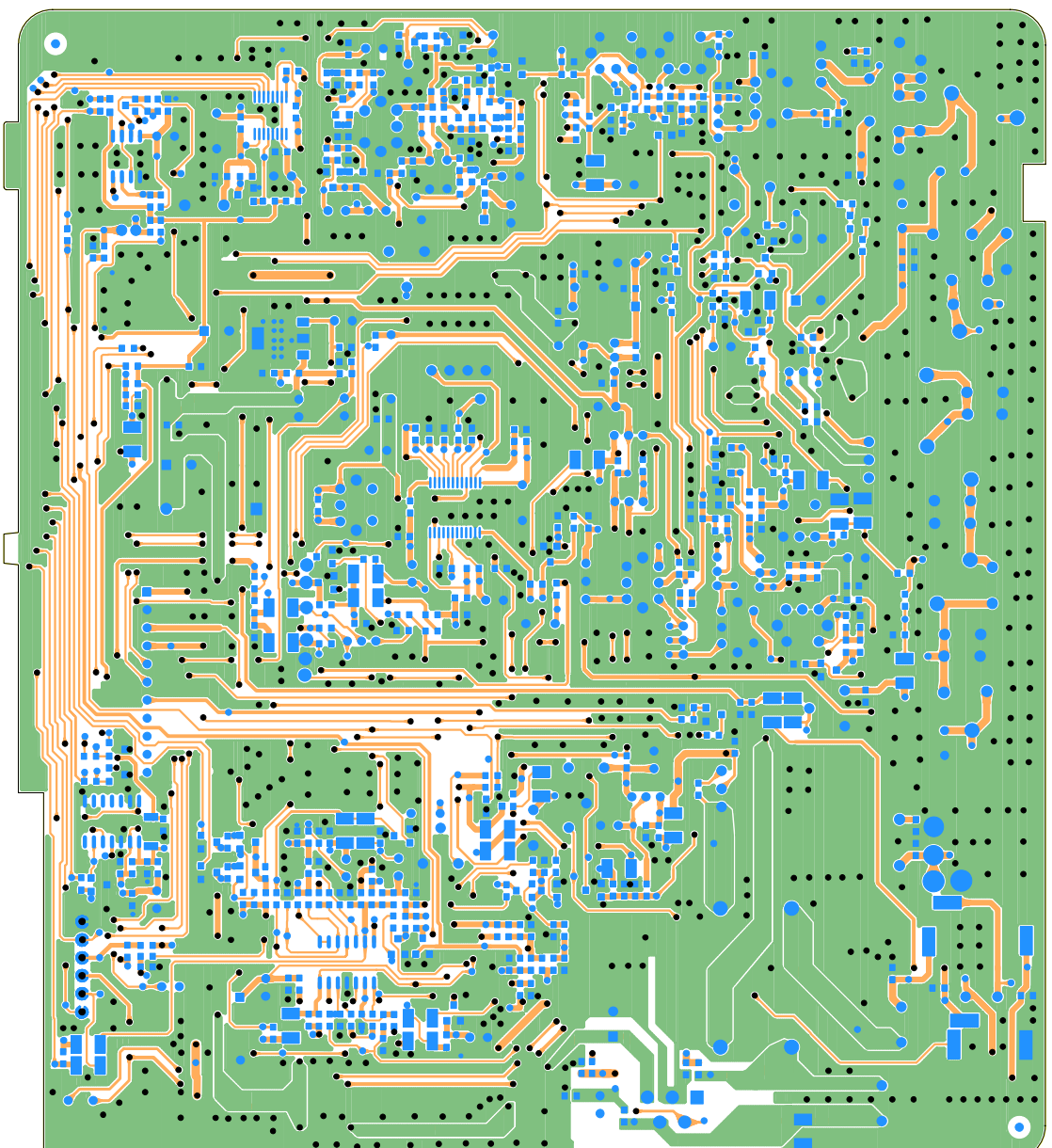
(4) THE U1 IS IF AMP, AND D4(AM) D5(FM) IS DETECT DIODE. AUDIO SIGNAL RECOVER BY THAT DIODE.

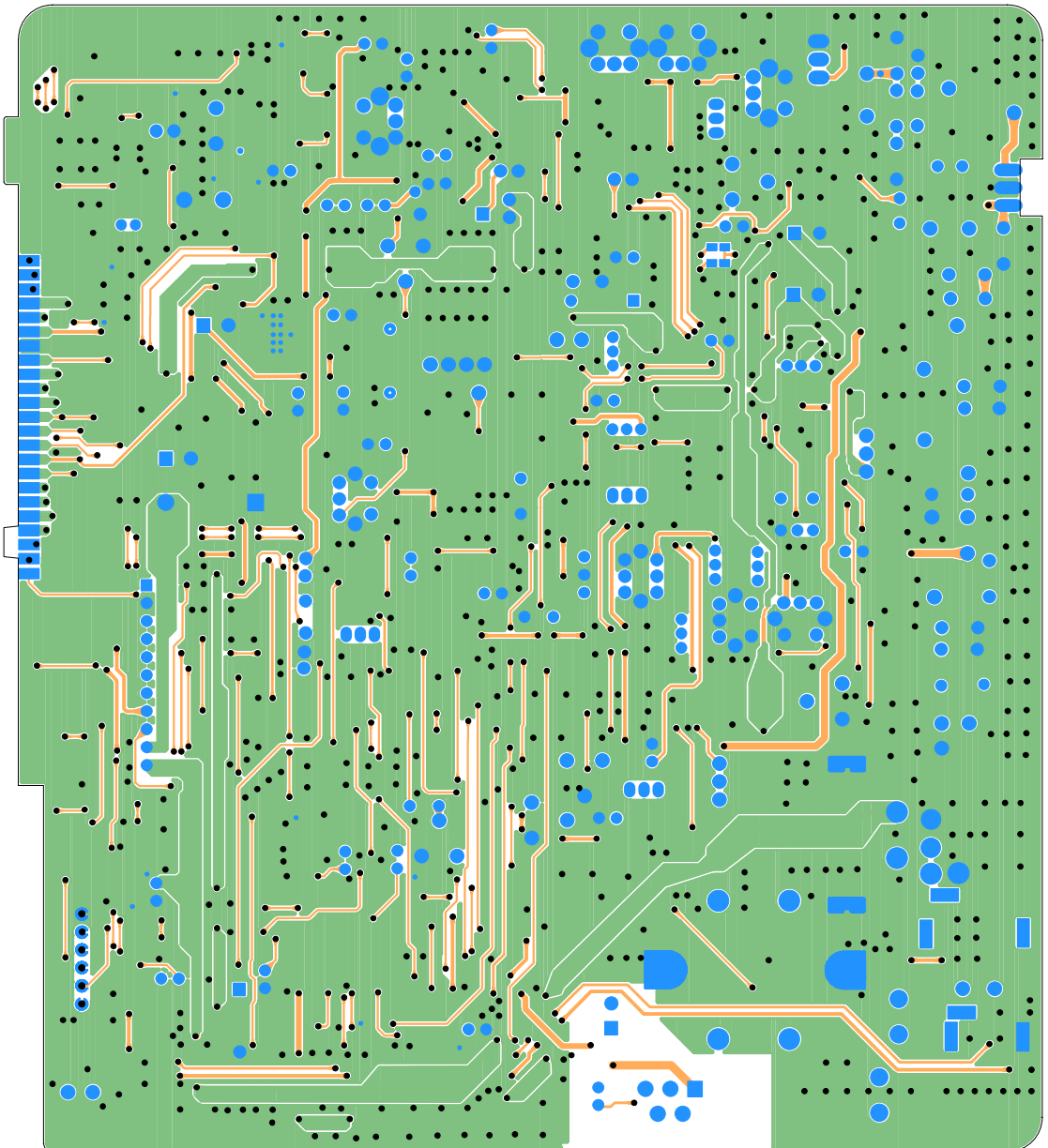
THE AUDIO SIGNAL IS FED THROUGH C36 TO ESP(key esp) and AUDIO POWER AMP(U6) FOR DRIVING SPEAKER.

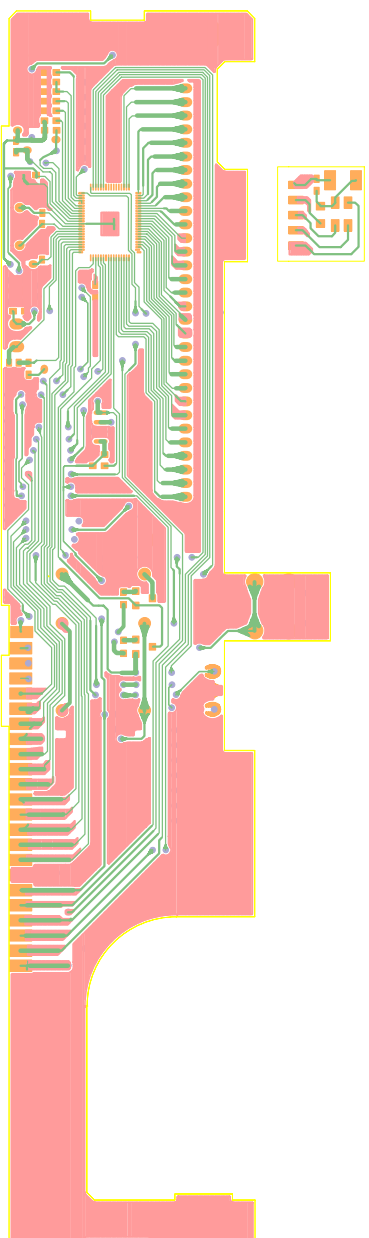
(5) THE U8 IS MULTI COLOR CONTROL.



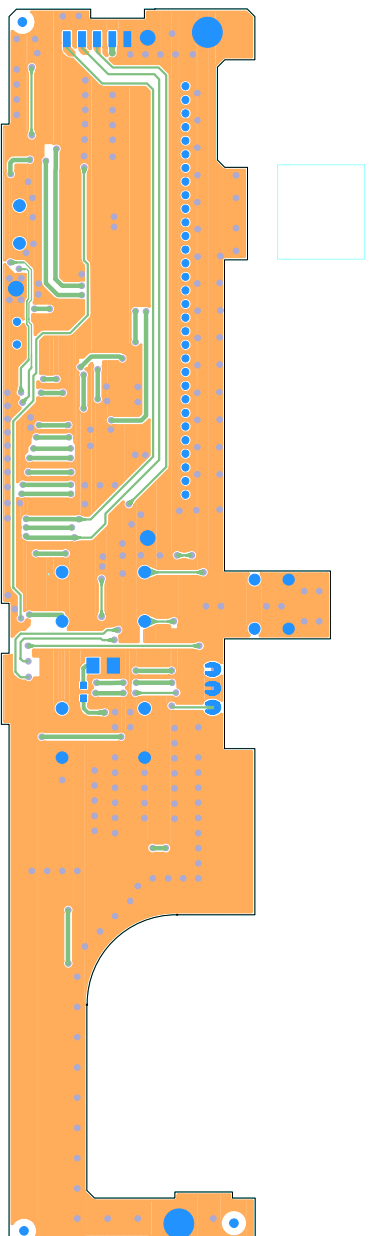




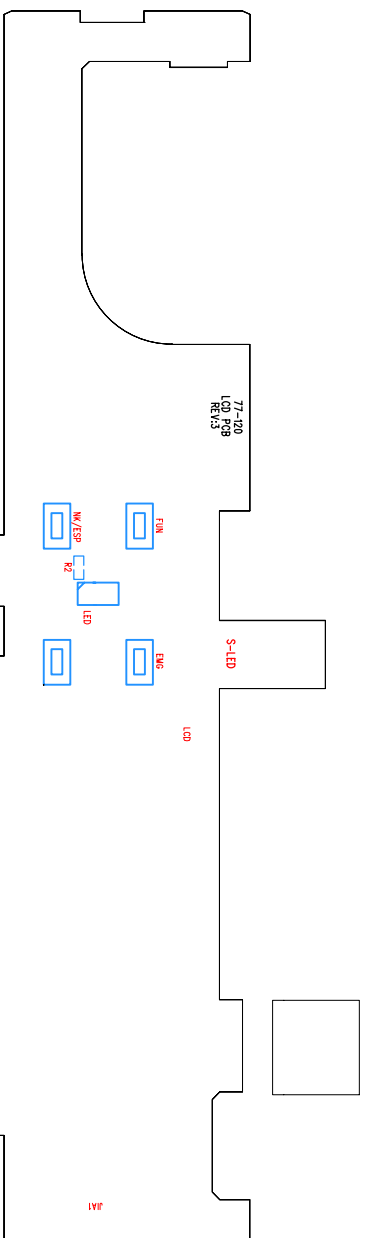




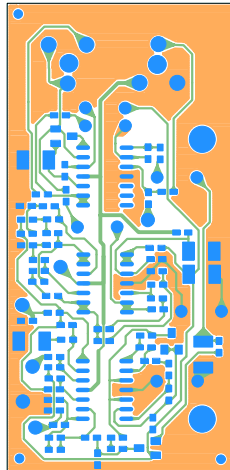
FR-4 THD1.6mm D/S
77-120
LED PCB

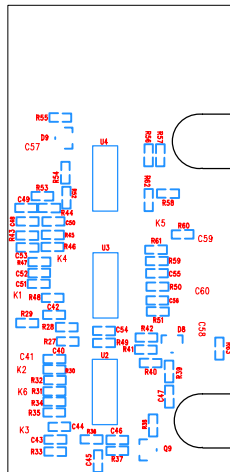


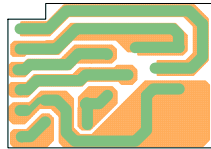
FR-4 THD1.6mm D/S
77-120
LED PCB



ГЕД PCB
051-77
2\0 mm2.1QHT 4-93







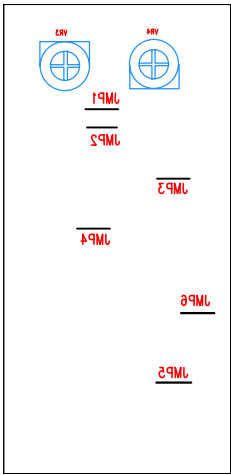
94V0 THD1.6mm S/S

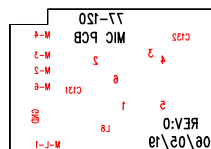
77-120

MIC PCB

REV:0

19-05-06





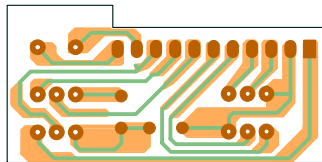
94V0 THD1.6mm S/S

77-120

MIC PCB

REV:0

19-05-06

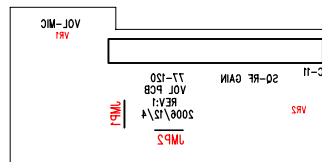


94V0 THD1.6mm S/S

VOL PCB

REV:1

06-12-4

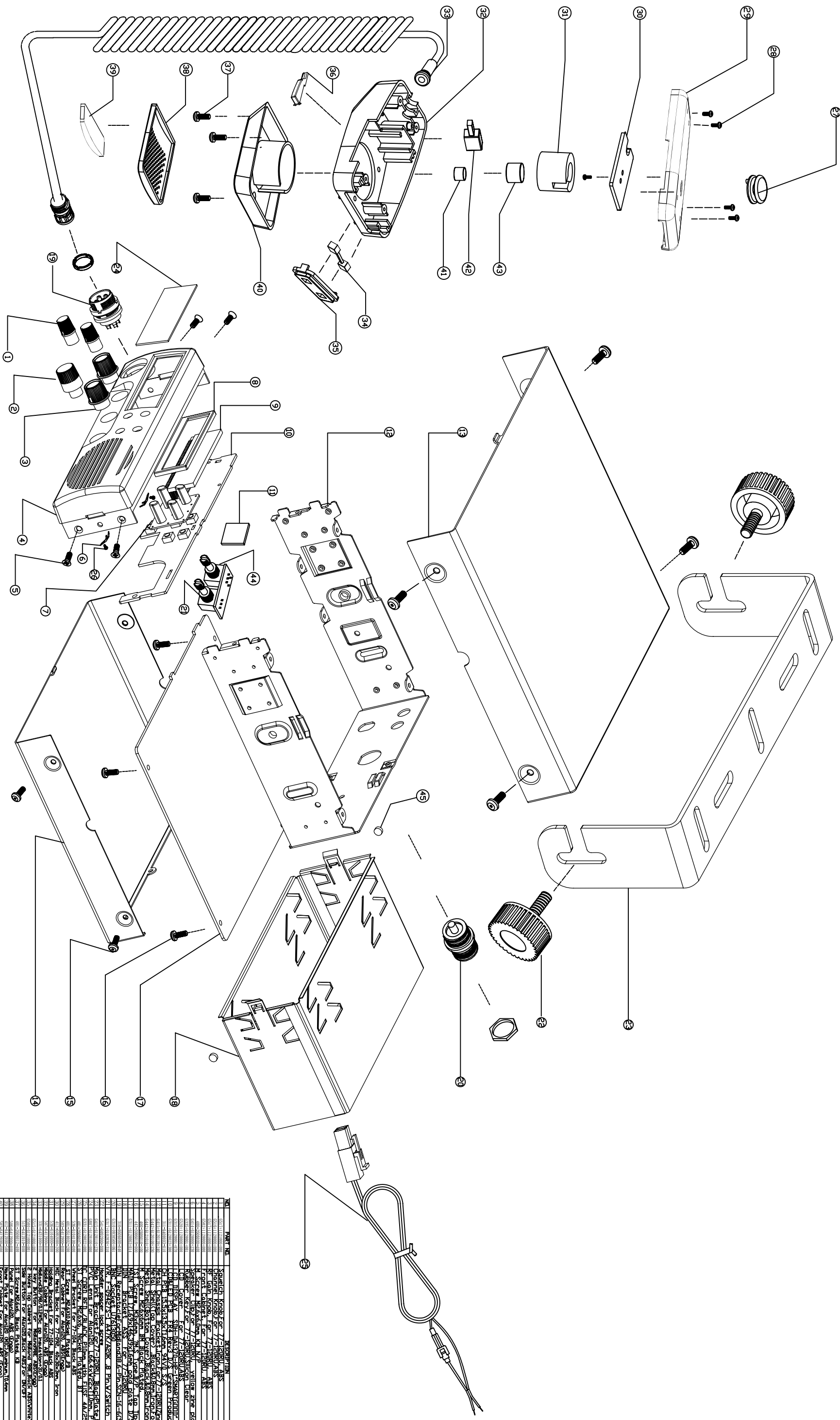


94V0 THD1.6mm S/S

VOL PCB

REV:1

06-12-4



MIDLAND 220 Exploded View

PART NO.	DESCRIPTION	QTY.
1	SCREW 1/4" X 1/4" (10-32)	1
2	SCREW 1/4" X 1/4" (10-32)	1
3	SCREW 1/4" X 1/4" (10-32)	1
4	SCREW 1/4" X 1/4" (10-32)	1
5	SCREW 1/4" X 1/4" (10-32)	1
6	SCREW 1/4" X 1/4" (10-32)	1
7	SCREW 1/4" X 1/4" (10-32)	1
8	SCREW 1/4" X 1/4" (10-32)	1
9	SCREW 1/4" X 1/4" (10-32)	1
10	SCREW 1/4" X 1/4" (10-32)	1
11	SCREW 1/4" X 1/4" (10-32)	1
12	SCREW 1/4" X 1/4" (10-32)	1
13	SCREW 1/4" X 1/4" (10-32)	1
14	SCREW 1/4" X 1/4" (10-32)	1
15	SCREW 1/4" X 1/4" (10-32)	1
16	SCREW 1/4" X 1/4" (10-32)	1
17	SCREW 1/4" X 1/4" (10-32)	1
18	SCREW 1/4" X 1/4" (10-32)	1
19	SCREW 1/4" X 1/4" (10-32)	1
20	SCREW 1/4" X 1/4" (10-32)	1
21	SCREW 1/4" X 1/4" (10-32)	1
22	SCREW 1/4" X 1/4" (10-32)	1
23	SCREW 1/4" X 1/4" (10-32)	1
24	SCREW 1/4" X 1/4" (10-32)	1
25	SCREW 1/4" X 1/4" (10-32)	1
26	SCREW 1/4" X 1/4" (10-32)	1
27	SCREW 1/4" X 1/4" (10-32)	1
28	SCREW 1/4" X 1/4" (10-32)	1
29	SCREW 1/4" X 1/4" (10-32)	1
30	SCREW 1/4" X 1/4" (10-32)	1
31	SCREW 1/4" X 1/4" (10-32)	1
32	SCREW 1/4" X 1/4" (10-32)	1
33	SCREW 1/4" X 1/4" (10-32)	1
34	SCREW 1/4" X 1/4" (10-32)	1
35	SCREW 1/4" X 1/4" (10-32)	1
36	SCREW 1/4" X 1/4" (10-32)	1
37	SCREW 1/4" X 1/4" (10-32)	1
38	SCREW 1/4" X 1/4" (10-32)	1
39	SCREW 1/4" X 1/4" (10-32)	1
40	SCREW 1/4" X 1/4" (10-32)	1
41	SCREW 1/4" X 1/4" (10-32)	1
42	SCREW 1/4" X 1/4" (10-32)	1
43	SCREW 1/4" X 1/4" (10-32)	1
44	SCREW 1/4" X 1/4" (10-32)	1
45	SCREW 1/4" X 1/4" (10-32)	1

INDUSTRIAL CO., LTD. ENGINEERING DEPT.

Model: Multi Band CB Radio

Customer: Midland220

Product: CB

Standard:

B.O.M No.

REV: SO

Issue Date :2007/11/1

ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

#1 Main Body								
#1-1 ELECTRONICS PARTS					OVERALL			
	ITEM	P/N or DWG No.	TYPE	REFERENCE	QTY	HK\$	VENDER	CODE
	1-1	G324+6324022+010	FUSE 4A 250V 6G-4A 250CG 6X32mm FAST BLOW (UL) "MOBICON"		2			
	1-2	G331+6120012+001	DC CORD RED /BLACK 200mm		1			
	1-3	G331+6120022+000	DC CORD RED /BLACK P10mm with FUSE 4A/250V		1			
	1-4	G308+0422130+101	Push button switch, 2P2T, Knob height13mm, PBS-221126,Green product 06.6.7		1			
	1-5	G301+2041020+053	C. Cap, Y5R, 0.001uF, 50V, +/-10%	C104	1			
	1-6	313-6030987-000	MIC CAP D9.8X7mm 1.5V HQ64 60+/-3dB		1			
	1-7	G327+0107030+260	WIRE UL1007 AWG #26 3+70+3mm BLACK		1			
	1-8	G327+0107030+262	WIRE UL1007 AWG #26 3+70+3mm RED		1			
	1-9	G310+0930500+061	BNC Socket U7613050 浩輝		1			
	1-10	G309+0022186+086	Speaker,oval,L4060AE000-8B2K22,8 Ohm,3W,'MASTER'		1			
	1-11	G311+6120003+014	MAIN PCB 171.69x146.39x1.6mm gold plate D/S		1			
	1-12	319-6092020-000	Choke Coil Transformer for 77-092, EN6889 EI-19, XC190026 "CO-ELECTONIC"	T2	1			
	1-13	G319+6092020+001	MOD. Transformer , 3002557 EI-28 "FINE"	T1	1			
	1-14	G302+6881931+107	RF COIL TH17-881931NP, GP	L1	1			
	1-15	G302+6881933+108	RF COIL MKH7-881933NP GP	L2	1			
	1-16	G302+6881934+108	RF COIL LKHC-881934NP GP	L3	1			
	1-17	G302+5881935+108	IFT COIL LKHC-881935NP GP	L4	1			
	1-18	G302+5881937+108	IFT COIL AHK8-881937NP GP	L5	1			
	1-19	G302+6881932+108	RF COIL LKHC-881932NP GP	L10 L11	2			
	1-20	G302+6881936+008	RF COIL LKHC-881936NP Green Product	L12	1			
	1-21	G302+7MN7327+067	OSC COIL 7BM-N7327-LF "HAN-TELECOM"	T3	1			
	1-22	G302+3007025+080	COIL SPRING 2.5X0.8X7T:R 0.11UH CW "HAN TELECOM	L14	1			
	1-23	G302+3005560+080	Spring Coil,CW,T5.5xID6xWD0.8mm	L16 L22	2			
	1-24	G302+3013550+060	COIL SPRING 5x0.6x13.5T:R	L6 L7	2			
	1-25		Spring Coil,CW,T4.5xID6xWD0.8mm	L18	1			
	1-26		SPRING COIL T7xID5x0.8mm	L20	1			
	1-27	306-0510690-003	Crystal Filter, 10.695MHz, 10M7.5A , 3-PIN, HC-49/T	CF1	1			
	1-28	G306+0004550+055	CERAMIC FILTER LTW33-455T 5PIN,455KHz	CF2	1			

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ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

	1-29	G321+1000000+139	Crystal 10MHz 20PF +/-20PPM HC-49U/S-30°C+85°C	X4	1			
	1-30	321-1024000-131	Crystal, 10.240MHz, 20pF +/-30PPM HC-49/S	X1	1			
	1-31	G340+0002000+704	Trimmer Cap,D6.2x4.8,20pF,N750±250,+100-10%,Red,CVN620	TC1	1			
	1-32	328-0002020-080	Semi-Fixed Res,Single Turn, 2K, KVSF637A KOA Weltronics	VR5	1			
	1-33	328-0005020-110	Semi-Fixed Res, Single Turn, 5K, KVSF637A KOA Weltronics	VR7	1			
	1-34	G328+0001030+080	Semi-Fixed Res,Single Turn, 10K, KVSF637A KOA Weltronics	VR6 VR9	2			
	1-35	328-0004730-080	Semi-Fixed Res, Single Turn, 47K, KVSF637A KOA 'Weltronics'	VR2 VR8	2			
	1-36		C.F.RES. 4.7 OHM 2W +-5%	R85	1			
	1-37	G300+0001000+033	C.F.RES. 10 OHM 1/4W +-5%	R206 R100	2			
	1-38	G300+0001030+033	C.F.RES. 10K 1/4W +-5%	R94	1			
	1-39	G300+0004790+033	C.F.RES. 4.7 OHM 1/4W +-5%	R170	1			
	1-40	G300+0004720+033	C.F.RES. 4.7 K 1/4W +-5%	R35	1			
	1-41	G300+0500001+003	Chip Res, 0603,0 Ohm,1/16W,+/-5% Tape Pack	D13	1			
	1-42		Chip Res,0603,1 Ohm,1/16W,+/-5%,Tape Pack	R227	1			
	1-43	G300+0501011+003	Chip Res, 0603,100 Ohm,1/16W,+/-5% Tape Pack	R9 R157 R199 R200 R203 R129 R131	7			
	1-44	G300+0501021+003	Chip Res, 0603, 1K,1/16W,+/-5% Tape Pack	R159 R120 R122 R190 R186 R201 R205 R1SS R95 R154	10			
	1-45	G300+0501031+003	Chip Res, 0603, 10K,1/16W,+/-5% Tape Pack	R5 R20 R73 R158 R179 R182 R177 R148 R150 R124 R116 R222 R189 R109 R198 R133 R103	17			
	1-46	G300+0501041+003	Chip Res, 0603, 100K,1/16W,+/-5% Tape Pack	R21 R22 R23 R26 R72 R70 R83 R121 R192 R191 R115 R96	12			
	1-47	G300+0501051+003	Chip Res,0603,1M,1/16W,+/-5%,Tape Pack	R107 R104	2			
	1-48	G300+0501061+003	Chip Res,0603,10M,1/16W,+/-5%,Tape Pack	R69	1			
	1-49	G300+0501211+003	Chip Res,0603,120 Ohm,1/16W,+/-5%,Tape Pack	R126	1			
	1-50	G300+0501221+003	Chip Res,0603,1.2K, 1/16W,+/-5%,Tape Pack	R12	1			
	1-51	G300+0501231+003	Chip Res,0603,12K,1/16W,+/-5%,Tape Pack	R149 R193	2			
	1-52	G300+0501511+003	Chip Res 0603 150 Ohm 1/16W +/-5% Tape Pack	R4 R130	2			
	1-53	G300+0501521+003	Chip Res, 0603, 1.5K,1/16W,+/-5% Tape Pack	R97	1			
	1-54	G300+0501531+003	Chip Res, 0603, 15K,1/16W,+/-5% Tape Pack	R135 R143 R117	3			
	1-55	G300+0501541+003	Chip Res, 0603, 150K,1/16W,+/-5% Tape Pack	R160 R111	2			

Model: Multi Band CB Radio

Customer: Midland220

Product: CB

Standard:

B.O.M No.

REV: SO

Issue Date :2007/11/1

ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

	1-56	G300+0501551+003	Chip Res,0603,1.5M,1/16W,+/-5%,Tape Pack	R139	1			
	1-57	G300+0501831+003	Chip Res, 0603, 18K,1/16W,+/-5% Tape Pack	R145	1			
	1-58	G300+0501841+003	Chip Res,0603,180K,1/16W,+/-5%,Tape Pack	R113	1			
	1-59	G300+0502201+003	Chip Res, 0603, 22 Ohm, 1/16W, +/-5%, Tape Pack	R226	1			
	1-60	G300+0502211+003	Chip Res, 0603,220 Ohm,1/16W,+/-5% Tape Pack	R6 R161 R132	3			
	1-61	G300+0502021+003	Chip Res,0603,2K,1/16W,+/-5%,Tape Pack	R142 R75	2			
	1-62	G300+0502221+003	Chip Res, 0603, 2.2K,1/16W,+/-5% Tape Pack	R74 R81 R98 R99 R136 R178 R14 R90 R208 R213 R106 R79 R137	13			
	1-63	G300+0502231+003	Chip Res, 0603, 22K,1/16W,+/-5% Tape Pack	R15 R19 R24 R80 R118 R16 R188 R187 R84 R127	10			
	1-64	G300+0502721+003	Chip Res,0603,2.7K,1/16W,+/-5%,Tape Pack	R112	1			
	1-65	G300+0502731+003	Chip Res,0603,27K,1/16W,+/-5%,Tape Pack	R86	1			
	1-66	G300+0503021+003	Chip Res, 0603, 3K,1/16W,+/-5% Tape Pack	R105'	1			
	1-67	G300+0503321+003	Chip Res, 0603, 3.3K,1/16W,+/-5% Tape Pack	R204	1			
	1-68	G300+0503331+003	Chip Res, 0603, 33K,1/16W,+/-5% Tape Pack	R151 R144	2			
	1-69		Chip Res, 0603, 3.3M,1/16W,+/-5% Tape Pack	R66	1			
	1-70	G300+0503921+003	Chip Res, 0603, 3.9K,1/16W,+/-5% Tape Pack	R172 R163	2			
	1-71	G300+0504791+003	Chip Res, 0603,4.7 Ohm,1/16W,+/-5% Tape Pack	R167	1			
	1-72	G300+0504701+003	Chip Res,0603,47 Ohm, 1/16W,+/-5%,Tape Pack	R10 R105	2			
	1-73	G300+0504711+003	Chip Res, 0603,470 Ohm,1/16W,+/-5% Tape Pack	R7 R8 R87 R153 R11 R119 R76	7			
	1-74	G300+0504721+003	Chip Res, 0603,4.7K,1/16W,+/-5% Tape Pack	R1 R2 R67 R68 R64 R82 R140 R164 R165 R223 R102	11			
	1-75	G300+0504731+003	Chip Res, 0603, 47K,1/16W,+/-5% Tape Pack	R3 R13 R18 R156 R77 R65 R91 R92 R93 R152 R141 R146 R162 R147 R180	15			
	1-76	G300+0504741+003	Chip Res, 0603,470K,1/16W,+/-5% Tape Pack	R78 R196 R108	3			
	1-77	G300+0505601+003	Chip Res, 0603, 56 Ohm, 1/16W, +/-5%, Tape Pack	R166	1			
	1-78	G300+0505621+003	Chip Res, 0603, 5.6K, 1/16W, +/-5%, Tape Pack	R211 R125 R155	3			
	1-79	G300+0505631+003	Chip Res, 0603, 56K,1/16W,+/-5% Tape Pack	R17 R123	2			
	1-80	G300+0506831+003	Chip Res,0603,68K, 1/16W,+/-5%,Tape Pack	R25 R114	2			
add			Chip Res,0603,68 Ohm, 1/16W,+/-1%,Tape Pack	R89	1			
add			Chip Res,0603,1.5K, 1/16W,+/-1%,Tape Pack	R88	1			
	1-81	G300+0507521+003	Chip Res,0603,7.5K, 1/16W,+/-5%,Tape Pack	R138 R214	2			
	1-83	G300+0508211+003	Chip Res,0603,820 Ohm, 1/16W,+/-5%,Tape Pack	R110	1			

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ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

	1-84	G301+3112091+056	Chip Cap, 0603,2pF,50V,0.25pF,NPO,Tape pack	C189	1			
	1-85	G301+3114091+056	Chip Cap, 0603, 4pF,50V,0.25pF,NPO,Tape pack	C105 C4	2			
	1-86	G301+3115091+056	Chip Cap, 0603, 5pF,50V,0.25pF,NPO,Tape pack	C230	1			
	1-87	G301+3118091+056	Chip Cap ,0603 ,8pF,50V,0.25pF,NPO,Tape Pack	C120 C112	2			
	1-88		Chip Cap, 0603, 9pF, 50V, +/-5%, NPO, Tape Pack	C6	1			
	1-89	G301+3111001+052	Chip Cap, 0603, 10pF, 50V, +/-5%, NPO, Tape Pack	C28	1			
	1-90		Chip Cap, 0603, 12pF,50V,+/-5%,NPO,Tape Pack	C10 C231 C97	3			
	1-91	G301+3111501+052	Chip Cap 0603 15pF 50V +/-5% NPO Tape Pack	C153 C17 C224 C217	4			
	1-92	G301+3111801+052	Chip Cap,0603,18pF,50V,+/-5%,NPO,Tape Pack	C9 C190	2			
	1-93	G301+3112701+052	Chip Cap,0603,27pF,50V +/-5%,NPO,Tape Pack	C108 C154	2			
	1-94	G301+3113001+052	Chip Cap,0603,30pF,50V +/-5%,NPO,Tape Pack	C139 C223	2			
	1-95	G301+3113301+052	Chip Cap,0603,33pF,50V +/-5%,NPO,Tape Pack	C216 C111 C119	3			
	1-96	G301+3113901+052	Chip Cap,0603,39pF,50V +/-5%,NPO,Tape Pack	C22	1			
	1-97	G301+3114701+052	Chip Cap,0603,47pF,50V +/-5%,NPO,Tape Pack	C14	1			
	1-98		Chip Cap, 0603, 56pF,50V,+/-5%,NPO,Tape pack	C107	1			
	1-99	G301+3116801+052	Chip Cap, 0603, 68pF, 50V, +/-5%, NPO, Tape Pack	C106	1			
	1-100	G301+3111011+052	Chip Cap,0603,100pF,50V +/-5%,NPO,Tape Pack	C65 C116 C155	3			
	1-101	G301+3111211+052	Chip Cap,0603,120pF,50V +/-5%,NPO,Tape Pack	C23	1			
	1-102	G301+3112211+052	Chip Cap 0603 NPO 220pF 50V +/-5% Tape Pack	C109	1			
	1-103	G301+3122221+043	Chip Cap, 0603, 0.0022uF, 25V, +/-10%, X7R, Tape Pack	C70	1			
	1-104	G301+3102231+044	Chip Cap, 0603, 0.022uF,25V,+/-20%,Tape pack	C69 C121 C38 C33	4			
	1-105	G301+3103311+052	Chip Cap 0603 NPO 330pF 50V +/-5% Tape Pack	C118 C161	2			
	1-106	G301+3103331+044	Chip Cap, 0603, 0.033uF,25V,+/-10%,Tape pack	C20	1			
	1-107	G301+3114711+052	Chip Cap ,0603 ,470pF,50V,+/-5%NPO,Tape Pack	C176 C178	2			
	1-108	G301+3104721+044	Chip Cap,0603,0.0047uF,25V,+/-20%,Tape Pack	C89 C213	2			
	1-109	G301+3124731+043	Chip Cap, 0603, 0.047uF,25V,+/-10%,Tape pack	C5 C64 C86 C91 C191 C158 C177 C243 C72 C114 C167 C78	12			
	1-110	G301+3126811+043	Chip Cap, 0603, 680pF, 25V, +/-10%, X7R, Tape Pack	C143	1			
	1-111	G301+3106821+054	Chip Cap ,0603 ,0.0068uF,50V,+/-20%Tape Pack	C39 C142	2			
	1-112	G301+3106831+043	Chip Cap 0603 0.068uF 25V +/-10% Tape Pack	C144	1			
	1-113	G301+3121021+043	Chip Cap, 0603, 0.001uF, 25V, +/-10%, X7R, Tape Pack	C85 C2 C68 C73 C71 C136 C110 C103	8			

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ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

	1-114	G301+3121031+043	Chip Cap, 0603, 0.01uF, 25V, +/-10%, X7R, Tape Pack	C7 C11 C13 C12 C19 C66 C84 C192 C93 C94 C96 C148 C150 C151 C156 C122 C123 C157 C113 C218 C221 C1 C3 C15 C18 C90 C195 C135 C67 C102 C117 C225 C182 C174	34			
	1-115	G301+3101041+044	Chip Cap, 0603, 0.1uF,25V,+/-20%,Tape pack	C30 C24 C25 C26 C27 C34 C36 C37 C63 C62 C133 C145 C138 C137 C147 C31 C219 C210 C220 C76 C234 C244 C82 C128 C241 C242	26			
	1-116	G301+4304740+034	Chip Tan Cap 1206 SMT 0.47uF 16V +/-20%	C16	1			
	1-117	G301+2014700+052	C Cap, NPO, 47pF, 50V, +/-5%	C125	1			
	1-118	G301+2018200+052	C Cap, NPO, 82pF, 50V, +/-5%	C166	1			
	1-119	G301+2011010+052	C Cap, NPO, 100pF, 50V, ±5%	C100 C124	2			
	1-120	G301+2011810+052	C Cap, NPO, 180pF,50 V, +/-5%	ANT	1			
	1-121	G301+2012210+052	C Cap, NPO, 220pF, 50V, ±5%	C168 C163 C180 C181	4			
	1-122	G301+2013310+052	C. Cap, NPO, 330pF, 50V, ±5%	C74 C164 C99 C169	4			
	1-123	G301+2003910+052	C Cap, 390pF, 50V, +/-5%	C77 C162	2			
	1-124	G301+0051080+074	E CAP 0.1UF 50V 20% 5x11	C61	1			
	1-125	G301+0051090+074	E CAP 1UF 50V 20% 5x11	C35 C134 C140 C141 C115 C214	6			
	1-126	G301+0052290+074	E Cap, D5x11, 2.2uF, 50V, ±20%	C8 C175	2			
	1-127	G301+0051000+034	E CAP 10UF 16V 20% 5x11	C21 C29 C87 C95 C101 C228 C229 C211 C222 C226 C227	11			
	1-128	G301+0052200+034	E.CAP 22UF 16V 20% 5x11	C32	1			
	1-129	G301+0053300+034	E.CAP 33UF 16V +/-20% (SIZE 5X11mm)	C75	1			
	1-130	G301+0054700+034	E.CAP 47UF 16V 20% 5x11	C194	1			
	1-131	G301+0041010+034	E Cap, D5x7, 100uF, 16V, +/-20%	C88 C92 C196 C146 C233 C240	6			
	1-132		E Cap, D8x16, 220uF, 35V, +/-20%	C83	1			
	1-133	G301+0114710+034	E Cap, D8x12, 470uF, 16V, +/-20%	C197 C129 C179 C173 C245	5			
	1-134	G301+0004700+044	No Polar Cap, 470uF, 25V, +/-20%	C81	1			
	1-135	303-21N4148-001	Switching Diode, 1N4148, SMT	D1-D7 D10-D12 D14 D16-20 D26-D30 D32 D33 D22 D38 D40 D25	27			
	1-136	G303+11N4004+000	Rectifier Diode, 1N4004, DO41	D23 D24	2			

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MECHANICAL ENGINEER:

	1-137	303-0406890-014	Zener Diode, 0.5W, 6.8V, DO-35, ±10%	D31	1			
	1-138	G303+0408290+013	Zener Diode, 8.2V, 0.5W, DO-35, +/-5%	D21	1			
	1-139	G303+0409690+014	Zener Diode, 0.5W, 9.6V, DO-35, ±10%	D39	1			
	1-140	303-4SVC251-000	Varactor Diode, SVC251, SPA	VD1 VD3	2			
	1-141		Transistor RD16HHF1 T0-220	Q65	1			
	1-142	G304+02SK212+E90	Transistor 2SK212E-SPA代KTK161GP GP	Q1 Q3 Q4	3			
	1-143	G304+KTB1367+Y41	Transistor KTB1367Y TO-220IS KEC Green Product	Q23 Q17	2			
	1-144	G304+KTA1266+Y11	Transistors, KTA1266Y, ECB KEC GP	Q8 Q12 Q20 Q24	4			
	1-145	G304+KTC3198+Y11	KTC3198Y TO-92	Q19 Q21	2			
	1-146	G304+KTC3192+Y11	Transistor KTC3192Y TO-92 KEC Green Product	Q42	1			
	1-147	304-KTC3880-Y31	Transistor, NPN, KTC3880Y KEC, BEC, SOT-23	Q40 Q28 Q27 Q30 Q51 Q48 Q49 Q50 Q41 Q31	10			
	1-148	304-TC3875G- R01	CB Module Transistor NPN KTC3875GR SOT-23 "KEC"	Q5 Q11 Q13 Q2 Q39 Q29 Q52 Q53	8			
	1-149	304-TA1504G-R01	Transistor PNP KTA1504GR SOT-23 "KEC"	Q47 Q58 Q60 Q22 Q32 Q54 Q55 Q9	8			
	1-150	304-0KRC101-S01	Transistors KRC101S NPN SOT-23 KEC	Q10 Q36 Q38 Q57 Q59	5			
	1-151	G304+0KRC102+S01	Transistor KRC102S NPN SOT-23 KEC Green product	Q25 Q26	2			
	1-152	304+0KRC110+S01	Transistor KRC110S NPN SOT-23 KEC Green product	Q6 Q7 Q16 Q14 Q15 Q18	6			
	1-153	304-2SC2314-F15	Transistor,NPN,2SC2314F 'Sanyo',ECB TO-126	Q43	1			
	1-154	G305+MC33074+101	IC MC33074D SOP14"NO" Green Product	U5	1			
	1-155	G305+TDA2003+100	IC, TDA2003 "SIG"	U6	1			
	1-156	G305+74HC393+100	IC Counter Durl 4BIT BIN 14SOIC74HC393D-T " PHILIPS" Green product	U8	1			
	1-157	G305+TLE4264+100	IC TLE 4264-2G SOT-223 "INFINEON"	U15	1			
	1-158	G305+tk10931+100	IC TK10931 TSSOP-24 TOKO	U1	1			
	1-159	G305+00LM358+200	IC LM358 SO-8	U11	1			
	1-160	G305+IT8825B+100	IC SIT8825B SSOP-16	U13	1			
	1-161	332-0200D5J-110	THERMISTOR 200 OHM CAP TYPE	TH1 TH2 TH4	3			
	1-162	G310+0000350+070	Mono phone Jack, D3.5mm,CKX-3.5-04B, Green product 品佳	J2	1			
	1-163	G310+0026400+041	Mono Phone Jack, ID2.6xOD4mm, MJ-03N 'Yat Shun',wiring Type	J3	1			
	1-164	G327+0008030+262	Jumper Wire, 3+80+3mm, 26AWG, Red		1			
	1-165	G327+0008030+260	Jumper Wire, 3+80+3mm, 26AWG, Black		1			
	1-166	G327+0008030+269	Jumper Wire, 3+80+3mm, 26AWG, White		2			
	1-167	G327+0008030+264	Jumper Wire, 3+80+3mm, 26AWG, Yellow		2			

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MECHANICAL ENGINEER:

	1-168	G327+0008030+286	Jumper Wire, 3+80+3mm, 28AWG, Blue		1			
	1-169	G327+0008030+280	Jumper Wire, 3+80+3mm, 28AWG, Black		1			
#2 LCD								
	2-1	321-4000000-0260	Crytal 4.0MHz 20PF+/-30PPM HC-49/S -30°C+85°C	X2	1			
	2-2	321-3276800-813	Crystal, 32.768KHz, 12.5pF, ±20ppm, D2x6mm, 'P&Y'	X3	1			
	2-3	G300+0501511+003	Chip Res 0603 150Ohm 1/16W +/-5% Tape Pack GP	R300	1			
	2-4	G300+0501031+003	Chip Res, 0603, 10K,1/16W,+/-5% Tape Pack	R199' R184 R134	3			
	2-5	G300+0501041+003	Chip Res, 0603, 100K,1/16W,+/-5% Tape Pack	R194 R224 R225	3			
	2-6	G300+0502241+003	Chip Res, 0603, 220K,1/16W,+/-5% Tape Pack	R185	1			
	2-7	G300+0504741+003	Chip Res, 0603,470K,1/16W,+/-5% Tape Pack	R195 R197	2			
	2-8	G301+3112201+052	Chip Cap,0603,22pF,50V +/-5%,NPO,Tape Pack	C204 C205	2			
	2-9	G301+3113301+052	Chip Cap,0603,33pF,50V +/-5%,NPO,Tape Pack	C207 C208	2			
	2-10	G301+3101041+044	Chip Cap, 0603, 0.1uF,25V,+/-20%,Tape pack	C199-C203 C206 C212	7			
	2-11	G301+3104741+044	Chip Cap, 0603, 0.47uF, 25V,+/-20%,Tape pack	C209	1			
	2-12	304-TC3875G- R01	CB Module Transistor NPN KTC3875GR SOT-23 "KEC"	Q64	1			
	2-13	304-TA1504G-R01	Transistor PNP KTA1504GR SOT-23 "KEC"	Q63	1			
	2-14		IC S3P72K8 64PIN	U101	1			
	2-15	305-4A60X51-100	IC-EPROM S524A60X51, "Samsung"	U12	1			
	2-16	G315+6120001+070	LCD DISPLAY SDH-DA1370-HP-1"SMARTGOOD"		1			
	2-17	308-0111015-090	Tact Switch,Knob Height 1.5mm,TC-121Y-K02 'Chun Kai'	EMG AM/FM NK/ESP FUN	4			
	2-18	308-0111043-170	TACT SWITCH TC-0112	LED	1			
	2-19	G312+5991331+110	LED 3528H184W-A04 WHITE "HONGLI"		1			
#3 LED								
	3-1	G311+6120023+300	LCD&LED PCB FR4 Rev3 D/S Green Product		1			
	3-2	G301+4301061+034	Chip Tan Cap 1206 SMT 10uF 16V +/-20%	C3	1			
	3-3	G301+3101041+044	Chip Cap, 0603, 0.1uF,25V,+/-20%,Tape pack	C2	1			
	3-4	G302+2001001+02J	INDUCTOR 10uH ELJFC100JF	L1	1			
	3-5	G312+5991631+100	MULTI COLORS LED HL-AF-3528U22FH190BU57GL-A "HONGLI"	LED	1			
#4 ESP								
	4-1	G311+6120033+011	ESP PCB 62x30x1.6mm S/S 94V0		1			
	4-2	G300+0501001+003	Chip Res,0603,10 Ohm,1/16W,+/-5%,Tape Pack	R61	1			

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MECHANICAL ENGINEER:

	4-3	G300+0501011+003	Chip Res, 0603,100 Ohm,1/16W,+/-5% Tape Pack	R37	1			
	4-4	G300+0501021+003	Chip Res, 0603, 1K,1/16W,+/-5% Tape Pack	R39 R41 R53 R52	4			
	4-5	G300+0501031+003	Chip Res, 0603, 10K,1/16W,+/-5% Tape Pack	R27	1			
	4-6	G300+0501041+003	Chip Res, 0603, 100K,1/16W,+/-5% Tape Pack	R29 R35 R63 R57 R62 R55 R56	7			
	4-7	G300+0502221+003	Chip Res, 0603, 2.2K,1/16W,+/-5% Tape Pack	R32 R36 R40 R42	4			
	4-8	G300+0502231+003	Chip Res, 0603, 22K,1/16W,+/-5% Tape Pack	R30 R31 R45 R60 R48 R51 R59	7			
	4-9	G300+0502241+003	Chip Res, 0603, 220K,1/16W,+/-5% Tape Pack	R54	1			
	4-10	G300+0503321+003	Chip Res, 0603, 3.3K,1/16W,+/-5% Tape Pack	R34	1			
	4-11	G300+0504721+003	Chip Res, 0603,4.7K,1/16W,+/-5% Tape Pack	R38	1			
	4-12	G300+0504731+003	Chip Res, 0603, 47K,1/16W,+/-5% Tape Pack	R33 R43 R44 R47 R46 R49 R50 R58	8			
		G300+0508221+003	Chip Res, 0603, 8.2K,1/16W,+/-5% Tape Pack	R28	1			
	4-13	G301+3111011+052	Chip Cap,0603,100pF,50V +/-5%,NPO,Tape Pack	C45	1			
	4-14	G301+3121021+043	Chip Cap, 0603, 0.001uF, 25V, +/-10%, X7R, Tape Pack	C43	1			
	4-15	G301+3122221+043	Chip Cap, 0603, 0.0022uF, 25V, +/-10%, X7R, Tape Pack	C48 C50	2			
	4-16	G301+3104721+044	Chip Cap,0603,0.0047uF,25V,+/-20%,Tape Pack	C49 C51 C52	3			
	4-17	G301+3121031+043	Chip Cap, 0603, 0.01uF, 25V, +/-10%, X7R, Tape Pack	C42 C53 C54 C56	4			
	4-18	G301+3102231+044	Chip Cap, 0603, 0.022uF,25V,+/-20%,Tape pack	C46 C55	2			
	4-19	G301+3124731+043	Chip Cap, 0603, 0.047uF,25V,+/-10%,Tape pack	C47	1			
	4-20	G301+3101041+044	Chip Cap, 0603, 0.1uF,25V,+/-20%,Tape pack	C40	1			
	4-21		Chip Cap, 0603, 0.15uF,25V,+/-20%,Tape pack	C44	1			
	4-22	301-4301050-0341	Chip Tan Cap 1206 SMT 1uF 16V +/-20%	C58 C57	2			
	4-23	G301+4301061+034	Chip Tan Cap 1206 SMT 10uF 16V +/-20%	C41 C59 C60	3			
	4-24		Transistor F.E.T 2SK211 SOT-23	Q9	1			
	4-25	G303+2KDS226+100	Diode, KDS226, SMT, 'KEC'	D8 D9	2			
	4-26	G305+0000324+000	IC,UTC324,SOP14	U2 U3 U4	3			
	4-27	328-0004730-080	Semi-Fixed Res, Single Turn, 47K, KVSF637A KOA 'Weltronics'	VR3 VR4	2			
#5 VR								
	5-1	G311+6120013+011	VR PCB 42x21xT1.6mm 94V0 S/S		1			
	5-2	G317+0102030+310	VR, F-09427S-1 A47K/A20K ,8 Pin,W/Switch "PS"	MIC/ VOL	1			
	5-3	G317+0102100+310	VR, F-09427G-1 B10K/B100K, 6 Pin,W/O Switch "PS"	RFGAIN SQ	1			

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MECHANICAL ENGINEER:

	5-4	G327+5101180+325	FLAT Cable,11 Pins,3+80+3mm,Pitch 2.54mm		1			
#6 MIC JACK								
	6-1	302-0006821-122	Fixed Inductor 6.8UH EC22-6R8J	L8	1			
	6-2	G301+2804720+034	C. Cap, Axial Lead, 0.0047uF, 16V, +/-20%	C131	1			
	6-3	G 301+2Y01040+053	C.Cap,0.1uF,50V,+/-10%,Axial Lead	C132	1			
	6-4	310-0606000-040	DIN Receptacle For Midland38, 6-Pin, SCN-16-6(S1)R 'Sam Woo'		1			
	6-5	331-6431000-000	Midland38/98/0.12*5c pp insulation+31/0.1 斜包司勞 + 包紙 pvc6.0mm, black (光) 06.6.12		1			
	6-6	G311+6120003+090	77120MIC PCB 27x19x1.6mm 94V0 REV:0		1			
	6-7	G311+6121043+011	MIC PCB 46.6x14.5x1.6mm 94V0 S/S		1			
	6-8	G308+0100043+450	Tact switch TC-0112Z-A00, 6x6x4.3mm,GP	for mic	2			
	6-9	311-6400003-010	CH PCB 15.5x13.5xT1.6mm 94V0 S/S		1			
	6-10	G308+0861200+300	ROTARY SWITCH SR10L-KQ25-20C "IDEAL"	CH	1			
			****Base****					
	2#	METAL PARTS						
	2-1-1	400-3010000-100	M Screw, M3x10,Nickel Plated, BM(Slotted & Square Socket)	For IC3,Q27,Bracket	3			
	2-1-2	400-2606010-100	M Screw M2.6x6mm BM Black Plated,	For Top and Bottom Cover	11			
	2-1-3	443-3006019-000	TST Screw, M3x6mm, ^M,S Type,B/P, Tap Tipe (TT)	For PCB	8			
	2-1-4	400-2606000-400	M Screw M2.6x6.0mm KM N/P	For Front Cabinet	4			
	2-1-5	401-2606007-100	ST Screw, M2.6x6, Nickel Plated, BT	For Speaker clip	2			
	2-1-6	402-0430055-073	Spring Washer, M3xOD5.5xT0.7mm, Stainless, S503 Yuet Chung	For IC3,Q27,Bracket	3			
	2-1-7	402-0030060-080	Fiber Washer, M3xOD6xT0.8mm 1103-1 Yuet Chung	For ESP, PCB, C107	4			
	2-1-8	403-0300552-310	Nut, Hexagon, M3xOD5.5xT2.3mm, Iron, 3504-1 Yuet Chung	For Q31,IC3,Q27,Bracket	3			
	2-1-9	419-6092010-100	Custom Made Nut For 77-092, M7xOD10xT2mm, Brass	For Turning Knob	1			
	2-1-10	419-6412010-100	Custom Made Nut For Alan120, M9xOD12xT2mm, Brass	For Turning Knob	2			
	2-1-13	G415+6120120+240	Metal Chassis Bracket, Iron, For 77-120RU Zinc Plated	For Base	1			
	2-1-14	G414+6120000+230	Speaker Clip,For 77-120RU, yellow zine plated, Iron	For Speaker	2			
	2-1-15	G442+6120100+230	Metal Shell(Top Cover) , Black &0.8mm ,Iron ,For 77-120RU		1			
	2-1-16	G442+6121010+230	Metal Shell(Bottom Cover) ,Black,&0.8mm,Iron, For 77-120RU		1			
	2-1-17		Shield Plate For 77-120RU, 110x72x0.4mm N/P	For Base PCB	1			
	2-1-18		Shield PLATE 2 For 77-120RU 24x19x0.10mm Brass		1			
	2-1-19	430-6121020-800	Shield Box L30xW30xH14.3mm T=0.4mm Spte		1			
	2-1-20	406-6121010-500	Aluminium Heat Sink 1 30x18x2mm		1			
	2-1-21	406-6121020-500	Aluminium Heat Sink2 40x13x1.8mm		1			
	2-1-22		Aluminium Heat Sink L50x30mm		1			

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ELECTRONIC ENGINEER:

MECHANICAL ENGINEER:

	2-1-23	412-6120050-500	77-120RU Heat Plate 2(20x10x1.8) Aluminium Heat Sink			1			
	2-1-24		DIN Bracket ASS For 77-120RU			1			
	3#	PLASTICS PARTS(BASE)							
	3-1-1		Front Cabinet, For 77-120RU, ABS (engg)			1			
	3-1-2		RF Gain Knob, For 77-120RU, ABS (engg)	For Front Cabinet		2			
	3-1-3		Squelch Knob,For 77-120RU, ABS (engg)	For Front Cabinet		2			
	3-1-4		Channel Knob,For 77-120RU,ABS (engg)	For Front Cabinet		1			
	3-1-5		LCD Cover For 77-120RU,ABS (engg)	For LCD		1			
	3-1-6		Reflex,For 77-120RU,PMMA (engg)	For LCD		1			
	4#	MISCELLANEOUS							
	3-1-7	801-0000015-000	Heat-Shrinkable Tube,ID1.5x18mm, Black			1x18			
	3-1-8	801-0000015-000	Heat-Shrinkable Tube,ID1.5x8mm, Black			1x8			
	3-1-9	803-0100000-000	Screw Bushing, M3 Screw/TO-220 Package	For Q27		1			
	3-1-10	803-0011002-000	Cord Bushing , Black , UL ,3B-2	For DC Cord		1			
	3-1-11	G807+6120100+000	PVC Lens For Alan120, L66.4xW22xT1.0mm, PVC w/A ON ONE FACE	For Front Cabinet		1			
	3-1-12	815-0080000-000	Cable Tie, Natural, GT-80M, UL, L80mm	For Base Inside		2			
	3-1-13	807-6120000-000	PVC plate, For 77-120RU, L150xW130xT0.3, Black PVC	For Top Cover		1			
	3-1-14	817-A410000-00I	Felt Sheet, L140xW10x0.6mm, Black, W/A LV960	For Top and Bottom Cover		2			
	3-1-15	820-6092000-400	Insulation Sheet, for 77-092, T0.4mm,Mica	For Q27		1			
	3-1-16	820-6120010-400	Insulation Sheet"1" For 77-120RU,L28xW22xT0.4mm ,Red	For Base PCB		1			
	3-1-17	823-0250100-401	Cushion,LP250B,25x10x4mm,W/Adhesive on one Face, Black	For Base PCB		1			
	3-1-18	817-5231000-000	Speaker Felt, (Ellipse52x31mm), Black	For Front Cabinet		1			
	3-1-19	807-6120000-005	Tracing Paper,L64XW21XT0.125	For LCD		1			
	3-1-20		Rubber Key,For 77-120RU,Silicon Clear (engg)	For Front Cabinet		1			
	3-1-21		EVA For 77-120RU L64xW3xH4.50mm on one Face Black TB580g	For LCD		2			
	3-1-22		Tin Foil For 77-120RU L69.2xW5xT0.1mm on one Face 不導電	For LCD		2			
	3-1-23		Tin Foil For 77-120RU L21xW5xT0.1mm on one Face 不導電	For LCD		1			
			****Hand MCI MIDLAND38****						
	5#	METAL PARTS							
	5-1-1	401-2606012-400	ST Screw, M2.6x6mm , Black Plated, KB			3			
	5-1-2	401-2610002-200	ST Screw , M2.6x10mm , N/P,PB			5			
	5-1-3	412-6092000-200	MIC Metal Block for 77-092,40x30x3mm,iron			1			
	5-1-4		Name Plate For Alan120 (MIC),Aluminum,T0.4mm,"MIDLAND"			1			
	6#	PLASTICS PART							
	6-1-1	506-6412000-000	Panel For Alan120, MIC,Black,ABS	For MIC		1			
	6-1-2	502-6412000-000	Front Cabinet For Alan120,Black, ABS	For MIC		1			
	6-1-3	507-6412010-000	Middle Cabinet For Alan120,Black, ABS	For MIC		1			

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	6-1-4	503-6412020-000	Rear Cabinet For Alan120,Black ABS,Rev2	For MIC		1			
	6-1-5	G500+6121000+001	2 Holes Top Cabinet for ALAN121,Black ABS,S/S"DN,,UP"(White)	For MIC		1			
	6-1-6	G515+6121000+000	2 Key Button For ALAN121, Black ABS	For MIC		1			
	6-1-7	515-6412010-000	Side Button For Alan120,Black ABS,For ON/OFF,Rev1	For MIC		1			
	6-1-8	536-6104000-000	Holding Bracket For 77-104, Black ABS	For MIC		1			
	6-1-9	536-6104100-000	Wheel Bracket For 77-104, Black ABS	For MIC		1			
	7#	MISCELLANEOUS							
	7-1-1	825-6104000-000	Sealing Rubber For 77-104, Black Cap (Mic Bushing)			1			
	7-1-2	823-7140300-601	Sponge, ID14xOD30x6.0mm,Black, W/Adhesive On One Face			1			
	7-1-3	817-4034000-000	Felt Sheet, L40xW34mm,Black Felt			1			
	7-1-4	817-3826200-752	PVC Sheet 38x26x0.5mm/HL20xHD7.5mm,Black PVC W/A			1			
			****PACKAGE MATERIAL***						
	8#	METAL PARTS							
	8-1-1	401-3008007-100	ST Screw M3x8mm,BT (Nickel Plated)			2			
	8-1-2	401-5021010-300	S.T.Screw M5x21mm,TA (Black Plated)			3			
	8-1-3	402-0070200-15A	Flat Washer, ID7xOD20xT1.5mm, Rubber			2			
	8-1-4	402-0360110-064	Internal Tooth Washer M6 xOD11x0.6mm ,Carbon Steel			3			
	8-1-5	402-0432055-093	Spring Washer, OD5.5xID3.2xT0.9,Stainless Steel			2			
	8-1-6		Main Unit Bracket , For 77-120RU, BlackPlate,&2.0mm Iron			1			
	8-1-7	415-6092010-610	MIC Bracket For 77-092, White, Alloy, Nickel Plated			1			
	9#	PLASTICS PART							
	9-1-1	541-6412000-999	Hander Spacer Lock Screw For Alan120 , ABS (Engg)			2			
	10#	PACKING MATERIAL	(包裝按走貨單)						
	10-1-1		Insert For 77-120 RU			2			
	10-1-2		Carton For 77-120RU			1			