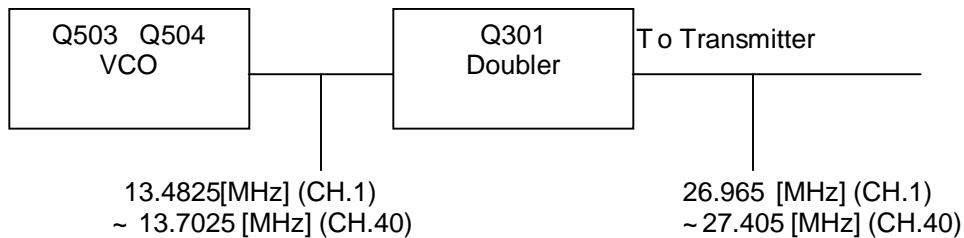


Description Of Frequency Determining And Stabilizing Circuit Introduction

The frequencies for transmitter and receiver local frequencies are all derived a signal 4.5 [MHz] crystal by means of a phase locked loop. The first local oscillator frequencies are 16.27 [MHz] (CH.1) to 16.71 [MHz] (CH.40). The second local frequency is fixed at 10.240 [MHz] to generate second IF 455 [KHz]. During transmit, the VCO of the PLL operates 13.4825[MHz] (CH.1) to 13.7025 [MHz] (CH.40). The VCO frequency goes to the doublers circuit Q301, L301, L302 which doubles the frequency to generate 26.965 [MHz] (CH.1) to 27.405 [MHz] (CH.40).



The VCO operating frequency for the receiver is 16.27 [MHz] (CH.1) to 16.71 [MHz] (CH.40) as the first local oscillator, injected through the buffer amp Q506 into the first FET balanced mixer Q107, Q108

Descriptions Of Each Block

1. Introduction

The synthesizer is implemented with the following

Components : PLL IC (IC6)

X-TAL (X401)

VCO, Varicap Diode (D503,504)

IC101 is a MCU that includes LCD driver and all of control circuit.

The PLL IC (IC6) of PLL block,

The Q503, L404, C511, C512, C513, C507, Varicap diode D503 and D504 are clap oscillator circuit to operate as a VCO.

The Q505 is a switching transistor to turn on or turn off the tuning capacitor in the VCO oscillator tank circuit for transmitter or receiver. The Q506 works as a buffer amp for RX local frequencies (16 [MHz]) and TX carrier generating frequencies (13 [MHz]).

2. Reference Frequency

The crystal, X401(4.5 [MHz]) and other components at pin1 and 16 of IC6 can make a reference frequency oscillator with internal amplifier.

2-1. VCO

The Q503 and surrounding parts are consisting a clap oscillator work as a VCO of IC6 with appropriate control voltage on D503 and D504, the can be oscillate over the required range of 13.4825[MHz] to 16.71 [MHz].

2-2. Programmable Divider And PLL Data Control

The MCU(IC101) and PLL IC (IC6) communicate by serial data for PLL IC data setting.

The programmable inputs for each channels set by MCU (IC101). Each input signal to control the PLL IC is done with the provided key input pins 20 and 21 of IC101.

2-3. 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 pulses whose DC level depends on the phase error of each signal.

The phase detector pulse output is fed to an active low pass filter and RC low pass filter output signal of IC6 is filtered and fed to varicap D503 and 504 control the VCO frequency.

TRANSMITTER / RECEIVER BUFFER AMP

Output signal of Q503 is fed into the buffer AMP Q506, L401 to increase the strength of TX carrier frequency and 1st local frequencies.

Transmitter Doublers

The output signal of Q506, L401 goes to an amplifier with tuning circuit Q301, L301, L302 which doubles incoming 13 MHz signals.

Switching Of Tuning Capacitor In VCO

The VCO circuit must tune with a wide range of frequencies 13.4825 ~ 13.7025 [MHz] for transmitter and 16.27 ~ 16.710 [MHz] for receiver. To comply above range of VCO, the tuning Capacitance should be switched for transmission or reception.

The tuning circuit consists with L401, C507, C512, C513, C522, when the VCO is working as a receiver Q505 becomes turn off. So, L401 AND D503,504 makes tuning function. When transmitting Q505 becomes on. So, L401 and the parallel capacitance of C522 and D503,504 make turning function.

Receiver Local Oscillator outputs

1ST mixer : The secondary output signals of L401 is injected to the source of 1ST mixer Q107, Q108 in the 1ST IF mixer section.

2ND mixer : The output of 10.24 [MHz] oscillator circuit with X1 is injected into the IF module (IC102). Incoming IF signal and 10.24 [MHz] signal are mixed inside the IF IC to extract 2ND IF signal 455 [MHz]. FM and AM signals are recovered with envelope detector.

Frequency Stability

Let : F_o = Crystal Oscillator Frequency

F_r = Phase Detector Reference Frequency

F_{vco} = VCO Frequency

F_t = Transmit Frequency

Then : $F_r = F_o / 1800$

And under locked conditions : $F_r = F_{vco} / N$

Where, "N" is the programmable divider ratio.

Then : $F_{vco} = N \times F_r$

From which it can be seen, the percentage error in F_t is the same as percentage error in F_o .

The stability of the crystal oscillator is determined primarily by the itself and having passive components of the oscillator.

The choice of crystal and components is such that the required frequency stability is maintained over the required voltage and temperature range.

Description Of Transmitter And Receiver

1. The Transmitter

RF Amplification

The output of doublers AMP Q301 is fed through tuning IFT L301 and L302 to the base of pre-driver AMP Q305.

The output is then supplied through tuning circuit L303 to RF driver AMP Q306.

The output of Q306 is supplied with tuning circuit L304, C321, RFC306 and goes to the base of final RF AMP Q307. The output of Q307 is supplied to the antenna through L-C tuning circuit.

CIRCUIT FOR SUPPRESSION OF SPURIOUS RADIATION

The tuning circuit between the output of final AMP Q303 and antenna, 7-stage "LPF" network L310, C331, C332, L311, C333, C335, L312, C337, serves as a spurious radiation suppressor. This network also serves to match the impedance between TX power AMP Q307 and the antenna.

Circuits For Limiting Power

After finished all alignment, to constant voltage supply circuit limits the available power 4 [W] or slightly less. RV-203 and corresponding three transistors control supply voltage of RF amplifier and other circuits.

Tune all the trimming parts for maximum indication of RF power meter and adjust RV-203 to make 4 [W] indication of RF power meter. The tuning is adjusted so that the actual power is from 3.8 to 4.0 [W]. There are on other additional controls for adjusting the TX output power.

Max Deviation Control

The deviation signals are filtered with RC network and goes to the OP AMP IC IC3 make nominal signal level to achieve wanted modulation. To control incoming audio signal, diode D451,452 and corresponding limiter circuit controls with proportional to sampled audio output level adjust RV501 shall not exceed ± 2 [KHz] max deviation under 1.25 [KHz] AF 20 dB up from 1kHz modulation level input.

Max Modulation Control

The modulation signal are filtered with RC network and goes to the audio AMP IC IC104 make amplitude signal to achieved AM modulation.

To control incoming audio signal, diode D202, Q208, and Q207 corresponding limiter circuit controls with proportional to sampled audio output level adjust by RV201 shall not exceed 100% max modulation under 60% AF 20dB up from 1KHz modulation input.

2. The RECEIVER

RF AMP Q104 amplify RF signal from antenna, the amplified RF SIGNAL is fed through tuning coils L102, L103 to the gate of double balance mixer FET, Q107, Q108 also VCO sources frequency lower 10.695 MHz than the frequency of each channel is supplied to mixer.

The source of 10.695MHz frequency filtered by CF1 is fed through to IC102.

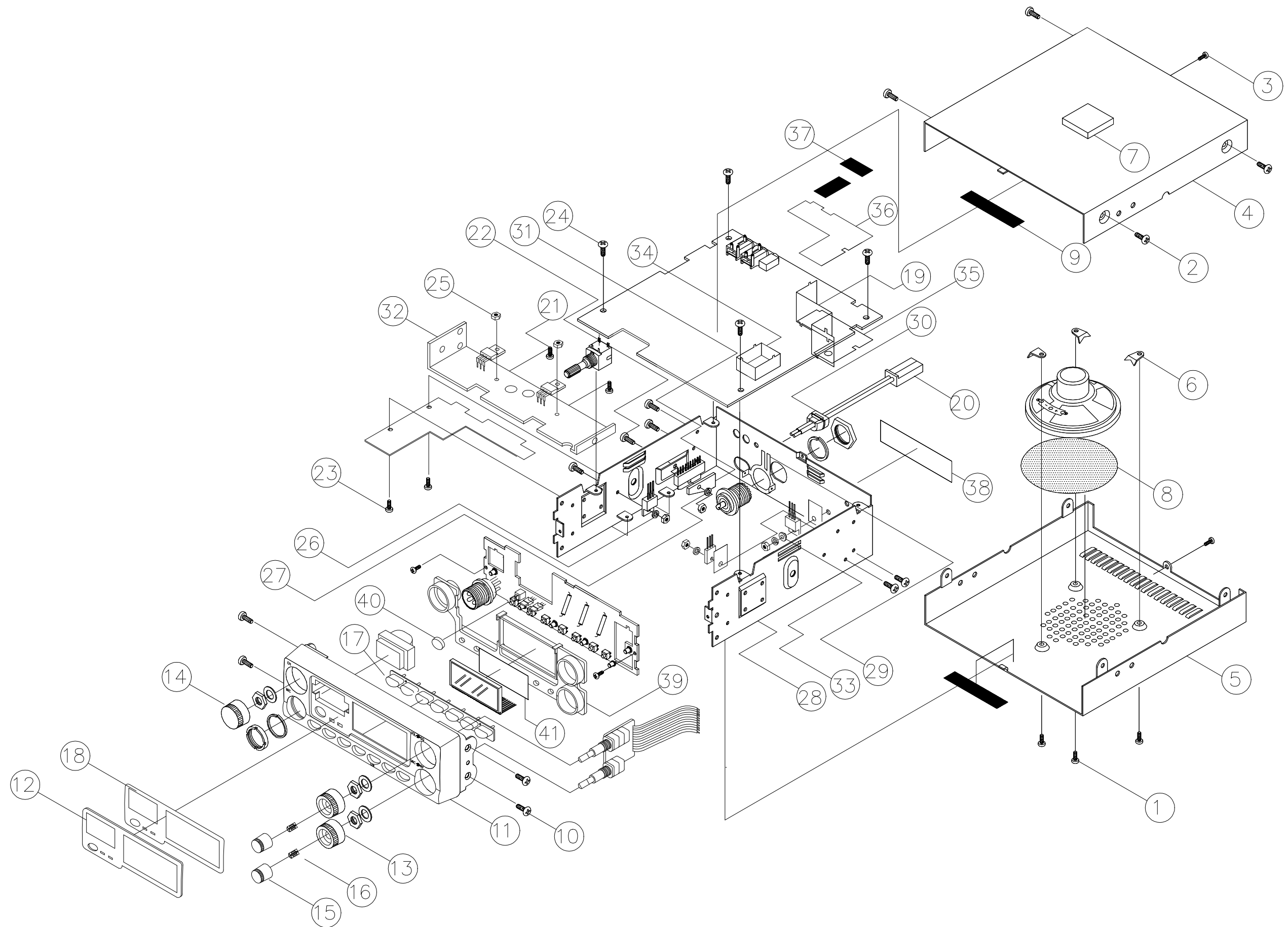
The 455KHz frequency signal produced from IC102 by mixing the output source of CF1 10.695MHz filter and the source of 10.240MHz frequency from crystal oscillator X1.

Internal AM and FM detector of IC102 detect AM and FM audio signal.

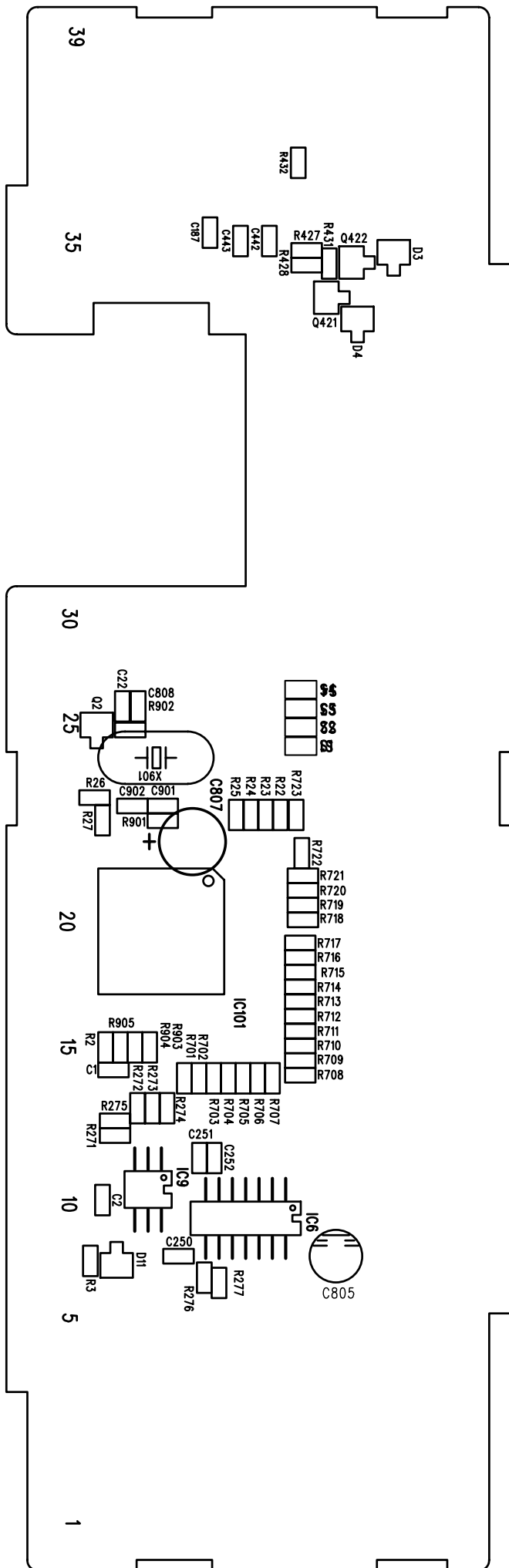
A.G.C(Automatic Gain Control) signal of IC102 fed to IC103, D122, Q121 control receiving sensitivity.

The AM detected audio signals fed through R157, C167, D151, VR101 to low frequency audio AMP for driving speaker.

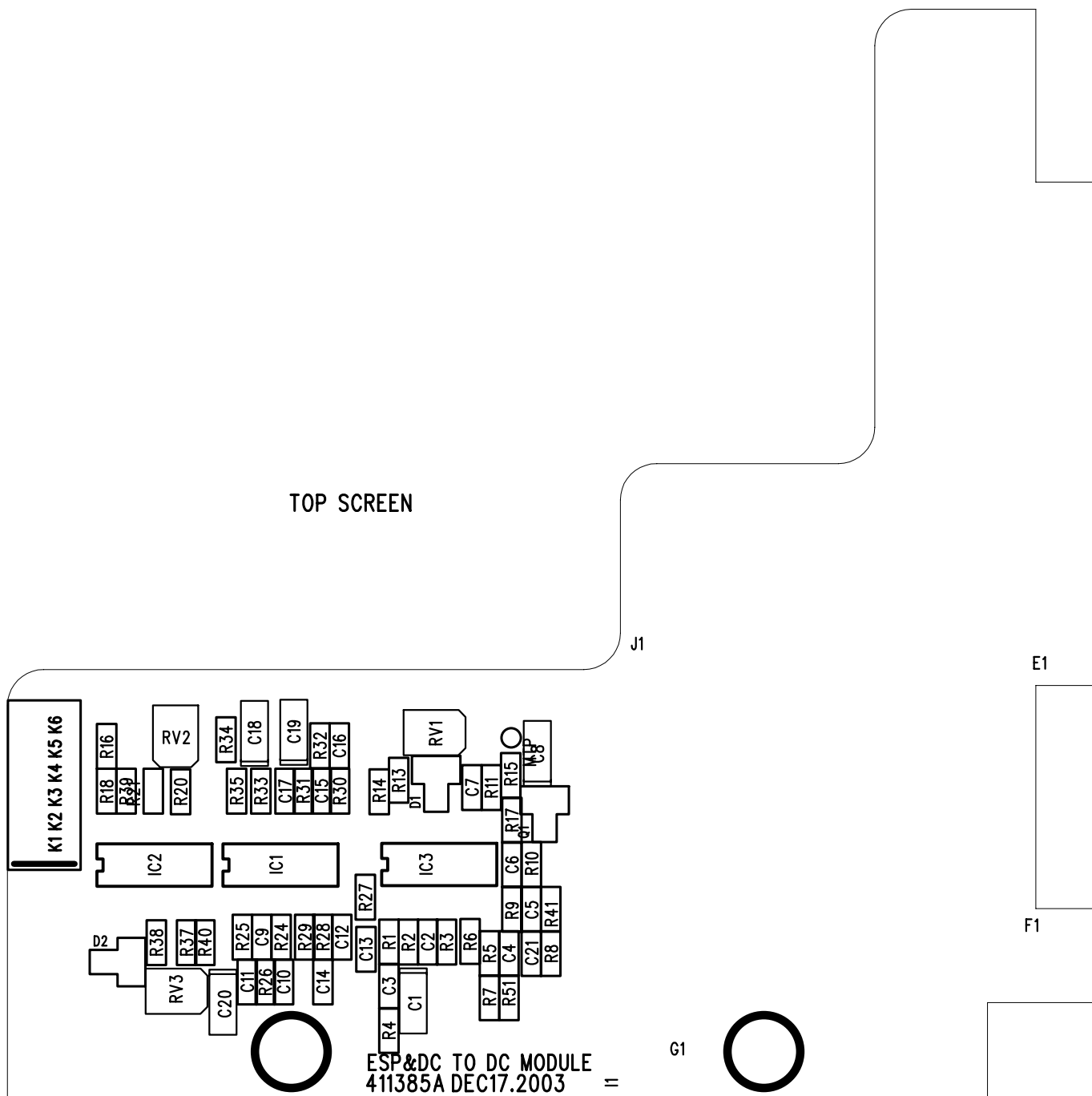
The FM audio detected and amplified audio signal is fed through high cut filter R161, C153, D152, VR101 to speaker.

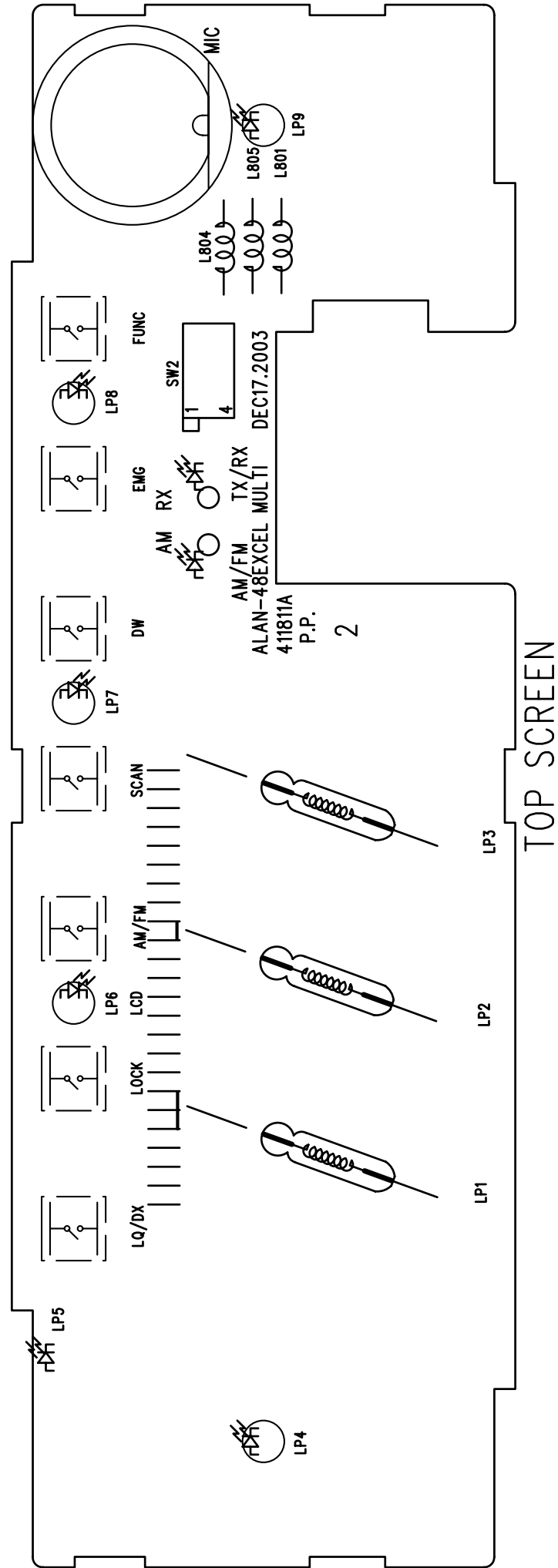


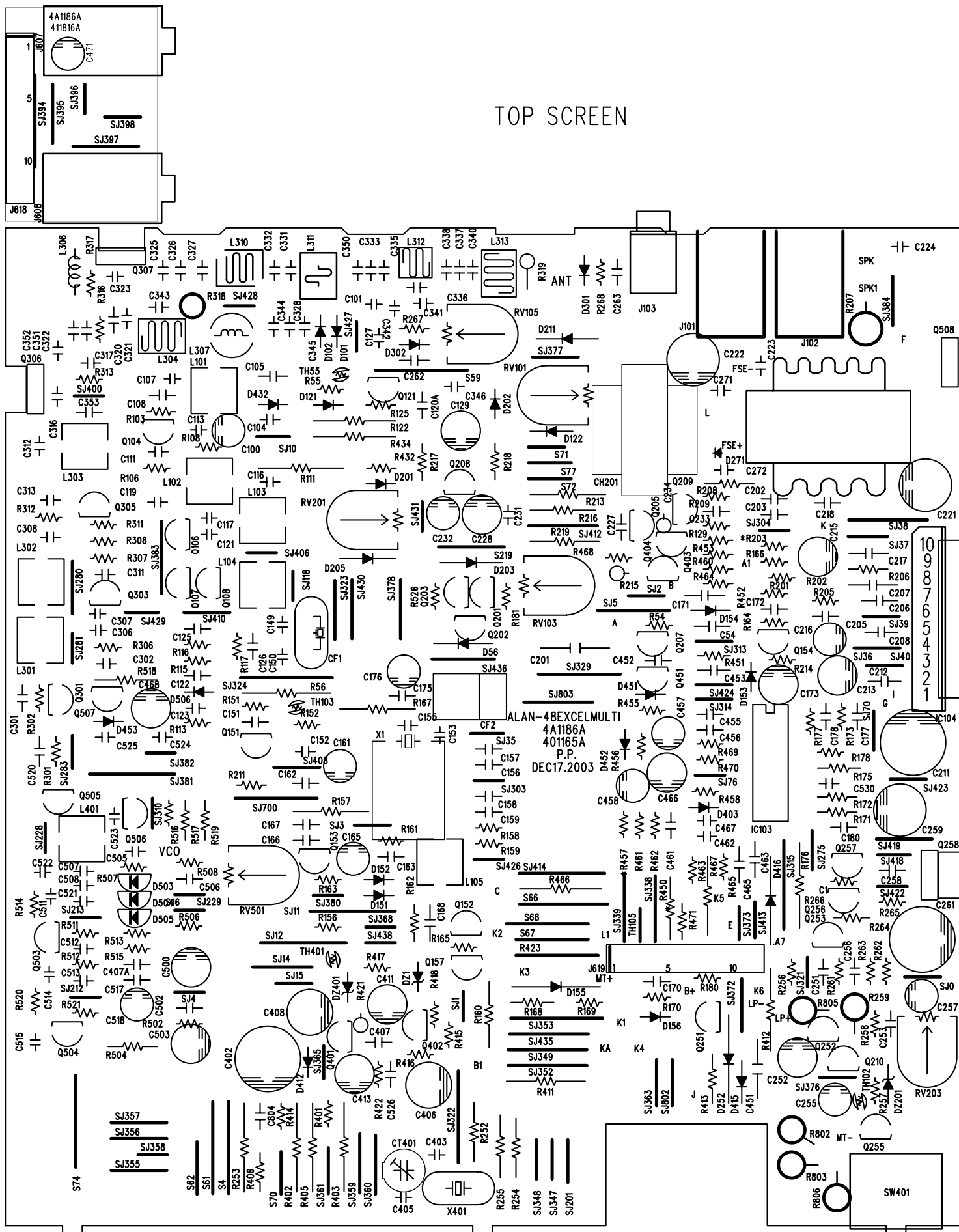
BOTTOM SCREEN











Alan 48 Excel Multi Explode

No.	Part number	Name & Description	Q'ty	Remark
1.	623-344	(+)TAPPING SCREW(BH)3X8-2S BLK	3	
2.	633-082	(+)TAP TITE SCREW BH3X6 BLK	4	
3.	633-152	(+)TAP TITE SCREW BH3X4-3S BLK	2	
4.	719-072	COVER UPPER SPC+VINYL SHEET T0.8 BLK	1	
5.	719-073-A	COVER BOTTOM SPC+VIN.SHT.T0.75 BLK(ALAN48+)	1	
6.	730-015-A	HOLDER(SPK) EGI T1 USCOATING	3	
7.	891-590	CUSHION 25X25XT5 RUBB.SPO.BLK STIC.	1	
8.	900-708	FELT &77XT0.3 FELT	1	
9.	901-794-A	FELT 8X45XT0.3 FELT STIC.ALAN48PLUS	4	
10.	611-095	(+)MACHINE SCREW(FH)2.6X5 ZN-PLAT	4	
11.	801-317	E.S.C ABS 94HB BLK L380-9001	1	
12.	814-286	LENS ACRYL	1	
13.	826-404	KNOB SQL ABS 94HB BLK	2	
14.	826-406	KNOB CH ABS 94HB BLK	1	
15.	826-407	KNOB VOL ABS 94HB BLK	2	
16.	881-613	SPRING(VOL.SW MTG) SK5 T0.25	2	
17.	895-572-D	KONB FUNCTION SILICONE RUBBER	1	
18.	906-867	DOUBLE TAPE(LENS) 3M-Y9448HK T0.16	1	
19.	772-238	SHIELD HOUSING SPTE T0.3	1	
20.	504-892	MOLEX PLUG ASS'Y	1	
21.	613-305	(+)MACHINE SCREW(BH)3X8 ZN-PLAT	3	
22.	613-332	(+)MACHINE SCREW(BH)3X10 ZN-PLAT	3	
23.	621-420	(+)TAPPING SCREW(PH)2.6X8-2S ZN-PLAT	2	
24.	623-265	(+)TAPPING SCREW(BH)3X6-2S ZN-PLAT	8	
25.	651-024	NUT SS41 M3-1S ZN-PLAT	6	
26.	660-590	WASHER FIBER 7&X3.2& 1T RED	2	
27.	662-305	WASHER (SPRING) M3 ZN-PLAT	4	
28.	702-426-D	BODY MAIN EGI T1.0 US COATING	1	
29.	732-560	HOLDER(ANT MTG) SPTE T0.3	1	
30.	750-766	CORD STOPPER PP	1	
31.	760-704	HEAT SINK(IC MTG) ALP 30X18XT2	1	
32.	761-801	HEAT SINK AL PLATE T2.0	1	
33.	853-105	BUSHING NYLON66+GLASS	1	
34.	771-850	SHIELD PLATE SPTE T0.5	1	
35.	772-274-A	SHIELD PLATE SPTE T=0.3	1	
36.	772-678	SHIELD PLATE TIN T0.3	1	
37.	906-998	TAPE CU 16X36XT0.05 CU-TAPE	2	
38.	95B-180	LABEL MULTI POLYESTER 70X70	1	
39.	814-287	LENS LIGHTING ACRYL	1	
40.	826-405	KNOB CB/PA ABS 94HB BLK	1	
41.	906-868	BACK PLATE 54.3X22.8XT0.25 PC YELLOW	1	

DEVELOPMENT : FINAL
 # RI R610B
 DESIGN : FINAL
 TECHNIQUE : FINAL
 Rev. : 038
 S/W VERSION : UNDEFINED
 MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W
 4/09/17 13:31:08 1

PL3361.TXT
 P A R T S L I S T
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SEQ	LEVEL	PART-NO.	NAME & DESCRIPTION	Q'TY	UT	G	KON	OPT	REFERENCE-NO
		ECO-DATE	ECO-NO.						
1	2	533-61C-A	COVER ASS'Y	1.000	EA	A			
		3/06/11							
	3	420-107-6	SPEAKER 8 OHM 3.0W 77MM P-302RL	1.000	EA	B	SUB		
		3/06/11							
	3	623-344	(+) TAPPING SCREW(BH) 3X8-2S BLK	3.000	EA	B	SUB		SPK MTG
		3/08/20							
	3	633-082	(+) TAP TITE SCREW BH3X6 BLK	4.000	EA	B	SUB		UPPER/BOTTOM COVER MTG
		3/08/20							
	3	633-152	(+) TAP TITE SCREW BH3X4-3S BLK	2.000	EA	B	SUB		UP/BOTT REAR COVER MTG
		3/08/20							
	3	719-072-E	COVER UPPER SPC+VINYL SHEET TO. 75 BLK	1.000	EA	B	SUB		
		4/07/05 C CT04-0592							
	3	719-073-A	COVER BOTTOM SPC+VIN. SHT. TO. 75 BLK(ALAN48+)	1.000	EA	B	SUB		
		3/08/20							
	3	730-015-A	HOLDER(SPK) EGI T1 USCOATING	3.000	EA	B	SUB		SPK MTG
		3/08/20							
	3	891-590	CUSHION 25X25XT5 RUBB. SPO. BLK STIC.	1.000	EA	B	SUB		
		3/08/20							
	3	900-708	FELT &77XT0.3 FELT	1.000	EA	B	SUB		SPK HOLE
		3/08/20							
	3	901-794-A	FELT 8X45XT0.3 FELT STIC. ALAN48PLUS	4.000	EA	B	SUB		FRONT: 2 BACK: 2
		3/08/20							
2	2	533-61E-SC	ESCUTCHEON ASS'Y	1.000	EA	A			
		3/08/20							
	3	611-095	(+) MACHINE SCREW(FH) 2.6X5 ZN-PLAT	4.000	EA	B	SUB		ESC + MAIN BODY MTG
		3/08/20							
	3	801-317	E. S. C ABS 94HB BLK L380-9001	1.000	EA	B	SUB		
		3/08/20							
	3	814-286-C	LENS ACRYL	1.000	EA	B	SUB		
		4/07/24 C CT04-0659							

PL3361. TXT

3	826-404	KNOB SQL	ABS 94HB BLK	2.000	EA	B	SUB	SQL: 1 RF: 1
	3/08/20							
3	826-406	KNOB CH	ABS 94HB BLK	1.000	EA	B	SUB	
	3/08/20							
3	826-407	KNOB VOL	ABS 94HB BLK	2.000	EA	B	SUB	VOL: 1 MIC: 1
	3/08/20							
3	881-613	SPRING(VOL. SW MTG)	SK5 TO. 25	2.000	EA	B	SUB	VOL: 1 MIC: 1
	3/08/20							
3	895-572-D	KONB FUNCTION	SILICONE RUBBER	1.000	EA	B	SUB	
	4/01/26 A CT04-0073							
3	906-867	DOUBLE TAPE(LENS)	3M-Y9448HK TO. 16	1.000	EA	B	SUB	
	3/08/20							
3 2	533-61E-SP	ESP & DC MODULE ASSY		1.000	EA	A		
	3/08/18 A CT03-KATHI							
3	002-102-9Z	FILM RESISTOR	1K 1/ 8W 5% ST	1.000	EA	B	MAN	R2A
	4/07/21 C CT04-0624							
3	002-271-8Z	FILM RESISTOR	270 1/ 8W 5% ST	1.000	EA	B	MAN	R4A
	4/05/14 C AT04-KATHI							
3	002-681-5Z	FILM RESISTOR	680 1/ 8W 5% ST	2.000	EA	B	MAN	R3A. 8A
	4/05/14 C AT04-KATHI							
3	030-181-9Z	FILM RESISTOR	180 1/ 2W 5% ST MINI	1.000	EA	B	MAN	R1A
	4/05/14 C AT04-KATHI							
3	030-229-0Z	FILM RESISTOR	2.2 1/ 2W 5% ST MINI	2.000	EA	B	MAN	R7A. 9A
	4/05/14 C AT04-KATHI							
3	036-338-5	CEMENT RESISTOR	0.33 5W 5% ST	1.000	EA	B	MAN	R5A
	4/05/14 C AT04-KATHI							
3	05B-100-2Z	CHIP RESISTOR	10 1/16W 5% T 1608	1.000	EA	B	SMD	R35
	3/08/18 A CT03-KATHI							
3	05B-101-3Z	CHIP RESISTOR	100 1/16W 5% T 1608	1.000	EA	B	SMD	R10
	3/08/18 A CT03-KATHI							
3	05B-102-4Z	CHIP RESISTOR	1K 1/16W 5% T 1608	4.000	EA	B	SMD	R11. 13. 37. 40
	3/08/18 A CT03-KATHI							
3	05B-103-5Z	CHIP RESISTOR	10K 1/16W 5% T 1608	1.000	EA	B	SMD	R2
	3/08/18 A CT03-KATHI							
3	05B-104-6Z	CHIP RESISTOR	100K 1/16W 5% T 1608	7.000	EA	B	SMD	R4. 7. 15. 16. 18. 21. 39
	3/08/18 A CT03-KATHI							
3	05B-222-9Z	CHIP RESISTOR	2.2K 1/16W 5% T 1608	4.000	EA	B	SMD	R6. 9. 14. RV1
	3/08/18 A CT03-KATHI							
3	05B-223-0Z	CHIP RESISTOR	22K 1/16W 5% T 1608	8.000	EA	B	SMD	R1. 3. 5. 24. 27. 30. 33. 34
	3/08/18 A CT03-KATHI							
3	05B-224-1Z	CHIP RESISTOR	220K 1/16W 5% T 1608	1.000	EA	B	SMD	R38
	3/08/18 A CT03-KATHI							
3	05B-332-5Z	CHIP RESISTOR	3.3K 1/16W 5% T 1608	1.000	EA	B	SMD	R51
	3/08/18 A CT03-KATHI							

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3	05B-472-8Z	CHI P	RESI STOR	4.7K	1/16W	5% T	1608	1.000	EA	B	SMD	R17
3/08/18 A CT03- KATHI												
3	05B-473-9Z	CHI P	RESI STOR	47K	1/16W	5% T	1608	8.000	EA	B	SMD	R8. 20. 25. 26. 28. 29. 31. 32
3/08/18 A CT03- KATHI												
3	071-503-5Z	RESI STOR	SEMI FI XED	50K	PRM-065			2.000	EA	B	MAN	RV2. 3
4/08/17 C AT04- PAT												
3	101-124-5	ELECT	CAPACI TOR	100UF	25V 20% 6.3X11			1.000	EA	B	MAN	C6A
4/05/14 C AT04- KATHI												
3	102-278-6Y	ELECT	CAPACI TOR	2200UF	25V 20% 13X25			1.000	EA	B	MAN	C5A
4/07/21 C CT04- 0624												
3	102-300-2	ELECT	CAPACI TOR	22UF	16V 20% 4X7			1.000	EA	B	MAN	C2A
4/05/14 C AT04- KATHI												
3	130-A73-6Y	CHI P	CERAMI C	0.01UF	GRM39 X7R103K 25V			4.000	EA	B	SMD	C3. 14. 15. 16
3/08/18 A CT03- KATHI												
3	130-A74-7Y	CHI P	CERAMI C	0.1UF	GRM39 Y5V104Z 25V PT			1.000	EA	B	SMD	C2
3/08/18 A CT03- KATHI												
3	130-A75-8Y	CHI P	CERAMI C	0.001UF	GRM39 X7R102K 50V PT			1.000	EA	B	SMD	C21
3/08/18 A CT03- KATHI												
3	130-B06-6Y	CHI P	CERAMI C	0.15UF	GRM39Y5V 154Z 16V TT			1.000	EA	B	SMD	C4
3/08/18 A CT03- KATHI												
3	130-101-8	DI SK	CERAMI C	0.001UF	F 102Z 50V			3.000	EA	B	MAN	C1A. 3A. 4A
4/05/14 C AT04- KATHI												
3	130-249-9	CHI P	CERAMI C	0.0022UF	GRM39 X7R222J 50V PT			2.000	EA	B	SMD	C9. 10
3/08/18 A CT03- KATHI												
3	130-261-9Y	CHI P	CERAMI C	0.022UF	GRM39 X7R223K 50V PT			2.000	EA	B	SMD	C6. 17
3/08/18 A CT03- KATHI												
3	130-432-7Y	CHI P	CERAMI C	0.0047UF	GRM39 X7R472K 50V PT			3.000	EA	B	SMD	C11. 12. 13
3/08/18 A CT03- KATHI												
3	131-093-9Y	CHI P	CERAMI C	100PF	GRM39 COG101J 50V PT			1.000	EA	B	SMD	C5
3/08/18 A CT03- KATHI												
3	134-775-7Y	CHI P	CERAMI C	0.047UF	GRM39 X7R473K 16V PT			1.000	EA	B	SMD	C7
3/08/18 A CT03- KATHI												
3	141-036-1Z	CHI P	TANTALUM	1UF	293D105X0016A2T16V			2.000	EA	B	SMD	C8. 20
3/08/18 A CT03- KATHI												
3	141-072-3Y	CHI P	TANTALUM	10UF	TSM1A106ASSR 10V			3.000	EA	B	SMD	C1. 18. 19
3/08/18 A CT03- KATHI												
3	200-332-2	TRANSI STOR		KTD1413				2.000	EA	B	SUB	Q3A. 5A
4/01/06 C AT04- KATHI												
3	202-023-3	TRANSI STOR		KTC3198(GR)				1.000	EA	B	MAN	Q2A
4/05/14 C AT04- KATHI												
3	202-036-5	TRANSI STOR		KTA1266(GR)				1.000	EA	B	MAN	Q4A
4/05/14 C AT04- KATHI												
3	202-183-4	FET		KTK211GR				1.000	EA	B	SMD	Q1
3/08/18 A CT03- KATHI												

				PL3361. TXT		
3	222-018-5A	I. C	KIA324F-EL	3.000	EA B SMD	IC1. 2. 3
3/08/18	A CT03-	KATHI				
3	241-062-5	DIODE ZENER	UZ-15BM	2.000	EA B MAN	D2A. 3A
4/05/14	C AT04-	KATHI				
3	243-049-4	DIODE SI CHIP	KDS226	2.000	EA B SMD	D1. 2
3/08/18	A CT03-	KATHI				
3	245-015-3X	DIODE RECTIFIER	1N4004	1.000	EA B MAN	D1A
4/07/21	A CT04-	0624				
3	411-385-B	P. C. B ESP&DC TO DO	M121. 4X35. 5 X1. 6 FR4 1/1	1.000	EA B SMD	
4/05/11	C CT04-	0429				
3	420-692-5	RELAY	BS-114S-10A-24VDC	1.000	EA B MAN	RLA1
4/05/14	C AT04-	KATHI				
3	505-023	HOUSING ASS'Y (6P)	SHD-8901	1.000	EA B MAN	J1
4/05/14	C AT04-	KATHI				
4 2	533-61M-A	MIC ASS'Y		1.000	EA A	
3/06/11						
3	002-223-5Z	FILM RESISTOR	22K 1/ 8W 5% ST	1.000	EA B SUB	R901
3/06/11						
3	130-101-8Y	DISK CERAMIC	0.001UF F 102Z 50V	1.000	EA B SUB	C950
3/06/11						
3	411-941	P. C. B MIC	32.17X38X1.6T XPC 94HB	1.000	EA B SUB	
3/06/11						
3	420-205-9W	MIC CONDENSER	YCM9765-W-005	1.000	EA B SUB	C - MIC
3/06/11						

DEVELOPMENT : FINAL
RI R610B
DESIGN : FINAL
TECHNIQUE : FINAL
Rev. : 038

P A R T S L I S T

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S/W VERSION : UNDEFINED
MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W
4/09/17 13:31:08 2

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SEQ	LEVEL	PART-NO.	NAME & DESCRIPTION	Q' TY	UT G KON OPT	REFERENCE-NO
	ECO-DATE	ECO-NO.				
3	420-362-7Z	CORD DURL	STHK-23095	1.000	EA B SUB	
4/05/14	C CT04-	0449				
3	421-069-8	MIC CONNECTOR	MIC-6PIN(P) SW-1561	1.000	EA B SUB	J106
3/06/11						

PL3361. TXT					
3	432-064-8Y	PUSH SWITCH	SKPS- 2251N	1. 000 EA B SUB	SW102
3/06/11					
3	436-059-7Z	SW TACT	TM115AP	2. 000 EA B SUB	SW103. 104
3/06/11					
3	600-718	(-) SECURING SCREW	ABS M6X8(P: 1) BLK	2. 000 EA B SUB	ACCESSORY
3/08/20					
3	623-627	(+) TAPPING SCREW(BH) 3X8- 2S NI- PLAT		2. 000 EA B SUB	ACC. FOR MIC BRKT
3/08/20					
3	625-007	(+) TAPPING SCREW(TH) 5X12- 1S ZN- PLAT		3. 000 EA B SUB	ACC. FOR SET BRKT
3/08/20					
3	660-138	WASHER	RUBB. &7X&25XT1. 5 BLK	2. 000 EA B SUB	ACCESSORY
3/08/20					
3	664-320	WASHER(LOCK" B" TYPE)	M3 NI- PLAT	2. 000 EA B SUB	ACC. FOR MIC BRKT
3/08/20					
3	664-518	WASHER(LOCK" B" TYPE)	M5 ZN- PLAT	3. 000 EA B SUB	ACC. FOR SET BRKT
3/08/20					
3	693-026	(+) PLUS SCREW (P. H) 3X8 ZN- PLAT		3. 000 EA B SUB	PCB: 2 HOLDER: 1
3/08/20					
3	693-197	(+) PLUS SCREW (P. H) 3X12(S: 10) BLK- PLAT		2. 000 EA B SUB	COVER MTG
3/08/20					
3	718-935-BA	COVER UPPER	ABS94 L380- 9001 BLK(ALAN48+)	1. 000 EA B SUB	
3/08/20					
3	718-936	COVER BOTTOM(MIC)	ABS94HB BLK	1. 000 EA B SUB	
3/08/20					
3	720-095	BRACKET(MIC)	SKD- 5 CR- PLAT	1. 000 EA B SUB	
3/08/20					
3	723-655-A	BRACKET	SPC T2 BLK- SPRAY	1. 000 EA B SUB	
3/08/20					
3	731-940-A	HOLDER(MIC)	PC BLK	1. 000 EA B SUB	
3/08/20					
3	740-547	LEVER	ABS94HB BLK	1. 000 EA B SUB	
3/08/20					
3	825-030-A	KNOB CODE	ABS 94HB BLK	2. 000 EA B SUB	
3/08/20					
3	870-036	WIRE CLAMP (CORD)	NYLON	1. 000 EA B SUB	
3/08/20					
3	894-526	CUSHION	&12XT5 RUBB. SPO. BLK STIC.	1. 000 EA B SUB	
3/08/20					
3	895-187	RUBBER SPONG	&9X&16XT10 EVA	1. 000 EA B SUB	
3/08/20					
3	91B-657	BOX MIC	SW1S 222(W) X68(D) X58(H)	1. 000 EA B FIN	
3/08/20					
3	921-010-EA	POLYBAG(PRINT)	P. E 100X100XT0. 05	2. 000 EA B FIN	ACCESSORY
3/08/20					

				PL3361. TXT		
	3	921-020-EA	POLYBAG (PRINT)	P. E 100X200XT0.05	1.000 EA B FIN	MIC
	3/08/20					
5	2	533-61M-BA	MAIN BODY ASS'Y		1.000 EA A	
	3/06/11					
	3	202-066-2	TRANSISTOR	KTB1367	1.000 EA B SUB	Q258
	3/06/11					
	3	204-010-1	TRANSISTOR	2SC2078(E)	1.000 EA B SUB	Q307
	3/11/28 C	CT03-1252				
	3	204-016-7	TRANSISTOR	2SC2314(E)	1.000 EA B SUB	Q306
	3/06/11					
	3	222-006-4	I.C	KIA7217AP	1.000 EA B SUB	IC104
	3/06/11					
	3	420-020-8X	METER E.I	H321-9028A	1.000 EA B SUB	
	3/06/11					
	3	420-705-1Z	JACK DC	TC38-078-01	2.000 EA B MAN	J101.102
	3/06/11					
	3	420-726-3X	JACK MINIATURE	FJ-2506 2.5MM	1.000 EA B MAN	J103
	3/06/11					
	3	421-046-7	CONNECTOR	CH-239(A) SW-1229	1.000 EA B SUB	J104
	3/06/11					
	3	440-005-1	MICA	(FOR T.R 2SC2314)	1.000 EA B SUB	TR C2314 MTG
	3/06/11					
	3	440-020-4	MICA	0.1T: 15X13 MICA FOR TR	1.000 EA B SUB	
	3/06/11					
	3	504-892	MOLEX PLUG ASS'Y		1.000 EA S SUB	
	3/06/11					
	3	613-305	(+) MACHINE SCREW(BH) 3X8 ZN-PLAT		3.000 EA B SUB	TR MTG: 3
	4/01/26 C	CT04-0073				
	3	613-332	(+) MACHINE SCREW(BH) 3X10 ZN-PLAT		3.000 EA B SUB	TR MTG: 2 IC MTG: 1
	3/08/20					
	3	621-420	(+) TAPPING SCREW(PH) 2.6X8-2S ZN-PLAT		2.000 EA B SUB	SUB PCB MTG: 2
	3/08/20					
	3	623-265	(+) TAPPING SCREW(BH) 3X6-2S ZN-PLAT		8.000 EA B SUB	MAIN PCB MTG: 6 , HEAT
SINK MTG	4/01/26 C	CT04-0073				
	3	651-024	NUT	SS41 M3-1S ZN-PLAT	6.000 EA B SUB	: 2
	4/01/26 C	CT04-0073				
	3	660-590	WASHER FIBER	7&X3.2& 1T RED	2.000 EA B SUB	TR MTG: 5, IC MTG: 1
	3/08/20					
	3	662-305	WASHER (SPRING)	M3 ZN-PLAT	4.000 EA B SUB	TR MTG: 3 IC MTG: 1
	4/01/19 C	CT04-KATHI				
	3	702-426-D	BODY MAIN	EGI T1.0 US COATING	1.000 EA B SUB	
	4/01/26 A	CT04-0073				
	3	732-560	HOLDER(ANT MTG)	SPTE TO. 3	1.000 EA B SUB	

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3/08/20	3	750- 766	CORD STOPPER	PP		1. 000	EA	B	SUB	
3/08/20	3	760- 704	HEAT SINK(IC MTG)	ALP 30X18XT2		1. 000	EA	B	SUB	
3/08/20	3	761- 801	HEAT SINK	AL PLATE T2. 0		1. 000	EA	B	SUB	
4/01/26	A	CT04- 0073								
3/08/20	3	853- 105	BUSHING	NYLON66+GLASS		1. 000	EA	B	SUB	TR MTG
3/08/20	6	533- 61M- PA	MAIN PCB AUTO ASS' Y			1. 000	EA	A		
3/06/11	3	002- 100- 7Z	FILM RESISTOR	10	1/ 8W 5% ST	1. 000	EA	B	AUT	R519
4/07/21	A	CT04- 0624								
3/10/10	3	002- 101- 8Z	FILM RESISTOR	100	1/ 8W 5% ST	5. 000	EA	B	AUT	R113. 206. 254. 312. 468
3/10/10	C	CT03- 1070								
R106. 125. 253. 268. 406. 418. 460.	3	002- 102- 9Z	FILM RESISTOR	1K	1/ 8W 5% ST	11. 000	EA	B	AUT	
4/07/21	C	CT04- 0624								
R22. 108. 165. 171. 267. 401. 402.	3	002- 103- 0Z	FILM RESISTOR	10K	1/ 8W 5% ST	17. 000	EA	B	AUT	512. 517. 521. 526
4/07/21	C	CT04- 0624								
403. 405. 411. 414. 415. 462. 465. +										
R166. 168. 169. 172. 173. 180. 209.	3	002- 104- 1Z	FILM RESISTOR	100K	1/ 8W 5% ST	10. 000	EA	B	AUT	466. 513. 311
3/06/25	C	CT03- KATHI								
3/06/11	3	002- 106- 3Z	FILM RESISTOR	10M	1/ 8W 5% ST	1. 000	EA	B	AUT	264. 516. 520
3/10/10	3	002- 109- 6Z	FILM RESISTOR	1	1/ 8W 5% ST	1. 000	EA	B	AUT	R176
3/10/10	C	CT03- 1070								
3/10/10	3	002- 122- 7Z	FILM RESISTOR	1. 2K	1/ 8W 5% ST	1. 000	EA	B	AUT	R313
3/10/10	C	CT03- 1070								
3/08/15	3	002- 123- 8Z	FILM RESISTOR	12K	1/ 8W 5% ST	1. 000	EA	B	AUT	R151
3/08/15	C	CT03- KATHI								
3/06/11	3	002- 151- 3Z	FILM RESISTOR	150	1/ 8W 5% ST	1. 000	EA	B	AUT	R463
3/12/22	3	002- 152- 4Z	FILM RESISTOR	1. 5K	1/ 8W 5% ST	2. 000	EA	B	AUT	R257. 316
3/06/25	C	CT03- 1345								
3/06/25	3	002- 153- 5Z	RESISTOR FILM	15K	1/8W 5% ST	3. 000	EA	B	AUT	R256. 506. 518
3/06/11	3	002- 154- 6Z	FILM RESISTOR	150K	1/ 8W 5% ST	3. 000	EA	B	AUT	R215. 412. 455
3/06/11	3	002- 155- 7Z	FILM RESISTOR	1. 5M	1/ 8W 5% ST	1. 000	EA	B	AUT	R301
3/06/11	3					1. 000	EA	B	AUT	R451

3 002-183-2Z FILM RESISTOR 18K 1/ 8W 5% ST PL3361. TXT 1.000 EA B AUT R457
3/10/10 C CT03-1070

DEVELOPMENT : FINAL P A R T S L I S T

RI R610B

DESIGN : FINAL

TECHNIQUE : FINAL

Rev. : 038

S/W VERSION : UNDEFINED

MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W

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SEQ	LEVEL	PART-NO.	NAME & DESCRIPTION	Q'TY	UT	G	KON	OPT	REFERENCE-NO
	ECO-DATE	ECO-NO.							

3	002-202-6Z	FILM RESISTOR	2K	1/	8W	5%	ST	1.000	EA	B	AUT	R453
	4/05/17 C	CT04-0457										
3	002-221-3Z	FILM RESISTOR	220	1/	8W	5%	ST	3.000	EA	B	AUT	R111. 302. 417
	3/10/10 C	CT03-1070										
3	002-222-4Z	FILM RESISTOR	2.2K	1/	8W	5%	ST	12.000	EA	B	AUT	
R56. 158. 205. 213. 216. 252. 258.	3/10/10 C	CT03-1070										
3	002-223-5Z	FILM RESISTOR	22K	1/	8W	5%	ST	3.000	EA	B	AUT	261. 265. 416. 450. 471 R160. 170. 203
	3/06/25 C	CT03-KATHI										
3	002-229-1Z	FILM RESISTOR	2.2	1/	8W	5%	ST	1.000	EA	B	AUT	R317
	3/12/22 C	CT03-1345										
3	002-272-9Z	FILM RESISTOR	2.7K	1/	8W	5%	ST	1.000	EA	B	AUT	R504
	3/08/15 A	CT03-KATHI										
3	002-273-0Z	FILM RESISTOR	27K	1/	8W	5%	ST	1.000	EA	B	AUT	R218
	3/10/10 C	CT03-1070										
3	002-331-9Z	FILM RESISTOR	330	1/	8W	5%	ST	1.000	EA	B	AUT	R255
	3/06/11											
3	002-332-0Z	FILM RESISTOR	3.3K	1/	8W	5%	ST	1.000	EA	B	AUT	R266
	3/08/15 A	CT03-KATHI										
3	002-333-1Z	FILM RESISTOR	33K	1/	8W	5%	ST	3.000	EA	B	AUT	R456. 469. 508
	4/02/09 C	CT04-0124										
3	002-335-3Z	FILM RESISTOR	3.3M	1/	8W	5%	ST	1.000	EA	B	AUT	R177
	3/06/11											
3	002-392-4Z	FILM RESISTOR	3.9K	1/	8W	5%	ST	1.000	EA	B	AUT	R161
	4/07/21 A	CT04-0624										
3	002-393-5Z	FILM RESISTOR	39K	1/	8W	5%	ST	1.000	EA	B	AUT	R157

PL3361. TXT

3/10/10 A CT03-1070							
3 002-470-1Z FILM RESISTOR	47	1/ 8W 5% ST	2.000	EA B AUT	R117. 263		
3/06/11							
3 002-471-2Z FILM RESISTOR	470	1/ 8W 5% ST	5.000	EA B AUT	R115. 116. 152. 217. 467		
4/07/21 C CT04-0624							
3 002-472-3Z FILM RESISTOR	4. 7K	1/ 8W 5% ST	11.000	EA B AUT			
R181. 201. 208. 211. 214. 307. 308. 3/08/23 C CT03-KATHI							
					413. 432. 434. 507		
3 002-473-4Z FILM RESISTOR	47K	1/ 8W 5% ST	15.000	EA B AUT			
R103. 122. 129. 156. 159. 163. 178. 4/02/09 C CT04-0124							
219. 262. 306. 452. 458. 461. 470. +							
3 002-474-5Z FILM RESISTOR	470K	1/ 8W 5% ST	1.000	EA B AUT	514		
3/06/25 C CT03-KATHI					R202		
3 002-561-0Z FILM RESISTOR	560	1/ 8W 5% ST	1.000	EA B AUT	R55		
3/06/11							
3 002-562-1Z FILM RESISTOR	5. 6K	1/ 8W 5% ST	1.000	EA B AUT	R464		
3/10/10 A CT03-1070							
3 002-563-2Z FILM RESISTOR	56K	1/ 8W 5% ST	4.000	EA B AUT	R162. 175. 511. 515		
3/06/11							
3 002-681-5Z FILM RESISTOR	680	1/ 8W 5% ST	1.000	EA B AUT	R421		
3/10/10 C CT03-1070							
3 002-683-7Z FILM RESISTOR	68K	1/ 8W 5% ST	1.000	EA B AUT	R164		
3/08/15 C CT03-KATHI							
3 002-752-2Z FILM RESISTOR	7. 5K	1/ 8W 5% ST	2.000	EA B AUT	R54. 502		
3/08/15 A CT03-KATHI							
3 030-100-6Z FILM RESISTOR	10	1/ 2W 5% ST MINI	1.000	EA B AUT	R167		
3/10/10 C CT03-1070							
3 030-100-6Z FILM RESISTOR	10	1/ 2W 5% ST MINI	1.000	EA B MAN	R259		
3/06/11							
3 030-472-2Z FILM RESISTOR	4. 7K	1/ 2W 5% ST MINI	1.000	EA B MAN	R319		
3/06/11							
3 030-479-3Z FILM RESISTOR	4. 7	1/ 2W 5% ST MINI	1.000	EA B MAN	R318		
3/08/15 A CT03-KATHI							
3 098-501-3 THERMISTOR DISK	500	KC5C150L	1.000	EA B MAN	TH401		
3/10/10 A CT03-1070							
3 100-101-9Y ELECT CAPACITOR	0. 1UF	50V 20% 5X11	1.000	EA B AUT	C468		
3/06/11							
3 101-006-2Y ELECT CAPACITOR	1UF	50V 20% 5X11	3.000	EA B AUT	C165. 457. 458		
3/12/22 C CT03-1345							
3 101-012-7Z ELECT CAPACITOR	10UF	16V 20% 5X11	6.000	EA B AUT			
C161. 173. 176. 255. 411. 518 3/06/11							
3 101-012-7Z ELECT CAPACITOR	10UF	16V 20% 5X11	1.000	EA B MAN	C232		

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3/10/10 C CT03-1070							
3 101-117-9 ELECT CAPACITOR	1000UF	16V 20% 10X16		1.000	EA B AUT	C259	
3/06/11							
3 101-124-5 ELECT CAPACITOR	100UF	25V 20% 6.3X11		2.000	EA B AUT	C252.406	
3/06/11							
3 101-124-5 ELECT CAPACITOR	100UF	25V 20% 6.3X11		2.000	EA B MAN	C228.466	
3/10/10 C CT03-1070							
3 102-207-2X ELECT CAPACITOR	2.2UF	50V 20% 5X11	2.5PT	1.000	EA B MAN	C257	
3/10/10 A CT03-1070							
3 102-210-4Z ELECT CAPACITOR	22UF	16V 20% 5X11		1.000	EA B AUT	C129	
3/06/11							
3 102-301-3 ELECT CAPACITOR	220UF	35V 20% 8X12		1.000	EA B AUT	C222	
4/02/09 C CT04-0124							
3 103-313-9Y ELECT CAPACITOR	33UF	16V 20% 5X11		1.000	EA B AUT	C216	
3/06/11							
3 104-707-7Y ELECT CAPACITOR	4.7UF	50V 20% 5X11	2.5PT	1.000	EA B AUT	C215	
4/02/09 C CT04-0124							
3 104-771-4X ELECT CAPACITOR	47UF	16V 20% 5X11		2.000	EA B AUT	C213.408	
3/10/10 C CT03-1070							
3 104-813-9X ELECT CAPACITOR	470UF	16V 20% 8X12		3.000	EA B AUT	C211.221.402	
4/02/09 C CT04-0124							
3 130-164-6Z AXIAL CERAMIC	0.1UF	SA105E104ZAA	50V	17.000	EA B MAN		
C54.156.157.158.159.166.168.	3/08/15 C CT03-KATHI						
170.175.177.178.212.218.451. +							
3 130-187-7 AXIAL CERAMIC	0.001UF	UP050B102MK	50V	5.000	EA B AUT	456.465.467	
3/06/11						C105.201.202.207.455	
3 130-188-8Z AXIAL CERAMIC	0.01UF	EP050Y103MN	16V	8.000	EA B AUT		
C104.108.126.127.151.234.407.	4/02/13 C CT04-0147						
3 130-203-9 AXIAL CERAMIC	0.0022UF	EP050X222MN	16V	1.000	EA B AUT	452	
3/06/11						C205	
3 130-227-9 AXIAL CERAMIC	0.022UF	RH050F 223Z	50V	5.000	EA B AUT	C167.171.206.506.520	
4/02/09 C CT04-0124							
3 130-418-5 AXIAL CERAMIC	0.0047UF	EP050X472MN	16V	1.000	EA B AUT	C227	
3/06/11							
3 130-427-3 AXIAL CERAMIC	0.047UF	UP050F473ZB	50V	1.000	EA B AUT	C203	
3/06/11							
3 130-613-4 AXIAL CERAMIC	0.0068UF	EP050X682K	16V	1.000	EA B AUT	C172	
3/06/11							
3 138-002-2 DISK CERAMIC	8PF	NP0080D	50V	1.000	EA B MAN	C24	
4/07/21 A CT04-0624							
3 140-401-2 DIP TANTALUM	0.47UF	ECSF1VE474M	16V	1.000	EA B MAN	C500	

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4/08/26 C CT04-0773							
3 141-004-2 DIP TANTALUM	1UF	TAM1E010AMCB	25V	1.000	EA	B SUB	C503
4/08/26 C CT04-0773							
3 196-802-6Z MYLAR CAPACITOR	0.0068UF	682J	50V	1.000	EA	B MAN	C461
3/06/11							
3 202-023-3X TRANSISTOR	ST2SC3198G(ECB-M)			1.000	EA	B AUT	Q402
3/10/10 A CT03-1070							
3 241-004-3X DIODE ZENER	1N5237BST			1.000	EA	B MAN	DZ1
3/10/10 A CT03-1070							
3 243-019-7 DIODE	1N4148(R.L)			24.000	EA	B AUT	
D101. 102. 121. 151. 152. 153.	4/07/21 C CT04-0624						
154. 155. 156. 201. 202. 203. 205. +							
252. 301. 302. 415. 416. 432. 451.							
3 311-972-9Z COIL SPRING	R4251-CS57-854392			1.000	EA	B MAN	452. 453. 506. 56 L312
3/06/11							
3 4A1-186-C P. C. B ASS'Y	187 X160 X1.6 XPC-94HB 1/0			1.000	EA	B AUT	
4/08/25 C CT04-0742							
4 401-165-C P. C. B MAIN	153.5X145.4X1.6 XPC-94HB 1/0			1.000	EA	B MAN	
4/08/24 A CS-CSKANG							

 DEVELOPMENT : FINAL
 # RIR610B

P A R T S L I S T

DESIGN : FINAL
 TECHNIQUE : FINAL

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Rev. : 038

S/W VERSION : UNDEFINED

MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W

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SEQ	LEVEL	PART-NO.	NAME & DESCRIPTION	Q'TY	UT	G	KON	OPT	REFERENCE-NO
		ECO-DATE	ECO-NO.						

	4	411-816-C	P. C. B VOLUME	32.5	X23.2	X1.6	XPC-94HB	1/0	1.000 EA B MAN
		4/08/24 A CS-CSKANG							
7	2	533-61M-PM	MAIN PCB MANUAL ASSY						1.000 EA A
		3/06/11							
	3	019-100-5	METAL OXIDE RESISTOR10	2W	5%	ST			2.000 EA B MAN
		3/12/22 C CT03-1345							R803. 809

PL3361. TXT									
3	019-479-8Z	METAL OXIDE RESISTOR	4.7	2W 5% ST				1.000 EA B MAN	R207
3/06/11									
3	030-181-9Z	FILM RESISTOR	180	1/ 2W 5% ST MINI				1.000 EA B MAN	R805
3/06/11									
3	061-109-9	RESISTOR SEMI FIXED	10KB	PC805M H 8DIA				2.000 EA B MAN	RV101. 203
3/06/11									
3	061-205-2	RESISTOR SEMI FIXED	2KB	PC805M H 8DIA				1.000 EA B MAN	RV201
3/06/11									
3	061-507-7	RESISTOR SEMI FIXED	5KB	PC805M H 8DIA				1.000 EA B MAN	RV501
3/06/11									
3	061-508-8	RESISTOR SEMI FIXED	50KB	PC805M H 8DIA				2.000 EA B MAN	RV103. 105
3/06/11									
3	098-201-2	THERMISTOR DISK	200 OHM 15%	KC5B120L				3.000 EA B MAN	TH102. 103. 105
3/06/25	C CT03-KATHI								
3	098-501-3	THERMISTOR DISK	500	KC5C150L				1.000 EA B MAN	TH55
3/06/11									
3	101-117-9	ELECT CAPACITOR	1000UF	16V 20% 10X16				1.000 EA B AUT	C261
3/06/11									
3	102-207-2X	ELECT CAPACITOR	2.2UF	50V 20% 5X11	2.5PT			1.000 EA B MAN	C100
3/06/11									
3	116-803-3Z	MYLAR CAPACITOR	0.068UF	50V 10% S				1.000 EA B MAN	C463
3/10/10	C CT03-1070								
3	130-101-8Y	DISK CERAMIC	0.001UF	F 102Z 50V				1.000 EA B MAN	C224
3/06/11									
3	130-102-9R	DISK CERAMIC	0.01UF	DD312B 103K 50V	794			8.000 EA B AUT	
C119. 152. 223. 272. 302. 312. 313.	3/10/10 C CT03-1070								
3	130-102-9R	DISK CERAMIC	0.01UF	DD312B 103K 50V	794			13.000 EA B MAN	343
C116. 120A. 271. 517. 122. 125. 251.	3/08/15 C CT03-KATHI								
3	130-164-6	AXIAL CERAMIC	0.1UF	SA105E104ZAA	50V			1.000 EA B AUT	253. 256. 258. 263. 301. 804
4/07/21	A CT04-0624								C163
3	130-227-9X	DISK CERAMIC	0.022UF	Y5U223M	50V			1.000 EA B MAN	C502
4/08/26	C CT04-0773								
3	130-405-3R	DISK CERAMIC	0.047UF	SDD 360Y5V 473M	794 50			7.000 EA B AUT	
C111. 231. 262. 311. 328. 345. 530	3/10/10 C CT03-1070								
3	130-405-3R	DISK CERAMIC	0.047UF	SDD 360Y5V 473M	794 50			2.000 EA B MAN	C162. 233
4/07/21	C CT04-0624								
3	131-003-8Y	DISK CERAMIC	10PF	NP0100D	50V			2.000 EA B MAN	C341. 523
4/07/21	C CT04-0624								
3	131-015-9R	DISK CERAMIC	100PF	DD330CH 101K	50V 794			3.000 EA B AUT	C325. 335. 524
3/10/10	C CT03-1070								
3	131-015-9Y	DISK CERAMIC	100PF	NP0101K	50V			1.000 EA B MAN	C180
4/07/21	C CT04-0624								

PL3361. TXT										
3	131-204-3X	DISK CERAMI C	12PF	NPO K%	50V	2.000	EA	B	MAN	C121.405
4/07/21	C CT04-0624									
3	131-226-3R	DISK CERAMI C	120PF	DD380CH	121J 794 50V	1.000	EA	B	AUT	C512
4/07/21	C CT04-0624									
3	131-502-2Y	DISK CERAMI C	15PF		NP0150K 50V	2.000	EA	B	MAN	C101.306
4/07/21	C CT04-0624									
3	131-510-9R	DISK CERAMI C	150PF	DD380CH	151K 794 50V	1.000	EA	B	AUT	C513
3/12/22	C CT03-1345									
3	131-804-5X	DISK CERAMI C	18PF		NPO K% 50V	3.000	EA	B	MAN	C117.153.307
4/07/21	C CT04-0624									
3	131-814-4	DISK CERAMI C	180PF		NP0181K 50V	2.000	EA	B	MAN	C308.316
3/10/10	C CT03-1070									
3	132-004-4Y	DISK CERAMI C	2PF		NP0020D 50V	1.000	EA	B	MAN	C342
3/06/11										
3	132-202-6X	DISK CERAMI C	22PF		NPO K% 50V	3.000	EA	B	MAN	C113.403.511
3/08/15	C CT03-KATHI									
3	132-214-7	DISK CERAMI C	220PF		NP0221K 50V	2.000	EA	B	MAN	C208.352
4/07/21	A CT04-0624									
3	132-214-7X	DISK CERAMI C	220PF		NPO 50V	4.000	EA	B	AUT	C322.327.337.338
4/07/21	C CT04-0624									
3	132-214-7X	DISK CERAMI C	220PF		NPO 50V	3.000	EA	B	MAN	C217.331.339
3/12/22	C CT03-1345									
3	133-002-7X	DISK CERAMI C	3PF		NPO K% 50V	2.000	EA	B	MAN	C149.150
3/06/25	C CT03-KATHI									
3	133-004-9X	DISK CERAMI C	30PF		NPO K% 50V	1.000	EA	B	AUT	C453
3/06/11										
3	133-303-9R	DISK CERAMI C	33PF		NP0330K 50V	1.000	EA	B	AUT	C525
3/06/11										
3	133-311-0X	DISK CERAMI C	330PF		NPO	4.000	EA	B	AUT	C254.321.326.333
4/07/21	C CT04-0624									
3	133-311-0X	DISK CERAMI C	330PF		NPO	1.000	EA	B	MAN	C332
3/06/11										
3	133-902-0Y	DISK CERAMI C	39PF		NP0390K 50V	2.000	EA	B	MAN	C336.522
4/04/07	C CT04-0320									
3	133-904-2	DISK CERAMI C	390PF		SL 391K 50V	2.000	EA	B	MAN	C155.317
4/07/21	C CT04-0624									
3	134-702-1R	DISK CERAMI C	470PF	DD380SL	471K 794 50V	2.000	EA	B	AUT	C344.346
3/08/15	C CT03-KATHI									
3	134-708-7R	DISK CERAMI C	47PF	DD350257CH	470K 50V 794	1.000	EA	B	AUT	C123
3/06/11										
3	134-708-7X	DISK CERAMI C	47PF		NPO K% 50V	1.000	EA	B	MAN	C515
3/10/10	C CT03-1070									
3	135-001-6Y	DISK CERAMI C	5PF		NP0050D 50V	1.000	EA	B	MAN	C521
4/07/21	C CT04-0624									

			PL3361. TXT			
	3	135-602-9 DISK CERAMIC	560PF	SL 561K 50V	1.000 EA B MAN	C507
		3/10/10 C CT03-1070				
	3	135-605-2X DISK CERAMIC	56PF	NPO K% 50V	1.000 EA B MAN	C320
		4/07/21 C CT04-0624				
	3	136-004-4X DISK CERAMIC	6PF	NPO K% 50V	2.000 EA B MAN	C107. 514
		3/06/25 C CT03-KATHI				
	3	136-802-8 DISK CERAMIC	680PF	B 681K 50V	1.000 EA B MAN	C462
		3/10/10 A CT03-1070				
	3	136-805-1X DISK CERAMIC	68PF	NPO K% 50V	1.000 EA B MAN	C347
		4/04/07 A CT04-0320				
	3	172-015-6W DIP TRIMMER	20PF	CVN620	1.000 EA B MAN	CT401
		3/06/11				
	3	200-040-8R TRANSISTOR	KRC101M AT (TO-92)		4.000 EA B AUT	Q154. 403. 451. 505
		3/08/15 C CT03-KATHI				
	3	202-023-3 TRANSISTOR	KTC3198(GR)		1.000 EA B MAN	Q252
		3/06/11				
	3	202-023-3X TRANSISTOR	ST2SC3198G(ECB-M)		6.000 EA B AUT	
Q121. 151. 207. 251. 401. 404		4/07/21 C CT04-0624				
	3	202-036-5 TRANSISTOR	KTA1266(GR)		1.000 EA B MAN	Q208
		3/06/11				
	3	202-036-5X TRANSISTOR	ST2SA1266G(ECB-M)		3.000 EA B AUT	Q157. 253. 257
		3/06/25 C CT03-KATHI				
	3	202-043-1R TRANSISTOR	KTC3192(Y) AT		1.000 EA B AUT	Q305
		3/06/11				
	3	202-060-7R TRANSISTOR	KTC3194(Y) AT		3.000 EA B AUT	Q503. 504. 506
		4/08/26 C CT04-0773				
	3	202-068-4R TRANSISTOR	KTK161(GE) AT		3.000 EA B AUT	Q104. 107. 108
		3/06/11				
	3	202-121-8R TRANSISTOR	KRC110MAT		9.000 EA B AUT	
Q106. 152. 153. 201. 202. 203. 205.		3/06/11				
	3	202-122-9R TRANSISTOR	KRC102MAT		4.000 EA B AUT	209. 303
		4/08/26 C CT04-0773				Q255. 256. 301. 507
	3	202-184-5R BRT	KRC112MAT		1.000 EA B AUT	Q210
		3/06/11				
	3	220-818-1 IC(AM/FM DETECTOR)	TK10930VTL		1.000 EA B SUB	IC102
		3/06/11				
	3	221-312-5 I. C	MC33074P		1.000 EA B MAN	IC103
		3/06/11				
	3	241-004-3X DIODE ZENER	1N5237BST		1.000 EA B AUT	DZ201
		3/06/11				
	3	241-158-9Z DIODE ZENER	1N5234B 6.2V1/2W		1.000 EA B AUT	DZ401
		3/10/10 C CT03-1070				
	3	241-201-7Y DIODE ZENER	1N5235BST		1.000 EA B AUT	DZ403

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DEVELOPMENT : FINAL
 # RI R610B
 DESIGN : FINAL
 TECHNIQUE : FINAL
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P A R T S L I S T

S/W VERSION : UNDEFINED
 MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W
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SEQ	LEVEL	PART-NO.	NAME & DESCRIPTION	Q' TY	UT	G	KON	OPT	REFERENCE- NO
	ECO- DATE	ECO- NO.							
3	242-001-5R	DIODE VARI CAP	SVC251SPA- AC	3.000	EA	B	MAN		D503. 504. 505
3	245-008-7X	DIODE RECTIFIER	1N5404	1.000	EA	B	MAN		D211
3	245-015-3Z	DIODE RECTIFIER	1N4004T/R 400V 1A	1.000	EA	B	MAN		D271
3	260-485-5V	CRYSTAL HC49U	10.240M -30 30PM 32P FUND	1.000	EA	B	MAN		X1
3	262-043-9Y	CRYSTAL(HC- 49U)	4.5MHZ -30 30PM 16P FUND	1.000	EA	B	MAN		X401
3	270-007-0W	FILTER CERAMIC	LTW455HT	1.000	EA	B	MAN		CF2
3	271-030-5Z	FILTER CRYSTAL	HC49/T (10.695M)	1.000	EA	B	MAN		CF1
3	300-136-3W	TRANSFORMER	LE119- H019	1.000	EA	B	MAN		CH201
3	300-159-4Z	TRANSFORMER (MOD.)	EI - 24	1.000	EA	B	MAN		T201
3	310-172-8	COIL SPRING	6.3X0.8X6T: R 0.225UH	1.000	EA	B	MAN		L311
3	310-291-2Z	COIL AXIAL	6.8UH: TCEC- 6R8K	1.000	EA	B	AUT		L306
3	310-296-7Z	COIL SPRING	6X0.8X5.5T: R	1.000	EA	B	MAN		L310
3	310-297-8Z	COIL SPRING	2.5X0.8X7T: R	1.000	EA	B	MAN		L304
3	310-347-0Z	COIL SPRING	5.2X0.7X7T: R	1.000	EA	B	MAN		L313

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3/06/11	3	310-407-1	COIL SPRING	5X0. 6X13. 5T: R	1. 000	EA	B	MAN	L307
3/06/11	3	320-301-1	COIL	455KHZ DET	1. 000	EA	B	MAN	L105
3/06/11	3	320-314-3Z	COIL IFT	Z73D- 225	1. 000	EA	B	MAN	L401
3/06/11	3	320-318-7Z	COIL IFT	Z73C- 359	2. 000	EA	B	MAN	L301. 302
3/06/11	3	320-380-2Y	COIL IFT	27MHZ LKSZ73D0- X000205- 0	1. 000	EA	B	MAN	L102
3/06/11	3	320-576-3Z	COIL IFT	10. 7MHZ MAX RX	1. 000	EA	B	MAN	L104
4/07/16 C CT04- 0618	3	320-577-4	COIL IFT	37MHZ TX	1. 000	EA	B	MAN	L303
4/07/16 C CT04- 0618	3	320-585-1Z	COIL IFT	27MHZ Z073I - 1	1. 000	EA	B	MAN	L101
3/06/11	3	321-095-2	COIL IFT	27MHZ RX (7RC)	1. 000	EA	B	MAN	L103
4/07/16 C CT04- 0618	3	430-073-8	SW PULSE	YPS210125SK 25MM	1. 000	EA	B	MAN	SW401
3/06/11	3	509-110	6. 5T SPRING COIL ASS6. 5T3. 4X. 55: M9D3. 7X6		1. 000	EA	B	MAN	L314
3/08/15 A CT03- KATHI	4	310-809-1	COIL SPRING	3. 4X0. 55X6. 5T: R	1. 000	EA	B	MAN	
93/07/09 A B93- 0709	4	321-053-2	CORE	1108- KA- 058 M9DTH3. 7X6	1. 000	EA	B	MAN	
93/07/09 A B93- 0709	3	771-850	SHIELD PLATE	SPTE TO. 5	1. 000	EA	B	MAN	
3/08/20	3	772-238	SHIELD HOUSING	SPTE TO. 3	1. 000	EA	B	MAN	
3/08/20	3	772-274-A	SHIELD PLATE	SPTE T=0. 3	1. 000	EA	B	SUB	
3/08/20	3	772-678	SHIELD PLATE	TIN TO. 3	1. 000	EA	B	SUB	
4/01/26 A CT04- 0073	3	906-998	TAPE CU	16X36XT0. 05 CU- TAPE	2. 000	EA	B	SUB	
4/02/26 A CT04- 0192	3	999-128	TAPE	TAPE MARKING 12 MM	0. 055	RL	B		SUPPORT 772- 238
4/03/17 C AT04- KATHI	8 2	533-61P-A	PACKING ASS' Y		1. 000	EA	A		
3/08/20	3	504-629	MOLEX RECEPTACLE ASS900MM		1. 000	EA	S	SUB	
3/06/11	3	91B-658	BOX TRAY	SW1S 226(W) X162(D) X58(H)	1. 000	EA	B	FIN	

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3/08/20						
3	91C-002	PAD (TRC-439)	SW1S 268X21	3.000	EA B FIN	
3/08/20						
3	91D-235-B	BOX OUT	DW1E 415(W)X244(D)X244(H)	0.167	EA B FIN	
4/09/14 A	CT04-0844					
3	91D-326	BOX INNER	SW1S "E" 238(W)X238(D)X66(H)	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	922-030-EB	POLYBAG(PRINT)	P. E 200X300XT0.05	1.000	EA B FIN	MANUAL
3/08/20						
3	922-535-ED	POLYBAG (PRINT)	P. E 250X350XT0.05	1.000	EA B FIN	SET
3/08/20						
3	937-854	MANUAL OWNER' S	ALAN48XL MULTI	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	937-855	MANUAL OWNER' S	ALAN48XL MULTI	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	943-244-C	WARRANTY CARD	WOOD PAPER 350X92	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	943-714	CARD WARRANTY	ARTPAPER 210X95	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	943-757	CARD WARRANTY	WOODFREEPAPER 149X105	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	943-859	CARD IMPORTANT	WOODFREEPAPER 148X210	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	95B-100	LABEL E3	FOIL STICKER 12X8	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	95B-125	LABEL ITALIAN	ARTPAPER 57X105	1.000	EA B FIN	
4/07/10 A	CT04-0616					
3	95B-172	LABEL SERIAL	ARTPAPER 30X40	1.000	EA B FIN	
4/08/13 A	CT04-0724					
3	95B-180	LABEL MULTI	POLYESTER 70X70	1.000	EA B FIN	
4/04/01 A	CT04-0311					
3	95B-199	LABEL AUTOMATIVE	POLYESTER 12X8	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	95B-200	LABEL EU COUNTRY	ARTPAPER 50X36	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	95B-201	LABEL GIFT BOX	ARTPAPER 224X50	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	95B-202	LABEL NAME	POLYESTER 68.5X16.5	1.000	EA B FIN	
4/09/14 A	CT04-0844					
3	950-040	LABEL NEGATIVE		1.000	EA B FIN	
4/08/23 A	CT04-0757					
3	953-750	LABEL CAUTION 2A	40X28XT0.02	1.000	EA B FIN	
4/08/23 A	CT04-0757					
3	954-267-A	LABEL WIRE BATTERY	PAPER 40X12	1.000	EA B FIN	

PARTS LIST

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DEVELOPMENT : FINAL
              # RI R610B
DESIGN       : FINAL
TECHNIQUE    : FINAL
              Rev. : 038
S/W VERSION : UNDEFINED
MODEL CODE   : 3361      ALAN48XL MULTI 27MHZ 400CH 4W
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PARTS LIST

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3	05B-474-0Z	CHIP RESISTOR	470K	1/16W 5% T 1608	1.000	EA	B	SMD	R906
3/08/15	C	CT03-KATHI							

		PL3361. TXT			
3	130-A73-6Y CHIP CERAMIC	0.01UF	GRM39 X7R103K 25V	3.000 EA B SMD	C138.806.808
3/08/15	C CT03-KATHI				
3	130-432-7Y CHIP CERAMIC	0.0047UF	GRM39 X7R472K 50V PT	2.000 EA B SMD	C442.443
3/08/15	C CT03-KATHI				
3	131-093-9Y CHIP CERAMIC	100PF	GRM39 COG101J 50V PT	3.000 EA B SMD	C250.251.252
3/08/15	C CT03-KATHI				
3	131-100-6Y CHIP CERAMIC	0.1UF	GRM39 X7R104K 50V PT	2.000 EA B SMD	C22.187
3/08/15	C CT03-KATHI				
3	132-025-3Y CHIP CERAMIC	20PF	GRM39 COG200J 50V PT	2.000 EA B SMD	C901.902
3/08/15	C CT03-KATHI				
3	202-082-6 TRANSISTOR	KTA1504ST1(G)		1.000 EA B SMD	Q422
3/06/25	C CT03-KATHI				
3	202-095-8Z TRANSISTOR	KRC104SND		1.000 EA B SMD	Q2
3/06/25	A CT03-KATHI				
3	202-112-0 TRANSISTOR	KTC3875S(GR)		1.000 EA B SMD	Q421
3/06/25	C CT03-KATHI				
3	221-460-5 I.C PLL(DUAL)	BU2630F		1.000 EA B SMD	IC6
3/06/25	A CT03-KATHI				
3	221-531-6 I.C CPU(OTP)	S3P8249XZZ- TWR9	(NIKE)	1.000 EA B SUB	IC101
4/08/17	C AT04-PAT				
3	221-872-4 I.C EEPROM	HT93LC66- 8SOP-A		1.000 EA B SMD	IC9
3/11/17	C CT03-1205				
3	243-051-5 DIODE SI CHIP	KDS184S		3.000 EA B SMD	D3.4.11
3/10/10	C CT03-1070				
3	252-321-7 LCD DISPLAY	IS07167P		1.000 EA B SUB	LCD
3/11/17	A CT03-1205				
3	270-065-2X RESONATOR CERAMIC	ZTA 3.587MG		1.000 EA B SUB	X901
3/08/15	A CT03-KATHI				
10 2	533-61S-PM SUB PCB MANUAL ASS'Y			1.000 EA A	
3/06/11					
3	100-102-0Z CAPACITOR ELECT	0.1UF 50V SRA(M): 4X7		2.000 EA B SUB	C805.807
3/08/15	A CT03-KATHI				
3	251-078-3Z LED LAMP	BL-REG202H		2.000 EA B SUB	LED1.2
3/06/11					
3	251-224-8Z PILOT LAMP	60MA 3& 14V		3.000 EA B MAN	LP1.2.3
4/05/18	C AT04-KATHI				
3	251-279-8Z PILOT LAMP	40MA 3& 14V		6.000 EA B SUB	LP4.5.6.7.8.9
3/06/11					
3	310-291-2Z COIL AXIAL	6.8UH: TCEC- 6R8K		3.000 EA B MAN	L801.804.805
3/06/11					
3	411-811-B P.C.B LCD	149 X48	X1.6 FR4 1/1	1.000 EA B SMD	
4/05/19	C CT04-0463				
3	421-643-6A CONNECTOR SOCKET	SCN- 16- 6(M1)R PCB TYPE		1.000 EA B SUB	J105
4/02/05	C CT04-0118				

		PL3361. TXT			
	3	432-040-6 SW PUSH	SPPH221AP011	1.000 EA B MAN	SW201
	3/06/11				
	3	436-059-7Z SW TACT	TM115AP	8.000 EA B MAN	SW1. 2. 3. 4. 5. 6. 10. A
	4/05/20	C AT04-KATHI			
	3	814-287 LENS LIGHTING	ACRYL	1.000 EA B SUB	
	3/08/20				
	3	826-405 KNOB CB/PA	ABS 94HB BLK	1.000 EA B SUB	
	3/08/20				
	3	895-625 LAMP CAP	3\$ YELLOW	6.000 EA B SUB	
	3/08/20				
	3	906-868 BACK PLATE	54. 3X22. 8XT0. 25 PC YELLOW	1.000 EA B SUB	
	3/08/20				
11	2	533-61V-RP V/R PCB ASS' Y		1.000 EA A	
	3/06/11				
	3	101-006-2Y ELECT CAPACITOR	1UF 50V 20% 5X11 2. 5PT	1.000 EA B MAN	C471
	3/12/22	A CT03-1345			
	3	429-324-8 FLAT WIRE	11PX2. 0X150	1.000 EA B MAN	
	3/06/11				
	3	450-534-5Z VR	50KA: 0952- 25FP- B10K	1.000 EA B MAN	VOL/SQ
	3/06/11				
	3	450-535-6Z VR	50KB: 0951- 25FP	1.000 EA B MAN	MIC/RF GAIN
	3/06/11				
12	2	533-61W-A WIRE ASS' Y		1.000 EA A	
	3/06/11				
	3	427-002-7 WIRE	1007 AWG 24 (1/0/51) BRN	0.070 ME B MAN	A --- A1
	3/12/22	C CT03-1345			
	3	427-003-8 WIRE	1007 AWG 24(1/0. 51) RED	0.200 ME B MAN	1. 5: 1. 5 L --- L1
	3/12/22	A CT03-1345			
	3	427-010-4 WIRE	1007 AWG 24(1/0. 51) WHT	0.110 ME B MAN	1. 5: 1. 5 C --- C1
	3/12/22	C CT03-1345			
	3	427-025-8 WIRE	1007 AWG 24(11/0. 16) YEL	0.080 ME B MAN	1. 5: 1. 5 MP MT(+) --- MET(+)
	3/06/11				
	3	427-026-9 WIRE	1007 AWG 24 (11/0. 16) GRN	0.080 ME B MAN	0. 5: 0. 5 MP MT(-) --- MET(-)
	3/06/11				
	3	427-269-2 WIRE	1015 AWG 20(10/0. 26) RED	0.200 ME B MAN	0. 5: 0. 5 E --- E1
	3/12/22	A CT03-1345			
	3	427-270-2 WIRE	1015 AWG 20(10/0. 26) BLK	0.120 ME B MAN	1. 5: 1. 5 F --- F1
	3/12/22	A CT03-1345			

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13	2	533-61W-MA	WIRE MIC ASS'Y			1.000 EA A	1.5:1.5
		3/06/11					
PCB	SUB	3	427-025-8	WIRE	1007 AWG 24(11/0.16)	YEL	0.060 ME B SUB
		3/06/11					CONDENSER MIC(+) ---
							0.5:0.5
PCB	SUB	3	427-026-9	WIRE	1007 AWG 24 (11/0.16)	GRN	0.060 ME B SUB
		3/06/11					CONDENSER MIC(-) ---
							0.5:0.5

* TOTAL RECORD = 379

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