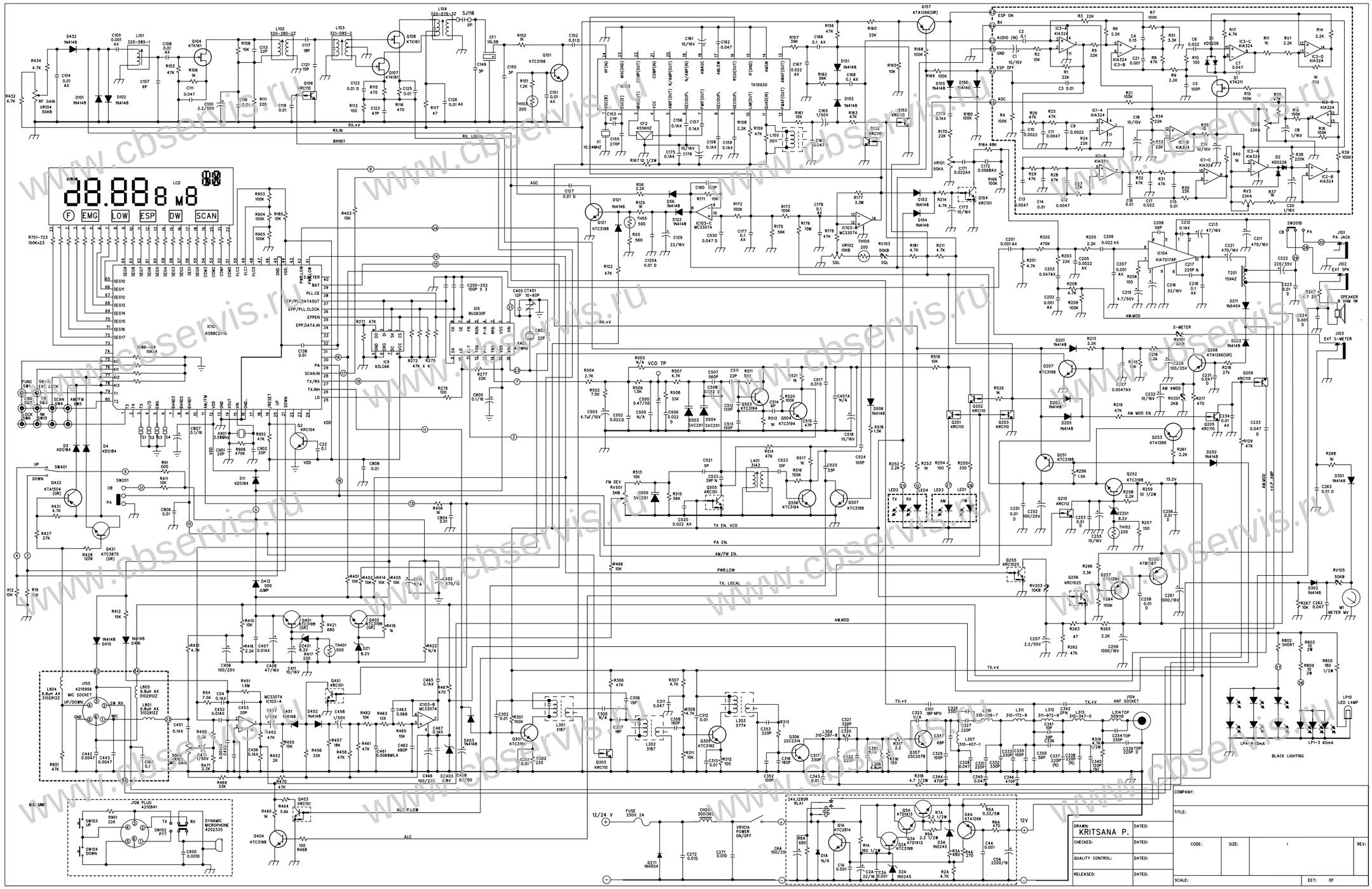
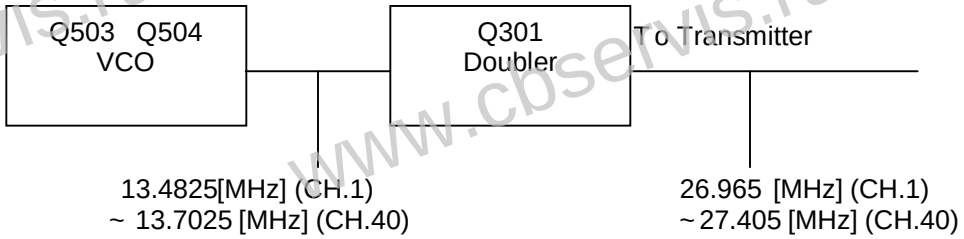
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Description Of Frequency Determining And Stabilizing Circuit Introduction

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 doublers 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 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 : Fo = Crystal Oscillator Frequency
Fr = Phase Detector Reference Frequency
Fvco = VCO Frequency
Ft = Transmit Frequency
Then : Fr = Fo/1800
And under locked conditions : Fr = Fvco / N
Where , “N” is the programmable divider ratio.
Then : Fvco = N X Fr

From which it can be seen, the percentage error in Ft is the same as percentage error in Fo.

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

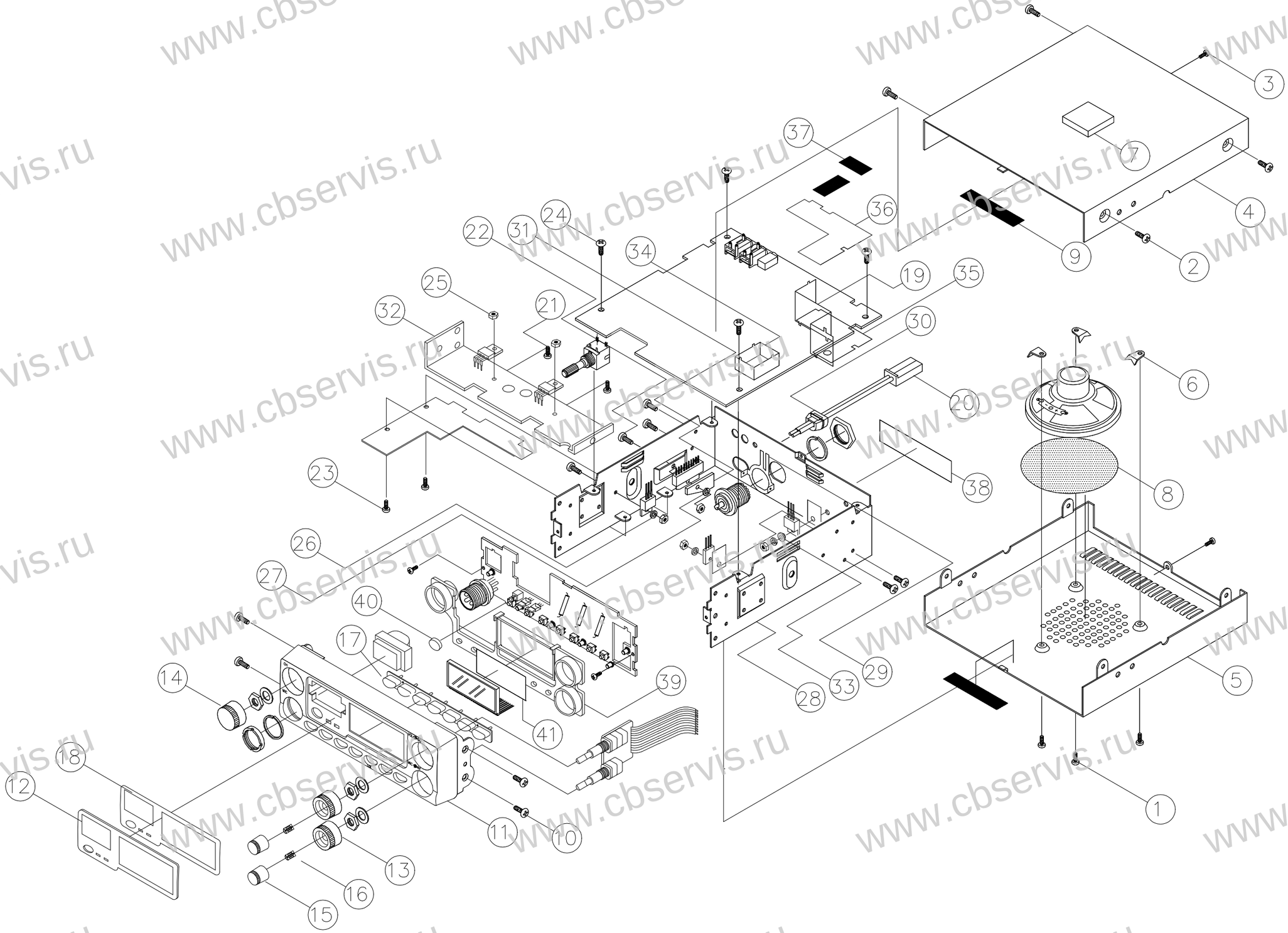
The deviation signals are filtered with RC network and goes to the OP AMP IC IC3 make nominal signal level to achieve wanted modulation. To control incoming audio signal, diode D451,452 and corresponding limiter circuit controls with proportional to sampled audio output level adjust RV501 shall not exceed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

Max Modulation Control

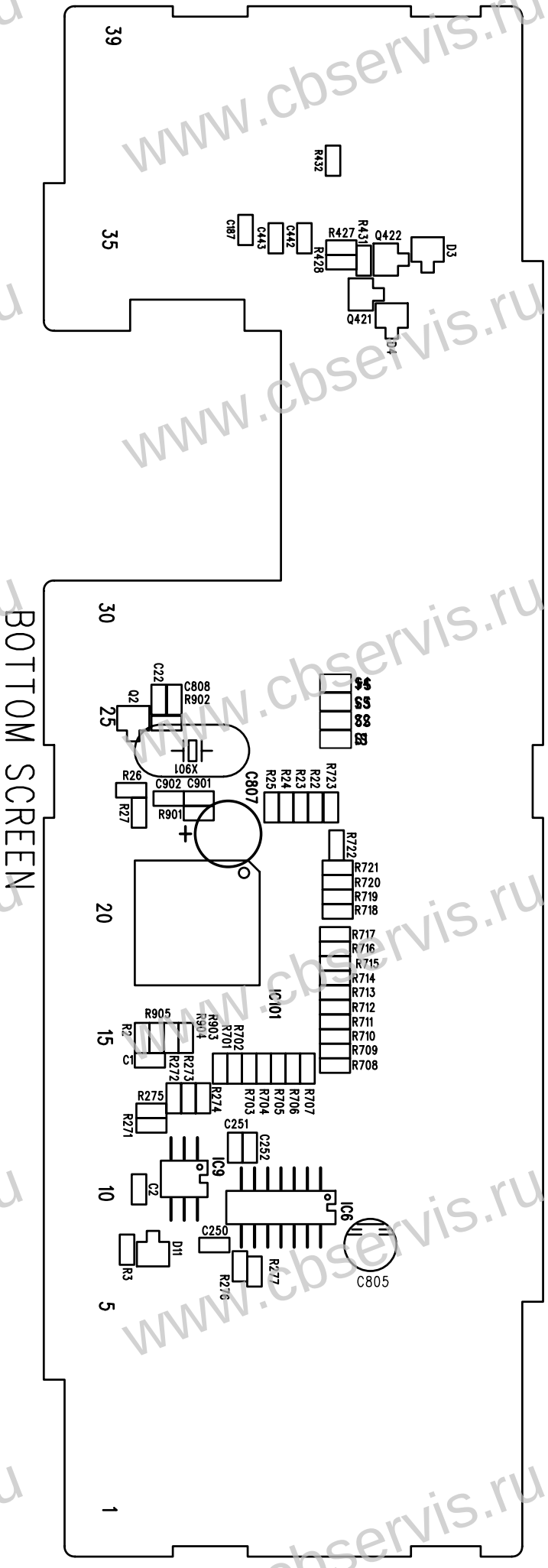
The modulation signal are filtered with RC network and goes to the audio AMP IC IC104 make amplitude signal to achieved AM modulation.
To control incoming audio signal, diode D202, Q208, and Q207 corresponding limiter circuit controls with proportional to sampled audio output level adjust by RV201 shall not exceed 100% max modulation under 60% AF 20dB up from 1KHz modulation input.

2. The RECEIVER

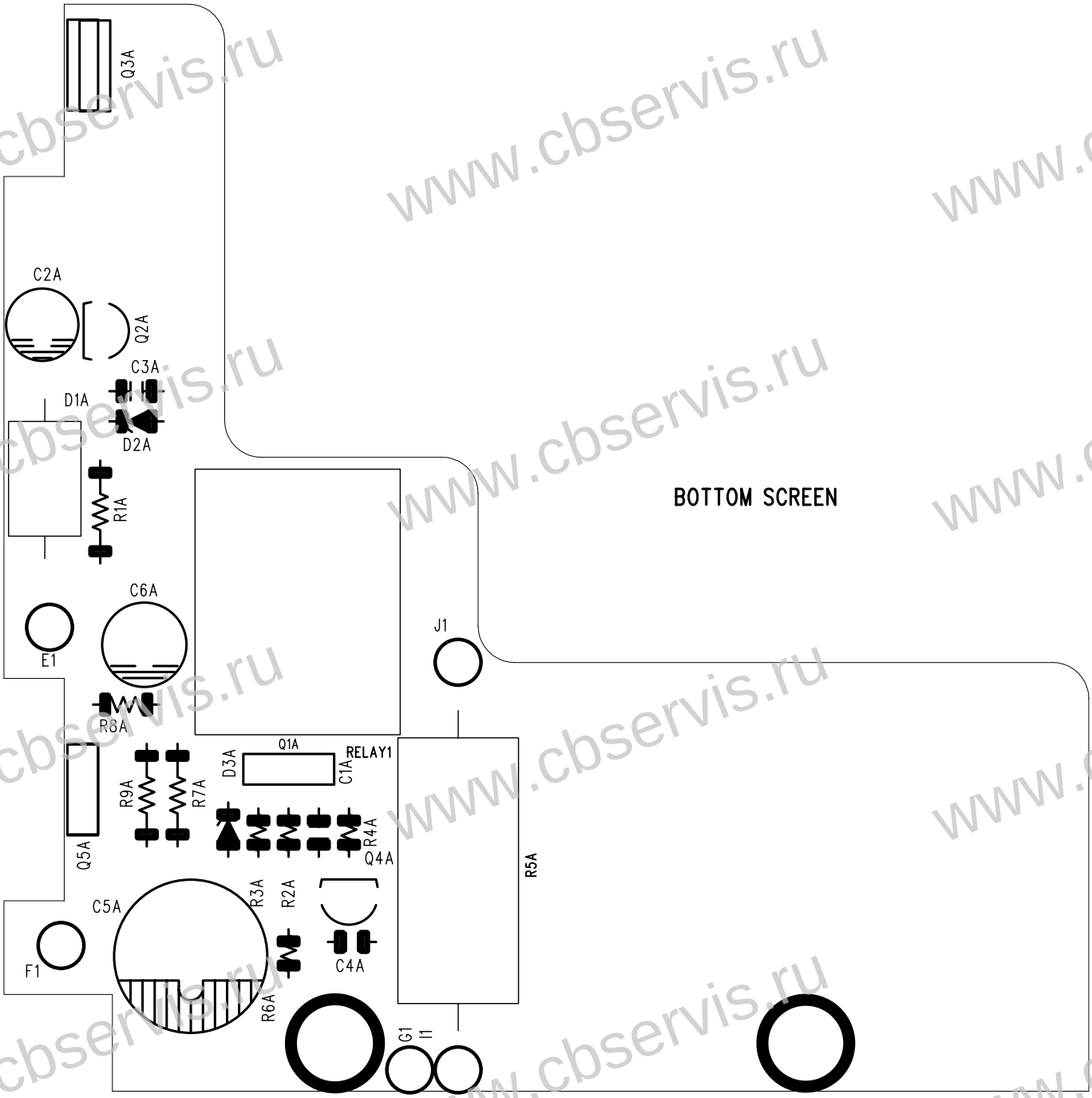
RF AMP Q104 amplify RF signal from antenna, the amplified RF SIGNAL is fed through tuning coils L102, L103 to the gate of double balance mixer FET, Q107, Q108 also VCO sources frequency lower 10.695 MHz than the frequency of each channel is supplied to mixer.
The source of 10.695MHz frequency filtered by CF1 is fed to 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.

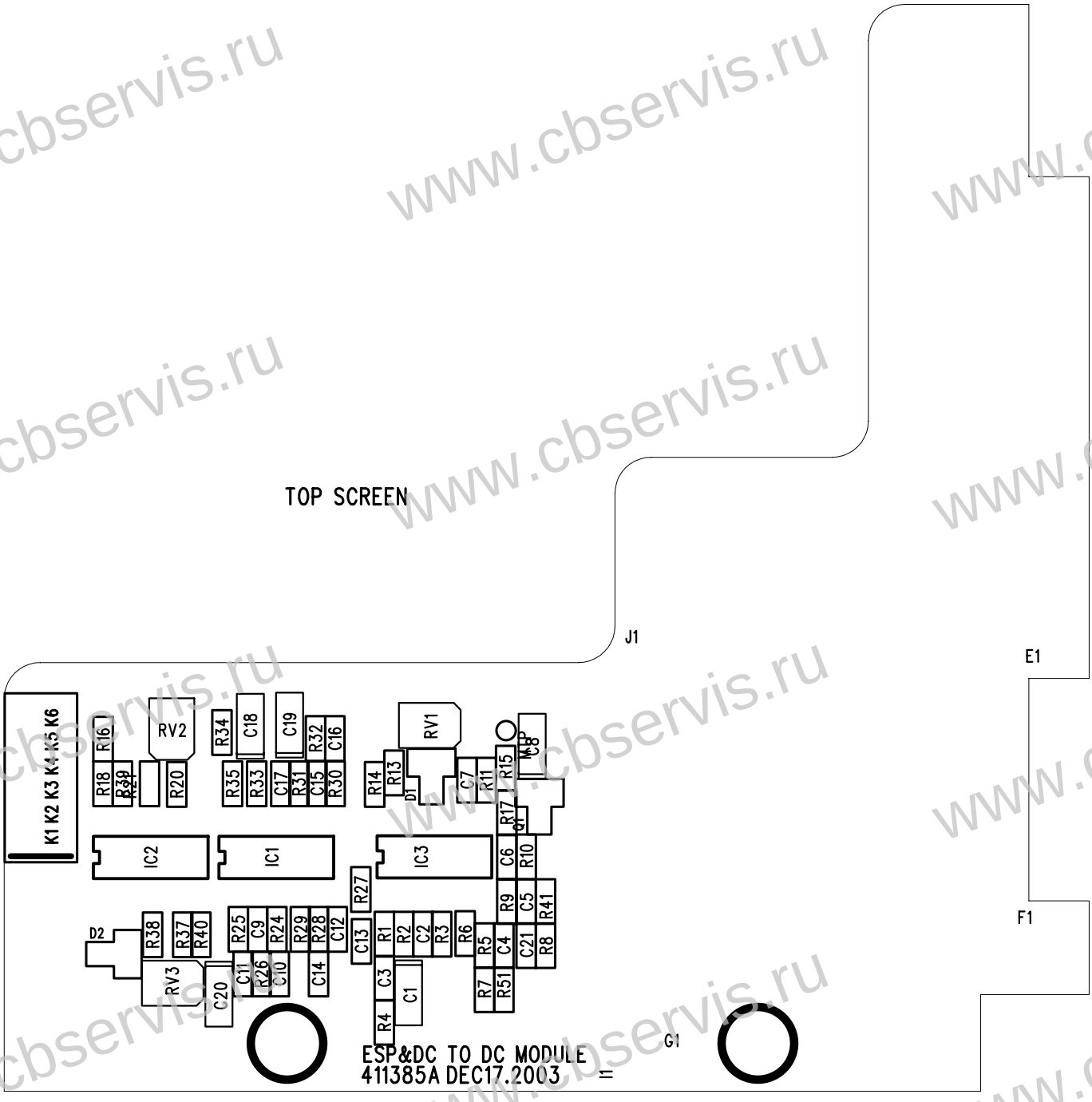


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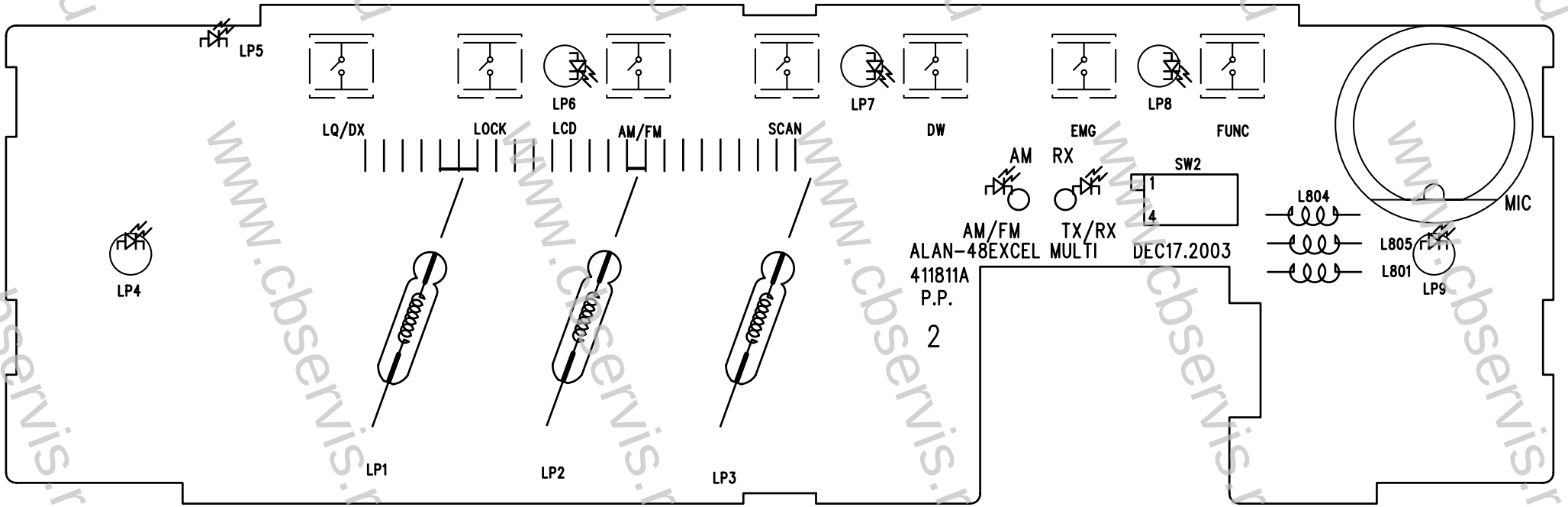
www.cbservis.ru


Q3A
C2A
Q2A
C3A
D1A
D2A
R1A
BOTTOM SCREEN
C6A
E1
J1
R8A
Q1A
RELAY1
D3A
C1A
R9A
R7A
R4A
Q5A
Q4A
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C5A
R3A
R2A
F1
C4A
R6A
G1
I1



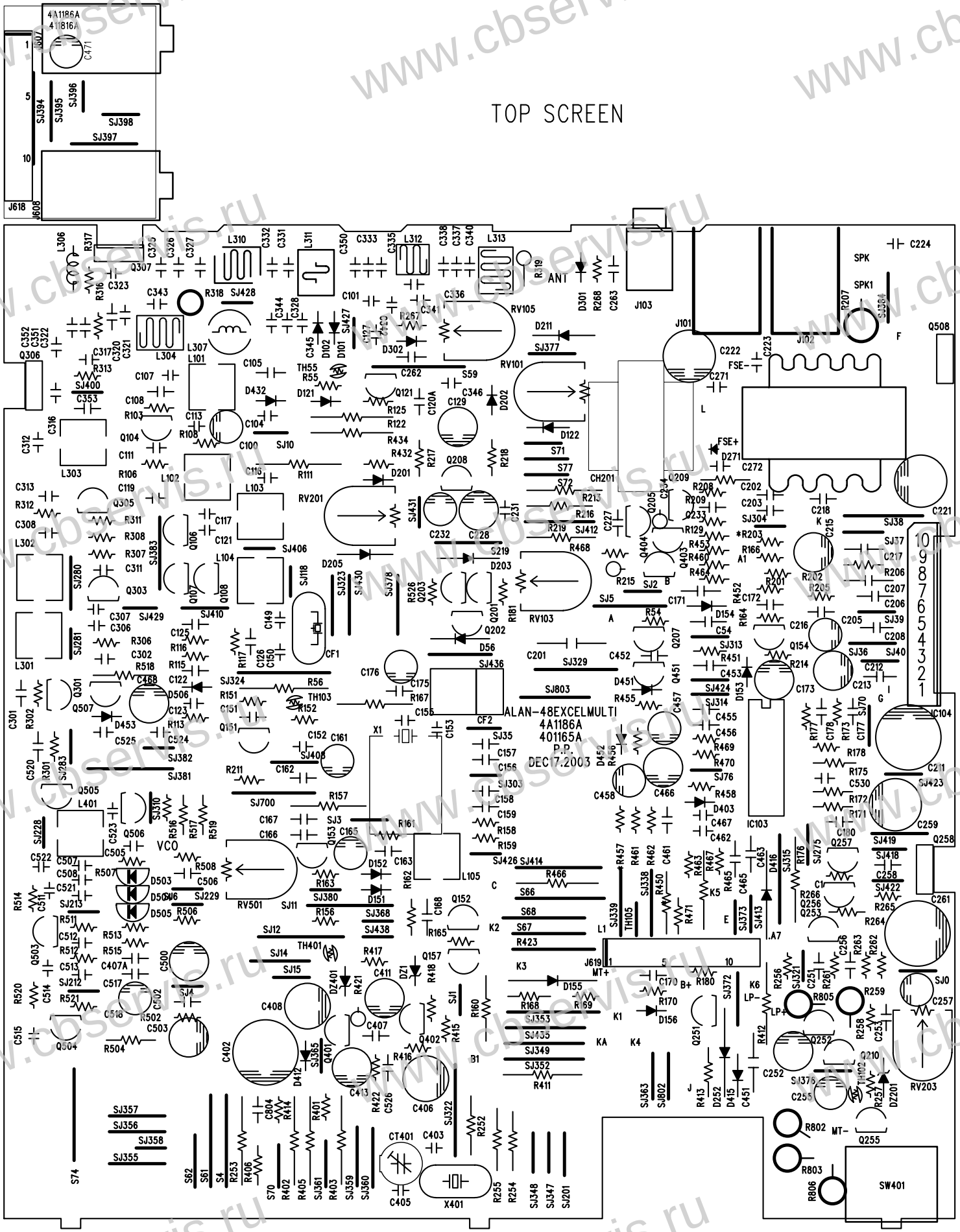
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TOP SCREEN

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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.SP0.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	

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DEVELOPMENT : FINAL
RIR610B
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

P A R T S L I S T

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 BH	3X6 BLK	4.000	EA	B	SUB		UPPER/BOTTOM COVER MTG
		3/08/20								
	3	633-152	(+)TAP TITE SCREW BH	3X4-3S BLK	2.000	EA	B	SUB		UP/BOTT REAR COVER MTG
		3/08/20								
	3	719-072-E	COVER UPPER	SPC+VINYL SHEET T0.75 BLK	1.000	EA	B	SUB		
		4/07/05 C	CT04-0592							
	3	719-073-A	COVER BOTTOM	SPC+VIN.SHT.T0.75 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.SP0.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							

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 T0.25	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 T0.16	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						

3	05B-472-8Z	CHIP RESISTOR	4.7K 1/16W 5% T 1608	1.000	EA B SMD	R17
	3/08/18 A CT03-KATHI					
3	05B-473-9Z	CHIP RESISTOR	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	RESISTOR SEMIFIXED	50K PRM-065	2.000	EA B MAN	RV2.3
	4/08/17 C AT04-PAT					
3	101-124-5	ELECT CAPACITOR	100UF 25V 20% 6.3X11	1.000	EA B MAN	C6A
	4/05/14 C AT04-KATHI					
3	102-278-6Y	ELECT CAPACITOR	2200UF 25V 20% 13X25	1.000	EA B MAN	C5A
	4/07/21 C CT04-0624					
3	102-300-2	ELECT CAPACITOR	22UF 16V 20% 4X7	1.000	EA B MAN	C2A
	4/05/14 C AT04-KATHI					
3	130-A73-6Y	CHIP CERAMIC	0.01UF GRM39 X7R103K 25V	4.000	EA B SMD	C3.14.15.16
	3/08/18 A CT03-KATHI					
3	130-A74-7Y	CHIP CERAMIC	0.1UF GRM39 Y5V104Z 25V PT	1.000	EA B SMD	C2
	3/08/18 A CT03-KATHI					
3	130-A75-8Y	CHIP CERAMIC	0.001UF GRM39 X7R102K 50V PT	1.000	EA B SMD	C21
	3/08/18 A CT03-KATHI					
3	130-B06-6Y	CHIP CERAMIC	0.15UF GRM39Y5V 154Z 16V TT	1.000	EA B SMD	C4
	3/08/18 A CT03-KATHI					
3	130-101-8	DISK CERAMIC	0.001UF F 102Z 50V	3.000	EA B MAN	C1A.3A.4A
	4/05/14 C AT04-KATHI					
3	130-249-9	CHIP CERAMIC	0.0022UF GRM39 X7R222J 50V PT	2.000	EA B SMD	C9.10
	3/08/18 A CT03-KATHI					
3	130-261-9Y	CHIP CERAMIC	0.022UF GRM39 X7R223K 50V PT	2.000	EA B SMD	C6.17
	3/08/18 A CT03-KATHI					
3	130-432-7Y	CHIP CERAMIC	0.0047UF GRM39 X7R472K 50V PT	3.000	EA B SMD	C11.12.13
	3/08/18 A CT03-KATHI					
3	131-093-9Y	CHIP CERAMIC	100PF GRM39 COG101J 50V PT	1.000	EA B SMD	C5
	3/08/18 A CT03-KATHI					
3	134-775-7Y	CHIP CERAMIC	0.047UF GRM39 X7R473K 16V PT	1.000	EA B SMD	C7
	3/08/18 A CT03-KATHI					
3	141-036-1Z	CHIP TANTALUM	1UF 293D105X0016A2T16V	2.000	EA B SMD	C8.20
	3/08/18 A CT03-KATHI					
3	141-072-3Y	CHIP TANTALUM	10UF TSM1A106ASSR 10V	3.000	EA B SMD	C1.18.19
	3/08/18 A CT03-KATHI					
3	200-332-2	TRANSISTOR	KTD1413	2.000	EA B SUB	Q3A.5A
	4/01/06 C AT04-KATHI					
3	202-023-3	TRANSISTOR	KTC3198(GR)	1.000	EA B MAN	Q2A
	4/05/14 C AT04-KATHI					
3	202-036-5	TRANSISTOR	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					

	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
RIR610B
DESIGN : FINAL
TECHNIQUE : FINAL
Rev.: 038
S/W VERSION : UNDEFINED
MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W ( )
4/09/17 13:31:08 2

P A R T S L I S T
==========

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								

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						

	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 :2
		4/01/26 C CT04-0073						
	3	651-024	NUT	SS41 M3-1S ZN-PLAT	6.000	EA	B SUB	TR MTG:5,IC MTG:1
		4/01/26 C CT04-0073						
	3	660-590	WASHER FIBER	7&X3.2& 1T RED	2.000	EA	B SUB	TR MTG:2
		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 T0.3	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    853-105     BUSHING             NYLON66+GLASS                   1.000 EA B SUB      TR MTG
        3/08/20
   6   2    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    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
       3    002-102-9Z  FILM RESISTOR       1K    1/ 8W 5% ST              11.000 EA B AUT
R106.125.253.268.406.418.460.   4/07/21 C CT04-0624
                                                                                                  512.517.521.526
       3    002-103-0Z  FILM RESISTOR       10K   1/ 8W 5% ST              17.000 EA B AUT
R22.108.165.171.267.401.402.    4/07/21 C CT04-0624

403.405.411.414.415.462.465. +
                                                                                                  466.513.311
       3    002-104-1Z  FILM RESISTOR       100K  1/ 8W 5% ST              10.000 EA B AUT
R166.168.169.172.173.180.209.   3/06/25 C CT03-KATHI
                                                                                                  264.516.520
       3    002-106-3Z  FILM RESISTOR       10M   1/ 8W 5% ST               1.000 EA B AUT      R176
        3/06/11
       3    002-109-6Z  FILM RESISTOR       1     1/ 8W 5% ST               1.000 EA B AUT      R313
        3/10/10 C CT03-1070
       3    002-122-7Z  FILM RESISTOR       1.2K  1/ 8W 5% ST               1.000 EA B AUT      R151
        3/10/10 C CT03-1070
       3    002-123-8Z  FILM RESISTOR       12K   1/ 8W 5% ST               1.000 EA B AUT      R463
        3/08/15 C CT03-KATHI
       3    002-151-3Z  FILM RESISTOR       150   1/ 8W 5% ST               2.000 EA B AUT      R257.316
        3/06/11
       3    002-152-4Z  FILM RESISTOR       1.5K  1/ 8W 5% ST               3.000 EA B AUT      R256.506.518
        3/12/22 C CT03-1345
       3    002-153-5Z  RESISTOR FILM       15K 1/8W 5% ST                  3.000 EA B AUT      R215.412.455
        3/06/25 C CT03-KATHI
       3    002-154-6Z  FILM RESISTOR       150K  1/ 8W 5% ST               1.000 EA B AUT      R301
        3/06/11
       3    002-155-7Z  FILM RESISTOR       1.5M  1/ 8W 5% ST               1.000 EA B AUT      R451
        3/06/11
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       3    002-183-2Z  FILM RESISTOR       18K   1/ 8W 5% ST                1.000 EA B AUT      R457
        3/10/10 C CT03-1070
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DEVELOPMENT : FINAL                                    P A R T S   L I S T
                # RIR610B
DESIGN      : FINAL                                    ==================
TECHNIQUE   : FINAL
                Rev.: 038
S/W VERSION : UNDEFINED
MODEL CODE  : 3361      ALAN48XL MULTI 27MHZ 400CH 4W                                    (          )
4/09/17   13:31:08      3
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 SEQ  LEVEL PART-NO.    NAME & DESCRIPTION                                 Q'TY  UT G KON OPT  REFERENCE-NO
       ECO-DATE   ECO-NO.
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       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
                                                                                                  261.265.416.450.471
       3    002-223-5Z  FILM RESISTOR       22K   1/ 8W 5% ST                3.000 EA B AUT      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
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        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. +
                                                                                                  514
       3    002-474-5Z  FILM RESISTOR       470K  1/ 8W 5% ST                1.000 EA B AUT      R202
        3/06/25 C CT03-KATHI
       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    2.5PT   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. +
                                                                                                    456.465.467
       3    130-187-7   AXIAL CERAMIC       0.001UF  UP050B102MK   50V        5.000 EA B AUT      C105.201.202.207.455
        3/06/11
       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
                                                                                                    452
       3    130-203-9   AXIAL CERAMIC       0.0022UF EP050X222MN   16V        1.000 EA B AUT      C205
        3/06/11
       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            NPO080D 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.
                                                                                                  452.453.506.56
       3    311-972-9Z  COIL SPRING        R4251-CS57-854392                 1.000 EA B MAN      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
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DEVELOPMENT : FINAL                                  P A R T S   L I S T
              # RIR610B
DESIGN      : FINAL                                  ==================
TECHNIQUE   : FINAL
              Rev.: 038
S/W VERSION : UNDEFINED
MODEL CODE  : 3361      ALAN48XL MULTI 27MHZ 400CH 4W                                    (          )
4/09/17   13:31:08      4
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 SEQ  LEVEL PART-NO.    NAME & DESCRIPTION                                  Q'TY  UT G KON OPT  REFERENCE-NO
       ECO-DATE   ECO-NO.
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        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      R803.809
        3/12/22 C CT03-1345
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3    019-479-8Z  METAL OXIDE RESISTOR4.7      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 SEMIFIXED  10KB  PC805M   H 8DIA           2.000 EA B MAN      RV101.203
 3/06/11
3    061-205-2   RESISTOR SEMIFIXED  2KB   PC805M   H 8DIA           1.000 EA B MAN      RV201
 3/06/11
3    061-507-7   RESISTOR SEMIFIXED  5KB   PC805M   H 8DIA           1.000 EA B MAN      RV501
 3/06/11
3    061-508-8   RESISTOR SEMIFIXED  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
                                                                                         343
3    130-102-9R  DISK CERAMIC        0.01UF  DD312B 103K 50V  794   13.000 EA B MAN
C116.120A.271.517.122.125.251.  3/08/15 C CT03-KATHI
                                                                                         253.256.258.263.301.804
3    130-164-6   AXIAL CERAMIC       0.1UF    SA105E104ZAA  50V     1.000 EA B AUT      C163
 4/07/21 A CT04-0624
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           NPO100D 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          NPO101K 50V      1.000 EA B MAN      C180
 4/07/21 C CT04-0624
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3    131-204-3X  DISK CERAMIC        12PF           NPO K%  50V        2.000 EA B MAN      C121.405
 4/07/21 C CT04-0624
3    131-226-3R  DISK CERAMIC        120PF  DD380CH  121J  794  50V    1.000 EA B AUT      C512
 4/07/21 C CT04-0624
3    131-502-2Y  DISK CERAMIC        15PF           NPO150K 50V        2.000 EA B MAN      C101.306
 4/07/21 C CT04-0624
3    131-510-9R  DISK CERAMIC        150PF  DD380CH  151K  794  50V    1.000 EA B AUT      C513
 3/12/22 C CT03-1345
3    131-804-5X  DISK CERAMIC        18PF           NPO K%  50V        3.000 EA B MAN      C117.153.307
 4/07/21 C CT04-0624
3    131-814-4   DISK CERAMIC        180PF          NPO181K 50V        2.000 EA B MAN      C308.316
 3/10/10 C CT03-1070
3    132-004-4Y  DISK CERAMIC        2PF            NPO020D 50V        1.000 EA B MAN      C342
 3/06/11
3    132-202-6X  DISK CERAMIC        22PF     NPO K% 50V               3.000 EA B MAN      C113.403.511
 3/08/15 C CT03-KATHI
3    132-214-7   DISK CERAMIC        220PF          NPO221K 50V        2.000 EA B MAN      C208.352
 4/07/21 A CT04-0624
3    132-214-7X  DISK CERAMIC        220PF              NPO 50V        4.000 EA B AUT      C322.327.337.338
 4/07/21 C CT04-0624
3    132-214-7X  DISK CERAMIC        220PF              NPO 50V        3.000 EA B MAN      C217.331.339
 3/12/22 C CT03-1345
3    133-002-7X  DISK CERAMIC        3PF            NPO K%  50V        2.000 EA B MAN      C149.150
 3/06/25 C CT03-KATHI
3    133-004-9X  DISK CERAMIC        30PF           NPO K%  50V        1.000 EA B AUT      C453
 3/06/11
3    133-303-9R  DISK CERAMIC        33PF           NPO330K 50V        1.000 EA B AUT      C525
 3/06/11
3    133-311-0X  DISK CERAMIC        330PF          NPO                4.000 EA B AUT      C254.321.326.333
 4/07/21 C CT04-0624
3    133-311-0X  DISK CERAMIC        330PF          NPO                1.000 EA B MAN      C332
 3/06/11
3    133-902-0Y  DISK CERAMIC        39PF           NPO390K 50V        2.000 EA B MAN      C336.522
 4/04/07 C CT04-0320
3    133-904-2   DISK CERAMIC        390PF          SL 391K 50V        2.000 EA B MAN      C155.317
 4/07/21 C CT04-0624
3    134-702-1R  DISK CERAMIC        470PF  DD380SL  471K  794  50V    2.000 EA B AUT      C344.346
 3/08/15 C CT03-KATHI
3    134-708-7R  DISK CERAMIC        47PF   DD350257CH470K 50V 794     1.000 EA B AUT      C123
 3/06/11
3    134-708-7X  DISK CERAMIC        47PF           NPO  K% 50V        1.000 EA B MAN      C515
 3/10/10 C CT03-1070
3    135-001-6Y  DISK CERAMIC        5PF            NPO050D 50V        1.000 EA B MAN      C521
 4/07/21 C CT04-0624
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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 CERMIC	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 (T0-92)		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						
						209.303
3	202-122-9R	TRANSISTOR	KRC102MAT		4.000 EA B AUT	Q255.256.301.507
4/08/26 C CT04-0773						
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

3/06/11

DEVELOPMENT : FINAL # RIR610B
DESIGN : FINAL
TECHNIQUE : FINAL Rev.: 038
S/W VERSION : UNDEFINED
MODEL CODE : 3361 ALAN48XL MULTI 27MHZ 400CH 4W ( )
4/09/17 13:31:08 5

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.								
	3	242-001-5R	DIODE VARICAP	SVC251SPA-AC		3.000	EA	B	MAN		D503.504.505
		3/06/11									
	3	245-008-7X	DIODE RECTIFIER	1N5404		1.000	EA	B	MAN		D211
		3/06/11									
	3	245-015-3Z	DIODE RECTIFIER	1N4004T/R 400V 1A		1.000	EA	B	MAN		D271
		3/06/11									
	3	260-485-5V	CRYSTAL HC49U	10.240M -30 30PM 32P	FUND	1.000	EA	B	MAN		X1
		3/06/11									
	3	262-043-9Y	CRYSTAL(HC-49U)	4.5MHZ -30 30PM 16P	FUND	1.000	EA	B	MAN		X401
		3/06/11									
	3	270-007-0W	FILTER CERAMIC	LTW455HT		1.000	EA	B	MAN		CF2
		4/01/28 C	CT04-0084								
	3	271-030-5Z	FILTER CRYSTAL	HC49/T (10.695M)		1.000	EA	B	MAN		CF1
		3/06/11									
	3	300-136-3W	TRANSFORMER	LE119-H019		1.000	EA	B	MAN		CH201
		3/06/11									
	3	300-159-4Z	TRANSFORMER (MOD.)	EI-24		1.000	EA	B	MAN		T201
		3/06/11									
	3	310-172-8	COIL SPRING	6.3X0.8X6T:R 0.225UH		1.000	EA	B	MAN		L311
		3/06/11									
	3	310-291-2Z	COIL AXIAL	6.8UH:TCEC-6R8K		1.000	EA	B	AUT		L306
		3/06/11									
	3	310-296-7Z	COIL SPRING	6X0.8X5.5T:R		1.000	EA	B	MAN		L310
		3/06/11									
	3	310-297-8Z	COIL SPRING	2.5X0.8X7T:R		1.000	EA	B	MAN		L304
		3/06/11									
	3	310-347-0Z	COIL SPRING	5.2X0.7X7T:R		1.000	EA	B	MAN		L313

	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 LKSZ73DO-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 ASS	6.5T3.4X.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 T0.5	1.000	EA	B MAN	
	3/08/20							
	3	772-238	SHIELD HOUSING	SPTE T0.3	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 T0.3	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 ASS	900MM	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	

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		

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       4/08/23 A CT04-0757
   9  2     533-61S-PA  SUB PCB AUTO ASS'Y                                    1.000 EA A
       3/06/11
       3    05B-000-5Z  CHIP RESISTOR       0     1/16W 5% T 1608            1.000 EA B SMD      R91
       4/01/22 A CT04-0066
       3    05B-101-3Z  CHIP RESISTOR       100   1/16W 5% T 1608            1.000 EA B SMD      R276
       3/08/15 A CT03-KATHI
       3    05B-103-5Z  CHIP RESISTOR       10K   1/16W 5% T 1608            7.000 EA B SMD
R12.19.185.186.187.188.189      3/08/15 C CT03-KATHI
       3    05B-104-6Z  CHIP RESISTOR       100K  1/16W 5% T 1608           26.000 EA B SMD
R701.702.703.704.705.706.707.   3/08/15 C CT03-KATHI

708.709.710.711.712.713.714. +

715.716.717.718.719.720.721.
                                                                                                  722.723.903.904.905
       3    05B-124-4Z  CHIP RESISTOR       120K  1/16W 5% T 1608            1.000 EA B SMD      R428
       3/08/15 C CT03-KATHI
       3    05B-223-0Z  CHIP RESISTOR       22K   1/16W 5% T 1608            1.000 EA B SMD      R277
       3/08/15 C CT03-KATHI
       3    05B-273-5Z  CHIP RESISTOR       27K   1/16W 5% T 1608            1.000 EA B SMD      R427
       3/08/15 C CT03-KATHI
       3    05B-472-8Z  CHIP RESISTOR       4.7K  1/16W 5% T 1608            1.000 EA B SMD      R431
       3/08/15 C CT03-KATHI
       3    05B-473-9Z  CHIP RESISTOR       47K   1/16W 5% T 1608            7.000 EA B SMD
R271.272.273.274.275.801.902    3/08/15 C CT03-KATHI
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DEVELOPMENT : FINAL                                 P A R T S   L I S T
              # RIR610B
DESIGN      : FINAL                                 ==================
TECHNIQUE   : FINAL
              Rev.: 038
S/W VERSION : UNDEFINED
MODEL CODE  : 3361      ALAN48XL MULTI 27MHZ 400CH 4W                                  (          )
4/09/17   13:31:08      6
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 SEQ  LEVEL PART-NO.    NAME & DESCRIPTION                                  Q'TY  UT G KON OPT  REFERENCE-NO
       ECO-DATE   ECO-NO.
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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
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	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	ISO7167P		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						

	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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                                                                                                                                                1.5:1.5
  13  2     533-61W-MA  WIRE MIC ASS'Y                                                                  1.000 EA A
        3/06/11
       3    427-025-8   WIRE                1007 AWG 24(11/0.16)  YEL         0.060 ME B SUB      CONDENSER MIC(+) ---
PCB SUB    3/06/11
                                                                                                                                                0.5:0.5
       3    427-026-9   WIRE                1007 AWG 24 (11/0.16)   GRN       0.060 ME B SUB      CONDENSER MIC(-) ---
PCB SUB    3/06/11
                                                                                                                                                0.5:0.5
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                                                                                * TOTAL RECORD =    379
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