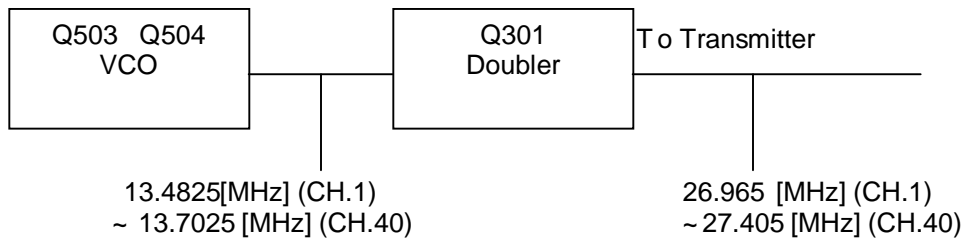


COMPANY: MAXON SYSTEM(THAILAND) CO.,LTD
 TITLE: ALAN48 EXCEL MULTI
 DRAWN: KRITSANA P.
 CHECKED: _____
 QUALITY CONTROL: _____
 RELEASED: _____
 DATED: _____
 DATED: _____
 DATED: _____
 DATED: _____
 SCALE: _____
 SHEET: OF _____

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 tuning 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 to through to IC102.

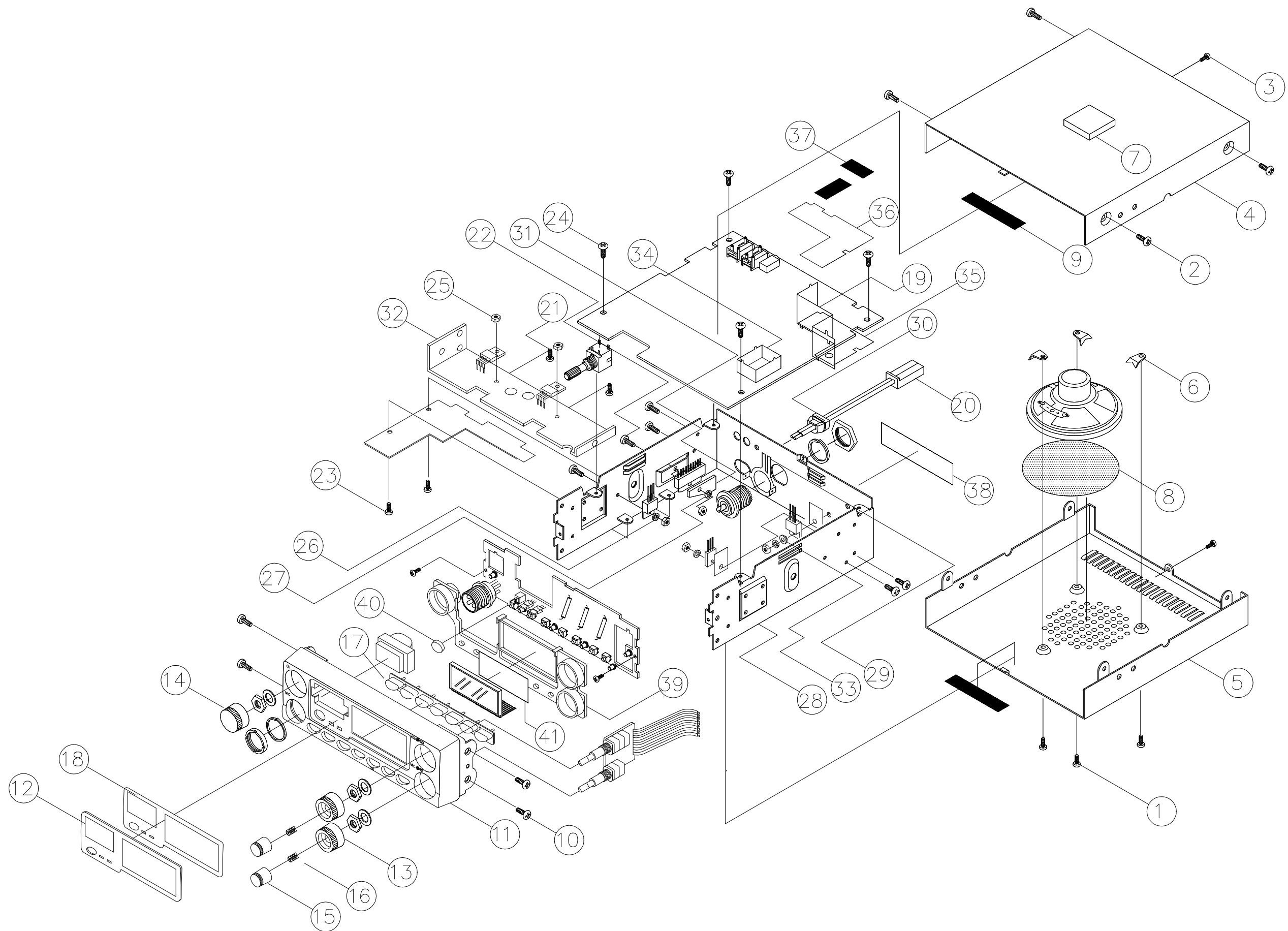
The 455KHz frequency signal produced from IC102 by mixing the output source of CF1 10.695MHz filter and the source of 10.240MHz frequency from crystal oscillator X1.

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

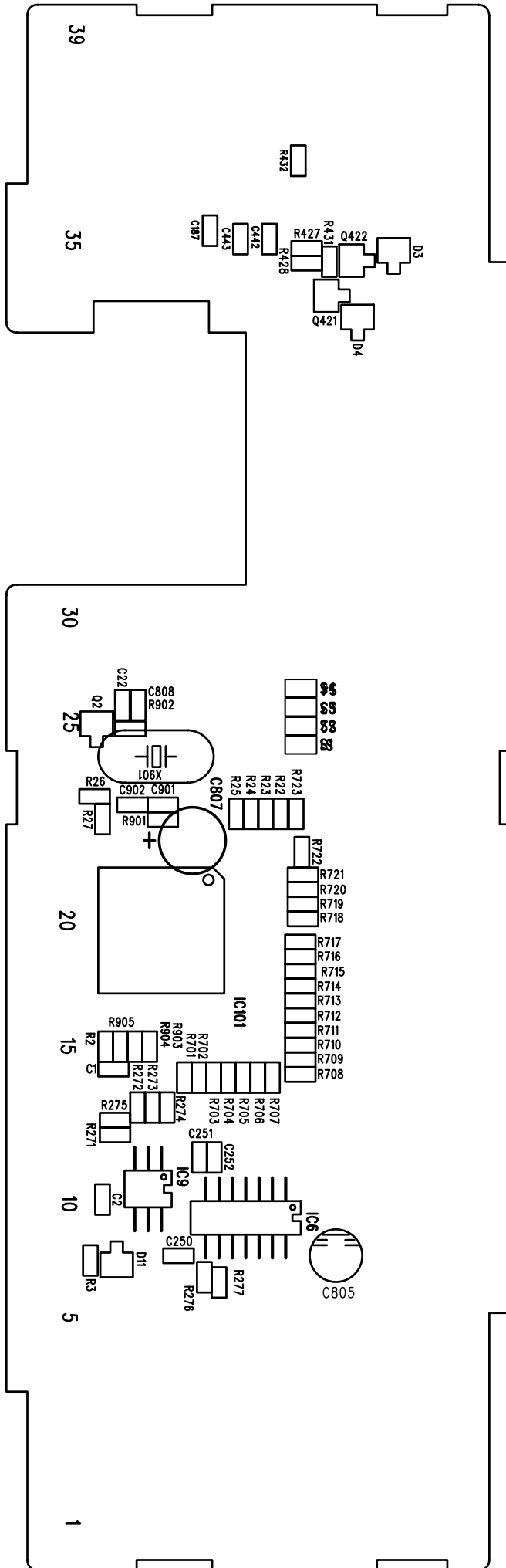
A.G.C(Automatic Gain Control) signal of IC102 fed to IC103, D122, Q121 control receiving sensitivity.

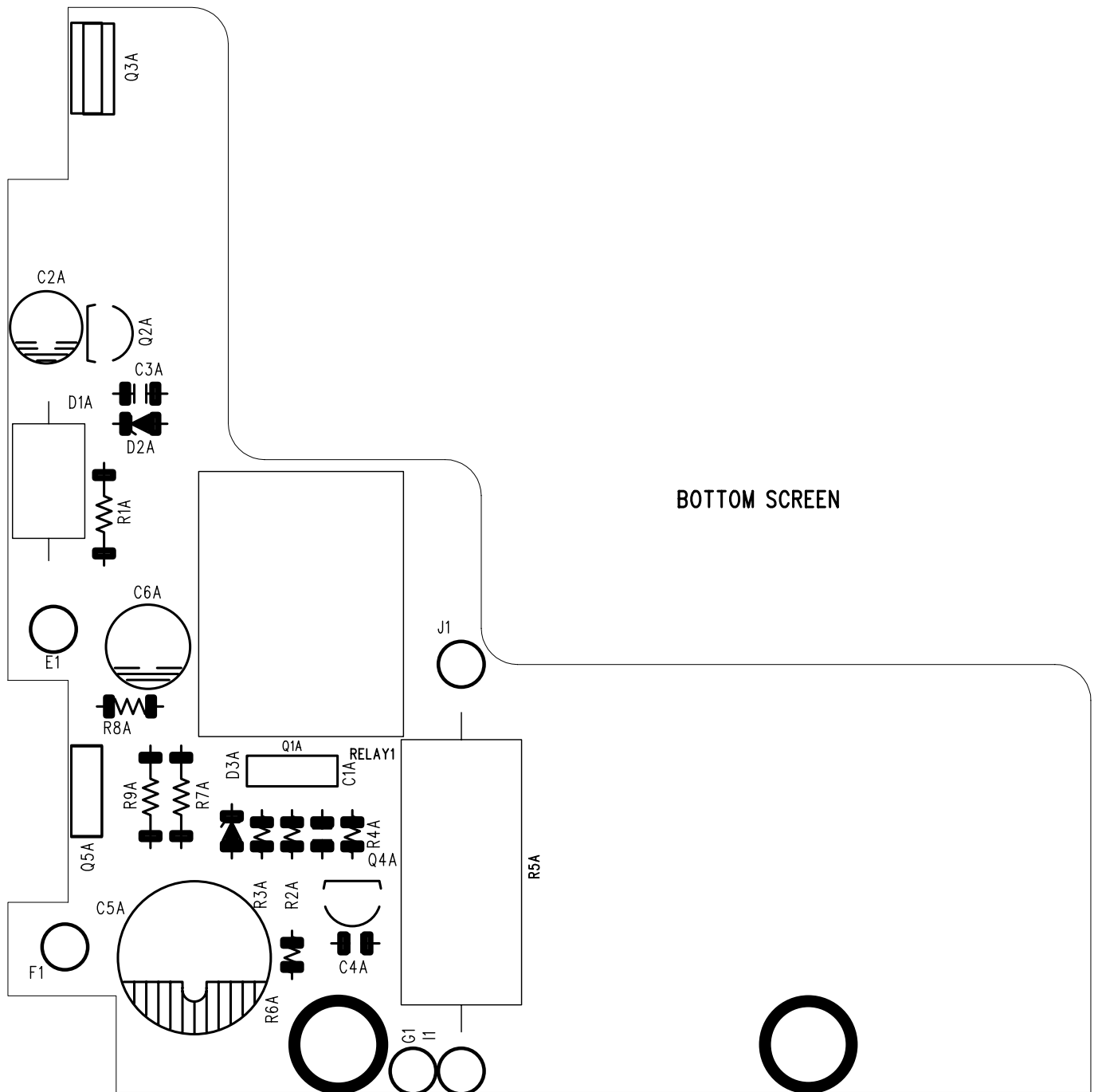
The AM detected audio signals fed through R157, C167, D151, VR101 to low frequency audio AMP for driving speaker.

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

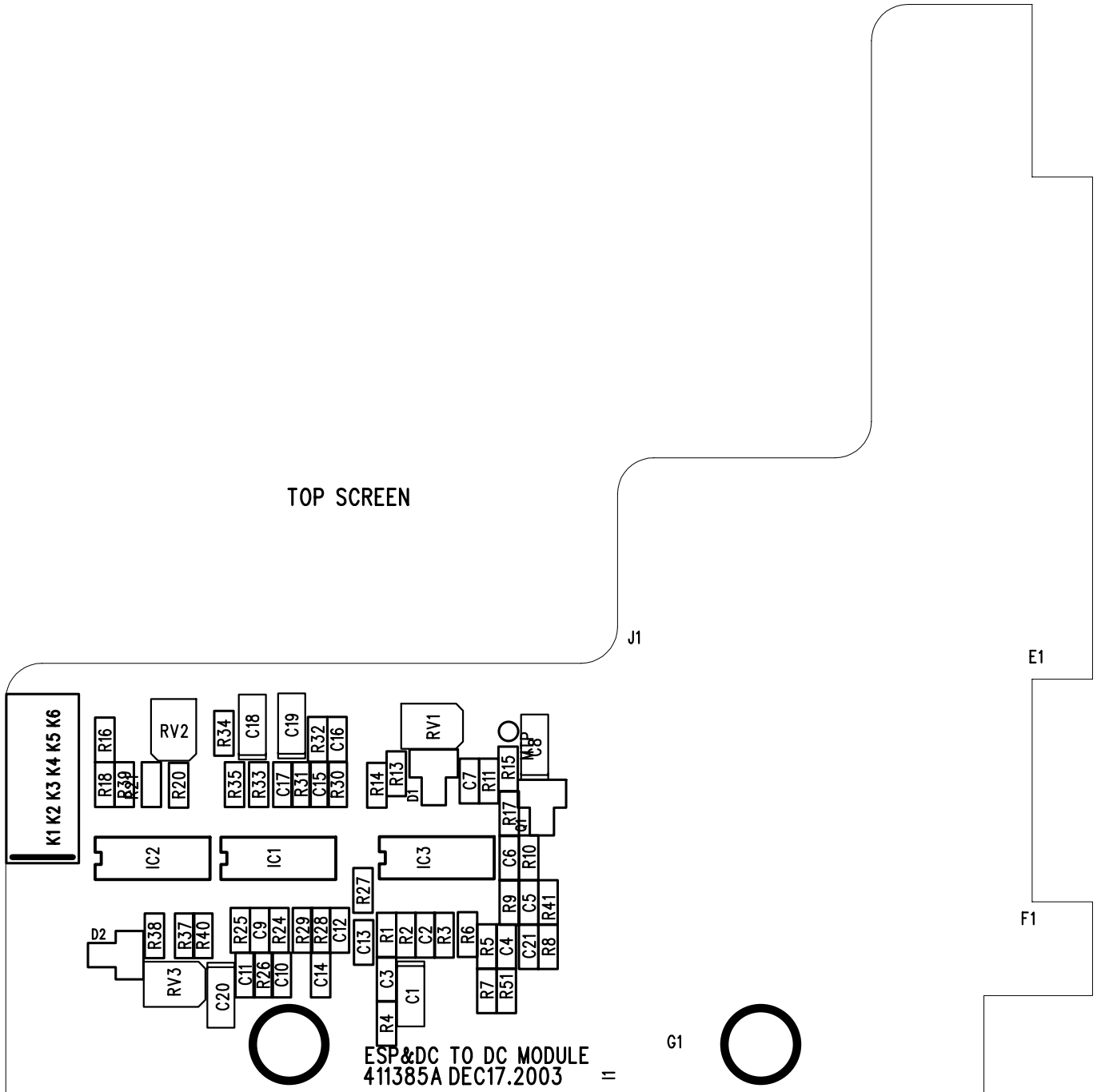


BOTTOM SCREEN





TOP SCREEN



ESP&DC TO DC MODULE
411385A DEC17.2003

11

G1

E1

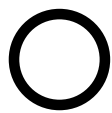
F1

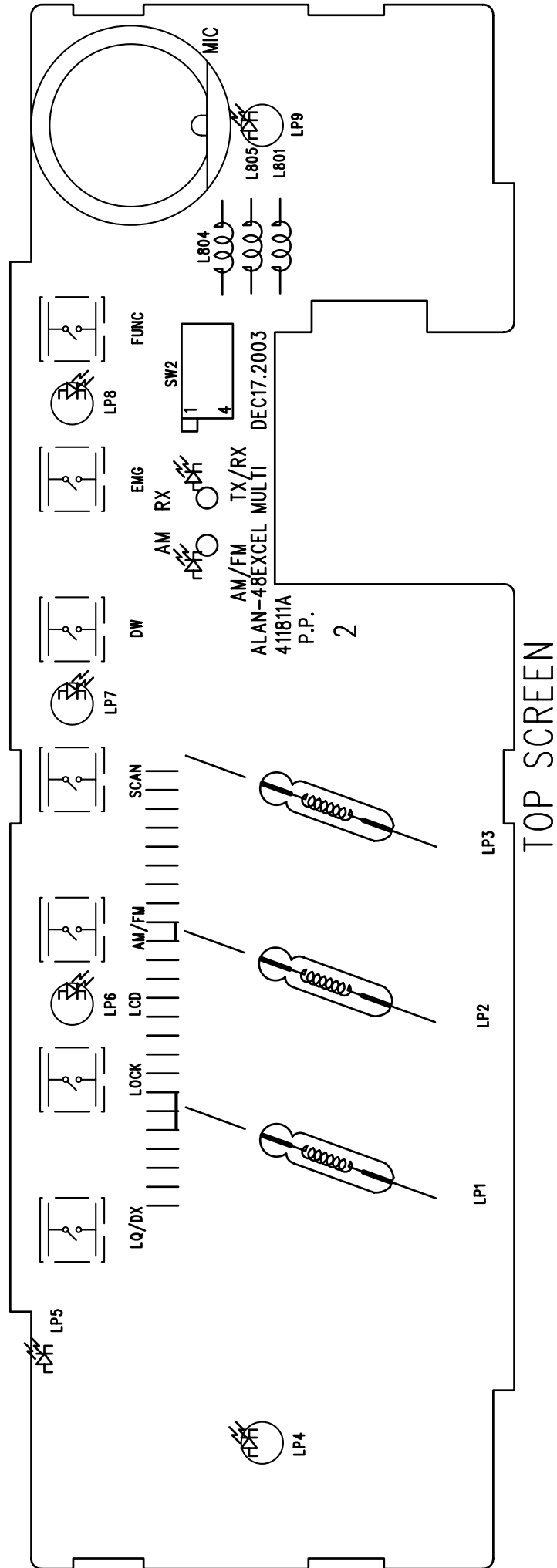
J1

K1 K2 K3 K4 K5 K6

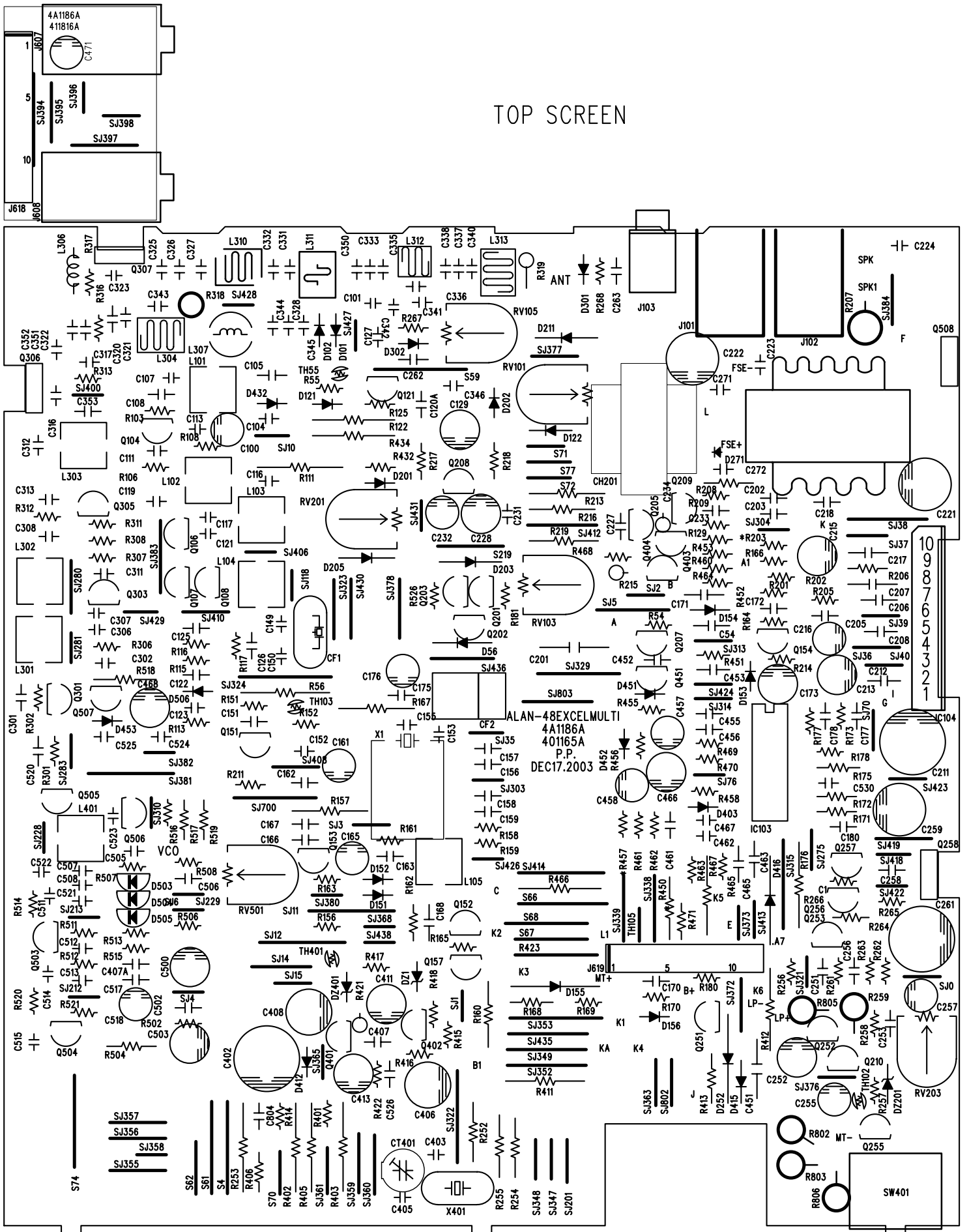
R18 R16 RV2 R34 C18 C19 R35 R33 C17 R31 C15 R32 R30 C16 R14 R13 DI RV1 C7 R11 R17 R15 U8 R12 R20 R38 R37 R40 R25 C9 R24 R29 R28 C12 C13 R27 R4 C3 R1 R2 C2 R3 R6 R7 R5 R51 C4 R9 C6 R10 C21 C5 R10 R8 R41

RV3





TOP 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	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	1.000	EA	B	SUB		
		4/07/05 C CT04-0592							
	3	719-073-A	COVER BOTTOM	1.000	EA	B	SUB		
		3/08/20							
	3	730-015-A	HOLDER(SPK)	3.000	EA	B	SUB		SPK MTG
		3/08/20							
	3	891-590	CUSHION	1.000	EA	B	SUB		
		3/08/20							
	3	900-708	FELT	1.000	EA	B	SUB		SPK HOLE
		3/08/20							
	3	901-794-A	FELT	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	1.000	EA	B	SUB		
		3/08/20							
	3	814-286-C	LENS	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 MI C: 1
	3/08/20								
3	881-613	SPRING(VOL. SW MTG)	SK5 TO. 25		2.000	EA	B	SUB	VOL: 1 MI C: 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							

		PL3361. TXT					
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 SEMI FIXED	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					

		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
RIR610B
DESIGN : FINAL
TECHNIQUE : FINAL
Rev. : 038

P A R T S L I S T

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	1.000	EA	B	SUB		
4/05/14	C	CT04-0449							
3		421-069-8	MIC CONNECTOR	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(MI C)	ABS94HB BLK	1.000	EA	B SUB	
	3/08/20						
3	720-095	BRACKET(MI C)	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(MI C)	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 MI C	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	KT B1367	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	KI A7217AP	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 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 TO. 3	1.000	EA B SUB	

PL3361. TXT

	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				
											466. 513. 311
403.	405.	411.	414.	415.	462.	465.	+				
	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									

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

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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					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							
	3 002-473-4Z FILM RESISTOR	47K	1/ 8W 5% ST		15.000 EA B AUT		413. 432. 434. 507	
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	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	

PL3361. TXT

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									
	3	130-203-9	AXIAL CERAMIC	0.0022UF	EP050X222MN	16V	1.000	EA	B	AUT	452
3/06/11	3	130-227-9	AXIAL CERAMIC	0.022UF	RH050F 223Z	50V	5.000	EA	B	AUT	C205
4/02/09 C CT04-0124	3	130-418-5	AXIAL CERAMIC	0.0047UF	EP050X472MN	16V	1.000	EA	B	AUT	C167. 171. 206. 506. 520
3/06/11	3	130-427-3	AXIAL CERAMIC	0.047UF	UP050F473ZB	50V	1.000	EA	B	AUT	C227
3/06/11	3	130-613-4	AXIAL CERAMIC	0.0068UF	EP050X682K	16V	1.000	EA	B	AUT	C203
3/06/11	3	138-002-2	DISK CERAMIC	8PF	NP0080D	50V	1.000	EA	B	MAN	C172
4/07/21 A CT04-0624	3	140-401-2	DIP TANTALUM	0.47UF	ECSF1VE474M	16V	1.000	EA	B	MAN	C24
											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
3/06/11	3	311-972-9Z	COIL SPRING		R4251-CS57-	854392	1.000	EA	B	MAN	L312
4/08/25 C CT04-0742	3	4A1-186-C	P. C. B ASS'Y	187	X160	X1.6 XPC-94HB	1/0	1.000	EA	B	AUT
4/08/24 A CS-CSKANG	4	401-165-C	P. C. B MAIN	153.	5X145.	4X1.6 XPC-94HB	1/0	1.000	EA	B	MAN

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

		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							
										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	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	NPO150K 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	NPO181K 50V		2.000	EA	B	MAN	C308.316
3/10/10	C CT03-1070								
3	132-004-4Y DISK CERAMI C	2PF	NPO020D 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	NPO221K 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	NPO330K 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	NPO390K 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	NPO050D 50V		1.000	EA	B	MAN	C521
4/07/21	C CT04-0624								

			PL3361. TXT			
	3	135-602-9	DISK CERAMI C	560PF	SL 561K 50V	1.000 EA B MAN C507
		3/10/10	C CT03-1070			
	3	135-605-2X	DISK CERAMI C	56PF	NPO K% 50V	1.000 EA B MAN C320
		4/07/21	C CT04-0624			
	3	136-004-4X	DISK CERMI C	6PF	NPO K% 50V	2.000 EA B MAN C107. 514
		3/06/25	C CT03-KATHI			
	3	136-802-8	DISK CERAMI C	680PF	B 681K 50V	1.000 EA B MAN C462
		3/10/10	A CT03-1070			
	3	136-805-1X	DISK CERAMI C	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	TRANSI STOR	KRC101M AT (TO-92)		4.000 EA B AUT Q154. 403. 451. 505
		3/08/15	C CT03-KATHI			
	3	202-023-3	TRANSI STOR	KTC3198(GR)		1.000 EA B MAN Q252
		3/06/11				
	3	202-023-3X	TRANSI STOR	ST2SC3198G(ECB-M)		6.000 EA B AUT
Q121. 151.		207. 251. 401. 404	4/07/21 C CT04-0624			
	3	202-036-5	TRANSI STOR	KTA1266(GR)		1.000 EA B MAN Q208
		3/06/11				
	3	202-036-5X	TRANSI STOR	ST2SA1266G(ECB-M)		3.000 EA B AUT Q157. 253. 257
		3/06/25	C CT03-KATHI			
	3	202-043-1R	TRANSI STOR	KTC3192(Y) AT		1.000 EA B AUT Q305
		3/06/11				
	3	202-060-7R	TRANSI STOR	KTC3194(Y) AT		3.000 EA B AUT Q503. 504. 506
		4/08/26	C CT04-0773			
	3	202-068-4R	TRANSI STOR	KTK161(GE) AT		3.000 EA B AUT Q104. 107. 108
		3/06/11				
Q106. 152. 153. 201. 202. 203. 205.	3	202-121-8R	TRANSI STOR	KRC110MAT		9.000 EA B AUT
		3/06/11				
	3	202-122-9R	TRANSI STOR	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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RIR610B

P A R T S L I S T

DESIGN : FINAL
TECHNIQUE : FINAL
Rev. : 038

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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	3/06/11	242-001-5R	DIODE VARI CAP	3.000	EA	B	MAN		D503.504.505
3	3/06/11	245-008-7X	DIODE RECTIFIER	1.000	EA	B	MAN		D211
3	3/06/11	245-015-3Z	DIODE RECTIFIER	1.000	EA	B	MAN		D271
3	3/06/11	260-485-5V	CRYSTAL HC49U	1.000	EA	B	MAN	FUND	X1
3	3/06/11	262-043-9Y	CRYSTAL(HC-49U)	1.000	EA	B	MAN	FUND	X401
3	4/01/28	270-007-0W	FILTER CERAMIC	1.000	EA	B	MAN		CF2
3	3/06/11	271-030-5Z	FILTER CRYSTAL	1.000	EA	B	MAN		CF1
3	3/06/11	300-136-3W	TRANSFORMER	1.000	EA	B	MAN		CH201
3	3/06/11	300-159-4Z	TRANSFORMER (MOD.)	1.000	EA	B	MAN		T201
3	3/06/11	310-172-8	COIL SPRING	1.000	EA	B	MAN		L311
3	3/06/11	310-291-2Z	COIL AXIAL	1.000	EA	B	AUT		L306
3	3/06/11	310-296-7Z	COIL SPRING	1.000	EA	B	MAN		L310
3	3/06/11	310-297-8Z	COIL SPRING	1.000	EA	B	MAN		L304
3	3/06/11	310-347-0Z	COIL SPRING	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	

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9 2	4/08/23 A CT04-0757	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.							
3	05B-124-4Z	CHIP RESISTOR	120K	1/16W 5% T 1608		1.000 EA B SMD	722. 723. 903. 904. 905 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						

DEVELOPMENT : FINAL
RIR610B

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TECHNIQUE : FINAL

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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		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	CHI P CERAMI C	0. 01UF	GRM39 X7R103K 25V	3. 000 EA B SMD	C138. 806. 808	
3/08/15	C CT03-KATHI						
3	130-432-7Y	CHI P CERAMI C	0. 0047UF	GRM39 X7R472K 50V PT	2. 000 EA B SMD	C442. 443	
3/08/15	C CT03-KATHI						
3	131-093-9Y	CHI P CERAMI C	100PF	GRM39 COG101J 50V PT	3. 000 EA B SMD	C250. 251. 252	
3/08/15	C CT03-KATHI						
3	131-100-6Y	CHI P CERAMI C	0. 1UF	GRM39 X7R104K 50V PT	2. 000 EA B SMD	C22. 187	
3/08/15	C CT03-KATHI						
3	132-025-3Y	CHI P CERAMI C	20PF	GRM39 COG200J 50V PT	2. 000 EA B SMD	C901. 902	
3/08/15	C CT03-KATHI						
3	202-082-6	TRANSI STOR		KTA1504ST1(G)	1. 000 EA B SMD	Q422	
3/06/25	C CT03-KATHI						
3	202-095-8Z	TRANSI STOR		KRC104SND	1. 000 EA B SMD	Q2	
3/06/25	A CT03-KATHI						
3	202-112-0	TRANSI STOR		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	1. 000 EA B SUB	IC101	
4/08/17	C AT04-PAT			(NI KE)			
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	DI ODE SI CHI P		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 CERAMI C		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	PI LOT LAMP		60MA 3& 14V	3. 000 EA B MAN	LP1. 2. 3	
4/05/18	C AT04-KATHI						
3	251-279-8Z	PI LOT 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. OX150	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	MI C/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					
						1.5: 1.5	
3	427-003-8	WIRE	1007 AWG 24(1/0.51) RED	0.200	ME B MAN	L --- L1	
	3/12/22	A CT03-1345					
						1.5: 1.5	
3	427-010-4	WIRE	1007 AWG 24(1/0.51) WHT	0.110	ME B MAN	C --- C1	
	3/12/22	C CT03-1345					
						1.5: 1.5	
3	427-025-8	WIRE	1007 AWG 24(11/0.16) YEL	0.080	ME B MAN	MP MT(+) --- MET(+)	
	3/06/11						
						0.5: 0.5	
3	427-026-9	WIRE	1007 AWG 24 (11/0.16) GRN	0.080	ME B MAN	MP MT(-) --- MET(-)	
	3/06/11						
						0.5: 0.5	
3	427-269-2	WIRE	1015 AWG 20(10/0.26) RED	0.200	ME B MAN	E --- E1	
	3/12/22	A CT03-1345					
						1.5: 1.5	
3	427-270-2	WIRE	1015 AWG 20(10/0.26) BLK	0.120	ME B MAN	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	CONDENSER MIC(+) ---
		3/06/11					
PCB SUB	3	427-026-9	WIRE	1007 AWG 24 (11/0.16)	GRN	0.060 ME B SUB	0.5:0.5 CONDENSER MIC(-) ---
		3/06/11					0.5:0.5

* TOTAL RECORD = 379