

Ameritron Engineering
 371 Dean Rd. Barnesville, GA 30204
 Ph 770-358-3335
 Cell 770-596-3514
 Email W8Jl@W8Jl.com

HO2WUALS606
 ALS606

Exhibit IX Parts and Tuning Instructions

Tuning Instructions

The ALS606 uses factory preset bandpass filters. There are no user amplifier tuning adjustments or amplifier level adjustments. The user sets the bandswitch to the proper band and transmits.

Parts and Components ALS606

1KWF6 Filter							
QTY	Value	Desc		Vendor PN			Designation
	1500pf	Snub Mica Capacitor		CDV1500			C1, C3,C5
1	860pF	Surf Mnt		100E861JW			C4
2	680pf	Surf Mnt		100E681JW			C6, C8
2	360pf	Surf Mnt		100E361JW			C7,9
4	270pf	Surf Mnt		100E271JW			C14,C16
3	180pf	Surf Mnt		100E181JW			C17, 14, 14a
6	220pF	Surf Mnt		100E221JW			C10, 11,11a,12,13,15
2	91pf	Surf Mnt		100E910JW			C16,18
5	56pf	Surf Mnt		100E560JW			C17a, 19-21
7	0.1uf	0805 Surf Mnt					C22-27
3	30pf	1210 Surf Mnt					C29-31
1	150pf	0805 Surf Mnt					C32
1	220pf	0805 Surf Mnt					C33
1	12-90pf	Trimmer Cap		280-2100			C34
1	0.001uf	0805 Surf Mnt					C35
2	914	Diode SOT-23 case		914			D1
6	4001	Diode SMX case		Not loaded			D2-7
4	HD8P	Header pins					J2,J3,H1,H2
1	1k	1206 Surf Mnt		1005-3100			R1
1	1.5k	1206 Surf Mnt		1005-3150			R2
1	4.7k	Axial 2W					R3
3	150 ohm	2512 Surf Mnt 1W					R4-6
14	HK14FH -	SPDT Relay		12Vdc			RLY1 - RLY14
		Core	Wire Ins	Wire Size		Turns	
2	22T/T94-2	T94-2	PTFE	18 AWG	160	22	L1,L2
2	15T/T94-2	T94-2	PTFE	18 AWG	80	15	L3,L4
2	10T/T94-2	T94-2	PTFE	16 AWG	40	10	L5,L6
2	8T/T94-2	T94-2	PTFE	10 AWG	20	8	L7,L8
2	6.5 T	Air	Bare	14 AWG	15	6.5	L9,L10
2	5.5 T	Air	Bare	12 AWG	10	5.5	L11,L12
2	3.5 T	Air	Bare	10 AWG	6	3.5	L13,L14
1	MEJ SWR						T1

BSW3		
Qty	Value	Designation
5	0.1uF	C1,5-8
3	0.001uF	C2-4
4	1N4001	D1-D42 HD6P J1,J3
11	RED LED	LED1-11
11	2.2k ohms	R1-11
7	10k	R12-18
	SP12T APEM	SW-11
	74HC148	U1
1	74HC595	U2

CB2		
Qty	Value	Designation
3		J7A, RJ1A, RJ1B
1		J7B
1		JP1
10	0.001uF	C20, 22, 39, 49, 69, 85, 87-89, 98
24	0.01uF	C23, 28, 33-36, 48, 55, 58-68, 70, 84, 97, 100,101
32	0.1uF	C3-5, 8, 9, 12-18, 24, 27, 29, 30-32, 37,38, 40-45, 47, 56, 71, 76, 86, 99
1	0.022uF	C26
4	0.47uF	C 6, 7, 10, 11
1	1-25pF	VC1
2	1A	F1, 2
25	1k	R6, 14, 17, 18, 19, 28, 39-40, 42, 46, 50, 57, 58, 89, 93, 97, 101, 110, 112, 128, 130, 137, 138, 147, 148
4	1k trim pot	VR1-4 bias
2	1k	R5, R11
7	2.2k	R69, 72, 75, 78, 81, 84, 87
3	3.01k (1%)	R108, 114, 117
6	3.3k	R4, 16, 92, 96, 100, 104
25	4.7k	R3, 9, 13, 15, 24, 25, 32, 44, 48, 52, 54, 56, 62, 91, 95, 99, 102, 103, 105, 106, 111, 119, 120, 123, 136
2	6.04k (1%)	R107, 116
2	6.8k	R41, 45
4	10ohm	R43, 47, 49, 142
6	1.5k	R20, 21, 90, 94, 98, 134
41	10k	R22-23, 26-27, 29, 31, 51, 53, 55, 60, 63-65, 66-68, 70-71, 73-74, 76-77, 79-80, 82-83, 85-86, 88, 121-122, 126-127, 131-133, 135, 143, 144, 149, 150
1	10MHz Xtal	Y1
1	12.1k (1%)	R115
1	22pF	C19

1	25k	VR9
2	27k	R8, R12
2	4.7uF	C21, 25
2	47uF/50V	C1-2
1	47k	R113
1	74HC165	U9
1	74HC595	U8
1	78M05	U4
15	100ohm	R1-2, 7, 10, 33-38, 118, 124, 129, 141, 146
4	100k	R59, 61, 109, 139
3	470ohm	R30, 140, 145
13	914	D1-2, 5-7, 16-22, 26
2	2955	Q8, 12
3	3055	Q1-3
14	3904	Q4,5, 9-11, 13, 15, 17, 19, 21, 23, 25, 31, 33
14	3906	Q6-7, 14, 16, 18, 20, 22, 24, 26-30, 34
1	5179	Q32
1	5231 (5.1V)	Z1
1	header pin	J8 band data
2	BAS70	D3-4
1	3 pin header	J6 fan
1	header	J2 filter
1	header	J3 band
1	socket 16p dip	RJ2
2	LM324	U2, 7
1	LM358	U6
1	LM7809	U3
1	N/L	R125
1	NC7SZ04	U10
1	NC7SZ14	U11
1	PIC18F2520-SP	U1
1	Header pin	J1 rear panel
1	header	J5 stby
1	header	J4 meter board

MB-1

QTY	Value	Description	Designation
2	0.01uf	Disc	C8,9
2	2.2uf	Elect	C3, 4
13	0.1uf	Disc	C1-2,5-7,10-17
9	1N916	Diode	D1-9
1	HD10P	Header	J1
1	HD6P	Header	J2
1	HD4P	Header	J3
1	HD3P	Header	J4
2	2k ohm trim	Vert Pot CA6H2.5	R1-2
2	1M ohm trim	Vert Pot CA6H1M	R15,16
1	10k pot	Alpha 5J3 B10k chas	R39
2	5.6k ohms	1/4 watt	R3,4
3	10k ohms	1/4 watt	R5,9, 28
3	1m ohms	1/4 watt	R6,8,31
9	1k ohms	1/4 watt	R22,25,27,29,32,36,37,40,41
1	560 ohms	1/4 watt	R26
3	10 ohms	1/4 watt	R7,12,19
1	100 ohms	1/4 watt	R21
4	4.7k ohms	1/4 watt	R17,18,20,38
2	68k ohms	1/4 watt	R10,11
2	47k ohms	1/4 watt	R23,24
1	6.8k ohms	1/4 watt	R30
2	220k ohms	1/4 watt	R33,34
1	100k ohms	1/4 watt	R35
1	475 ohms	1/2 watt metal	R13
1	1k ohms	1/2 watt metal	R14
2	2N3904	NPN	Q1,2
1	LM324		U1
1	LM358		U2
1	Green LED		LED1
2	Red LED		LED2,LED3
1	Yellow LED		LED4
1	6PDT APEM		SW 1

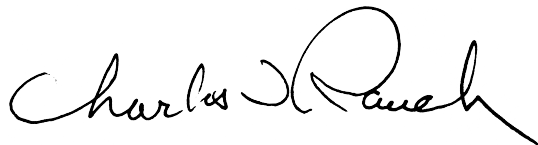
PAM606 (PA Board)				
Qty	value	description	Part #	Designation
8	0.1uF 100V	SM cap1210	12101C104KAT2A	C1,2,4,5,7,8,10,11
6	0.1uF 250V	SM cap1210	C1210C104KARACTU	C29-34
7	0.33uF 100V	SM cap1206	C1206C334K1RACTU	C3,6,9,12,19,17,18
2	300pF 200V	SM cap1210	100B301KW ATC	C14,15
3	120pF 300V	SM cap1210	100B121KW ATC	C16,27,28
1	100uF 100V	elect thru hole		C21
1	0.47uF 100V	thru hole		C20
4	0.001uF 1kV	thru hole		C22-25
4	1/2w 1ohm	SM resistor 1210	RK73B2ETTE1ROJ	R8,12,16,4
4	1/2w 33k	SM resistor 1210	RK73B2ETTDD333J	R6,10,14,18
8	1/2w 18ohm	SM resistor 1210	RK73B2ETTD180J	R3,7,11,15,5,9,13,18
6	2w 22ohm	Resistor thru hole		R23,24,25,26,27,28
4	3w 470ohm	OY Resistor thru hole	OY471KE	R19,20,21,22
2	NTC10k	Thermistor thru hole	PT103J2	R1,2
4		FET	MRF150	Q1-4
1		Input transformer	61 core 9:1	T1
1		Feedback transformer	18:1	T2
1		Output Transformer	2861009902 core 1:9 ratio	T3
1		Ferrite bead	73 mix	FB1
1	27.5 in (8 turns on 61 core)	CM Choke	RG-316	RFC1
1	8pin header	header pins thru hole		J1

PD8m Attn				
Qty	Value	Desc	P/N	Designation
4	200ohm	Caddock TO220	MP930-200-1%	R1, 3-4, 6
2	27ohm	Caddock TO220	MP930-27-1%	R2, 5
1	2.2k	MOX 3W		R7
1	DPDT	12V relay		

RJ45			
Qty	Value	Desc	Designation
22	0.001uF	0805	C46, 50-52, 72-75, 77-83, 90-96
1	RADIO	M09VP-CUP	P1
1	AUX1	RJ45V	J12
1	AUX2	RJ45V	J13
2	Socket 16 pin		RJ3, 4

RLY		
Qty	Desc	Designation
2	HD8P receptacle	J1, 2
2	Relay 12Vdc	RLY1, 2

SWR			
Qty	Value	Desc	Designation
3	30pF	1kV	C1-3
2	150pF	1kV	C3, 4
2	0.001uF	100V	C5, 6
1	10-112pF	Trim cap	C7
2	1N34A	Diode	D1, 2
1	3.3k	1/4w	R1
2	1.3k	1/4w	R2, 3
1	68 ohm	2W	R4
1	1000uH	molded choke	L1
1		Current transformer	T1



Charles T. Rauch
Engineer Ameritron
6/15/2016