

### 3.2. VOLTAGE DISTRIBUTION TABLE

Note:

1. Voltages are dc with respect to ground under no-input-signal conditions unless otherwise specified with a VOM (50 k $\Omega$ /V).
2. Positions of controls and switches are as follows unless otherwise specified.  
 MAIN POWER switch: ON  
 POWER switch: ON  
 AM ATT switch: DX  
 MANUAL TUNE MODE: as required  
 TONE control: HIGH  
 VOLUME control: MIN  
 All key switches: as required
3. Sample waveforms (A) through (BI) from page 53 are taken with respect to ground in no-input-signal conditions unless otherwise specified with a storage oscilloscope and an X-Y plotter, and they represent approximate forms.

4. Voltage variations may be noted due to production tolerances,  $\pm 10\%$ .

5. Abbreviations for AM band:

W: WIDE ON  
 N: NARROW ON  
 SF: SYNC OFF  
 SN: SYNC ON  
 U: USB ON  
 L: LSB/CW ON

6. Frequencies at which voltage measurements are made are these initial low edges, i.e., 150.0 kHz (AM), 76.000 MHz (FM) and 116.000 kHz (AIR) unless otherwise noted.

Unit: V DC		B: base	C: collector	E: emitter
Q		AM	FM	AIR
Q1	G	0	0	0
	S	1.4	0	1.4
	D	2.9	0	2.9
Q2	G	0	0	0
	S	1.4	0	1.4
	D	2.9	0	2.9
Q3	G	0	0	0
	S	0	0	0
	D	2.8	0	2.8
Q4	B	0	0	0
	C	1.9	0	1.9
	E	0	0	0
Q5	G	0	0	0
	S	1.3 (250mVp-p SINE OF 55,390.0 kHz)	0	1.3 (250mVp-p SINE OF 55,390.0 kHz)
	D	2.5	0	2.5
Q6	B	W: 0.6 N: 0 U: 0 L: 0	0	0
	C	W: 0.1 N: 1.75 U: 1.75 L: 1.75	0	0
	E	0	0	0
Q8	B	0	0	0
	C	2.95	2.95	2.95
	E	0	0	0

		G: gate	S: source	D: drain
Q		AM	FM	AIR
Q9	B	0.1 (0.6 WITH INPUT SIGNAL AND AM RF GAIN SET TO MAX, ALL SIGNAL METER LED LIT)	0.1 (0.6 WITH INPUT SIGNAL AND SIGNAL METER LIT)	0.1 (0.6 WITH INPUT SIGNAL AND SIGNAL METER LIT)
	C	1.8	1.8	1.8
	E	0	0	0
Q10	B	0	0	0
	C	0	0	0
	E	0	0	0
Q11	G	0	0	0
	S	0	0	0.02
	D	0	0	2.9
Q12	G	0	0	0
	S	0	0	0
	D	0	2.8	0
Q13	B	0	0.65	0
	C	0	1.45	0
	E	0	0	0
Q14	B	0	0.7	0
	C	0	1.9	0
	E	0	0	0
Q15	B	W: 0 N: 0 SF: 0 SN: 0.15 U: 0.55 L: 0.55	0.15	0
	C	W: 0.65 N: 0.65 SF: 0.65 U: 0 L: 0	0.65	0.65
	E	0	0	0

AM MODE: W: WIDE ON, N: NARROW ON, SF: SYNC OFF, SN: SYNC ON, U: USB ON, L: LSB/CW ON

Q	AM	FM	AIR
Q16	B W: 0 N: 0 SF: 0 SN: 0 U: 0.6 L: 0.6	0	0
	C W: 2.05 N: 2.05 SF: 2.05 SN: 2.05 U: 0 L: 0	2.05	2.05
	E 0	0	0
Q17	B W: 2.4 N: 2.4 SF: 2.4 SN: 2.4 U: 2.35 L: 2.35	2.4	2.35
	C 2.95	2.95	2.95
	E 3.0	3.0	3.0
Q18	B 0.6	0.6	0.6
	C 1.0	1.0	1.0
	E 0	0	0
Q19	B W: 0 N: 1.1 U: 1.1 L: 1.1	0	0
	C 3	3	3
	E W: 1.45 N: 1.95 U: 1.95 L: 1.95	0	1.45
Q20	B W: 0.7 N: 0 U: 0 L: 0	0	0.7
	C 3.0	3.0	3.0
	E W: 1.45 N: 1.95 U: 1.95 L: 1.95	0	1.45
Q21	B 0	0	0
	C 0	0	0
	E 0	0	0
Q22	G 1.0	1.0	1.0
	D 2.8	2.8	2.8
	S 1.3	1.3	1.3
Q23	B 1.2	1.2	1.2
	C 1.2	1.35	2.15
	E 0.55	0.55	0.55
Q24	G 2.0	2.15	2.9
	S 2.25	2.4	3.2
	D 12.6	12.6	12.6
Q25	B 0	0	0
	C 0.62	0.62	0.62
	E 0	0	0

Q	AM	FM	AIR
Q26	G 0	0.2	0
	S 0	NOT MEAS- URABLE WITH VOM	0
	D 0	2.8	0
Q27	B 2.15	2.8	2.15
	C 2.75	0	2.75
	E 2.8	2.8	2.8
Q28	G 0	0	0
	S 0.3	0	0.3
	D 2.3 (AT 150 kHz: 3Vp-p SINE OF 57,279.0 kHz. AT 29,999.9 kHz: 580mVp-p SINE OF 85,845.6 kHz)	0	2.3 (AT 116 MHz 3Vp-p SINE OF 60,155.7 kHz. AT 136 MHz 1Vp-p SINE OF 80,155.7 kHz)
Q29	B 0.7	0	0.7
	C 2.1 (AT 150 kHz 720mVp-p SINE OF 57,279 kHz. AT 29,999.9 kHz 510mVp-p SINE OF 85,845.6 kHz)	0	2.1 (AT 116 MHz 640mVp-p SINE OF 60,155.7 kHz. AT 136 MHz 530mVp-p SINE OF 80,155.7 kHz)
	E 0	0	0
Q30	B 0.7 (40mVp-p SINE)	0.7	0.7 (SINE 3mVp-p)
	C 1.0 (AT 150 kHz 730mVp-p SINE OF 5,625.0 kHz. AT 29,999.9 kHz 220mVp-p SINE OF 21,607.0 kHz)	0	1.0 (AT 116 MHz 300mVp-p SINE OF 11,490.0 kHz. AT 136 MHz 220mVp-p SINE OF 17,659.0 kHz)
	E 0	0	0
Q31	G 1.3 (AT 150 kHz 120mVp-p OF 50,370.6 kHz)	0	1.25 (AT 116 MHz 130mVp-p OF 46,596.0 kHz)
	S 1.45	0	1.45
	D 2.6	0	2.6

AM MODE: W: WIDE ON, N: NARROW ON, SF: SYNC OFF, SN: SYNC ON, U: USB ON, L: LSB/CW ON

Q	AM	FM	
B	0.6	0	0.6
C	0.7	0	1.5
Q32	(AT 150 kHz 420mVp-p SINE OF 50,370.661 kHz. AT 29,999.9 kHz 420mVp-p SINE OF 50,345.561 kHz)		(AT 116-136 MHz 380mVp-p SINE OF 46,605.653 kHz)
E	0	0	0
G	0	0	0
Q33	S	0	0.2
D	2.6	0	2.6
B	0.7	0	0.7
C	1.3	0	1.3
Q34	E	0	0
	(FIXED 55,390.0 kHz SINE OF 240mVp-p)	(SAME AS AM)	(SAME AS AM)
B	2.4	2.4	2.4
Q35	C	0	0
E	3.0	3.0	3.0
B	0.35	1.4	0.35
Q36	C	0	2.3
E	0	0	0
B	2.4	2.4	2.4
Q37	C	0	3.0
E	3.0	3.0	3.0
B	0	0	2.9
Q38	C	2.4	0
E	0	0	0
B	2.3	3.0	2.3
Q39	C	0	2.9
E	3.0	3.0	3.0
B	3.8	3.8	3.8
Q40	C	4.4	4.4
E	4.5	4.5	4.5
B	3.8	3.8	3.8
Q41	C	4.4	4.4
E	4.5	4.5	4.5
B	0.65	0.65	0.65
Q42	C	0.05	0.05
E	0	0	0
B	0.62	0.62	0.62
Q43	C	SAME AS AM.	SAME AS AM.
	MOMENTARI- LY 0.5 WHEN KEYED IN, 0 AFTER- WARDS.		
E	0	0	0

Q	AM	FM	AIR
B	W, N, SF: 0-2.45 CHANGING (NOISE). SN: WITH INPUT SIGNAL AND D411 (UPPER) LIT: 0V D412 (LOWER) LIT: 2.45 V	0 OR 2.45 DEPENDING UPON TIMING OF KEYING IN.	0
Q44	C	2.45 OR 0 DEPENDING UPON TIMING OF KEYING IN.	0
E	0	0	0
B	0	0	0
Q45	C	1.8	1.8
E	0	0	0
B	3.7	3.7	3.7
Q46	C	2.8	2.8
E	4.4	4.4	4.4
B	0.6	0.6	0.6
Q47	C	0.6	0.6
E	0	0	0
B	0.6	0.6	0.6
Q48	C	3.4	3.4
E	0	0	0
B	0	0	0
Q301	C	2.0	0
E	0	0	0
G	0	0	0
Q302	S	0.1	0
D	2.9	0	0
G	0	0	0
Q303	S	0.2	0
D	2.9	0	0
B	2.2	2.3	0
Q304	C	2.9	0
E	2.9	0	2.9
B	0	0.55	0.6
Q305	C	0.65	0
E	0	0	0
B	0	0	2.2
Q306	C	0.65	0
E	0	0	0

Q		AM	FM	AIR
Q401	B	2.1	2.1	2.1
	C	W: 0 N: 0 SF: SYNC LED OFF: 2.9 SYNC LED ON WITH INPUT SIGNAL: 2.75	0	0
	E	2.95	2.95	2.95
Q501	B	D501 (LIGHT) OFF: 0 ON: 0.75	SAME AS AM	SAME AS AM
	C	D501 (LIGHT) OFF: 2.75 ON: 0.15		
	E	0		
Q502	B	2.35	2.35	2.35
	C	0	0	0
	E	2.95	2.95	2.95
Q504	B	0	0	0
	C	1.8	1.8	1.8
	E	0	0	0
Q601	B	W: 0 N: 0 U: 2.85 L: 2.85	0	0
	C	U: 0 L: 0	0	0
	E	0	0	0
Q602	B	0	0	2.9
	C	SN, U, L: 1.8 W, N, SF: 0	1.8	0
	E	0	0	0
Q603	B	0.95 (1.3Vp-p SINE OF 3.64 MHz)	0.95 (SAME AS AM)	0.95 (SAME AS AM)
	C	2.7	2.7	2.7
	E	0.9	0.9	0.9
Q701	B	0	0	0
	C	0.6	0.6	0.6
	E	0	0	0
Q702	B	0.6	0.6	0.6
	C	6.0	6.0	6.0
	E	0	0	0

IC	PIN	AM	FM	AIR
IC1	1	NOT USED.	NOT USED.	NOT USED.
	2	0	0.7	0
	3	0	0	0
	4	0	1.2	0
	5	0	1.7	0
	6	0.1	2.8	0.1
	7	2.8	2.8	2.8
	8	0	1.7	0
	9	0	0	0
	10	0.7	1.1	0.7
	11	0.65	0.55	0.65
	12	2.7	0	2.7
	13	0.6	0.6	0.6
	14	0.05 (1.1 WITH AM RF GAIN MAX AND ALL SIGNAL METER LEDS LIT)	0.05	0.05
	15	2.7	0	2.7
	16	0.6	0.55	0.6
IC2	1	0	0	0
	2	1.35	1.35	1.35
	3	0.5 (3V RANGE)	0.5 (3V RANGE)	0.5 (3V RANGE)
	4	0	0	0
	5	0.55	0.55	0.55
	6	0.5 (3V RANGE)	0.5 (3V RANGE)	0.5 (3V RANGE)
	7	0	0	0
	8	3.0	3.0	3.0
IC3	1	W, N, SF: 0-2.45 CHANGING WITH NOISE INPUT. SN, U, L: 0 OR 2.45 DEPENDING UPON TIMING OF KEYING IN (MORE "L" OR MORE "H")	0 OR 2.45	0
	2	W, N: 0.85 SN: 0.55 U, L: 0.35	0.55	1.0
	3	1.4	1.45	1.4
	4	0	0	0
	5	1.45	1.45	1.45
	6	W, N, SF, SN: 0.65 U, L: 0	0.65	0.65
	7	W, N: 1.7 SN: 1.1 U, L: 2.55 MEMORY ON: 0 MEMORY ON: MOMENTARI- LY 1.1	MOMENTARI- LY 1.6	MOMENTARI- LY 1.6
	8	3.0	3.0	3.0

IC	PIN	AM	FM	AIR
IC4	1	-0.75 (3V RANGE)	-0.75 (3V RANGE)	-0.75 (3V RANGE)
	2	2.95	2.95	2.95
	3	0	0	0
	4	0	0	0
		(SAME AS PIN11 OF IC506)	(SAME AS PIN11 OF IC506)	(SAME AS PIN11 OF IC506)
	5	SINE 1.3Vp-p (NOT MEAS- URABLE WITH VOM)	SINE 1.3Vp-p (NOT MEAS- URABLE WITH VOM)	SINE 1.3Vp-p (NOT MEAS- URABLE WITH VOM)
	6	1.3 (SINE 2.15Vp-p)	1.3 (SINE 2.15Vp-p)	1.3 (SINE 2.15Vp-p)
	7	1.0	1.0	1.0
	8	0	0	0
	9	NOT USED.	NOT USED.	NOT USED.
	10	0.1	0.25	0.1
	11	0.25	0.15	0.25
	12	2.6	2.6	2.6
	13	NOT USED.	NOT USED.	NOT USED.
	14	0	0	0
IC5	1	2.75	0	2.75
	2	2.55 (AT 150 kHz 60mVp-p SIGNAL)	0	2.55 (AT 116 MHz 40mVp-p SIGNAL)
	3	2.0	0	2.0
	4	0	0	0
	5	1.15 (AT 150 kHz 280mVp-p SINE. AT 29,999.9 kHz 320mVp-p SINE.)	0	1.15 (AT 116 MHz 280mVp-p SINE. AT 136 MHz 320mVp-p SINE.)
	6	1.15	0	1.15
	7	1.1 (AT 150 kHz, 70mVp-p SINE. AT 29,999.9 kHz, 80mVp-p SINE)	0	1.1 (AT 116 MHz, 55mVp-p SINE. AT 136 MHz, 70mVp-p SINE)

IC	PIN	AM	FM	AIR
IC6	1	-0.7	0	0.7
	2	2.95	0	2.95
	3	0	0	0
	4	0	0	0
	5	1.3 (800mVp-p SINE SIGNAL)	0 (800mVp-p SINE SIGNAL)	1.3 (800mVp-p SINE SIGNAL)
	6	1.1 (2Vp-p SINE)	0	1.1 (2Vp-p SINE)
	7	1.3 (65mVp-p SAWTOOTH)	0	1.25 (65mVp-p SAWTOOTH)
	8	0	0	0
	9	0	0	0
	10	0.1	0	0.1
	11	0.25	0	0.25
	12	2.75	0	2.75
	13	0.25 (AT 150 kHz, 170mVp-p SINE SIGNAL OF 5020 kHz. AT 29,999.9 kHz, 190mVp-p SINE SIGNAL OF 5271 kHz.)	0	0.25 (AT 116 MHz, 190mVp-p SINE SIGNAL OF 8785 kHz. AT 136 MHz, 210mVp-p SINE SIGNAL OF 8785 kHz.)
	14	0	0	0
IC7	1	2.7	0	2.7
	2	2.5 (150mVp-p SIGNAL)	0	2.5 (55mVp-p SIGNAL)
	3	1.95	0	1.95
	4	0	0	0
	5	1.1 (AT 150 kHz, 560mVp-p SINE OF 50,370.6 kHz. AT 29,999.9 kHz, 560mVp-p SINE OF 50,345.5 kHz.)	0	1.1 (CONSTANT 410mVp-p SINE SIGNAL OF 46,605.66 kHz.)
	6	1.1	0	1.1
	7	1.1 (190mVp-p SINE OF 55,391.15 kHz)	0	1.1 (190mVp-p SINE OF 55,391.15 kHz)
IC9	1	4.4	4.4	4.4
	2	0	0	0
	3	3.0	3.0	3.0

AM MODE: W: WIDE ON, N: NARROW ON, SF: SYNC OFF, SN: SYNC ON, U: USB ON, L: LSB/CW ON

IC	PIN	AM	FM	AIR	IC	PIN	AM	FM	AIR
IC10	1, 3	W, N: 1.1 SF: 1.55 SN: 0.7 U, L: 1.4 (SF WITH MAX AM RF GAIN AND TUNED IN A STATION, 880mVp-p SIGNAL.)	0.7	1.1	IC12	1	0	0	0
	2	W, N, SN: 0.7 U, L: 0.45	0.7	1.1		2	1.8	1.8	1.8
	4	1.5	1.5	1.5		3	0	0	0
	5	W, N, SN: 0 U, L: 2.85	0	0		4	W, N, SF, U, L: 0 SN: 2.95	2.95	0
	6	W, N, SF, U: 1.7 SN, L: 0	0	1.7		5	U, L: 2.85 OTHERS: 0	0	0
	7	0	0	0		6	SN, U, L: 0 SF: 2.9	0	2.85
	8-11	0.3	0.3	0.3		7	0	0	0
	12	W, N, SF, SN, U: 0 L: 1.8	1.8	0		8	W, N, SF, U, L: 2.95 SN: 0	0	2.95
	13	W, N, SF, SN: 2.95 U, L: 0	2.95	2.95		9	W, N, SF, SN: 2.95 U, L: 0	2.95	2.95
	14	3.0	3.0	3.0		10	0	0	0
IC11	1	0	0	0		11	2.95	2.95	2.95
	2	2.95	2.95	2.95		12	0	0	0
	3	0	0	0		13	0	0	0
		SAMPLE WAVEFORM: (BH)	SAMPLE WAVEFORM: (BH)	SAMPLE WAVEFORM: (BH)		14	3.0	3.0	3.0
	4	2.95	2.95	2.95	IC13	1	2.95	0	0
	5	0	2.95	2.95		2	0.35	1.4	0.35
	6	2.95	0	0		3	0	0	2.9
	7	0	0	0		4	0	2.95	2.95
	8	W, N, SF, U: 0 SN, L: 2.95	2.95	0		5	LW: 3 MW: 0 SW: 3	0	0
	9	W, N, SF, U: 2.95 SN, L: 0	0	2.95		6	LW: 0 MW: 3 SW: 3	0	0
	10	W, N, SF, SN: 2.95 U, L: 0	2.95	2.95		7	0	0	0
	11	W, N, SF, SN: 0 U, L: 2.85	0	0		8	0.35	2.9	0.35
	12	W, N, SF, U: 0 SN, L: 2.95	0	0		9	2.95	0	0
	13	W, N, SF, U: 2.95 SN, L: 0	0	2.95		10	W: 2.4 N, U, L: 0 PRIORITY: W/N	0	2.4
	14	3.0	3.0	3.0		11	W, N, SF, U, L: 0 SN: 2.95	2.95	0
						12	W, N, SF, SN: 0 U, L: 2.85 PRIORITY: SSB	0	0
						13	W, N, SF, U: 2.95 SN, L: 0	0	2.95
						14	3.0	3.0	3.0

AM MODE: W: WIDE ON, N: NARROW ON, SF: SYNC OFF, SN: SYNC ON, U: USB ON, L: LSB/CW ON

IC	PIN	AM	FM	AIR	IC	PIN	AM	FM	AIR
IC14	1	3.0	3.0	3.0	IC16	1	W, N, SF: 0-2.45 CHANGING (NOISE). SN: WITH INPUT SIGNAL AND D411 (UPPER) LIT: 2.45, D412 (LOWER) LIT: 0V	2.45 OR 0 DEPENDING UPON TIMING OF KEYING IN.	0
	2	W, N, SF, U, L: 0 SN: 2.95	2.95	0		2	W, N, SF, U, L: 0 SN: 2.95	2.95	0
	3	W, N, SF, U, L: 2.95 SN: 0	0	2.95		3, 12	W, N, SF, U, L: 2.95 SN: 0	0	3.0
	4, 9	W, N, SF, SN: 2.95 U, L: 0	2.95	2.95		4	0	0	0
	5, 11	2.95	2.95	2.95		5, 6, 10	3.0	3.0	3.0
	6, 10	W, N, SF: 0 U, L: 2.95	0	0		7	0	0	0
	12	W, N, SF: 2.9 SN, U, L: 0.5	0.5	2.9		8	LW: 0 MW: 3 SW: 3	0	0
	13	WHEN BAND IS CHANGED TO AM, MOMENTARILY 1.7. SN: MOMENTARILY 1.1. U, L: 2.55	WHEN BAND IS CHANGED TO FM, MOMENTARILY 1.6.	WHEN BAND IS CHANGED TO AIR, MOMENTARILY 1.6.		9	W, N, SF, SN, U: 1.8 L: 0	0 OR 1.8	1.8
	14	3.0	3.0	3.0		11	W, N, SF, U: 2.95 SN, L: 0	0	2.95
IC15	1	WHEN BAND IS CHANGED TO AM, MOMENTARILY 1.7. SN: MOMENTARILY 1.1 U, L: 2.55	WHEN BAND IS CHANGED TO FM, MOMENTARILY 1.6.	WHEN BAND IS CHANGED TO AIR, MOMENTARILY 1.6.		13	W, N, SF, U: 0 SN, L: 2.95	2.95	0
	2, 4	W, N, SF: 0 SN, U, L: 2.95	2.95	0		14	3.0	3.0	3.0
	3	W, N, SF: 2.95 U, L: 0	2.95	2.95	IC17	1	0.7	0.7	0.7
	5, 6	W, N, SF: 2.9 SN, U, L: 0.5	0.5	2.9		2	0	0	0
	7	0	0	0		3	0.55	0.55	0.55
	8, 11	2.95	2.95	2.95		4	NOT USED	NOT USED	NOT USED
	9, 13	0	0	0		5	0	0	0
	10	2.95	2.95	2.95		6	2.25	2.25	2.25
	12	W, N, SF: 0-2.45 CHANGING (NOISE). SN: WITH INPUT SIGNAL AND D411 (UPPER) LIT: 2.45, D412 (LOWER) LIT: 0V	2.45 OR 0 DEPENDING UPON TIMING OF KEYING IN.	0		7	4.4	4.4	4.4
	14	3.0	3.0	3.0		8	4.4	4.4	4.4
						9	4.4	4.4	4.4

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	AM	FM	AIR
IC401	1	0	0	0
	2	0 (0.02 WITH MAX AM RF GAIN)	0	0
	3	0.05	0.05	0.05
	4	1.6 (1.35 WHEN D405 LIT)	1.6 (1.35 WHEN D405 LIT)	1.6 (1.35 WHEN D405 LIT)
	5	1.6 (1.35 WHEN D404 LIT)	1.6 (1.35 WHEN D404 LIT)	1.6 (1.35 WHEN D404 LIT)
	6	1.6 (1.35 WHEN D403 LIT)	1.6 (1.35 WHEN D403 LIT)	1.6 (1.35 WHEN D403 LIT)
	7	1.6 (1.35 WHEN D402 LIT)	1.6 (1.35 WHEN D402 LIT)	1.6 (1.35 WHEN D402 LIT)
	8	1.6 (1.35 WHEN D401 LIT)	1.6 (1.35 WHEN D401 LIT)	1.6 (1.35 WHEN D401 LIT)
	9	1.6 (1.35 WHEN D406 LIT)	1.6 (1.35 WHEN D406 LIT)	1.6 (1.35 WHEN D406 LIT)
	10	2.0 (1.35 WHEN D407 LIT)	2.0 (1.35 WHEN D407 LIT)	2.0 (1.35 WHEN D407 LIT)
	11	1.6 (1.35 WHEN D408 LIT)	1.6 (1.35 WHEN D408 LIT)	1.6 (1.35 WHEN D408 LIT)
	12	1.6 (1.35 WHEN D409 LIT)	1.6 (1.35 WHEN D409 LIT)	1.6 (1.35 WHEN D409 LIT)
	13	1.6 (1.35 WHEN D410 LIT)	1.6 (1.35 WHEN D410 LIT)	1.6 (1.35 WHEN D410 LIT)
	14	1.25	1.25	1.25
	15	2.95	2.95	2.95
	16	1.2	1.2	1.2
IC501	1	0	0	0
	2	2.95 (WAVEFORM (H))	2.95 (WAVEFORM (H))	2.95 (WAVEFORM (H))
	3	2.95 (WAVEFORM (I))	2.95 (WAVEFORM (I))	2.95 (WAVEFORM (I))
	4	2.95 (WAVEFORM (J))	2.95 (WAVEFORM (J))	2.95 (WAVEFORM (J))
	5	0 (0.2 DURING TURNING TUNING KNOB)	0 (0.2 DURING TURNING TUNING KNOB)	0 (0.2 DURING TURNING TUNING KNOB)
	6	0	0	0
	7	0.4 (0.55 DUR- ING TURN- ING TUNING KNOB)	0.4 (0.55 DUR- ING TURN- ING TUNING KNOB)	0.4 (0.55 DUR- ING TURN- ING TUNING KNOB)
	8	2.95 (0 WHEN POWER SWITCH S502 SET TO OFF OR TIMER)	2.95 (0 WHEN POWER SWITCH S502 SET TO OFF OR TIMER)	2.95 (0 WHEN POWER SWITCH S502 SET TO OFF OR TIMER)

IC	PIN	AM	FM	AIR
IC501	9	0 (ALSO 0 WHEN POWER SWITCH S502 SET TO OFF. 2.95 WHEN POWER SWITCH S502 SET TO TIMER)	0 (SAME AS AM)	0 (SAME AS AM)
	10	0 (CHANGING ABOUT 2.75 DURING TURNING TUNING KNOB)	0 (SAME AS AM)	0 (SAME AS AM)
	11	0	0	0
	12	0 (2.2 WHEN ENTER, SHIFT, SKIP, PT1-3 OR PT4 KEY KEPT DEPRESSED. 0 WHEN OTHER KEYS KEPT DE- PRESSED. WAVEFORMS (P, Q, R, (S, T, U) AND V) WHEN ENTER, SHIFT, SKIP, PT1-3 OR PT4 KEYED IN RESPECTIVE- LY)	0 (SAME AS AM)	0 (SAME AS AM)
	13	0 (2.6 WHEN ANY BAND/MODE KEY OR ANY MEMORY KEY b1-b8, c1-c8 OR d1-d8 KEYED IN OR KEPT DEPRESSED. SAMPLE WAVEFORMS (W), (X), (Y), (Z). CENTER PULSE MOVES FROM LEFT TO RIGHT PROPERLY 8 TIMES, I.E., 8-BIT SYSTEM AS BAND/MODE IS KEYED IN FROM LEFT (AIR) TO RIGHT (LSB/CW) OR FOR EXAMPLE b1-b8. BACKS TO 0 WHEN ABOVE DEPRESSED KEY IS RELEASED)		
	14	0 (2.6 WHEN ANY KEY OF BANDS, AM MODES, OPERATION TIME, a1-a8, d1-d8 KEPT DE- PRESSED, AND 0 WHEN RELEASED) SAMPLE WAVEFORMS WHEN KEYED IN: AIR, a1, d1: (W)      N, a5, d5: (AA) FM, a2, d2: (X)      SN, a6, d6: (AB) AM, a3, d3: (Y)      U, a7, d7: (AC) W, a4, d4: (Z)      L, a8, d8: (AD)		



FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	
IC501	15	0 (COMMON FOR ALL BANDS AND MODES) (2.6 WHEN ANY BAND/MODE KEY OR ANY OF MEMORY KEYS a1-a8, c1-c8, OR ANY OF TEN KEYS 0-7 KEYED IN (MOMENTARILY) OR KEPT DEPRESSED, AND BACKS TO 0 WHEN RELEASED) SAMPLE WAVEFORMS WHEN KEYED IN FROM LEFT TO RIGHT: AIR, 0, a1, c1: (W) N, 4, a5, c5: (AA) FM, 1, a2, c2: (X) SN, 5, a6, c6: (AB) AM, 2, a3, c3: (Y) U, 6, a7, c7: (AC) W, 3, a4, c4: (Z) L, 7, a8, c8: (AD)
16		2.95. SAMPLE WAVEFORM: (N)
17		2.95. SAMPLE WAVEFORM: (M)
18		2.95. SAMPLE WAVEFORM: (L)
19		2.95. SAMPLE WAVEFORM: (K)
20		1.25 MICROCOMPUTER CLOCK. SAMPLE WAVEFORM: (AJ)
21		1.0. MICROCOMPUTER CLOCK. SAMPLE WAVEFORM: (AK) (VOM IS NOT USABLE)
22		0 (ALL BANDS)
23		0 (ALL BANDS)
24		0.7 (ALL BANDS)
25		1.4 (ALL BANDS)
26		2.95 (ALL BANDS)
27		NOT USED, BUT 1.1 (ALL BANDS)
28		1.3 (ALL BANDS) SAMPLE WAVEFORM: (D). DRIVES COMMON ELECTRODE FOR PM, PT1, PT2, PT4, 0, 15, 30, 60 ETC.
29		1.25 (ALL BANDS/MODES). SAMPLE WAVEFORM: (D). DRIVES COMMON ELECTRODE FOR AM AND SEGMENTS a, d, e AND g OF FOURTH DIGIT OF CLOCK, ETC.
30		1.25 (ALL BANDS/MODES). SAMPLE WAVEFORM: (D). DRIVES SEGMENTS a, b AND g OF TIMER-SIDE FIGURES.
31		NOT USED, BUT 1.05 (ALL BANDS).
32		NOT USED, BUT 1.05 (ALL BANDS).
33		0.7, SAMPLE WAVEFORM: (E). DRIVES SEGMENTS b AND c OF TIMER'S MEMORY CH FIGURE OF DISPLAY. PT1-PT4 KEPT DEPRESSED: 1.4, SAMPLE WAVEFORM (B). ANY ONE OF PT1-PT4 KEYS AND ANY ONE OF 15-60 MIN KEY ARE KEPT DEPRESSED SIMULTANEOUSLY. 1.25, SAMPLE WAVEFORM: (C) PT1 KEPT DEPRESSED . . . . .SAMPLE WAVEFORM ↓ 30 MIN KEYED IN . . . . .(C) ↓ a1, b1, c1, d1, a3, b3, c3, d3, a4, b4, c4, d4, a7, b7, c7, d7, a8, b8, c8, d8 KEYPED IN } . . . . . UNCHANGED ↓ a2, b2, c2, d2, a5, b5, c5, d5, a6, b6, c6, d6 KEYPED IN } . . . . .(A)

IC	PIN	
IC501	34	0.7, SAMPLE WAVEFORM: (E). DRIVES SEGMENTS a, d AND g OF TIMER'S MEMORY CH FIGURE. PT1 KEPT DEPRESSED . . . . .SAMPLE WAVEFORM ↓ DEPRESSING PT1, UNCHANGED a) a1-d1 KEYED IN . . . . .(E) ↓ b) a2-d2, a3-d3, a5-d5, a6-d6, a8-d8 KEYPED IN } . . . . .(B) ↓ c) a4-d4, a7-d7 KEYPED IN . . . . .(A)
35		0.7, SAMPLE WAVEFORM: E. DRIVES SEGMENTS e AND f OF TIMER'S MEMORY CH FIGURE AND ONE SEGMENT OF LETTERS a AND d OF MEMORY CH DISPLAY. DEPRESSING PT1, SAMPLE WAVEFORM a) a1, a3, a7, b2-d2, b4-d4 } . . . . .(A) b5-d5 KEYPED IN } b) a6 OR a8 KEYPED IN . . . . .(B) c) a2, a4, a5, b6-d6, b8-d8. . . . .(C) KEYED IN d) b1-d1, b3-d3, b7-d7 KEYPED IN . . . . .(E)
36		0.7, SAMPLE WAVEFORM: (E). DRIVES THREE SEGMENTS OF LETTER d AND TWO SEGMENTS OF LETTER a, AND HYPHEN SEGMENT OF TIMER'S MEMORY CH DISPLAY. DEPRESSING ANY OF PT1-PT4, SAMPLE WAVEFORM a) a1-a8, b1-b8 KEYPED IN . . . . .(C) b) c1-c8 KEYPED IN . . . . .(A) c) d1-d8 KEYPED IN . . . . .(B)
37		DRIVES SEGMENTS b AND c OF FIRST DIGIT OF TIMER'S SLEEP TIME FIGURE. 1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E) 2. SLEEP KEY KEYED IN; SAMPLE WAVEFORM a) 60 MIN OR 30 MIN DISPLAYED . . . . .(C) b) 15 MIN DISPLAYED . . . . .(A)
38		DRIVES SEGMENTS a, d AND g OF FIRST DIGIT OF TIMER'S SLEEP TIME FIGURE. 1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E) 2. SLEEP KEY KEYED IN; SAMPLE WAVEFORM a) 60 MIN OR 30 MIN DISPLAYED . . . . .(C) b) 15 MIN DISPLAYED. . . . .(B)
39		DRIVES SEGMENTS e AND f OF FIRST DIGIT OF TIMER'S SLEEP TIME AND LETTERS "MIN". 1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E) 2. SLEEP KEY KEYED IN; SAMPLE WAVEFORM a) 60 MIN OR 30 MIN DISPLAYED . . . . .(B) b) 15 MIN DISPLAYED. . . . .(C)

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.





IC	PIN		IC	PIN	
IC501	40	<p>DRIVES SEGMENTS b AND c OF SECOND DIGIT OF TIMERS SLEEP TIME FIGURE AND LETTERS "TIMER".</p> <p>1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E)</p> <p>2. SLEEP KEY KEYED IN;</p> <p>a) 60 MIN . . . . . SAMPLE WAVEFORM (A)</p> <p>b) 30 MIN OR 15 MIN DISPLAYED. . . (C)</p>	IC501	46	<p>DRIVES SEGMENTS e AND f OF FIRST DIGIT OF CLOCK'S FIGURE, AND LETTERS "SLEEP".</p> <p>1. POWER ON AND INITIAL CLOCK DISPLAY 0:00. 1.25, SAMPLE WAVEFORM (C).</p> <p>2. WHEN FIGURE OF FIRST DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURE 0, 6 AND 8 DISPLAYED . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURES 1, 3 AND 7 DISPLAYED . . . . . (E)</p> <p>c) FIGURES 2, 4, 5 AND 9 DISPLAYED . . . (A)</p>
	41	<p>DRIVES SEGMENTS a, d and g OF SECOND DIGIT OF TIMER'S SLEEP TIME FIGURE.</p> <p>1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E)</p> <p>2. SLEEP KEY KEYED IN;</p> <p>a) 60 MIN OR 30 MIN . . . . . SAMPLE WAVEFORM (B)</p> <p>b) 15 MIN DISPLAYED. . . (E)</p>		47	<p>DRIVES SEGMENTS b AND c OF SECOND DIGIT OF CLOCK'S FIGURE, AND "PT4".</p> <p>1. POWER ON AND INITIAL CLOCK DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C).</p> <p>2. WHEN FIGURE OF SECOND DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURES 0, 1, 3 AND 4 DISPLAYED . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURE 2 AND 5 DISPLAYED . . . . . (A)</p> <p>Note: FIGURES 6 THROUGH 9 ARE NOT DISPLAYED, BECAUSE THESE ARE NOT NECESSARY.</p>
	42	<p>DRIVES SEGMENTS e AND f OF SECOND DIGIT OF TIMER'S SLEEP TIME FIGURE AND ONE SEGMENT OF TIMER'S MEMORY CH LETTER "b".</p> <p>1. POWER SWITCH (S502): TIMER 0.7, SAMPLE WAVEFORM: (E)</p> <p>2. SLEEP KEY KEYED IN;</p> <p>a) 60 MIN DISPLAYED. . . . . SAMPLE WAVEFORM (C)</p> <p>b) 30 MIN OR 15 MIN DISPLAYED . . . . . (E)</p>		48	<p>DRIVES SEGMENTS a, d, AND g OF SECOND DIGIT OF CLOCK'S FIGURE.</p> <p>1. POWER ON AND INITIAL DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C).</p> <p>2. WHEN FIGURE OF SECOND DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURE 0 . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURE 1 DISPLAYED . . . . . (E)</p> <p>c) FIGURES 2, 3 AND 5 DISPLAYED . . . . . (B)</p> <p>d) FIGURE 4 DISPLAYED . . . . . (A)</p> <p>Note: FIGURES 6 THROUGH 9 ARE NOT DISPLAYED, BECAUSE THESE ARE NOT NECESSARY.</p>
	43	<p>DRIVES CLOCK'S COLON, "PT3" AND FIGURES "15".</p> <p>1.05, SAMPLE WAVEFORM: (A) (UNCHANGES)</p>		49	<p>DRIVES SEGMENTS e AND f OF SECOND DIGIT OF CLOCK'S FIGURE, AND FIGURES "30".</p> <p>1. POWER ON AND INITIAL DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C).</p> <p>2. WHEN FIGURE OF SECOND DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURE 0 . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURES 1 AND 3 DISPLAYED . . . . . (E)</p> <p>c) FIGURE 2, 4 AND 5 DISPLAYED . . . (A)</p> <p>Note: FIGURES 6 THROUGH 9 ARE NOT DISPLAYED, BECAUSE THESE ARE NOT NECESSARY.</p>
	44	<p>DRIVES SEGMENTS b AND c OF FIRST DIGIT OF CLOCK'S FIGURE, AND FIGURE "60".</p> <p>1. POWER ON AND INITIAL CLOCK DISPLAY 0:00. 1.25, SAMPLE WAVEFORM (C).</p> <p>2. WHEN FIGURE OF FIRST DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURES 2, 5 AND 6 DISPLAYED . . . . . SAMPLE WAVEFORM (A)</p> <p>b) FIGURES 0, 1, 3, 4, 7-9 DISPLAYED . . . . . (C)</p>		50	<p>DRIVES SEGMENTS b AND c OF THIRD DIGIT OF CLOCK'S FIGURE, AND "PT2".</p> <p>1. POWER ON AND INITIAL DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C).</p> <p>2. WHEN FIGURE OF THIRD DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURES 0, 1, 3, 4, 7-9 DISPLAYED . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURES 2, 5 AND 6 DISPLAYED . . . (A)</p>
	45	<p>DRIVES SEGMENTS a, d AND g OF FIRST DIGIT OF CLOCK'S FIGURE.</p> <p>1. POWER ON AND INITIAL CLOCK DISPLAY 0:00. 1.25, SAMPLE WAVEFORM (C).</p> <p>2. WHEN FIGURE OF FIRST DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURE 0 . . . . . SAMPLE WAVEFORM (C)</p> <p>b) FIGURE 1 DISPLAYED . . . . . (E)</p> <p>c) FIGURE 2, 3, 5, 6, 8 AND 9 DISPLAYED . . . . . (B)</p> <p>d) FIGURES 4 AND 7 DISPLAYED . . . . . (A)</p>			


FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	
IC501	51	<p>DRIVES SEGMENTS a, d AND g OF THIRD DIGIT OF CLOCK'S FIGURE.</p> <p>1. POWER ON AND INITIAL DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C)</p> <p>2. WHEN FIGURE OF THIRD DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURE 0 SAMPLE WAVEFORM (C)</p> <p>b) FIGURE 1 DISPLAYED (E)</p> <p>c) FIGURES 2, 3, 5, 6, 8 AND 9 DISPLAYED (B)</p> <p>d) FIGURES 4 AND 7 DISPLAYED (A)</p>
	52	<p>DRIVES SEGMENTS e AND f OF THIRD DIGIT OF CLOCK'S FIGURE, AND "PT1".</p> <p>1. POWER ON AND INITIAL DISPLAY 0:00. 1.25, SAMPLE WAVEFORM: (C)</p> <p>2. WHEN FIGURE OF THIRD DIGIT CHANGED AS CLOCK TIME ADVANCES,</p> <p>a) FIGURES 0, 6 AND 8 SAMPLE WAVEFORM (C)</p> <p>b) FIGURE 1, 3 AND 7 DISPLAYED (E)</p> <p>c) FIGURE 2, 4, 5 AND 9 DISPLAYED (A)</p>
	53	<p>DRIVES FOURTH DIGIT OF CLOCK'S FIGURE, I.E., 1 OR 2.</p> <p>1. POWER ON AND INITIAL CLOCK DISPLAY 0:00. 0.7, SAMPLE WAVEFORM: (E) (FOURTH DIGIT IS VACANT).</p> <p>2. WHEN FIGURE OF FOURTH DIGIT CHANGED AS CLOCK TIME ADVANCES, SAMPLE WAVEFORM IS (C) FOR BOTH FIGURES 1 AND 2.</p> <p>Note: FIGURES 1 AND 2 ARE EFFECTIVE, AND OTHERS ARE NOT NECESSARY AND NOT DISPLAYED.</p>
	54	<p>DRIVES LETTERS "AM" AND "PM".</p> <p>1. WHEN BOTH "AM" AND "PM" ARE NOT DISPLAYED: 0.7, SAMPLE WAVEFORM: (E)</p> <p>2. WHEN "AM" OR "PM" DISPLAYED: 1.05, SAMPLE WAVEFORM: (A)</p>
	55	<p>0 OR 3.0.</p> <p>1. RECEIVES ALTERNATE 0V ("L") AND +3V ("H") DC SIGNALS FROM ROTARY ENCODER. 0V ("L") OR +3V ("H") STATE DEPENDS UPON STOPPING POSITION OF TUNING KNOB.</p> <p>2. SAMPLE WAVEFORMS: (AL), (AM) AND (BC)</p>
	56	<p>0 (ALL BANDS)</p>
	56	<p>1.25 (ALL BANDS/ MODES). MICROCOMPUTER CLOCK SAMPLE WAVEFORM: (AN)</p>
	58	<p>2.95 (ALL BANDS/MODES)</p>
	59	<p>1.5. SAMPLE WAVEFORM: (AO)</p>
	60	<p>3.4.</p> <p>TAKES ABOUT 25 MINUTES TO FULLY DISCHARGE AFTER TURNING BOTH POWER SWITCHES OFF.</p>
	61	<p>1. WITH CLOCKWISE TURNING OF TUNING KNOB, ALTERNATE 0 AND 3.0 (ALL BANDS). "L" AND "H" DEPENDS UPON SETTING OF TUNING KNOB. SAMPLE WAVEFORM: (AP)</p> <p>2. 0 WITH COUNTERCLOCKWISE TURNING OF TUNING KNOB.</p>

IC	PIN	AM	FM	AIR
IC501	62	<p>1. 0 WITHOUT TURNING TUNING KNOB.</p> <p>2. WHEN TUNING KNOB TURNED,</p> <p>a) 0.15 WITH MANUAL TUNE MODE SWITCH (S501) SET TO FAST OR SLOW.</p> <p>b) 0.35 WITH MANUAL TUNE MODE SWITCH (S501) SET TO LOCK.</p>		
	63	<p>0 OR 2.6.</p> <p>1. POWER ON AND INITIAL STATE: 0</p> <p>2. 2.6 WHEN PRESENT TIME, SLEEP, LIGHT OR SCAN (BOTH) KEY KEYED IN AND KEPT DEPRESSED. BACKS TO 0 WHEN RELEASED.</p> <p>3. SAMPLE WAVEFORMS:</p> <p>a) SCAN START/STOP: (S)</p> <p>b) MEMORY SCAN START/STOP: (T)</p> <p>c) LIGHT: (J)</p> <p>d) PRESENT TIME: (R)</p> <p>e) SLEEP: (A)</p>		
	64	<p>2.95 (ALL BANDS) SAMPLE WAVEFORM: (O)</p>		
IC502	1	NOT USED.		
	2	0 (ALL BANDS)		
	3	0 (ALL BANDS). SAME AS PIN 2 OF IC505.		
	4	0 (ALL BANDS). SAME AS PIN 1 OF IC505.		
	5	0 (ALL BANDS).		
	6	0 (ALL BANDS).		
	7	0.4 (ALL BANDS).		
	8	0 (ALL BANDS).		
	9	<p>1.7 AT THE MOMENT OF POWER ON, AND 0 THEREAFTER (ALL BANDS).</p> <p>0.4 MOMENTARILY WHEN BAND IS CHANGED.</p>		
	10	LW: 0 MW: 3.0 SW: 3.0	0	0
	11	LW: 3.0 MW: 0 SW: 3.0	0	0
	12	0	0	0
	13	0	0	0
	14	2.95	2.95	2.95
	15	0	2.95	0
	16	W, N, SF: 2.95 SN, U, L: 0	0	2.95
	17	U, L: 2.95 OTHERS: 0	0	0
	18	W, N, SF, U: 2.95 SN, L: 0	0	2.95
	19	W, SF, SN: 0 N, U, L: 2.95	0	0
	20	NOT USED, BUT 1.0 (ALL BANDS). SAMPLE WAVEFORM: (AK)		
	21	<p>1.25 MICROCOMPUTER CLOCK. SAMPLE WAVEFORM: (AJ)</p>		
	22, 23	0 (ALL BANDS)		
	24	1.2 (ALL BANDS). LCD VOLTAGE.		
	25	1.4 (ALL BANDS). LCD VOLTAGE.		
	26	2.95 (ALL BANDS).		
	27	NOT USED, BUT 1.05 (ALL BANDS) SAMPLE WAVEFORM: (E)		

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN																																														
IC502	28	1.25 DRIVES COMMON ELECTRODE FOR DIS- PLAYS AM, MW 9 kHz, MW 10 kHz, SCAN1, SCAN2, MHz, ETC. SEE PAGE 59. SAMPLE WAVEFORM: (D)																																													
	29	1.25 DRIVES COMMON ELECTRODE FOR DIS- PLAYS FM AND 28 OTHER ELEMENTS OR SEGMENTS. SEE PAGE 59. SAMPLE WAVEFORM: (D)																																													
	30	1.25 SAMPLE WAVEFORM: (D) DRIVES COMMON ELECTRODES FOR DIS- PLAYS AIR, WIDE, NARROW, SYNC, USB, LSB/CW, kHz, SCAN AND 16 OTHER ELEMENTS OR SEGMENTS. SEE PAGE 59.																																													
	31	0.75. SAMPLE WAVEFORM: (E). DRIVES SEGMENTS b AND d OF SCANNING CHANNEL'S FIGURE, AND DISPLAY "SCAN". 																																													
		1. FIGURES 1, 3, 4, 7 AND 8 DISPLAYED . . . . SAMPLE WAVEFORM (C)																																													
		2. FIGURES 2, 5 AND 6 DISPLAYED . . . . (A)																																													
	32	0.75, SAMPLE WAVEFORM: (E). DRIVES SEGMENTS a, d AND g OF SCAN- NING CHANNEL'S FIGURE. 																																													
	33	0.75. SAMPLE WAVEFORM: (E). DRIVES SEGMENTS e AND f OF SCANNING CHANNEL'S FIGURE, AND ONE SEGMENT OF SCANNING CHANNEL'S LETTER "a" OR "d". SAMPLE WAVEFORMS WHEN SCANNING CHANNELS DISPLAYED.																																													
		<table><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr><tr><td>a</td><td>(A)</td><td>(C)</td><td>(A)</td><td>(C)</td><td>(C)</td><td>(B)</td><td>(A)</td><td>(B)</td></tr><tr><td>b</td><td>(E)</td><td>(A)</td><td>(E)</td><td>(A)</td><td>(A)</td><td>(C)</td><td>(E)</td><td>(C)</td></tr><tr><td>c</td><td>(E)</td><td>(A)</td><td>(E)</td><td>(A)</td><td>(A)</td><td>(C)</td><td>(E)</td><td>(C)</td></tr><tr><td>d</td><td>(E)</td><td>(A)</td><td>(E)</td><td>(A)</td><td>(A)</td><td>(C)</td><td>(E)</td><td>(C)</td></tr></table>		1	2	3	4	5	6	7	8	a	(A)	(C)	(A)	(C)	(C)	(B)	(A)	(B)	b	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)	c	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)	d	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)
	1	2	3	4	5	6	7	8																																							
a	(A)	(C)	(A)	(C)	(C)	(B)	(A)	(B)																																							
b	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)																																							
c	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)																																							
d	(E)	(A)	(E)	(A)	(A)	(C)	(E)	(C)																																							
	34	0.7V, SAMPLE WAVEFORM: (E). DRIVES TWO SEGMENTS OF "a", THREE SEGMENTS OF "d" AND HYPHEN IN SCAN- NING CHANNEL'S DISPLAY. 																																													
		1. MEMORY/SCANNING CHANNELS OF ROWS a AND b DISPLAYED; SAMPLE WAVEFORM: (C)																																													
		2. MEMORY/SCANNING CHANNELS OF ROW c DISPLAYED; SAMPLE WAVEFORM: (A)																																													
		3. MEMORY/SCANNING CHANNELS OF ROW d DISPLAYED; SAMPLE WAVEFORM: (B)																																													
	35	1.05, SAMPLE WAVEFORM: (A). DRIVES ONE SEGMENT OF LETTER "b" AND TRIANGULAR MARK IN MEMORY/ SCANNING CHANNEL'S DISPLAY. 																																													
		1. MEMORY/SCANNING CHANNELS OF ROWS a, c AND d DISPLAYED; SAMPLE WAVEFORM: (C)																																													
		2. MEMORY/SCANNING CHANNELS OF ROW b DISPLAYED; SAMPLE WAVEFORM: (B)																																													












IC	PIN	AM	FM	AIR
IC502	36	DRIVES SEGMENTS b AND c OF FIRST DIGIT OF FREQUENCY DISPLAY, AND "kHz".  kHz		
		1. INITIAL SAMPLE WAVEFORM: (B)	1. INITIAL SAMPLE WAVEFORM: (C)	
		2. SAMPLE WAVEFORM (A) FOR 5 SECONDS AFTER KEYED FREQUENCY IN FROM TEN KEYS AND NOT EXECUTED, AND BACKS TO INITIAL STATE.	2. SAMPLE WAVEFORM E FOR 5 SECONDS AFTER KEYED FREQUENCY IN FROM TEN KEYS AND NOT EXECUTED, AND BACKS TO INITIAL STATE.	
		3. WHEN EXECUTED AND FREQUENCY IS CHANGED, EXECUTED, AND BACKS TO INITIAL STATE.	3. WHEN EXECUTED AND FREQUENCY IS CHANGED, a) .000 MHz AND .050 MHz DISPLAYED; SAMPLE WAVEFORM: (C) b) .025MHz AND .075 MHz DISPLAYED; SAMPLE WAVEFORM: (A)	
		3. WHEN EXECUTED AND FREQUENCY CHANGED, a) FIGURES 0,1,3,4,7,8 AND 9 DISPLAYED; SAMPLE WAVEFORM: (B) b) FIGURES 2, 5 AND 6 DISPLAYED; SAMPLE WAVEFORM: (C)	Note: FM BAND IS OF .050 MHz AND AIR BAND IS OF .025MHz CHANNEL STEP, SO FIRST DIGIT IS 0 OR 5.	

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	AM	FM	AIR
IC502	37	<p>1.25. INITIAL SAMPLE WAVEFORM: (C) (FIRST FREQUENCY DIGIT IS 0) DRIVES SEGMENTS a, d AND g OF FIRST DIGIT OF FREQUENCY DISPLAY.</p> <p>1. SAMPLE WAVEFORM (E) FOR 5 SECONDS AFTER KEYED FREQUENCY IN FROM TEN KEYS AND NOT EXECUTED, AND BACKS TO INITIAL STATE.</p> <p>2. WHEN EXECUTED AND FREQUENCY CHANGED, a) FIGURES 0 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>b) FIGURE 1 DISPLAYED; SAMPLE WAVEFORM: (E)</p> <p>c) FIGURES 2,3,5,6,8 AND 9 DISPLAYED; SAMPLE WAVEFORM: (B)</p> <p>d) FIGURES 4 AND 7 DISPLAYED; SAMPLE WAVEFORM: (A)</p>		
	38	<p>1.4. INITIAL SAMPLE WAVEFORM: (B) (FIRST FREQUENCY DIGIT IS 0) DRIVES SEGMENTS e AND f OF FIRST DIGIT OF FREQUENCY DISPLAY AND "SCAN2".</p> <p>WHEN FREQUENCY IS EXECUTED AND CHANGED AND, a) FIGURES 0, 6 AND 8 DISPLAYED; SAMPLE WAVEFORM: (B)</p> <p>b) FIGURES 1, 3 AND 7 DISPLAYED; WAVEFORM: (A)</p> <p>c) FIGURES 2,4,5 AND 9 DISPLAYED; SAMPLE WAVEFORM: (C)</p>		
	SCAN2	<p>SAMPLE WAVEFORM: ALWAYS (B) (FIGURE DISPLAYED IS ALWAYS 0)</p> <p>WHEN FREQUENCY IS EXECUTED AND CHANGED AND, a) FIGURE 0 DISPLAYED; SAMPLE WAVEFORM: (B)</p> <p>b) FIGURE 5 DISPLAYED; SAMPLE WAVEFORM: (C)</p>		

IC	PIN	AM	FM	AIR
IC502	39	<p>DRIVES SEGMENTS b AND c OF SECOND DIGIT OF FREQUENCY DISPLAY, AND "LSB/CW" DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF SECOND DIGIT IS CHANGED AND, a) FIGURES 0,1,3,4,7,8 AND 9 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>b) FIGURES 2, 5 AND 6 DISPLAYED; SAMPLE WAVEFORM: (A)</p>		
	LSB/CW	<p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF SECOND DIGIT IS CHANGED AND, a) FIGURE 0 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>b) FIGURE 5 DISPLAYED; SAMPLE WAVEFORM: (A)</p>		
	40	<p>DRIVES SEGMENTS a, d AND g OF SECOND DIGIT OF FREQUENCY DISPLAY. WHEN FREQUENCY IS EXECUTED AND FIGURE OF SECOND DIGIT IS CHANGED AND, a) FIGURE 0 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>b) FIGURE 1 DISPLAYED; SAMPLE WAVEFORM: (E)</p> <p>c) FIGURES 2, 3, 5, 6, 8 AND 9 DISPLAYED; SAMPLE WAVEFORM: (B)</p> <p>d) FIGURES 4 AND 7 DISPLAYED; SAMPLE WAVEFORM: (A)</p>		
	41	<p>DRIVES SEGMENTS e AND f OF SECOND DIGIT OF FREQUENCY DISPLAY, AND "DOT".</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF SECOND DIGIT IS CHANGED AND, a) FIGURES 0,6 AND 8 DISPLAYED; SAMPLE WAVEFORM: (B)</p> <p>b) FIGURES 1, 3 AND 7 DISPLAYED; SAMPLE WAVEFORM: (A)</p> <p>c) FIGURES 2,4,5 AND 9 DISPLAYED; SAMPLE WAVEFORM: (C)</p>		
		<p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF SECOND DIGIT CHANGED AND, a) FIGURE 0 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>b) FIGURE 5 DISPLAYED; SAMPLE WAVEFORM: (A)</p> <p>c) FIGURE 2 DISPLAYED; SAMPLE WAVEFORM: (A)</p> <p>d) FIGURE 7 DISPLAYED; SAMPLE WAVEFORM: (E)</p>		

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	AM	FM	AIR	IC	PIN	AM	FM	AIR
IC502	42 USB 	<p>DRIVES SEGMENTS b AND c OF THIRD DIGIT OF FREQUENCY DISPLAY, AND "USB".</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF THIRD DIGIT CHANGED AND,</p> <p>a) FIGURES 0, 1, 3, 4, 7, 8 AND 9 DISPLAYED;</p> <p>SAMPLE WAVEFORM: (C)</p> <p>b) FIGURES 2, 5 AND 6 DISPLAYED;</p> <p>SAMPLE WAVEFORM: (A)</p> <p>SAME AS THOSE AT PIN 50 OF IC501, AND THOSE AT PIN 39 OF IC502 IN "AM" BAND SHOWN ABOVE.</p>			IC502	50  MW10kHz	<p>DRIVES SEGMENTS e AND f OF FIFTH DIGIT OF FREQUENCY DISPLAY, AND "MW10kHz" DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND FIFTH DIGIT OF FREQUENCY CHANGED, SAMPLE WAVEFORMS ARE THOSE AT PIN 46 OF IC501 IN OR THOSE AT PIN 47 OF IC502 IN "AM" BAND.</p> <p>NOTE:</p> <p>a) FIGURES FOR FM BAND ARE 7, 8, 9 AND 0 ONLY.</p> <p>b) FIGURES FOR AIR BAND ARE 1, 2 AND 3 ONLY.</p>		
	43 	<p>DRIVES SEGMENTS a, d AND g OF THIRD DIGIT OF FREQUENCY DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF THIRD DIGIT CHANGED, SAMPLE WAVEFORMS ARE SAME AS PIN 40 OF IC502 IN "AM" BAND SHOWN ABOVE.</p>				51 	<p>DRIVES SEGMENTS a, b, c, d, e AND g OF SIXTH DIGIT OF FREQUENCY DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND SIXTH DIGIT OF FREQUENCY CHANGED,</p> <p>a) VACANT (NO DISPLAY); SAMPLE WAVEFORM: (E)</p> <p>b) FIGURES 1 AND 2 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>c) WHEN OFF-BAND FREQUENCY EXECUTED AT LOWER END, Error DISPLAY BLINKS FOR FIVE SECONDS, AND BACKS TO INITIAL FREQUENCY; SAMPLE WAVEFORMS: ALTER-NATE (A) AND (E) DURING BLINKING.</p>		
	44 SCAN1 	<p>DRIVES SEGMENTS e AND f OF THIRD DIGIT OF FREQUENCY DISPLAY, AND "SCAN1".</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF THIRD DIGIT CHANGED, SAMPLE WAVEFORMS ARE SAME AS THOSE AT PIN 46 OF IC501 SHOWN ABOVE.</p>					<p>a) VACANT (NO DISPLAY); SAMPLE WAVEFORM: (E)</p> <p>b) FIGURE 1 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>c) WHEN OFF-BAND FREQUENCIES EXECUTED TO UPPER END, Error DISPLAY BLINKS FOR FIVE SECONDS, AND BACKS TO INITIAL FREQUENCY; SAMPLE WAVEFORMS: ALTER-NATE (A) AND (C) DURING BLINKING.</p> <p>d) LOWER-END OFF-BAND; ALTER-NATE (A) AND (E) DURING BLINKING.</p>		
	45 SYNC 	<p>DRIVES SEGMENTS b AND c OF FOURTH DIGIT OF FREQUENCY DISPLAY, AND "SYNC".</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF FOURTH DIGIT CHANGED, SAMPLE WAVEFORMS ARE SAME AS THOSE AT PIN 42 OF IC502 SHOWN ABOVE.</p>					<p>a) FIGURE 1 ONLY AND SAMPLE WAVEFORM IS (C).</p> <p>b) WHEN OFF-BAND FREQUENCIES EXECUTED AT BOTH ENDS, Error DISPLAY BLINKS FOR FIVE SECONDS, AND BACKS TO INITIAL FREQUENCY; SAMPLE WAVEFORMS: ALTER-NATE (A) AND (C) DURING BLINKING.</p>		
	46 	<p>DRIVES SEGMENTS a, d AND g OF FOURTH DIGIT OF FREQUENCY DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF FOURTH DIGIT CHANGED, SAMPLE WAVEFORMS ARE SAME AS THOSE AT PIN 40 OF IC502 IN "AM" MODE SHOWN ABOVE.</p>					<p>a) VACANT (NO DISPLAY); SAMPLE WAVEFORM: (E)</p> <p>b) FIGURE 1 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>c) WHEN OFF-BAND FREQUENCIES EXECUTED TO UPPER END, Error DISPLAY BLINKS FOR FIVE SECONDS, AND BACKS TO INITIAL FREQUENCY; SAMPLE WAVEFORMS: ALTER-NATE (A) AND (C) DURING BLINKING.</p> <p>d) LOWER-END OFF-BAND; ALTER-NATE (A) AND (E) DURING BLINKING.</p>		
	47  MHz	<p>DRIVES SEGMENTS e AND f OF FOURTH DIGIT AND 1MHz DOT OF FREQUENCY DISPLAY, AND "MHz".</p> <p>WHEN FREQUENCY IS EXECUTED AND FIGURE OF FOURTH DIGIT CHANGED, SAMPLE WAVEFORMS ARE SAME AS THOSE AT PIN 38 OF IC502 IN "AM" BAND SHOWN ABOVE.</p>					<p>a) VACANT (NO DISPLAY); SAMPLE WAVEFORM: (E)</p> <p>b) FIGURE 1 DISPLAYED; SAMPLE WAVEFORM: (C)</p> <p>c) WHEN OFF-BAND FREQUENCIES EXECUTED TO UPPER END, Error DISPLAY BLINKS FOR FIVE SECONDS, AND BACKS TO INITIAL FREQUENCY; SAMPLE WAVEFORMS: ALTER-NATE (A) AND (C) DURING BLINKING.</p> <p>d) LOWER-END OFF-BAND; ALTER-NATE (A) AND (E) DURING BLINKING.</p>		
	48 NARROW 	<p>DRIVE SEGMENTS b AND c OF FIFTH DIGIT OF FREQUENCY DISPLAY, AND "NARROW".</p> <p>AT INITIAL 150kHz, SAMPLE WAVEFORM (E)</p> <p>AT OFF-BAND WITH Error DISPLAY, ALSO (E)</p>					<p>1. AT INITIAL 76MHz OR 116MHz, SAMPLE WAVEFORM (C).</p> <p>2. AT OFF-BANDS WITH Error DISPLAY, BLINKED WAVEFORMS (A) AND (E) FOR FIVE SECONDS.</p>		
	49 	<p>DRIVES SEGMENTS a, d AND g OF FIFTH DIGIT OF FREQUENCY DISPLAY.</p> <p>WHEN FREQUENCY IS EXECUTED AND FIFTH DIGIT OF FREQUENCY CHANGED, SAMPLE WAVEFORMS ARE THOSE AT PIN 40 OF IC502 IN "AM" MODE SHOWN ABOVE.</p> <p>NOTE:</p> <p>a) FIGURES FOR FM BAND ARE 7, 8, 9 AND 0 ONLY.</p> <p>b) FIGURES FOR AIR BAND ARE 1, 2 AND 3 ONLY.</p>				52 WIDE  MW9kHz	<p>DRIVES SEGMENT f (NOT USED IN THIS SET) OF SIXTH FREQUENCY DISPLAY, AND "WIDE" AND "MW9kHz" DISPLAYS.</p> <p>IN WIDE AND MW9kHz MODE, SAMPLE WAVEFORM (C).</p>		
						53 AIR FM AM	<p>1.05.</p> <p>DRIVES SEGMENT "AM", "FM" OR "AIR".</p> <p>SAMPLE WAVEFORM: (A)</p>		

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	AM	FM	AIR
IC502	54	0.7. SAMPLE WAVEFORM: (E) DRIVES TRIANGLE MARKS.		
	55	0 (GROUND) (ALL BANDS)		
	56	0 (ALL BANDS)		
	57	1.2. (ALL BANDS). CLOCK SAMPLE WAVEFORM: (F)		
	58	2.95 (B+, ALL BANDS).		
	59	1.3 (ALL BANDS). CLOCK SAMPLE WAVEFORM: (G)		
	60	0 OR 3.0. ACTIVATES "FAST" TUNING OF AM MANUAL TUNE MODE. 0: "LOCK" AND "SLOW" POSITIONS. 3.0: "FAST" POSITION.		
	61	0 OR 3.0. ACTIVATES "SLOW" TUNING OF MANUAL TUNE MODE. 0: "LOCK" AND "FAST" POSITIONS. 3.0: "SLOW" POSITION.		
	62	0 (ALL BANDS)		
	63	0 OR 2.75.		
IC503	1	0. (2.6 WHEN b1-b8 KEYED IN AND KEPT DEPRESSED. 0 WHEN OTHER KEYS KEYED IN.)		
	2	0. (2.6 WHEN c1-c8 KEYED IN AND KEPT DEPRESSED. 0 WHEN OTHER KEYS KEYED IN.)		
	3	0 (2.6 WHEN d1-d8 KEYED IN AND KEPT DEPRESSED. 0 WHEN OTHER KEYS KEYED IN.)		
	4	0 (2.6 WHEN AIR, FM OR AM KEYED IN.)		
	5	3.0 (B+).		
	6	0. (2.95 WHEN b1-b8, c1-c8, d1-d8, WIDE, NARROW, SYNC, USB OR LSB/CW KEYED IN.)		
	7	IDENTICAL TO PIN 13 OF IC501 (ICF-2010). 0. (2.95 WHEN THOSE KEYS SHOWN FOR PIN 14 OF IC501 ARE KEYED IN. IDENTICAL TO PIN 14 OF IC501).		
	8	0 (GROUND).		
	9	0. (2.95 WHEN THOSE KEYS SHOWN FOR PIN 15 OF IC501 ARE KEYED IN. IDENTICAL TO PIN 15 OF IC501).		
	10	0 (GROUND).		
	11	0. (2.6 WHEN KEYS 0-7 ARE KEYED IN OR KEPT DEPRESSED AT TEN KEY, AND BACKS TO 0 WHEN KEY IS RELEASED.) SAMPLE WAVEFORMS WHEN FIGURES ARE KEYED IN;		
	12	0. (2.6 WHEN 8, 9, EXECUTE, 0 MIN, 15 MIN, 30 MIN OR 60 MIN ARE KEYED IN OR KEPT DEPRESSED, AND BACKS TO 0 WHEN KEY IS RELEASED.) SAMPLE WAVEFORMS WHEN KEYED IN;		

IC	PIN	AM	FM	AIR
IC503	13	0. (2.6 WHEN a1-a8 KEYED IN OR KEPT DE- PRESSED, AND BACKS TO 0 WHEN KEY IS RELEASED.) SAMPLE WAVEFORMS WHEN KEYED IN;		
		a1: (W)	a4: (Z)	a7: (AC)
		a2: (X)	a5: (AA)	a8: (AD)
		a3: (Y)	a6: (AB)	
	14	NOT USED, BUT 0. (2.95 WHEN KEYS OTHER THAN LIGHT, SLEEP, PT1-PT4, SCAN START/STOP, MEMORY SCAN START/STOP, SKIP, ENTER AND SHIFT ARE KEYED IN OR KEPT DE- PRESSED, AND BACKS TO 0 WHEN KEY IS RELEASED.) SAMPLE WAVEFORMS ARE ALSO IN THE ORDER OF (W) TO (AD) AS SHOWN ABOVE IN 8-BIT SYSTEM.		
	15	NOT USED, BUT 2.95. (0 REVERSEWISE WHEN AIR, FM, AM, WIDE, NARROW, SYNC, USB AND LSB/CW ARE KEYED IN.) SAMPLE WAVEFORMS WHEN KEYED IN.		
		AIR: (AQ)	WIDE: (AT)	USB: (AW)
		FM: (AR)	NARROW: (AU)	LSB/CW: (AX)
		AM: (AS)	SYNC: (AV)	
		OTHER KEYS ARE UNCHANGED WHEN KEYED IN, I.E., 2.95.		
IC504	16	3.0 (B+).		
	1	0 OR 3.0 DEPENDING UPON STOP POSITION OF TUNING KNOB. 1. ALTERNATE 0 AND 3.0 WHEN TUNING KNOB TURNED COUNTERCLOCKWISE. FREQUENCY DISPLAY'S FIGURE CHANGES AT LEADING EDGE FROM 0V TO 3.0V. SAMPLE WAVEFORM: (AP)		
		2. UNCHANGED 0V WHEN TUNING KNOB TURNED CLOCKWISE.		
	2	NOT USED.		
	3	0. (ALTERNATE 0 AND 3.0 FOLLOWING TURN OF TUNING KNOB IN BOTH CLOCKWISE AND COUNTERCLOCKWISE.)		
	4	ALTERNATE 0 AND 3.0 FOLLOWING TURN OF TUNING KNOB IN BOTH CLOCKWISE AND COUNTERCLOCK- WISE. FREQUENCY DISPLAY FIGURE CHANGES AT LEADING EDGE FROM 0V TO 3.0V.		
	5	ALTERNATE 0 AND 3.0 FOLLOWING TURN OF TUNING KNOB. 1. 0 WHEN PIN 1 OF THIS IC IC504 IS 3.0 "H", AND 3.0 WHEN PIN 1 OF IC504 IS 0. (REVERSAL OF PIN 1 OF IC507) 2. POINTS CAN BE DETECTED WHEN BOTH PINS 1 OF IC507 AND 5 OF IC504 BE- COMES IN 0 "L" OR 3.0 "H" AT THE SAME TIME DURING TURN OF TUNING KNOB.		
	6	0 (GROUND).		
	7	0 (GROUND).		
	8	0 (GROUND).		
	9	SAME AS PIN 3 OF THIS IC IC504 AND PIN 1 OF IC507.		

FOR SAMPLE WAVEFORMS, SEE PAGES FROM 53.

IC	PIN	AM	FM	AIR																		
IC504	10	0. (ALTERNATE 0 AND 3.0 WHEN TUNING KNOB TURNED IN BOTH DIRECTION OF CLOCKWISE AND COUNTERCLOCKWISE. REVERSAL OF PIN 11 OF IC505.) SAMPLE WAVEFORM: (BC)																				
	11	SAME AS PIN 5 OF THIS IC IC504 AND PIN 2 OF IC507.																				
	12	NOT USED																				
	13	SAME AS PIN 61 OF IC501.																				
	14	3.0 (B+).																				
IC505	1	0 OR 3.0 DEPENDING UPON STOP POSITION OF TUNING KNOB. (ALTERNATE 0 AND 3.0 WHEN TUNING KNOB IS TURNED. SAME AS PIN 4 OF IC502. REVERSAL OF PIN 2 OF IC505.) SAMPLE WAVEFORM: (BF)																				
	2	3.0 OR 0 DEPENDING UPON STOP POSITION OF TUNING KNOB. (ALTERNATE 3.0 AND 0 WHEN TUNING KNOB IS TURNED. REVERSAL OF PIN 1 OF IC505. SAME AS PIN 3 OF IC502.) SAMPLE WAVEFORMS: (BD) AND (BE)																				
	3	3.0 OR 0 DEPENDING UPON STOP POSITION OF TUNING KNOB. (ALTERNATE 3.0 AND 0 WHEN TUNING KNOB TURNED IN BOTH CLOCKWISE AND COUNTERCLOCKWISE DIRECTIONS. REVERSAL OF PIN 1 OF THIS IC IC505. FIGURE OF FREQUENCY DISPLAY CHANGES AT TRAILING EDGE FROM 3.0 "H" TO 0 ("L"). SAMPLE WAVEFORMS: (BE), (BF) AND (BG)																				
	4	3.0 OR 0 DEPENDING UPON STOP POSITION OF TUNING KNOB. (ALTERNATE 3.0 AND 0 WHEN TUNING KNOB TURNED IN BOTH CLOCKWISE AND COUNTERCLOCKWISE DIRECTIONS. "H" OR "L" WHEN PIN 5 OF IC505 IS "H", AND "L" WHEN PIN 5 OF IC505 IS "L".																				
	5	0 OR 3.0 DEPENDING UPON STOP POSITION OF TUNING KNOB AND STATES OF INPUT PINS 1 AND 2 OF IC507.																				
		<table><tr><th colspan="2">IC507</th><th>IC505</th></tr><tr><th>PIN 1</th><th>PIN 2</th><th>PIN 5</th></tr><tr><td>0V("L")</td><td>0V("L")</td><td>3V("H")</td></tr><tr><td>3V("H")</td><td>3V("H")</td><td>0V("L")</td></tr><tr><td>3V("H")</td><td>0V("L")</td><td>0V("L")</td></tr><tr><td>0V("L")</td><td>3V("L")</td><td>0V("L")</td></tr></table>			IC507		IC505	PIN 1	PIN 2	PIN 5	0V("L")	0V("L")	3V("H")	3V("H")	3V("H")	0V("L")	3V("H")	0V("L")	0V("L")	0V("L")	3V("L")	0V("L")
	IC507		IC505																			
	PIN 1	PIN 2	PIN 5																			
	0V("L")	0V("L")	3V("H")																			
	3V("H")	3V("H")	0V("L")																			
	3V("H")	0V("L")	0V("L")																			
	0V("L")	3V("L")	0V("L")																			
		SAMPLE WAVEFORM: (BA)																				
	6,8	SAME AS PIN 61 OF IC501 SHOWN ABOVE. SAMPLE WAVEFORM: (AP)																				
7	0 (GROUND).																					
9	SAME AS PIN 1 OF IC504 SHOWN ABOVE.																					
10	SAME AS PIN 55 OF IC501. REVERSAL OF PIN 11 OF IC505. SAMPLE WAVEFORM: (BC)																					
11	0. (ALTERNATE 0 AND 3.0 WHEN TUNING KNOB TURNED. REVERSAL OF PIN 10 OF THIS IC IC505 AND PIN 55 OF IC501. SAMPLE WAVEFORM: (BC)																					
12	SAME AS PIN 1 OF IC504 AND PIN 9 OF IC505.																					
13	SAME AS PIN 5 OF THIS IC IC505 AND PIN 3 OF IC507.																					
14	3.0 (B+).																					

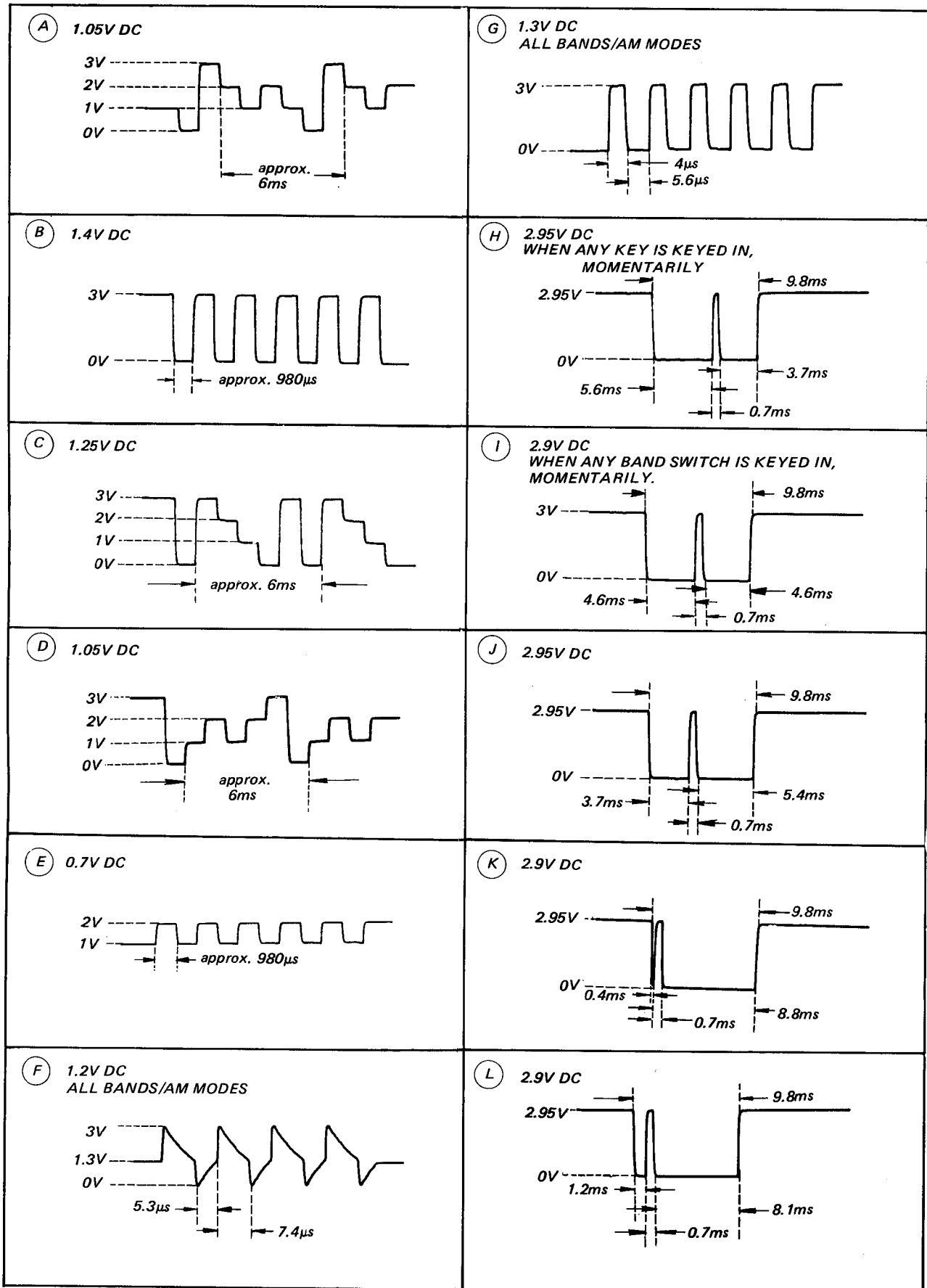
IC	PIN	AM	FM	AIR
IC506	1	SAME AS PIN 4 OF IC502 AND PIN 1 OF IC505.		
	2	0. SAME AS PIN 5 OF IC506 AND PIN 4 OF IC507.		
	3	0. SAME AS PIN 3 OF IC11. SAMPLE WAVEFORM: (BH)		
	4	0. SAME AS PIN 1 OF IC11. WHEN AM, FM, AIR KEYED IN; SAMPLE WAVEFORMS: (BH) AND (BI)		
	5	SAME AS PIN 2 OF THIS IC IC506 AND PIN 4 OF IC507.		
	6	SAME AS PIN 3 OF IC502, PIN 2 OF IC505 AND PIN 8 OF THIS IC506.		
	7	0 (GROUND).		
	8	SAME AS PIN 3 OF IC502, PIN 2 OF IC505 AND PIN 6 OF THIS IC506.		
	9	SAME AS PIN 2 OF IC502 AND PIN 12 OF THIS IC506.		
	10	0. (1. WHEN AM OR AIR KEYED IN; SAMPLE WAVEFORM: (BJ) 2. WHEN FM KEYED IN; ALWAYS 0V 3. SAME FOR PIN 3 OF IC6.)		
	11	0. (WHEN AIR, FM, AM AND a1-a8 KEYED IN; SAMPLE WAVEFORM: (BJ) SAME FOR PIN 3 OF IC4.		
	12	0. SAME FOR PIN 2 OF IC502. (WHEN AIR, FM, AM AND a1-a8 KEYED IN; SAMPLE WAVEFORM: (BJ)		
	13	SAME AS PIN 4 OF IC502 AND PIN 1 OF THIS IC506.		
	14	3.0 (B+).		



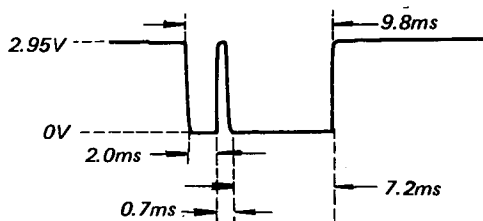
AM MODE: W: WIDE ON, N: NARROW ON, SF: SYNC OFF, SN: SYNC ON, U: USB ON, L: LSB/CW ON

IC	PIN	AM	FM	AIR	OTHER POINTS	AM	FM	AIR															
IC507	1	0 OR 3.0 DEPENDING UPON STOP POSITION OF TUNING KNOB. SAME AS PINS 3 AND 9 OF IC504. REVERSAL OF PIN 2 OF THIS IC507.			VCO OUTPUT OF X601 (TO IC10)	SN,U,L; 3Vp-p SIGNAL OF 3.64MHz	3Vp-p SIGNAL OF 3.64MHz	1.3Vp-p SIGNAL OF 3.64MHz															
	2	3.0 OR 0 DEPENDING UPON STOP POSITION OF TUNING KNOB. SAME AS PINS 5 AND 11 OF IC504. REVERSAL OF PIN 1 OF THIS IC507.			PSN	1	1.0	1.0	1.0														
	3	SAME AS PINS 5 AND 13 OF IC505.				2	1.0	1.0	1.0														
	4	0. (ALL MODES). SAME AS PINS 2 AND 5 OF IC506.				3	3.0	3.0	3.0														
	5	0. (GROUND).				4	1.35	1.35	1.35														
	6	0.4 (ALL BANDS). SAME AS PINS 2 AND 5 OF IC506.				5	0.45	0.45	0.45														
	7	0. (GROUND).				6	0(GROUND)	0(GROUND)	0(GROUND)														
	8	0. (ALL BANDS). SAME AS PIN 5 OF IC501 AND PIN 6 OF IC502.				7	0(GROUND)	0(GROUND)	0(GROUND)														
	9	0. (GROUND).				8	3.0	3.0	3.0														
	10, 12	0. (ALL BANDS). 1. WHEN BANDS, AM MODES, MEMORY AND TEN KEYS ARE KEYED IN, "L" STATE CHANGES TO "H" (3.0). 2. IC507				9	1.0	1.0	1.0														
		<table><tr><td>PIN 1</td><td>PIN 2</td><td>PIN 10 AND 12</td></tr><tr><td>3.0("H")</td><td>0 ("L")</td><td>3.0("H") OR 0 ("L")</td></tr><tr><td>0 ("L")</td><td>3.0("H")</td><td>3.0("H")</td></tr><tr><td>0 ("L")</td><td>0 ("L")</td><td>3.0("H")</td></tr><tr><td>3.0("H")</td><td>3.0("H")</td><td>3.0("H")</td></tr></table>			PIN 1	PIN 2	PIN 10 AND 12	3.0("H")	0 ("L")	3.0("H") OR 0 ("L")	0 ("L")	3.0("H")	3.0("H")	0 ("L")	0 ("L")	3.0("H")	3.0("H")	3.0("H")	3.0("H")	OUTPUT OF L19 TO IC5	AT 150kHz: 70mVp-p SINE OF 50,370.67kHz. AT 29,999.9kHz 70mVp-p SINE OF 50,345.57kHz	0	AT 116MHz: 55mVp-p SINE OF 46,605.66kHz AT 136MHz: 60mVp-p SINE OF 46,605.66kHz
	PIN 1	PIN 2	PIN 10 AND 12																				
	3.0("H")	0 ("L")	3.0("H") OR 0 ("L")																				
	0 ("L")	3.0("H")	3.0("H")																				
0 ("L")	0 ("L")	3.0("H")																					
3.0("H")	3.0("H")	3.0("H")																					
				OUTPUT OF X 3 TO Q5	250mVp-p SINE OF 55,390kHz. SAME FOR "S" OF Q5.	0 SAME FOR "S" OF Q5.	250mVp-p SINE OF 55,390kHz. SAME FOR "S" OF Q5.																
11	0. (DATA SIGNAL FOR PLL'S).																						
13	SAME AS COLLECTOR OF Q504.																						
14.	3.0 (B+).																						
IC601	1	2.3	2.3	2.3																			
	2	0.1	0.1	0.1																			
	3	SN,U,L: 1.8 W,N,SF: 0	1.8	0																			
	4	SN: 2.9 SF,U,L: 0	0.1	2.9																			
	5	NOT USED.	NOT USED.	NOT USED.																			
	6	0(GROUND)	0(GROUND)	0(GROUND)																			
	7	2.15	2.15	2.15																			
	8	2.35	2.35	2.35																			
	9	0(GROUND)	0(GROUND)	0(GROUND)																			
	10	NOT USED.	NOT USED.	NOT USED.																			
	11	2.85	2.85	2.85																			
	12	NOT USED.	NOT USED.	NOT USED.																			
	13	W,N: 1.2 U,L: 0.5 SN : 0.7	0.65	1.2																			
	14	2.95	2.95	2.95																			
	15	NOT USED.	NOT USED.	NOT USED.																			
	16	NOT USED.	NOT USED.	NOT USED.																			
	17	NOT USED.	NOT USED.	NOT USED.																			
18	2.65	2.65	2.65																				
19	2.95	2.95	2.95																				
20	2.45	2.45	2.45																				

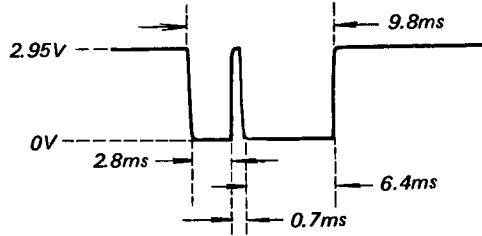
## SAMPLE WAVEFORMS:



(M) 2.95V DC  
WHEN BAND IS SWITCHED, MOMENTARILY



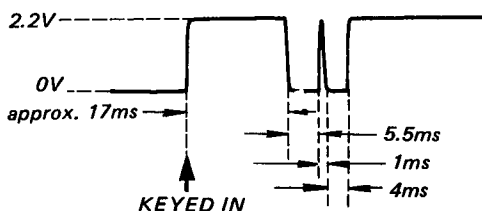
(N) 2.95V DC  
WHEN BAND IS SWITCHED, MOMENTARILY



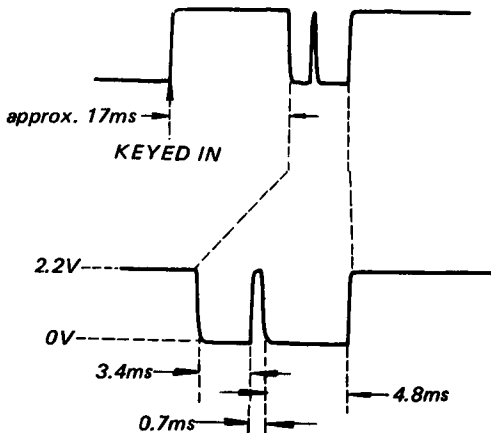
(O) 2.95V DC  
WHEN BAND IS SWITCHED, MOMENTARILY



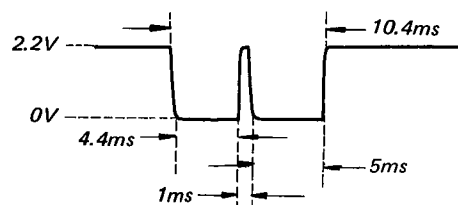
(P) 2.2V DC  
WHEN ENTER SWITCH KEYED IN



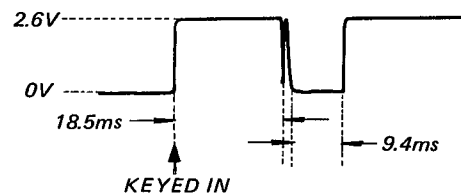
(Q) 2.2V DC  
WHEN SHIFT SWITCH KEYED IN



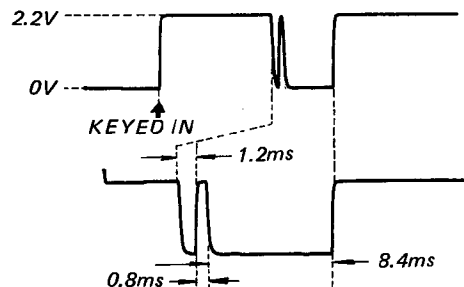
(R) 2.2V DC



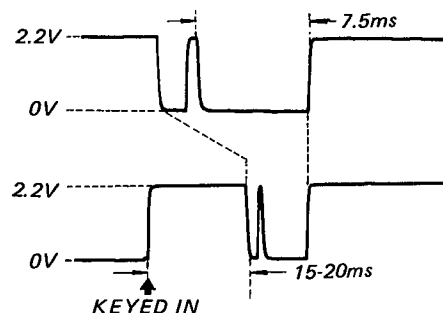
(S) PT1 SWITCH OFF: 0V DC  
PT1 SWITCH KEPT DEPRESSED: 2.2V DC



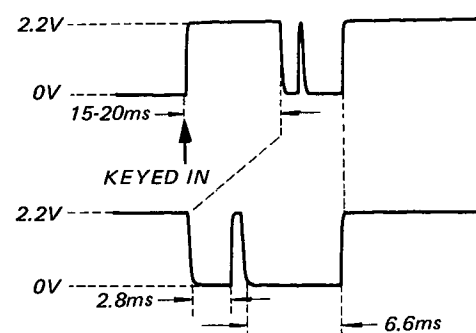
(T) 2.2V DC

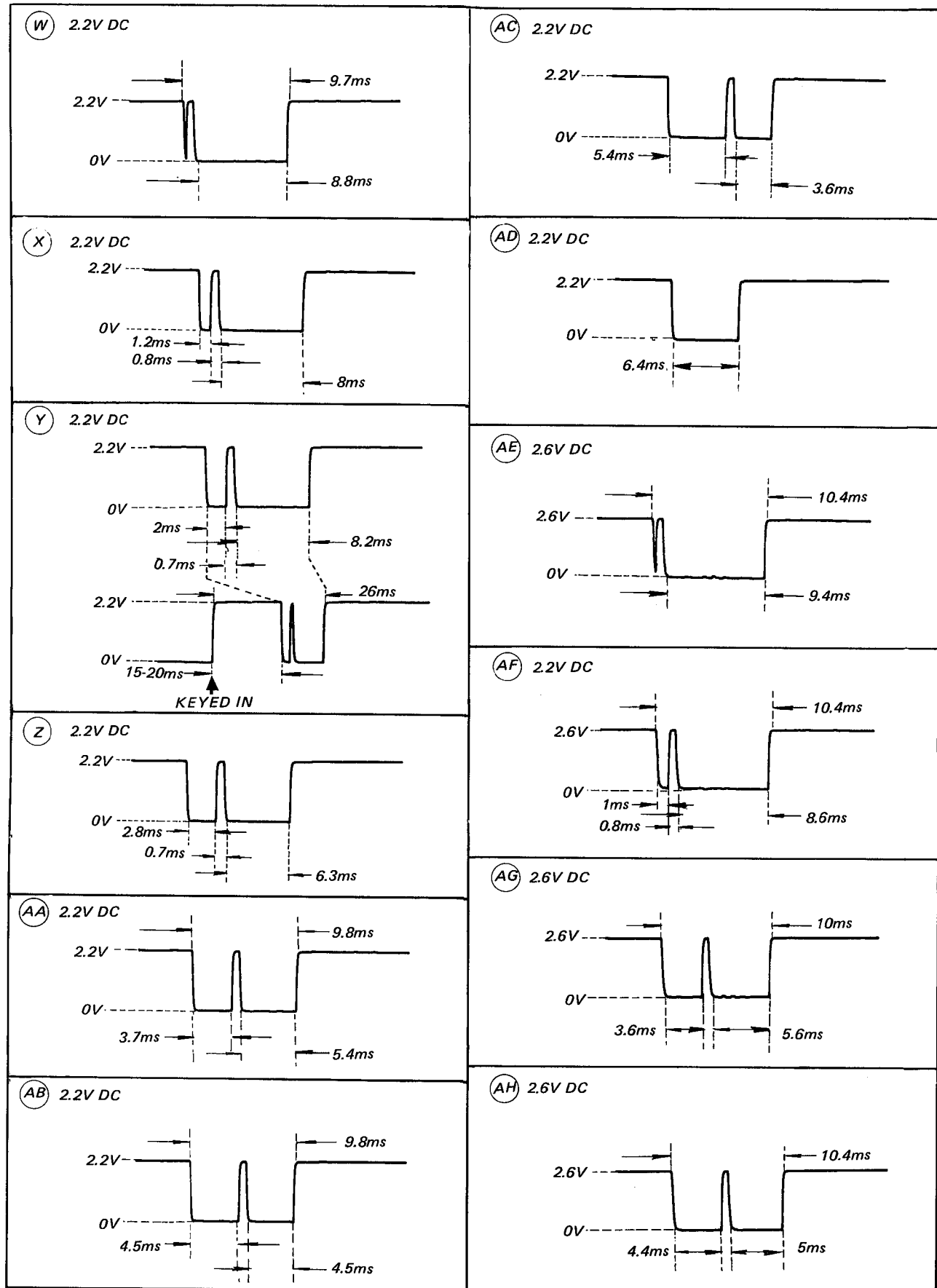


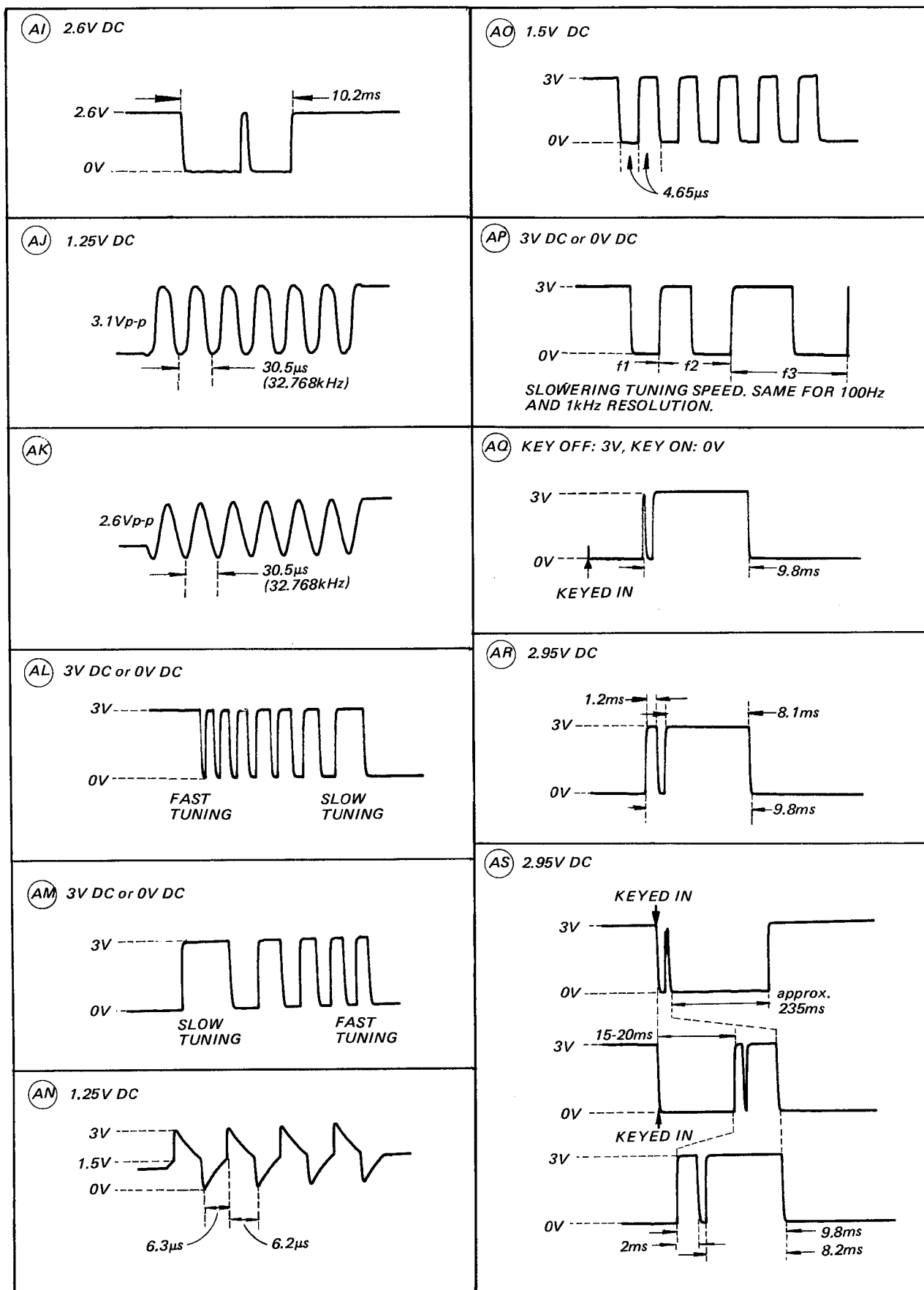
(U) 2.2V DC



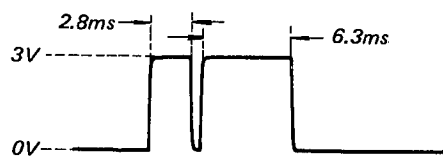
(V) 2.2V DC



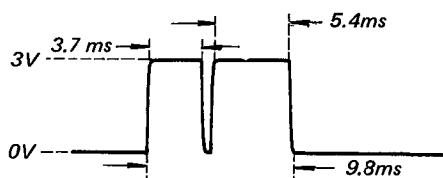




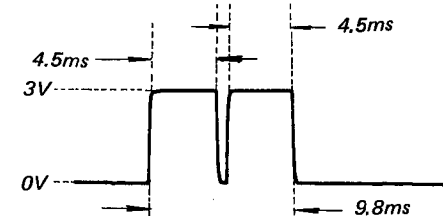
(AT) 2.95V DC



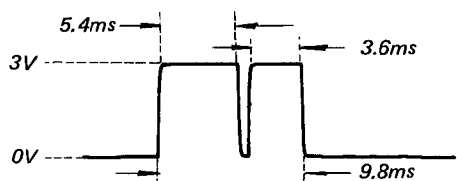
(AU) 2.95V DC



(AV) 2.95V DC



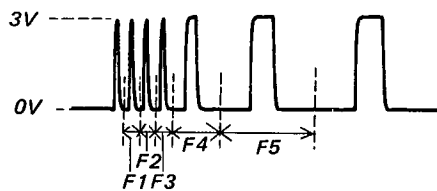
(AW) 2.95V DC



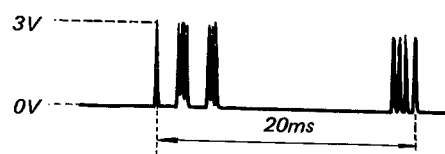
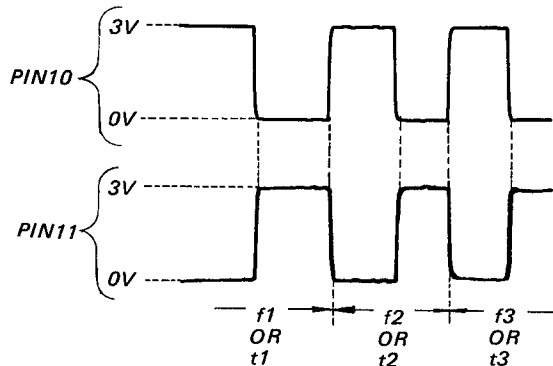
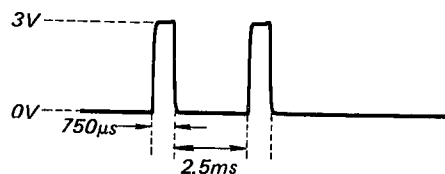
(AX) 2.95V DC



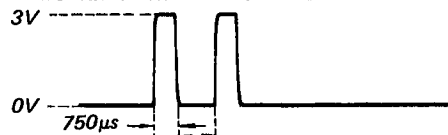
(BA) 3V DC OR 0V DC



FAST TUNING SLOW TUNING

FIGURE ON LCD DISPLAY  
SUCCESSIVELY CHANGES DURING EACH  
DURATION F1 THROUGH F5, ETC.(BB) 0V DC  
WHEN TUNING KNOB IS TURNED(BC) 3V DC OR 0V DC  
WHEN TUNING KNOB IS TURNED IN BOTH  
FREQUENCY AND TIMER SETTINGS.(BD) 0V DC  
WHEN AM OR AIR SWITCH IS PRESSED,  
MOMENTARILY TWO PULSES.(BE) 0V DC  
WHEN AM SWITCH IS PRESSED TWICE OR a1  
THROUGH d8 SWITCH IS PRESSED ONCE,  
MOMENTARILY ONE PULSE.

**(BF)** 0V DC  
WHEN BAND SWITCH IS PRESSED INITIALLY,  
MOMENTARILY TWO PULSES.

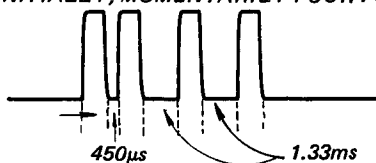


FM: 1.35ms AIR, AM: 3.4ms

AIR, AM: 3.4ms

WHEN EACH BAND SWITCH IS PRESSED TWICE,  
WAVEFORM CHANGES TO **(BE)**.

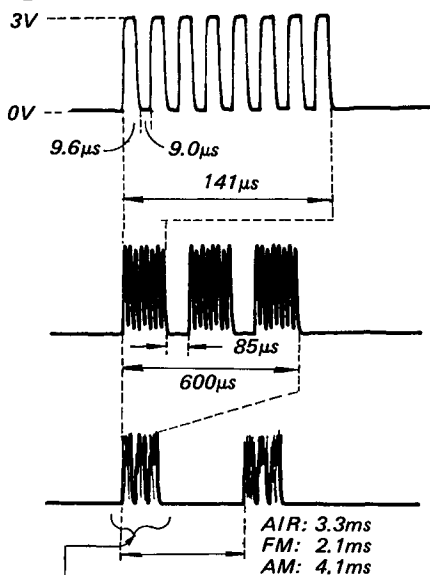
**(BG)** 0V DC  
WHEN AM OR AIR SWITCH IS KEYED IN  
INITIALLY, MOMENTARILY FOUR PULSES.



WHEN BAND IS CHANGED TO FM, WAVEFORM  
CHANGES TO **(BF)**. WHEN AIR IS PRESSED  
TWICE, WAVEFORM CHANGES TO **(BE)**.

WHEN AM IS PRESSED TWICE, WAVEFORM  
CHANGES TO **(BF)**.

**(BH)** 0V DC



AIR: 3.3ms

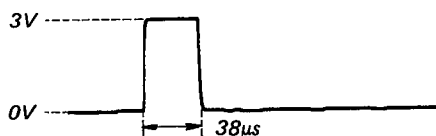
FM: 2.1ms

AM: 4.1ms

WHEN AM SWITCH PRESSED TWICE, RIGHT-SIDE  
THREE PULSE GROUP DISSAPPEARS.

IN SCAN START/STOP MODE, LEFT-SIDE THREE  
PULSE GROUP ONLY FLICKERS.

**(BI)** 0V DC  
WHEN AM OR AIR SWITCH IS KEYED AFTER  
POWER ON, MOMENTARILY.



WHEN FM KEYED IN:  
UNCHANGED 0V DC