CLAIRTONE

SERVICE MANUAL
for
CHASSIS TYPE C403

USED IN MODELS
S403 S503 S553 S603 ST803 ST853

CIRCUIT DESCRIPTION

The R.F. and mixer circuits employ a double triode tube, VI (ECC85). One triode functions as a conventional grounded cathode R.F. amplifier and the second triode as an oscillator/additive mixer. The oscillator frequency is stabilised by an A.F.C. circuit using a silicon diode (CR6). The characteristics of the diode are such that when a negative bias is applied, the interelectrode capacity of the diode changes, and is proportional to the amplitude of the bias. The diode is wired as a capacitive element in the oscillator tuned circuit and is controlled by a bias derived from the ratio detector, thus stabilising the oscillator frequency.

The A.M. mixer uses a heptode tube, V2(6BE6) in an autodyne circuit. A low impedance and low Q input circuit, in conjunction with a loop antenna, provide good signal to noise ratio characteristics.

Intermediate frequency signals (A. M. at 455 Kc/s and F.M. at 10.7 Mc/s) are applied to a common two-stage amplifier wired around V3 (6BZ6) and V4 (6CB6). The first stage functions as a conventional amplifier; the second stage as a limiter to F.M. signals and a demodulator to A.M. signals. The A.G.C. voltages, developed across the A.M. load resistor R21 are applied to V2 and V3.

The F.M. signals are passed from the limiter stage to the ratio detector V5 (6AL5). This is a conventional balanced circuit. The frequency and amplitude of the audio modulation signal, appearing at the tertiary winding of IFT5 are functions of the carrier deviation rate and amplitude respectively. Two audio outputs are taken from the ratio detector. One is fed via the push-button control switches to the audio amplifier during monaural operation, the other is fed to the multiplex circuits for stereo. The multiplex circuit, V6 (12AT7) differentiates between left and right hand channel information and passes this to the two channels of the audio amplifier via the push-button control switches.

The two channels of the audio amplifier are identical. Each consists of a three-stage resistance/capacity coupled circuit with a push-pull output stage, providing an output of 9 watts (RMS) and a frequency response of 40-25,000 cycles ±3db. The power supplies circuit comprises power transformer (T1), silicon diode (CR1) and associated components.

ALIGNMENT INSTRUCTIONS

GENERAL

The alignment of the tuned circuits of the C403 chassis is an exacting procedure and should be undertaken only when absolutely necessary and when adequate test equipment is available. The step by step instructions given below should be strictly adhered to. Two methods for the F.M. I.F. circuit alignment are described; one using an unmodulated signal generator and VTVM, and a second using a sweep generator and oscilloscope. The latter is preferred and should be used whenever possible.

During the alignment operations the audio output stages of the receiver should be loaded, by connecting an 8 ohm loudspeaker, or a 5 to 10 ohm dummy load, across the secondaries of the output transformers.

TEST EQUIPMENT

The test equipment required to align the C403 chassis is listed below:

Amplitude Modulation I.F. and R.F. Circuits

1. Amplitude modulated signal generator with range 455 Kc/s-1625 Kc/s
2. Vacuum tube voltmeter (VTVM)

Frequency Modulation I.F. Circuits

1. F.M. sweep generator with range covering 10.7 Mc/s
2. 10.7 Mc/s crystal calibrator or other accurate marker generator
3. Oscilloscope

Frequency Modulation I.F. Circuits (Without Oscilloscope)

1. Un-modulated signal generator with range covering 10.7 Mc/s
2. Vacuum tube voltmeter (VTVM)

Multiplex Circuits

1. Audio signal generator with range 600 c/s to 70 Kc/s
2. Fisher multiplex test set
3. Oscilloscope
4. Vacuum tube voltmeter (VTVM)

AMPLITUDE MODULATION I.F. and R.F. CIRCUIT ALIGNMENT

Step	Radio Setting		Signal Generator		VTVM	Adjustment
	Dial	S1	Connection	Frequency	Connection	
1	Tuning gang fully closed	A.M.	High side to TP1 thru .001 MFD capacitor. Low side to ground	455Kc/s	Between T.P.4 and ground	Adjust top and bottom cores of IFT2 and IFT3 for max. output as shown on VTVM Ensure that VTVM reading does not exceed 3V by reducing input as required.
2	Tuning gang fully closed	A.M.	Couple generator inductively to L6	535Kc/s	Between T.P.4 and ground	Adjust the core of L9 for maximum VTVM reading.
3	Tuning gang fully open	A.M.	Couple generator inductively to L6	1625Kc/s	Between T.P.4 and ground	Adjust oscillator trimmer, C23, for maximum VTVM reading.
4	Repeat step	2 and	3 until no further	increase	in VTVM reading is possible.	
5	1400Kc/s	A.M.	Couple generator inductively to L6	1400Kc/s	Between T.P.4 and ground	Adjust R.F. trimmer, C19, for maximum VTVM reading.
6	600Kc/s	A.M.	Couple generator inductively to L6	600Kc/s	Between T.P.4 and ground	Adjust R.F. coil, L6 for maximum VTVM reading.
7	Repeat step	5 and	6 until no further	increase	in VTVM reading is possible.	

FREQUENCY MODULATION I.F. CIRCUIT ALIGNMENT (Without Oscilloscope)

Step	Radio Setting		Signal Generator		VTVM	Adjustment
	Dial	S1	Connection	Frequency	Connection	
1	Point of no Interference	F.M.	High side to tube shield fitted over V1. Low side to ground.	10.7Mc/s (Unmod.)	Between T.P.6 and ground.	Adjust both cores of IFT1 and IFT4, and the bottom core of IFT5 for max. output as shown on VTVM.
2	Point of no Interference	F.M.	As in step 1	10.7Mc/s (Unmod.)	Between T.P.5 and ground	Adjust top core of IFT5 for a zero reading. This is found between positive and negative readings.

FREQUENCY MODULATION I.F. CIRCUIT ALIGNMENT

During this alignment procedure the F.M. sweep generator should be set to give a frequency deviation of 450 Kc/s and should have the deviation rate synchronised to the oscilloscope sweep rate, at approximately 60 cps.

Step	Radio Setting		Signal Generator		Oscilloscope	Adjustment
	Dial	S1	Connection	Frequency	Connection	
1	Point of no interference	F.M.	High side to T.P. 3 Low side to ground	10.7 Mc/s	Vert amp input to T.P. 6 Common to ground.	Disconnect C45 and adjust bottom core of IFT 5 for max. amplitude and symmetry.
2	Point of no interference	F.M.	High side to T.P. 3 Low side to ground	10.7 Mc/s	Vert amp input to T.P. 5 Common to ground.	Re-connect C45 and adjust top core of IFT 5 so that 10.7 Mc/s point appears as in fig. 2. Carefully adjust bottom core of IFT 5 for max. amplitude and symmetry.
3	Repeat step 1					
4	Point of no interference	F.M.	High side to T.P. 2 Low side to ground	10.7 Mc/s	Vert amp input to T.P. 6 Common to ground.	With C45 disconnected, adjust top and bottom cores of IFT 4 for response shown in fig. 3.
5	Point of no interference	F.M.	High side to tube shield fitted over V1. Low side to ground.	10.7 Mc/s	Vert amp input to T.P. 6 Common to ground.	With C45 disconnected, adjust top and bottom cores of IFT 4 for optimum amplitude and symmetry of response.
6	Point of no interference	F.M.	As in step 5	10.7 Mc/s	Vert amp input to T.P. 5 Common to ground.	Re-connect C45 and adjust top core of IFT 5 for max. symmetry of response (fig. 2) maintaining 10.7 Mc/s at cross-over point.

MULTIPLEX CIRCUIT ALIGNMENT

Step 1: Connect the audio generator to T.P. 7, the VTVM to T.P. 8 and ground pin 7 of V6.
Step 2: Set the audio generator frequency to 670 cps and the output level to give a VTVM reading of Odb on the 1V scale.
Step 3: Reset the audio generator to 67.5 Kc/s and adjust L11 and L12 for minimum VTVM reading. Check the minimum is at least -40db when referred to Odb on the 1V scale. Remove the ground connection to pin 7 of V6.
Step 4: Connect T.P. 9 to the vertical input terminals of the oscilloscope. Connect the 19 Kc/s output from the Fisher multiplex test set to the oscilloscope as an external X-sweep. Adjust L10 until a figure 8 lissajous display is obtained.
Step 5: Set the oscilloscope for internal repetitive time base operation and adjust T4 for maximum output.
Step 6: Set the Fisher test set to give left channel output and loosely couple the R.F. to the receiver under test. Connect the oscilloscope to T.P. 5 and tune receiver for maximum output.
Step 7: Connect the oscilloscope to T.P. 10 and adjust T4 for minimum output.
Step 8: Check the channel separation by connecting the oscilloscope to T.P. 10 and T.P. 11 in turn: the separation should be at least 18db.

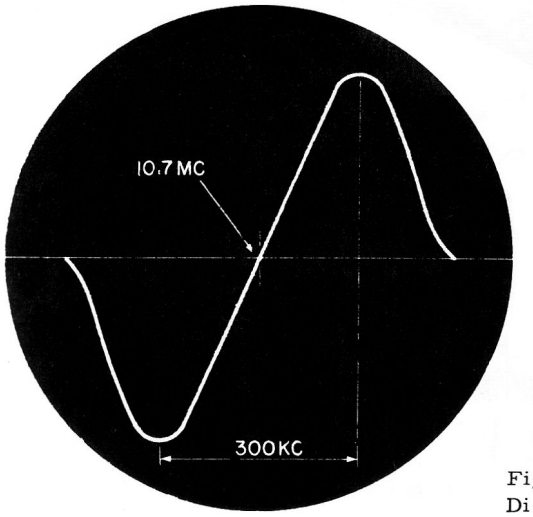
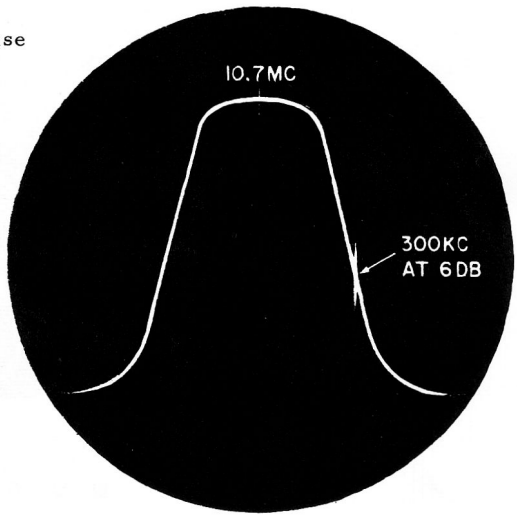


Figure 2
Discriminator Response

Figure 3
I.F. Response



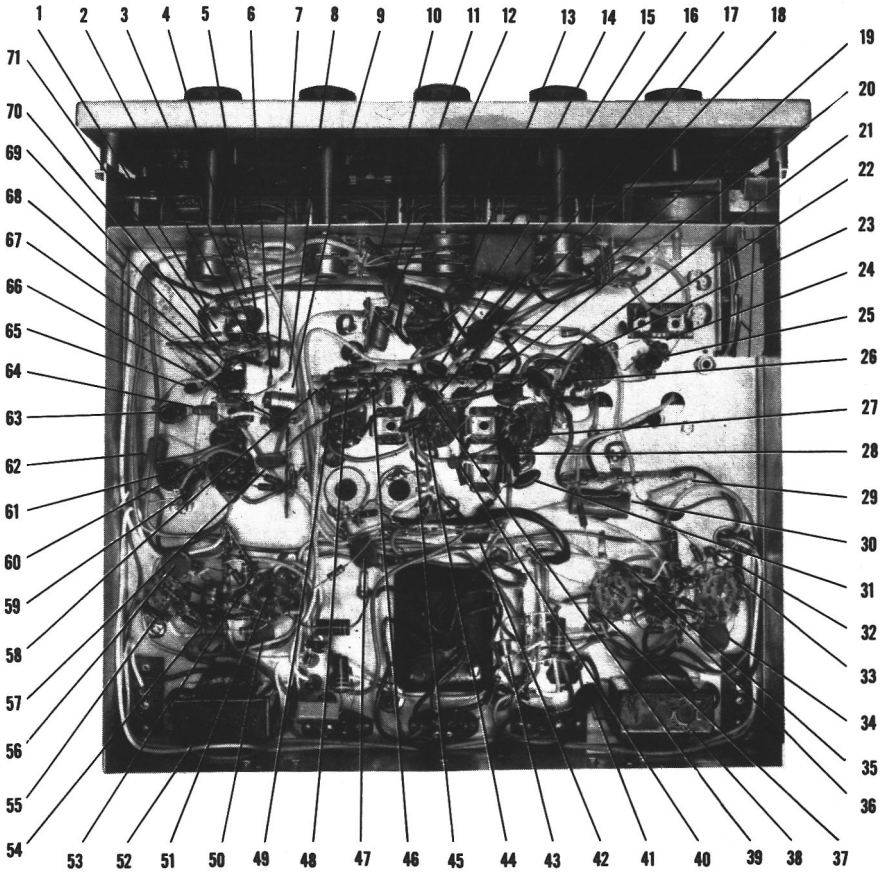


Figure 4

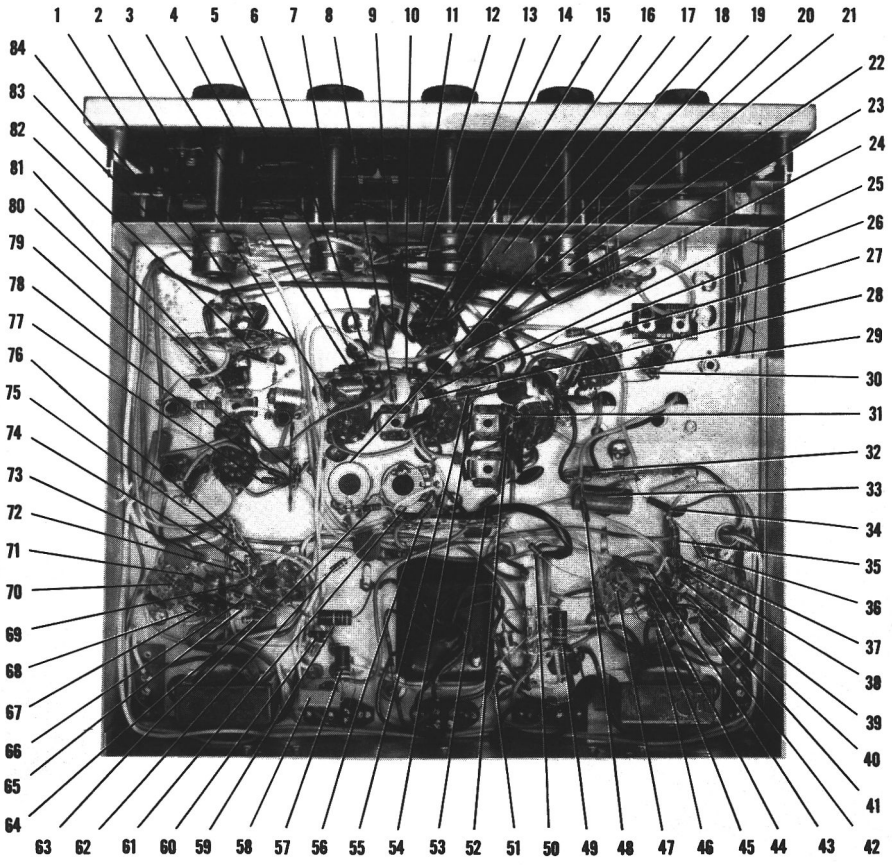


Figure 5

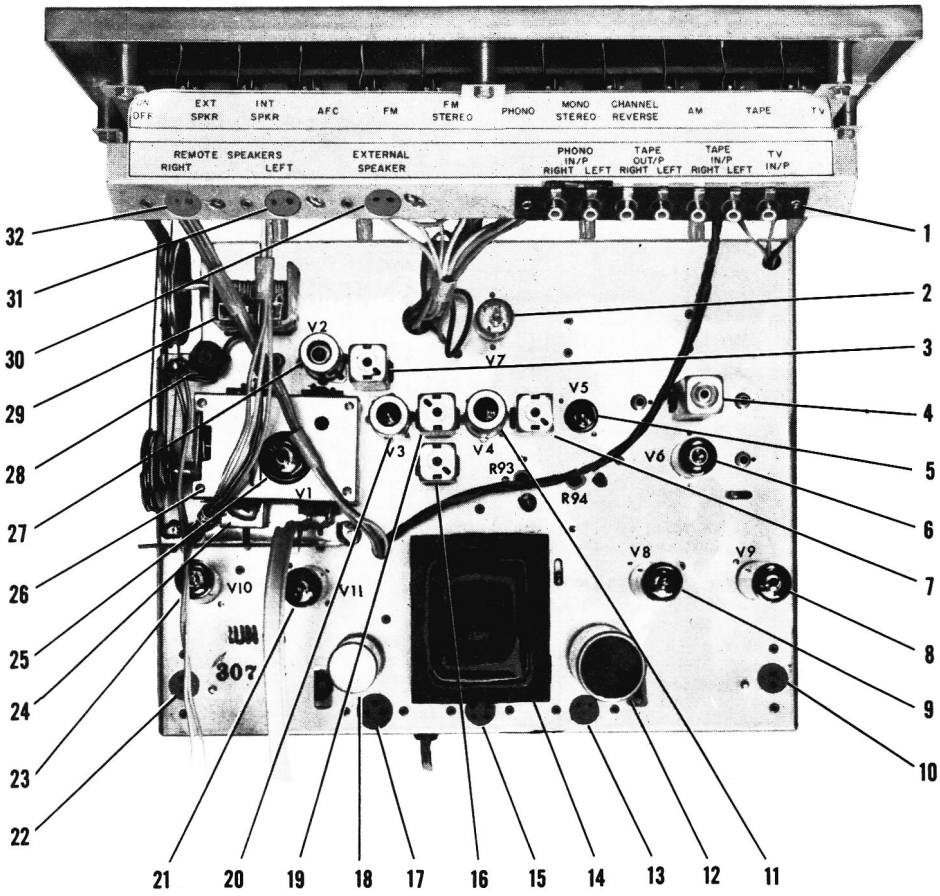


Figure 6

DIAL STRINGING

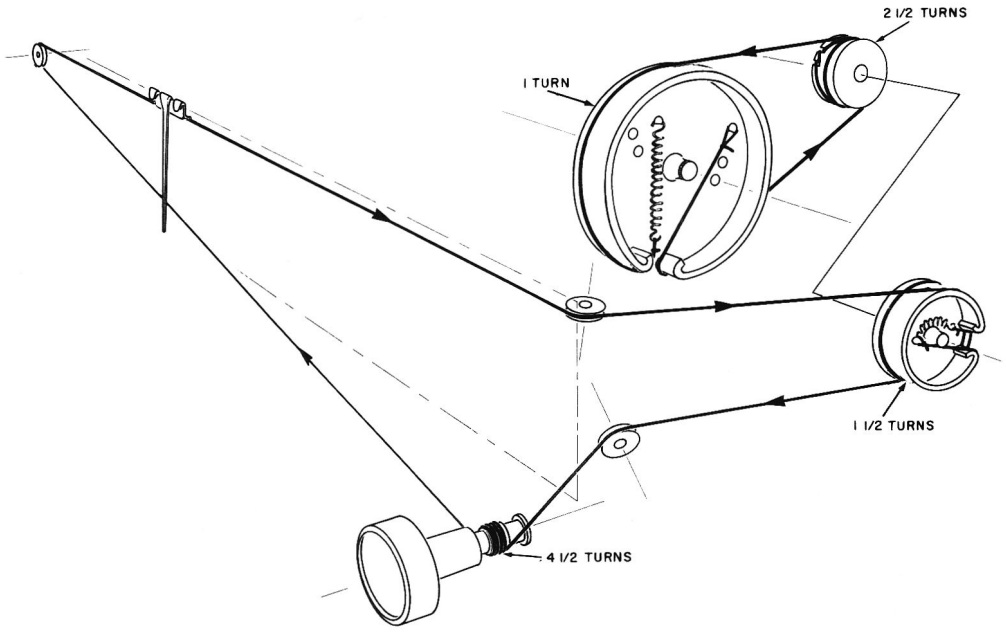
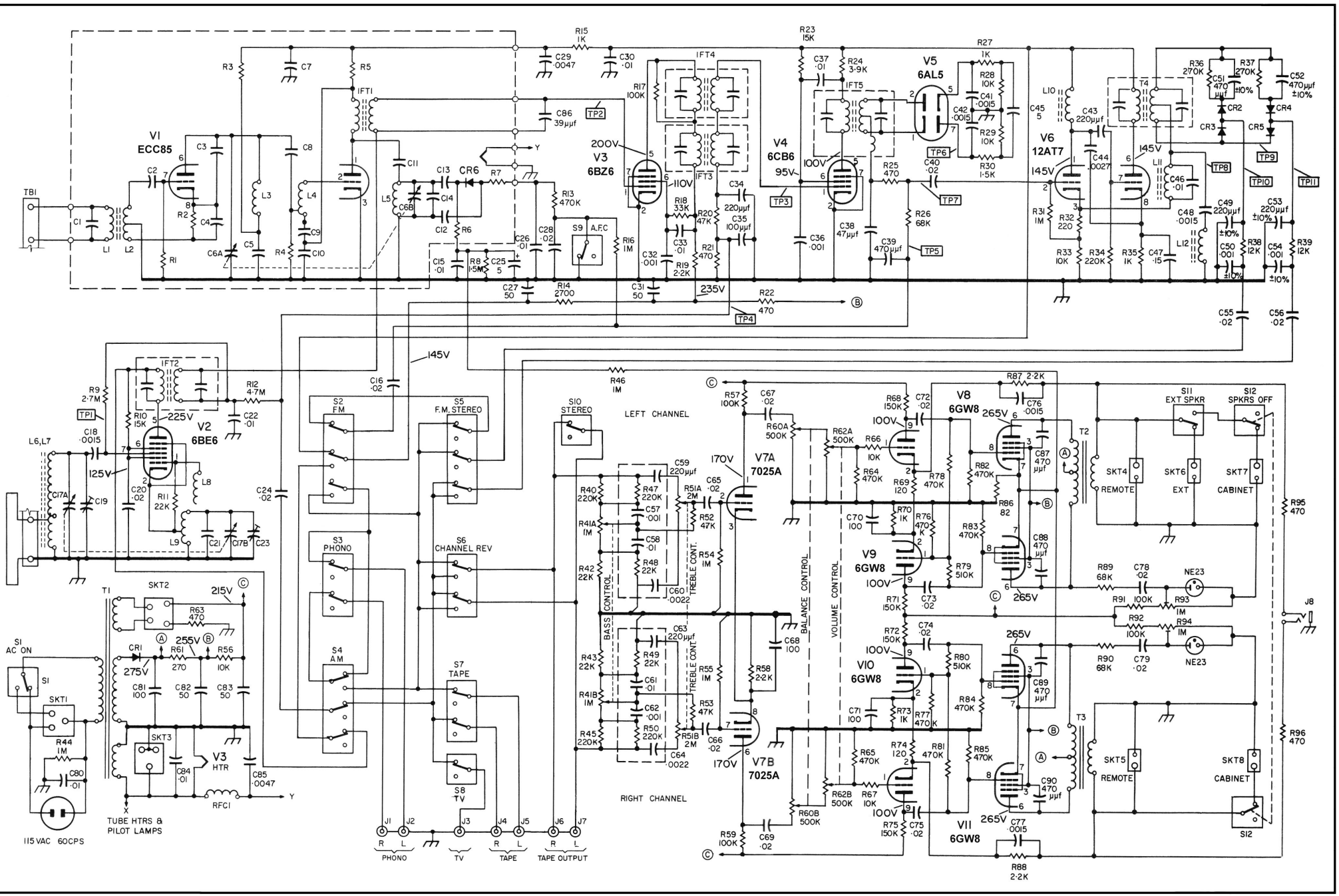


Figure 7

Comp. Ref.	DESCRIPTION	Clairtone Part Bo.	Component Location Fig.	Item
CAPACITORS				
C 1 thru C14	Part of F.M.Tuner Assembly			
C15	0.01 UF ± 20%, 500V, ceramic	32-200044-68	6	26
C16	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	15
C17A,B	Tuning capacitor	38-270452-1	6	29
C18	0.0015 UF ± 20%	32-9575-18	4	22
C19	Trimmer Capacitor — part of C17		6	29
C20	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	23
C21	Part of Tuning Capacitor Assembly		4	24
C22	0.01 UF ± 20%, 500V, ceramic	32-200044-68	4	21
C23	Trimmer Capacitor — part of C17		6	29
C24	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	19
C25	5 UF, 50V, Electrolytic	32-254587-2	4	30
C26	0.01 UF ± 20%, 500V, ceramic	32-200044-68	6	26
C27	50 UF, 300V, Electrolytic	32-254599-4	6	12
C28	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	26
C29	0.02 UF, ± 20%, 500V, ceramic	32-200044-43	6	24
C30	0.01 UF ± 20%, 500V, ceramic	32-200044-68	4	18
C31	50 UF, 300V, Electrolytic	32-254599-4	6	12
C32	0.001 UF, ± 20%, 500V, ceramic	32-250950-82	4	27
C33	0.01 UF ± 20%, 500V, ceramic	32-200044-68	4	31
C34	220 UUF ± 20%, 500V, ceramic	32-250950-41	4	40
C35	100 UUF ± 20%, 500V, ceramic	32-250950-44	4	20
C36	0.001 UF ± 20%, 500V, ceramic	32-250950-82	4	44
C37	0.01 UF ± 20%, 500V, ceramic	32-200044-68	4	45
C38	47 UUF ± 10%, 500V, ceramic	32-200044-1	4	46
C39	470 UUF ± 20%, 600V, ceramic	32-250950-10	4	39
C40	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	57
C41	0.0015 UF ± 20%, 500V, ceramic	32-9597-18	4	58
C42	0.0015 UF ± 20%, 500V, ceramic	32-9597-18	4	49
C43	220 UUF ± 10%, NPO, ceramic	32-200044-9	4	60
C44	0.0027 UF ± 10%, Durez Dipped	32-270324-4	4	59
C45	5 UF, 50V, Electrolytic	32-254587-2	4	48
C46	0.01 UF ± 20%, 100V, Polystyrene	32-270538-1	4	9
C47	0.15 UF ± 20%, 25V, Tubular	32-253659-21	4	62
C48	0.0015 UF ± 20%, 100V, Polystyrene	32-270538-2	4	64
C49	220 UUF ± 10%, 500V, ceramic	33-200044-9	4	7
C50	0.001 UF ± 10%, 500V, ceramic	32-250550-59	4	4
C51	470 UUF ± 10%, 500V, ceramic	32-250950-83	4	67
C52	470 UUF ± 10%, 500V, ceramic	32-250950-83	4	65
C53	220 UUF ± 10%, 500V, ceramic	33-200044-9	4	70
C54	0.001 UF ± 10%, 500V, ceramic	32-250550-59	4	69
C55	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	5
C56	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	1
C57	0.01 UF, Tone Couplate			
C58	0.01 UF, Tone Couplate	32A254557-1	4	14
C59	220 UUF, Tone Couplate			
C60	0.0022 UF, Tone Couplate			
C61	0.01 UF, Tone Couplate			
C62	0.01 UF, Tone Couplate	32A254557-1	4	16
C63	220 UUF, Tone Couplate			
C64	0.0022 UF, Tone Couplate			
C65	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	13
C66	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	17
C67	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	11
C68	100 UF, 6V, Electrolytic	32-254587-6	4	12
C69	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	10
C70	100 UF, 6V, Electrolytic	32-254587-6	4	54
C71	100 UF, 6V, Electrolytic	32-254587-6	4	36
C72	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	50
C73	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	56
C74	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	35
C75	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	34
C76	0.0015 UF ± 20%, 500V, ceramic	32-9597-18	4	53
C77	0.0015 UF ± 20%, 500V, ceramic	32-9597-18	4	32
C78	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	47
C79	0.02 UF ± 20%, 500V, ceramic	32-200044-43	4	42
C80	0.01 UF ± 20%, 1400V, ceramic	32-250950-43	4	41
C81	100 UF, 350V, Electrolytic	32-254599-14	6	18
C82	50 UF, 300V, Electrolytic	32-254599-4	6	12
C83	50 UF, 300V, Electrolytic	32-254599-4	6	12
C84	0.01 UF, 500V, ceramic	32-200044-68	4	28
C85	0.0047 UF, ± 20%, 500V, ceramic	32-250950-42	6	24
C86	39 UUF ± 5%, 500V, ceramic	32-200044-54	4	26
C87	470 UUF, 2000V, ceramic	32-200044-17	4	51
C88	470 UUF, 2000V, ceramic	32-200044-17	4	44
C89	470 UUF, 2000V, ceramic	32-200044-17	4	37
C90	470 UUF, 2000V, ceramic	32-200044-17	4	33
CONNECTORS				
J1 thru J7	7 Section Input Jack	79A254785-7	6	1
J8	Phone Jack	79-270456-1		
SKT1	3-Pin Phono Motor Power Socket	79-254578-3	6	17
SKT2	4-Pin Pre-amplifier Socket	79-254578-7	6	15
SKT3	3-Pin Pilot Light Socket	82-270511-1	6	13
SKT4,5	2-Pin Remote Speaker Sockets	79-254578-1	6	31
SKT6	2-Pin External Speaker Socket	79-254578-1	6	30
SKT7,8	2-Pin Cabinet Speaker Sockets	79-254578-1	6	10

Comp. Ref.	DESCRIPTION	Clairtone Part No.	Component Location Fig.	Item
INDUCTORS				
L1 thru L5	Part of F.M. Tuner Assembly			
L6, 7	A.M. Antenna Inductor	83A254981-1	6	28
L8, 9	A.M. Oscillator Inductor	83A254592-6	4	25
L10	Oscillator Coil — 19 Kcls.	83A270484-1	4	61
L11	S.C.A. Filter — Parallel Tuned	83A270536-1	4	66
L12	S.C.A. Filter — Series Tuned	83A270537-1	4	63
RESISTORS				
R 1 thru R7	Part of F.M. Tuner Assembly			
R 8	1.5M ± 20%, ½ watt	33-51535	5	33
R 9	2.7M ± 10%, ½ watt	33-50733	5	26
R10	15K ± 20%, 1 watt	33-31575	5	29
R11	22K ± 20%, ½ watt	33-32235	5	30
R12	4.7M ± 20%, ½ watt	33-54735	5	27
R13	470K ± 20%, ½ watt	33-44735	5	32
R14	2.7K ± 20%, 5 watt	33-254644-18	5	58
R15	1K ± 20%, ½ watt	33-21035	5	34
R16	1M ± 20%, ½ watt	33-51035	5	55
R17	100K ± 20%, ½ watt	33-41035	5	31
R18	33K ± 20%, ½ watt	33-33335	5	52
R19	2.2K ± 20%, ½ watt	33-22233	5	53
R20	47K ± 20%, ½ watt	33-34735	5	54
R21	470K ± 20%, ½ watt	33-44735	5	55
R22	470 ± 20%, 2 watt	33-14765	5	57
R23	15K ± 20%, ½ watt	33-31535	5	25
R24	3.9K ± 20%, ½ watt	33-23935	5	28
R25	470 ± 20%, ½ watt	33-14735	5	8
R26	68K ± 20%, ½ watt	33-36835	5	10
R27	1K ± 20%, ½ watt	33-21035	5	2
R28	10K ± 20%, ½ watt	33-31035	5	3
R29	10K ± 20%, ½ watt	33-31035	5	6
R30	1.5K ± 20%, ½ watt	33-21535	5	4
R31	1M ± 20%, ½ watt	33-51035	5	78
R32	220 ± 10%, ½ watt	33-12233	5	77
R33	10K ± 10%, ½ watt	33-31033	5	79
R34	220K ± 20%, ½ watt	33-42235	4	59
R35	1K ± 10%, ½ watt	33-21033	4	59
R36	270K ± 10%, ½ watt	33-42733	5	81
R37	270K ± 10%, ½ watt	33-42733	5	80
R38	12K ± 10%, ½ watt	33-31233	5	82
R39	12K ± 10%, ½ watt	33-31233	5	1
R40	220K ± 20%, ½ watt	33-42235	5	18
R41A,B	1M Bass Control	33-254595-20	5	13
R42	22K ± 20%, ½ watt	33-32235	5	11
R43	22K ± 20%, ½ watt	33-32235	5	12
R44	1M ± 20%, ½ watt	33-51035	4	41
R45	220K ± 20%, ½ watt	33-42235	5	18
R46	1M ± 20%, ½ watt	33-51035	5	48
R47	220K Tone Couplate	32A254557-1	5	18
R48	22K Tone Couplate			
R49	22K Tone Couplate	32A254557-1	5	17
R50	220K Tone Couplate			
R51 A, B	2M Treble Control	33-254595-21	5	20
R52	47K ± 20%, ½ watt	33-34735	5	18
R53	47K ± 20%, ½ watt	33-34735	5	18
R54	1M ± 20%, ½ watt	33-51035	5	15
R55	1M ± 20%, ½ watt	33-51035	5	16
R56	10K ± 20%, ½ watt	33-31035	5	60
R57	100K ± 20%, ½ watt	33-41035	5	9
R58	2.2K + 10%, ½ watt	33-22233	5	24
R59	100K ± 20%, ½ watt	33-41035	5	15
R60A, B	500K, Balance Control	33-254595-19	5	7
R61	270 ± 20%, ½ watt	33-12765	5	49
R62A, B	500K Volume Control	33-254595-18	5	84
R63	470 ± 20%, ½ watt	33-14735	5	51
R64	470K ± 20%, ½ watt	33-44735	5	74
R65	470K ± 20%, ½ watt	33-44735	5	39
R66	10K ± 20%, ½ watt	33-31035	5	72
R67	10K ± 20%, ½ watt	33-31035	5	38
R68	150K ± 20%, ½ watt	33-41535	5	66
R69	120 ± 20%, ½ watt	33-11235	5	69
R70	1K ± 20%, ½ watt	33-21035	5	68
R71	150K ± 20%, ½ watt	33-41535	5	71
R72	150K ± 20%, ½ watt	33-41535	5	44
R73	1K ± 20%, ½ watt	33-21035	5	46
R74	120 ± 20%, ½ watt	33-11235	5	42
R75	150K ± 20%, ½ watt	33-41535	5	40
R76	470K ± 20%, ½ watt	33-44735	5	67
R77	470K ± 20%, ½ watt	33-44735	5	45
R78	470K ± 10%, ½ watt	33-44733	5	65
R79	510K ± 5%, ½ watt	33-45132	5	70
R80	510K ± 5%, ½ watt	33-45132	5	47
R81	470K ± 10%, ½ watt	33-44733	5	41
R82	470K ± 20%, ½ watt	33-44735	5	64
R83	470K ± 20%, ½ watt	33-44735	5	73
R84	470K ± 20%, ½ watt	33-44735	5	43


V1 ECC85
V2 6BE6
V3 6BZ6
V4 6CB6
V5 6AL5
V6 12AT7
V7A 7025A
V7B 7025A
V8 6GW8
V9 6GW8
V10 6GW8
V11 6GW8
V3 HTR
TBI
SI AC ON
SKT1
SKT2
SKT3
T1
T2
T3
T4
L1
L2
L3
L4
L5
L6,L7
L8
L9
L10
L11
L12
CR1
CR2
CR3
CR4
CR5
CR6
RFC1
IFT1
IFT2
IFT3
IFT4
IFT5
S1 AC ON
S2 FM
S3 PHONO
S4 AM
S5 F.M. STEREO
S6 CHANNEL REV
S7 TAPE
S8 TV
S9 A.F.C.
S10 STEREO
S11 EXT SPKR
S12 SPKRS OFF
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
200V
110V
100V
95V
145V
125V
225V
215V
255V
275V
235V
170V
265V
TUBE HTRS & PILOT LAMPS
115 VAC 60CPS
LEFT CHANNEL
RIGHT CHANNEL
BASS CONTROL
TREBLE CONT.
BALANCE CONTROL
VOLUME CONTROL
SKT4 REMOTE
SKT6 EXT
SKT7 CABINET
SKT5 REMOTE
SKT8 CABINET
NE23
J1 J2 J3 J4 J5 J6 J7
R L
PHONO
TV
TAPE
TAPE OUTPUT

PARTS LIST

chassis parts cont'd

Comp. Ref.	DESCRIPTION	Clairtone Part No.	Component Location Fig.	Item
R85	470K ± 20%, ½ watt	33-44735	5	42
R86	82 ± 20%, 2 watt	33-08263	5	59
R87	2.2K ± 10%, ½ watt	33-22233	5	75
R88	2.2K ± 10%, ½ watt	33-22233	5	36
R89	68K ± 20%, ½ watt	33-36835	5	62
R90	68K ± 20%, ½ watt	33-36835	5	50
R91	100K ± 20%, ½ watt	33-41035	5	63
R92	100K ± 20%, ½ watt	33-41035	5	56
R93	1M Linear Pre-set Control	33-270321-2	5	19
R94	1M Linear Pre-set Control	33-270321-2	5	61
R95	470K ± 10%, ½ watt	33-14733	5	76
R96	470K + 10%, ½ watt	33-14733	5	35
	SWITCHES			
S1	A.C. ON switch, 3 amp. 125 volt	58-254780-6		
S2	F.M. switch, 3 pole, a.t.	58-254781-1		
S3	PHONO switch, d.p.s.t.	58-254780-5		
S4	A.M. swtich, 3 pole, d.t.	58-254781-1		
S5	F.M. STEREO switch, 3 pole, d.t.	58-254781-1		
S6	CHANNEL REV switch, d.p.d.t.	58-254780-4		
S7	TAPE switch, d.p.s.t.	58-254780-5		
S8	T.V. switch, s.p.s.t.	58-254780-1		
S9	A.F.C. switch, s.p.s.t.	58-254780-1		
S10	STEREO switch, s.p.s.t.	58-254780-1		
S12	SPKRS OFF switch, d.p.s.t.	58-254780-5		
	TRANSFORMERS			
IFT1	Part of F.M. tuner assembly		6	26
IFT2	455 Kcls i.f. transformer	1655-6	6	3
IFT3	455 Kcls i.f. transformer	1655-6	6	16
IFT4	10.7 Mcls i.f. transformer	K-1009	6	19
IFT5	10.7 Mcls. ratio det. transformer	K-1008	6	7
T1	Power transformer	75-270491-1	6	14
T2	Ourput transformer (R.H.)	75-270490-1	4	38
T3	Output transformer (L.H.)	75-270490-1	4	52
T4	38 Kcls transformer "K" type	83A270494-1	4	4
	TUBES AND DIODES			
CR1	Silicon rectifier, 800 P.I.V.	78-254566-4	4	43
CR2	Multiplex diode	IN34A	4	71
CR3	Multiplex diode	IN34A	4	3
CR5	Multiplex diode	IN34A	4	6
CR5	Multiplex diode	IN34A	4	8
CR6	Part of F.M. tuner assembly			
V1	F.M. RF amplifier/mixer	ECC85	6	25
V2	A.M. mixer	6BE6	6	27
V3	I.F. amplifier	6BZ6	6	20
V4	I.F. amplifier	6CB6	6	11
V5	Ratio detector	6AL5	6	5
V6	Multiplex	12AT7	6	6
V7	A.F. amplifier	7025A	6	2
V8	A.F. amplifier/output (L.H.)	6GW8	6	9
V9	A.F. amplifier/output (L.H.)	6GW8	6	8
V10	A.F. amplifier/output (R.H.)	6GW8	6	21
V11	A.F. amplifier/output (R.H.)	6GW8	6	23
	MISCELLANEOUS			
RFC1	Choke, heater	39-12595-1	4	29
Clips	Clips, dial retaining	24-270458-1		
	Cover, balance device	35-270425-1		
	Dial, glass	49-270223-6		
	Escutcheon, front - die cast	41-270423-1		
	Insert, balance indicator	35-270426-1		
	Insert, plastic	35-270424-1		
	Pointer, dial	122-270249-5		
	Push buttons	103A2005-TB-1		
	Tuner assembly, F.M. – A.F.C.	116-254724-2	6	26

cabinet parts

DESCRIPTION	Clairtone Part No.
CABINET PARTS USED ON ALL MODELS (S403, S503, S553, S603, ST803, ST853)	
Antenna, F.M. dipole	30-60-00
Capacitor, 5 UF, 25 V.A.C.	24-31-00
Lamp, pilot – no.47	34-90-47
Lens, pilot lamp	35-20-00
Speaker, tweeter – TW 34-2-97492J	14-41-01
Tube, light shield	47-00-02
MODEL S403	
Cover, back	17-71-03
Lid support	1748-8-11-C-B
Panel, basket weave (R.H.) – walnut	10-117-91
Panel, basket weave (L.H.) – walnut	10-117-90
Panel, basket weave (R.H.) – mahogany	10-117-93
Panel, basket weave (L.H.) – mahogany	10-117-92
Plate, strike	4454
Speaker, woofer – CE200-106 93870 AP	14-40-00
Stop, catch-nylon	1298
MODEL S503	
Cover, back	17-71-04
Lid support	1748-8-11-C-8
Plate, strike	4454
Section, basket weave (R.H.) – walnut	10-118-91
Section, basket weave (L.H.) – walnut	10-118-90
Section, basket weave (R.H.) – fruitwood	10-118-93
Section, basket weave (L.H.) – fruitwood	10-118-92
Section, basket weave (R.H.) – antique ivory	10-118-95
Section, basket weave (L.H.) – antique ivory	10-118-94
Speaker, woofer – CE-200-106 93870 AP	14-400-00
Stop, catch-nylon	1298
MODEL S553	
Cover, back	17-71-04
Lid support	1748-8-11-C-B
Plate, strike	4454
Section, basket weave (R.H.) – fruitwood	10-119-91
Section, basket weave (L.H.) – fruitwood	10-119-90

DESCRIPTION	Clairtone Part No.
MODEL S553 (cont'd)	
Section, basket weave (R.H.) – antique fruitwood	10-119-93
Section, basket weave (L.H.) – antique fruitwood	10-119-92
Speaker woofer – CE200-106 93870 AP	14-40-00
Stop, catch-nylon	1298
MODEL S603	
Cover, back	17-71-05
Door, sliding (R.H.) – walnut	10-120-91
Door, sliding (L.H.) – walnut	10-120-90
Door, sliding (R.H.) – teak	10-120-93
Door, sliding (L.H.) – teak	10-120-92
Guide, door	90-60-60
Lid support	1748-6-12-C
Speaker, woofer – C100-138	92390T
Spring, door	72-24-1
Stop, door	278
MODEL ST803	
Cover, back (R.H.)	17-72-00
Cover, back (L.H.)	17-71-06
Cover, back (center)	17-73-00
Door, tambour – walnut	10-122-91
Lid support	1748-6-12-C
Panel, basket weave (R.H.) – walnut	10-122-90
Panel, basket weave (L.H.) – walnut	10-122-90
Speaker, woofer – CE200-106 93870 AP	14-40-00
MODEL ST853	
Cover, back (R.H.)	17-72-00
Cover, back (L.H.)	17-71-06
Cover, back (center)	17-73-00
Door, sliding – basket weave (R.H.)	10-123-93
Door, sliding – basket weave (L.H.)	10-123-92
Guide, door	90-60-60
Lid support	1748-6-12-C
Panel, basket weave (R.H.)	10-123-91
Panel, basket weave (L.H.)	10-123-90
Speaker, woofer – CE200-106 93870 AP	14-40-00
Spring, door	72-24-1

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