

MOTOROLA MODELS  
1L5TCA, 1L5TCA-12

TRADE NAME	Motorola Models 1L5TCA, 1L5TCA-12 (For 1955 International R Line Trucks)
MANUFACTURER	Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
TYPE SET	Battery Operated Custom Built AM Superheterodyne Truck Receiver
TUBES (Six)	Types 6BA6 RF Amplifier, 6BE6 Converter, 6BA6 IF Amplifier, 6CR6 Det.-AVC-AF Amp., 6AQ5 Output, 6X4 Rectifier (Equivalent 12 Volt Tubes Used in Model 1L5TCA-12)
POWER SUPPLY	6 Volts Storage Battery (Model 1L5TCA)      RATING 6 Amp. @ 6.3 Volts DC 12 Volts Storage Battery (Model 1L5TCA-12)      3 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC-1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .1MFD	High side to pin 7 (grid) of 6BE6 (V2). Low side to chassis.	455KC (400vMod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2. Fig. 1	Thru dummy to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
* 3. "	"	"	"	"	"	"
* 4. "	"	1300KC	Tune to 1300KC signal	"	A8, A9, A10	"
* 5. "	"	1605KC	High frequency end stop	"	A5, A6, A7	"

6. With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum control.

\* Not necessary unless tuner cores or components have been replaced. Back tuner cores out of forms before proceeding with step 3.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton all the way out.
2. Tune manually to desired station.
3. Press pushbutton all the way in.
4. Repeat on remaining pushbuttons.

POINTER ADJUSTMENT

Tune to 1300KC signal and adjust pointer cam so that pointer coincides with 1300KC on dial.

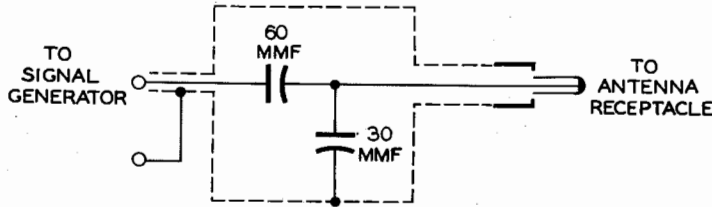
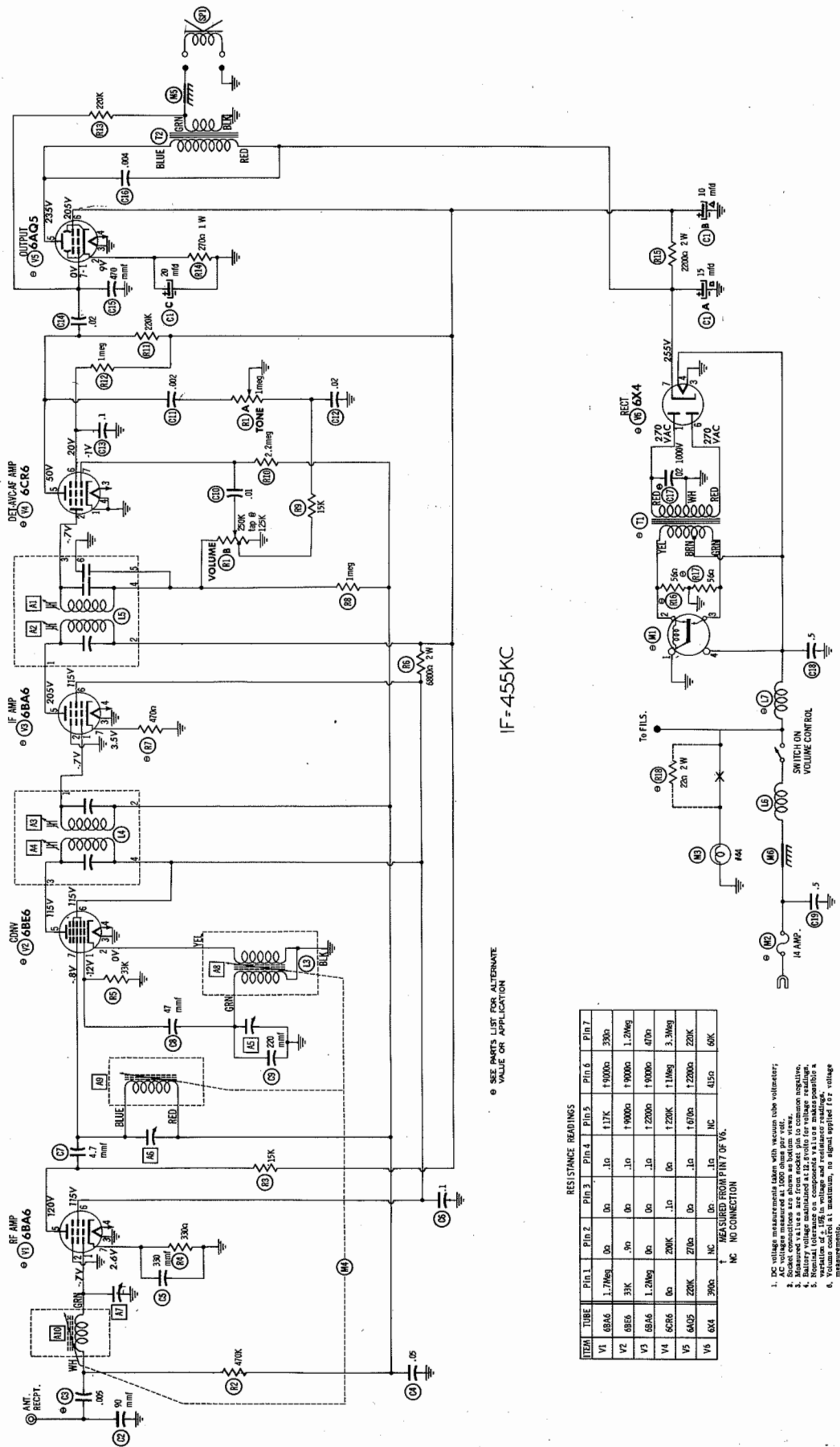


FIG. 1

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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SEE PARTS LIST FOR ALTERNATE  
VALUE OR APPLICATION

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	6BA6	1.7Mg	.05	.05	.05	15000	3500	
V2	6BE6	3K	.05	.05	15000	15000	1.2Mg	
V3	6BA6	1.2Mg	.05	.05	15000	15000	4000	
V4	6CR6	.05	.05	.05	15000	15000	3.3Mg	
V5	6AQ5	200K	200K	200K	200K	200K	200K	
V6	6X4	200K	200K	200K	200K	200K	200K	

1. DC voltage measurements taken with vacuum tube voltmeter.  
2. AC voltage measurements taken with vacuum tube voltmeter.  
3. Measured values are from end of pin to common negative.  
4. Measured values are from end of pin to common positive.  
5. Nominal tolerance on component values makes possible a  
6. Voltage of 1.5V maximum, no signal applied for voltage  
measurements.

**PARTS LIST AND DESCRIPTIONS**  
 TUBES (GENERAL ELECTRIC, SYLVANIA)

MOTOROLA  
 MODEL IL5TCA

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BA6	Note 1
V2	Converter	6BE6	Note 1
V3	IF Amplifier	6BA6	Note 1

Note 1. Equivalent 12 volt tubes used in Model IL5TCA-12.

ITEM No.	USE	TYPE	NOTES
V4	Det.-AVC-AF Amplifier	6CR6	Note 1
V5	Output	6AQ5	Note 1
V6	Rectifier	6X4	Note 1

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA			
			MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.
C1A	15	350	23A495677	AFB3-104	C077	FF928
C1B	10	350				
C1C	20	25				

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
C2	90	0.05	21A501682	SI5000	D6-502	CUB8D5	Note 1
C3	0.05	400	8R121005	BPD-05	DF-503	CUB2B5	
C4	0.05	200	21R2744	SI330	D6-331	5W5T33	
C5	330	500	8R121006	P488N-1	DF-104	CUB4P1	
C6	1	400	21R15955	NPO-S14.7	TCZ-4R7	TZ07	
C7	4.7	400	21R15980	N750-D147	TCN-47	N033	
C8	220	400	8R121002	BPD-01	DD-103	CUB4S1	
C9	0.01	200	8R121568	SI2000	D6-202	CUB8D2	
C10	0.02	200	8R121008	BPD-02	DF-203	CUB4S2	
C11	0.02	200	8R121006	P488N-1	DF-104	CUB4P1	
C12	0.01	400	8R121566	BPD-02	DD-203	CUB4S2	
C13	0.02	400	21R15955	NPO-S14.7	TCZ-4R7	TZ07	
C14	470	600	8R121000	SI4000	DD-471	CUB8D4	
C15	0.004	1000	8R121004	P10958A-02	DF-402	CUB4S2	
C16	0.02	100	8R121007	SI330	DF-104	CUB4P1	
C17	0.05	100	8R121005	BPD-05	DF-503	CUB2B5	
C18	0.05	100	8R121005	BPD-05	DF-503	CUB2B5	

Note 1. Some versions use .0088MFD in this application (part #6R31003).  
 Note 2. Model IL5TCA-12 use .048MFD in this application (part #6A121549).

CONTROLS

ITEM No.	RATING RESIST.	WATTS	REPLACEMENT DATA			INSTALLATION NOTES
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	
R1A	1Meg	1/2	18K535758	F1-51	RTV-588C	Tune (Panel)
R1B	250K	1/2		R2-38		Volume (Rear) tapped
R1C	Switch			KB-4		Attach to RUB

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	WATT	REPLACEMENT DATA			NOTES
			MOTOROLA PART No.	IRC PART No.	MOTOROLA PART No.	
R2	470K		6R6032	BTS-470K		
R3	15K		6R6477	BTS-15K		
R4	330K		6R6010	BTS-330		
R5	33K		6R6012	BTS-33K		
R6	6800Ω	2	6R5690	BTS-6800		
R7	470Ω		6R6004	BTS-470		Note 1
R8	1Meg		6R6004	BTS-1Meg		
R9	15K		6R2119	BTS-15K		
R10	2.2Meg		6R3927	BTS-2.2Meg		

Note 1. Some 6 volt versions use 150Ω (part #6R3992) in this application.

Note 2. 12 Volt versions use 330Ω (part #6R6010) in this application.

Note 3. Used in 12 volt models only.

CHASSIS—TOP VIEW

