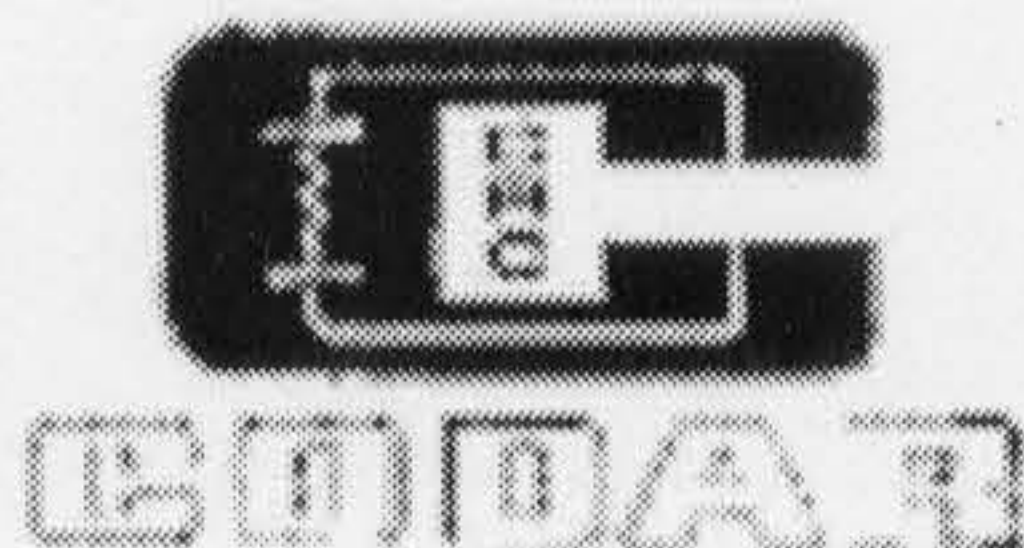
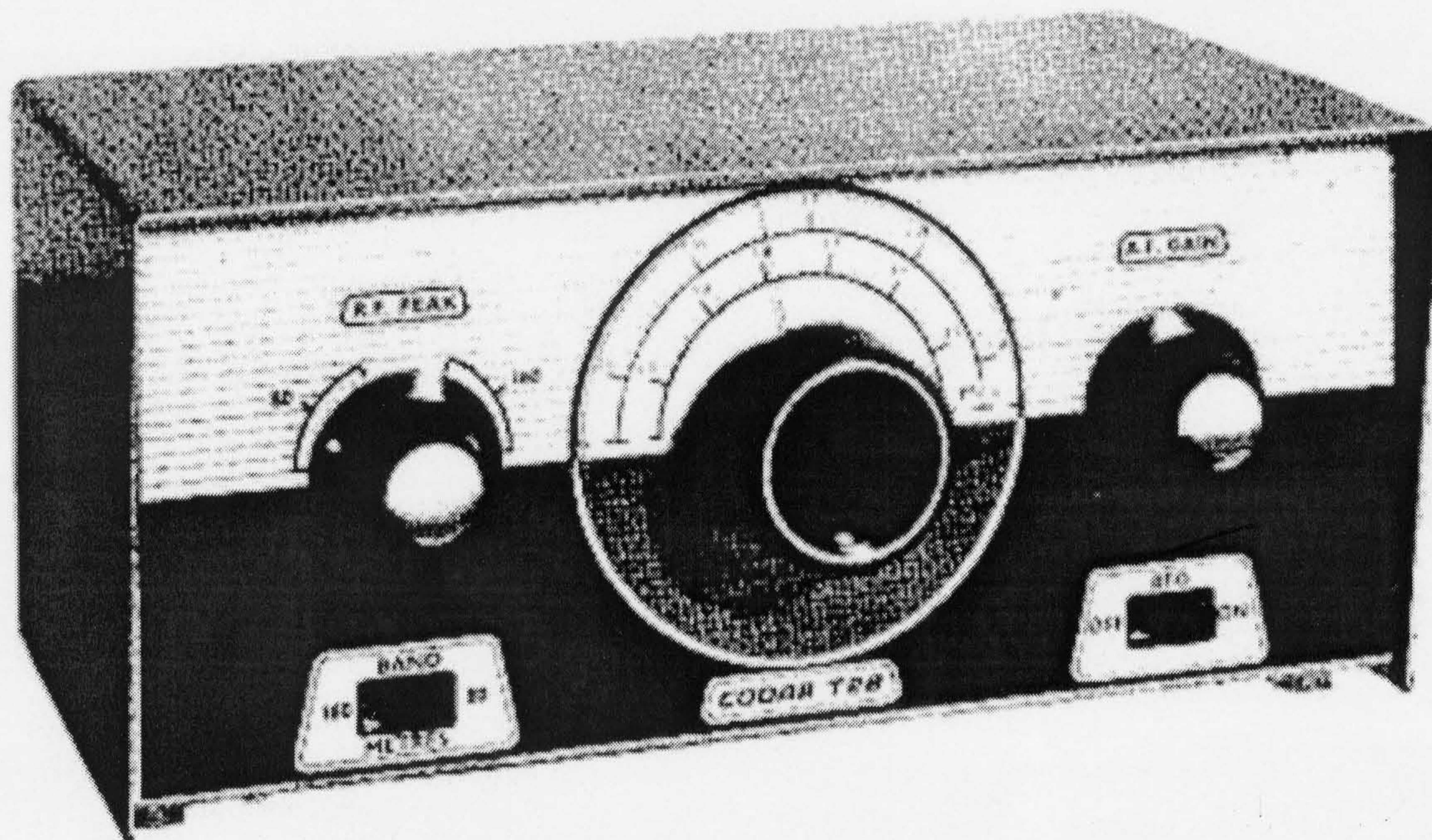


TOP QUALITY — LOW COST



AMATEUR RADIO EQUIPMENT



## CODAR T28 2 BAND RECEIVER

### GENERAL INFORMATION AND SERVICE DATA

The CODAR T28 2 AMATEUR BAND 160-80 meter receiver employs 9 transistors plus 1 diode. It is suitable for use from a 12 volt dry battery supply and can be safely used for mobile work where the battery voltage at times may be 14-15 volts.

The R.F. stage is separately tuned by the PEAK control to assist in obtaining maximum performance with the narrow band width and low impedances met with low frequency loaded mobile aerial systems.

A separate BFO is fitted and used in the conventional manner for the reception of CW and SSB signals. On exceptionally strong SSB signals it may be necessary to slightly detune the PEAK control to reduce signal input to obtain correct resolution with the BFO.

The peaking position of this control will depend largely on the aerial system in use. With some aeriels it may be quite sharp and others fairly broad. In home installations where long aeriels may be in use, it is recommended that if necessary, the signal input be reduced by using a small series aerial capacitor. This may not be necessary if an aerial tuner unit is being used with the aerial system.

For home or portable use, suitable dry batteries are three 4½ volt type Vidor V8 or Ever Ready 126 connected in series which will give many months of service. Smaller type batteries such as the Vidor VT1 or Ever Ready PPI 6 volt (two in series) are also suitable for shorter term use. The receiver can function down to 9/10 volts but with lower gain and output.

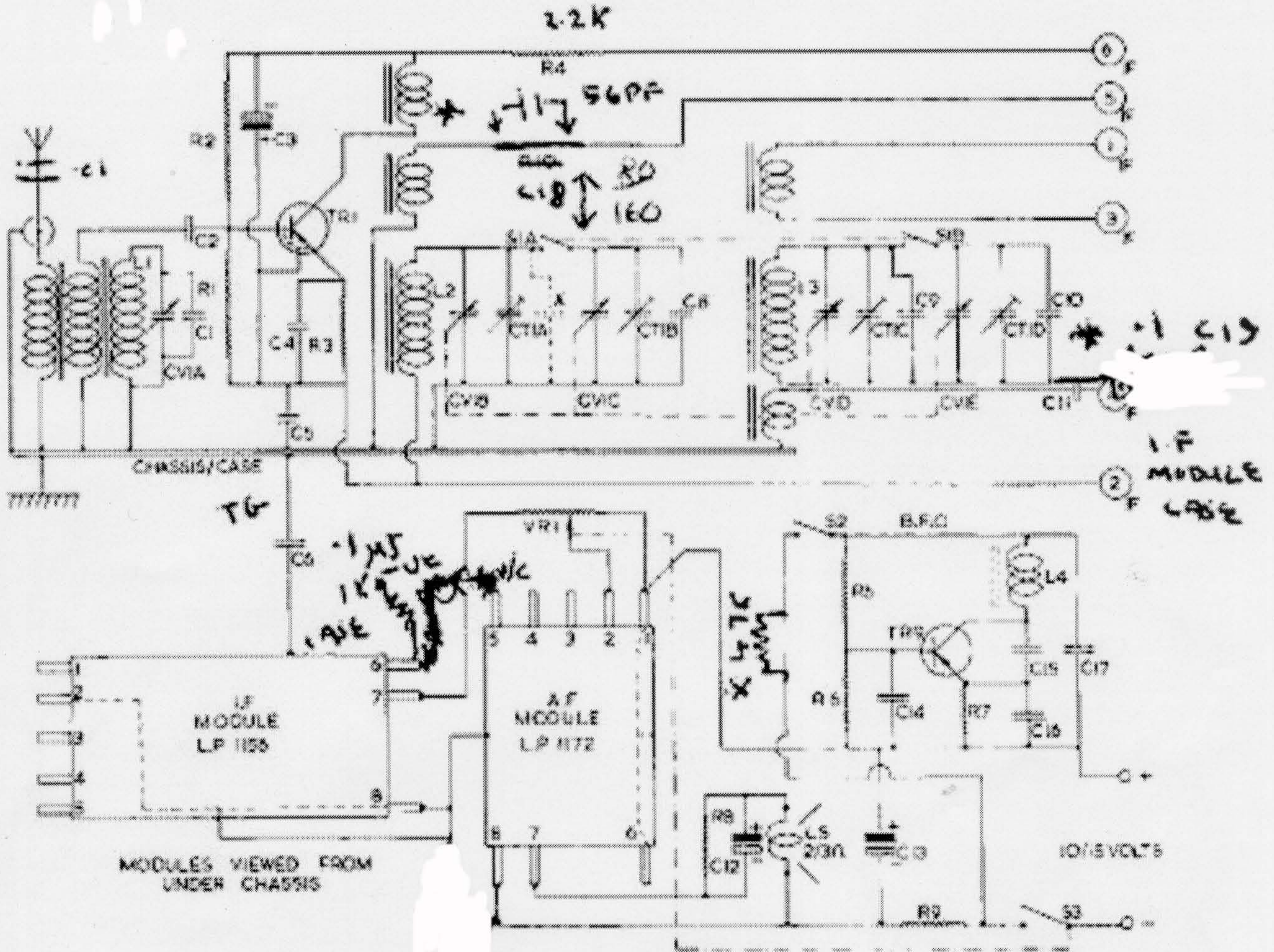
#### WARNING

Care must be taken that correct polarity of supply voltage be observed, otherwise the transistors will be damaged. The RED lead is positive supply, and the BLACK lead negative, also the receiver must not be switched on without the loudspeaker connected.

The R.F. Transistor can be damaged if no aerial input switching/muting is employed when used with a transmitter.



# T28 SCHEMATIC



CVIA	325 pfd.	
CVIB	24 pfd.	
CVIC	30 pfd.	4
CVID	24 pfd.	Gang
CVIE	45 pfd.	
C1	56 pfd.	
C2, 7, 14, 15, 16	1,000 pfd.	
C3	10 mfd. 15v.	
C4, 11, 17	.01 mfd.	
C5, 6	.1 mfd.	
C8, 10	100 pfd.	
C9	22 pfd.	
C13	250 mfd. 15v.	
CTIA	CTIC	80
CTIB	CTIE	pfd.

Component Values	
R1, 3	2K 1/2 w.
R2	10K 1/2 w.
R4, 7	1K 1/2 w.
R5	22K 1/2 w.
R6	4.7K 1/2 w.
R8	10ohm 1/2 w.
R9	75 ohm 1/2 w.
R10	50 ohm 1/2 w.
VR1	5K w/s.

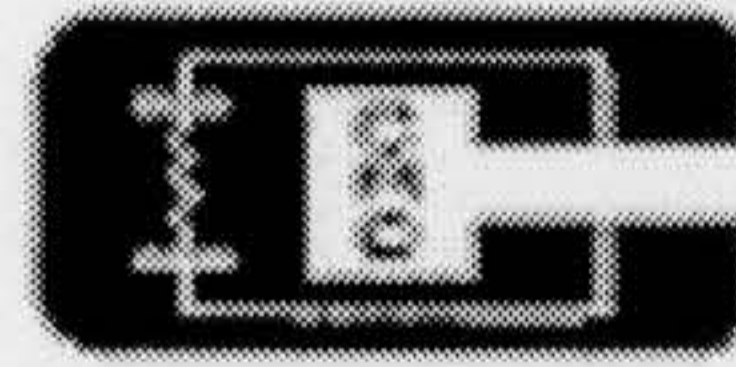
L1	RF10A
L2	RF10M
L3	OST10
L4	BO46
TR1	OC170
TR9	AC155

Schedule A Models Ser. No. 0122 up C.7 replaced with R10.

Ser. No. 0125 up C9 now omitted.

I.F. Frequency 505 Kc/s.

Data Sheet/T28/M3.

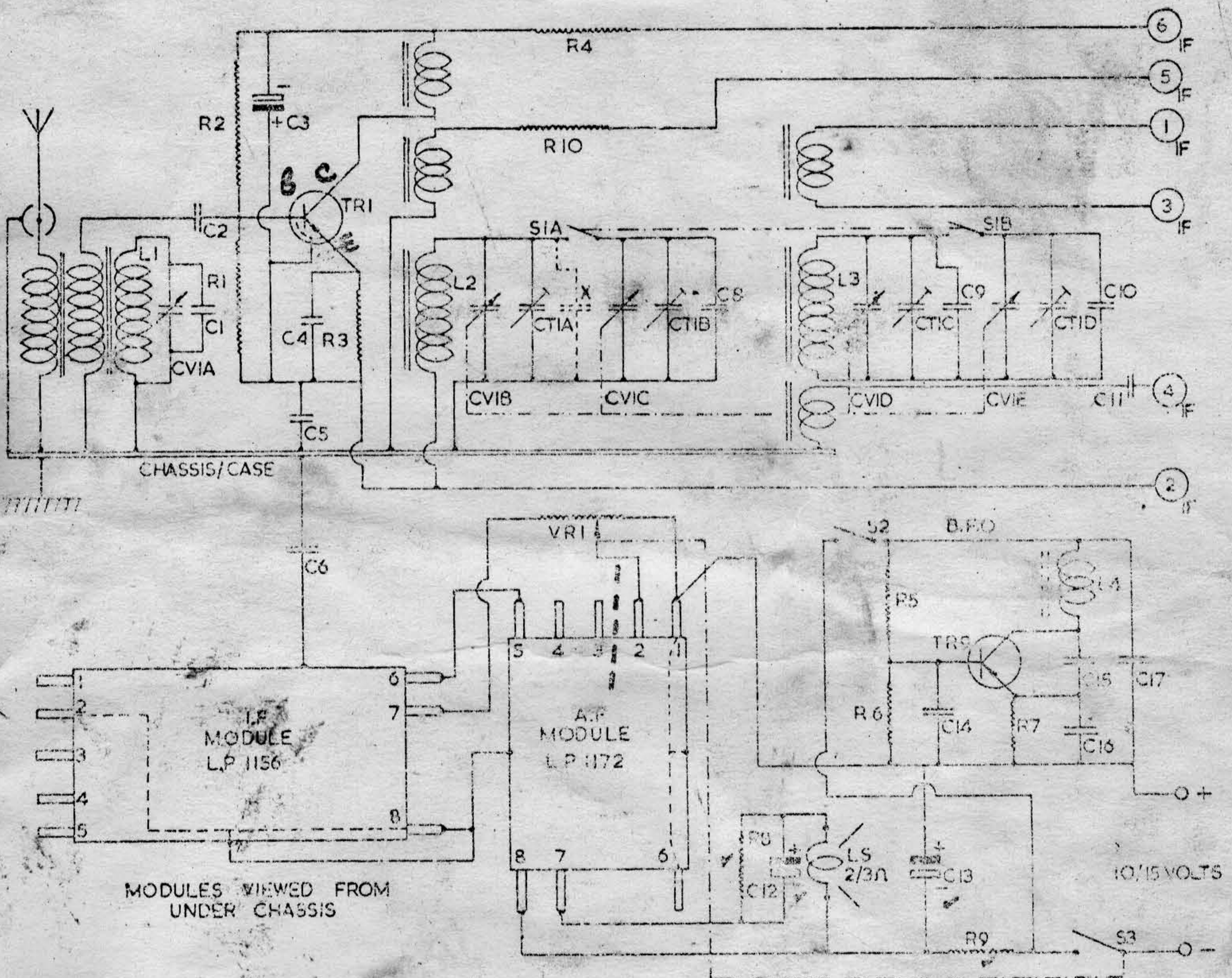


\* AS FROM 23/10/67

\* 31/10/67



# T28 SCHEMATIC



MODULES VIEWED FROM UNDER CHASSIS

CV1A	325 pfd.	
CV1B	24 pfd.	} 4 Gang
CV1C	30 pfd.	
CV1D	24 pfd.	
CV1E	45 pfd.	
C1	56 pfd.	
C2, 7, 14, 15, 16	1,000 pfd.	
C3	12 10 mfd. 15v.	
C4, 11, 17	.01 mfd.	
C5, 6	.1 mfd.	
C8, 10	100 pfd.	
C9	22 pfd.	
C13	250 mfd. 15v.	
CT1A	CT1C	} 80 pfd.
CT1B	CT1E	

Component Values		
R1, 3	2K	1/2 w.
R2	10K	1/2 w.
R4, 7	1K	1/2 w.
R5	22K	1/2 w.
R6	4.7K	1/2 w.
R8	10ohm	1/2 w.
R9	75 ohm	1/2 w.
R10	150 ohm	1/2 w.
VR1	5K	w/s.

L1	RF10A
L2	RF10M
L3	OST10
L4	BO16
TR1	OC170
TR9	AC155

Schedule A Models Ser. No. 0122 up C.7 replaced with R10.

Ser. No. 0125 up C9 now omitted.

I.F. Frequency 505 Kc/s.

Data Sheet/T28/M3.





## MOBILE INSTALLATION

The receiver case is isolated from the supply to allow installation in cars employing either negative or positive earth electrical systems. The twin red and black supply lead is connected to any convenient point of the car metal work and the switch feed terminal No. 1 on the CODAR 12RC CONTROL unit.

### POSITIVE EARTH SYSTEM

Where the car electrical system is positive earth, the RED lead is connected to the car metal work and the BLACK lead to terminal No. 1 on the 12RC CONTROL unit, or negative supply.

### NEGATIVE EARTH SYSTEM

Where the electrical system is negative earth, the BLACK lead is connected to car metal work, and the RED lead to the 12 RC CONTROL unit, or positive supply. The supply to the receiver is automatically switched by the 12RC Control unit function switch, being on for Standby and Net, and off in the transmit position. The receiver gain control ON/OFF switch can be left set.

### NOTE

Where the 12/MS Power supply unit is also being used, ensure that the unit has been adjusted for the correct polarity supply voltage as detailed in its instructions.

### SERVICE DATA

The following readings are average over 6 models and slight variations can be accepted. Module spills, viewed from under chassis.

Supply volts 11.5 test meter 50,000 O.P.V., positive lead to positive of supply. No signal, aerial disconnected. A.F. gain maximum. Bandswitch 160M dial cursor 1.9 mc/s. R.F. Peak control fully right. B.F.O. off.

A.F. Module Spill No. 8 10 volts.  
A.F. Module Spill No. 7 9.9 volts.  
I.F. Module Spill No. 6 7.4 volts.  
I.F. Module Spill No. 4 1.0 volts.  
I.F. Module Spill No. 3 6.8 volts.  
I.F. Module Spill No. 1 6.8 volts.

TR1 Collector 6 volts.  
Base 1.25 volts.  
Emitter 1.0 volts.

TR9 Collector 7.2 volts.  
Base 0.6 volts.  
Emitter 0.82 volts.

Static Current total 20 Ma.

I.F. Frequency 505 kc/s.

Gang capacitor and trimmers location, viewed from front.

CV1D 1st Gang section and trimmer 80 meter oscillator.  
CV1E 2nd Gang section and trimmer 160 meter oscillator.  
CV1C 3rd Gang section and trimmer 160 Mixer.  
CV1B. 4th Gang section and trimmer 80 Mixer.

Coils, (viewed from front)

L1 Aerial. Extreme left of chassis.

L2 Mixer. Rear of chassis.

L3 Oscillator. Adjacent to gang capacitor.

L4 B.F.O. Under chassis rear, right hand.

I.F. Transformers, 3 Red core adjustments on top of I.F. Module. Due to the brittle nature of ferrite cores, a plastic trimmer tool must be used.

NOTE. The rotor vanes of the gang capacitor are individually adjusted to provide correct tracking and must not be altered from their settings. Transistors TR2-TR8 are part of the module units, and in view of the miniaturisation techniques employed in manufacture, servicing of these units should not be attempted. See Service After Sales information.



# **K4XL's** **BAMA**

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