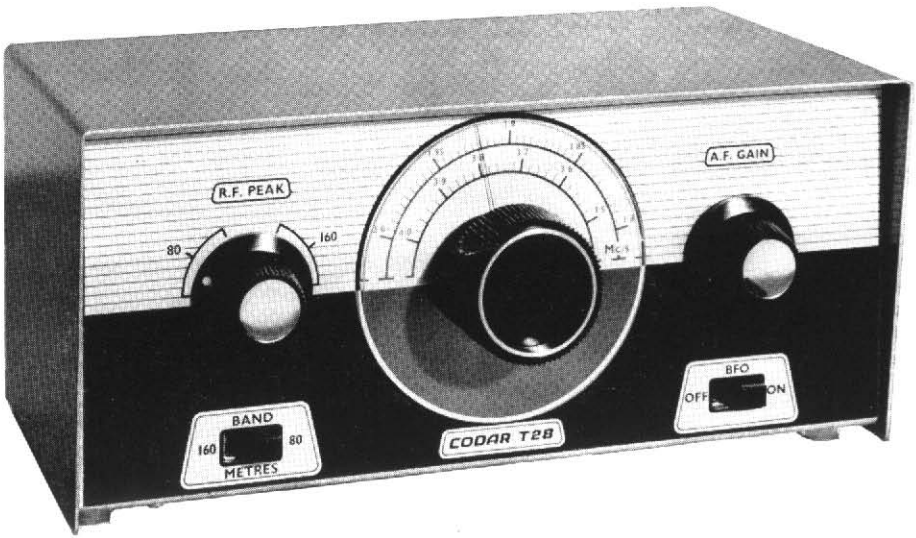
TOP QUALITY — LOW COST

CODAR

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 ocntrol 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 aerials it may be quite sharp and others fairly broad. In home installations where long aerials 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 PP1 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.

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.	TR1 Collector	6 volts.
A.F. Module Spill No. 7	9.9 volts.	Base	1.25 volts.
I.F. Module Spill No. 6	7.4 volts.	Emitter	1.0 volts.
I.F. Module Spill No. 4	1.0 volts.		
I.F. Module Spill No. 3	6.8 volts.	TR9 Collector	7.2 volts.
I.F. Module Spill No. 1	6.8 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.

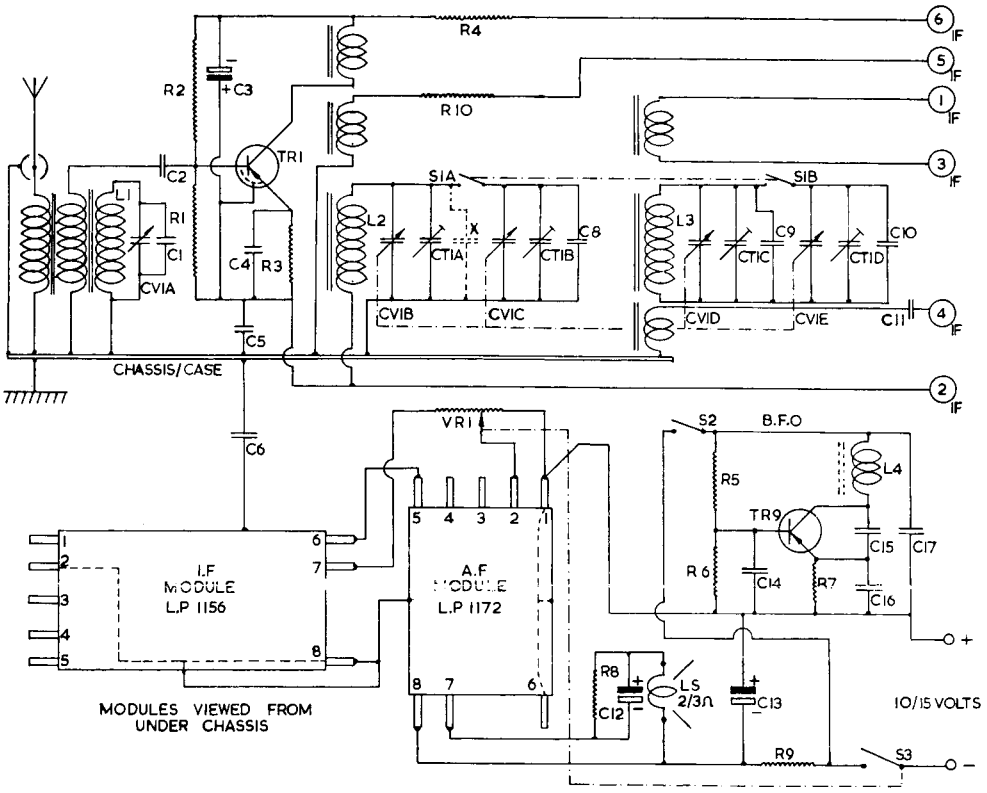
CV1D 1st Gang section and trimmer 80 meter oscillator.
CV1E 2nd Gang section and trimmer 160 meter oscillator.
CV1C 3rd Gang section and trimmer 160 Mixer.
CV1B. 4th Gang section and trimmer 80 Mixer.

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. Tranformers, 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.

T28 SCHEMATIC



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 ½ w.
R2	10K ½ w.
R4, 7	1K ½ w.
R5	22K ½ w.
R6	4.7K ½ w.
R8	10ohm ½ w.
R9	75 ohm ½ w.
R10	150 ohm ½ w.
VR1	5K w/s.

CODAR

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.

SERVICE AFTER SALES

Your CODAR T28 receiver uses top quality materials throughout and is guaranteed for 12 months against component failure and faulty workmanship.

Should a fault develop the following procedure must be adhered to, to obviate delay and unnecessary correspondence. First, write to Service Department, detailing nature of the fault in full, **clearly**, and stating date of purchase, and Invoice number. If purchased through CODAR agent, state also name and address. Do not return receiver at this stage, as the Service Department may be able to help you, if the fault is a simple one.

If it is necessary to return the receiver, the Service Department will notify you and forward a parcels label with Service reference number which must be quoted on any future correspondence.

PACKING

Please pack the receiver very carefully, using old newspapers, etc., as cushioning material. We cannot be responsible for damage in transit to us and the maximum compensation that the G.P.O. will pay is £5 0s 0d. only if they consider the parcel was well packed.

No charge will be made if the fault is due to component failure or faulty workmanship, but the guarantee will become void if any modification or servicing other than by CODAR has been carried out. In the event of the receiver being out of guarantee, the Service Department will forward quotation for approval before commencing.

We trust your T28 will give you every satisfaction.

From G.W. Smith & Co. (Radio) Ltd.
311, Kingsland Road.
13 Feb 70. 15/17/6 G3WAU

CODAR RADIO COMPANY

BANK HOUSE, SOUTHWICK SQUARE, SOUTHWICK, SUSSEX

TELEPHONE SOUTHWICK, 3149

CANADA CODAR RADIO COMPANY OF CANADA TWEED ONTARIO