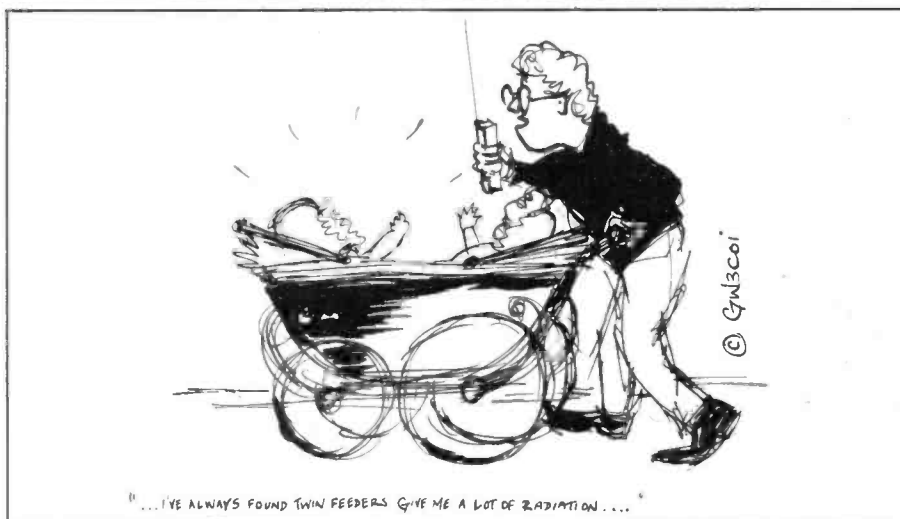


1 pole 6 way switch is needed with point A going to the pole, and short leads (not more than about three or four inches) connecting each position to the PCB. If you are going to build the transmitter, then use a 2 pole 6 way switch, so that a spare set of contacts are available for the Tx.

NEXT MONTH we will describe the matching Transmitter, intended as a companion to this unit. This can also be used with almost any other 2 metre receiver, and is complete with an antenna switching relay. The case illustrated on the front cover will also be described, together with wiring and drilling instructions for the complete unit.



#### Resistors

R1,13	10K
R2	5k6
R3,7,20,21,24	100R
R4,25	470R
R5,10	100K
R6,22	47K
R8	150R
R9	330K
R11	4K7
R12,14,18	15K
R15	33K
R16	220K
R17	2R2
R19	8K2
R23	2K2

All 0.25W 5% carbon film types.

RV1	20k (lin) TOKO VM10R pot
RV2	10k or 22k log TOKO VM10R pot

#### Capacitors

C1	4p7 ceramic plate
C2	2p2 ceramic plate
C3,4,5,6,36,37	1n0 ceramic plate
C7	39p ceramic plate
C8,32	68p ceramic plate
C9	220p ceramic plate
C10	10p ceramic plate
C11	2u2 tantalum bead 16V
C12,24,25	10n ceramic disc
C13,14	1000p polystyrene
C15,16,17,18,19,20,28,30,34	100n monolithic ceramic
C21,33	150p ceramic plate

C22	10uF electrolytic 16V
C23,38	0.47uF Tantalum bead 16V
C26	1uF electrolytic 16V
C27	10uF electrolytic 16V
C29,31	100uF electrolytic 16V
C33,39	47p ceramic plate
C35	22p ceramic plate
CT	2-36p film trimmer 7.5mm dia (6 off)

#### Semiconductors

Q1,2	3SK51 or 3SK60
Q3	BF241 or BF273 or BF274
Q4	2N2369A or BSX20
IC1	MC3359 or ULN3859
IC2	LM380N (14 pin)
IC3	78L05

D1	IN4148
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#### Miscellaneous

F1	Nikko Denshi 10M15A
F2	Ceramic filter LFH12S (12kHz)
X1	10.245MHz HC18/U 30p parallel
X2-X7	45MHz range series type for reqd frequency. HC25/U
(Frequency = $\frac{\text{Signal Freq}}{10.7}$ )	

(i.e. 145.5MHz needs a 44.933MHz crystal.

L1	TOKO S18-5.5 turns (green)
HF1	TOKO Helical filter type 272MT-1006A
T1	TOKO 119LC30099
T2	TOKO KXNK3335R
T3	TOKO MC111 4.25/1.25 turns
T4	TOKO LMC4200A or LMC4201A
S1	2 pole 6 way rotary switch (extra pole used for Tx)

Also required: 3 Miniature ferrite beads; 12 CG1 Cage Jacks (AMBIT — for crystal sockets); 4 or 8 ohm speaker.

KITS — a complete kit of parts for this project, including drilled tinned PCB, all components, wire, pots, and rotary switch but excluding 45MHz crystals and speaker is available from WPO Communications for £39.65 inc VAT & p&p. PCB's alone are £3.80 each inc.

Crystals are available from Quartslab Marketing Ltd, PO Box 19, Erith, Kent at £1.96 each (1.74 for two or more) plus VAT. Please state HC25/U SR, and the actual crystal frequency required.