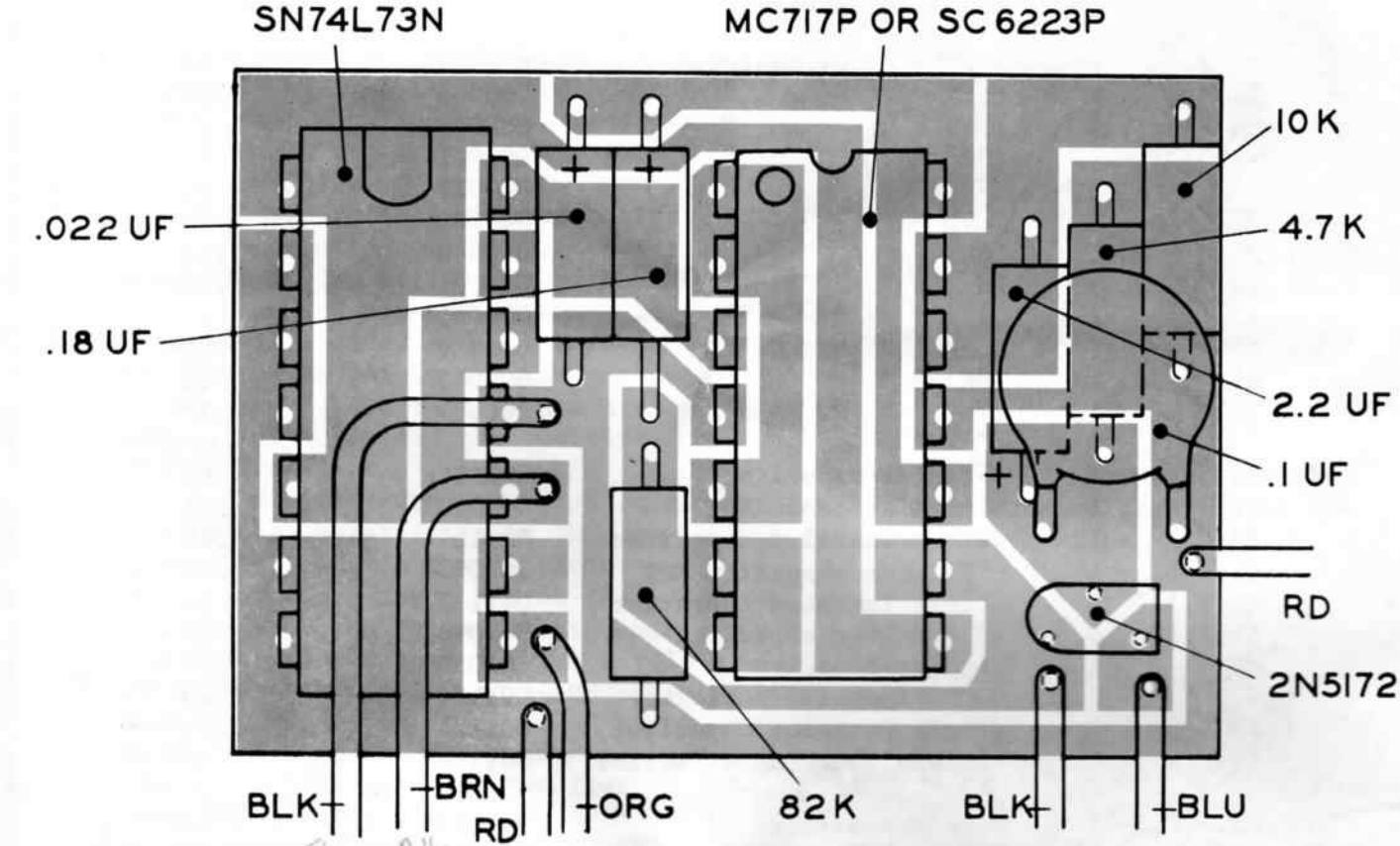
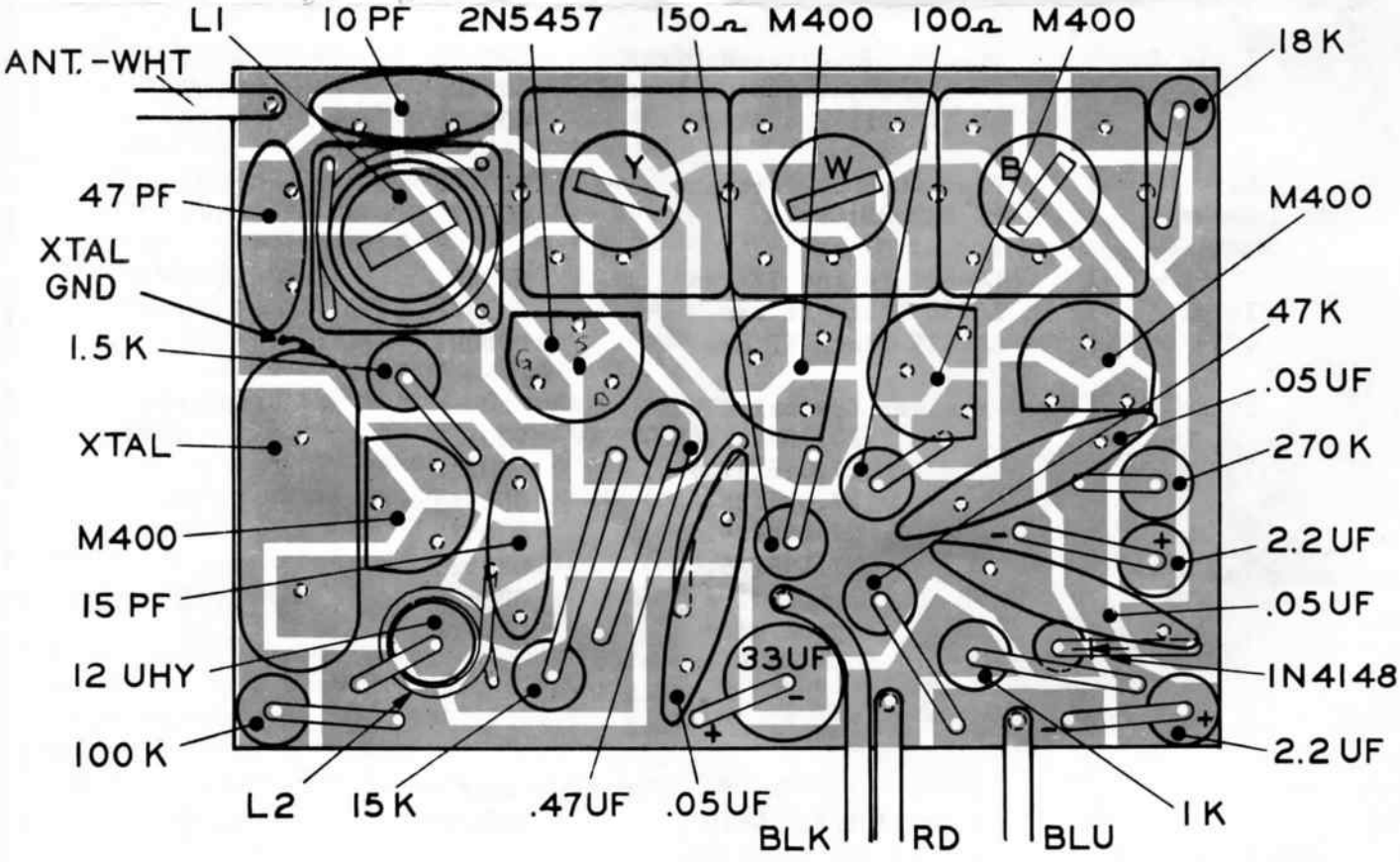
MICRO FET IC RECIEVER PARTS LIST

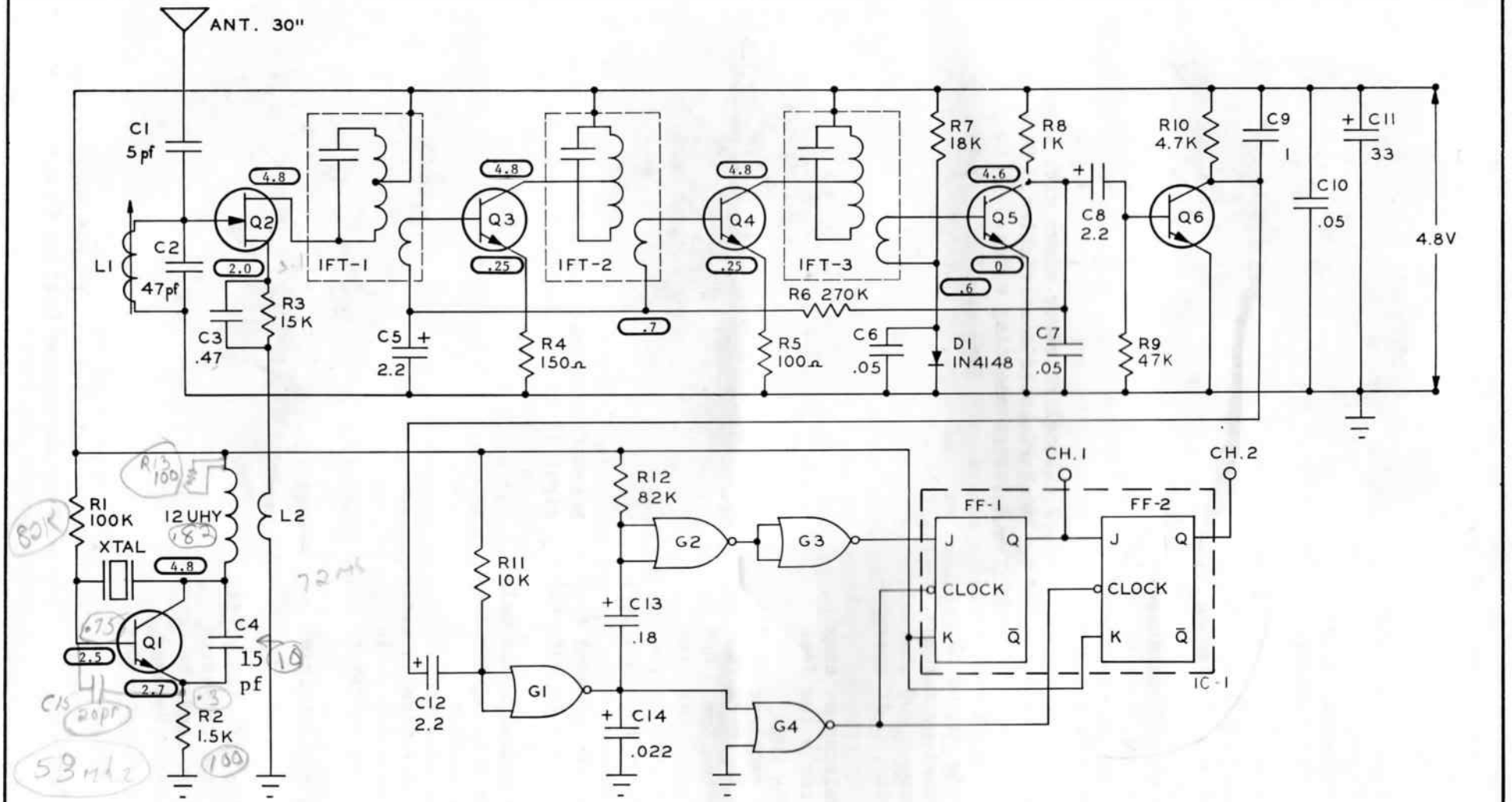
Ref.No.	Quant.	Description	R.E. Part No.	Price each
R1	1	100K ¼ W 10% resistor	000055	.12
R2	1	1.5K " " " "	000033	.12
R3	1	15K " " " "	000045	.12
R4	1	150 " " " "	000021	.12
R5	1	100 " " " "	000019	.12
R6	1	270K " " " "	000060	.12
R7	1	18K " " " "	000046	.12
R8	1	1K " " " "	000031	.12
R9	1	47K " " " "	000051	.12
R10	1	4.7K " " " "	000039	.12
R11	1	10K " " " "	000043	.12
R12	1	82K " " " "	000054	.12
C1	1	5pf Mica capacitor	001186	.45
C2	1	47pf Disc capacitor NPO	001020	.40
C3	1	.47mfd Tantalum capacitor	001127	.85
C4	1	15pf Disc capacitor NPO	001010	.30
C5,8,12	3	2.2mfd Tantalum capacitor	001138	.85
C6,7,10	3	.05mfd Disc capacitor	001049	.25
C9	1	.1 Disc capacitor	001050	.25
C11	1	33mfd Tantalum capacitor	001160	1.10
C13	1	.18mfd Tantalum capacitor	001124	.85
C14	1	.022mfd Tantalum capacitor	001118	.85
Q1,3,4,5	4	M400 Transistor	000443	.65
Q2	1	2N5457 FET	000453	1.50
Q6	1	2N5172 Transistor	000419	.65
IC-1	1	SC6223P Integrated Circuit	000438	2.25
IC-2	1	SN74L73N Integrated Circuit	000436	4.50
D1	1	1N4148 Silicon Diode	000405	.30
L1	1	Plastic coil form and core	000486	.75
Choke	1	12 UHY RF Choke	000476	.45
IFT-1	1	LC4827 Yellow IF can	000897	1.70
IFT-2	1	LC238 White IF can	000898	1.70
IFT-3	1	LC4828 Black IF can	000899	1.70
Xtal	1	Receiver Crystal 27Mhz		3.50
		26.995(27.450)	000521	
		27.045(27.500)	000522	
		27.095(26.640)	000523	
		27.145(26.690)	000524	
		27.195(26.740)	000525	
	12"	#26 ga. Magnet wire	000614	.15
	3"	#28 ga. Magnet wire	000612	.15
	30"	#26 ga. Hook Up Wire-White		
	8"	" " " " " -Black		
	8"	" " " " " -Red		
	3"	" " " " " -Blue		
	5"	" " " " " -brown, orange		
	1	PC Board 1/32" G-10	000669	1.50
	1	Complete Parts Package (Less connectors & case)	503141	25.95

DECODER DECK





RECEIVER DECK



ALL RESISTORS 1/4 W. 10%
ALL CAPACITORS IN MFD. UNLESS NOTED
C3,5,8,11,12,13,14 ARE TANTALUM, ALL OTHERS ARE CERAMIC
Q1,3,4,5 - M400 OR 2N4128
Q2 - 2N5457
Q6 - 2N5172
G1,2,3,4 - SC6223P OR MC717P
IC-1 - SN74L73N (FF-1 & FF-2)

IFT-1 TOKO LC4827 YELLOW
IFT-2 " LC238 WHITE
IFT-3 " LC4828 BLACK

L1 - 11T #26 GA. ENAMELED WIRE WOUND ON ROYAL 000486 COIL FORM
L2 - 2T #28 GA. ENAMELED WIRE WOUND OVER CENTER OF 12 UHY. CHOKE
XTAL - 27 MHZ. 3RD OVERTONE TYPE

⬭ THIS SYMBOL INDICATES A POSITIVE D.C. VOLTAGE REFERENCED TO GROUND TAKEN WITH A 20,000Ω/V V.O.M. AND NO INCOMING SIGNAL

RECEIVER TUNING INSTRUCTIONS

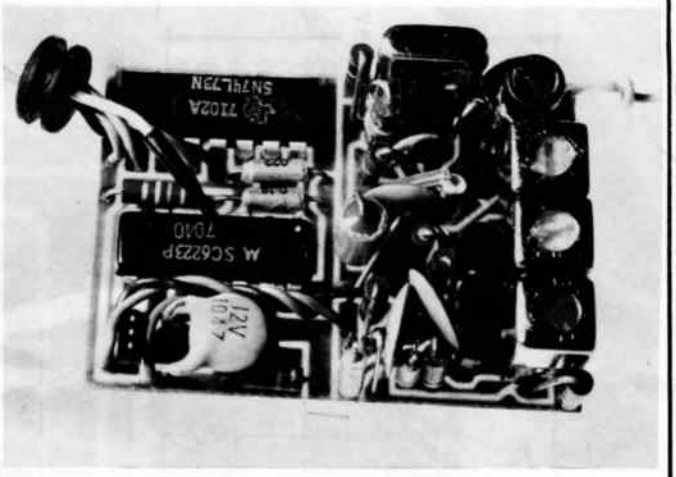
The receiver should be tuned using the transmitter it will be flown with. The transmitter should be completed, ready to fly, and properly tuned with battery packs fully charged.

( ) Lay the receiver antenna out to its full length on a non-metallic surface, or if the surface is high enough, hang the antenna over the edge.
( ) Temporarily solder two 1K resistors to the tuning points as shown on the schematic. These test points are the Q5 collector and the positive ground land.
( ) Place the multitester function selector to the lowest AC range and connect test leads to the 1K resistors. Place the meter leads out ot the proximity of the receiver antenna. The meter should have 5,000 ohm/volt or higher sensitivity on AC measurements.
( ) Collapse the transmitter antenna. Place the transmitter a few feet away and turn it on.
( ) Apply power to the receiver (4.8V) and tune the three IF cores for maximum voltage deflection. Use an insulated tuning tool. Move the transmitter further away as the meter reading increases, to maintain a peak reading of less than 1/2 volt.
( ) If possible, remove the antenna from the transmitter and tune L1 for peak meter reading.
( ) Repeak all IF cans and L1 while maintaining transmitter spacing for less than 1/2 volt peak reading.
( ) Disconnect the test equipment.
( ) Make a final check for foreign material on the PC boards which could possibly short out the receiver.

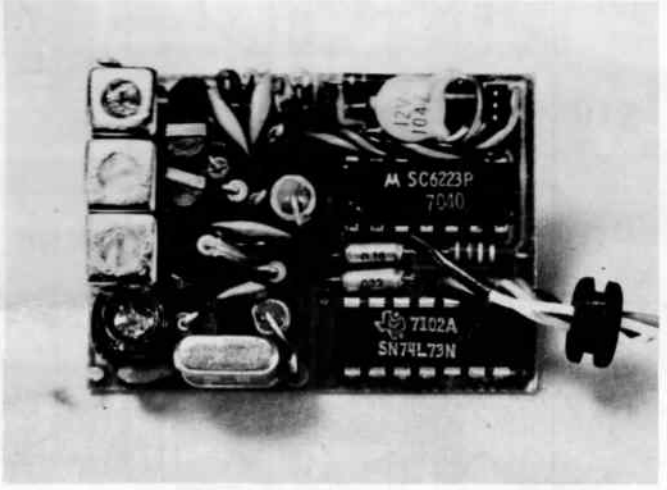
The receiver-decoder is now complete.

NOTE: For optimum tuning effeciency, it is recommended that an edge triggered scope be used and the test leads be connected to the 1K resistors. However, the above procedure is quite adequate.

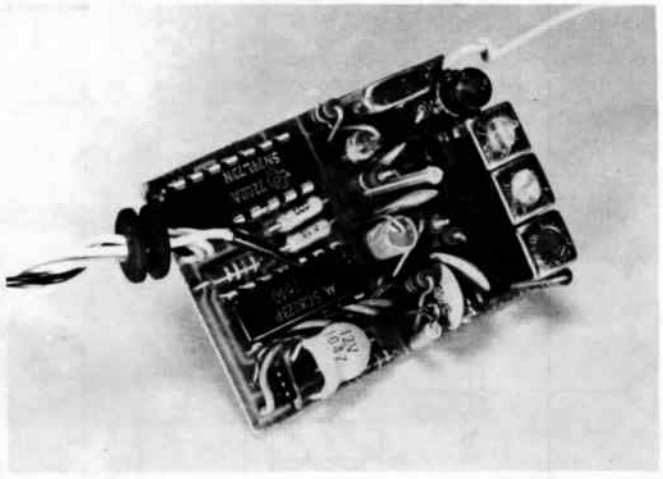
Photographs by Michael Berry



2 channel receiver shown with single deck PC board construction. Note the 3 interconnecting wires.

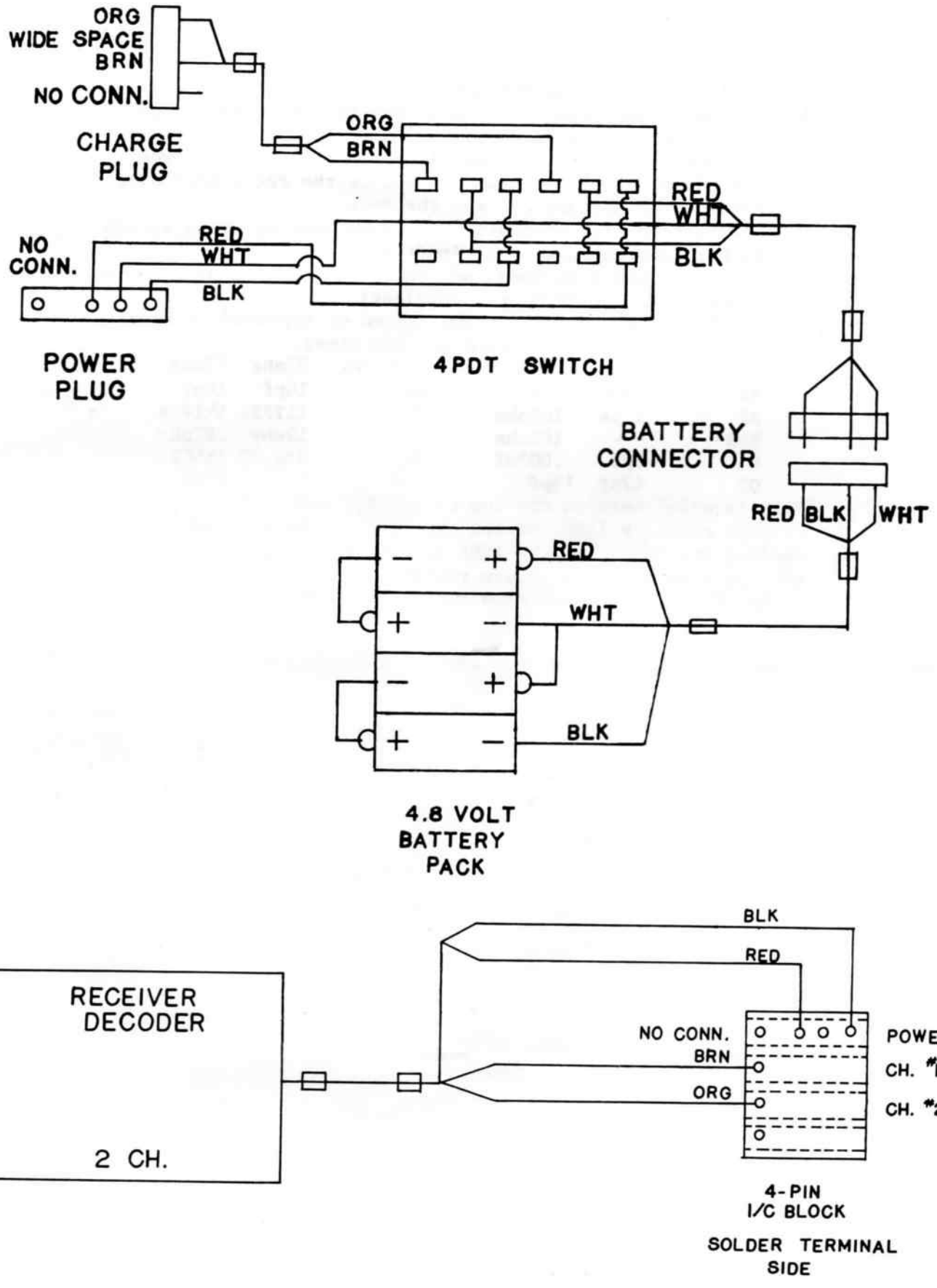


Note IC polarity. Be sure to get the right IC in the correct position.



Note installation of .luf Murata capacitor on decoder half of PC board. It should lay flat.

WIRING SCHEMATIC FOR THE DORFFLER 2CH. RX.



2 CHANNEL AIRBORNE WIRING DIAGRAM

Dorffler 2CH Rx - General Comments

A. A ground wire from the crystal can to the negative PCB land sometimes helps a noisy receiver.

B. If your receiver is too sensitive when using IC servos try adding a 100ohm res. in place of the red jumper wire between the decoder PCB and the receiver PCB.

C. One customer reported jittery servos when he tried to use Tech IV servos mixed with Kraft type trasistor servos. Problem cleared up when just one type was used at one time.

D. 72MHZ changes used be Ralph Majeski
(72mhz changes have not been tested or approved by Royal Electronics or M. Dorffler at this time).

Ref. No.	27mhz	72mhz	Ref. No.	27mhz	72mhz
R1	100K	82K	C4	16pf	10pf
R2	1.5K	100ohm	L1	11T#26	5¼T#26
R13*	---	100ohm	RFC	12uhy	.82uhy
C1	5pf	.002uf	Xtal	3rd OT	5thOT
C2	47pf	15pf	C15	-	20pf

*R13 is added between the top of the RFC and +4.8V supply. Cut the positive land between the 33uf filter cap and the land feeding the choke and the 100K (now 82K) resistor, and bridge the cut land with the 100ohm resistor.

A 20pf NPO cap is added from emitter to base on Q1.