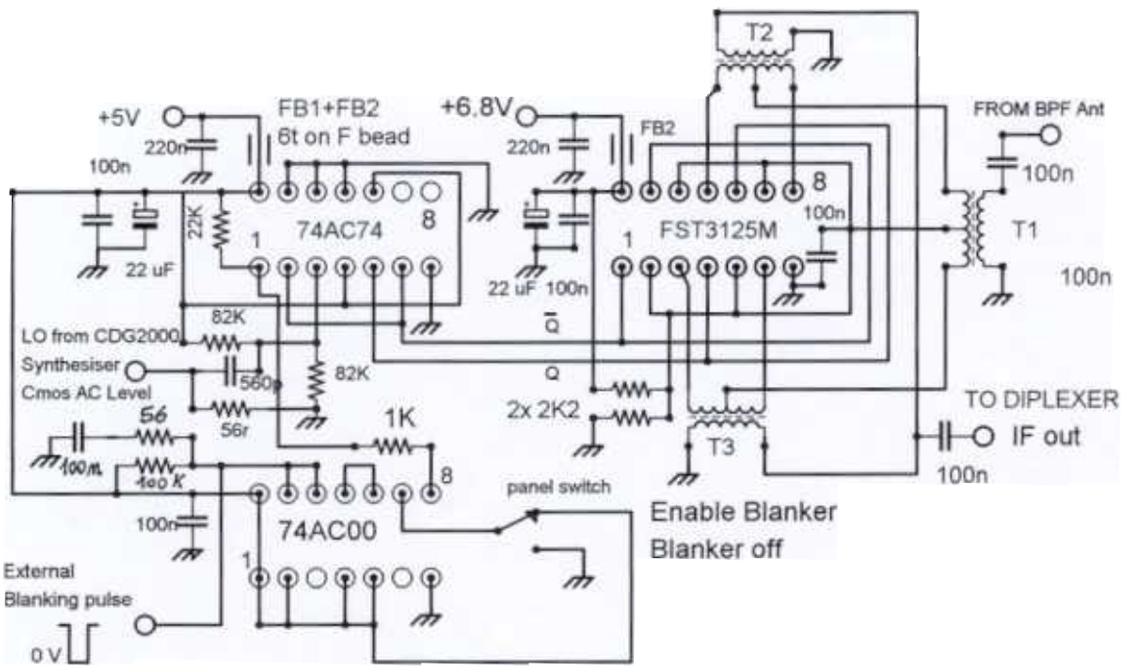
H-mode mixer with LO divide by 2with NOISE BLANKER input
compatible with CDG2000 Synthesiser
(adapted from EMRFD 2003 ARRL, p 6.50, W7AAZ
and modified for 74AC74 IC as divide by 2)



Drawing by I4FAF Romano Cartoceti, 2/2004

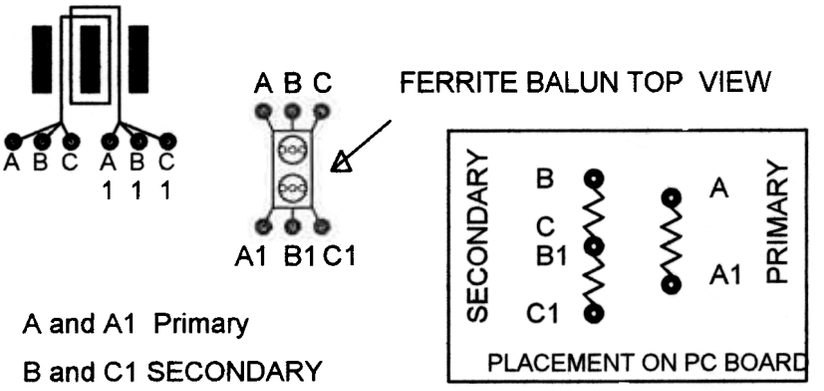
No. 3 AMIDON FERRITE BINOCULAR BALUN

Part No.BN-43-2402 (O.D.280, Hgt.240 Inches)

WINDING DETAILS:

4 TURNS of closed spaced enameled copper wire (AWG 29)

DIAMETER = 0.3 mm.

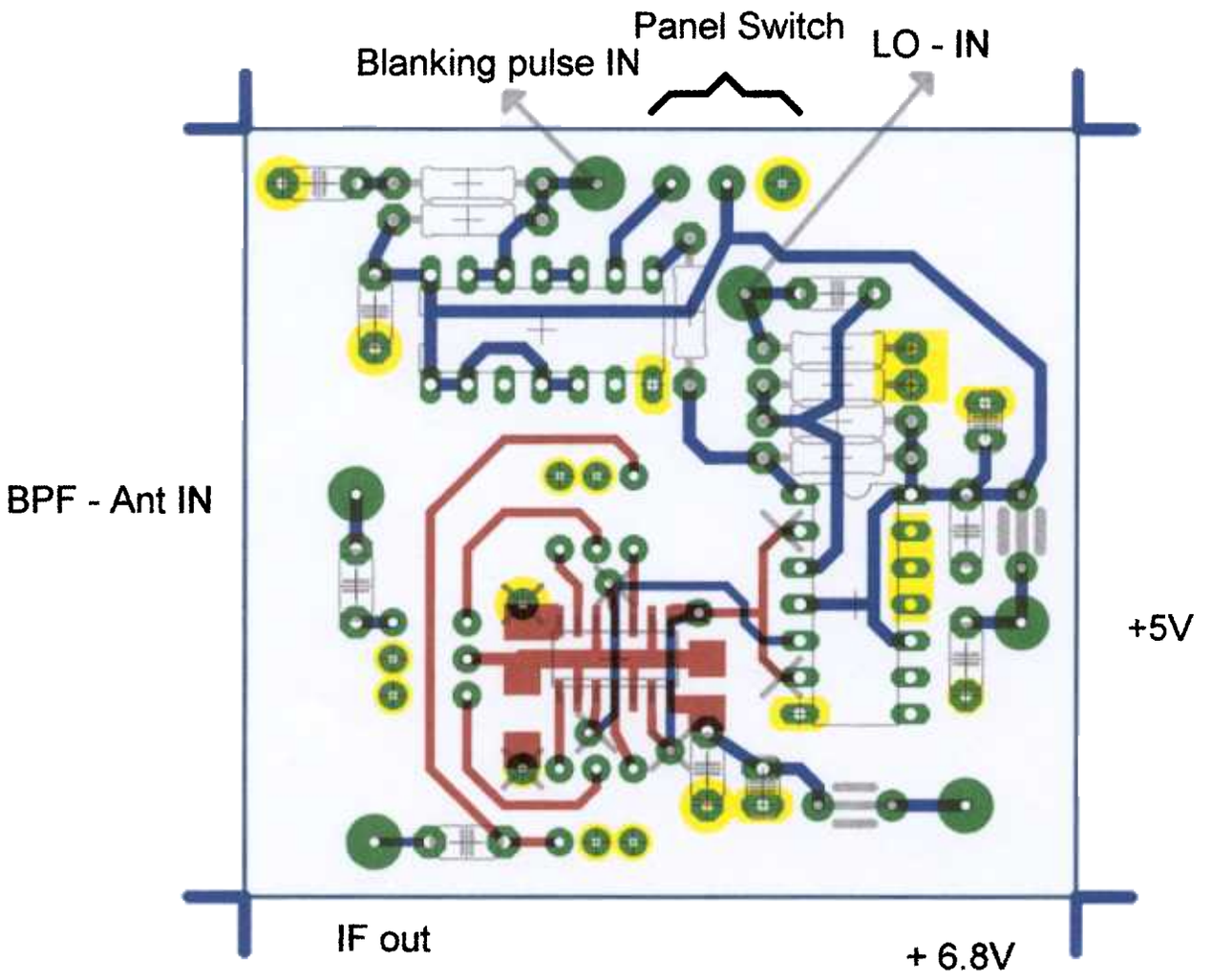


A and A1 Primary

B and C1 SECONDARY

C and B1 CENTER TAPPED

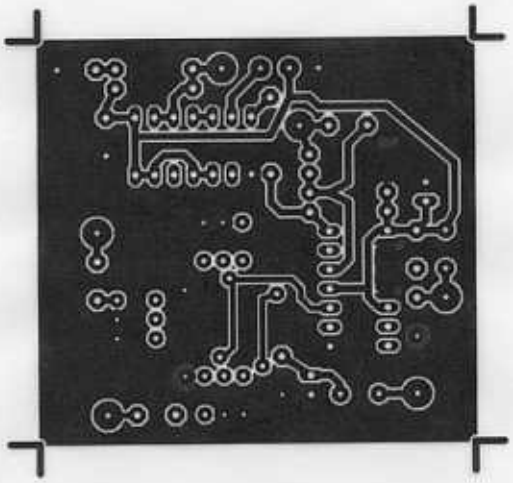
H-mode FST3125M mixer with 74AC74 IC as divide by 2 and Noise Blanker input adapted from EMRFD 2003 ARRL, p 6.50, W7AAZ, we have used here a different IC for divide by 2, a 74AC74. LO input is compatible with CDG2000 (G3SBI,G3OGQ,G8KBB) synthesiser. Drawing by I4FAF Romano Cartoceti, 2/2004



Red track is on top side of PCB.

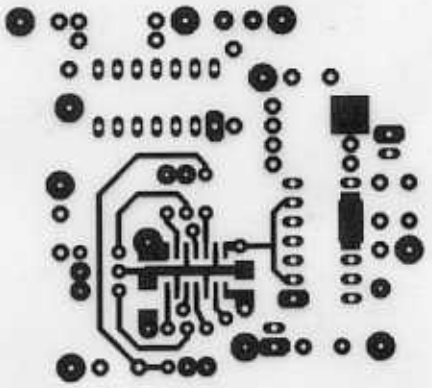
X point: make top and bottom sides connections and soldering.

28/02/2004 18.32.17 f=2.00 C:/Programmi/EAGLE-4.01/H - mode mixer div by 2 con blanker.brd



H-mode mixer, with FST3125M IC, with divide by 2 74AC74 IC, and noise blanker input, MIRRORED □ bottom side. □
PCB drawing by I4FAF, Romano Cartoceti, 2/2004. □

28/02/2004 09.57.39 C:/Programmi/EAGLE-4.01/H- mode mixer div by 2 senza blanker brd.brd



PCB drawing by I4FAF, Romano Cartoceti, 2/2004.
H-mode mixer, with FST3125M IC, with divide by 2 (74AC74) and Noise Blanker input, TOP SIDE

28/02/2004 09.59.35 C:/Programmi/EAGLE-4.01/H - mode mixer div by 2 con blanker.brd

Components List H-mode mixer with LO divide by 2 and Noise Blanker input
(adapted from EMRFD 2003 ARRL, p 6.50, W7AAZ, and modified by us for 74AC74 IC as divide by 2)

ICs:
FST3125 M (Fairchild), 14 lead SOIC small package (soldered on top side pcb)
74AC74 DIL plastic package, No socket
74AC00 DIL plastic package
Resistors:
56 Ohm, ¼ Watt, 2
1K, 1
22K, 1
82K, 2
100K, 1
2200 Ohm, **smd**, 2
Capacitors:
100nF, **smd**, 1 (it is the one in parallel with 2200 Ohm chip resistor)
560pF, ceramic, 1
100nF, multi layer ceramic, 6
220nF, multi layer ceramic, 2
22microF, 25 V, vertical electrolytic, 3
FB1, FB2: Ferrite Bead (mix 43), 6 turns, enamelled wire diam. 0.3 mm
T1,T2,T3, BN-43-2402 (O.D. 280, Hgt 240 inches) Amidon, 3.
See Ferrite Binoculars winding details.