

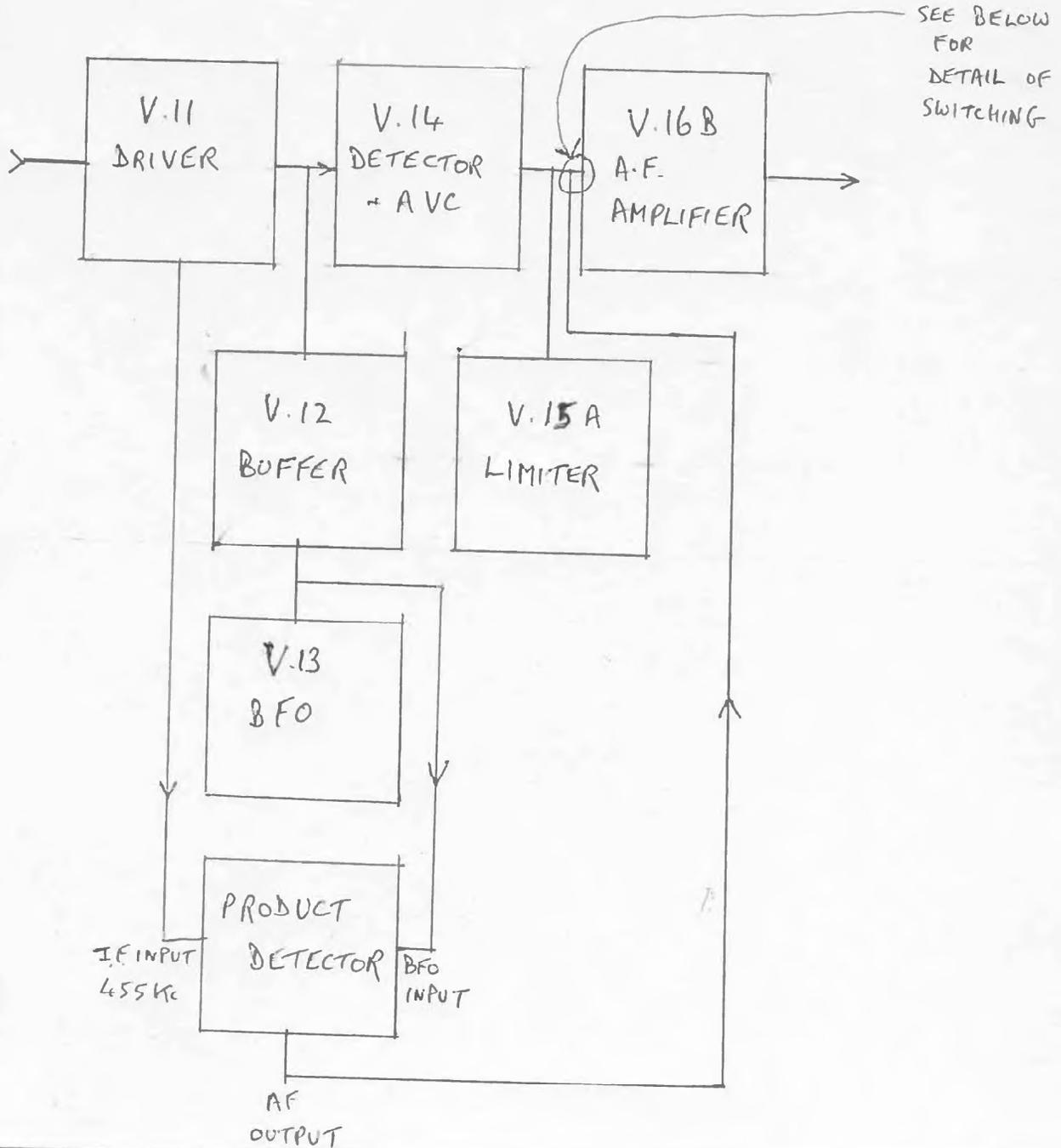
SP-600 Mod Text as corrected on April 2, 2001

(To be read in conjunction with (1) the block diagram, (2) the schematic and (3) the JPG picture)

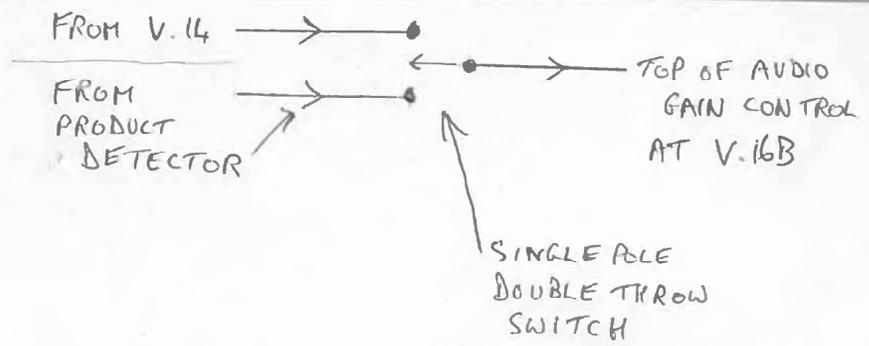
My comments thereon are as follows –

1. You can see from the pic that the mod is a one tube (12AU7) sub assembly which sits above and to the left of the rearmost smoothing choke. Its small aluminium chassis is held on an existing pillar by one retaining nut. (The power transformer in the pic is a replacement).
2. The IF, BFO and AF connections to the sub assembly are via screened cables (old bits of co-ax) and phono plugs.
3. Power is drawn from the socket of V3 via a homemade plug using the base of an old octal tube.
4. The IF input is taken from the junction of the anode of the IF Driver (V11) and C138/C139 via a small capacitor i.e. from pin5 of V11.
5. The BFO input is taken via a small capacitor from the link between the BFO (V13) and the buffer (V12) i.e. from pin 1 of V12.
6. Links 4. and 5. can remain permanently soldered in place and have no significant effect on the normal operation of the SP-600.
7. The AF output of the detector is taken to the top of the AF Gain control via a short length of screened cable (co-ax).
8. In order to avoid drilling any holes the tuning lock is removed and replaced by a two position rotary wafer switch which uses the knob removed from the tuning lock. In one position the gain control receives its audio from the existing SP-600 circuitry. In the second position the audio comes from the new sub assembly.
9. The original circuitry of the SP-600 and the new sub assembly remain powered up at all times. The AVC therefore remains functional with the new mod but the noise limiter is obviously no longer in the audio chain. The S meter should also work as before.
10. The values of the IF and BFO input caps were arrived at by experimenting with variable multivaned trimmer caps and reading the best settings with a capacity meter.
11. The BFO input cap is not that critical and 100Pf. seems to be about right. Surprisingly the BFO injection level into the new sub assembly is affected by the BFO Injection level of the Buffer (V12) and the best position of that preset on the receiver appears to be almost zero i.e anti-clockwise.
12. The value of the IF input cap is very critical and I finally settled on 8.2Pf. which results in just the right level of RF gain (with the gain control at max) when listening to SSB with AVC and the BFO switched on. I think that the value of this cap could vary quite a bit from one receiver to another depending on the age and condition of components including tubes and also between civilian and military SP-600s because the values of C138 and C139 appear to differ.

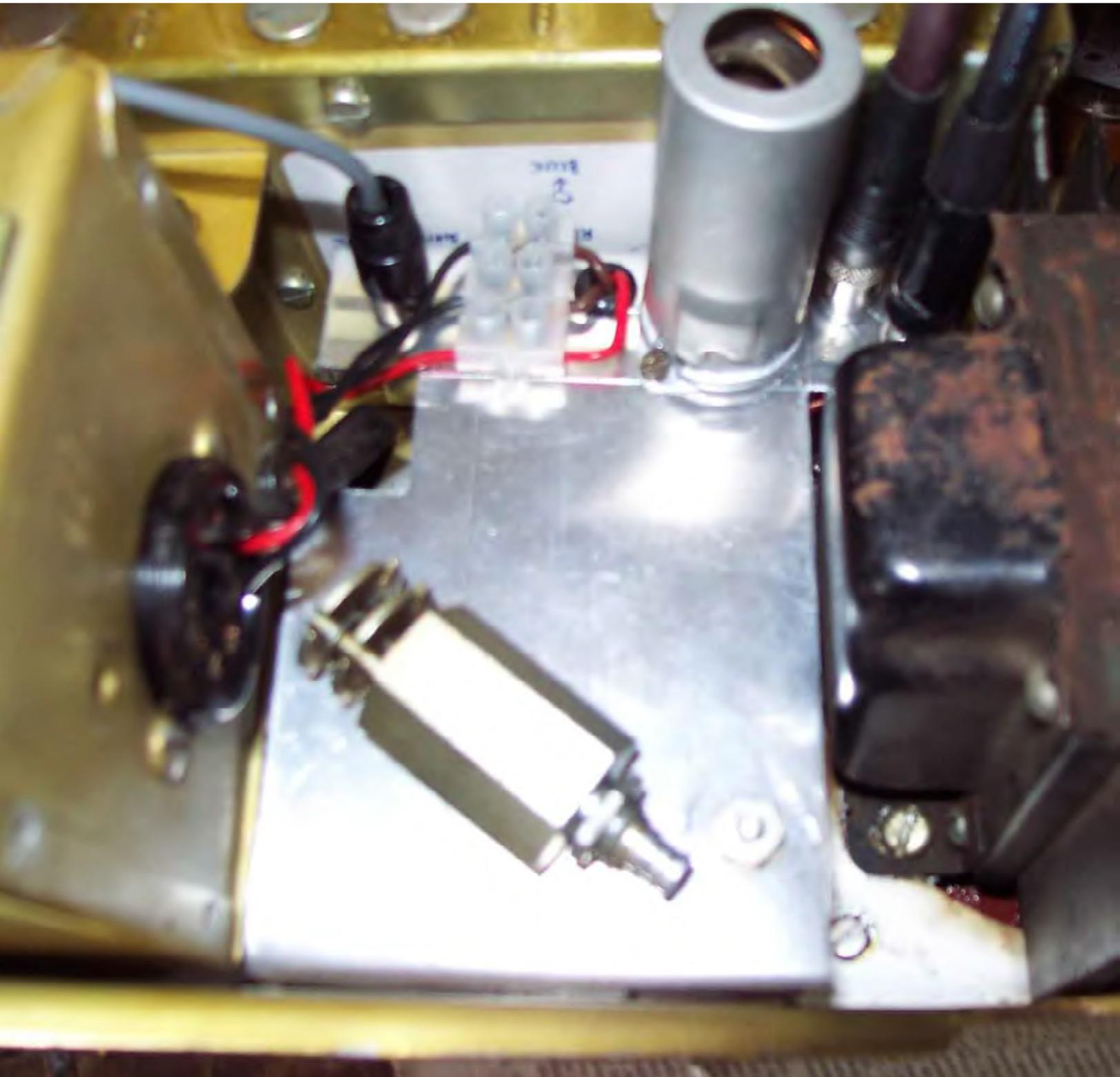
SSB MODIFICATION FOR SP-600



DETAIL OF
AF INPUT
SWITCHING



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2001



'B'
SCHEMATIC

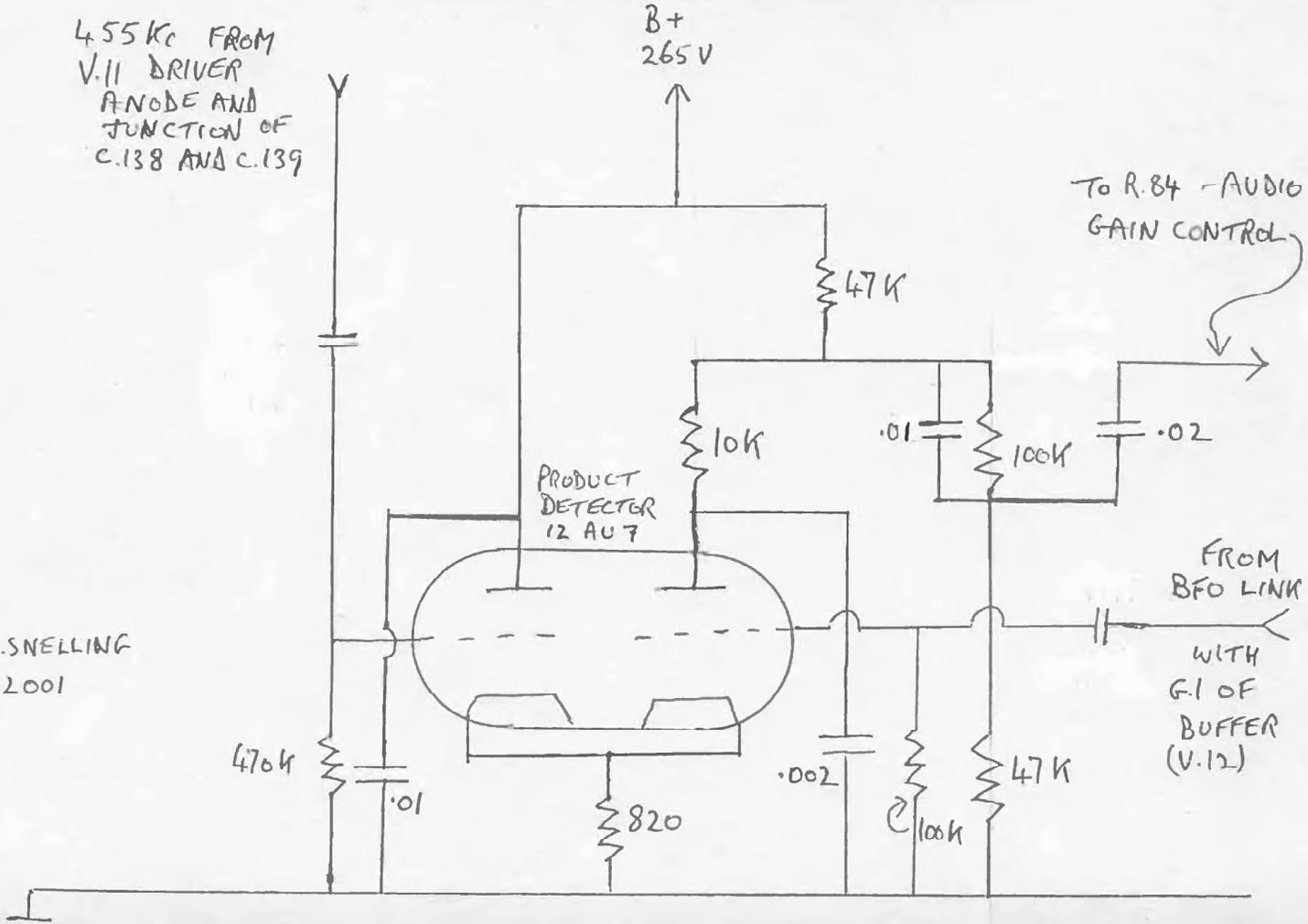
SSB MODIFICATION FOR SP-600

4.55 Kc FROM
V.11 DRIVER
ANODE AND
JUNCTION OF
C.138 AND C.139

B+
265 V

TO R.84 - AUDIO
GAIN CONTROL

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2001



FROM
BFO LINK
WITH
G.I. OF
BUFFER
(V.12)