

VLBA Electronics Memo No. 73

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

(860714)

June 12, 1986

MEMORANDUM:

TO: W. Brundage P. Lillie
K. Crady R. Norrod
H. Dill R. Simon
W. Lakatosh A. R. Thompson

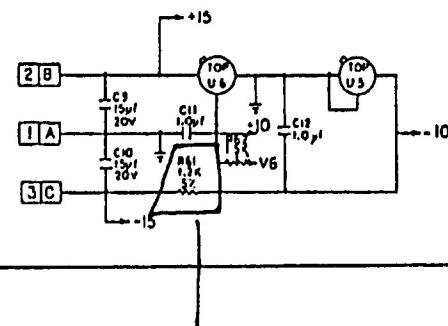
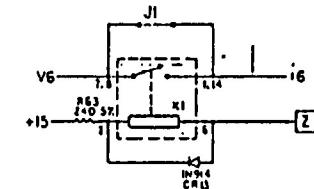
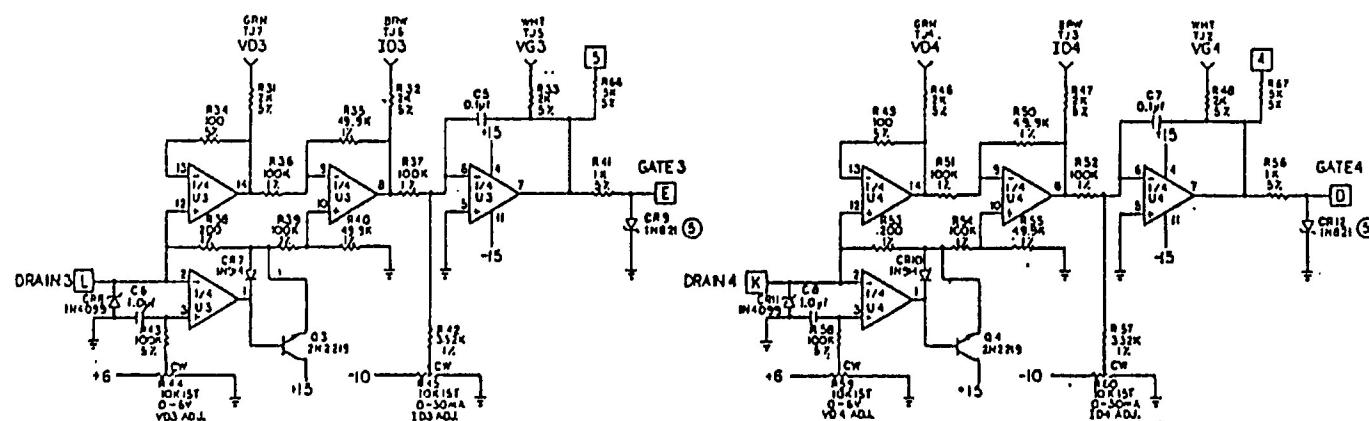
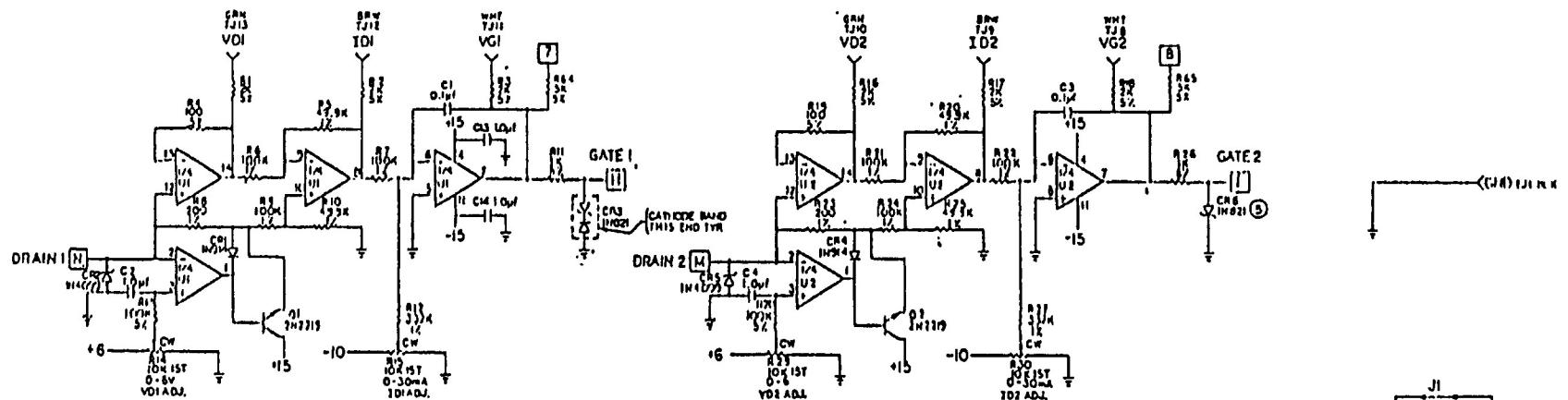
FROM: S. Weinreb

SUBJECT: Improvement of VLBA/Voyager FET Bias Card

It has been found that the -10 volt regulator (AD581) has insufficient current for proper regulation. This should be corrected by changing R61 from 1.2K to 470 ohm, 1/4 watt, 5% (see attached schematic and layout). The change may increase FET bias currents by 5% and increase front-end gain by a small amount (0.3 dB measured on one 8.4 GHz front-end). The FET bias current pots can either be left alone or reset to the previous drain current.

Without this change an 8.4 GHz front-end decreases gain by 0.5 dB if the -15 volt supply is set to -13.5 volts. With the 470 ohm resistor, the gain change is -.03 dB. There is no change in gain for +15 volt supply variation to +11.5 volts.

Attachments



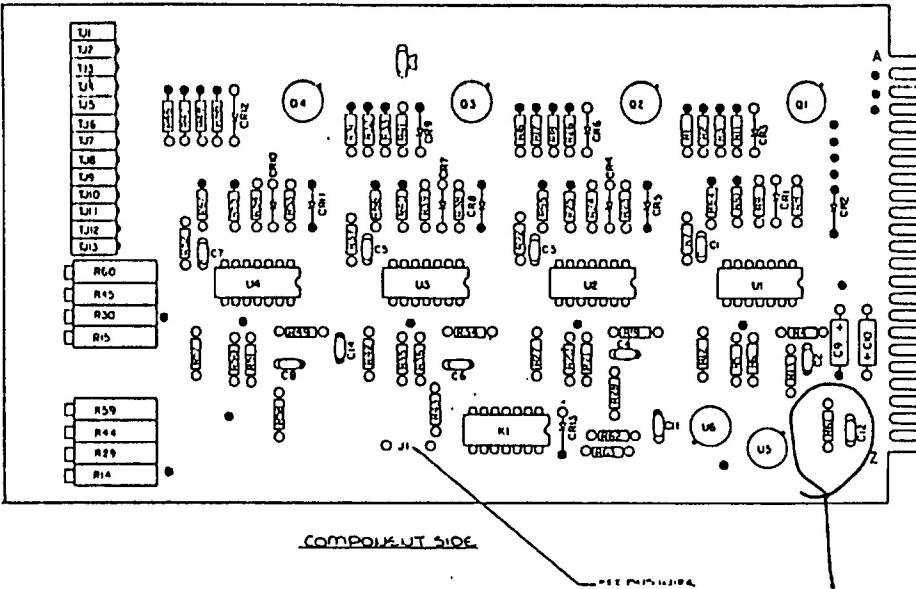
- NOTES
- ① UI-4 TLO84BCH
 - ② U3-6 A05B1JH
 - ③ ALL CAPS ARE SOV UNLESS OTHERWISE MARKED.
 - ④ ALL RES. AS FOLLOWS:
5% 1/4 WATT
1% 1/8 WATT
 - ⑤ SEE CR3 FOR INTERNAL SCHEMATIC.
 - ⑥ KI-MAGNECRAFT W171DIP-14

①	②	③	④	⑤	⑥
UI-4 TLO84BCH	A05B1JH	ALL CAPS ARE SOV UNLESS OTHERWISE MARKED.	ALL RES. AS FOLLOWS: 5% 1/4 WATT 1% 1/8 WATT	SEE CR3 FOR INTERNAL SCHEMATIC.	KI-MAGNECRAFT W171DIP-14

CHANGE TO 470-2, 1/4W, 570

6/10/86

S. WEINREB



1. HOLLY TIA T ARE SWAPAD TO
PRL AND O THEU
2. ALL DIO IC PHARMACED UXL SOKKETS.
ITEM 27 (ICN-143-33-X). UI-U4. 4 DIOD
3 ALL COMPOUNDL VALVES SHOULD DL V3.04
IF POSSIBLE.

CHANGE
TO
470 SW
1/4W
570

- ① D0M A332600002
 - ② SCM. D55200-001
 - ③ C55200-001
 - ④ DEILL DWG. D55100-001

Y	FRONT END	NATIONAL RADIO ASTRONOMY OBSERVATORY
B	ASSY - BIAS CARD	SEARCHED INDEXED SERIALIZED FILED
		DATE 02-22-90 BY C-A 14-71