VLBA ACQUISITION MEMO #346

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To: VLBA Data Acquisition Group

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Subject: Further improvement of Write Driver performance

VLBA memo #258 and #277 presented a scheme to improve Write Driver performance in regard to both symmetry and rise time. However, adding the series diodes specified in memo #277 is impractical considering the assembly time and the fact that many units are already in the field. The following steps will minimize junction breakdown and provide adequate symmetry.

1. On the Printed Circuit Board, insert 8-pin SIP (single in-line) sockets in place of RM11, RM12, RM13, RM14, RM15, RM26, RM27, RM28, RM29, and RM30. This will facilitate changing resistor values for the present configuration and any future modifications.

2. Install 220Ω resistor networks in place of the 33Ω resistors removed. This will increase the output rise time of the Write Driver and minimize breakdown of the emitter follower transistors in the VLBA read-write interface boards.

A test tape was written at 9 Mb/s using 20 volts write voltage and 220Ω resistors; reproduction at 160 ips results in a very symmetric eye pattern and an average parity error rate of 16E-5.