

VLBA ACQUISITION MEMO # 130
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HAYSTACK OBSERVATORY

WESTFORD, MASSACHUSETTS 01886

8 March 1989

Area Code 508

692-4764

To: VLBA Data Acquisition Group
From: Alan E.E. Rogers
Subject: Visit to Honeywell Corporation

George Peck, Hans Hinteregger and Alan Rogers met with Honeywell personnel on 28 February 1989 at 8:00 A.M. The Honeywell people present were:

Ed Haines, Marketing
Harry Allen, Recorder Division Head
Russ Ruhl, Engineer
Herb Sanford, one of the original designers of the 96

The discussion was mostly technical and centered on the items listed in the attached memo to Honeywell. Their response to our questions was most helpful and they would like to work with us to improve various aspects of the transport which will help us to maintain good performance. Some more specific suggestions were as follows:

1) Use of idler roller

The use of the idler roller has been known to produce other problems like beats between the out of round in the capstan and idler. Harry Allen suggests we investigate further the low angle mode for reducing sensitivities to alignment and tape characteristics.

2) Grooves

Other heavy uses of the 96 are also affected by grooves and Ed Haines said that he is anxious to see Honeywell offer hard point inserts or other methods for solving the problem. Both Honeywell and Haystack will evaluate designs for hard point inserts further.

3) Capstan Taper

Russ Ruhl will continue to check capstans and replace "out of spec" units (using Honeywell's exchange repair). He will further advise us on whether alcohol should be used for capstan cleaning. There is a study which suggests that alcohol may change the urethane in the capstan and that Neptane should be used instead. He will provide us more details. Russ will also look at the questions of whether we should purchase capstans made of different material (Honeywell has several variants on the standard capstan) for the VLBA.

4) Vacuum Column Depth

Honeywell is aware of the vacuum column depth problem (although they were interested to hear a theoretical explanation) and have increased the standard "E" casting height.

5) Head Wear

Honeywell has also seen uneven head wear on wide track headstack and agree that the probable cause is capstan taper.

6] Precision Plate

Honeywell has also seen some precision plates which produce a gross miss-alignment of the tape path. At this time it remains a mystery as to the exact cause - some ideas are:

- a) The plates are being bent when headstack location pins are inserted.
- b) The plates are not flat.

Direct measurements of certain selected points on a defective precision plate show nothing way out of spec. [Perhaps the plate is only distorted when it is mounted on the transport.]

Attachment: Letter to Honeywell Recorder Division