11-13-98

Memorandum

To: A. R. Kerr
S. -K. Pan
K. Crady

cc: J. Webber

From: J. Effland

Date: 13 November 1998

Subject: Status Report for Automating SIS Mixer Measurements

1. Accomplishments this period

Kirk and I are revising the designs of the computer interface chassis and coax switch control chassis prior to building two additional of sets of these for use in Pan's rack and the JT-1 rack. The design revisions not only incorporate as-built changes, but they should also increase reliability by reducing the parts count and by minimizing point-to-point wiring. We are improving maintainability by rearranging the printed circuit boards so that the component sides of all boards are not obscured by the other boards in the chassis.

As part of this effort, a revised printed circuit board for the coax switch control was laid out and will be sent to a PC board manufacturer (Triple W) early next week. Changes made to the existing board include:

- incorporating the switch debounce flip-flops on the board, (they're currently installed on a perf board),
- replacing the discrete NAND gates used for the flip-flops with an IC containing S-R flip-flops, and
- using resistor arrays in lieu of individual resistors.

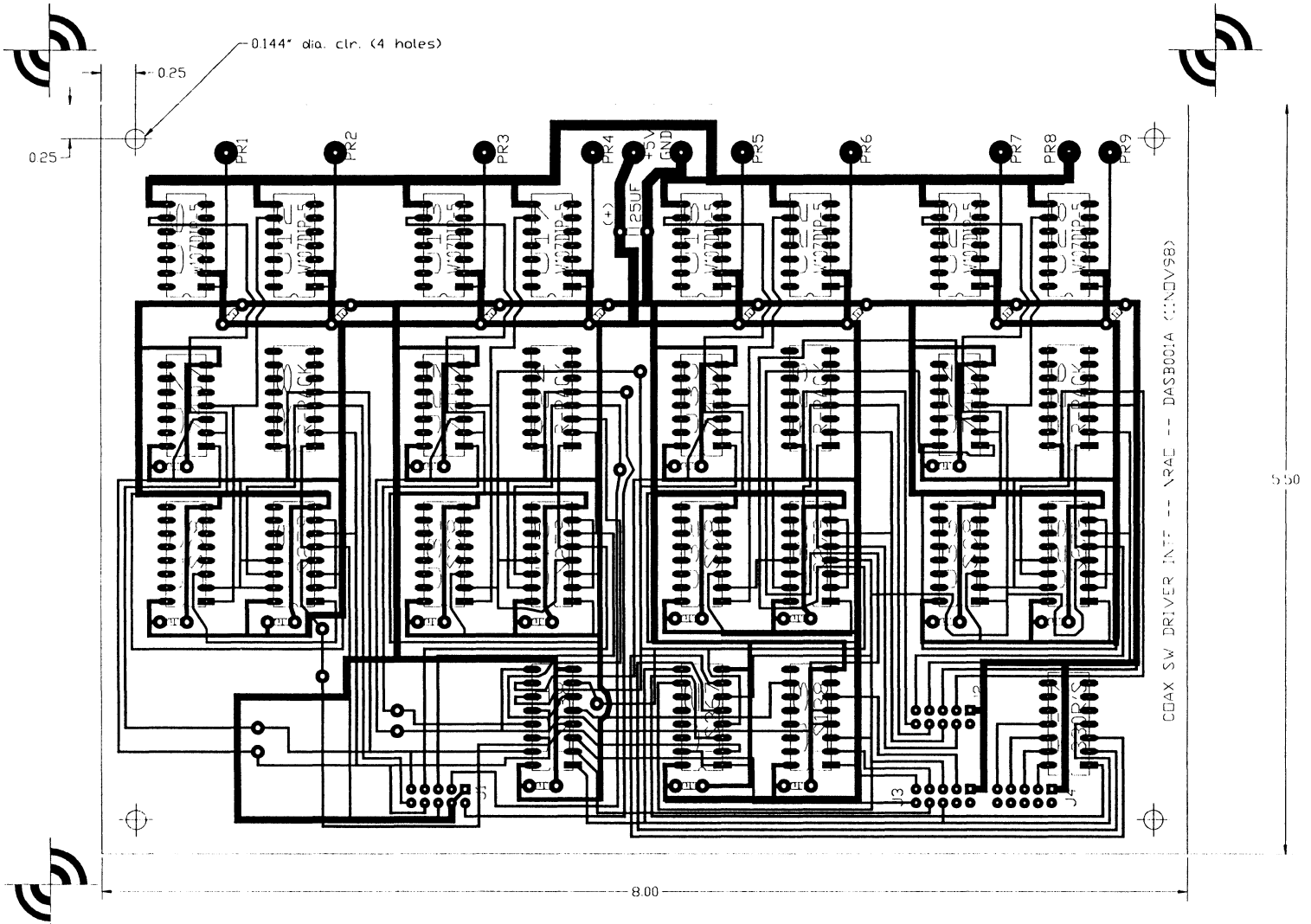
The layout of this board showing both sides and silkscreen is attached.

A new report format was created in the database program Access to allow direct printing of NRAO Purchase Requisitions from data in the PR database. A sample is attached.

2. Future Tasks

The following tasks, which focus on automating Pan's rack, will be accomplished in the next week:

1. Two additional PC boards require design and layout:
   - The power-supply and noise diode controller in the coax switch control chassis, and
   - a logic board for the computer interface chassis.
2. The printer for outputting the NRAO PR's will be changed from the wide-carriage Epson model to a standard Epson printer, which should only require a margin change to the form layout. The wide-carriage model is unnecessary because it prints the PR forms in landscape mode with the narrow dimension inserted into the printer.



BOARD DIMENSION DRAWING

Notes:

* Board matl. is FR-4 (0.062")
* Cut board to dims. shown
* Drawing is 2X actual size
* Drill holes 0.031", except four corner holes
* Drill four corner holes 0.144" as shown

REV	DATE	BY	DESCRIPTION
01	21NOV98	JEE	ADDED DEBOUNCE CKT

NATIONAL RADIO ASTRONOMY OBSERVATORY
CHARLOTTESVILLE, VA. 22903

TITLE: Coax Switch Driver Interface

PROJECT: SIS Balanced Mixer

DESIGN	WKC	7/28/98	COMPUTER DRAWING	DASB001A
DRAWN	WKC	7/28/98	MATERIAL	
SHEET			FINISH	
SCALE 2 : 1			DWG. NO. DASBP001	REV 01