

NOTES:
 1. ICH-CONTROLLER AND CONTROL ARE PRE-INSTALLED SYNC TO PDP.
 2. IN FULL VLSI SYSTEM THERE ARE 2 RACKS.
 3. IN THIS CONFIGURATION:
 4. EACH 500-1000 MHz I.F. TERMINATOR HAS 2 CHANNELS.
 5. EACH 500-1000 MHz I.F. TERMINATOR HAS 2 CHANNELS.
 6. EACH 500-1000 MHz I.F. TERMINATOR HAS 2 CHANNELS.
 7. EACH 500-1000 MHz I.F. TERMINATOR HAS 2 CHANNELS.

VLBA DATA ACQUISITION SYSTEM

AERVACRACK 15 APR 86

D.C.H. & DESCRIPTION

DATE

APP'D BY

CHK'D BY

OWN BY

CHANGE LETTER

8-WAY POWER DIV
ZFCS-8-43-SMA
(IN REAR OF BIN)

REAR PANEL
OSP

ZFSC-2-2

ZFL-2000
22dB

SW30B

R6
30dB
SAT-30

SW30A

SW15B

R3
15dB
SAT-15

SW15A

SW1B

REAR PANEL
OSP

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ZFL-2000
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SW30B

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SAT-30

SW30A

SW15B

R3
15dB
SAT-15

SW15A

SW1B

SW1A

COM

REAR PANEL
OSP

OSP

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OSP

ALT. INPUT
F.P. 1
BNC

SW1A

RF1

R2
50

C1
0.1

C2
0.1

R1
30dB
SAT-30

C3
0.1

C4
0.1

C5
0.1

C6
0.1

SW1B

SW15A

R3
15dB
SAT-15

C7
0.1

C8
0.1

C9
0.1

C10
0.1

C11
0.1

C12
0.1

C13
0.1

C14
0.1

SW30A

SW30B

R6
30dB
SAT-30

C15
0.1

C16
0.1

C17
0.1

C18
0.1

C19
0.1

C20
0.1

C21
0.1

C22
0.1

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CHANGE LETTER

BASEBAND OUTPUTS

USB F.P.MON.

LSB F.P.MON.

C-54120500B

USB AGC

LSB AGC

16 GAIN

LSB SQUARE LAW

LSB SQUARE LAW

USB SQUARE LAW

LOCK

SERIAL #

DATE

PROJECT

ENGINEER

DWG. NO.

REV.

USB FILTER/AMP

LSB FILTER/AMP

BW SEL

GAIN COMP.

16

16

16

16

16

16

16

16

16

IF SSB MIXER

LO

10dBm

MONITOR

10dBm

10dBm

10dBm

10dBm

10dBm

10dBm

10dBm

10dBm

10dBm

4-WAY INPUT SELECT

OSC

LOCK

COUNTER/PHASE COMP.

5MHz

5MHz

5MHz

5MHz

5MHz

5MHz

5MHz

5MHz

5MHz

POWER DIST & SWITCH DRIVERS

INPUT SEL

2

8

8

8

8

8

8

8

8

8

8

COUNTER INPUTS

A

B

ERROR SENS.

SERIAL # SENS.

DIGITAL INTERFACE

DATA IN

DATA OUT

1pps

RACK

ADDR.

GND.

GND.

NOTE:

ELECTRONIC NOTES:

UNLESS OTHERWISE NOTED:

RESISTORS:

CAPACITORS:

INDUCTORS:

SCALE

CLASSIFICATION

USED ON

DATE

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REV.

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VLBA RECORDER

- RECOMMENDATION BASED ON TESTS AND EXPERIENCE
- PRESENTLY AVAILABLE COMPONENTS
- REQUIRES OPERATIONAL TESTING

HEADS: 34-MICRON WIDTH

TAPE: T-160 HIGH-GRADE 24,000-FOOT LENGTH
16-INCH GLASS REELS

TRACKS: 5-MICRON GUARD BANDS
37,500 BITS PER INCH

USE: 18 PASSES OF 32+ TRACKS
40 MINUTES PER PASS
12 HOURS PER REEL AT 128 MBIT/SEC

VLBA RECORDER

GOAL FOR 1988:

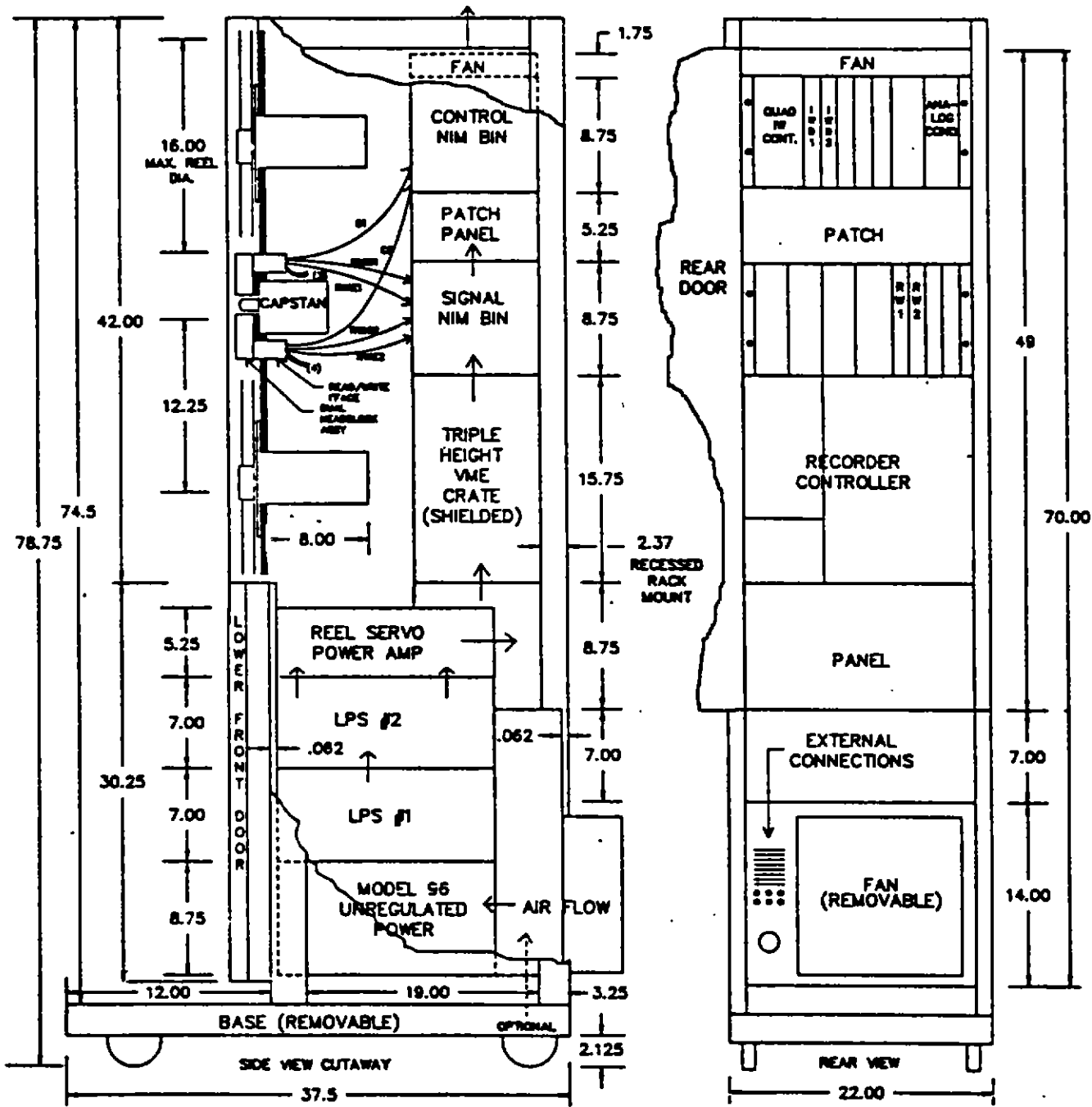
24 HOURS ON ONE REEL AT 128 MBIT/SEC

- DIGITAL VIDEO TAPE
 - +5 DB SNR OVER T-160
 - 20% THINNER THAN T-160
 - COERCIVITY OK FOR FERRITE HEAD
 - SMALLER PARTICLE SIZE
 - 50,000 TO 75,000 BPI PROJECTED
 - SAMPLES NOW IN HAND

- REDUCTION OF TRACK WIDTH
 - 24-MICRON TRACKS
 - 5-MICRON GUARD BANDS

- USE:
 - 50,000 BPI DENSITY
 - ONE HOUR PER PASS
 - 24 PASSES

- UNKNOWNNS:
 - HANDLING OF THINNER TAPE
 - ABRASIVITY WILL BE GREATER



VLBA RECORDER LAYOUT

	86	87	88	89	90	91	92
#DAS	2	6	4	2	2	4	
#DPS	1	1	1	4	5	4	4



"PROTOTYPES"

FABRICATION PLAN (AER/PBS MAY 1986)