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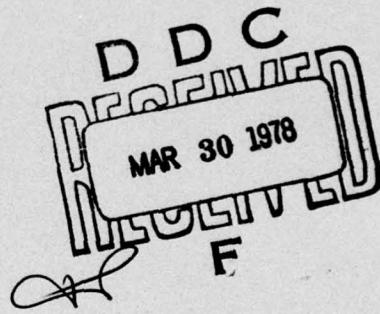


ATEC DIGITAL ADAPTATION STUDY, Development and Field
Evaluation - Digital Automated Technical Control

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Subsequent to the completion of the feasibility phase of the ATEC Digital Adaptation Study, existing ATEC hardware and software was adapted or developed to provide Performance Assessment (PA), Fault Isolation (FI) and Trend Analysis for the FKV type digital transmission systems. The resulting DATEC system was then field tested using the facilities of the digital transmission test bed located at Ft. Huachuca, Arizona. The purpose of the field evaluation was to confirm the basic concepts, exercise and test the developed hardware		

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and software, and verify DATEC's capabilities to accomplish PA/FI/TA in the operational environment of an operating digital transmission system. These DATEC capabilities are directed towards the centralized nodal monitoring of numerous digital transmissions links.

The DATEC field evaluation confirmed both the practicality and advantages inherent in automated digital system monitoring, insofar as enabling the centrally located controller to performance assess, trend analyze and fault isolate the digital transmission system for numerous failure occurrences and patterns and system parameter degradation. DATEC enables technicians to monitor in-service system parameters thereby enhancing system performance and allowing more efficient utilization of maintenance resources.

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Section 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 GENERAL

This section presents the conclusions and recommendations that result following the satisfactory completion of the final phase of the ATEC Digital Adaptation Study, the Field Test and Evaluation of the Digital Automated Technical Control (DATEC) equipment, performed in conjunction with the digital transmission communications test bed located at Fort Huachuca, Arizona.

7.2 CONCLUSIONS

The overall conclusion of this report is that the DATEC system successfully completed all requirements of the Statement of Work (S.O.W.). This conclusion is based on the satisfactory adaptation of ATEC hardware and software for digital application as evidenced by test data resulting from execution of the In-Plant Test Plan and Procedures and by the data evaluations presented in Section 2, Field Test Results (Individual Summaries of Tests and Scenarios), and Section 3, Field Test Results Relative to Statement Work Requirements in the Field Test and Evaluation Report. Section 3 of that test report was included in this report (see Section 6), because it addresses S.O.W. compliance directly, and because it provides a complete resume of the field test phase.

The specific objective of the field test was the collection of data to demonstrate confirmation of the tasks that are specified in Paragraph 4.1.12.7 of the Statement of Work. Summarizing those requirements, the field objectives were: (1) gather test data to demonstrate whether the DATEC system satisfied the S.O.W. and system design objectives for PA/FI/TA; (2) perform system level testing to collect data which can be used to evaluate the accuracy, usefulness, and effectiveness of the DATEC system in monitoring a digital transmission link; and (3) make recommendations which will enhance the usefulness and effectiveness of the DATEC system based on field test results. Contract amendment number 5 added as an additional test objective, the demonstration that the DATEC system could be used to monitor non FKV communications equipment by performing add-on field tests using the AVANTEK DR8A radio (DEB prototype) in place of the AN/FRC-162(V) radio.

The field test program successfully satisfied all the S.O.W. requirements and system performance objectives.

Test data recorded during the validation and system scenario evaluation test periods illustrate the adequacy of the monitor points selected by DATEC for monitoring the digital transmission system. Furthermore, the test data demonstrates the usefulness and effectiveness of the DATEC system in accomplishing performance assessment, fault isolation, and trend analysis of the digital transmission system.

The DATEC system ability to accomplish performance assessment and trend analysis was satisfactorily demonstrated and documented without compromise or qualification. The DATEC fault isolation capability was also successfully demonstrated but its success was somewhat diminished by technical controller comments that the system scan rate was not fast enough to satisfy their need for near real time fault isolation unless DATEC is used in the monitor immediate mode. The use of the monitor immediate mode was demonstrated effective during fault isolation but it requires that the normal system scanning be interrupted during its use. The comments relative to scanning rate did not apply to the SSFSS which was shown effective in detecting a loss of service condition and reporting it to the technical controller within 4 seconds regardless of the number of sites under nodal control jurisdiction.

The nodal control concept which would enable a single nodal controller to accomplish PA/FI/TA on a multiple site configuration was confirmed by the system scenario test results. The test results demonstrated the adequacy of the software in accomplishing all system objectives. Also demonstrated was the ease of software maintainability and field modifications afforded by the DATEC software program modularity and top-down structured programming design.

Equipment logs attest to the overall DATEC system reliability and performance. Hardware down time remained less than one day, cumulative, throughout the three month test period ending 30 June. Additional down time was experienced during the add-on testing due to a Caelus Disk problem.

The usefulness of the BEM and EPUT at providing a measure of the system bit error rate was demonstrated during the system scenario testing and the add-on testing. The BEM ability to provide a measure of the system BER to 10^{-15} was shown to be an effective performance assessment measurement which permits a direct indication of system performance in a region previously unmeasurable by any other measuring instrument.

DATEC adaptability to other communications equipment types was successfully demonstrated by the test results from the validation and system scenario evaluation tests performed on the digital transmission system configured with the AVANTEK DR8A Microwave Radio in place of the AN/FRC-162(V) Microwave Radio.

7.3 RECOMMENDATIONS

The field test recommendations address those areas of system operation where the modification or addition of system operating features could add to the overall usefulness and effectiveness of the DATEC system. Additional testing is also recommended which would help answer remaining questions.

Table 7-1 contains the recommended system operating features and their usefulness in enhancing the DATEC system operation.

All of the recommendations listed in Table 7-1 can be accomplished. Many of them require only minor changes to the software. The most difficult is that of increasing the DATEC system scan rate, for this involves both hardware and software changes. Yet, even this is possible.

7.3.1 User Desired Features Not Currently Part of DATEC

The DATEC system S.O.W. and operating objectives addressed those areas judged necessary in performing PA/FI/TA on a digital transmission system. The technical controllers expressed an interest in other system features which were not a part of the DATEC system objectives; however, they represent user preferences and are therefore listed below. These features can be provided by software program additions and are not considered difficult although items 1, 2 and 3 would be somewhat complicated. The features not currently part of DATEC are:

1. Generation of DCA reports.
2. Circuit, digroup, link and trunk identification numbers with priorities.
3. Circuit altroute information.
4. Multiple CRTs for technical control and maintenance use.
5. Individual VF channel monitoring.
6. Long term (90 day) storage of hourly averages of key parameters.
7. Remote switching of standby radios and multiplexers.
(Recommended in the ATEC Digital Adaptation Study Report.)

TABLE 7-1. RECOMMENDED SYSTEM OPERATING FEATURES VERSUS USEFULNESS

<u>Recommended System Features</u>	<u>Usefulness</u>
1. Immediate scan interrupt capability	Allows the nodal controller to gain immediate DATEC system control. Currently, the in-process measurement is completed before the operator gets control.
2. Colocate SSFSS and CRT	System testing confirmed the need to colocate the SSFSS and CRT in order to provide timely, effective system monitoring.
3. Increase system scan rate	Provides more effective usage of system during fault isolation by allowing the system to remain in normal scan instead of going to Monitor Immediate for parameter updates.
4. Update CRT display with a single computer output	Speeds up CRT output display time to an average of 10 seconds per display type, a factor of two improvement over the current method which outputs display formats and data separately.
5. CRT Paging within a single site	Allows the nodal controller to access various site displays using only a single page number.
6. Provide automatic DATEC self-test	Incorporation of a system self-test routine at the end of a scan could minimize DATEC system down time due to faulty DATEC equipment. Current system has self-test by operator command.
7. Telemetry reroute capability	The capability to reroute the telemetry through a 3 kHz channel could help eliminate telemetry down time during an emergency situation.

TABLE 7-1. RECOMMENDED SYSTEM OPERATING FEATURES VERSUS USEFULNESS (Continued)

<u>Recommended System Features</u>	<u>Usefulness</u>
8. Provide fast EPUT and BEM Hits counter time bases	Provides rapid update of FER and Hits during fault isolation testing using Monitor Immediate function.
9. Constructable Monitor Immediate scan sequence	Allows nodal controller to construct his own scan sequence.
10. Add display type argument to Monitor Immediate command	Allows nodal controller to select display type as part of Monitor Immediate command instead of current method which requires a separate display command.
11. Provide CRT indication of: (1) Monitor Immediate usage, (2) Baseband (A or B) being monitored by BEM	Alerts nodal controller that: (1) The system is out of normal scan mode, (2) BEM is connected to A or B Radio Baseband.
12. Show highest level system alarm as part of major alarm warning indicator	Notifies nodal controller of highest level fault in the system.
13. Add alarm scanner and TlWB1 FER commands to Monitor Immediate	Provides additional fault isolation capability to the nodal controller when using Monitor Immediate.
14. Add alarm thresholds to the key trend analysis parameters	Provides additional fault isolation information for system degradation analysis.

7.3.2 Recommendations For Future Consideration

Although the field test was successful in all areas explored, it left unanswered, several questions which only an extended operational field test could answer. Included among these are:

1. Long term trend analysis evaluation and usefulness
2. Technical controller/DATAC interface in an operational multilink environment
3. DATAC use and effectiveness in scheduling maintenance
4. Usefulness of correlatable parameters
5. Usefulness of existing fault isolation capability in an operational multilink environment.

The answers to these questions would provide valuable information for future system specifications and design.

Appendix A
EQUIPMENT DESCRIPTION

Appendix A

EQUIPMENT DESCRIPTION

A.1 GENERAL

DATEC consists of selected ATEC equipments adapted to monitor, measure, and analyze the quality of hybrid analog and PCM/TDM data signals. Basic functions are to convert the values of slowly varying dc signals to digital form, sense the status of two-state alarms in the monitored equipment, measure and analyze the signal/noise ratio, and amplitude levels. The DATEC equipment consists of a Test Set, Electronic Systems, AN/GYM-13(V)1, commonly referred to as a Programmable ATEC Element (PATE), configured for in-service voice frequency (ISVF) measurements; a Test Set Group, Communications Circuit, OQ-224(V), commonly referred to as a Measurement Acquisition Unit (MAU) with an adapted analog scanner and adapted baseband monitor option which is referred to as the Baseband Eye Monitor (BEM), and an Alarm-Monitor Group, OD-123(V)/G, commonly referred to as an Alarm Reporting Set (ARS). Input/output terminals supplement these configurations of the DATEC equipment.

A.2 PATE HARDWARE DESCRIPTION

The PATE, Figure A-1, used in conjunction with DATEC, is a computer controlled test set capable of providing continuous automatic performance monitoring and assessment of selected communication circuits. The PATE provides noninterfering, in-service monitoring and assessment of voice frequency (VF) circuits and inputs from digital data monitors. A functional block diagram of PATE is shown in Figure A-2. The PATE is operated in a stand-alone mode. The PATE consists of a standard 19-inch electronic equipment rack which contains a Rack Primary Power Panel, Scanner Power Supply, Scanner, Jack Panel, Signal Parameter Converter, an H-316R Computer, and a Disk Memory Unit. These units are described in the following paragraphs; also reference Figure A-2, PATE Functional Block Diagram.

A.2.1 Rack Primary Power Panel

The Primary Power Panel (Figure A-3) contains a circuit breaker which functions as the rack ON-OFF switch, a pilot lamp, and a set of ac line filters. The panel provides ac power distribution to PATE components by means of a terminal strip to which all other rack units are connected.

A.2.2 Scanner Power Supply

The Scanner Power Supply (Figure A-4) contains a regulated ± 5 vdc power supply which provides operating power for the Scanner

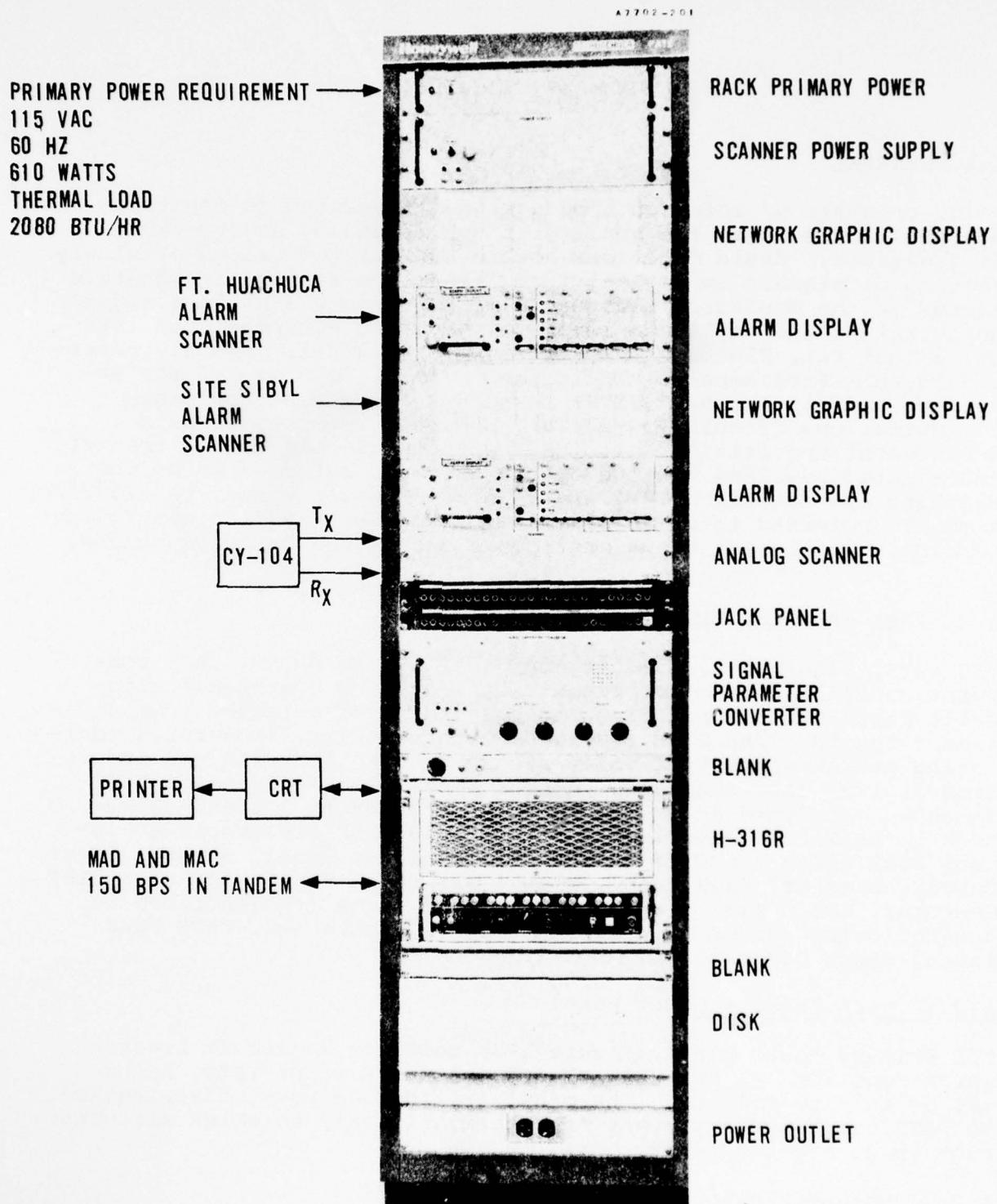


FIGURE A-1. PATE RACK ASSEMBLY, FORT HUACHUCA, ARIZONA

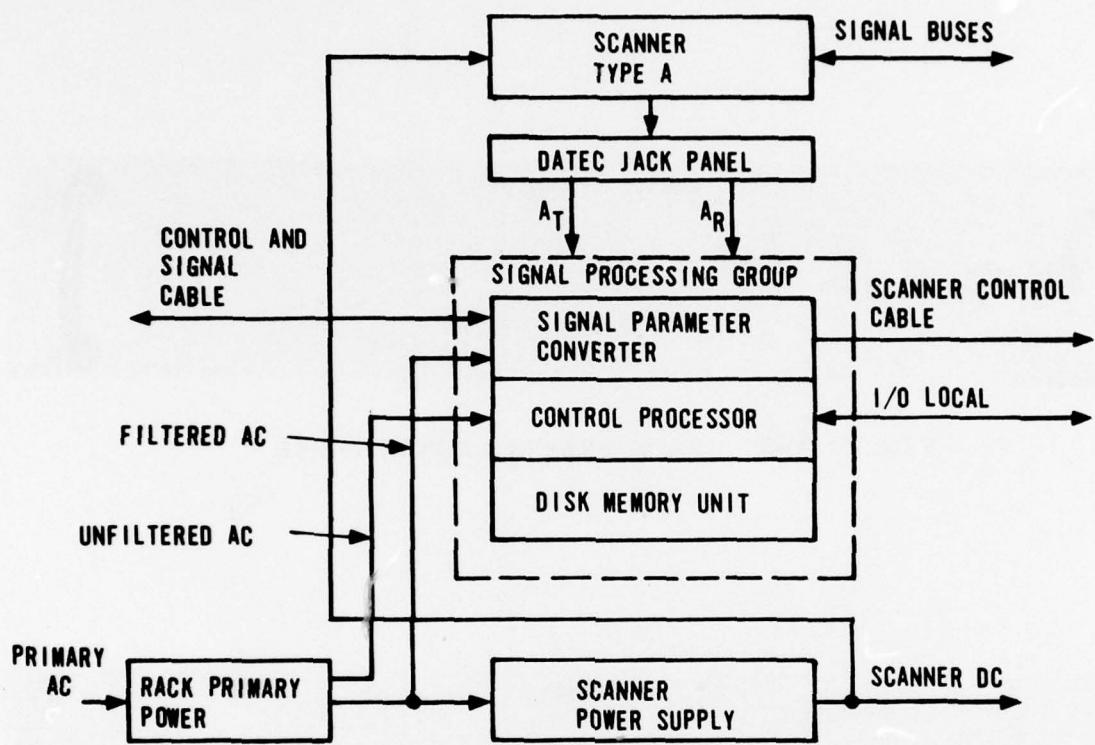


FIGURE A-2. PATE FUNCTIONAL BLOCK DIAGRAM

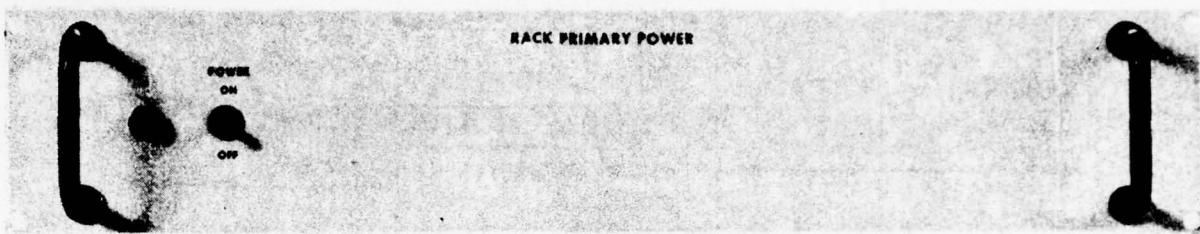


FIGURE A-3. RACK PRIMARY POWER PANEL

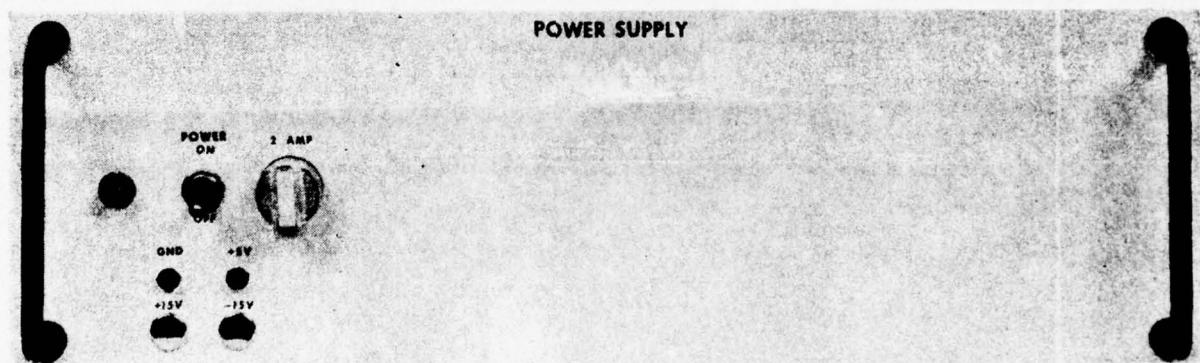


FIGURE A-4. SCANNER POWER SUPPLY PANEL

drawer. A POWER ON switch, 1-ampere fuse, and pilot light are mounted on the front panel. The pilot light indicates both the power ON condition and that the +5 vdc output is available.

A.2.3 Scanner

The Form A Scanner shown in Figure A-5 provides the interface between the communications circuits and the Signal Parameter Converter (SPC). At Fort Huachuca, the scanner is the Form A type.

The Scanner drawer contains one circuit control card, one address decode card, and 10 relay cards. A slot is provided for a scanner test card, one of which is provided with each PATE.

The Form A Scanner relay card has 11 relays. Ten relays are used to selectively switch data circuits to the SPC. The remaining relay functions as a fail-safe electronic switch to protect the data bus in the event of a relay failure. Collectively, the 10 circuit select relays provide the capability of scanning 100 two-wire Communication Circuit lines (half duplex) which are connected to the two scanner terminal blocks. Monitoring is performed in a noninterfering manner, using a high impedance bridge-on connection. Monitored points of the digital transmission system are automatically selected through these digitally controlled scanners by the PATE program software.

A.2.4 Jack Panel

The Jack Panel shown in Figure A-6 contains two rows of jacks (26 in each row), horizontally oriented, with the transmit functions on the top row and the receive functions on the bottom row. It is used to perform PATE maintenance functions and to manually access and monitor internal data signals and control lines, external data signals and PATE-generated test tones without disturbing circuit configuration or interrupting service.

A.2.5 Signal Parameter Converter (SPC)

The Signal Parameter Converter (Figure A-7) converts monitored channel information to a 16-bit digital word to be transferred to the H-316R computer via an input/output bus. The SPC contains control, measurement, and conversion logic to interface the computer with the MAC, MAD or other selected communication circuits under test. A regulated ± 15 vdc power supply furnishes voltage for lamp drivers, relay driver, operational amplifiers, and other control functions. A regulated +5 vdc power supply furnishes logic level voltages. The power supplies are protected against over-load and short circuits by current limiting circuits in the output stages and against internal component failure by an internal fuse.

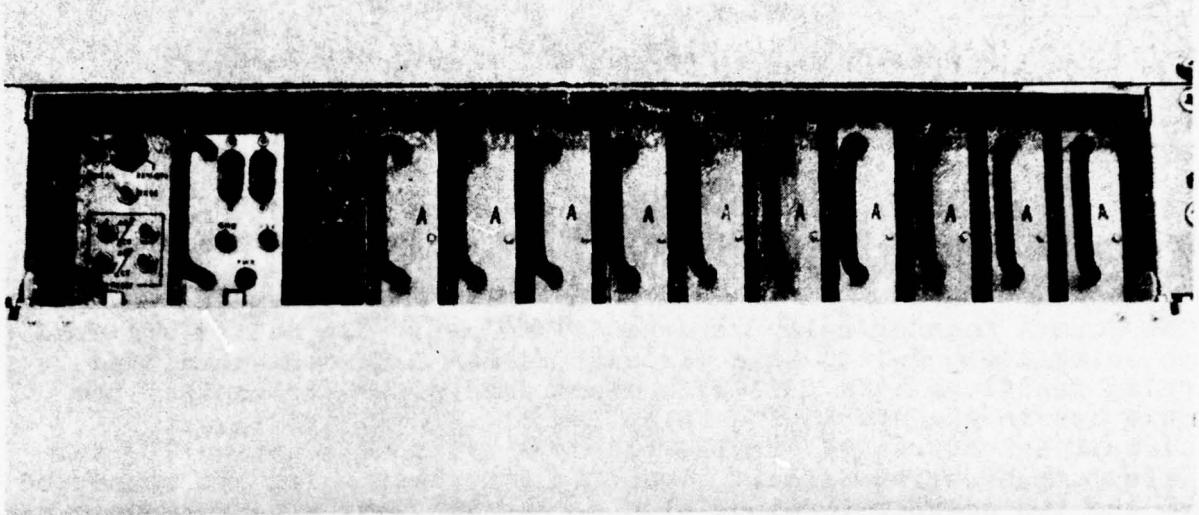


FIGURE A-5. ANALOG SCANNER, FORM A

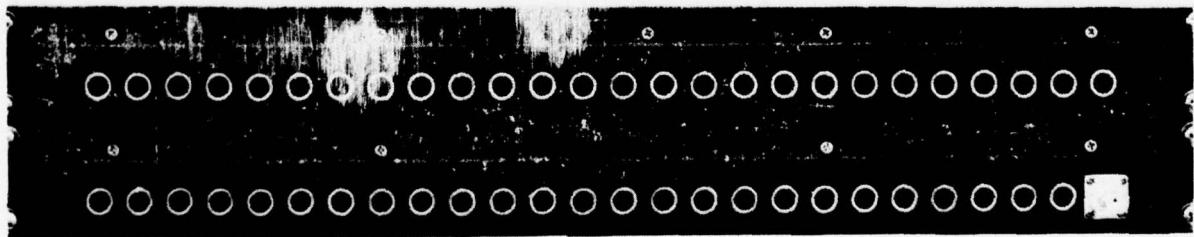


FIGURE A-6. JACK PANEL

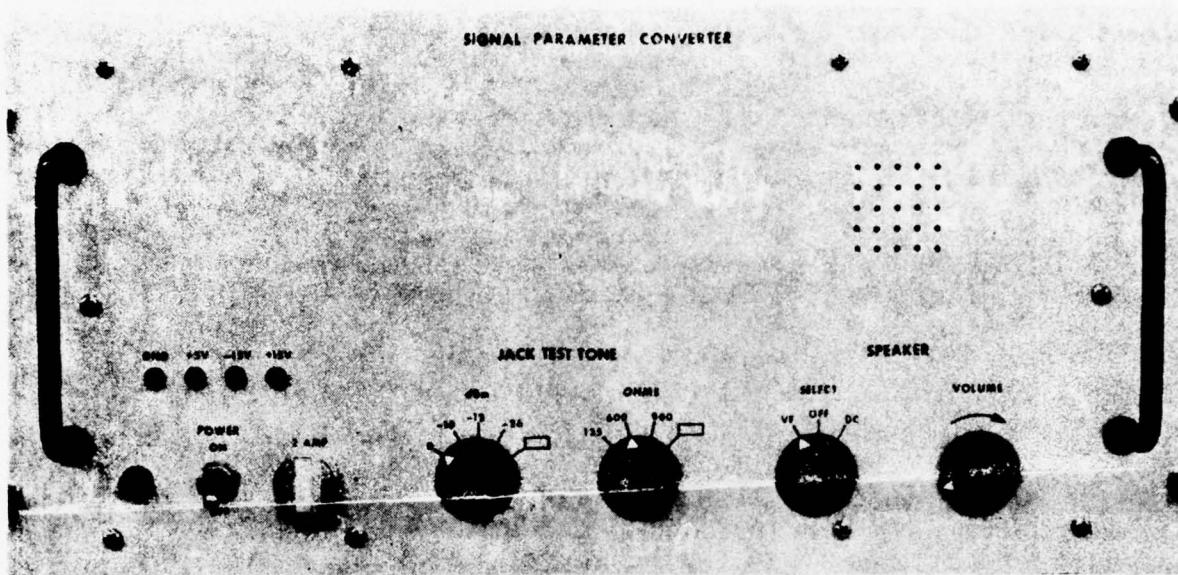


FIGURE A-7. SIGNAL PARAMETER CONVERTER

The SPC drawer also contains input protection circuits to prevent damage from lightning surges, hits on the data lines or from incorrect signals applied through the Jack Panel. The input protection circuits consist of a fused line plus a lightning arrestor.

A.2.6 H-316R Computer

The PATE operating program including the measurement parameters and operating thresholds, etc., are called up from the disk by the H-316R Computer as required to satisfy the functions commanded. Operating switches and displays are located on the computer front panel (Figure A-8). A key lock switch prevents unauthorized operation or manipulation of the logic functions. The computer comes equipped with a 16K core memory stack, high speed arithmetic package, real time clock, auto restart, and base sector relocation capability. The computer input/output (I/O) serial port operates at 1200 Baud. The I/O buffers are compatible with RS-232-C code. The PATE program can be operated either automatically or as an interrupt program through use of a local input/output (I/O) terminal.

A.2.7 Disk Memory Unit

The Disk Memory Unit (DMU) shown in Figure A-9 is a dual, disk cartridge, servo controlled, drive unit and head positioner with one fixed and one removable cartridge. Each cartridge records at 2200 bits per inch (BPI), and has a 48-megabit storage capacity. Each cartridge has two surfaces, providing a total of four surfaces for each disk unit. However, the cartridges are redundant. The DMU provides a total storage capacity of approximately 2.5 megawords of 16 bits each. The DMU is contained in its own enclosure and is suitable for installation in a standard 19-inch electronics equipment rack. A self-contained regulated power supply furnishes all required power supply voltages.

A.3 MEASUREMENT ACQUISITION UNIT (MAU) HARDWARE DESCRIPTION

The Measurement Acquisition Unit consists of power supplies, a Form A Scanner modified to include an events per unit time (EPUT) function, Jack Panel, and the Measurement Acquisition Control (MAC). A functional diagram of the MAU is shown in Figure A-10.

A.3.1 Power Supplies

The Scanner power supplies (2) and the MAC power supplies (2) used in the MAU operate as constant voltage sources and are modular portions of the MAU. Short circuiting of any of the power supply output circuits will not cause failure or permanent damage in the power supply or associated circuitry.

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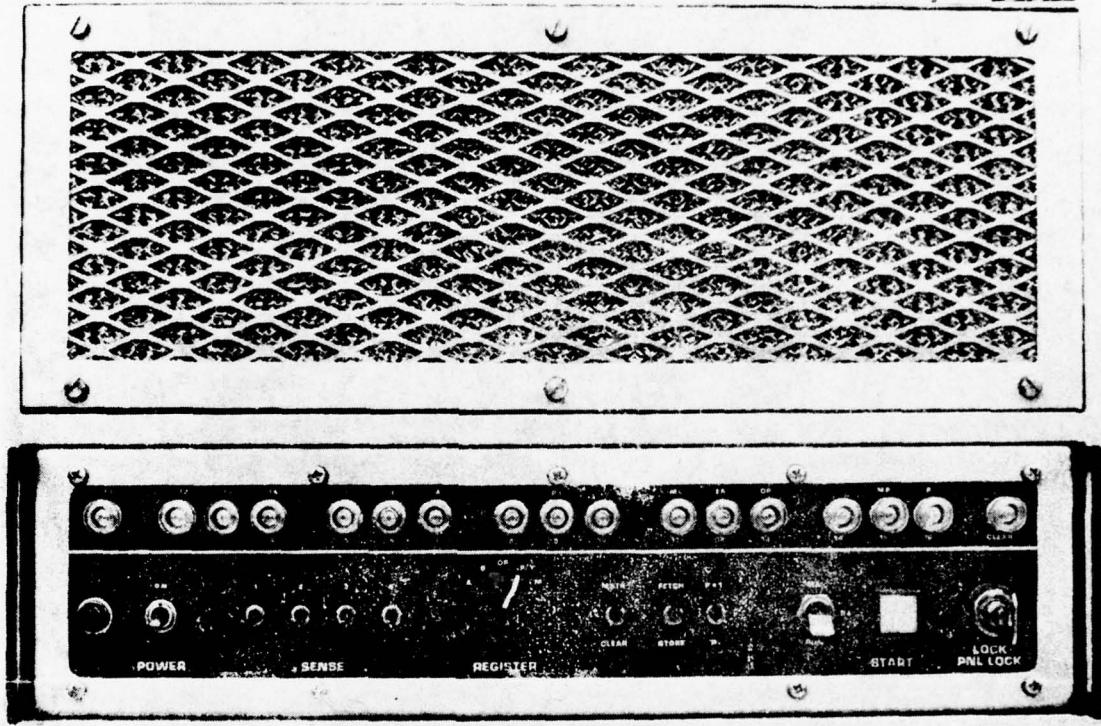


FIGURE A-8. H-316R COMPUTER

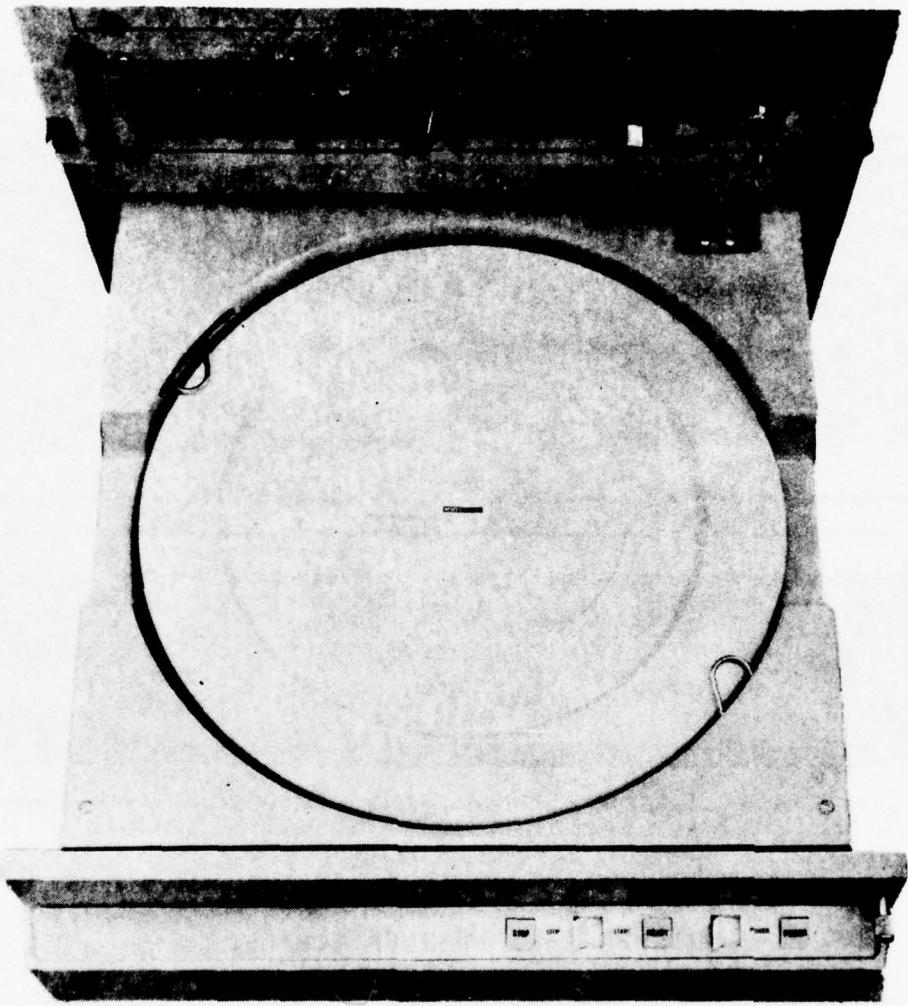


FIGURE A-9. DISK MEMORY UNIT

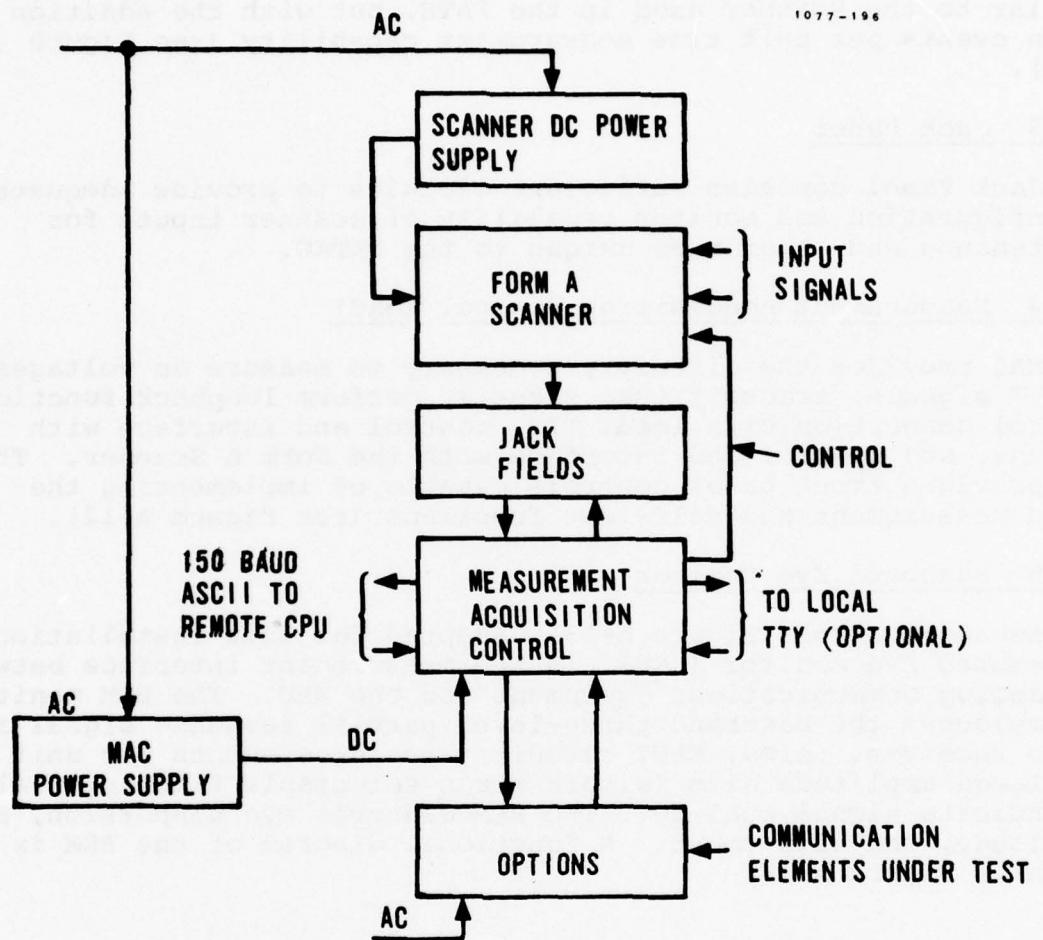


FIGURE A-10. MEASUREMENT ACQUISITION UNIT FUNCTIONAL DIAGRAM

A.3.2 Scanner

The Scanner is equipped with Form A plug-in relay cards and is similar to the Scanner used in the PATE, but with the addition of an events per unit time measurement capability (see Figure A-11).

A.3.3 Jack Panel

The Jack Panel contains sufficient circuits to provide adequate reconfiguration and monitor capability of scanner inputs for maintenance and other uses unique to the DATEC.

A.3.4 Measurement Acquisition Control (MAC)

The MAC provides the circuitry necessary to measure dc voltages and VF signals, transmit test signals, perform loopback functions, control connection of a local TTY, control and interface with options, and control and interface with the Form A Scanner. The MAC provides front panel controls capable of implementing the basic measurement and self-test functions (see Figure A-12).

A.3.5 Baseband Eye Monitor

A Baseband Monitor (Figure A-13), adapted for this installation as a Baseband Eye Monitor (BEM), is the measurement interface between the analog communications equipment and the MAU. The BEM monitors and measures the baseband three-level partial response signal at a radio receiver. Also, EPUT circuitry measures events per unit time and large amplitude hits (within strap selectable time intervals) to indicate signal quality. The BEM measures eye dispersion, eye amplitude, and hits count. A functional diagram of the BEM is shown in Figure A-14.

A.4 ALARM REPORTING SET (ARS) HARDWARE DESCRIPTION

The Alarm Reporting Set consists of the Alarm Scanner, Alarm Display, and the Master Alarm Display (MAD) used in various quantities depending on the individual installation. The Alarm Scanner can stand alone and be used as a local alarm sensor and display. If a remote display is desired, an Alarm Display can be used, driven by the Alarm Scanner. An Alarm Display can also be used with a MAD to select and display alarms from as many as 10 remote Alarm Scanners. A functional diagram of the ARS is shown in Figure A-15.

A.4.1 Alarm Scanner

The Alarm Scanner (Figure A-16) provides the circuitry necessary to scan, detect, and display two-state alarm information; the capability for alarm acknowledgement; and the capability for self-test. The Alarm Scanner provides for connection to an Alarm Display and/or a MAD.

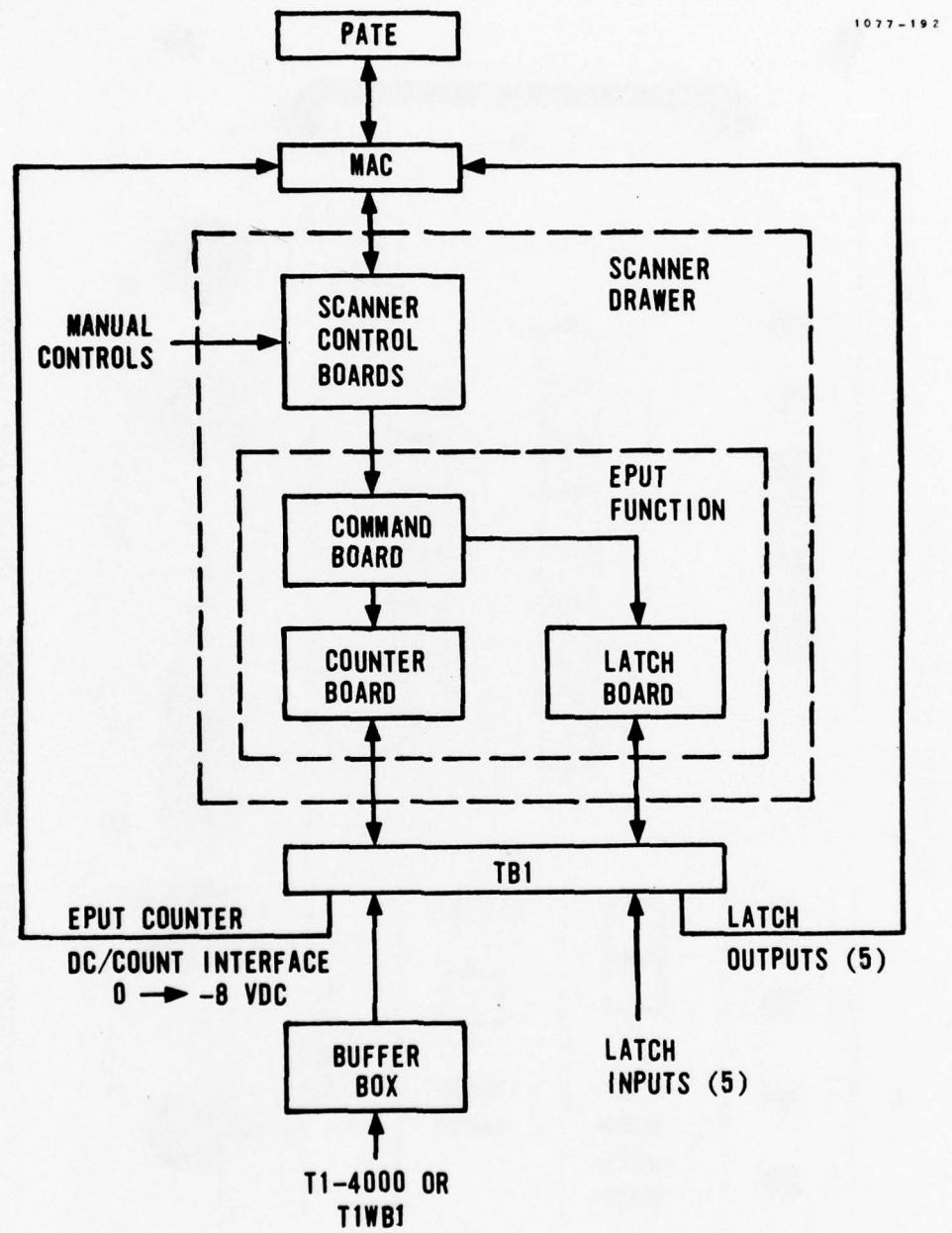


FIGURE A-11. BLOCK DIAGRAM OF SCANNER
WITH EPUT FUNCTION

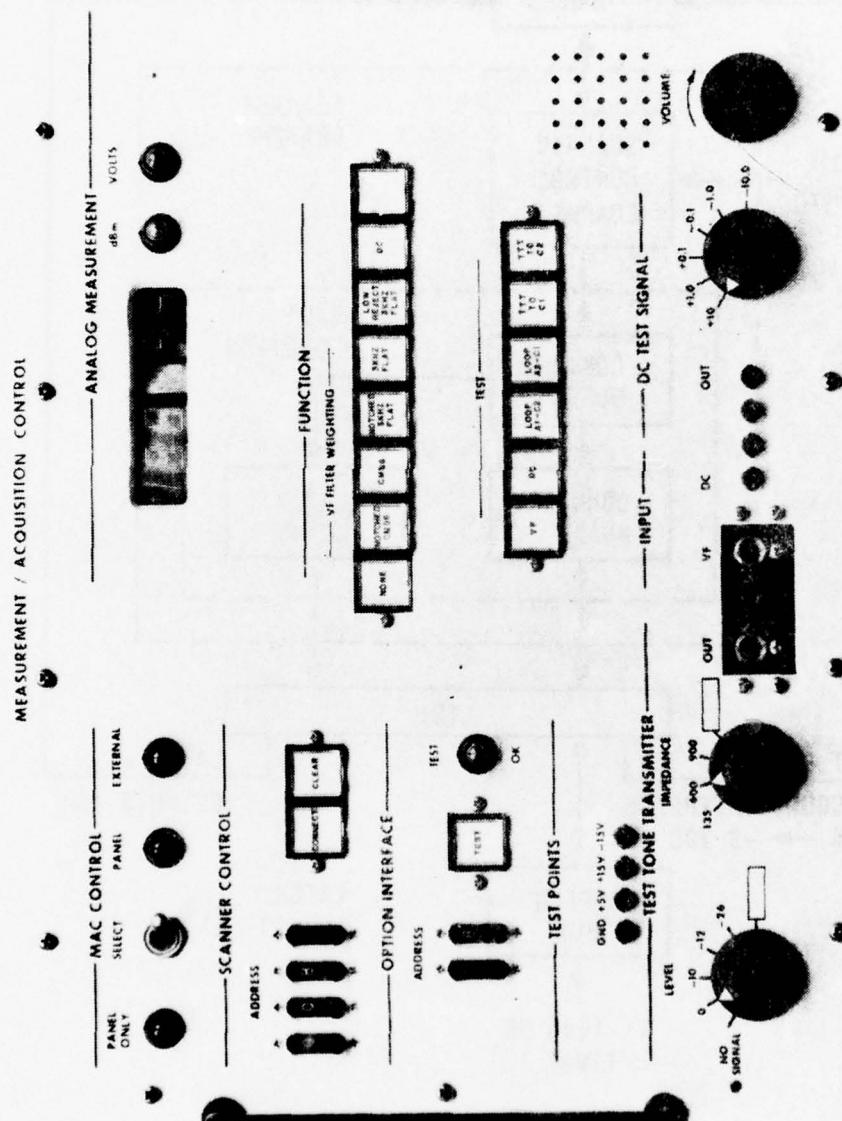


FIGURE A-12. MEASUREMENT ACQUISITION CONTROL

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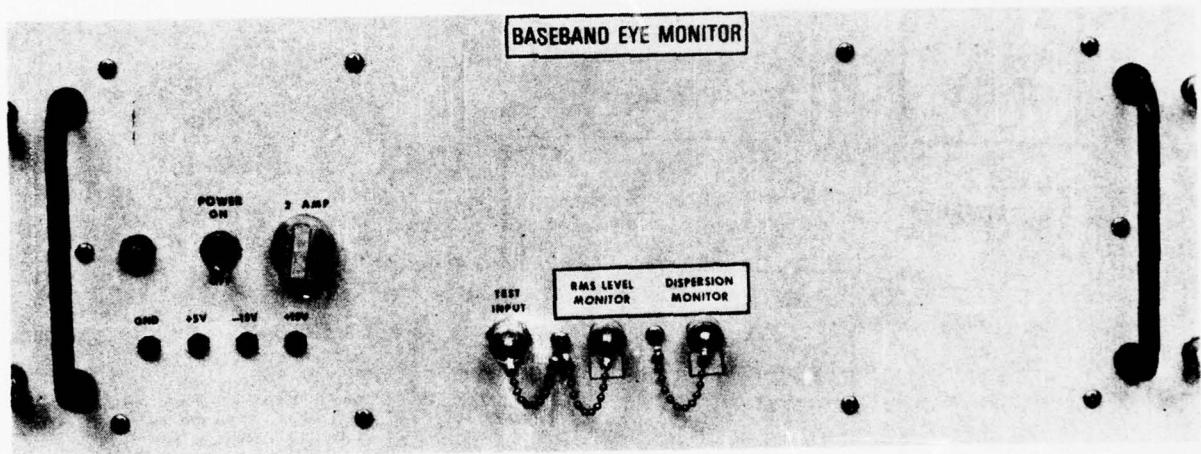


FIGURE A-13. BASEBAND EYE MONITOR

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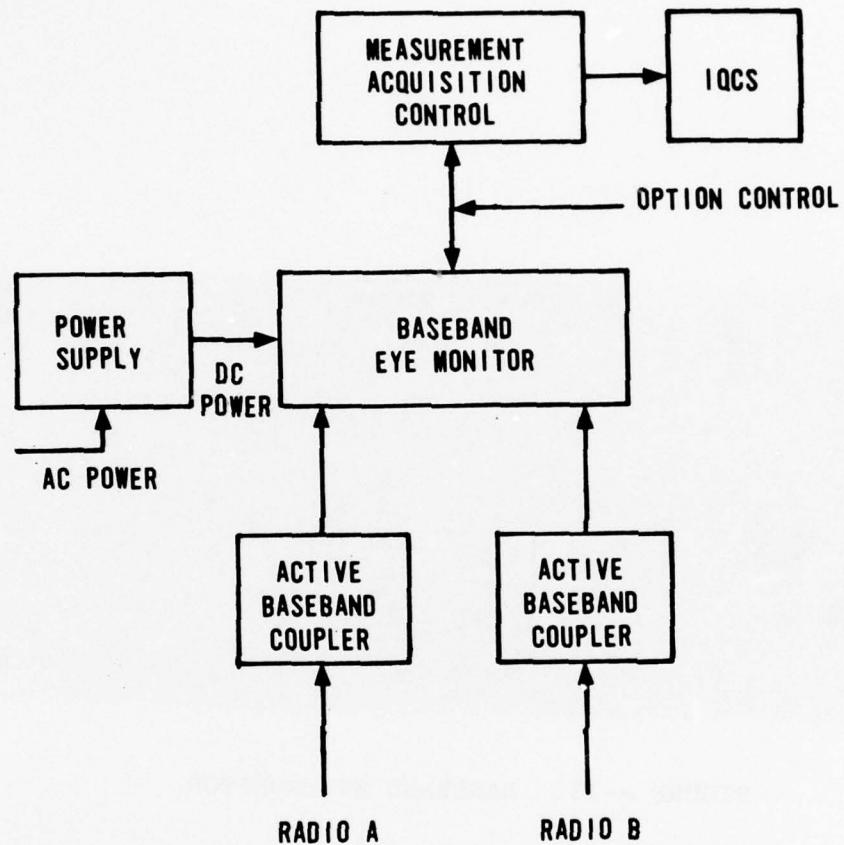


FIGURE A-14. BASEBAND EYE MONITOR FUNCTIONAL DIAGRAM

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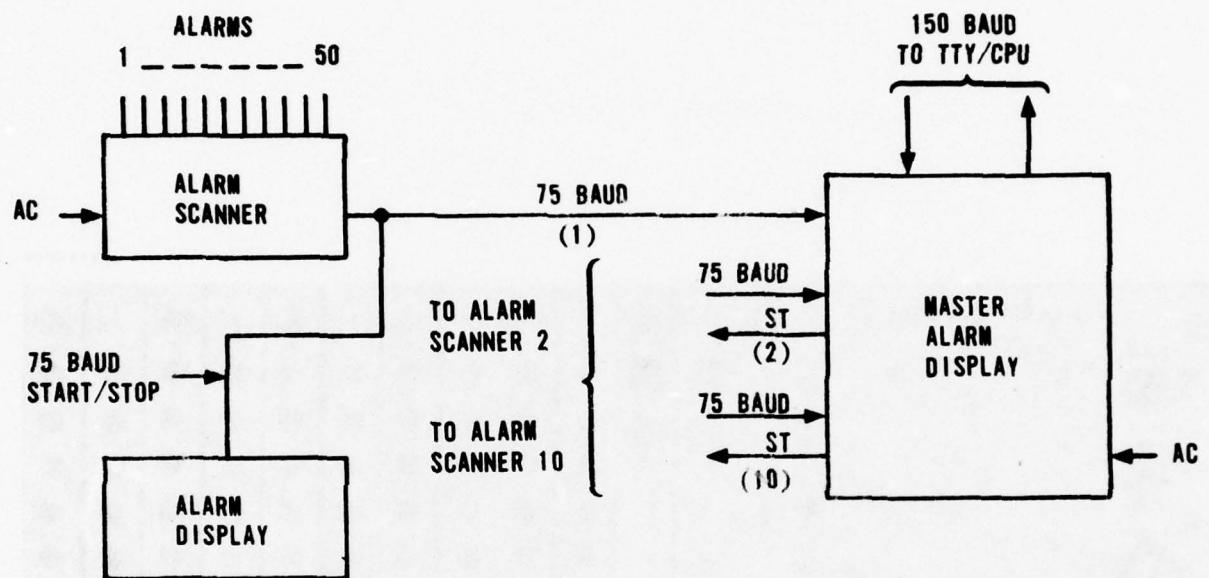


FIGURE A-15. ALARM REPORTING SET FUNCTIONAL DIAGRAM

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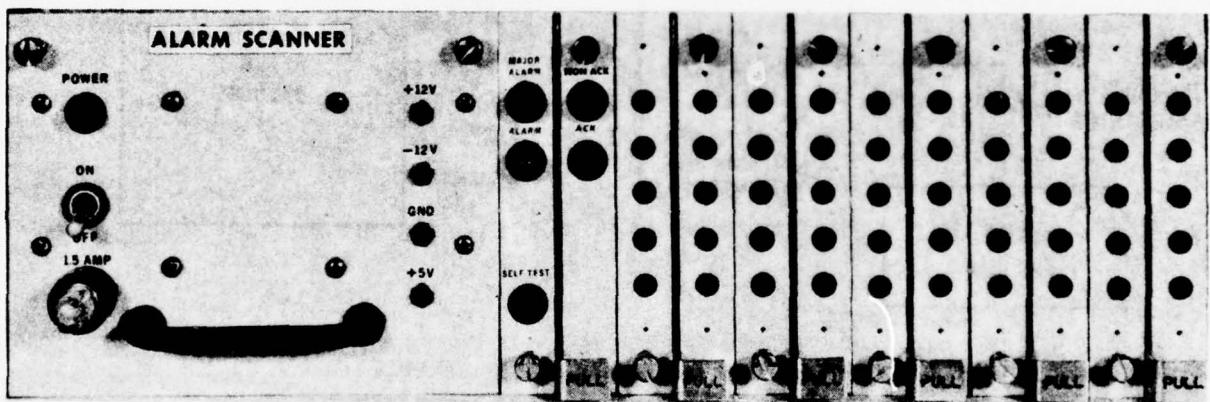


FIGURE A-16. ALARM SCANNER

A.4.2 Alarm Display

The Alarm Display (Figure A-17) provides the circuitry necessary to display alarm states detected by the Alarm Scanner, the capability for alarm acknowledgement, and the capability of self-test. The Alarm Display can be connected to either an Alarm Scanner or a MAD.

A.4.3 Master Alarm Display (MAD)

The MAD (Figure A-18) provides the circuitry necessary to interface with up to 10 Alarm Scanners and display major alarm, any alarm, and alarm nonacknowledged status. The MAD, in conjunction with an Alarm Display, is also capable of displaying the alarm states of a selected Alarm Scanner. The MAD provides the 150 Baud ASCII interface to the modem.

A.5 MODEM

The Modem (Figure A-19) serves as a variable data rate multiplex interface between DATEC and AN/FRC-162 Transceiver. In the transmit direction, the 75 and 150 Bps DATA outputs are summed, frequency-shift key modulated, and translated to 7140 Hz for input to the supervisory orderwire channel of the AN/FRC-162. In receive direction, the orderwire channel output is translated to data rates and selectively filtered for DATEC input.

A.6 PATE SOFTWARE DESCRIPTION

The software package controlling the PATE is divided into system operating and application sets. The system operating set contains the program executive which schedules which and when each application task is to be performed. The application set contains the IQCS modules. The modules perform the appropriate calculations and analyses required for each function.

A.7 OTHER EQUIPMENT

The I/O devices used with DATEC are an ADDS Model 980 CRT Display and Keyboard. It provides 24 lines at 80 characters per line. It provides editing, tab, erase, and insert controls for both individual characters or entire lines. In addition, a General Electric TermiNet 1200B ASR consisting of a printer, keyboard, and paper tape reader/punch as shown in Figure A-20 is utilized to provide hard copy prints of the CRT display and to punch paper tape(s) as needed for inputting data into the DATEC.

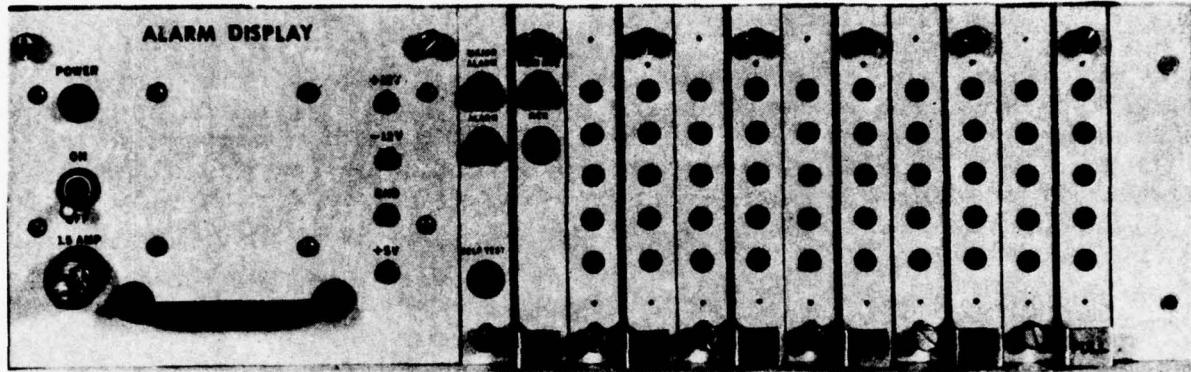


FIGURE A-17. ALARM DISPLAY

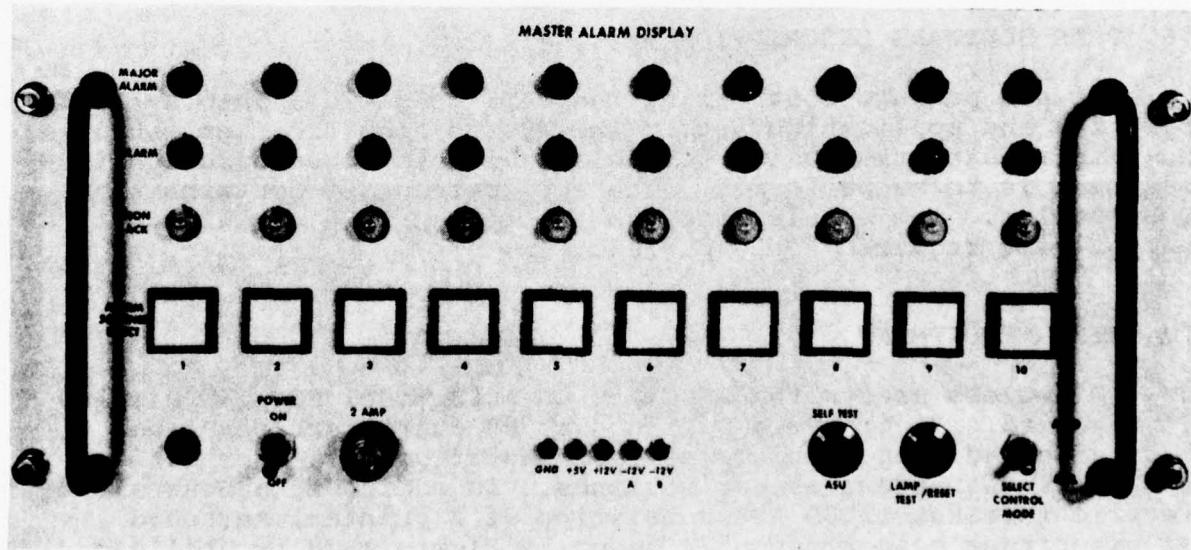


FIGURE A-18. MASTER ALARM DISPLAY

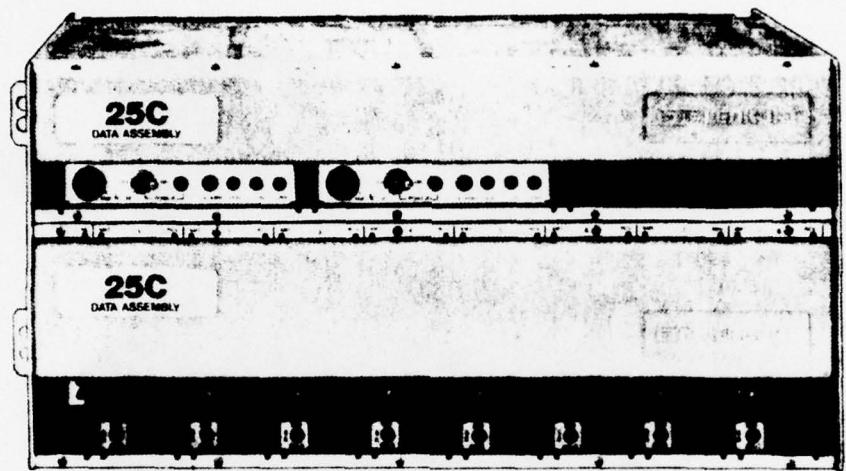


FIGURE A-19. DATA MODEM

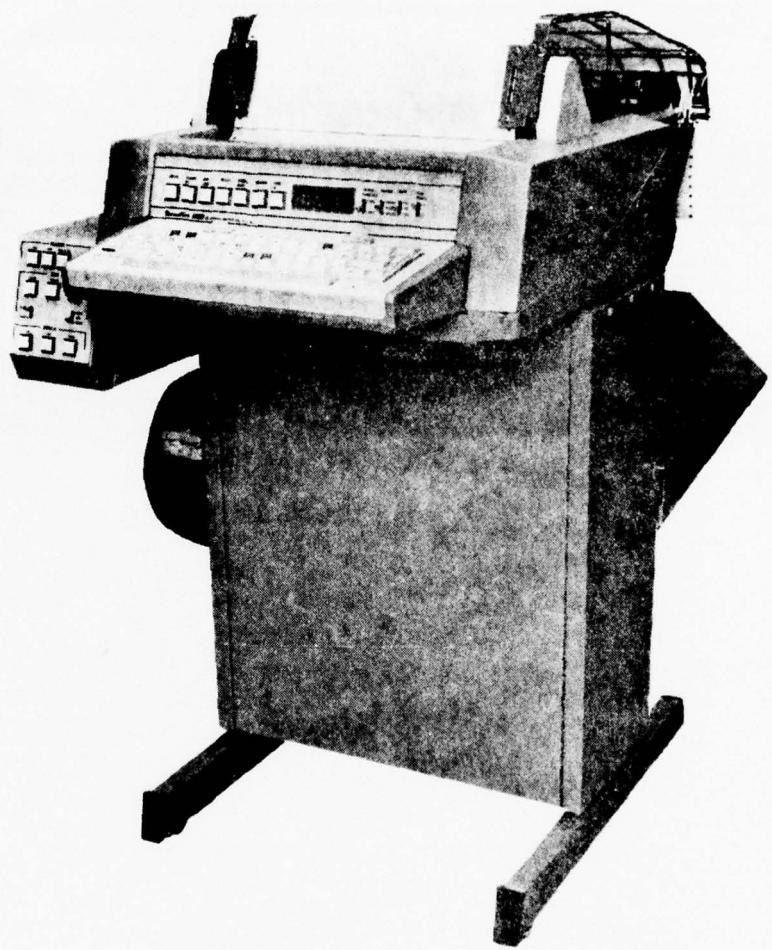


FIGURE A-20. TERMINET 1200 ASR

A.7.1 Printer

The Keyboard Send Receive (KSR) Printer has a keyboard similar to a standard office typewriter. The printer can print and transmit information generated locally by the keyboard or paper tape reader. It can receive information from a remote device (e.g., computer or other communication device) utilizing ASCII. All of the 94 printable ASCII characters can be printed.

The Printer is equipped with the following features:

- a. Rate - switch selectable at 15 (LOW), 30 (MED), and 120 (HI) characters per second. For DATEC, the rate is set at HI (i.e., 1200 Baud).
- b. Horizontal Tabulation
- c. Vertical Format Unit (VFU)

A.7.2 Pedestal

The pedestal provides a stable, compact support structure for the TermiNet 1200B Printer and accessories. The paper tape reader and punch are mounted on the left side of the pedestal. The reader and punch power supply and control assembly are mounted within the pedestal and the Reader and Punch Control (R&PC) card is installed in the Printer. The photoelectric tape reader can read and send characters at any rate selected by the Printer "RATE" select switch. The solenoid driver, paper tape punch is capable of operating at a maximum of 30 characters per second with the rate determined by the Printer "RATE" select switch.

A.8 BASEBAND EYE MONITOR (BEM) SCHEMATICS

The 14 figures following present the detailed schematics of the BEM.

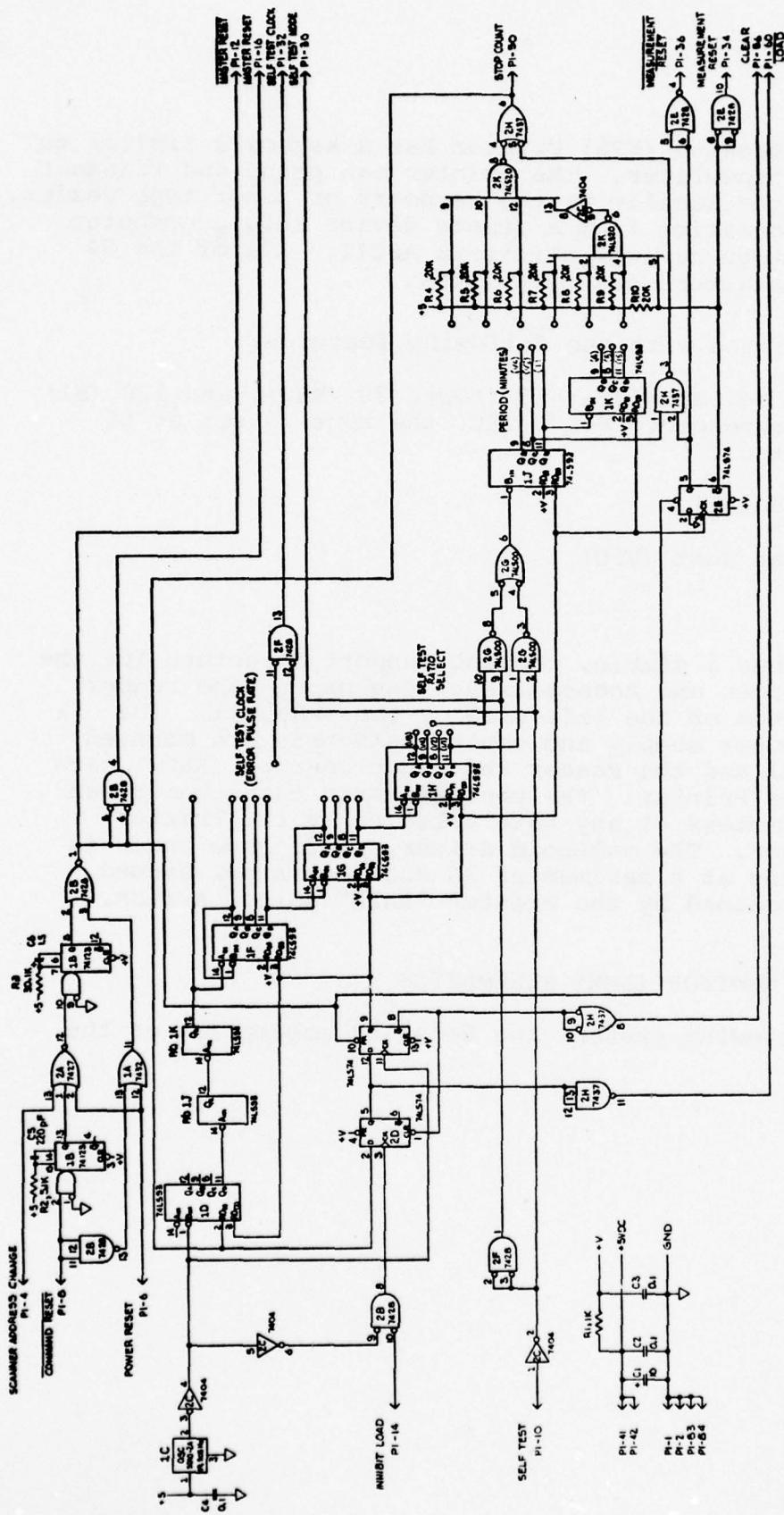
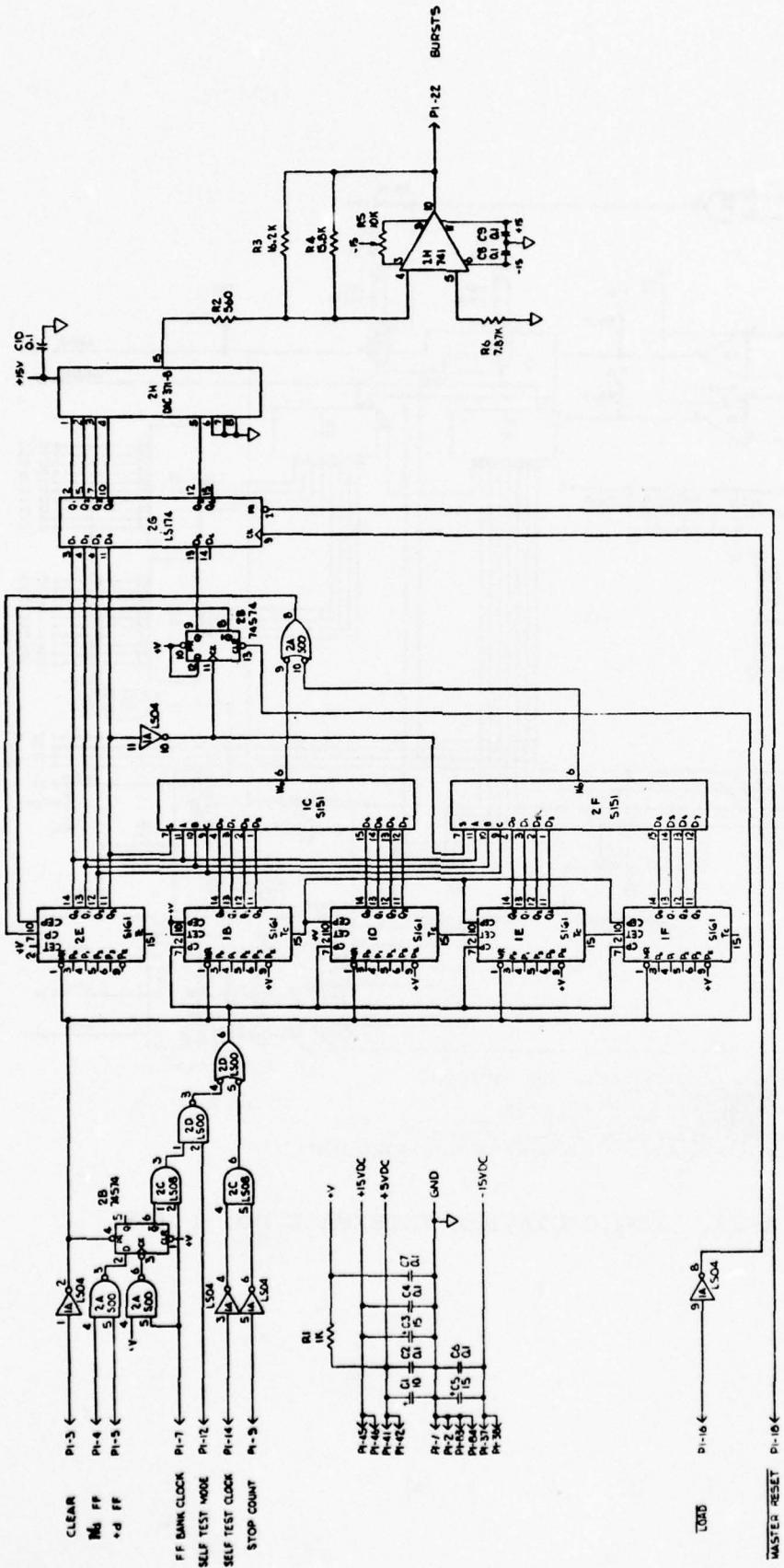


FIGURE A-21. LOGIC DIAGRAM EPUT TIME BASE (A1)

1. UNLESS OTHERWISE SPECIFIED:
 PIN 5 IS PWR & PIN 15 IS GND ON 1D, 1F, 1G, 1H, 1J, 1K
 PIN 6 & PIN 8 IS GND ON 1B,
 PIN 14 IS PWR & PIN 7 IS GND ON 1A, 2A, 2B, 2C, 2E, 2F
 RESISTOR VALUES ARE IN OHMS
 CAPACITOR VALUES ARE IN MICROFARADS



A-25

1 - UNLESS OTHERWISE SPECIFIED:
 PIN 6 IS PNP & PIN 8 IS NPN ON 1B, IC, ICIE, IF, 2E, 2F, 2G, 2H
 PIN 14 IS PNP & PIN 7 IS NPN ON 1A, 2A, 2B, 2C, 2D
 CAPACITOR VALUES - μ F IN MICROFARADS
 RESISTOR VALUES ARE IN OHMS

FIGURE A-22. LOGIC DIAGRAM EPUT COUNTER (A2)

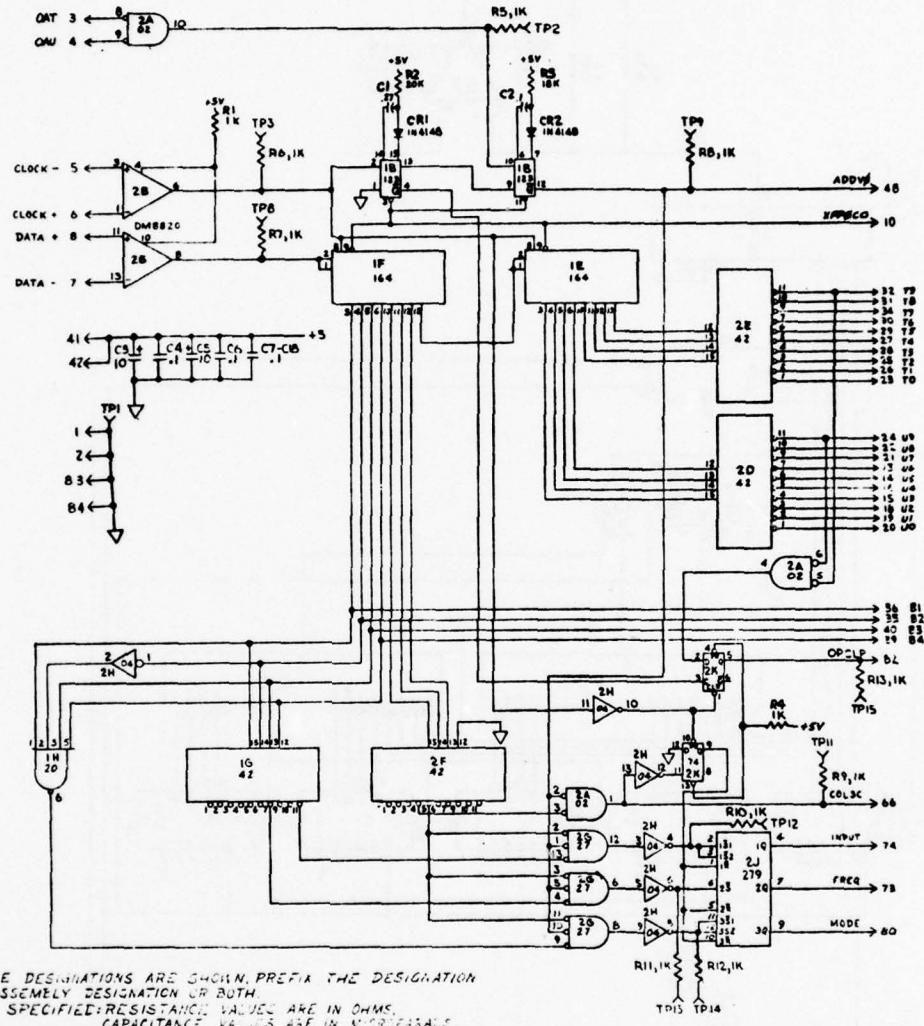


FIGURE A-23. LOGIC DIAGRAM INTERFACE NO. 1 (A3)

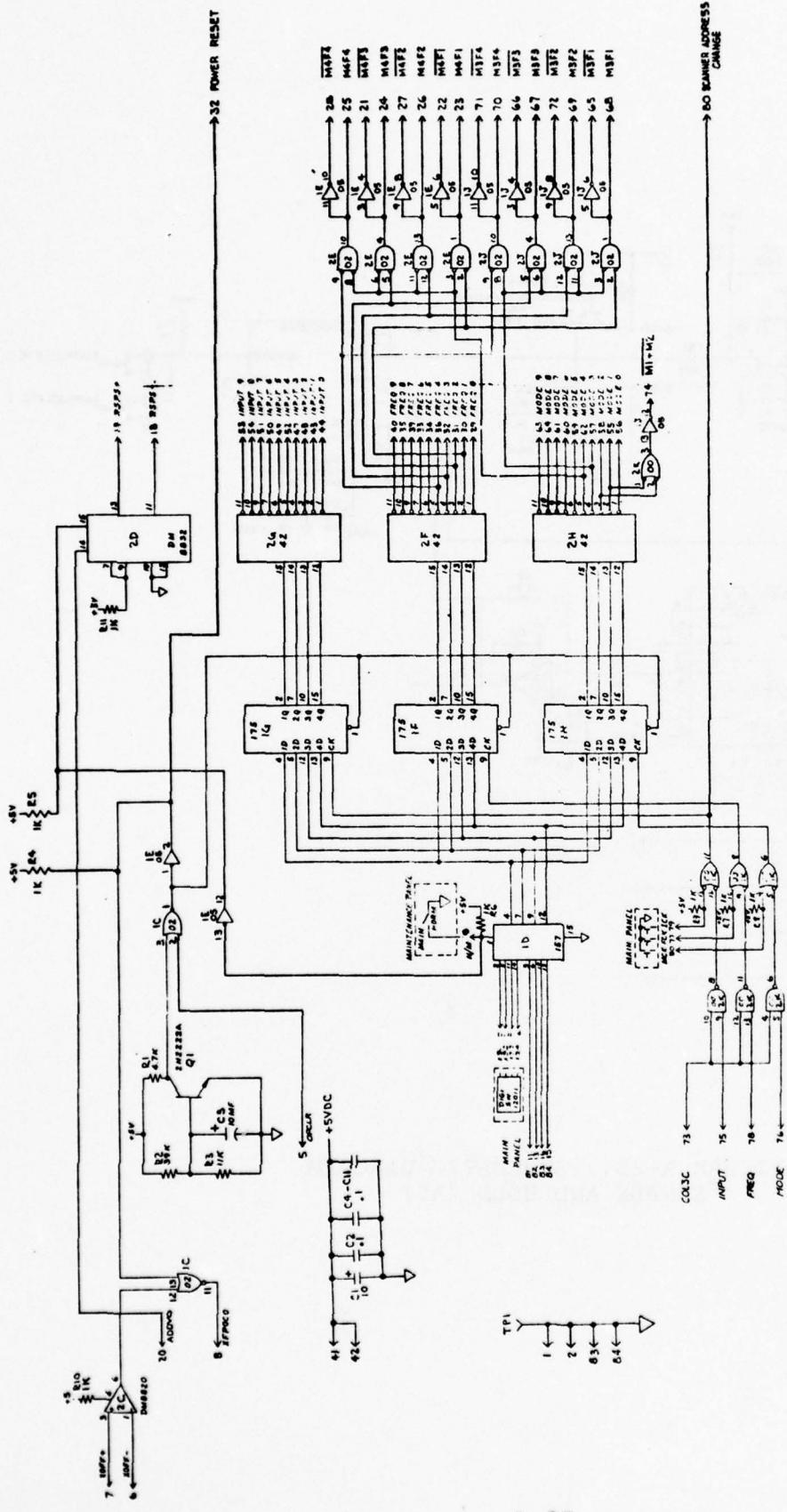
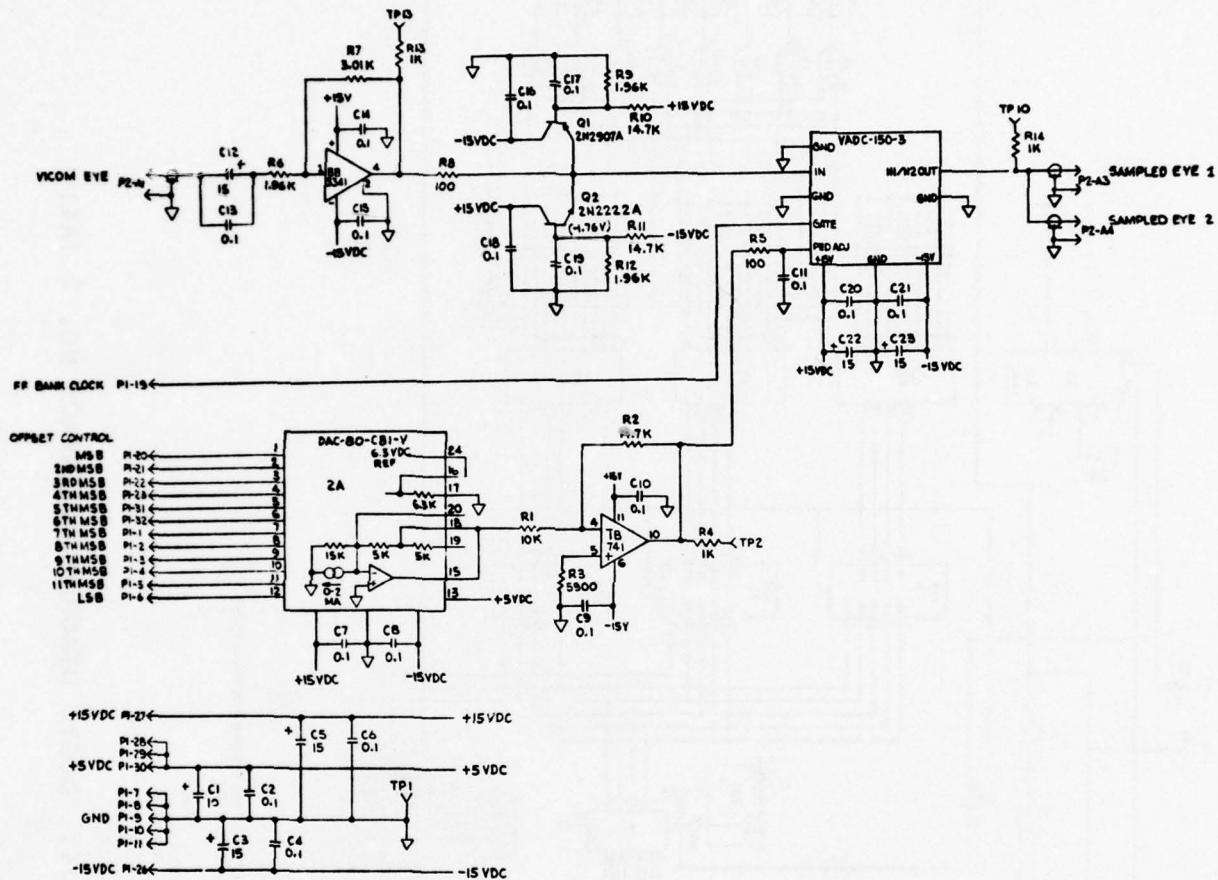


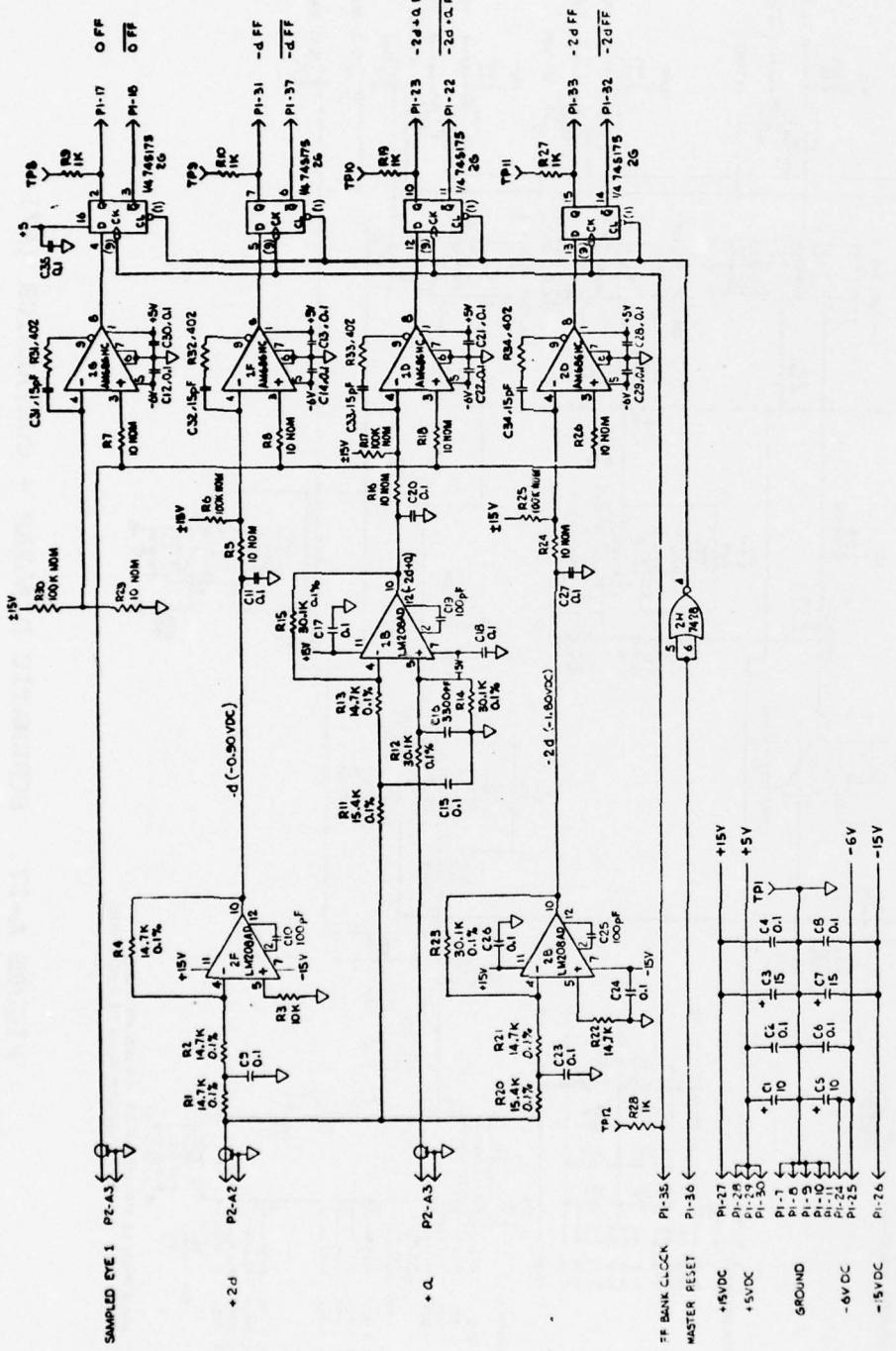
FIGURE A-24. LOGIC DIAGRAM INTERFACE NO. 2 (A4)

K2C2E2K923 PIN 1 IS GND AND PIN 14 IS V_S
4-ALLIC'S PIN 8 IS GND AND PIN 16 IS V_S EXCEPT IC16 IC18 IC19
3-SERTIAL'S PIN 1 IS GND AND PIN 14 IS V_S EXCEPT IC16 IC18 IC19
2-UCCS' TEPHA JE SYSTEM'S PIN 1 IS GND AND PIN 14 IS V_S
REFERENCE INTEGRATED CIRCUITS ARE SHOWN IN FIGURE 1.



1 - UNLESS OTHERWISE SPECIFIED:
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-25. SCHEMATIC DIAGRAM
SAMPLE AND HOLD (A5)

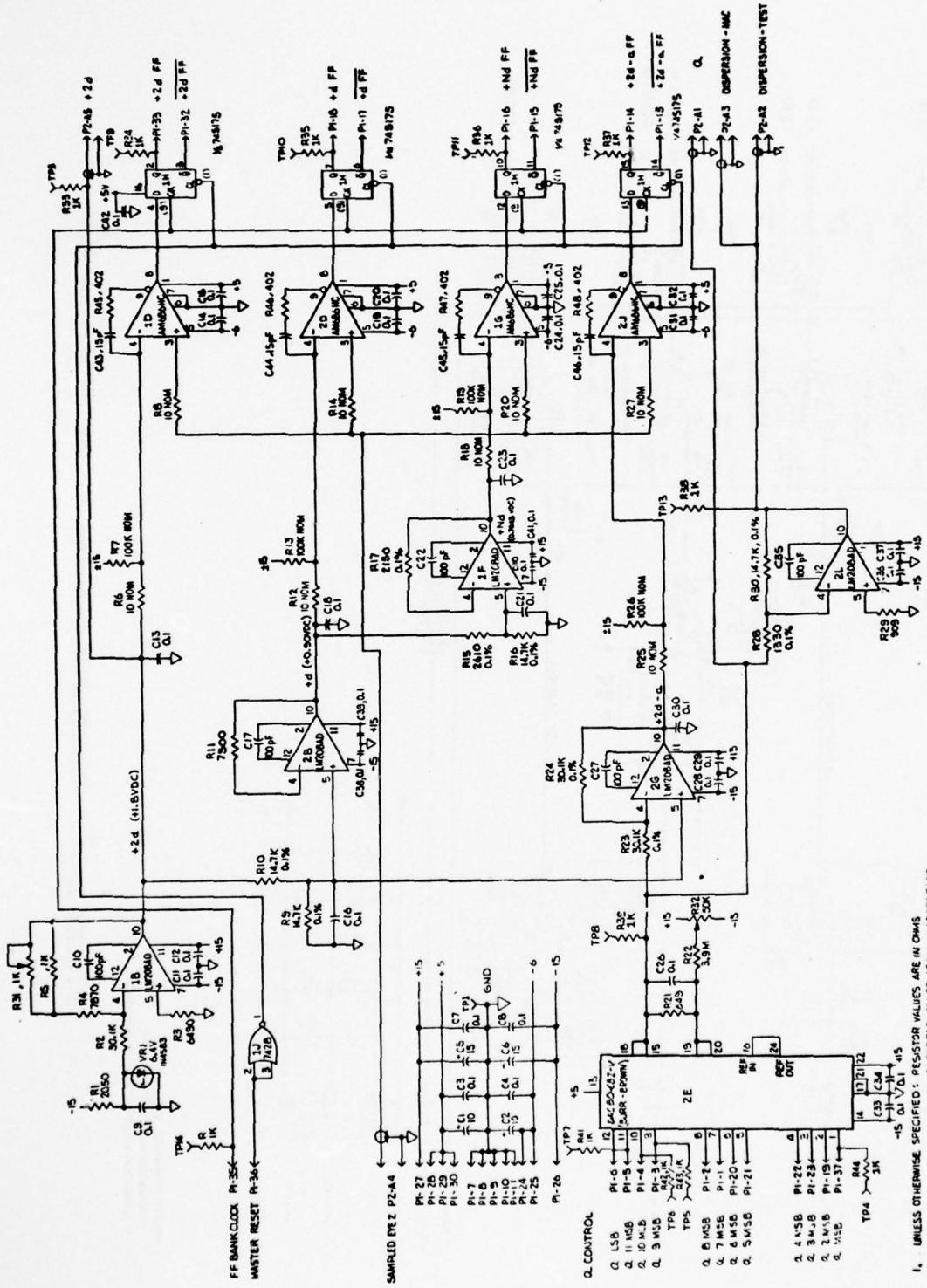


1 - UNLESS OTHERWISE SPECIFIED:
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-26. SCHEMATIC DIAGRAM - COMPARATOR (A6)

FIGURE A-27: SCHEMATIC DIAGRAM + COMPARATOR (A7)

1. UNLESS OTHERWISE SPECIFIED: RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS



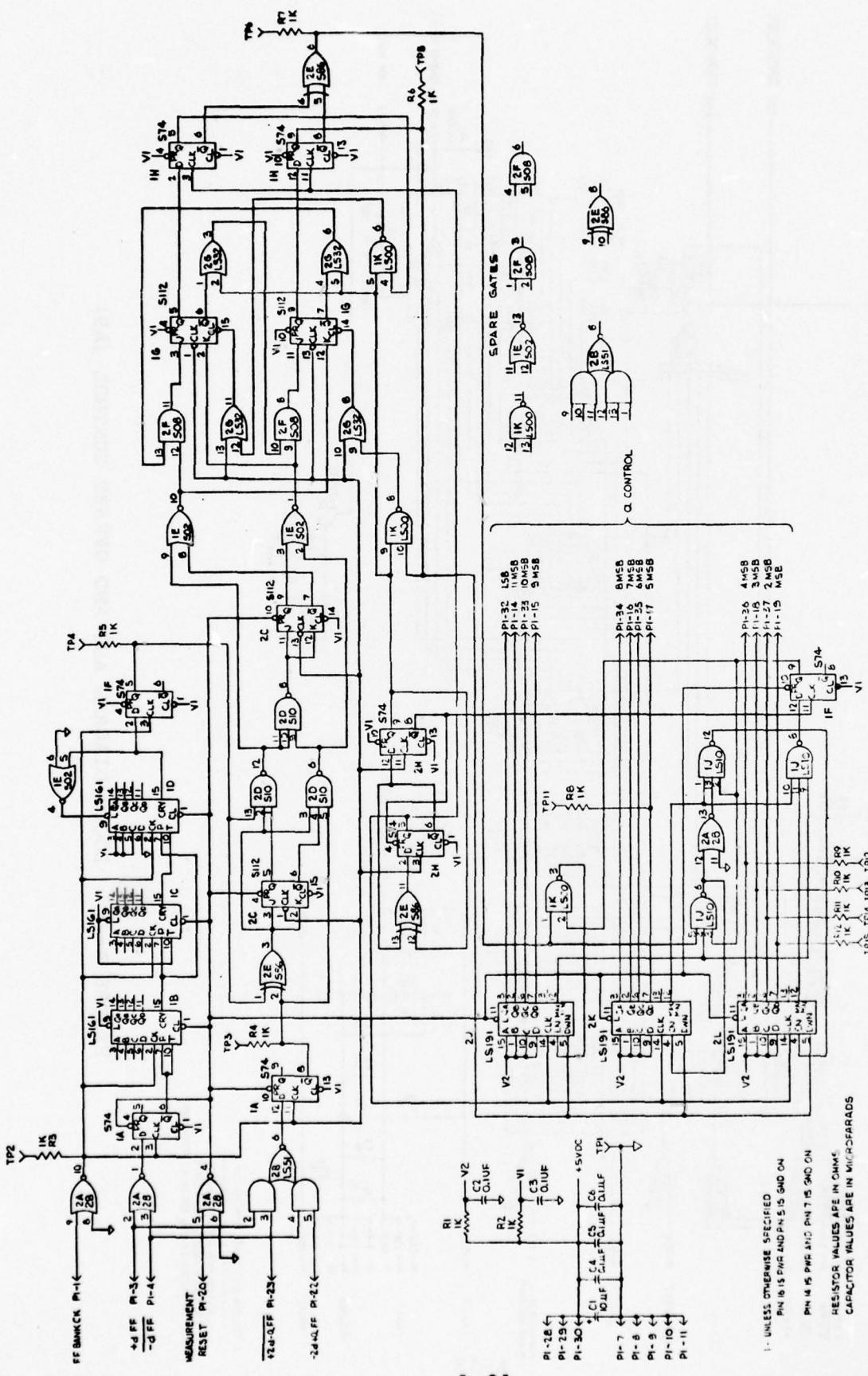


FIGURE A-28. LOGIC DIAGRAM a CONTROL (A8)

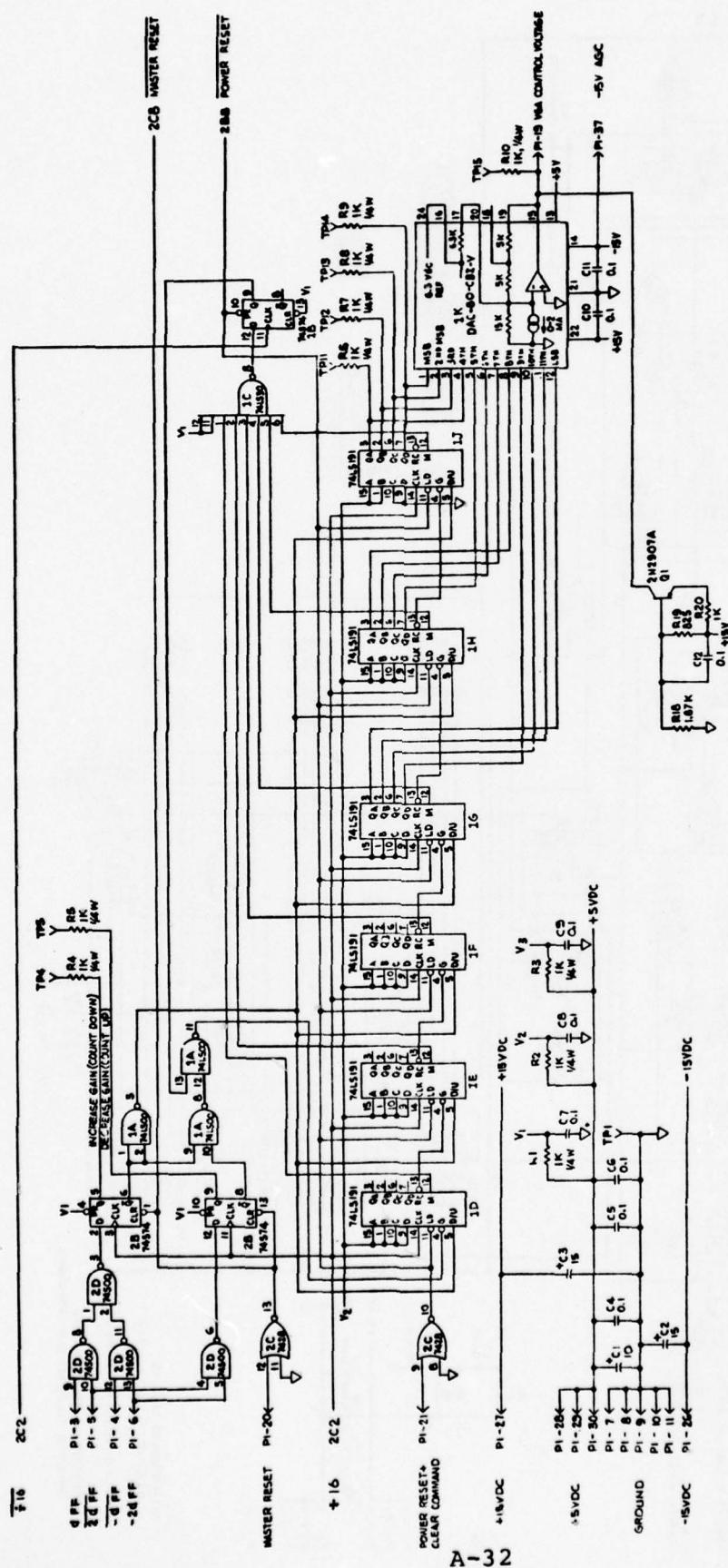
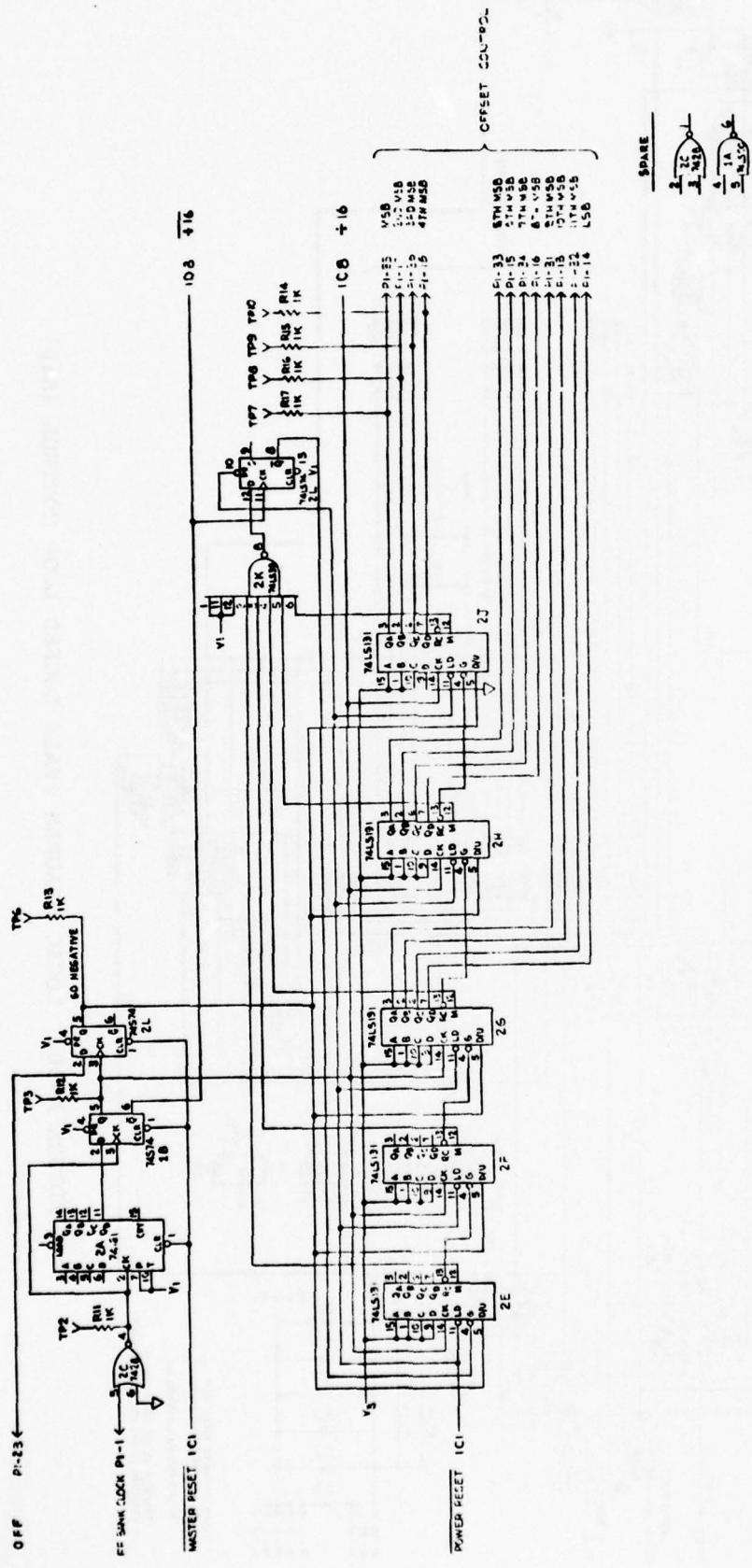


FIGURE A-29. LOGIC DIAGRAM AGC AND OFFSET CONTROL (A-9)



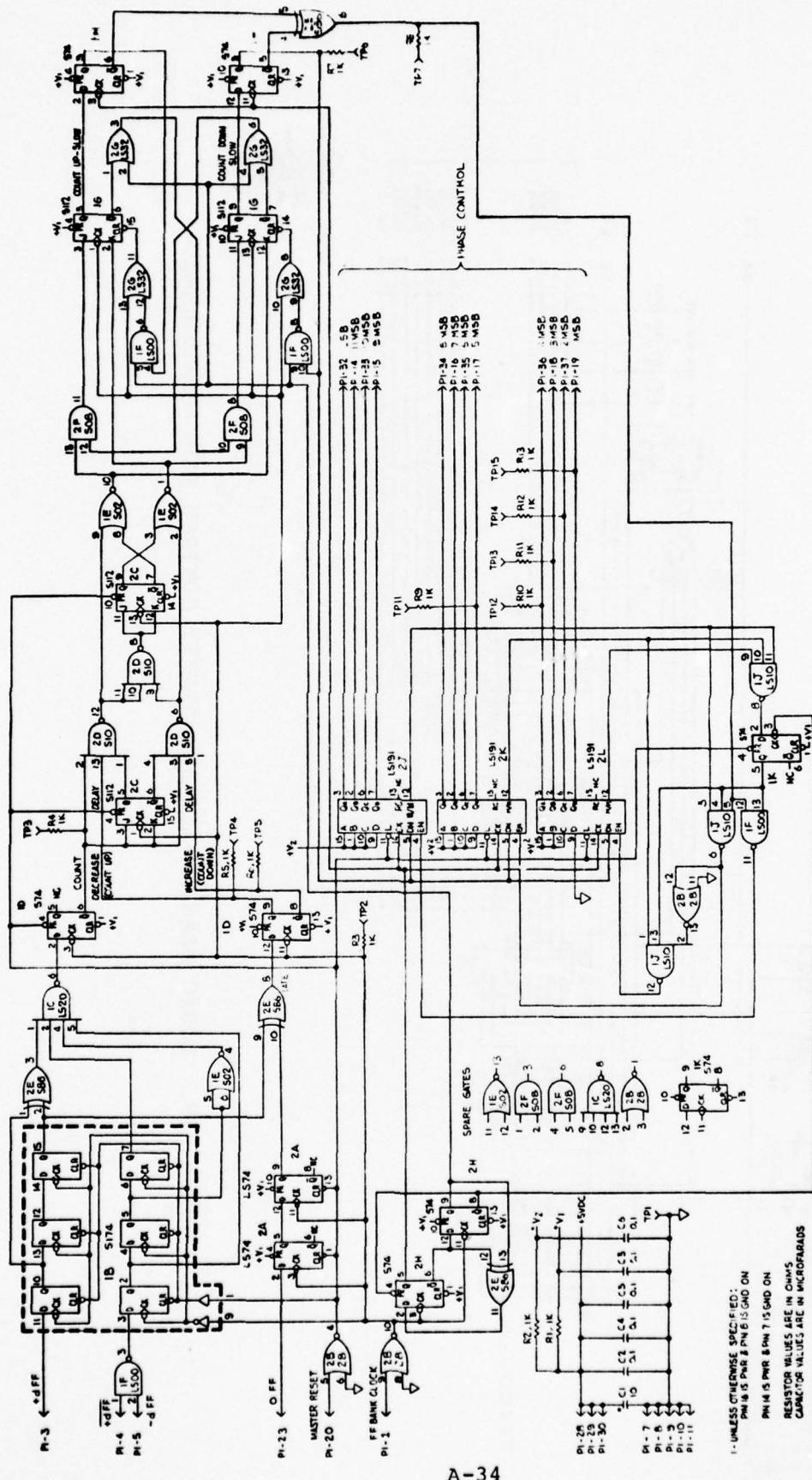


FIGURE A-30. LOGIC DIAGRAM PHASE LOCKED LOOP CONTROL (A10)

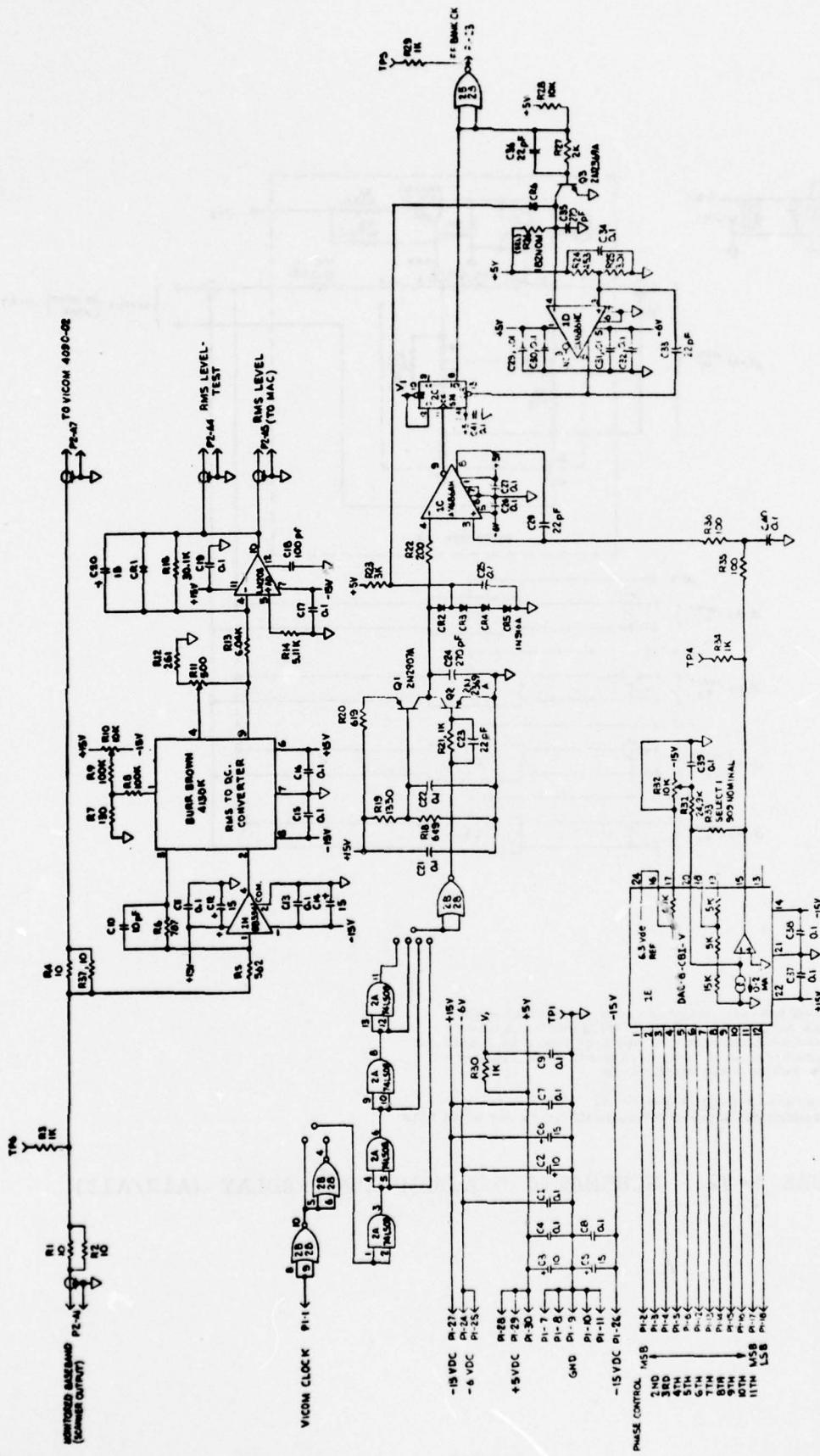
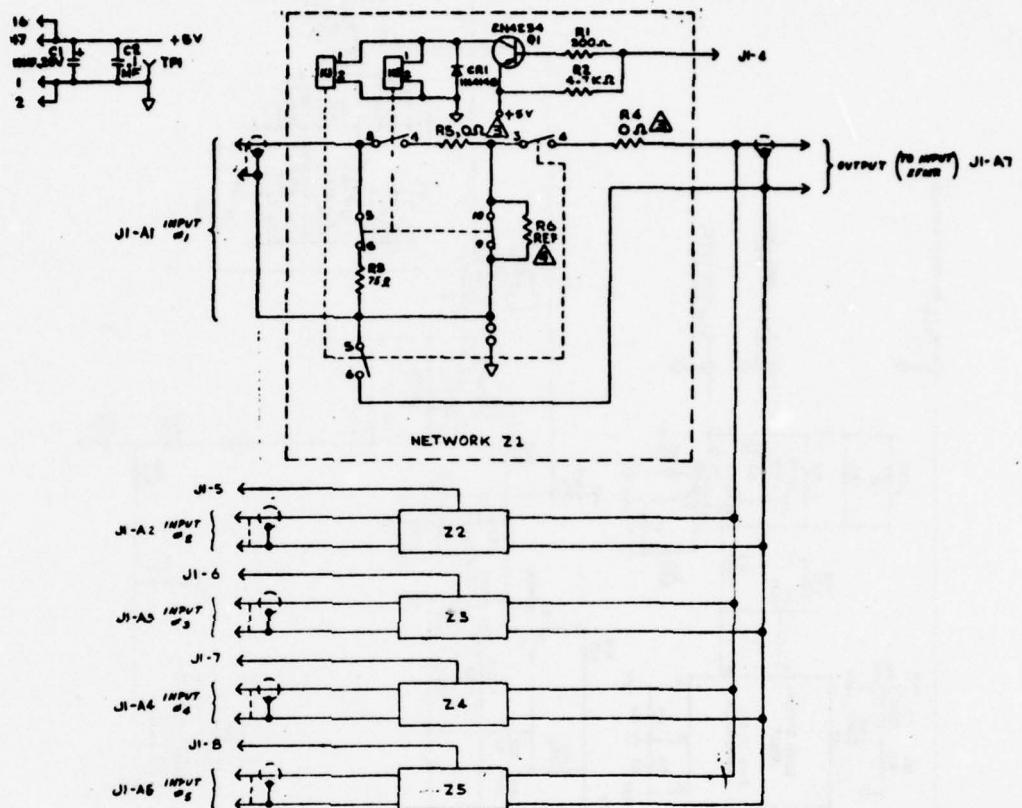


FIGURE A-31. SCHEMATIC DIAGRAM INPUT BOARD (All)

2. PINT 15 GND & PINT 14 IS PWR ON 2A & 2B
 1. UNLESS OTHERWISE SPECIFIED:
 1. RESISTOR VALUES ARE IN OHMRS
 CAPACITOR VALUES ARE IN MICRORADS



-  - R6 NOT INSTALLED FOR TEST. RESISTOR VALUE TO BE DETERMINED PER CUSTOMER REQUIREMENTS DURING FIELD INSTALLATION
-  - INSULATED HARDWIRE OR ZERO OHM RESISTOR SHALL BE INSTALLED FOR TEST. RESISTOR VALUE TO BE DETERMINED PER CUSTOMER REQUIREMENTS DURING FIELD INSTALLATION

2 - PIN 7 IS GND ON K1 & PIN 13 IS GND ON K2
1 - PARTIAL REF DESIGNATIONS SHOWN - PREFIX WITH ASSY NO OR UNIT NO OR BOTH

FIGURE A-32. SCHEMATIC DIAGRAM INPUT RELAY (A12/A13)

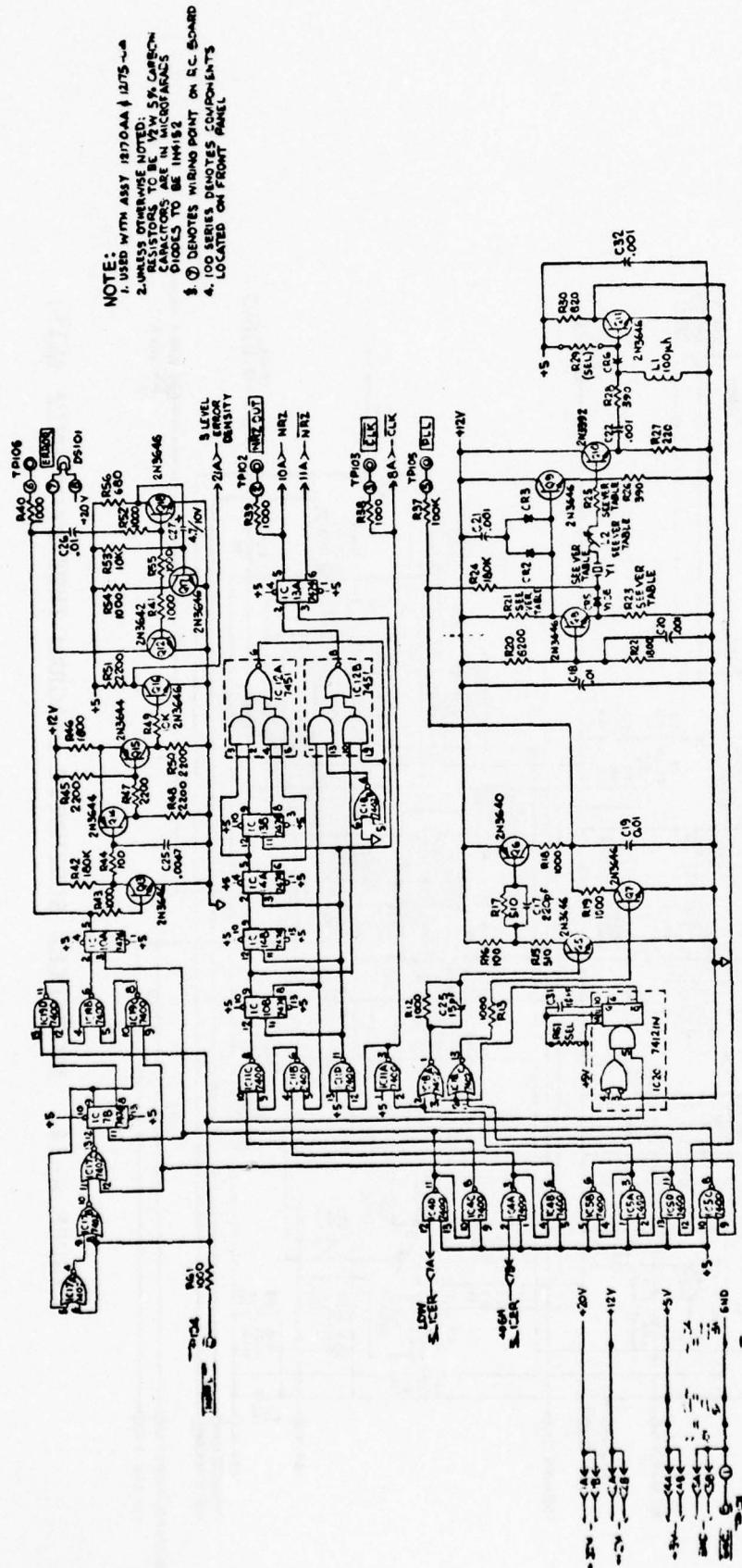
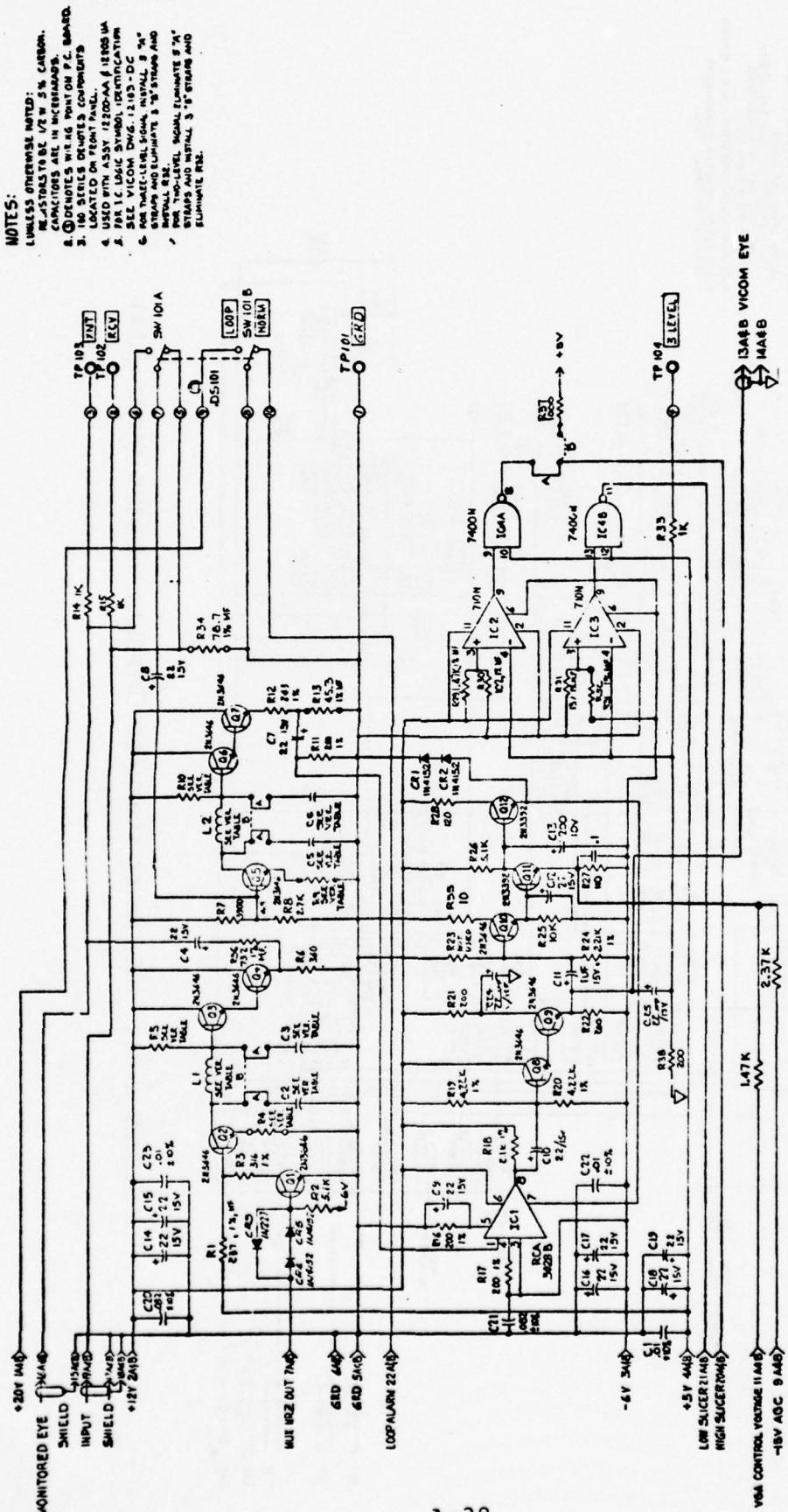


FIGURE A-33. MULTIPLEX SCHEMATIC DIAGRAM RECEIVE INPUT (A14)



A-38

FIGURE A-34. MULTIPLEX SCHEMATIC DIAGRAM INTERFACE UNIT (A15)

A-9 EVENTS PER UNIT TIME (EPUT) SCHEMATICS

The three figures following present the detailed schematics of the EPUT.

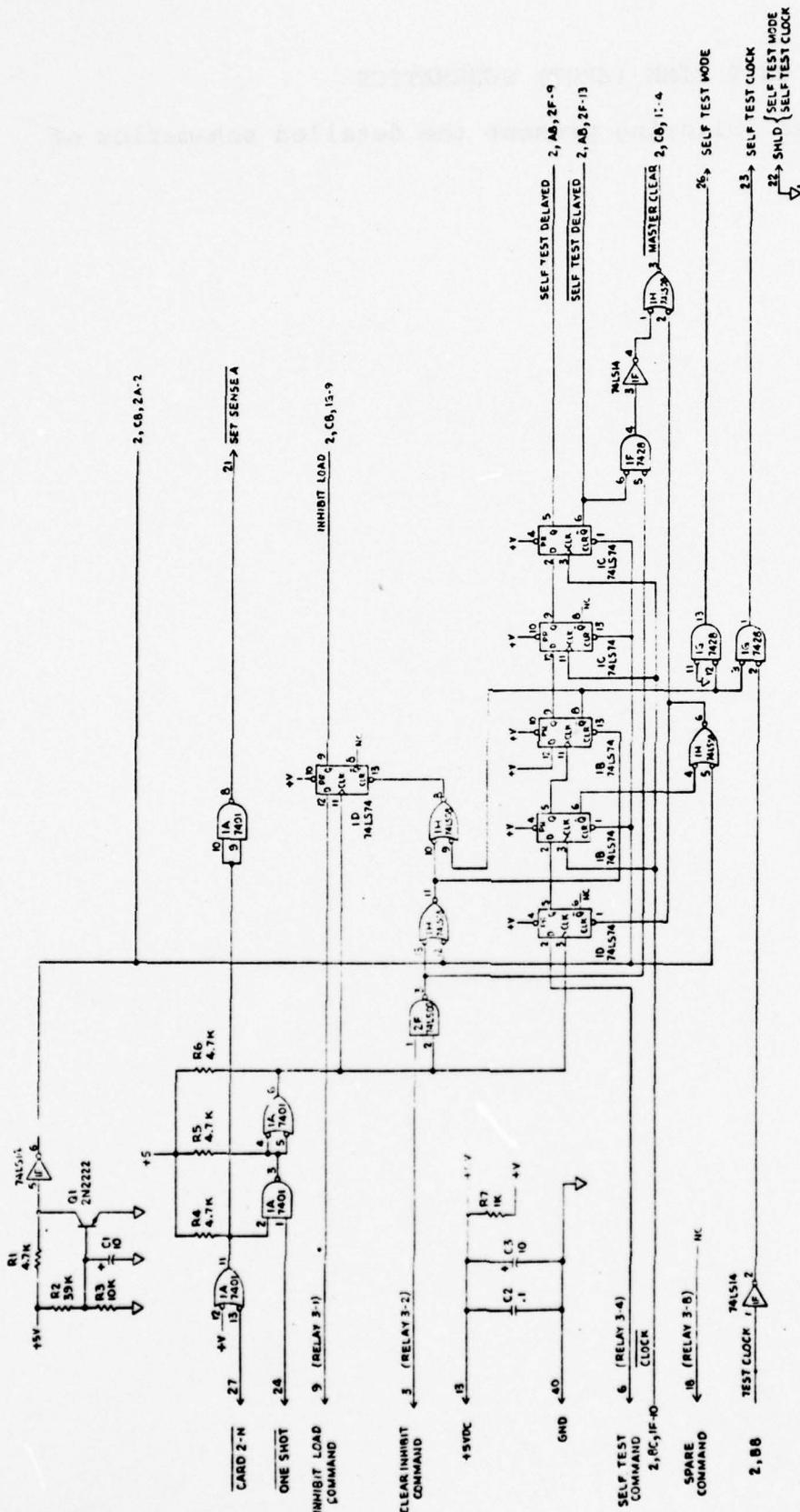
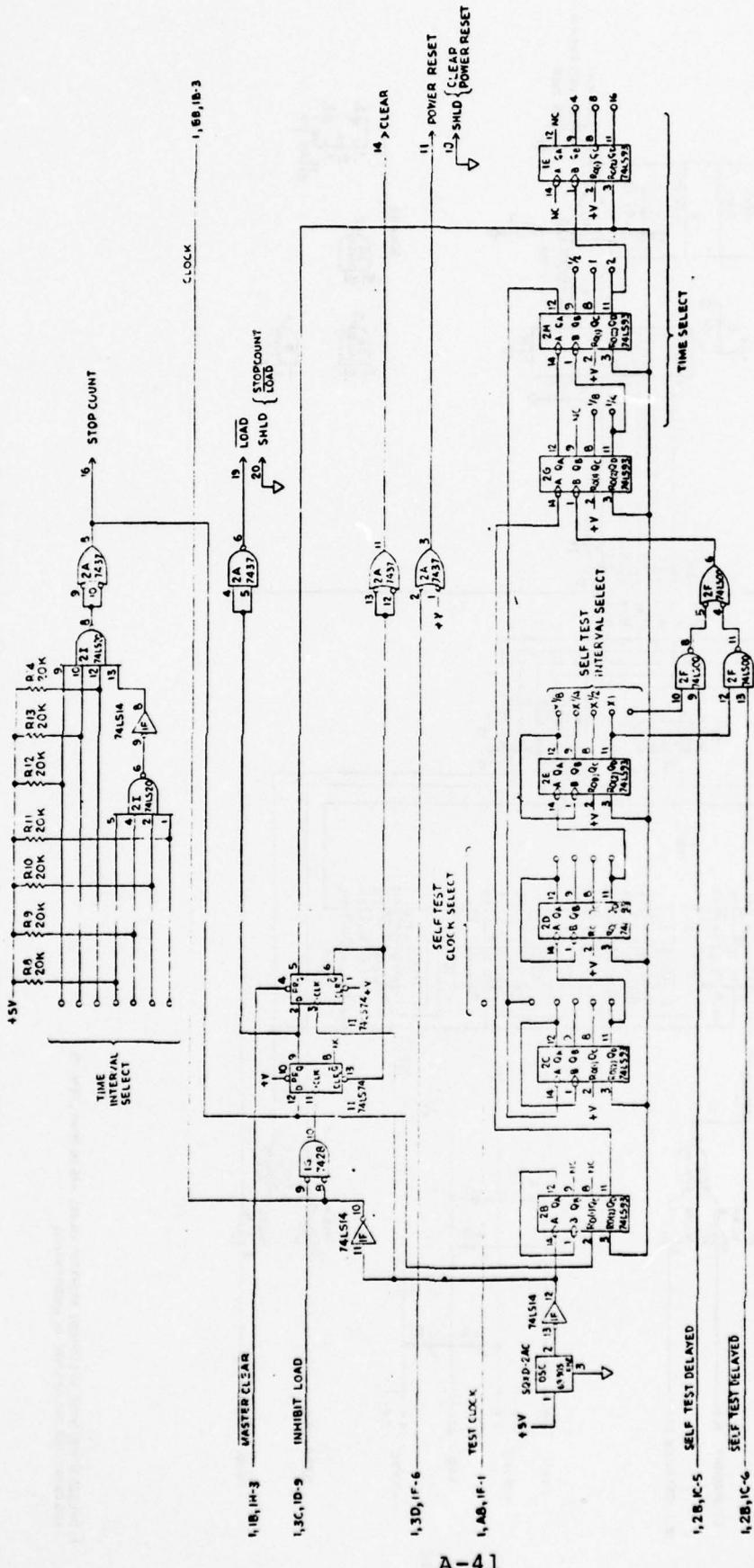


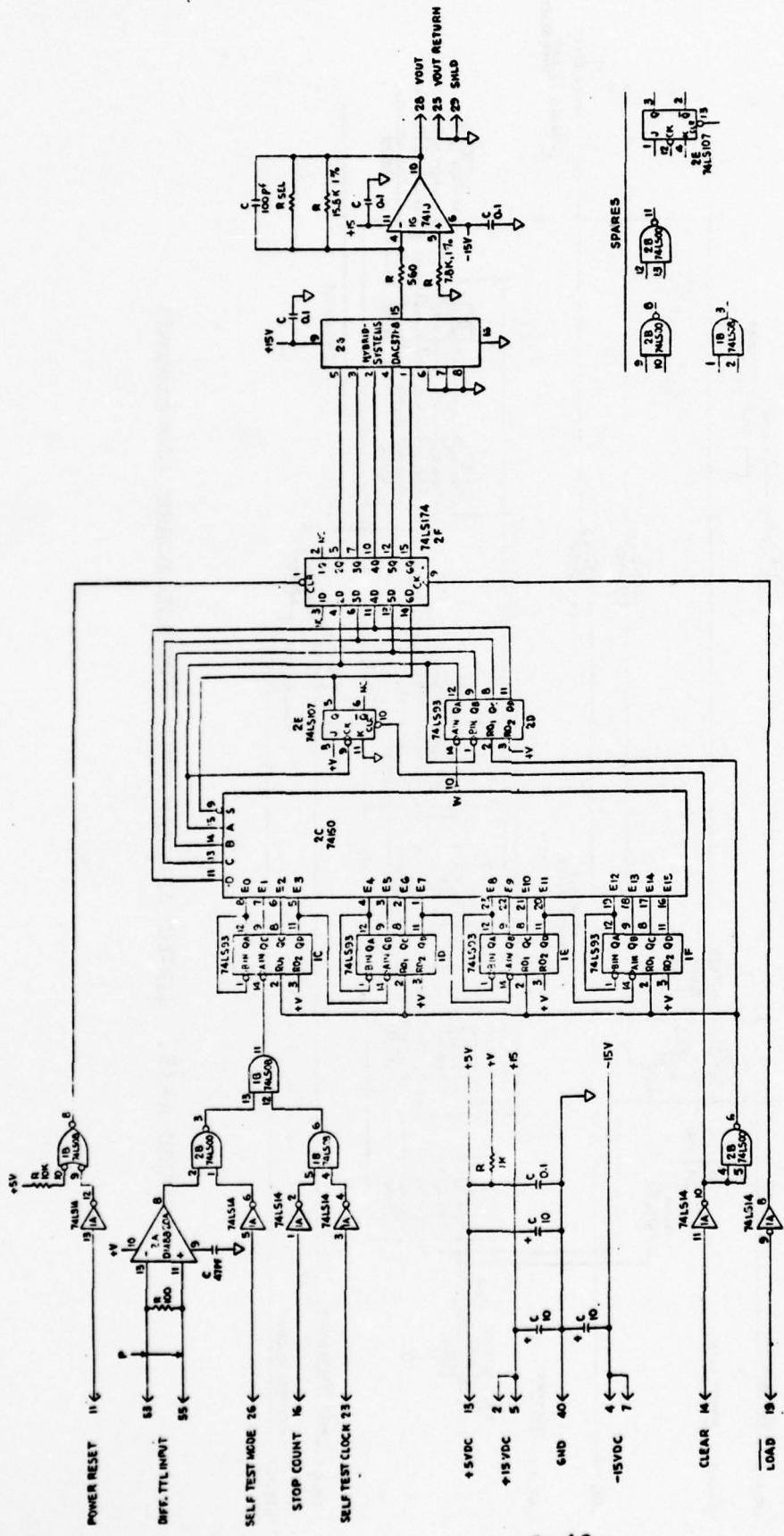
FIGURE A-35. LOGIC DIAGRAM EPUT COMMAND BOARD

4- ON 1E, 2B, 2C, 2D, 2E, 2C, 2A, 2H PIN 5 IS +5V, PIN 10 IS GND
 3- ON 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 2A, 2B & 21 PIN 7 IS GND, PIN 14 IS +5V
 2- PARTIAL REFERENCE DESIGNATIONS ARE SHOWN PERTAINING TO THE
 DESIGNATION WITH UNIT NO OR ASSY DESIGNATION OR BOTH.
 1- UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS
 CAPACITANCE VALUES ARE IN MICROFARADS



A-41

FIGURE A-35. LOGIC DIAGRAM EPUT COMMAND BOARD (Continued)



1- UNLESS OTHERWISE SPECIFIED: RESISTOR VALUES ARE IN OHMS, 1% TOLERANCE
AND CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-36. LOGIC DIAGRAM INPUT COUNTER BOARD

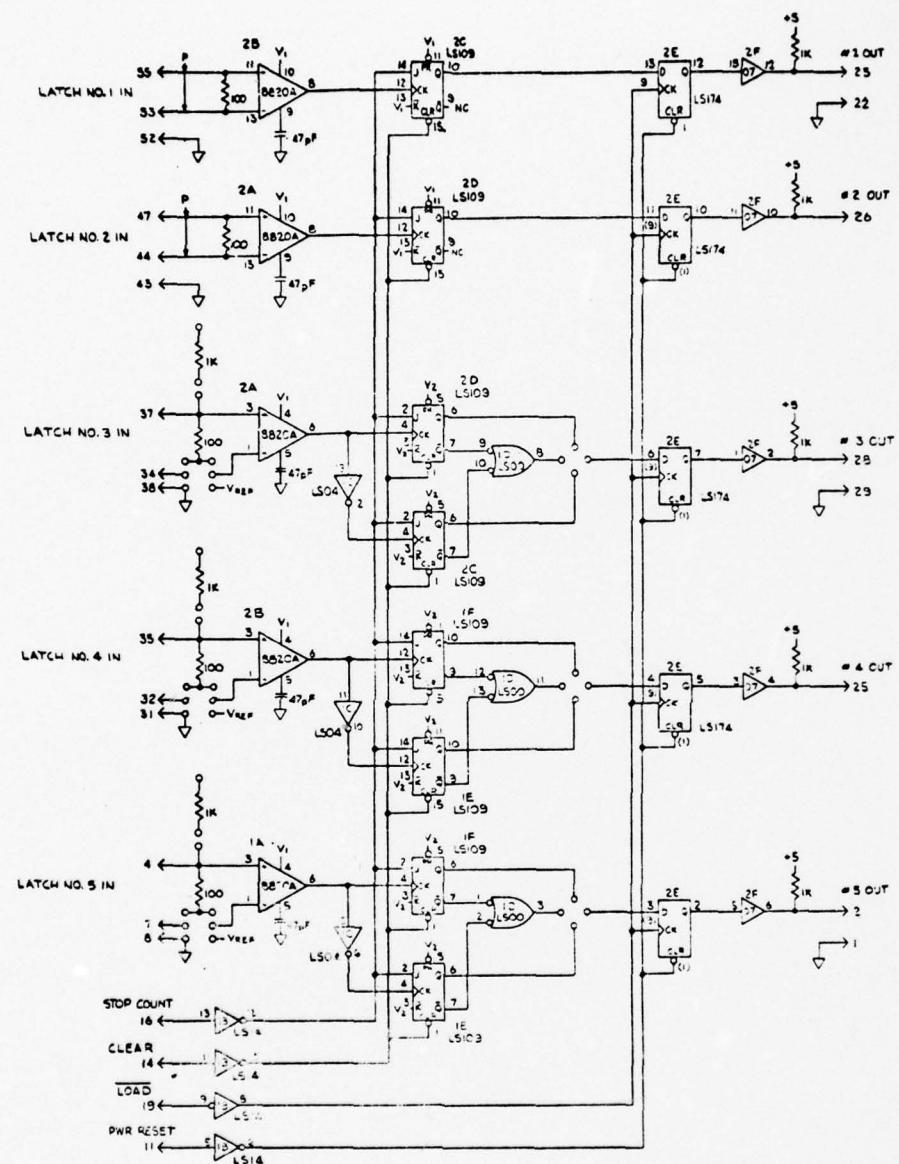


FIGURE A-37. LOGIC DIAGRAM EPUT LATCH BOARD

Appendix B

**COMPUTER PROGRAM TO PRODUCE
PERFORMANCE PREDICTION TABLES**

TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR
 WRITTEN BY DR. W F ACKER, 16 MARCH 1977 REVISION
 COMPUTES TABLES FOR DETERMINING THE SIGNAL TO NOISE RATIO AND
 PREDICTING THE BIT ERROR RATE OF THE VICON 4000 FROM THE OUTPUTS
 OF THE ATEC ADAPTIVE-THRESHOLD BASEBAND EYE PATTERN MONITOR.

NEEDS SUBROUTINES DMOLQ, ADPRL, AND TABLE
 NEEDS FUNCTIONS DFNORM, QNDR, AND ZNORM STORED IN A03000/NORMAL

ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE
 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN
 ADJACENT BAUDS EACH NOMINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE
 EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOW NOMINAL
 MAKING 9 TOTAL LEVELS.

DEFINE "DHALF" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS
 DEFINE "EPSLN" TO BE EPSILON DEFINED ABOVE
 DEFINE "NOISE" TO BE THE RMS AMPLITUDE OF THE GAUSSIAN NOISE
 DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE

THF NINE DATA LEVELS ARE THEN

```
( +2DHALF * EPSLN ), ( +2DHALF - EPSLN )
( ZERO      * EPSLN ), ( ZERO      - EPSLN )
( -2DHALF * EPSLN ), ( -2DHALF - EPSLN )
```

THF ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
 OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
 (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES),
 VOLTAGE COMPARATORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
 RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
 AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
 FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
 EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.

```
FROM ( DHALF ) TO ( +2DHALF ADAPT )
AND FROM ( -DHALF ) TO ( -2DHALF + ADAPT )
THF OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY  

A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE  

EQUAL TO THE PRESET RATIO "PFR" ( A SUBROUTINE INPUT VALUE ).  

THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD "ADAPT" IS THEN USED  

(WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR SIGNAL TO NOISE  

RATIO TREND ANALYSIS AND PREDICTION OF BIT ERROR RATE.
```

-- EXTERNAL VARIABLES { NAMES ENDING IN "H" DSIGNATE ARRAYS }

```
REAL          BITRATE          !* BIT RATE
REAL          PER               !* PSEUDO BIT ERRORS / BITS TRANSMITTED
REAL          PERINVS          !* BITS TRANSMITTED / PSEUDO ERROR
REAL          RDVBAO          !* NUMBER THAT NET PSEUDO ERRORS A
                           !* BY BEFORE THE A/D CONVERTER SETTING ADAPT.
REAL          BFRM(172)        !* BIT ERRORS PER BIT TRANSMITTED
REAL          INTEGFR NBR       !* NUMBER OF BRM VALUES = NBR ROW
REAL          ADRM(25)         !* AMPLITUDE INTERSYMBOL INTERFERE
                           !* DECISION LEVEL RATIO = EPSLN / DHALF
REAL          NADR             !* NUMBER OF ADRM VALUES = NUMBER
REAL          ADR              !* ADRM(INTABLE) CONSTANT FOR A
                           !* DECISION LEVEL TO NOISE RATIO
REAL          SDHR             !* RMS SIGNAL TO DHALF VOLTAGE RAT
                           !* RMS NOISE TO TOTAL RMS SIGNAL
REAL          NSRM(172)         !* SIGNAL TO NOISE RATIO IN DECIDE
REAL          ADM(172)          !* ADAPTIVE THRESHOLD TO D RATIO
REAL          OPERDAH(172)       !* DERIVATIVE OF PER WITH RESPECT
REAL          TMNSTN(172)       !* ADAPTIVE THRESHOLD QUASILINEAR T
```

-- INTERNAL VARIABLES

```
CDFAL      SCRATCHT      !* SCRATCH PADS FOR TEMPORARY STOR
```

```

INTEGER NROW
INTEGER NTABLE
LOGICAL DEBUG$/
FORMAT(3X,E11.3,F11.6,3X,F8.2,3F11.6,/)
FORMAT (1H1,"TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.")
```

```

C READ, BITRATE          READ INPUT DATA
READ, PERINVS
PER = 1. / PERINVS
READ, RDIVBAD
```

C

```

NBFR = 0
READ, SCRATCH
DWHALF1 SCRATCH .LT. 99. )
NBER = NBER + 1
BER(NBER) = SCRATCH
READ, SCRATCH
ENDO
```

C

```

NAIDR = 0
READ, SCRATCH
DWHALF1 SCRATCH .LT. 99. )
NAIDR = NAIDR + 1
AIDR(NAIDR) = SCRATCH
READ, SCRATCH
ENDO
```

C

```

NTABLE = 1
DWHILE( NTABLE .LE. NAIDR ) BEGIN A NEW TABLE
  AIDR = AIDR(NTABLE)
  SDHR = SQRT(2.* (1.+ AIDR*AIDR/4.))
  NROW = 1
```

C

```

DWHILE( NROW .LE. NBER )
  BEGIN A NEW ROW
  IF (DEBUG) PRINT "AIDR = ",AIDR," BER = ",BER(NROW)
  CALL DWRSL(E(BRM(NROW)), AIDR, DNR)
  NSRM(NROW) = 1./ (DNR * SDHR)
  SNRM(NROW) = -20.*ALOG10(NSRM(NROW))
  CALL ADRL(E(AIDR*DNR*PER*AIDR(NROW)*T)
  DPERADM(NROW)) = T
  TMCNSTM(NROW) = - RDIVBAD * 4095. / (BITRATE * T)
  C "4095." FOR 4095 BITS INTO A/D ACCUMULATOR
  C CHANGE THE A/D OUTPUT FROM ZERO TO DHALF.
  IF (DEBUG) WRITE(6,1) BFM(NROW), NSRM(NROW), SNRM(NROW).
  1 ADR*(NROW). OPERADM(NROW). TMCNSTM(NROW)
  C FINISHED A ROW
  NROW = NROW + 1
```

C

```

FNDO
  FINISHED STORING A TABLE
  CALL TABLE (BER*NBER*AIDR.NSRM.SNRM.ADR*DPERADM.TMCNSTM,
  1 PERINVS,BITRATE,RDIVBAD)
  IF (DEBUG) WRITE (6,2) STORAGE READY FOR A NEW TABLE
```

C

```

  NTABLE = NTABLE + 1
ENDO
PRINT "NORMAL END"
C STOP
END
```

SUBROUTINE ADD9LF (AIDR,DNR,PER,ADR,DPERDAD)

 C FINDS ADR FOR NINELEVEL EYE MOD 20/SEPT/76 W F ACKER
 C ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE
 C 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN
 C ADJACENT BAUDS EACH NOMINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE
 C EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOW NOMINAL
 C MAKING 9 TOTAL LEVELS.

 C DEFINE "DHALF" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS

 C DEFINE "EPSLN" TO BE EPSILON DEFINED ABOVE

 C DEFINE "NOISE" TO BE THE RMS AMPLITUDE OF THE GAUSSIAN NOISE

 C DEFINE "ADPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE

THF NINE DATA LEVELS ARE THEN

(+2*DHALF + EPSLN) * (+2*DHALF - EPSLN)
 (ZERO + EPSLN) * (ZERO - EPSLN)
 (-2*DHALF + EPSLN) * (-2*DHALF - EPSLN)

THF ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
 OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
 (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES).
 VOLTAGE COMPARATORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
 RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
 AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
 FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
 EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
 FROM (+DHALF) TO (+2*DHALF - ADPT)
 AND FROM (-DHALF) TO (-2*DHALF + ADPT)

THF OFFSET THRESHOLD AMPLITUDE "ADPT" IS CONTINUALLY ADJUSTED BY
 A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
 EQUAL TO THE PRESET RATIO "PER". (A SUBROUTINE "ADPT" IS THEN USED
 THF AMPLITUDE OF THE PSEUDO ERROR THRESHOLD."ADPT". IS THEN USED
 (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR TREND ANALYSIS
 AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DN9LF)

-- INPUT VARIABLES

 C REAL AIDR ¹* AMPLITUDE INTERSYMBOL INTERFERE
 C REAL DNR ¹* DATA TO NOISE RATIO = (DHALF) /
 C REAL PER ¹* RATIO. EPSLN / DHALF
 C ¹* VALUE OF PRFSET PSEUDO ERROR RA

-- OUTPUT VARIABLES

 C REAL ADR ¹* ADAPTIVE THRESHOLD TO "D" RATIO
 C REAL DPFRADR ¹* DERIVATIVE OF "PFR" WITH RESPEC

-- INTERNAL VARIABLES
 C -- INTERNAL VARIABLES

 C LOGICAL DEBUG/F/
 C INTEGER MRAPHSON
 C REAL ANROLD
 C REAL D1,D2,D3,D4
 C REAL E
 C REAL PERNEW
 C REAL DPERDAD
 C REAL LNTARGET
 C REAL LPERNEW
 C REAL EPRLNPF
 C REAL ERRNEW
 C REAL ERROLD
 C REAL THING
 C REAL D1NPFRDA
 C ¹* FOR DIAGNOSTIC PRINTOUT SET DEB
 C ¹* COUNTS NEWTON-RAPHSON ITERATION
 C ¹* NEWEST GUESS FOR "ANR". THAT
 C ¹* PREVIOUS GUESS FOR "ANR". THAT
 C ¹* COUNTS MULTIPLES OF "DNR"
 C ¹* INTEGERS
 C ¹* EPSLN/NOISE RATIO. THAT IS,
 C ¹* PSEUDO ERROR COMPUTED USING NEW
 C ¹* DERIVATIVE OF "PFR" WITH RESPEC
 C ¹* NATURAL LOG OF "PER" (THE TARGET
 C ¹* NATURAL LOG OF "PENew" (COMPUT
 C ¹* LNPERNEW - LNTARGET. ERROR IN
 C ¹* ABSOLUTE VALUE ERRENEW
 C ¹* PREVIOUS VALUE ERREOLD
 C ¹* TEMPORARY STORAGE FOR SCRATCH P
 C ¹* DERIVATIVE OF "PFR" WITH R

```

C LNTARF7 = ALOG( PER )
C E = AIDR * DNR          MAKE FIRST GUESS, A, AT PROPER VALUE FOR ANR
C   A = E + ZNORM( 4. * PER)    i.e. INVERSE OF 2*FIRST TERM PERN
C   A = AMIN1( A, .98*DNR )
C   D1 = 1. * DNR
C   D2 = 2. * DNR
C   D3 = 3. * DNR
C   D4 = 4. * DNR

C C ADJUST THE ANR VALUE BY NEWTON-RAPHSON
C C ITTERATION USING ALOG(PERNPNEW) RATHER THAN
C C (PERNEW*PER) FOR THE ERROR TERM TO REDUCE
C C SCALING PROBLEMS AND IMPROVE CONVERGENCE.

NRAPHSON = 0
ERROLD = 1200.
ERNNEW = 1100.
DOMHLFI( ERNEW,LT. ERROLD )

C IF( ERNEW .LT. 1000. ) 1* SKIPS THIS NEWTON RAPHSON
C                           CORRECTION ONLY THE FIRST PASS

      THING = DNORM( +A-E) + 2.*DNORM( +A) + DNORM( +A+E)
      1   + 2.*DNORM( D2-A-E) + 2.*DNORM( D2-A) + 2.*DNORM( D2+A-E)
      2   TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
      3   + DNORM( D4-A-E) + 2.*DNORM( D4-A) + DNORM( -A+E)
      DPERDANR = -THING / 8.
      DLNPERDA = DPERDANR / PERNW
      ANROLC = A
      NOTICE (-0.5*LNTARGET) IS POSITIVE.

C IF( ERRLNPER .LE. -0.5*LNTARGET ) USE FULL-SIZED CORRECTION
C   A = A - ERRLNPER / DLNPERDA
C
C ELSEF
C
C USE LIMITED CORRECTION TO
C   REDUCE OVERHOOT TENDENCY
C   LNPERNEW = ERRLNPER + LNTARGET
C   A = A - LNPERNEW / DLNPERDA
C
C ENDIF
C NRAPHSON = NRAPHSON + 1
C FINDIF
C
C   NRAPHSON CORRECTION. IF ANY, COMPLETED
C   NOW EVALUATE THE RESIDUAL ERROR
C
      THING = DNORM( +A-F) + 2.*DNORM( +A) + DNORM( +A+E)
      1   + DNORM( D1 -E) + 2.*DNORM( D1 ) + DNORM( D1 +E)
      2   - 2.*DNORM( D2-A-F) - 4.*DNORM( D2-A ) - 2.*DNORM( D2-A+E )
      3   TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
      4   + DNORM( D3 -F) + 2.*DNORM( D3 ) + DNORM( D3 +E )
      5   - DNORM( D4-A-F) - 2.*DNORM( D4-A ) - DNORM( D4-A+E )
      DPERNEW = -THING / 8.
      FRPLNPER = ALOG( PERNW / PER )
      ERROLD = ERNEW
      ERNEW = ABS( ERNLNPER )
      IF (DEBUG) PRINT,"NRAPHSON = ",NRAPHSON,""
      ! "DLNPEN/PERTARGET = ",FRRLNPER
      ENDO

C ADR = ANROLD / DNR
C DPERDANR = DPERDANR + DNR
C RETURN
C

```

```

SUBROUTINE DNROGLE(BER,AIDR,DNR) 1 * MOD-10/SEPT/76 W F ACKER
C   DATA-NOISE RATIO FOR NINE-LEVEL EYE
C   DETERMINES DATA-NOISE RATIO (DNR) REQUIRED TO PRODUCE SPECIFIED
BIT ERROR RATE (BER) FOR THREE LEVEL PARTIAL RESPONSE EYE PATTERN
C   WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE
THREE-LEVEL EYE INTO A NINE-LEVEL EYE
C
C   NEEDS DNORM, QNORM, AND ZNORM (IN "NORMAL" FILE)
C
C   -- INPUT VARIABLES --
C
C   REAL    BER      1* (BAUDS IN ERROR)/(BAUDS TRANSMIT)
C   REAL    AIDR     1* (AMPLITUDE OF INTERSYMBOL INTERFERENCE)
C
C   -- OUTPUT --
C
C   REAL    DNR      1* D / RMS NOISE AMPLITUDE, D DEF
C
C   -- INTERNAL VARIABLES
C
C   LOGICAL DEBUG/F/
C   INTEGER NRAPHSON
C   REAL    DNRNEW
C   DNROLD
C   REAL    ERNEW
C   REAL    ERBER
C   REAL    ERNEW
C   REAL    ERROLD
C   REAL    DRVBER
C
C   DNRNEW = ZNORM(BER/1.5) / (1. - AIDR)
C
C   C          IMPROVE FIRST APPROXIMATION OF
C   C          DNR BY NEWTON-RAPHSON ITERATION
C
C   ERROLD = 10.E+10
C   ERNEW = 2.E+10
C   NRAPHSON = 0
C
C   DO WHILE ( ERNEW .LT. ERROLD ) 1* SKIPS THIS ONLY THE FIRST PASS
C   IF ( NRAPHSON .GT. 0 ) 1* DRVBER = 1.
C   1   * 6. * DNORM( DNRNEW * (1.-AIDR) ) * (1.-AIDR)
C   2   * 12. * DNORM( DNRNEW * (1.+AIDR) ) * (1.-AIDR)
C   3   * 6. * DNORM( DNRNEW * (1.+AIDR) ) * (1.+AIDR) / 16.
C   DNROLD = DNRNEW
C   DNRNEW = (DNRNEW*1.E+10 - ERROLD/DRVBER) * 1.E-10
C
C   FINDIF
C   ERIFW = 1
C   1   * 6. * DNORM( DNRNEW * (1.-AIDR) )
C   2   * 12. * DNORM( DNRNEW * (1.+AIDR) ) / 16.
C   3   * 6. * DNORM( DNRNEW * (1.+AIDR) ) / 16.
C   DRVBER = ERNEW * 1.E+10 - BFR * 1.E+10
C   IF ( NRAPHSON .GT. 0 ) 1* SKIPS THIS ONLY THE FIRST PASS
C   ERROLD = ERNEW
C   ERNEW = ABS(ERNEW)
C
C   ENDIF
C   IF (DEBUG) PRINT,"NRAPHSON =",NRAPHSON,"ERR AER *1.E+10 =",ERRBER
C
NRAPHSON = NRAPHSON + 1
ENDO
DNR = DNROLD
RETURN
END

```

SUBROUTINE TABLE (BERM.NBEP.ADR.NSRM.SNRM.ADRM.DPERADM.
TCNSTM.PERINVR.BITRATE.RDIVBAD)

卷之三

```

      PRINT HEADINGS
      WRITE (6,1)
      WRITE (6,2)
      WRITE (6,3)
      WRITE (6,4) A10R
      WRITE (6,5) PERINRS
      WRITE (6,6)
      WRITE (6,7)
      WRITE (6,8)
      WRITE (6,9)
      FORMAT (1HD)          PRINT ROWS OF D TA

      TLINE = 0               LASTROW = MIN( NROW,36, NBFR )
      DO WHILE( NROW .LT. LASTROW )          PRINT A ROW
      NROW = NROW + 1
      C
      WRITE (6,10) BERM (NROW),NSPM(NROW),SNRM(NROW),ADRM(NROW),
      OPERADM(NROW),TMCSM(NROW)
      C
      IF INBER .LE. 15          DOUBLE SPACE IF NUMBER OF DATA ROWS .LF.15
      WRITE (6,11)
      TLINE = TLINE + 2
      ELSE
      TLINE = TLINE + 1
      ENDIF
      FND0
      ALL DATA PRINTED. MAKE RESIDUAL ROWS BLANK
      NLINP = 39-TLINE
      DO WHILE (NLINP .GT. 0 )
      WRITE (6,11)
      NLINP = NLINP - 1
      FND0
      WRITE FOOTNOTES
      C
      WRITE (6,12)
      WRITE (6,13)
      WRITE (6,14)
      WRITE (6,15)
      WRITE (6,16)
      WRITE (6,17)
      WRITE (6,18) BYTRATE, DIVRAD
      END
      RETURN
      END

```

-----END-OF-THIS.ROL INE-----
 THERE WERE NO ERRORS IN THE AROV ROUTIN DETECTED BY THE SP PRECOMPILER

 * PREFORT NOW PROCESSES THE "INCLUDE" STATEMENT. SO THAT
 * COMMON STATEMENTS CAN BE WRITTEN ONCE PUT AT THE BEGINNING
 * OF THE SOURCE INPUT. AND THEN INCLUDED IN SPECIFIC ROUTINES.
 * ALSO. COMMENTS PRECODED BY /* ARE MOVED OUT TO COLUMN 40.
 * TWO ADDITIONAL SP STATEMENTS HAVE BEEN MECHANIZED. THEY ARE
 * // ERF AND RYTC.

LIST A01730/FORTY/INFO.R FOR DETAILS.

SP052 02 08-10-77

01.190 TRUNK PROGRAM FOR ATFC BASFRAND EYE PATTERN MONITOR

LABEL PAGE 1

1 C TRUNK PROGRAM FOR ATFC BASFRAND EYE PATTERN MONITOR
2 C WRITTEN BY DR. W F ACKER. 16 MARCH 1977 REVISION
3 C COMPUTES TABLES FOR DETERMINING THE SIGNAL TO NOISE RATIO AND
4 C PREDICTING THE BIT ERROR RATE OF THE VICOM 4000 FROM THE OUTPUTS
5 C OF THE ATEC ADAPTIVE-THRESHOLD BASEBAND EYE PATTERN MONITOR.
6 C
7 C NFDS SUBROUTINES DN9LE, ADR9LE, AND TABLE
8 C NEEDS FUNCTIONS DFNORM, QNORM, AND ZNORM STORED IN A03000/NORMAL
9 C
10 C ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE
11 C 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN
12 C ADJACENT BAUDS EACH NOMINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE
13 C EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOW NOMINAL
14 C MAKING 9 TOTAL LEVELS.
15 C DEFINE "DHALF" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS
16 C DEFINE "EPSLN" TO BE EPSILON DEFINED ABOVE
17 C DEFINE "NOISE" TO BE THE RMS AMPLITUDE OF THE GAUSSIAN NOISE
18 C DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
19 C THE NINE DATA LEVELS ARE THEN
20 C (+2*DHALF + EPSLN) * (+2*DHALF - EPSLN)
21 C (ZERO + EPSLN) * (ZERO - EPSLN)
22 C (-2*DHALF + EPSLN) * (-2*DHALF - EPSLN)
23 C
24 C THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
25 C OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
26 C (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES).
27 C VOLTAGE COMPARATORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
28 C RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
29 C AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
30 C FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
31 C EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
32 C FROM (+DHALF) TO (+2*DHALF + ADAPT)
33 C AND FROM (-DHALF) TO (-2*DHALF + ADAPT)
34 C THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
35 C A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
36 C EQUAL TO THE PRESET RATIO "PER" (A SUBROUTINE INPUT VALUE).
37 C THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD "ADAPT" IS THEN USED
38 C (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR SIGNAL TO NOISE
39 C RATIO TREND ANALYSIS AND PREDICTION OF BIT ERROR RATE.
40 C
41 C -- EXTERNAL VARIABLES (NAMES ENDING IN "M" DESIGNATE ARRAYS)
42 C
43 C REAL BITRATE ** BIT RATE
44 C REAL PER ** PSEUDO BIT ERRORS / BITS TRANSMITTED
45 C REAL PERNVRS ** BITS TRANSMITTED / PSEUDO ERRORS
46 C REAL RDIVBAD ** NUMBER THAT NET PSEUDO ERRORS ARE DIVIDED
47 C BY BEFORE THE A/D CONVERTER SETTING ADAPT.
48 C REAL BERM(172) ** BIT ERRORS PER BIT TRANSMITTED RATIO
49 C INTEGER NBER ** NUMBER OF BERM VALUES = NBR ROWS PER TABLE
50 C REAL AIDRM(125) ** AMPLITUDE INTERSYMBOL INTERFERENCE TO
51 C INTEGER NAIDR ** DECISION LEVEL RATIO = EPSLN / DHALF
52 C ** NUMBER OF AIDRM VALUES = NUMBER OF TABLES

SP052 02 08-10-77 01.190 TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR LABEL ***** PAGE 2

```

53      REAL     AIDR    /* AIDRM(INTABLE) CONSTANT FOR ANY ONE TABLE
54      REAL     DNR     /* DECISION LEVEL TO NOISE RATIOS DHALF/NOISE
55      REAL     SDHR    /* RMS SIGNAL TO DHALF VOLTAGE RATIO
56      REAL     NSRM(72) /* RMS NOISE TO TOTAL RMS SIGNAL RATIO
57      REAL     SNRM(72) /* SIGNAL TO NOISE RATIO IN DECIBELS
58      REAL     ADM(72)  /* ADAPTIVE THRESHOLD TO D RATIOS ADAPT/DHALF
59      REAL     DPERADM(72) /* DERIVATIVE OF PER WITH RESPECT TO ADM
60      REAL     TMCNSTM(72) /* ADAPTIVE THRESHOLD QUASILINEAR TIME CONST
61      C      --
62      C      --
63      REAL     SCRATCH,T /* SCRATCH PADS FOR TEMPORARY STORAGE
64      INTEGER  NROW   /* INDEX REGISTER FOR NUMBER OF ROWS
65      INTEGER  NTABLF /* INDEX REGISTER FOR NUMBER OF TABLES
66      LOGICAL DEBUG/T/ /* FOR DIAGNOSTIC PRINTOUT SET DEBUG = TRUE
67      FORMAT(3X,E11.3,F11.6*3,F8.2*3,F11.6) */
68      1
69      2
70      C      FORMAT (1H1,TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.")
71      C#####
72      C      READ INPUT DATA
73      READ. BITRATE
74      READ. PERINVR
75      PER = 1. / PERINVR
76      READ. RDIVBAD
77      C      NBER = 0
78      C      READ. SCRATCH
79      DOWNHILF( SCRATCH .LT. 99. )
80      C      GO TO 9001
81      C      CONTINUE
82      C      NBER = NBER + 1
83      C      BERM(NBER) = SCRATCH
84      C      READ. SCRATCH
85      C      IF( SCRATCH .LT. 99. ) GO TO 9002
86      C      ENDIF
87      C      NAIIDR = 0
88      C      READ. SCRATCH
89      C      DOWNHILF( SCRATCH .LT. 99. )
90      C      GO TO 9003
91      C      CONTINUE
92      C      NAIIDR = NAIIDR + 1
93      C      AIDRM(NAIDR) = SCRATCH
94      C      READ. SCRATCH
95      C      IF( SCRATCH .LT. 99. ) GO TO 9004
96      C      ENDIF
97      C      COMPUTE VALUES. STORE. PRINT TABLES
98      C      NTABLE = 1
99      C      DOWNHILF( NTABLE .LE. NAIIDR )
100     C      GO TO 9005
101     C
102     C
103     C
104     C
  
```

SF057 02 OR-10-77 01.190 TRUNK PROGRAM FOR AT&T BASEBAND EYE PATTERN MONITOR
 LABEL ***** PAGE 3

```

105      9006  CONTINUE
106      C       BEGIN A NEW TABLE
107      AIDR = ADRM(NTABLE)
108      SDHR = SORT(2.0* 11.0 AIDR*AIDR/4.0)
109      NROW = 1
110      C
111      C      DO WHILE( NROW .LE. NBER )
112          GO TO 9007
113      C      CONTINUE
114      C      BEGIN A NEW R  BER = BERM(NROW)
115      IF (DEBUG) PRINT "AIDR =",AIDR,""
116      CALL DNR9LF(BERM(NROW), AIDR, DN )
117      NSRM(NROW) = 1.0/(DNR * SDHR)
118      SNRM(NROW) = -20.0*ANALOG10( NSRM(NROW) )
119      CALL AD9LE(AIDR,DNR,PERADM(NR, )+T)
120      OPERDADM(NROW) =
121      TMCNSTW(NROW) = - RDIVRAD * 4095 / (BITRATE * T )
122      C      "4095." FOR 4 5 BITS INTO A/D ACCUMULATOR
123      C      CHANGE THE A/ OUTPUT FROM ZERO TO DHALF.
124      IF (DEBUG) WRITE(6,1) BERM(NROW), NSRM(NROW), SNRM(NROW), STM(NROW)
125      1      PERADM(NROW) * T
126      C      FINISHED A RO
127      NROW = NROW + 1
128      IF ( NROW .LE. NBER ) GO TO 9008
129      C      FINISHED STORING A TABLE
130      C      CALL TABLE (BERM,NBER,AIDR,NSRM,ADR,OPERDADM,TM,NSTM,
131      PERINVS,BITRATE,RDIVRAD )
132      1      IF (DEBUG) WRITE (6,2)
133      C      STORAGE READY FOR A NEW TABLE
134      C      NTABLE = NTABLE + 1
135      1      IF (NTABLE .LE. NADIR ) GO TO 9006
136      9005  END
137      C      PRINT, "NORMAL END"
138
139      C      STOP
140      FND
141
  
```

SP052 02 08-10-77 01-19n TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR

LABEL ***** PAGE 4

EDIT DATE	02-10-75	ASR 2/H
ELAPSED TIME (SEC)		LINES/4MINUTE
OVERHEAD	.08	
PHASE 1	.10	84283
PHASE 2	.00	
PHASE 4	.07	113343
PHASE 5	.17	47666
TOTAL	.43	19281

THERE WERE NO DIAGNOSTICS IN ABOVE COMPIILATION
26K WORDS WERE USED FOR THIS COMPIILATION

SUBROUTINE ADR9LE (A1DR,DNR,PER,ADR,DPERDADR)

1
 2 C
 3 C FINDS ADR FOR NINE-LEVEL EYE) MOD 20/SEPT/76 W F ACKER
 4 C ASSUMES A PARTIAL RESPONSE EYE PATTERN WHICH WOULD NOMINALLY HAVE
 5 C 3 LEVELS BUT BECAUSE OF IMPROPER INTERSYMBOL INTERFERENCE BETWEEN
 6 C ADJACENT BAUDS EACH NOMINAL LEVEL HAS AN EXTRA LEVEL A DISTANCE
 7 C EPSILON ABOVE NOMINAL AND ANOTHER OFFSET BY EPSILON BELOW NOMINAL
 8 C MAKING 9 TOTAL LEVELS.
 9 C DEFINE "DHALF" TO BE HALF THE NOMINAL DISTANCE BETWEEN LEVELS
 10 C DEFINE "EPSLN" "EPSLN"
 11 C DEFINE "NOISE"
 12 C DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
 13 C THE NINE DATA LEVELS ARE THEN
 14 C { +2*DHALF * EPSLN) * (+2*DHALF - EPSLN)
 15 C { ZERO * EPSLN) * (ZERO - EPSLN)
 16 C { -2*DHALF * EPSLN) * (-2*DHALF - EPSLN)
 17 C
 18 C THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
 19 C OF GAUSSIAN NOISE. TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
 20 C ISO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES.
 21 C VOLTAGE COMPARATORs, LOGIC, AND COUNTERs ARE USED TO MEASURE THE
 22 C RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
 23 C AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDs EXAMINED.
 24 C FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDs WITH AMPLITUDES IN
 25 C EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
 26 C FROM (*DHALF) TO (+2*DHALF - ADAPT)
 27 C AND FROM (-DHALF) TO (-2*DHALF + ADAPT)
 28 C THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
 29 C A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
 30 C EQUAL TO THE PRESET RATIO "PER" (A SUBROUTINE INPUT VALUE).
 31 C THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD "ADAPT" IS THEN USED
 32 C (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR TREND ANALYSIS
 33 C AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DNR9LE)
 34 C
 35 C -- INPUT VARIABLES
 36 C REAL A1DR !* AMPLITUDE INTERSYMBOL INTERFERENCE TO DATA
 37 C REAL DNR !* DATA TO NOISE RATIO = (DHALF) / NOISE
 38 C REAL PER !* RATIO. EPSLN / DHALF
 39 C
 40 C -- OUTPUT VARIABLES
 41 C
 42 C REAL ADR !* ADAPTIVE THRESHOLD TO "D" RATIO ADAPT/DHALF
 43 C REAL DPERDADR !* DERIVATIVE OF "PER" WITH RESPECT TO "ADR"
 44 C
 45 C -- INTERNAL VARIABLES
 46 C
 47 C -- INTERNAL VARIABLES
 48 C
 49 C
 50 C LOGICAL DEBUG/F/ !* FOR DIAGNOSTIC PRINTOUT SET DEBUG = TRUE
 51 C INTEGER NRAPHSO !* COUNTS NEWTON-RAPHSON ITERATIONS
 52 C REAL A !* NEAREST GUESS FOR VALUE OF ("ADAPT"/"NOISE")

SP052 02 08-10-77

LABEL ADR9LE PAGE 2

```

53      C          TO ATTAIN THE SPECIFIED ERROR RATE
54      REAL ANROLD 1# PREVIOUS GUESS FOR "ANR". THAT IS OLD "A".
55      REAL D1,D2,D3,D4 1# INTEGER MULTIPLES OF "DNR".
56      REAL E 1# "EPSLN"/NOISE RATIO. THAT IS, (AIOR * DNR).
57      REAL PERNEW 1# PSEUDO ERROR COMPUTED USING NEWEST GUESS "A".
58      REAL DPERDANR 1# DERIVATIVE OF "PER" WITH RESPECT TO "ANR".
59      REAL LNTARGET 1# NATURAL LOG OF "PER". (THE TARGET VALUE)
60      REAL LNPERNPNEW 1# NATURAL LOG OF "PERNEW" (COMPUTED USING "A")
61      REAL ERRLNPER 1# = LNPERNPNEW - LNTARGET. ERROR IN LOG PERNPNEW
62      REAL ERNEW 1# ABSOLUTE VALUE OF ERRLNPER
63      REAL ERROLD 1# PREVIOUS VALUE ERNEW
64      REAL THING 1# TEMPORARY STORAGE FOR SCRATCH PAD NUMBERS
65      REAL DLNPERDA 1# DERIVATIVE OF "LNPERNPNEW" WITH RSPT TO "ANR"
66      C#####
67      C#####
68      LNTARGET = ALOG( PER )
69      E = AIOR * DNR
70      C          MAKE FIRST GUESS, A, AT PROPER VALUE FOR ANR
71      C          A = E + ZNORMQ( 4*( A + .98*DNR ) 1# A INVERSE OF 2*FIRST TERM PERNPNEW
72      C          A = AMIN( A , .98*DNR )
73      C          D1 = 1. * DNR
74      C          D2 = 2. * DNR
75      C          D3 = 3. * DNR
76      C          D4 = 4. * DNR
77      C
78      C          ADJUST THE ANR VALUE BY NEWTON-RAPHSON
79      C          ITERATION USING ALOG(PERNPNEW/PER) RATHER THAN
80      C          (PERNEW-PER) FOR THE ERROR TERM TO REDUCE
81      C          SCALING PROBLEMS AND IMPROVE CONVERGENCE.
82      C
83      NRAPHSON = 0
84      ERROLD = 1200.
85      ERNEW = 1100.
86      C          DOWNTIME( ERNEW, LT, ERROLD )
87      GO TO 9001
88      CONTINUE
89      C
90      C          IF(.NOT.( ERNEW .LT. 1000. ))GOTO 9003
91      C          CORRECTION ONLY THE FIRST PASS
92      C          THING = 1
93      C          DFNORM( *A-E ) + 2.*DFNORM( *A ) + DENORM( *A+E )
94      C          2 + 2.*DFNORM(D2-A-E) + 4.*DFNORM(D2-A) + 2.*DFNORM(D2+A-E)
95      C          TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
96      C          3 + DFNORM(D4-A-E) + 2.*DFNORM(D4-A) + DFNORM( -A+E )
97      C          DPERDANR = "THING" / 8.
98      C          DLNPERDA = DPERDANR / PERNPNEW
99      C          ANROLD = A
100     C          NOTICE (-0.5*LNTARGET) IS POSITIVE.
101     C
102     C          IF(.NOT.( ERRLNPER .LE. -0.5*LNTARGET ))GOTO 9004
103     C          USE FULL-SIZED CORRECTION
104     C

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SP052 02 08-10-77 01.190
105      C          GO TO 9005
106      C          ELSE
107      C          CONTINUE
108      C          USE LIMITED CORRECTION TO
109      C          REDUCE OVERROOT TENDENCY
110      C          LNPERNEW = ERRLNPER + LNTARGET
111      C          A = A - LNPERNEW / DLNPERDA
112      C          CONTINUE
113      C          ENDIF
114      C          NRAPHSON = NRAPHSON + 1
115      C          CONTINUE
116      C          ENDIF
117      C          NEWTON RAPHSON CORRECTION, IF ANY. COMPLETED
118      C          NOW EVALUATE THE RESIDUAL ERROR
119      C          THING =
120      C          1      + QNORM( *A-E ) * 2. * QNORM( A ) +
121      C          2      + QNORM( D1 -E ) * 2. * QNORM( D1 ) +
122      C          3      - 2. * QNORM( D2-A-E ) - 4. * QNORM( D2-A ) -
123      C          C      TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
124      C          4      + QNORM( D3 -E ) * 2. * QNORM( D3 ) +
125      C          5      - QNORM( D4-A-E ) - 2. * QNORM( D4-A ) -
126      C          PERNEW = THING / 8.
127      C          ERRLNPER = ALOG( PERNEW / PER )
128      C          ERROLD = ERNEW
129      C          ERNEW = ABS( ERRLNPER )
130      C          IF (DEBUG) PRINT "NRAPHSON =", NRAPHSON, " "
131      C          "PERNEW/PERTARGET =", ERRLNPER
132      C          9001    1  IF ( ERNEW .LT. ERROLD ) GO TO 9002
133      C          ENDO
134      C          ADR = ANROLD / DNR
135      C          DPERDADR = DPERDANR * DNR
136      C          RETURN
137      C          END
138

```

SP052 02 08-10-77 01.190

EDIT DATE 02-19-75 *SR 2/H

	ELAPSED TIME (SEC)	LINES/ MINUTE
OVERHEAD	.07	
PHASE 1	.09	.3754
PHASE 2	.00	
PHASE 4	.07	10.992
PHASE 5	.18	45.940
TOTAL	.43	19.188

THERE WERE NO DIAGNOSTICS IN ABOVE COMPILATION
26K WORDS WERE USED FOR THIS COMPI-LATION

```

1      SUBROUTINE DNR9LE(BER,AIDR,DNR)      ! * MOD-10/SEPT/76 W F ACKER
2      C   DATA-NOISE RATIO FOR NINE-LEVEL EYE
3      C   DETERMINES DATA-NOISE RATIO (DNR) REQUIRED TO PRODUCE SPECIFIED
4      C   BIT ERROR RATE (BER) FOR THREE LEVEL PARTIAL RESPONSE EYE PATTERN
5      C   WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE
6      C   THREE-LEVEL EYE INTO A NINE-LEVEL EYE
7      C
8      CNEFD S D JORM, DNR, AND ZNORM (IN "NORMAL" FILE)
9      C
10     C-- INPUT VARIABLS --
11     C
12     REAL    AFR   1* (BAUDS IN ERROR)/(BAUDS TRANSMITTED)
13     REAL    AIDR  1* (AMPLITUDE OF INTERSYMBOL INTERFERENCE)/D
14     C
15     C-- OUTPUT -
16     C
17     REAL    DNR   1* D / RMS NOISE AMPLITUDE. D DEFINED ABOVE
18     C
19     C-- INTERNAL VARIABLES
20     C
21     LOGICAL DEBUG/F/!* TRUE GIVES DIAGNOSTIC PRINTOUT
22     INTEGER NRAPHSON
23     REAL    DNRNEW 1* COUNTS NEWTON-RAPHSON ITERATIONS
24     REAL    DNROLD 1* NEWEST APPROX TO DNR VALUE FOR SPECIFIED BER
25     REAL    BERNEW 1* PREVIOUS VALUE OF DNRNEW
26     REAL    ERBER  1* (BIT ERROR RATE COMPUTED FOR DNRNEW
27     REAL    ERNEW  1* (BERNEW - BER) * 1.E+10 TO AVOID UNDERFLOW
28     REAL    ERROLD 1* ABSOLUTE VALUE OF ERROR USING DNRNEW
29     REAL    DRVBER 1* PREVIOUS VALUE OF ERNEW
30
31     C#####
32     C
33     DNRNEW =ZNORMQ(BER/1.5) / (1. - AIDR)          IMPROVE FIRST APPROXIMATION OF
34     C
35     C
36     C
37     ERROLD = 10.F10
38     ERNEW  = 2.F10
39     NRAPHSON = 0
40
41     C
42     DOWHILE ( ERNEW .LT. ERROLD )
43     GO TO 9001
44
45     CONTINUE
46     IF(1. - T.1 NRAPHSON .GT. 0 ) GOTO 9003
47     DR  = -( # DFNORM( DNRNEW * (1.-AIDR) ) * (1.+AIDR)
48     1   + ( # DFNORM( DNRNEW * (1.-AIDR) ) * (1.+AIDR)
49     2   + ( # DFNORM( DNRNEW * (1.-AIDR) ) * (1.+AIDR) ) / 16.
50     3   + ( # DFNORM( DNRNEW * (1.-AIDR) ) * (1.+AIDR) ) / 16.
51     DNC LD = DNRNEW
52     DNC EW = (DNRNEW*1.E+10 - ERBER/DRVBER) * 1.E-10
53     CO  TRUE
54     FNDIF

```

SP052 02 08-10-77 01.191

LABEL DNROLE PAGE 2

```
BERNEW =  
53      1      * 6.  * QNORM( DNRNEW * (1.-AIDR) )  
54      2      * 12. * QNORM( DNRNEW * (1.-AIDR) )  
55      3      * 6.  * QNORM( DNRNEW * (1.-AIDR) ) / 16.  
56      4      FRBER = BERNFW * 1.E+10 - BER * 1.E+10  
57      5      IF( NOT( ( NRAPHSON * 67.0 ) ) GOTO 9004  
58      6      FRROLD = FRNEW  
59      7      FRNEW = ARI(ERRER)  
60      8      FRNEW = ARI(ERRER)  
61      9004    CONTINUE  
62      ENDIF  
63      IF( DEBUG) PRINT "NRAPHSON =", NRAPHSON, "ERR BER *1.E+10 **.ERRBER  
64      NRAPHON = NRAPHON + 1  
65      IF( ERNEW .LT. ERROLD ) GO TO 9002  
66      ENDO  
67      DNR = DNROLD  
68      RETURN  
69      END
```

LABEL DNR91E PAGE 3

	EDIT DATE	02-19-75	*SR 2/H
	ELAPSED TIME (SEC)	LINES/ MINUTE	
OVERHEAD	.07		
PHASE 1	.06	68749	
PHASE 2	.00		
PHASE 4	.05	80193	
PHASE 5	.08	47062	
TOTAL	.27	15075	

THERE WERE NO DIAGNOSTICS IN ABOVE COMPILATION
26k WORDS WERE USED FOR THIS COMPILATION

1 SUBROUTINE TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADM,DPERADM,
 2 TMCNSTH,PERINVS,RTT RATE,RDVBAD)

3 C
 4 C
 5 C
 6 C
 7 C
 8 C -- EXTERNAL VARIABLES (NAMES ENDING IN "M" DESIGNATE ARRAYS :
 9 C
 10 REAL ADM(72) (* ADAPTIVE THRESHOLD TO D RATIOS; ADPT/DHALF
 11 REAL AIDR 1* AMPLITUDE INTERSYMBOL INTERFERENCE TO
 12 C REAL BEM(72) 1* DECISION LEVEL RATIO = EPSLN / DHALF
 13 REAL DPERADM(72) 1* BIT ERRORS PER BIT TRANSMITTED RATIO
 14 REAL NSRM(72) 1* DERIVATIVE OF PER WITH RESPECT TO ADM
 15 REAL PERINVS 1* RMS NOISE TO TOTAL RMS SIGNAL RATIO
 16 REAL SNRM(72) 1* BITS TRANSMITTED / PSEUDO ERRORS
 17 REAL TMCNSTH(72) 1* SIGNAL TO NOISE RATIO IN DECIBELS
 18 REAL TMCNSTM(72) 1* ADAPTIVE THRESHOLD QUASILINEAR TIME CNST
 19 INTEGER NBER 1* NUMBER OF BERM VALUES = NAR ROWS PER TABLE
 20 REAL RDVBAD 1* NUMBER OF PSEUDO ERRORS ARE DIVIDED
 21 C
 22 C -- INTERNAL VARIABLES
 23 C
 24 C
 25 INTEGER LASTROW 1* NUMBER OF LAST ROW ON PAGE
 26 INTEGER NROW 1* INDEX REGISTER FOR NUMBER OF ROWS
 27 INTEGER TLINE 1* LINE COUNTER
 28 INTEGER INLINE 1* LINE COUNTER FOR LINE SPACER
 29 C
 30 C -- FORMAT STATEMENTS
 31 C
 32 1 FORMAT (1H1)
 33 2 FORMAT (//)
 34 3 FORMAT (24X,"BASEBAND EYE PATTERN MONITOR TABLES")
 35 4 FORMAT (1H0,2BX,F9.4)
 36 5 FORMAT (1H,23X,"PSEUDO ERROR RATE EQUALS ",1.0,"*",F9.0)
 37 7 FORMAT (1H,6X,"BIT ERROR ",6X,"N / 5",7X,"SNR",7X,"A / D",6X,
 38 1 "DERIV PER ",7X,"TIME")
 39 8 FORMAT (1H,11X,"RATE ",8X,"RATIO",6X,"IN DR",6X,"RATIO",6X,
 40 1 FORMAT ("WRT A / D",5X,"CONSTANT")
 41 10 FORMAT (5X,E12.3,F13.6,F9.2,3F13.6)
 42 11 FORMAT (1H)
 43 12 FORMAT (8X,"NOMENCLATURE:",*)
 44 13 FORMAT (8X,"D",*)
 45 1 "BETWEEN DATA LEVELS FOR THE",1/26X,"THE THREE LEVEL EYE",
 46 2 "I.F.",*)
 47 14 FORMAT (8X,"N / S RATIO",*)
 48 15 FORMAT (8X,"SNR",*)
 49 1 "DECIBLES.")
 50 16 FORMAT (8X,"A / D RATIO",*)
 51 1 "D RATIO.")
 52 17 FORMAT (8X,"DERIV PER WRT",*)
 53 1 "DERIVATIVE OF PSEUDO ERROR RATE",*)

SPN42 02 04-10-77 01.191 LABEL TABLE PAGE 2

```

53   1   "WITH RESPECT TO A / D RATIO."
54   1   FORMAT (8X,"TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ")
55   1   "ADAPTIVE THRESHOLD",/.25X,"LOOP FOR SMALL CHANGES AROUND "
56   2   "STFADY STATE VALUES",/.25X,"WHEN BIT RATE = "F14.0,
57   3   " AND ERROR SIGNAL",/.25X,"DIVIDFR RATIO INTO D/A CONVERTER".
58   4   " = "F14.0
59   19  FORMAT (8A,"AIDR           = AMPLITUDE OF INTERSYMBOL",
60   1   " INTERFERENCE TO D RATIO.")
```

C ****

```

62   NROW = 0
63   DO WHILE (NROW .LT. NBER)
64   GO TO 9001
65   CONTINUE
```

C PRINT A PAGE

```

66   9002
67   C
68   C
69   C
70   WRITE (6,1)
71   WRITE (6,2)
72   WRITE (6,3)
73   WRITE (6,4) AIDR
74   WRITE (6,5) PERINVR
75   WRITE (6,7)
76   WRITE (6,8)
77   WRITE (6,9)
78   9   FORMAT (1MO)
```

C PRINT HEADINGS

```

79   C
80   ILINE = 0
81   LASTROW = MIN( NROW+36, NBER )
82   DO WHILE (NROW .LT. LASTROW )
83   GO TO 9003
84   CONTINUE
```

C PRINT ROWS OF DATA

```

85   NROW = NROW + 1
86   WRTE (6,10) BERM (NROW),NSRM (NROW),SNRM (NROW),ADM (NROW),
87   DPERDADM (NROW),TMCASTM (NROW)
88   1
89   IF( NOT (NBER .LE. 15))GOTO 9004
90   DOUBLE SPACE IF NUMBER OF DATA ROWS .LE.15
91   WRITE (6,11)
92   ILINE = ILINE + 2
93   GO TO 9006
94   ELSE
95   9005  CONTINUE
96   ILINE = ILINE + 1
97   9006  CONTINUE
98   C ENDIF
99   9003  IF( NROW .LT. LASTROW ) GO TO 9004
100  C END
101  C
102  MLINE = 39- ILINE
103  DO WHILE (ILINE .GT. 0 )
104  GO TO 9007
```

ALL DATA PRINTED. MAKE RESIDUAL ROWS BLANK

SP052 02 08-10-77 01.191

	LABEL	TABLE	PAGE
105	9008	CONTINUE	
106		WRITE (6,11)	
107		NLINE = NLINE + 1	
108	9007	IF (NLINE .GT. 0) GO TO 9008	
109	C	ENDO	
110	C	WRITE FOOTNOTES	
111		WRITE (6,12)	
112		WRITE (6,13)	
113		WRITE (6,19)	
114		WRITE (6,14)	
115		WRITE (6,15)	
116		WRITE (6,16)	
117		WRITE (6,17)	
118	9001	WRITE (6,18) BITRATE, ROLVBD	
119		IF (NROW .LT. NBER) GO TO 9002	
120	C	ENDO	
121		RETURN	
122		END	

S9052 02 08-10-77 01.191

EDIT DATE 02-19-75 *SR 2/H

	ELAPSED TIME (SEC)	LINES/ MINUTE
OVERHEAD	.07	
PHASE 1	.10	70564
PHASE 2	.00	
PHASE 4	.06	109637
PHASE 5	.15	47985
TOTAL	.39	18410
TOTAL TIME	1.57	

THERE WERE NO DIAGNOSTICS IN ABOVE COMPILED
264 WORDS WERE USED FOR THIS COMPILED

SP052 03 08-10-77 1.192

ORIGIN	DATE	MODULE	ENTRY LOCATION				
--------	------	--------	----------------	----------------	----------------	----------------	----------------

SUBPROGRAMS INCLUDED IN DECK.

```

023434 08/10/77 **** $ OPTION FORTRAN
      023434
      024540
      022020 08/10/77 DR9L ADR9LF 022020
      *DATA. 021744
      *DATA. 021510 DNRQL 021510
      *DATA. 021452
      *DATA. 021124 08/10/77 ABLE TABLE 021124
      *DATA. 020560
      020536 09/14/76 DFNO DFNORM 020536
      020506 09/14/76 PNOR PHORM 020506
      *DATA. 020500
      020332 09/14/76 QNOR QNORM 020332
      *DATA. 020110
      020072 09/14/76 ZNOR ZNORMP 020072
      *DATA. 020066
      017446 09/14/76 ZNOR 017446
      *DATA. 020066
      *DATA. 017326
      .DATA.

```

SUBPROGRAMS OBTAINED FROM SYSTEM LIBRARY

```

017236 01/10/73 FSOR SORT 017236
      017100 01/10/73 FALG ALOG 017100
      016770 01/10/73 FEXP ALOG 017100
      016442 75/03/21 FRDD EXP 016770
      *FRD. 016612 *FRD. 016613 *FRUN. 016614
      *FRD. 016617 *FRD. 016620 *FRTN. 016621
      *FRDNV 016665 *FRDNV 016655 *GCMP. 016504
      *PRNT 016457 *ASTRA 016754 *TC. 016461
      *FRMT 016664 *FRMT 016664 *POINT. 016501
      *FXMC. 016443 *A7 016510 *PUINT. 016660
      *A8 016512 *A9 016515 *A1 016446
      *A17 016521 *A18 016446 *A21 016516
      *A31 016535 *A27 016532 *A32 016524
      *A35 016564 *A37 016605 *A51 016444
      *CMACH 016451 *ECHR 016442 *OCT60 016447
      *LWRT 016453 *LWRF 016454 *RCW18 016534
      012756 75/02/14 FD10 *FRD 015621 *FWR 015526 *FNC 015750
      *FCD 015621 *FPR 015533 *FFL 015733 *FRT 015112
      *T05 015460 *LBCTR 016347 *FFCVR 013564
      *FCNV2 013652 *SKPB1 013536 *INCTR 016434
      *FMSCL 012777 *FMSCL 013014 *CKSTA 013761
      *SVRG 012762 *RETIN 012775 *FMSCL 013051
      *SKPB4 013545 *VL1ST 013472 *GTARG 015543
      *DFDLT 013155 *CSLSH 015350 *CSCFP 013104
      *CQTP 013214 *CLPAR 013160 *CDFPT 013661
      *CKST 013753 *DATUM 016332 *LBUFF 016350
      *CH1 013776 *FWSZ 016421 *CKSTP 013747
      *STOP 014154 *VCOMA 014604
      *CCR 014617
      *FCNVD 013575
      *STP 014147

```


SF-52 (3) 0-10-77

1-192

ORIGIN DATE MODULE ENTRY LOCATION ENTRY LOCATION ENTRY LOCATION ENTRY LOCATION

PAGE 3

FCB AND BUFFER SPACE
AVAILABLE 000101 THRU 002077 001777
FILE CTRL BLKS 001750 THRU 002100 000131
MAXIMUM BUFFER SPACE REQUIRED 001222

10K IS THE MINIMUM MEMORY NEEDED TO LOAD THIS ACTIVITY WITH ALL FILES OPEN
001164 LOCATIONS REQUIRED FOR LOAD TABLE
EXECUTION PROGRAM ENTERED AT 023414 THROUGH •FSETU

AIDS	$8.9000000E-01$	$0.25000000E+06$
AIDR	$0.80000000E-01$	$0.16000000E-06$
AIDR	$0.80000000E-01$	$0.10000000E-06$
AIDR	$0.80000000E-01$	$0.63000000E-07$
AIDR	$0.80000000E-01$	$0.40000000E-07$
AIDR	$0.80000000E-01$	$0.25000000E-07$
AIDR	$0.80000000E-01$	$0.16000000E-07$
AIDR	$0.80000000E-01$	$0.10000000E-07$
AIDR	$0.80000000E-01$	$0.63000000E-08$
AIDR	$0.80000000E-01$	$0.40000000E-08$
AIDR	$0.80000000E-01$	$0.25000000E-08$
AIDR	$0.80000000E-01$	$0.16000000E-08$
AIDR	$0.80000000E-01$	$0.10000000E-08$
AIDR	$0.80000000E-01$	$0.63000000E-09$
AIDR	$0.80000000E-01$	$0.40000000E-09$
AIDR	$0.80000000E-01$	$0.25000000E-09$
AIDR	$0.80000000E-01$	$0.16000000E-09$
AIDR	$0.80000000E-01$	$0.10000000E-09$
AIDR	$0.80000000E-01$	$0.63000000E-10$
AIDR	$0.80000000E-01$	$0.40000000E-10$
AIDR	$0.80000000E-01$	$0.25000000E-10$
AIDR	$0.80000000E-01$	$0.16000000E-10$
AIDR	$0.80000000E-01$	$0.10000000E-10$
AIDR	$0.80000000E-01$	$0.63000000E-11$
AIDR	$0.80000000E-01$	$0.40000000E-11$
AIDR	$0.80000000E-01$	$0.25000000E-11$
AIDR	$0.80000000E-01$	$0.16000000E-11$
AIDR	$0.80000000E-01$	$0.10000000E-11$
AIDR	$0.80000000E-01$	$0.63000000E-12$
AIDR	$0.80000000E-01$	$0.40000000E-12$
AIDR	$0.80000000E-01$	$0.25000000E-12$
AIDR	$0.80000000E-01$	$0.16000000E-12$
AIDR	$0.80000000E-01$	$0.10000000E-12$
AIDR	$0.80000000E-01$	$0.63000000E-13$
AIDR	$0.80000000E-01$	$0.40000000E-13$
AIDR	$0.80000000E-01$	$0.25000000E-13$
AIDR	$0.80000000E-01$	$0.16000000E-13$
AIDR	$0.80000000E-01$	$0.10000000E-13$
AIDR	$0.80000000E-01$	$0.63000000E-14$
AIDR	$0.80000000E-01$	$0.40000000E-14$
AIDR	$0.80000000E-01$	$0.25000000E-14$
AIDR	$0.80000000E-01$	$0.16000000E-14$
AIDR	$0.80000000E-01$	$0.10000000E-14$
AIDR	$0.10000000E+00$	$0.63000000E-03$
AIDR	$0.10000000E+00$	$0.40000000E-04$
AIDR	$0.10000000E+00$	$0.25000000E-04$
AIDR	$0.10000000E+00$	$0.16000000E-04$
AIDR	$0.10000000E+00$	$0.10000000E-04$
AIDR	$0.10000000E+00$	$0.63000000E-05$
AIDR	$0.10000000E+00$	$0.40000000E-05$
AIDR	$0.10000000E+00$	$0.25000000E-05$
AIDR	$0.10000000E+00$	$0.16000000E-05$
AIDR	$0.10000000E+00$	$0.10000000E-05$
AIDR	$0.10000000E+00$	$0.63000000E-06$
AIDR	$0.10000000E+00$	$0.40000000E-06$
AIDR	$0.10000000E+00$	$0.25000000E-06$
AIDR	$0.10000000E+00$	$0.16000000E-06$
AIDR	$0.10000000E+00$	$0.10000000E-06$
AIDR	$0.10000000E+00$	$0.63000000E-07$

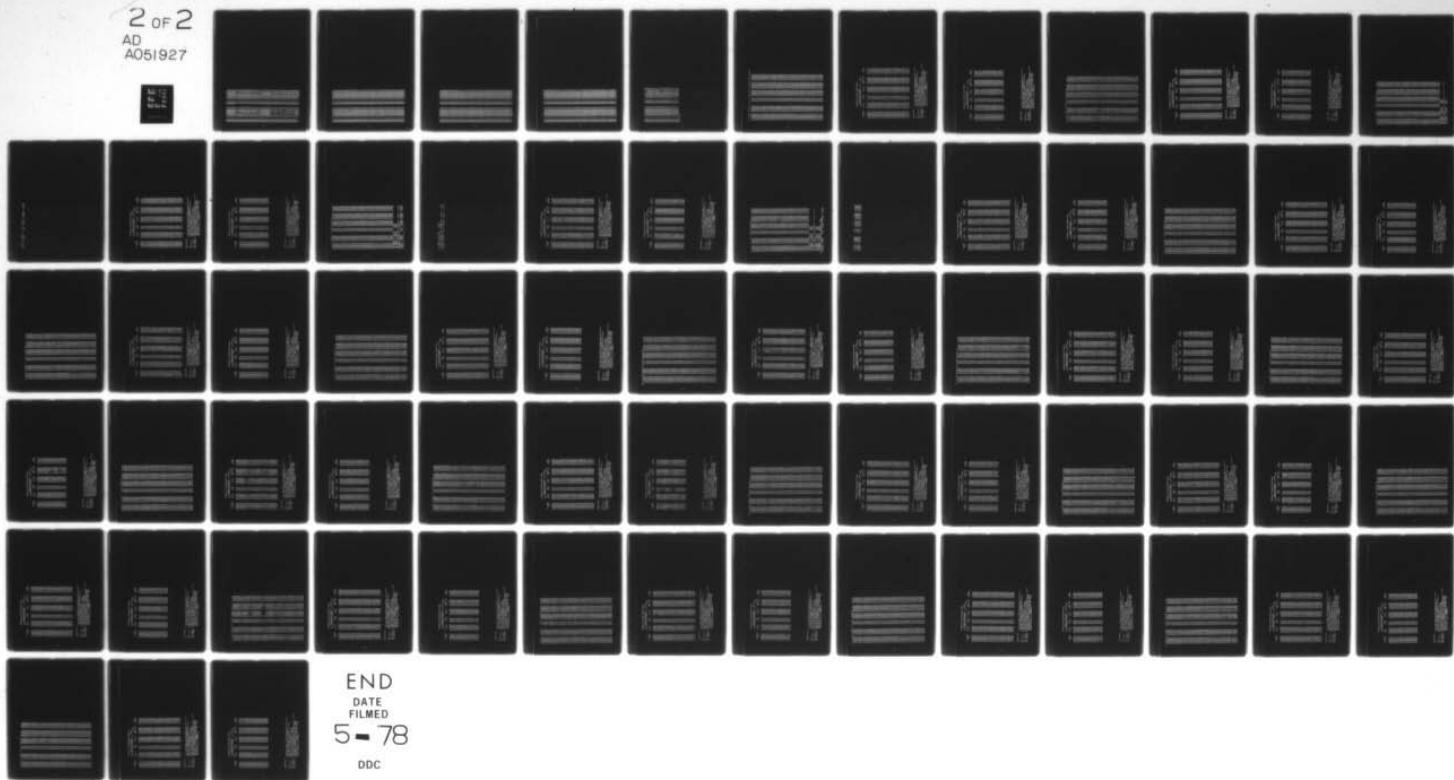
AIDR	0.20000000E+00	BFR	0.25000000E-12
AIDR	0.20000000E+00	BER	0.16000000E-12
AIDR	0.20000000E+00	BER	0.10000000E-12
AIDR	0.20000000E+00	BER	0.63000000E-13
AIDR	0.20000000E+00	BER	0.40000000E-13
AIDR	0.20000000E+00	BER	0.25000000E-13
AIDR	0.20000000E+00	BER	0.16000000E-13
AIDR	0.20000000E+00	BER	0.10000000E-13
AIDR	0.20000000E+00	BER	0.63000000E-14
AIDR	0.20000000E+00	BER	0.40000000E-14
AIDR	0.20000000E+00	BER	0.25000000E-14
AIDR	0.20000000E+00	BER	0.16000000E-14
AIDR	0.20000000E+00	BER	0.10000000E-14
AIDR	0.22000000E+00	BFR	0.10000000E-02
AIDR	0.22000000E+00	BER	0.63000000E-03
AIDR	0.22000000E+00	BER	0.40000000E-03
AIDR	0.22000000E+00	BER	0.25000000E-03
AIDR	0.22000000E+00	BER	0.16000000E-03
AIDR	0.22000000E+00	BER	0.10000000E-03
AIDR	0.22000000E+00	BER	0.63000000E-04
AIDR	0.22000000E+00	BER	0.40000000E-04
AIDR	0.22000000E+00	BER	0.25000000E-04
AIDR	0.22000000E+00	BER	0.16000000E-04
AIDR	0.22000000E+00	BER	0.10000000E-04
AIDR	0.22000000E+00	BER	0.63000000E-05
AIDR	0.22000000E+00	BER	0.40000000E-05
AIDR	0.22000000E+00	BER	0.25000000E-05
AIDR	0.22000000E+00	BER	0.16000000E-05
AIDR	0.22000000E+00	BER	0.10000000E-05
AIDR	0.22000000E+00	BFR	0.43000000E-06
AIDR	0.22000000E+00	BER	0.25000000E-06
AIDR	0.22000000E+00	BER	0.16000000E-06
AIDR	0.22000000E+00	BER	0.10000000E-06
AIDR	0.22000000E+00	BER	0.63000000E-07
AIDR	0.22000000E+00	BER	0.40000000E-07
AIDR	0.22000000E+00	BER	0.25000000E-07
AIDR	0.22000000E+00	BER	0.16000000E-07
AIDR	0.22000000E+00	BER	0.10000000E-07
AIDR	0.22000000E+00	BFR	0.43000000E-08
AIDR	0.22000000E+00	BER	0.25000000E-08
AIDR	0.22000000E+00	BER	0.16000000E-08
AIDR	0.22000000E+00	BER	0.10000000E-08
AIDR	0.22000000E+00	BFR	0.43000000E-09
AIDR	0.22000000E+00	BER	0.25000000E-09
AIDR	0.22000000E+00	BER	0.16000000E-09
AIDR	0.22000000E+00	BER	0.10000000E-09
AIDR	0.22000000E+00	BER	0.63000000E-10
AIDR	0.22000000E+00	BER	0.40000000E-10
AIDR	0.22000000E+00	BER	0.25000000E-10
AIDR	0.22000000E+00	BER	0.16000000E-10
AIDR	0.22000000E+00	BER	0.10000000E-10
AIDR	0.22000000E+00	BFR	0.43000000E-11
AIDR	0.22000000E+00	BER	0.25000000E-11
AIDR	0.22000000E+00	BER	0.16000000E-11
AIDR	0.22000000E+00	BER	0.10000000E-11
AIDR	0.22000000E+00	BFR	0.43000000E-12
AIDR	0.22000000E+00	BER	0.25000000E-12
AIDR	0.22000000E+00	BER	0.16000000E-12
AIDR	0.22000000E+00	BER	0.10000000E-12
AIDR	0.22000000E+00	BFR	0.43000000E-13
AIDR	0.22000000E+00	BER	0.25000000E-13

AD-A051 927

HONEYWELL INC ST PETERSBURG FL AVIONICS DIV
ATEC DIGITAL ADAPTATION STUDY, DEVELOPMENT AND FIELD EVALUATION--ETC(U)
JAN 78 T J CAMPBELL, W F ACKER, C L CHRISTNER F30602-75-C-0282
1077-14813-VOL-3 RADC-TR-77-431-VOL-3 NL

UNCLASSIFIED

2 of 2
AD
A051927



END
DATE
FILED
5 - 78
DDC

*RJMP = SP052, ACTIVITY # = 03, * RFPD CODE = 06, RECORD COUNT = 003765
 0.100E-02 0.220371 13.14 0.966668 -0.010461 0.124742
 0.630E-03 0.211755 13.48 0.965013 -0.007193 0.181424
 0.400E-03 0.206166 13.80 0.928164 -0.005345 0.266123
 0.250E-03 0.197080 14.11 0.699333 -0.004513 0.289160
 0.160E-03 0.190972 14.38 0.670198 -0.004346 0.300260
 0.100E-03 0.185096 14.65 0.841009 -0.004455 0.292938
 0.630E-04 0.179802 14.90 0.14950 -0.004644 0.288962
 0.400E-04 0.175004 15.14 0.791819 -0.004837 0.269767
 0.250E-04 0.170411 15.37 0.770109 -0.005022 0.259855
 0.160E-04 0.166360 15.58 0.51241 -0.005181 0.251877
 0.100E-04 0.162383 15.79 0.732912 -0.005334 0.244640
 0.630E-05 0.158792 15.99 0.716209 -0.005474 0.233393
 0.400E-05 0.155366 16.17 0.008866 -0.005603 0.222881
 0.250E-05 0.152094 16.36 0.686040 -0.005731 0.227684
 0.160E-05 0.149167 16.53 0.614927 -0.005848 0.223130
 0.100E-05 0.146256 16.70 0.659621 -0.005968 0.218662
 0.630E-06 0.143551 16.86 0.647400 -0.006082 0.215549
 0.400E-06 0.141029 17.01 0.636014 -0.006192 0.20738
 0.250E-06 0.138552 17.17 0.624836 -0.006304 0.203010
 0.160E-06 0.136314 17.31 0.614740 -0.006408 0.203651
 0.100E-06 0.134069 17.45 0.604611 -0.006515 0.200266
 0.630E-07 0.131964 17.59 0.595118 -0.006619 0.197136
 0.400E-07 0.129987 17.72 0.586200 -0.006720 0.194179
 0.250E-07 0.128030 17.85 0.577375 -0.006823 0.191253
 0.160E-07 0.126250 17.98 0.569348 -0.006919 0.188593
 0.100E-07 0.124453 18.10 0.561240 -0.007019 0.185906
 0.630E-08 0.122757 18.22 0.5532592 -0.007118 0.183372
 0.400E-08 0.121154 18.33 0.546365 -0.007210 0.180978
 0.250E-08 0.119559 18.45 0.539172 -0.007307 0.178595
 0.160E-08 0.118101 18.55 0.532595 -0.007397 0.176417
 0.100E-08 0.116620 18.66 0.525918 -0.007491 0.174205
 0.630E-09 0.115217 18.77 0.519590 -0.007582 0.172109
 0.400E-09 0.113885 18.87 0.513582 -0.007671 0.170119
 0.250E-09 0.112553 18.97 0.507577 -0.007761 0.168130
 0.160E-09 0.111330 19.07 0.502063 -0.007847 0.166303
 0.100E-09 0.110084 19.17 0.496443 -0.007935 0.164442
 0.630E-10 0.108899 19.26 0.491096 -0.008022 0.162670
 0.400E-10 0.107769 19.35 0.486002 -0.008106 0.160983
 0.250E-10 0.106636 19.44 0.480892 -0.008192 0.159290
 0.160E-10 0.105592 19.53 0.476185 -0.008273 0.157731
 0.100E-10 0.104525 19.62 0.471371 -0.008357 0.156137
 0.630E-11 0.103506 19.70 0.466777 -0.008450 0.154615
 0.400E-11 0.102533 19.78 0.462388 -0.008520 0.151161
 0.250E-11 0.101553 19.87 0.457972 -0.008602 0.149818
 0.160E-11 0.100649 19.94 0.453893 -0.008679 0.148347
 0.100E-11 0.099722 20.02 0.449711 -0.008760 0.146962
 0.630E-12 0.098836 20.10 0.445710 -0.008839 0.144637
 0.400E-12 0.097986 20.18 0.441877 -0.008915 0.143367
 0.250E-12 0.097127 20.25 0.438012 -0.00894 0.143087
 0.160E-12 0.096334 20.32 0.434434 -0.009068 0.143902
 0.100E-12 0.095519 20.40 0.430757 -0.009145 0.142664
 0.630E-13 0.094737 20.47 0.427232 -0.009221 0.141516
 0.400E-13 0.093987 20.54 0.423848 -0.009295 0.140395
 0.250E-13 0.093228 20.61 0.420429 -0.009370 0.139263
 0.160E-13 0.092525 20.67 0.417257 -0.009441 0.138012
 0.100E-13 0.091801 20.74 0.413992 -0.009516 0.137131
 0.630E-14 0.091106 20.81 0.410856 -0.009588 0.136092
 0.400E-14 0.090437 20.87 0.407840 -0.009659 0.135093
 0.250E-14 0.089760 20.94 0.404788 -0.009732 0.134082
 0.160E-14 0.089131 21.00 0.401951 -0.009801 0.133142
 0.100E-14 0.088483 21.06 0.399027 -0.009873 0.132173

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.
PSEUDO ERROR RATE EQUALS 1.0 /
2800.

AIDR ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E+02	0.220371	13.16	0.966668	-0.010461	0.124742
0.630E+03	0.211755	13.48	0.950513	-0.007193	0.181424
0.400E+03	0.204164	13.80	0.921664	-0.005345	0.244123
0.250E+03	0.197080	14.11	0.899333	-0.004513	0.289160
0.160E+03	0.190572	14.38	0.870198	-0.004446	0.300260
0.100E+03	0.185096	14.65	0.841009	-0.004455	0.292938
0.630E+04	0.179802	14.90	0.814950	-0.004644	0.280962
0.400E+04	0.175004	15.14	0.791819	-0.004837	0.269767
0.250E+04	0.170511	15.37	0.770109	-0.005022	0.259855
0.160E+04	0.166366	15.58	0.751241	-0.005181	0.251877
0.100E+04	0.162283	15.79	0.732912	-0.005234	0.246640
0.630E+05	0.158732	15.99	0.716209	-0.005474	0.238393
0.400E+05	0.155366	16.17	0.700886	-0.005603	0.232881
0.250E+05	0.152094	16.36	0.686040	-0.005721	0.227684
0.160E+05	0.149167	16.53	0.677785	-0.005848	0.223130
0.100E+05	0.146256	16.70	0.659621	-0.005948	0.218662
0.630E+06	0.143511	16.86	0.647400	-0.00602	0.215649
0.400E+06	0.141029	17.01	0.636014	-0.006192	0.210738
0.250E+06	0.138552	17.17	0.624836	-0.006304	0.205010
0.160E+06	0.136314	17.31	0.614740	-0.006408	0.20351
0.100E+06	0.134669	17.45	0.604611	-0.006515	0.200586
0.630E+07	0.131964	17.59	0.595118	-0.006619	0.197136
0.400E+07	0.129987	17.72	0.586200	-0.006720	0.194119
0.250E+07	0.128030	17.85	0.577375	-0.006823	0.192153
0.160E+07	0.126250	17.98	0.569348	-0.006919	0.18893
0.100E+07	0.124453	18.10	0.561240	-0.007019	0.185016
0.630E+08	0.122757	18.22	0.553592	-0.007116	0.183372
0.400E+08	0.121154	18.33	0.546365	-0.007210	0.180978
0.250E+08	0.119559	18.45	0.539172	-0.007307	0.178595
0.160E+08	0.118101	18.55	0.532595	-0.007397	0.176417
0.100E+08	0.116620	18.66	0.525918	-0.007491	0.174205
0.630E+09	0.115217	18.77	0.519590	-0.007582	0.172109
0.400E+09	0.113885	18.87	0.513582	-0.007671	0.170119
0.250E+09	0.112553	18.97	0.507577	-0.007761	0.168130
0.160E+09	0.111330	19.07	0.502063	-0.007847	0.166103
0.100E+09	0.110084	19.17	0.496443	-0.007935	0.164442

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
 THE THREE LEVEL EYE I.E., DECISION LEVEL.
 AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
 SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
 A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 DERIV DER WRT D = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
 LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
 WHEN BITE RATE = 12552600.
 DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0° /
PSEUDO ERROR RATE EQUALS 1.0 /
2800.

BIT FREQ	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.108899	19.26	0.491096	-0.008022	0.162670
0.400E-10	0.107769	19.35	0.486002	-0.008106	0.160983
0.250E-10	0.106636	19.44	0.480592	-0.008192	0.159290
0.160E-10	0.105592	19.53	0.476185	-0.008273	0.157731
0.100E-10	0.104526	19.62	0.471371	-0.008357	0.156137
0.630E-11	0.103506	19.70	0.466777	-0.008440	0.154615
0.400E-11	0.102533	19.78	0.462388	-0.008520	0.153161
0.250E-11	0.101553	19.87	0.457912	-0.008602	0.151698
0.160E-11	0.100649	19.96	0.453693	-0.008679	0.150347
0.100E-11	0.099722	20.02	0.449711	-0.008760	0.148962
0.630E-12	0.098834	20.10	0.445710	-0.008839	0.147637
0.400E-12	0.097984	20.18	0.441877	-0.008915	0.146367
0.250E-12	0.097127	20.25	0.438012	-0.008994	0.145087
0.160E-12	0.096334	20.32	0.434434	-0.009068	0.143902
0.100E-12	0.095519	20.40	0.430757	-0.009145	0.142684
0.630E-13	0.094737	20.47	0.427232	-0.009221	0.141516
0.400E-13	0.093987	20.54	0.423868	-0.009295	0.140395
0.250E-13	0.093228	20.61	0.420429	-0.009370	0.139263
0.160E-13	0.092525	20.67	0.417297	-0.009441	0.138212
0.100E-13	0.091881	20.74	0.413992	-0.009516	0.137131
0.630E-14	0.091106	20.81	0.410816	-0.009588	0.136092
0.400E-14	0.090437	20.87	0.407840	-0.009659	0.135093
0.250E-14	0.089760	20.94	0.404788	-0.009732	0.134082
0.160E-14	0.089131	21.00	0.401931	-0.009801	0.133142
0.100E-14	0.088483	21.06	0.399027	-0.009873	0.132173

NOMENCLATURE:

- δ = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BIT RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TRAILER	15 IN DEBUG PRINTOUT	WODE. TABLE WAS CALLED
0.100E-02	0.220134	13.15 0.066668 -0.010461
0.130E-01	0.211509	13.49 0.066668 -0.010461
0.160E-03	0.203909	13.81 0.928164 -0.005345
0.250E-03	0.196817	14.12 0.699334 -0.004513
0.160E-03	0.190701	14.39 0.870199 -0.004346
0.100E-03	0.184817	14.67 0.841011 -0.004495
0.630E-04	0.179516	14.92 0.814951 -0.004644
0.400E-04	0.174710	15.15 0.791821 -0.004837
0.250E-04	0.170110	15.39 0.770111 -0.005022
0.160E-04	0.166052	15.60 0.751244 -0.005181
0.100E-04	0.162068	15.81 0.732916 -0.005334
0.630E-05	0.158410	16.00 0.716213 -0.005474
0.400E-05	0.155038	16.19 0.700892 -0.005603
0.250E-05	0.151760	16.38 0.686046 -0.005731
0.160E-06	0.148827	16.55 0.672792 -0.005848
0.100E-05	0.145909	16.72 0.659629 -0.005968
0.630E-06	0.143194	16.88 0.647408 -0.006082
0.400E-06	0.140670	17.04 0.636024 -0.006192
0.250E-06	0.138187	17.19 0.624867 -0.006304
0.160E-16	0.135944	17.33 0.614752 -0.006408
0.100E-06	0.133693	17.48 0.604625 -0.006515
0.630E-07	0.131583	17.62 0.595133 -0.006619
0.400E-17	0.129601	17.75 0.586216 -0.006720
0.250E-07	0.127638	17.88 0.577393 -0.006823
0.160E-07	0.125853	18.00 0.569367 -0.006919
0.100E-07	0.124050	18.13 0.561261 -0.007019
0.630E-08	0.122349	18.25 0.553615 -0.007116
0.400E-08	0.120742	18.36 0.546389 -0.007210
0.250E-08	0.119142	18.48 0.539199 -0.007306
0.160E-08	0.117619	18.59 0.532624 -0.007397
0.100E-08	0.116194	18.70 0.525949 -0.007491
0.630E-09	0.114776	18.80 0.519622 -0.007582
0.400E-09	0.113449	18.90 0.513617 -0.007670
0.250E-09	0.112113	19.01 0.507614 -0.007761
0.160E-09	0.110886	19.10 0.502103 -0.007846
0.100E-09	0.109635	19.20 0.496485 -0.007935
0.630E-10	0.108445	19.30 0.491141 -0.008022
0.400E-10	0.107312	19.39 0.486049 -0.008106
0.250E-10	0.106174	19.48 0.480942 -0.008192
0.160E-10	0.105126	19.57 0.4776237 -0.008273
0.100E-10	0.104055	19.65 0.471427 -0.008357
0.630E-11	0.103032	19.74 0.4666836 -0.008439
0.400E-11	0.102055	19.82 0.4622449 -0.008519
0.250E-11	0.101072	19.91 0.458037 -0.008607
0.160E-11	0.100164	19.99 0.453961 -0.008679
0.100E-11	0.099233	20.07 0.449782 -0.008759
0.630E-12	0.094227	20.15 0.4427325 -0.009220
0.400E-13	0.093474	20.59 0.423945 -0.009293
0.250E-13	0.092712	20.66 0.420530 -0.009369
0.160E-13	0.09206	20.72 0.417362 -0.009447
0.100E-13	0.091279	20.79 0.414102 -0.009514
0.630E-14	0.090580	20.86 0.410969 -0.009587
0.400E-14	0.089908	20.92 0.407958 -0.009658
0.250E-14	0.089228	21.05 0.404910 -0.009731
0.160E-14	0.088556	21.12 0.399158 -0.009871
0.100E-14	0.087945	-0.132199

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.0200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RATY ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.220134	13.15	0.966668	-0.010461	0.124741
0.430E-03	0.211509	13.49	0.950513	-0.007193	0.181423
0.400E-03	0.203909	13.81	0.928164	-0.005345	0.244122
0.250E-03	0.196817	14.12	0.899336	-0.004513	0.289559
0.160E-03	0.190701	14.39	0.870199	-0.004346	0.300558
0.100E-03	0.184817	14.67	0.841011	-0.004455	0.292337
0.430E-04	0.179516	14.92	0.814951	-0.004644	0.280800
0.400E-04	0.174710	15.15	0.791821	-0.004837	0.269766
0.250E-04	0.170110	15.39	0.770111	-0.005022	0.259553
0.160E-04	0.166052	15.60	0.751244	-0.005181	0.251875
0.100E-04	0.162068	15.81	0.732916	-0.005334	0.246338
0.430E-05	0.158610	16.00	0.716213	-0.005474	0.238992
0.400E-05	0.155038	16.19	0.700892	-0.005603	0.232880
0.250E-05	0.151760	16.38	0.686046	-0.005731	0.227983
0.160E-05	0.148827	16.55	0.672792	-0.005848	0.223128
0.100E-05	0.145909	16.72	0.659629	-0.005968	0.218861
0.630E-06	0.143398	16.88	0.647608	-0.006082	0.214648
0.400E-06	0.140670	17.04	0.636024	-0.006192	0.210137
0.250E-06	0.138187	17.19	0.624847	-0.006304	0.207009
0.160E-06	0.135953	17.33	0.614752	-0.006400	0.203950
0.100E-06	0.133694	17.48	0.604625	-0.006515	0.200886
0.630E-07	0.131533	17.62	0.595133	-0.006619	0.197336
0.400E-07	0.129800	17.75	0.586216	-0.006720	0.194178
0.250E-07	0.127638	17.88	0.577393	-0.006833	0.191253
0.160E-07	0.125953	18.00	0.569367	-0.006919	0.188993
0.100E-07	0.124050	18.13	0.561261	-0.007049	0.185077
0.630E-08	0.122349	18.25	0.553615	-0.007116	0.183173
0.400E-08	0.120742	18.36	0.546389	-0.007210	0.180779
0.250E-08	0.119142	18.48	0.539199	-0.007306	0.178997
0.160E-08	0.117679	18.59	0.532624	-0.007397	0.176118
0.100E-08	0.116164	18.70	0.525949	-0.007491	0.174207
0.630E-09	0.114786	18.80	0.519622	-0.007582	0.172211
0.400E-09	0.113449	18.90	0.513617	-0.007670	0.170122
0.250E-09	0.112113	19.01	0.507614	-0.007761	0.168133
0.160E-09	0.110866	19.10	0.502103	-0.007846	0.166107
0.100E-09	0.109635	19.20	0.496485	-0.007935	0.164446

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL
- A/D RATIO = AMPLITUDE OF INTEPSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A' / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- A' / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A' / D RATIO.
- DERIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552000, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.0200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.108445	19.30	0.491141	-0.008022	0.162675
0.400E-10	0.107312	19.39	0.488049	-0.008106	0.160989
0.250E-10	0.106174	19.48	0.480942	-0.008192	0.159297
0.160E-10	0.105126	19.57	0.476237	-0.008273	0.157738
0.100E-10	0.104055	19.65	0.471427	-0.008357	0.156144
0.630E-11	0.103032	19.74	0.466636	-0.008439	0.154623
0.400E-11	0.102055	19.82	0.462249	-0.008519	0.153170
0.250E-11	0.101072	19.91	0.458037	-0.008601	0.151708
0.160E-11	0.100164	19.99	0.453961	-0.008679	0.150357
0.100E-11	0.099233	20.07	0.449782	-0.008759	0.148973
0.630E-12	0.098342	20.15	0.445784	-0.008838	0.147648
0.400E-12	0.097488	20.22	0.441955	-0.008915	0.146380
0.250E-12	0.096628	20.30	0.438094	-0.008993	0.145100
0.160E-12	0.095831	20.37	0.434319	-0.009067	0.143916
0.100E-12	0.095012	20.44	0.430647	-0.009146	0.142699
0.630E-13	0.094227	20.52	0.427325	-0.009220	0.141532
0.400E-13	0.093474	20.59	0.423945	-0.009293	0.140412
0.250E-13	0.092712	20.66	0.420330	-0.009369	0.139281
0.160E-13	0.092006	20.72	0.417362	-0.009440	0.138231
0.100E-13	0.091279	20.79	0.414102	-0.009514	0.137151
0.630E-14	0.090580	20.86	0.410969	-0.009587	0.136113
0.400E-14	0.089908	20.92	0.407938	-0.009658	0.135115
0.250E-14	0.089228	20.99	0.404910	-0.009731	0.134105
0.160E-14	0.088596	21.05	0.402028	-0.009799	0.133166
0.100E-14	0.087945	21.12	0.399158	-0.009871	0.132199

NOMENCLATURE:

- ?) = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THF
- ATCR = THE THRESHOLD LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRT TIME CONSTANT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TABLE WAS CALLED.						
0.100E-02	0.219422	1.17	0.986670	-0.010461	0.124734	
0.630E-03	0.210772	13.52	0.950517	-0.007193	0.181411	
0.400E-03	0.203148	13.84	0.928170	-0.00536	0.244105	
0.250E-03	0.196032	14.15	0.909343	-0.004513	0.289138	
0.160E-03	0.189894	14.43	0.880213	-0.00436	0.300235	
0.100E-03	0.183988	14.70	0.8461029	-0.00445	0.292913	
0.630E-04	0.178665	14.96	0.8144976	-0.004645	0.28936	
0.400E-04	0.173839	15.20	0.791852	-0.004838	0.269741	
0.250E-04	0.169219	15.43	0.767150	-0.005022	0.259828	
0.160E-04	0.165142	15.64	0.751290	-0.005181	0.251850	
0.100E-04	0.161139	15.86	0.732971	-0.005381	0.244613	
0.630E-05	0.157463	16.06	0.7162279	-0.005475	0.236367	
0.400E-05	0.154073	16.25	0.7000967	-0.005604	0.238855	
0.250E-05	0.150778	16.43	0.686133	-0.005732	0.227659	
0.160E-05	0.147829	16.60	0.672891	-0.005849	0.223105	
0.100E-05	0.144895	16.78	0.659741	-0.005968	0.218639	
0.630E-06	0.142168	16.94	0.647534	-0.006083	0.215527	
0.400E-06	0.139626	17.10	0.636165	-0.006133	0.210118	
0.250E-06	0.137129	17.26	0.625003	-0.006304	0.20992	
0.160E-06	0.134872	17.40	0.614924	-0.006408	0.20635	
0.100E-06	0.132608	17.55	0.604814	-0.006516	0.200772	
0.630E-07	0.130465	17.69	0.595341	-0.006620	0.197125	
0.400E-07	0.128469	17.82	0.5866443	-0.006720	0.194170	
0.250E-07	0.126515	17.96	0.577640	-0.006823	0.191248	
0.160E-07	0.124719	18.08	0.569634	-0.006919	0.188590	
0.100E-07	0.122905	18.21	0.5611550	-0.007019	0.185908	
0.630E-08	0.121193	18.33	0.553926	-0.007116	0.183378	
0.400E-08	0.119576	18.45	0.546724	-0.007210	0.180987	
0.250E-08	0.117966	18.56	0.539558	-0.007306	0.176609	
0.160E-08	0.116493	18.67	0.5332007	-0.007396	0.176435	
0.100E-08	0.114999	18.79	0.526358	-0.007490	0.174228	
0.630E-09	0.113582	18.89	0.520058	-0.007581	0.172137	
0.400E-09	0.112237	19.00	0.514980	-0.007669	0.170152	
0.250E-09	0.110893	19.10	0.508106	-0.007760	0.168169	
0.160E-09	0.109658	19.20	0.502622	-0.007844	0.166348	
0.100E-09	0.108400	19.30	0.497035	-0.007931	0.164493	
0.630E-10	0.107203	19.40	0.491721	-0.008019	0.162728	
0.400E-10	0.106062	19.49	0.486660	-0.008103	0.161047	
0.250E-10	0.104919	19.58	0.481585	-0.008188	0.159361	
0.160E-10	0.103865	19.67	0.476912	-0.008269	0.157009	
0.100E-10	0.102787	19.76	0.472135	-0.008353	0.155222	
0.630E-11	0.101759	19.85	0.467578	-0.008435	0.154708	
0.400E-11	0.100777	19.93	0.4633226	-0.008514	0.153261	
0.250E-11	0.99789	20.02	0.458849	-0.008596	0.151806	
0.160E-11	0.998876	20.10	0.454807	-0.008673	0.150463	
0.100E-11	0.997940	20.18	0.450666	-0.008753	0.148086	
0.630E-12	0.997045	20.26	0.446705	-0.008831	0.147769	
0.400E-12	0.996188	20.34	0.442912	-0.008907	0.146508	
0.250E-12	0.995323	20.42	0.439090	-0.008985	0.145237	
0.160E-12	0.994523	20.49	0.435553	-0.009058	0.144080	
0.100E-12	0.993701	20.57	0.431920	-0.009135	0.142952	
0.630E-13	0.992913	20.64	0.428438	-0.009209	0.141693	
0.400E-13	0.992157	20.71	0.425097	-0.009282	0.140581	
0.250E-13	0.991392	20.78	0.421724	-0.009357	0.139459	
0.160E-13	0.990684	20.85	0.418595	-0.009427	0.138618	
0.100E-13	0.989954	20.92	0.415377	-0.009501	0.137446	
0.630E-14	0.989254	20.99	0.412287	-0.009573	0.136317	
0.400E-14	0.988580	21.05	0.409317	-0.009643	0.135328	
EXP UNDERFLO	AT LOCATION	020464				
EXP UNDERFLO	AT LOCATION	020464				
EXP UNDERFLO	AT LOCATION	020464				
EXP UNDERFLO	AT LOCATION	020464				
FWD UNDERFLO	AT LOCATION	020464				
FWD UNDERFLO	AT LOCATION	020464				

OF UNIFLOW AT LOCATION
0.16E-14 0.08265 21.18 0.20458
0.110E-14 0.086613 21.25 0.403522 -0.009782 0.133398
0.110E-14 0.086613 0.400646 -0.009833 0.132440

BASEBAND FVF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.0000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RAT. ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.219622	13.17	0.9666670	-0.010461	0.124734
0.430E-03	0.210772	13.52	0.950517	-0.007193	0.181411
0.400E-03	0.203168	13.84	0.928170	-0.005346	0.244405
0.1250E-03	0.196032	14.15	0.899343	-0.004513	0.289138
0.160E-02	0.189894	14.43	0.870213	-0.004346	0.300235
0.100E-03	0.183988	14.70	0.841029	-0.004455	0.292913
0.630E-04	0.178665	14.96	0.814976	-0.004645	0.280946
0.400E-04	0.173839	15.20	0.791852	-0.004838	0.269741
0.250E-04	0.169219	15.43	0.770150	-0.005022	0.259818
0.160E-04	0.165142	15.64	0.751290	-0.005181	0.251830
0.100E-04	0.161139	15.86	0.732971	-0.005335	0.244613
0.630E-05	0.157463	16.06	0.716279	-0.005474	0.238307
0.400E-05	0.154073	16.25	0.700967	-0.005604	0.232835
0.250E-05	0.150778	16.43	0.686133	-0.005732	0.227619
0.160E-05	0.147829	16.60	0.672891	-0.005849	0.223105
0.100E-05	0.144895	16.78	0.659741	-0.005968	0.218639
0.630E-06	0.142168	16.94	0.6467534	-0.006083	0.214627
0.400E-06	0.139626	17.10	0.631615	-0.006193	0.210718
0.250E-06	0.137129	17.26	0.625003	-0.006304	0.206922
0.160E-06	0.134872	17.40	0.614924	-0.006406	0.203615
0.100E-06	0.132608	17.55	0.604814	-0.006516	0.200212
0.630E-07	0.130485	17.69	0.595341	-0.006620	0.197125
0.400E-07	0.128490	17.82	0.586443	-0.006720	0.194110
0.250E-07	0.126516	17.96	0.5776823	-0.006823	0.191248
0.160E-07	0.124677	18.08	0.5696346	-0.006919	0.188990
0.100E-07	0.122905	18.21	0.561550	-0.007019	0.185908
0.630E-08	0.121193	18.33	0.553926	-0.007116	0.183318
0.400E-08	0.119576	18.45	0.546724	-0.007210	0.180987
0.250E-08	0.117966	18.56	0.539558	-0.007306	0.178669
0.160E-08	0.116493	18.67	0.533007	-0.007396	0.176435
0.100E-08	0.114999	18.79	0.526358	-0.007490	0.174238
0.630E-09	0.113582	18.89	0.520058	-0.007581	0.172137
0.400E-09	0.112237	19.00	0.514080	-0.007669	0.170152
0.250E-09	0.110883	19.10	0.508106	-0.007761	0.168169
0.160E-09	0.109622	19.20	0.502622	-0.007844	0.166368
0.100E-09	0.108400	19.30	0.497035	-0.007933	0.164493

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTELLSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- DERIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
- LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600.
- WHEN BITE RATE = 12552600.
- DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND F/F PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 0.0400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.107203	19.40	0.491721	-0.0008019	0.162728
0.400E-10	0.106062	19.49	0.486660	-0.0008103	0.161047
0.250E-10	0.104917	19.58	0.491585	-0.0008188	0.155361
0.160E-10	0.103865	19.67	0.476912	-0.0008249	0.157809
0.100E-10	0.102737	19.76	0.472135	-0.0008333	0.156222
0.630E-11	0.101759	19.85	0.467578	-0.0008435	0.154108
0.400E-11	0.100777	19.93	0.463226	-0.0008514	0.153261
0.250E-11	0.099789	20.02	0.458849	-0.0008596	0.151806
0.160E-11	0.098876	20.10	0.454807	-0.0008673	0.150463
0.100E-11	0.097940	20.18	0.450666	-0.0008753	0.149046
0.630E-12	0.097045	20.26	0.446705	-0.0008831	0.147769
0.400E-12	0.096188	20.34	0.442913	-0.0008907	0.146508
0.250E-12	0.095323	20.42	0.439090	-0.0008985	0.145237
0.160E-12	0.094523	20.49	0.435553	-0.0009058	0.144060
0.100E-12	0.093701	20.57	0.431920	-0.0009135	0.142852
0.630E-13	0.092913	20.64	0.428438	-0.0009209	0.141693
0.400E-13	0.092157	20.71	0.425097	-0.0009282	0.140581
0.250E-13	0.091392	20.78	0.421724	-0.0009357	0.139459
0.160E-13	0.090684	20.85	0.418595	-0.0009427	0.138418
0.100E-13	0.089954	20.92	0.415377	-0.0009501	0.137346
0.630E-14	0.089254	20.99	0.412287	-0.0009573	0.136317
0.400E-14	0.088580	21.05	0.409317	-0.0009643	0.135328
0.250E-14	0.087899	21.12	0.406312	-0.0009714	0.133328
0.160E-14	0.087265	21.18	0.403522	-0.0009782	0.133398
0.100E-14	0.086613	21.25	0.400646	-0.0009853	0.132440

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO SIGNAL RATIO.
- = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV DFR WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552000. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER #.

AT LOCATION
EXP UNOFFLO AT LOCATION 020464
EXA UNDERFL0 AT LOCATION 020464
0.101E-14 0.085974 21.35 0.407680 -0.009750 0.133842
EXP UNDERFL0 AT LOCATION 020464
0.101E-14 0.084927 21.42 0.404900 -0.009819 0.132898

BASFBAND FVF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 0.0600 2800.

A/F ERROR RATE	N/S RATIO	SNR IN DB	A/D RATIO	DERIV PER WRT A/D	TIME CONSTANT	PSEUDO ERROR RATE EQUALS 1.0 / 0.0600					
						13.22	0.966677	-0.010464	0.124706		
0.100E-02	0.218245	13.22	0.966677	-0.010464	0.124706	0.209554	0.9507195	0.181362			
0.630E-03	0.201892	13.57	0.928195	-0.0053367	0.244031	0.400E-03	0.194739	14.21	0.99383	-0.004515	0.289047
0.259E-03	0.188567	14.49	0.870270	-0.004348	0.300137	0.160E-03	0.182627	14.77	0.861108	-0.004457	0.292810
0.100E-04	0.172773	15.03	0.85079	-0.0046647	0.280831	0.630E-04	0.172418	15.27	0.791982	-0.004840	0.269634
0.250E-04	0.167789	15.51	0.770310	-0.005024	0.259720	0.160E-04	0.163666	15.72	0.71482	-0.005186	0.251742
0.100E-04	0.159637	15.94	0.733199	-0.005337	0.244505	0.630E-05	0.155937	16.14	0.718544	-0.005477	0.238260
0.400E-05	0.152527	16.33	0.701273	-0.005607	0.232769	0.250E-05	0.149209	16.52	0.666484	-0.005736	0.227555
0.160E-06	0.133202	17.51	0.613287	-0.005852	0.223004	0.100E-05	0.143288	16.88	0.660187	-0.005971	0.218561
0.400E-06	0.140543	17.04	0.648033	-0.006085	0.214433	0.400E-06	0.137985	17.20	0.636195	-0.006195	0.210628
0.1250E-06	0.135672	17.36	0.625614	-0.006307	0.206906	0.160E-06	0.133202	17.51	0.615593	-0.006411	0.203556
0.400E-07	0.128924	17.66	0.605546	-0.006518	0.200201	0.630E-07	0.128789	17.80	0.593138	-0.006622	0.197060
0.1200E-07	0.126783	17.94	0.57306	-0.006722	0.194113	0.250E-07	0.124799	18.08	0.570574	-0.006825	0.191199
0.380E-07	0.122994	18.20	0.542617	-0.006921	0.188551	0.160E-07	0.121171	18.33	0.526228	-0.007020	0.185878
0.100E-07	0.119452	18.46	0.505079	-0.007117	0.183356	0.630E-08	0.119024	18.66	0.501719	-0.007210	0.180978
0.400E-08	0.117824	18.58	0.501953	-0.007306	0.178611	0.250E-08	0.116212	18.69	0.500868	-0.007306	0.178611
0.1200E-08	0.114735	18.81	0.524395	-0.007395	0.176448	0.160E-08	0.112994	18.92	0.517830	-0.007489	0.174253
0.380E-09	0.113236	19.03	0.521614	-0.007579	0.172174	0.100E-09	0.111815	19.14	0.557119	-0.007667	0.170202
0.400E-09	0.110467	19.24	0.59833	-0.007757	0.168232	0.250E-09	0.109121	19.36	0.506634	-0.007861	0.166626
0.160E-09	0.107895	19.44	0.498937	-0.007929	0.164582	0.100E-09	0.106625	19.44	0.498937	-0.007929	0.164582

NONENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF THE THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D RATIO = AMPLITUDE OF INFRASYMBOL INTERFERENCE TO D RATIO.
- N/S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A/D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A/D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600.
- WHEN BITE RATE = 12552600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.0600
PSEUDO ERROR RATE EQUALS 1.0 / 2A00.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.4305E-10	0.105428	19.54	0.493713	-0.000014	0.162831
0.4400E-10	0.104287	19.66	0.487741	-0.000097	0.161164
0.2500E-10	0.103144	19.73	0.48760	-0.000182	0.159493
0.1600E-10	0.102091	19.82	0.479176	-0.000261	0.157954
0.1000E-10	0.101015	19.91	0.474994	-0.000344	0.156382
0.6300E-11	0.099988	20.00	0.470030	-0.000425	0.154883
0.4000E-11	0.099008	20.09	0.465770	-0.000504	0.153451
0.2500E-11	0.098022	20.17	0.461490	-0.000584	0.152011
0.1600E-11	0.097112	20.25	0.457540	-0.000660	0.150683
0.1000E-11	0.096180	20.34	0.45396	-0.000739	0.149321
0.6300E-12	0.095288	20.42	0.449330	-0.000816	0.148019
0.4000E-12	0.094435	20.50	0.445932	-0.000891	0.146773
0.2500E-12	0.093574	20.58	0.442207	-0.000967	0.145517
0.1600E-12	0.092778	20.65	0.438762	-0.000940	0.144355
0.1000E-12	0.091961	20.73	0.435227	-0.000915	0.143162
0.6300E-13	0.091177	20.80	0.431861	-0.0009188	0.142019
0.4000E-13	0.090426	20.87	0.42894	-0.0009260	0.140922
0.2500E-13	0.089667	20.95	0.425318	-0.0009333	0.139815
0.1600E-13	0.088963	21.02	0.422282	-0.0009402	0.138788
0.1000E-13	0.088240	21.09	0.419181	-0.0009474	0.137732
0.6300E-14	0.087545	21.16	0.416165	-0.0009545	0.136716
0.4000E-14	0.086877	21.22	0.413288	-0.0009613	0.135743
0.2500E-14	0.086201	21.29	0.41030	-0.0009683	0.134757
0.1600E-14	0.085574	21.35	0.407480	-0.0009750	0.133842
0.1000E-14	0.084927	21.42	0.404690	-0.0009819	0.132898

NONENCLATURE:
 ? = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THF THREE LEVEL EYE I.E., DECISION LEVEL.

A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.

SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.

A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.

DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RATE = 1252600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

0.100E-13	0.086382	21.27	0.425747	-0.009458	0.137976
0.630E-14	0.085999	21.34	0.422874	=0.009527	0.136971
0.485E-14	0.08502	21.41	0.420116	=0.009595	0.136005
0.450E-14	0.084378	21.48	0.417329	=0.009664	0.135028
0.160E-14	0.083761	21.54	0.414744	-0.009729	0.134120
0.100E-14	0.083126	21.61	0.412082	=0.009798	0.133185

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D EQUALS 0.0000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	S/N IN DB	A / D RATIO	DERIV PFR WRT A / D	TIME CONSTANT
0.100E-02	0.216611	13.29	0.966698	-0.010670	0.124632
0.630E-03	0.207868	13.64	0.950568	-0.007200	0.161234
0.400E-03	0.200159	13.97	0.922858	-0.005351	0.243840
0.250E-03	0.192960	14.29	0.899485	-0.004518	0.288810
0.160E-03	0.186748	14.57	0.870417	-0.004351	0.299880
0.100E-03	0.180769	14.86	0.841310	-0.004461	0.29542
0.175E-03	0.175319	15.12	0.815341	-0.004651	0.280556
0.400E-04	0.170491	15.37	0.792310	-0.004845	0.26956
0.250E-04	0.165812	15.61	0.770712	-0.005010	0.25939
0.180E-04	0.16162	15.83	0.751960	-0.005189	0.251460
0.100E-04	0.157638	16.05	0.733763	-0.005343	0.244223
0.630E-05	0.153905	16.25	0.717198	-0.005483	0.23978
0.400E-05	0.150414	16.45	0.702021	-0.005613	0.232469
0.250E-05	0.147139	16.65	0.687334	-0.005761	0.227278
0.180E-05	0.144155	16.82	0.674240	-0.005859	0.222130
0.100E-05	0.141189	17.00	0.661253	-0.005978	0.218272
0.630E-06	0.138433	17.19	0.649214	-0.006093	0.214171
0.400E-06	0.135885	17.34	0.638016	-0.006203	0.210374
0.250E-06	0.133344	17.50	0.627038	-0.006314	0.206661
0.160E-06	0.131098	17.65	0.617146	-0.006418	0.203319
0.100E-06	0.128795	17.80	0.607226	-0.006525	0.199974
0.630E-07	0.126667	17.95	0.597951	-0.006629	0.196844
0.400E-07	0.124639	18.09	0.589253	-0.006729	0.193909
0.250E-07	0.122634	18.23	0.580662	-0.006832	0.19108
0.160E-07	0.120850	18.36	0.572861	-0.006927	0.188372
0.100E-07	0.119108	18.49	0.564996	-0.007026	0.185713
0.630E-08	0.117313	18.61	0.557592	-0.007123	0.18307
0.400E-08	0.115682	18.73	0.550609	-0.007216	0.180642
0.250E-08	0.114081	18.86	0.543673	-0.007311	0.17849
0.160E-08	0.112699	18.97	0.537342	-0.007400	0.176341
0.100E-08	0.111117	19.08	0.530928	-0.007493	0.174162
0.630E-09	0.109793	19.20	0.524863	-0.007582	0.172998
0.400E-09	0.108363	19.30	0.519113	-0.007670	0.170141
0.250E-09	0.107024	19.41	0.513378	-0.007759	0.168187
0.160E-09	0.105796	19.51	0.508123	-0.007842	0.166394
0.100E-09	0.10456	19.61	0.502777	-0.007929	0.164568

NOMENCLATURE:

- *) HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF.
- *) THE THREE LEVEL EYE I.E., DECISION LEVEL.
- *) AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- *) RMS NOISE TO RMS SIGNAL RATIO.
- *) SIGNAL POWER TO NOISE POWER IN DECIBLES.
- *) ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- *) DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- *) QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 1255600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.0800
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SWR IN DB	A / D RATIO	DERIV PER TIME	CONSTANT
0.630E-10	0.103358	19.71	0.497701	-0.008014	0.162833
0.410E-10	0.102227	19.81	0.498774	-0.008096	0.161181
0.250E-10	0.101094	19.91	0.498043	-0.008180	0.159525
0.160E-10	0.100051	20.00	0.493599	-0.008259	0.158001
0.110E-10	0.098986	20.49	0.479065	-0.008341	0.156444
0.630E-11	0.097971	20.18	0.474746	-0.008421	0.154959
0.400E-11	0.097001	20.26	0.470626	-0.008499	0.153541
0.250E-11	0.096027	20.35	0.466490	-0.008578	0.152116
0.160E-11	0.095128	20.43	0.462676	-0.008659	0.150800
0.110E-11	0.094207	20.52	0.458774	-0.008731	0.149452
0.630E-12	0.093327	20.60	0.454946	-0.008807	0.148163
0.400E-12	0.092485	20.68	0.451682	-0.008881	0.146930
0.250E-12	0.091636	20.76	0.447895	-0.008957	0.145686
0.160E-12	0.090852	20.83	0.444579	-0.009028	0.144536
0.110E-12	0.090046	20.91	0.441178	-0.009103	0.143355
0.630E-13	0.089274	20.99	0.437923	-0.009175	0.142222
0.400E-13	0.088534	21.06	0.434803	-0.009246	0.141136
0.250E-13	0.087787	21.13	0.431656	-0.009318	0.140039
0.160E-13	0.087095	21.20	0.428742	-0.009386	0.139022
0.110E-13	0.086382	21.27	0.425747	-0.009458	0.137976
0.630E-14	0.085699	21.34	0.42874	-0.009527	0.136971
0.400E-14	0.085042	21.41	0.420116	-0.009595	0.136005
0.250E-14	0.084378	21.48	0.417329	-0.009664	0.135028
0.160E-14	0.083761	21.54	0.414744	-0.009729	0.134120
0.110E-14	0.083126	21.61	0.412082	-0.009798	0.133185

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECIBELS
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SWR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRT THF CONSTANT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BIT RATE = 12592600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

0.100E-02	0.214535	13.37	0.966138	-0.010483	0.124481
0.630E-03	0.205734	13.73	0.950542	-0.007210	0.180751
0.400E-03	0.197973	14.07	0.928385	-0.005360	0.243455
0.250E-03	0.190725	14.39	0.899689	-0.004526	0.288332
0.160E-03	0.184471	14.68	0.870709	-0.004359	0.299360
0.100E-03	0.178453	14.97	0.841709	-0.004469	0.292001
0.630E-04	0.173030	15.24	0.815855	-0.004660	0.280003
0.400E-04	0.168114	15.49	0.792447	-0.004855	0.268796
0.250E-04	0.163409	15.73	0.771487	-0.005041	0.258874
0.160E-04	0.159259	15.96	0.752874	-0.005201	0.250890
0.100E-04	0.155187	16.18	0.734333	-0.005356	0.243651
0.630E-05	0.151451	16.39	0.718429	-0.005497	0.237405
0.400E-05	0.148010	16.59	0.703417	-0.005627	0.231897
0.250E-05	0.144667	16.79	0.688908	-0.005756	0.226707
0.160E-05	0.141679	16.97	0.675987	-0.005874	0.222163
0.100E-05	0.138711	17.16	0.663189	-0.005994	0.217710
0.630E-06	0.135956	17.33	0.651339	-0.006109	0.213614
0.400E-06	0.133390	17.50	0.640322	-0.006219	0.209824
0.250E-06	0.130874	17.66	0.629354	-0.006331	0.206120
0.160E-06	0.128605	17.81	0.610849	-0.006455	0.202787
0.100E-06	0.126330	17.97	0.601140	-0.006542	0.199451
0.630E-07	0.124202	18.12	0.590167	-0.006666	0.196332
0.400E-07	0.122205	18.26	0.592270	-0.006747	0.193406
0.250E-07	0.120232	18.40	0.584186	-0.006849	0.190518
0.160E-07	0.118441	18.53	0.576382	-0.006945	0.187893
0.100E-07	0.116634	18.66	0.568824	-0.007044	0.185246
0.630E-08	0.114933	18.79	0.561723	-0.007140	0.182752
0.400E-08	0.113327	18.91	0.554638	-0.007234	0.180397
0.250E-08	0.111733	19.04	0.548205	-0.007329	0.178057
0.160E-08	0.110277	19.15	0.542066	-0.007418	0.175919
0.100E-08	0.108801	19.27	0.535551	-0.007510	0.173751
0.630E-09	0.107405	19.38	0.529978	-0.007600	0.171699
0.400E-09	0.106081	19.49	0.524418	-0.007687	0.169752
0.250E-09	0.104761	19.60	0.518876	-0.007776	0.167807
0.160E-09	0.103550	19.70	0.513601	-0.007860	0.166024
0.100E-09	0.102318	19.80	0.508442	-0.007947	0.164207
0.630E-10	0.101148	19.90	0.503747	-0.008031	0.162480
0.400E-10	0.100034	20.00	0.499995	-0.008113	0.160836
0.250E-10	0.098919	20.09	0.494442	-0.008197	0.159188
0.160E-10	0.097893	20.18	0.490165	-0.008276	0.157670
0.100E-10	0.096846	20.28	0.485002	-0.008358	0.156119
0.630E-11	0.095847	20.37	0.481649	-0.008438	0.154640
0.400E-11	0.094895	20.46	0.477690	-0.008516	0.153228
0.250E-11	0.093938	20.54	0.473716	-0.008596	0.151807
0.160E-11	0.093055	20.63	0.470954	-0.008671	0.150496
0.100E-11	0.092151	20.71	0.466306	-0.008749	0.149152
0.630E-12	0.091287	20.79	0.462231	-0.008825	0.147866
0.400E-12	0.090461	20.87	0.459312	-0.008899	0.146635
0.250E-12	0.089629	21.32	0.440214	-0.009337	0.139751
0.160E-12	0.088859	21.03	0.435812	-0.008975	0.145394
0.100E-12	0.088069	21.10	0.44935	-0.009046	0.144245
0.630E-13	0.087313	21.18	0.446316	-0.009121	0.143065
0.400E-13	0.086587	21.25	0.443327	-0.009194	0.141934
0.250E-13	0.085855	21.32	0.440214	-0.009255	0.140848
0.160E-13	0.085177	21.39	0.437524	-0.009337	0.138733
0.100E-13	0.084479	21.47	0.434557	-0.009477	0.137686
0.630E-14	0.083809	21.53	0.431907	-0.009557	0.136680
0.400E-14	0.083146	21.60	0.429568	-0.009615	0.135712
0.250E-14	0.082516	21.67	0.426601	-0.009655	0.134733
0.160E-14	0.081912	21.73	0.424627	-0.009711	0.133823
0.100E-14	0.081290	21.80	0.421581	-0.009820	0.132885

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.1000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.214535	13.37	0.966738	-0.010483	0.1244681
0.630E-03	0.205734	13.73	0.950642	-0.007210	0.180974
0.400E-03	0.197913	14.07	0.928385	-0.005360	0.263456
0.250E-03	0.190725	14.39	0.899689	-0.004526	0.288312
0.160E-03	0.184471	14.68	0.870709	-0.004359	0.299300
0.110E-03	0.178553	14.97	0.841709	-0.004469	0.292001
0.630E-04	0.173020	15.24	0.815855	-0.004680	0.280003
0.400E-04	0.168114	15.49	0.792947	-0.004835	0.268796
0.250E-04	0.163099	15.73	0.771467	-0.005041	0.258874
0.160E-04	0.159259	15.96	0.752874	-0.005201	0.250990
0.100E-04	0.155187	16.18	0.734833	-0.005356	0.243621
0.630E-05	0.151151	16.39	0.718429	-0.005497	0.237405
0.400E-05	0.148010	16.59	0.703417	-0.005627	0.231897
0.250E-05	0.144667	16.79	0.688908	-0.005756	0.226707
0.160E-05	0.141679	16.97	0.675987	-0.005874	0.222163
0.100E-05	0.138711	17.16	0.663189	-0.005994	0.217710
0.630E-06	0.135256	17.33	0.651339	-0.006109	0.213914
0.400E-06	0.133390	17.50	0.640332	-0.006227	0.209844
0.250E-06	0.130814	17.66	0.629554	-0.006331	0.206120
0.160E-06	0.128605	17.81	0.619849	-0.006435	0.202787
0.100E-06	0.126310	17.97	0.610140	-0.006542	0.199411
0.630E-07	0.124202	18.12	0.601067	-0.006646	0.196312
0.400E-07	0.122205	18.26	0.592570	-0.006747	0.193408
0.250E-07	0.120312	18.40	0.584186	-0.006849	0.190518
0.160E-07	0.118641	18.53	0.576582	-0.006945	0.187893
0.100E-07	0.116634	18.66	0.568924	-0.007044	0.185226
0.630E-08	0.114933	18.79	0.561723	-0.007140	0.182722
0.400E-08	0.113327	18.91	0.554938	-0.007234	0.180997
0.250E-08	0.111733	19.04	0.548205	-0.007329	0.178077
0.160E-08	0.110277	19.15	0.542066	-0.007418	0.175919
0.100E-08	0.108801	19.27	0.535851	-0.007510	0.173751
0.630E-09	0.107055	19.38	0.529978	-0.007600	0.171699
0.400E-09	0.106081	19.49	0.524418	-0.007687	0.169752
0.250E-09	0.104781	19.60	0.518876	-0.007716	0.167807
0.160E-09	0.103550	19.70	0.513801	-0.007860	0.166024
0.100E-09	0.102318	19.80	0.508642	-0.007947	0.164207

NOMENCLATURE:

- % = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- % THE THREE LEVEL EYE I.E., DECISION LEVEL.
- % AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- % RMS NOISE TO RMS SIGNAL RATIO.
- % SIGNAL POWER TO NOISE POWER IN DECIBLES.
- % ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- % DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- % QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
- % LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
- % WHEN BITE RATE = 125.2600.
- % DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.1000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.1011E+08	19.90	0.503747	-0.008031	0.162480
0.400E-10	0.1000E+06	20.00	0.499095	-0.008113	0.160836
0.250E-10	0.0989E+05	20.09	0.494442	-0.008197	0.159188
0.160E-10	0.0978E+03	20.18	0.490165	-0.008276	0.157670
0.100E-10	0.0968E+02	20.28	0.485802	-0.008358	0.156119
0.630E-11	0.0958E+01	20.37	0.481649	-0.008438	0.155640
0.400E-11	0.0948E+00	20.46	0.477690	-0.008516	0.153228
0.250E-11	0.0939E-01	20.54	0.473716	-0.008596	0.151807
0.160E-11	0.0930E-02	20.63	0.470054	-0.008671	0.150497
0.100E-11	0.0921E-01	20.71	0.466308	-0.008759	0.149152
0.630E-12	0.0912E-07	20.79	0.462731	-0.008825	0.147862
0.400E-12	0.0904E-06	20.87	0.459312	-0.008899	0.146635
0.250E-12	0.0896E-05	20.95	0.455872	-0.008975	0.145394
0.160E-12	0.0888E-04	21.03	0.452694	-0.009046	0.144245
0.100E-12	0.0880E-03	21.10	0.449435	-0.009121	0.143065
0.630E-13	0.0873E-03	21.18	0.446316	-0.009194	0.141934
0.400E-13	0.0865E-02	21.25	0.443327	-0.009265	0.140848
0.250E-13	0.0858E-01	21.32	0.440314	-0.009337	0.139751
0.160E-13	0.0851E-01	21.39	0.437524	-0.009406	0.138733
0.100E-13	0.0844E-01	21.47	0.434657	-0.009477	0.137686
0.630E-14	0.0838E-01	21.53	0.431907	-0.009547	0.136680
0.400E-14	0.0831E-01	21.60	0.429268	-0.009615	0.135712
0.250E-14	0.0825E-01	21.67	0.426601	-0.009685	0.134733
0.160E-14	0.0819E-01	21.73	0.424127	-0.009751	0.133823
0.100E-14	0.0812E-01	21.80	0.421581	-0.009820	0.132885

NOMENCLATURE:

- 2 = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT A / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TWF CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 1255600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER # 4.

	Ru	Li	Ts	In	Oefus	Printout	M	13	Lab1	Lab2	Calib.
0.100E-02	0.212037	13.47	0.966810	0.010505	0.124218						
0.200E-03	0.203176	13.84	0.950776	0.007226	0.180525						
0.400E-03	0.195364	14.18	0.928603	0.005375	0.242789						
0.250E-03	0.186070	14.51	0.900035	0.004539	0.287505						
0.160E-03	0.181780	14.81	0.871202	0.003774	0.298463						
0.100E-03	0.175731	15.10	0.842376	0.003483	0.291068						
0.630E-04	0.170283	15.38	0.816709	0.004676	0.279053						
0.400E-05	0.165348	15.63	0.793998	0.004872	0.267834						
0.250E-05	0.160630	15.88	0.772075	0.005050	0.257903						
0.160E-04	0.156473	16.11	0.754356	0.005221	0.249914						
0.100E-04	0.152397	16.34	0.736549	0.005377	0.244668						
0.630E-05	0.148662	16.56	0.720385	0.005318	0.236418						
0.400E-05	0.145225	16.76	0.705614	0.005651	0.230907						
0.250E-05	0.141890	16.96	0.691359	0.005781	0.225716						
0.160E-05	0.138913	17.15	0.678685	0.005900	0.221172						
0.100E-05	0.135958	17.33	0.666614	0.006021	0.216720						
0.630E-06	0.133219	17.51	0.654558	0.006137	0.212627						
0.400E-06	0.130671	17.68	0.643806	0.006246	0.208839						
0.250E-06	0.128174	17.84	0.633292	0.006361	0.205139						
0.160E-06	0.125925	18.00	0.623837	0.006466	0.201810						
0.100E-06	0.123673	18.15	0.614389	0.006575	0.198476						
0.630E-07	0.121567	18.30	0.605572	0.006679	0.195365						
0.400E-07	0.119593	18.45	0.597322	0.006781	0.192445						
0.250E-07	0.117645	18.59	0.589190	0.006884	0.189560						
0.160E-07	0.115877	18.72	0.581182	0.006980	0.186940						
0.100E-07	0.114096	18.85	0.574410	0.007080	0.184297						
0.630E-08	0.112419	18.98	0.567445	0.007177	0.181806						
0.400E-08	0.110839	19.11	0.560887	0.007271	0.179402						
0.250E-08	0.109269	19.23	0.554385	0.007367	0.177118						
0.160E-08	0.107837	19.34	0.548460	0.007457	0.174983						
0.100E-08	0.106387	19.46	0.542666	0.007551	0.172811						
0.630E-09	0.105015	19.57	0.536804	0.007642	0.170765						
0.400E-09	0.103715	19.68	0.531448	0.007730	0.168819						
0.250E-09	0.102419	19.79	0.526111	0.007820	0.166875						
0.160E-09	0.101231	19.89	0.521226	0.007904	0.165090						
0.100E-09	0.100022	20.00	0.516262	0.007992	0.163273						
0.630E-10	0.098875	20.10	0.511554	0.008078	0.161544						
0.400E-10	0.097783	20.19	0.507081	0.008161	0.159898						
0.250E-10	0.096690	20.29	0.502607	0.008246	0.158247						
0.160E-10	0.095485	20.38	0.498584	0.008326	0.156726						
0.100E-10	0.094659	20.48	0.494305	0.008409	0.155172						
0.630E-11	0.093682	20.57	0.490315	0.008491	0.153689						
0.400E-11	0.092749	20.65	0.486513	0.008570	0.152271						
0.250E-11	0.091812	20.74	0.482697	0.008651	0.150846						
0.160E-11	0.090948	20.82	0.479180	0.008727	0.149529						
0.100E-11	0.090064	20.91	0.475584	0.008806	0.148179						
0.630E-12	0.089218	20.99	0.472150	0.008894	0.146887						
0.400E-12	0.088410	21.07	0.468868	0.008959	0.145650						
0.250E-12	0.087596	21.15	0.465566	0.009037	0.144402						
0.160E-12	0.086843	21.23	0.462515	0.009110	0.143249						
0.100E-12	0.086070	21.30	0.459387	0.009186	0.142056						
0.630E-13	0.085330	21.38	0.456393	0.009260	0.140920						
0.400E-13	0.084621	21.45	0.453525	0.009332	0.139827						
0.250E-13	0.083905	21.52	0.450632	0.009407	0.138722						
0.160E-13	0.083241	21.59	0.447954	0.009477	0.137697						
0.100E-13	0.082559	21.66	0.445262	0.009550	0.136641						
0.630E-14	0.081950	21.73	0.442603	0.009621	0.135624						
0.400E-14	0.081275	21.80	0.440028	0.009691	0.134651						
0.250E-14	0.080640	21.87	0.437468	0.009763	0.133663						
0.160E-14	0.080049	21.93	0.435093	0.009831	0.132744						
0.100E-14	0.079441	22.00	0.432648	0.009911	0.131797						

BASFBAND F/F PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.1200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERRIV PER WRT A / D	TIME CONSTANT
0.100F-02	0.212037	13.47	0.9666810	-0.010505	0.124218
0.630F-03	0.203176	13.84	0.950771	-0.007228	0.180523
0.400F-03	0.195364	14.18	0.928603	-0.005375	0.242789
0.250F-03	0.188170	14.51	0.900035	-0.004539	0.287508
0.160F-03	0.181780	14.81	0.871202	-0.004372	0.298463
0.100F-03	0.175371	15.10	0.842376	-0.004483	0.291068
0.630F-04	0.171283	15.38	0.816709	-0.004676	0.279053
0.400F-04	0.155348	15.53	0.793998	-0.004872	0.267834
0.250F-04	0.160630	15.88	0.772754	-0.005020	0.257903
0.160F-04	0.156473	16.11	0.754556	-0.005221	0.249914
0.100F-04	0.152397	16.34	0.736549	-0.005377	0.242668
0.630F-05	0.146662	16.56	0.713085	-0.005519	0.236418
0.400F-05	0.145225	16.76	0.705614	-0.005651	0.230907
0.250F-05	0.141890	16.96	0.691359	-0.005781	0.225716
0.160F-05	0.136913	17.15	0.678885	-0.005901	0.221172
0.100F-05	0.135958	17.33	0.666648	-0.006021	0.216720
0.630F-06	0.133214	17.51	0.654558	-0.006137	0.212627
0.400F-06	0.130671	17.68	0.643006	-0.006248	0.208839
0.250F-06	0.128174	17.84	0.633292	-0.006361	0.205139
0.160F-06	0.125225	18.00	0.623837	-0.006466	0.201810
0.100F-06	0.122673	18.15	0.614889	-0.006575	0.198479
0.630F-07	0.121567	18.30	0.605572	-0.006679	0.195365
0.400F-07	0.119593	18.45	0.597322	-0.006781	0.192445
0.250F-07	0.117645	18.59	0.589190	-0.006884	0.189560
0.160F-07	0.115877	18.72	0.581223	-0.006980	0.186940
0.100F-07	0.114096	18.85	0.574410	-0.007080	0.184297
0.630F-08	0.112419	18.98	0.567445	-0.007177	0.181806
0.400F-08	0.110839	19.11	0.560887	-0.007271	0.179456
0.250F-08	0.109260	19.23	0.554385	-0.007367	0.177118
0.160F-08	0.107837	19.34	0.548860	-0.007457	0.174983
0.100F-08	0.106487	19.46	0.542466	-0.007551	0.172817
0.630F-09	0.105015	19.57	0.536604	-0.007642	0.170765
0.400F-09	0.103115	19.68	0.531468	-0.007730	0.168819
0.250F-09	0.102419	19.79	0.526111	-0.007820	0.166875
0.160F-09	0.101231	19.89	0.521226	-0.007904	0.165090
0.100F-09	0.100022	20.00	0.516267	-0.007992	0.163273

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- THE THREE LEVEL EYE 1.0E-0 DECISION LEVEL.
- AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = SIGNAL POWER TO RMS SIGNAL RATIO.
- SNR = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- A / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- DERRIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
- TIME CONSTANT = LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASERAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D EQUALS 0.1200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.098875	20.10	0.511554	-0.008078	0.161544
0.400E-10	0.097783	20.19	0.507081	-0.008161	0.159898
0.250E-10	0.096690	20.29	0.502607	-0.008246	0.158247
0.160E-10	0.095685	20.38	0.498497	-0.008326	0.156726
0.100E-10	0.094659	20.48	0.494305	-0.008409	0.155172
0.630E-11	0.093682	20.57	0.490315	-0.008491	0.153689
0.400E-11	0.092744	20.65	0.486513	-0.008570	0.152271
0.250E-11	0.091812	20.74	0.482697	-0.008651	0.150846
0.160E-11	0.090948	20.82	0.479180	-0.008727	0.149529
0.100E-11	0.090064	20.91	0.475584	-0.008806	0.148179
0.630E-12	0.089218	20.99	0.472150	-0.008884	0.146887
0.400E-12	0.088410	21.07	0.468868	-0.008959	0.145650
0.250E-12	0.087596	21.15	0.465566	-0.009037	0.144402
0.160E-12	0.086843	21.23	0.462515	-0.009110	0.143246
0.100E-12	0.086070	21.30	0.459387	-0.009186	0.142059
0.630E-13	0.085330	21.38	0.456393	-0.009260	0.140920
0.400E-13	0.084621	21.45	0.453525	-0.009332	0.139827
0.250E-13	0.083905	21.52	0.450632	-0.009407	0.138722
0.160E-13	0.083241	21.59	0.447954	-0.009477	0.137697
0.100E-13	0.082559	21.66	0.445202	-0.009550	0.136641
0.630E-14	0.081904	21.73	0.442562	-0.009621	0.135626
0.400E-14	0.081275	21.80	0.440028	-0.009691	0.134651
0.250E-14	0.080640	21.87	0.437468	-0.009763	0.133663
0.160E-14	0.080049	21.93	0.435093	-0.009830	0.132744
0.100E-14	0.079441	22.00	0.432648	-0.009901	0.131797

NOMENCLATURE:

- Δ = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF THF THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- S/P = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT +1MF CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- QUASILINEAR TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

10E-12	10E-11	10E-10	10E-9	10E-8	10E-7	10E-6	10E-5	10E-4	10E-3	10E-2	10E-1
0.209139	0.966521	13.59	0.966521	-0.010540	0.123806						
0.200222	0.950970	13.97	0.950970	-0.007257	0.179823						
0.192365	0.92938	14.32	0.92938	-0.005398	0.241780						
0.185036	0.900561	14.65	0.900561	-0.004559	0.286231						
0.178721	0.871946	14.96	0.871946	-0.004493	0.297074						
0.172654	0.843375	15.26	0.843375	-0.004505	0.289858						
0.167197	0.811978	15.54	0.811978	-0.004701	0.277550						
0.162260	0.789545	15.80	0.789545	-0.004899	0.266337						
0.157546	0.774599	16.05	0.774599	-0.005089	0.256416						
0.153397	0.754693	16.28	0.754693	-0.005253	0.248418						
0.149337	0.739001	16.52	0.739001	-0.005411	0.241164						
0.145620	0.723149	16.74	0.723149	-0.005555	0.234955						
0.142204	0.705689	16.94	0.705689	-0.005689	0.229387						
0.138895	0.694756	17.15	0.694756	-0.005821	0.224190						
0.135944	0.682387	17.33	0.682387	-0.005941	0.219641						
0.133019	0.670170	17.52	0.670170	-0.006046	0.215104						
0.130310	0.658890	17.70	0.658890	-0.006182	0.211087						
0.127793	0.646439	17.87	0.646439	-0.006295	0.207297						
0.125330	0.638232	18.04	0.638232	-0.006409	0.203594						
0.123112	0.629061	18.19	0.629061	-0.006516	0.200262						
0.120894	0.619907	18.35	0.619907	-0.006626	0.196926						
0.118822	0.610821	18.50	0.610821	-0.006733	0.193811						
0.116881	0.603391	18.65	0.603391	-0.006836	0.190889						
0.114967	0.595531	18.79	0.595531	-0.006941	0.188000						
0.113230	0.58814	18.92	0.58814	-0.007039	0.185377						
0.111482	0.581257	19.06	0.581257	-0.007141	0.182779						
0.109837	0.574536	19.19	0.574536	-0.007240	0.180235						
0.108287	0.568211	19.31	0.568211	-0.007336	0.177879						
0.106749	0.561941	19.43	0.561941	-0.007436	0.175516						
0.105346	0.556331	19.55	0.556331	-0.007526	0.173356						
0.103925	0.550555	19.67	0.550555	-0.007621	0.171223						
0.102582	0.545001	19.78	0.545001	-0.007714	0.169165						
0.101310	0.539441	19.89	0.539441	-0.007764	0.167212						
0.100042	0.534702	20.00	0.534702	-0.007896	0.165261						
0.098879	0.529998	20.12	0.529998	-0.007983	0.163469						
0.097697	0.522218	20.20	0.522218	-0.008073	0.161644						
0.096575	0.520085	20.30	0.520085	-0.008160	0.159997						
0.095507	0.516379	20.40	0.516379	-0.008246	0.158252						
0.094439	0.512072	20.50	0.512072	-0.008333	0.156593						
0.093456	0.508115	20.59	0.508115	-0.008415	0.155064						
0.092453	0.504079	20.68	0.504079	-0.008501	0.153501						
0.091498	0.500238	20.77	0.500238	-0.008584	0.152009						
0.090586	0.496576	20.86	0.496576	-0.008666	0.150593						
0.089671	0.492202	20.95	0.492202	-0.008749	0.149149						
0.088826	0.488915	21.03	0.488915	-0.008827	0.147824						
0.087136	0.485651	21.11	0.485651	-0.008909	0.146465						
0.086346	0.48244	21.16	0.48244	-0.008989	0.145164						
0.085551	0.479582	21.28	0.479582	-0.009067	0.143918						
0.084815	0.476601	21.36	0.476601	-0.009147	0.142662						
0.084061	0.473461	21.43	0.473461	-0.009222	0.141488						
0.083338	0.470446	21.51	0.470446	-0.009301	0.140302						
0.082645	0.467561	21.58	0.467561	-0.009377	0.139155						
0.081945	0.464796	21.66	0.464796	-0.009452	0.138033						
0.081297	0.462077	21.73	0.462077	-0.009529	0.136940						
0.080631	0.45924	21.80	0.45924	-0.009601	0.135907						
0.079992	0.456770	21.87	0.456770	-0.009677	0.134844						
0.079377	0.454176	22.01	0.454176	-0.009751	0.133882						
0.078756	0.449310	22.07	0.449310	-0.009897	0.131844						
0.078180	0.447016	22.14	0.447016	-0.009967	0.130919						
0.077586	0.444658	22.20	0.444658	-0.010040	0.129985						

BASSBAND EYE PATTERN MONITOR TABLES

TABLE FOR ADTR EQUALS 0.1400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	S/N IN DB	A / D RATIO	DERIV PFR WRT A / D	TIME CONSTANT
0.100E-02	0.209139	13.59	0.966921	-0.010540	0.123806
0.630E-03	0.200222	13.97	0.950910	-0.007257	0.179823
0.400E-03	0.19365	14.12	0.928938	-0.005398	0.241760
0.250E-03	0.185036	14.65	0.90561	-0.004559	0.286231
0.160E-03	0.174721	14.96	0.871946	-0.004393	0.297074
0.100E-03	0.172654	15.26	0.843375	-0.004205	0.299628
0.630E-04	0.162197	15.54	0.817973	-0.004071	0.277590
0.400E-04	0.162260	15.80	0.795545	-0.004089	0.266157
0.250E-04	0.157546	16.05	0.774599	-0.003989	0.256416
0.160E-04	0.153397	16.28	0.756493	-0.003953	0.246418
0.100E-04	0.149337	16.52	0.739001	-0.003411	0.241164
0.630E-05	0.146262	16.74	0.723149	-0.003555	0.234905
0.400E-05	0.142204	16.94	0.708689	-0.003489	0.229387
0.250E-05	0.138895	17.15	0.694756	-0.003481	0.221910
0.160E-05	0.13594	17.33	0.682387	-0.003491	0.219641
0.100E-05	0.133019	17.52	0.670177	-0.003484	0.215184
0.630E-06	0.13010	17.70	0.658890	-0.003482	0.211087
0.400E-06	0.127793	17.87	0.648439	-0.003495	0.207297
0.250E-06	0.125330	18.04	0.638232	-0.003499	0.203594
0.160E-06	0.123112	18.19	0.629061	-0.003416	0.200262
0.100E-06	0.120894	18.35	0.619907	-0.003426	0.198928
0.630E-07	0.118822	18.50	0.613731	-0.003433	0.193811
0.400E-07	0.116891	18.65	0.603391	-0.003436	0.190889
0.250E-07	0.114967	18.79	0.595531	-0.003441	0.188000
0.160E-07	0.113230	18.92	0.588614	-0.003439	0.185377
0.100E-07	0.111462	19.06	0.581227	-0.003414	0.182229
0.630E-08	0.109837	19.19	0.574536	-0.003240	0.180235
0.400E-08	0.108287	19.31	0.568211	-0.003336	0.177879
0.250E-08	0.106749	19.43	0.561941	-0.003434	0.175536
0.160E-08	0.105346	19.55	0.556231	-0.003226	0.173395
0.100E-08	0.103925	19.67	0.550455	-0.003221	0.171223
0.630E-09	0.102582	19.78	0.545001	-0.003714	0.169165
0.400E-09	0.101310	19.89	0.539841	-0.003704	0.167212
0.250E-09	0.100042	20.00	0.534702	-0.003796	0.165261
0.160E-09	0.098879	20.10	0.529998	-0.003793	0.163469
0.100E-09	0.097697	20.20	0.525218	-0.003673	0.161644

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THF THREE LEVEL EYE I.E., DECISION LEVEL.
 ADTR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
 S/N = SIGNAL POWER TO NOISE POWER IN DECIBELS.
 A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 DERIV PFR WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
 WHFN BIT RATE = 1255200.
 DIVIDER RATIO INTO D/A CONVERTER = 6.

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR ADTR EQUALS 0.1400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.096575	20.30	0.520685	-0.008160	0.19907
0.400E-10	0.095507	20.40	0.516379	-0.008246	0.158252
0.250E-10	0.094439	20.50	0.512072	-0.008333	0.156593
0.160E-10	0.093456	20.59	0.508115	-0.008415	0.155064
0.100E-10	0.092453	20.68	0.504079	-0.008501	0.15501
0.630E-11	0.091498	20.77	0.500238	-0.008584	0.152009
0.400E-11	0.090586	20.86	0.496576	-0.008666	0.150583
0.250E-11	0.089671	20.95	0.492902	-0.008749	0.149149
0.160E-11	0.088826	21.03	0.489515	-0.008827	0.147824
0.100E-11	0.087962	21.11	0.486051	-0.008909	0.146665
0.630E-12	0.087136	21.20	0.482744	-0.008989	0.145164
0.400E-12	0.086346	21.28	0.479582	-0.009067	0.143918
0.250E-12	0.085551	21.36	0.476640	-0.009147	0.142662
0.160E-12	0.084815	21.43	0.473461	-0.009222	0.141498
0.100E-12	0.084061	21.51	0.470446	-0.009301	0.140302
0.630E-13	0.083338	21.58	0.467561	-0.009377	0.139155
0.400E-13	0.082645	21.66	0.464796	-0.009452	0.138053
0.250E-13	0.081945	21.73	0.462007	-0.009529	0.136940
0.160E-13	0.081297	21.80	0.459424	-0.009601	0.13507
0.100E-13	0.080631	21.87	0.456770	-0.009677	0.134644
0.630E-14	0.079992	21.94	0.454224	-0.009751	0.133122
0.400E-14	0.079377	22.01	0.451780	-0.009823	0.128339
0.250E-14	0.078756	22.07	0.449310	-0.009897	0.131044
0.160E-14	0.078180	22.14	0.447018	-0.009967	0.130919
0.100E-14	0.077586	22.20	0.444658	-0.010040	0.129965

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- ADTR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DFRIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP OR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.
0.100E-02 0.205866 13.73 0.967083 -0.010591 0.123208
0.630E-03 0.196905 14.11 0.926412 -0.005311 0.178818
0.400E-03 0.189016 14.47 0.926412 -0.005311 0.240288
0.250E-03 0.181668 14.81 0.901300 -0.005598 0.284407
0.160E-03 0.175345 15.12 0.872983 -0.004422 0.295092
0.100E-03 0.169279 15.43 0.846754 -0.004538 0.287580
0.630E-04 0.163892 15.71 0.819711 -0.004736 0.275516
0.400E-04 0.158913 15.98 0.797637 -0.004938 0.264272
0.250E-04 0.154223 16.24 0.777069 -0.005131 0.254321
0.160E-04 0.150103 16.47 0.755325 -0.005298 0.246312
0.100E-04 0.146076 16.71 0.722115 -0.00559 0.239048
0.630E-05 0.142395 16.93 0.726736 -0.005606 0.232779
0.400E-05 0.139018 17.14 0.712639 -0.005742 0.227551
0.250E-05 0.135750 17.35 0.699076 -0.005877 0.222053
0.160E-05 0.132840 17.53 0.681051 -0.006000 0.217485
0.100E-05 0.129959 17.72 0.675188 -0.006126 0.213019
0.630E-06 0.127293 17.90 0.666246 -0.006246 0.208914
0.400E-06 0.124819 18.07 0.654118 -0.006362 0.205116
0.250E-06 0.122399 18.24 0.644234 -0.006479 0.201405
0.160E-06 0.120222 18.40 0.633361 -0.006588 0.198055
0.100E-06 0.118067 18.56 0.625508 -0.006701 0.194774
0.630E-07 0.116015 18.71 0.618257 -0.006811 0.191600
0.400E-07 0.114114 18.85 0.610547 -0.006916 0.188669
0.250E-07 0.112239 19.00 0.602956 -0.007024 0.185774
0.160E-07 0.110540 19.13 0.594054 -0.007125 0.183143
0.100E-07 0.108829 19.27 0.589176 -0.007230 0.180477
0.630E-08 0.107220 19.39 0.582689 -0.007332 0.177955
0.400E-08 0.105705 19.52 0.576584 -0.007430 0.175622
0.250E-08 0.104201 19.64 0.570535 -0.007531 0.173272
0.160E-08 0.102830 19.76 0.563024 -0.007626 0.171123
0.100E-08 0.101441 19.88 0.559451 -0.007724 0.168943
0.630E-09 0.100129 19.99 0.556188 -0.007820 0.166878
0.400E-09 0.098886 20.10 0.552928 -0.007912 0.164918
0.250E-09 0.097667 20.21 0.544248 -0.008008 0.162929
0.160E-09 0.096512 20.31 0.539708 -0.008097 0.161161
0.100E-09 0.095357 20.41 0.535094 -0.008190 0.159128
0.630E-10 0.094261 20.51 0.530718 -0.008281 0.157858
0.400E-10 0.093219 20.61 0.525560 -0.008369 0.155924
0.250E-10 0.092176 20.71 0.522400 -0.008459 0.154259
0.160E-10 0.091216 20.80 0.518578 -0.008544 0.152774
0.100E-10 0.090237 20.89 0.514600 -0.008633 0.151155
0.630E-11 0.089306 20.98 0.510968 -0.008719 0.149958
0.400E-11 0.088415 21.07 0.505430 -0.008803 0.148288
0.250E-11 0.087521 21.16 0.503878 -0.008890 0.146789
0.160E-11 0.086697 21.24 0.500606 -0.008971 0.145499
0.100E-11 0.085853 21.32 0.497255 -0.009056 0.144098
0.630E-12 0.085067 21.41 0.494056 -0.009139 0.142792
0.400E-12 0.084276 21.49 0.490998 -0.009219 0.141513
0.250E-12 0.083499 21.57 0.487920 -0.009302 0.140883
0.160E-12 0.082781 21.64 0.485076 -0.009380 0.139117
0.100E-12 0.081945 21.72 0.482158 -0.009461 0.137913
0.630E-13 0.081339 21.79 0.479365 -0.009541 0.13670
0.400E-13 0.080663 21.87 0.476688 -0.009619 0.135660
0.250E-13 0.079980 21.94 0.473987 -0.009698 0.134557
0.160E-13 0.079348 22.01 0.471486 -0.009773 0.133514
0.100E-13 0.078697 22.08 0.468915 -0.009852 0.13254
0.630E-14 0.078073 22.15 0.466644 -0.009928 0.13143
0.400E-14 0.077474 22.22 0.464079 -0.010003 0.130454
0.250E-14 0.076867 22.29 0.461685 -0.010080 0.129451
0.160E-14 0.076305 22.35 0.459443 -0.010153 0.128550
0.100E-14 0.075725 22.47 0.457175 -0.010220 0.127575

BASFBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.1600
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.205966	13.73	0.967083	-0.010591	0.123208
0.630E-03	0.19605	14.11	0.951256	-0.007297	0.178818
0.400E-03	0.18016	14.47	0.929412	-0.00531	0.20298
0.250E-03	0.18168	14.81	0.901303	-0.004388	0.284407
0.160E-03	0.17345	15.12	0.872983	-0.004422	0.29092
0.100E-03	0.169279	15.43	0.844756	-0.004538	0.287580
0.630E-04	0.163132	15.71	0.819711	-0.004736	0.27516
0.400E-04	0.158913	15.98	0.797637	-0.004938	0.26272
0.250E-04	0.154223	16.24	0.777069	-0.005131	0.25321
0.160E-04	0.150103	16.47	0.759325	-0.005298	0.24612
0.100E-04	0.146076	16.71	0.742215	-0.005569	0.239048
0.630E-05	0.14295	16.93	0.726735	-0.005616	0.232779
0.400E-05	0.139018	17.14	0.712639	-0.005742	0.227251
0.250E-05	0.135750	17.35	0.699076	-0.005877	0.222043
0.160E-05	0.132440	17.53	0.687751	-0.006000	0.211485
0.100E-05	0.129959	17.72	0.675188	-0.006126	0.213019
0.630E-06	0.127793	17.90	0.664246	-0.006246	0.208914
0.400E-06	0.124919	18.07	0.654118	-0.006362	0.205116
0.250E-06	0.12299	18.24	0.644234	-0.006479	0.201405
0.160E-06	0.12022	18.40	0.635361	-0.006588	0.198465
0.100E-06	0.118447	18.56	0.626508	-0.006701	0.194124
0.630E-07	0.116015	18.71	0.614257	-0.006811	0.191000
0.400E-07	0.114114	18.85	0.604547	-0.006916	0.188369
0.250E-07	0.112339	19.00	0.602956	-0.007024	0.185774
0.160E-07	0.110640	19.13	0.598085	-0.007125	0.183143
0.100E-07	0.108829	19.27	0.589176	-0.007230	0.180487
0.630E-08	0.107200	19.39	0.582689	-0.007332	0.177985
0.400E-08	0.105105	19.52	0.576584	-0.007430	0.17522
0.250E-08	0.104021	19.64	0.570535	-0.007531	0.173772
0.160E-08	0.102330	19.76	0.565024	-0.007632	0.171123
0.100E-08	0.101441	19.88	0.559451	-0.007724	0.168443
0.630E-09	0.100129	19.99	0.554188	-0.007820	0.166178
0.400E-09	0.098866	20.10	0.549208	-0.007912	0.164918
0.250E-09	0.097447	20.21	0.544264	-0.008008	0.162959
0.160E-09	0.096112	20.31	0.539708	-0.008097	0.161161
0.100E-09	0.095357	20.41	0.535094	-0.008190	0.159328

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- S/N = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE WITH RESPECT TO D RATIO.
- DRIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12532600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND PYP PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.1600
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.430E-10	0.094261	20.51	0.530718	-0.008281	0.157585
0.440E-10	0.093219	20.61	0.526560	-0.008369	0.155924
0.450E-10	0.092176	20.71	0.522400	-0.008459	0.154259
0.460E-10	0.091216	20.80	0.518578	-0.008546	0.152724
0.470E-10	0.090237	20.89	0.514680	-0.008633	0.151155
0.480E-11	0.089304	20.98	0.510968	-0.008719	0.149658
0.490E-11	0.088415	21.07	0.507420	-0.008803	0.148228
0.500E-11	0.087522	21.16	0.503878	-0.008890	0.146759
0.510E-11	0.086697	21.24	0.500604	-0.008971	0.145459
0.520E-11	0.085853	21.32	0.497255	-0.009056	0.144026
0.530E-12	0.085067	21.41	0.494056	-0.009139	0.142792
0.540E-12	0.084276	21.49	0.490998	-0.009219	0.141553
0.550E-12	0.083499	21.57	0.487920	-0.009302	0.140283
0.560E-12	0.082781	21.64	0.485076	-0.009380	0.139117
0.570E-12	0.082045	21.72	0.482158	-0.009461	0.137919
0.580E-13	0.081339	21.79	0.479365	-0.009541	0.136770
0.590E-13	0.080663	21.87	0.476688	-0.009619	0.135666
0.590E-13	0.079980	21.94	0.473987	-0.009698	0.134552
0.600E-13	0.079348	22.01	0.471486	-0.009773	0.133518
0.600E-13	0.078697	22.08	0.468915	-0.009852	0.132424
0.630E-14	0.078073	22.15	0.466448	-0.009928	0.131431
0.600E-14	0.077474	22.22	0.464079	-0.010003	0.130448
0.625E-14	0.076887	22.29	0.461685	-0.010080	0.129453
0.660E-14	0.076305	22.35	0.459463	-0.010153	0.128529
0.100E-14	0.075725	22.42	0.457175	-0.010229	0.127575

NONENCLATURE:
 D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF.
 A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.

N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 S:R = RMS NOISE TO RMS SIGNAL RATIO.

SIGNAL POWER TO NOISE POWER IN DECIBELS.

ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 A / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.

DERRIV PER WRT THF CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RITE RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.10E-02	0.202249	13.88	0.967204	-0.010662	0.122390
0.63E-03	0.193259	14.28	0.951640	-0.017457	0.177457
0.40E-03	0.165358	14.64	0.930044	-0.005476	0.238309
0.25E-03	0.170011	14.99	0.902274	-0.004628	0.281957
0.16E-03	0.171701	15.30	0.874337	-0.004462	0.392434
0.10E-03	0.165660	15.62	0.846538	-0.004581	0.284845
0.63E-04	0.160246	15.90	0.821930	-0.004784	0.272760
0.40E-04	0.155366	16.17	0.800288	-0.004990	0.261510
0.25E-04	0.150721	16.44	0.780165	-0.005187	0.251555
0.16E-04	0.146648	16.67	0.762838	-0.005358	0.243541
0.10E-04	0.142674	16.91	0.746158	-0.005523	0.236268
0.63E-05	0.139047	17.14	0.731033	-0.005674	0.229990
0.40E-05	0.137723	17.35	0.717391	-0.005814	0.224452
0.25E-05	0.135510	17.56	0.704222	-0.005952	0.219235
0.16E-05	0.129652	17.74	0.692558	-0.006079	0.214668
0.10E-05	0.126825	17.94	0.681061	-0.006208	0.210194
0.63E-06	0.124212	18.12	0.670664	-0.006332	0.206080
0.40E-06	0.121189	18.49	0.660660	-0.006451	0.202275
0.25E-06	0.119420	18.46	0.651097	-0.006572	0.198557
0.16E-06	0.117290	18.61	0.642515	-0.006685	0.195211
0.10E-06	0.115162	18.77	0.633954	-0.006801	0.191864
0.63E-07	0.113176	18.92	0.625977	-0.006916	0.188735
0.40E-07	0.111318	19.17	0.618524	-0.007023	0.185800
0.25E-07	0.109487	19.21	0.611185	-0.007135	0.182899
0.16E-07	0.107827	19.35	0.604583	-0.007239	0.180265
0.10E-07	0.106156	19.48	0.597864	-0.007347	0.177606
0.63E-08	0.104586	19.61	0.591192	-0.007452	0.175101
0.40E-08	0.103106	19.73	0.585690	-0.007554	0.172735
0.25E-08	0.101638	19.86	0.579840	-0.007659	0.170383
0.16E-08	0.100300	19.97	0.574510	-0.007757	0.168233
0.10E-09	0.099309	20.43	0.545546	-0.008341	0.156440
0.63E-09	0.099445	20.09	0.569119	-0.008435	0.154698
0.40E-09	0.097665	20.21	0.564027	-0.007957	0.163986
0.25E-09	0.096452	20.31	0.559209	-0.008054	0.162026
0.16E-09	0.095243	20.42	0.554408	-0.008152	0.160068
0.10E-09	0.094136	20.52	0.550013	-0.008245	0.158270
0.63E-10	0.091940	20.63	0.545546	-0.008341	0.156440
0.40E-10	0.090923	20.83	0.537260	-0.008527	0.153040
0.25E-10	0.089906	20.92	0.533251	-0.008620	0.151377
0.16E-10	0.088970	21.02	0.529547	-0.008708	0.149846
0.10E-10	0.088015	21.11	0.525769	-0.008800	0.148281
0.63E-11	0.087105	21.20	0.522171	-0.008890	0.146788
0.40E-11	0.086237	21.29	0.518740	-0.008977	0.145362
0.25E-11	0.085365	21.37	0.515266	-0.009066	0.143928
0.16E-11	0.084561	21.46	0.512120	-0.009151	0.142603
0.10E-11	0.083738	21.54	0.508870	-0.009239	0.141246
0.63E-12	0.082952	21.62	0.505767	-0.009324	0.13948
0.40E-12	0.082000	22.08	0.502779	-0.009409	0.138705
0.25E-12	0.081443	22.16	0.486240	-0.009498	0.131758
0.16E-12	0.080742	22.23	0.483849	-0.009494	0.137452
0.10E-12	0.080024	22.37	0.497049	-0.009574	0.136292
0.63E-13	0.079336	22.01	0.491503	-0.009741	0.133960
0.40E-13	0.078476	22.08	0.488903	-0.009821	0.132864
0.25E-13	0.078010	22.16	0.486240	-0.009905	0.131758
0.16E-13	0.077393	22.23	0.483849	-0.009982	0.130731
0.10E-13	0.076759	22.30	0.481351	-0.010063	0.129675
0.63E-14	0.076150	22.37	0.478953	-0.010142	0.128661
0.40E-14	0.075565	22.43	0.476651	-0.010220	0.127687
0.25E-14	0.074974	22.50	0.474323	-0.010299	0.126700
0.16E-14	0.074429	22.57	0.472163	-0.010374	0.125784
0.10E-14	0.073860	22.63	0.469938	-0.010453	0.124840

BASEBAND EYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 2800.

A/D ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.202249	13.88	0.967304	-0.010662	0.12390
0.630E-03	0.193559	14.28	0.951753	-0.00753	0.17747
0.400E-03	0.185358	14.64	0.930644	-0.00546	0.23309
0.250E-03	0.17011	14.99	0.902274	-0.004628	0.281957
0.160E-03	0.171701	15.30	0.874437	-0.004462	0.292334
0.100E-03	0.165660	15.62	0.846538	-0.004581	0.28845
0.630E-04	0.160246	15.90	0.821930	-0.004704	0.27276
0.400E-04	0.155386	16.17	0.800285	-0.004990	0.261510
0.250E-04	0.150721	16.44	0.780165	-0.005187	0.251555
0.160E-04	0.146648	16.67	0.762839	-0.005358	0.243541
0.100E-04	0.142674	16.91	0.746158	-0.005523	0.236268
0.630E-05	0.139047	17.14	0.731093	-0.005674	0.229990
0.400E-05	0.135723	17.35	0.717391	-0.005814	0.224552
0.250E-05	0.135150	17.56	0.704222	-0.005912	0.21235
0.160E-05	0.129852	17.74	0.692558	-0.006019	0.214668
0.100E-05	0.126625	17.94	0.681061	-0.006208	0.210194
0.630E-06	0.124212	18.12	0.670464	-0.006332	0.20080
0.400E-06	0.121789	18.29	0.660460	-0.006451	0.202275
0.250E-06	0.119420	18.46	0.651097	-0.006572	0.195557
0.160E-06	0.117290	18.61	0.642515	-0.006685	0.19211
0.100E-06	0.115162	18.77	0.633954	-0.006801	0.191864
0.630E-07	0.113176	18.92	0.625977	-0.006914	0.188335
0.400E-07	0.111318	19.07	0.611852	-0.007023	0.185800
0.250E-07	0.109487	19.21	0.601185	-0.007135	0.182899
0.160E-07	0.107827	19.35	0.604563	-0.007239	0.180265
0.100E-07	0.106156	19.48	0.597864	-0.007347	0.177806
0.630E-08	0.104586	19.61	0.591592	-0.007452	0.175101
0.400E-08	0.103106	19.73	0.585690	-0.007554	0.172735
0.250E-08	0.101638	19.86	0.579840	-0.007659	0.170383
0.160E-08	0.100300	19.97	0.574510	-0.007757	0.168233
0.100E-08	0.098945	20.09	0.569119	-0.007858	0.166052
0.630E-09	0.097665	20.21	0.564027	-0.007957	0.163986
0.400E-09	0.096652	20.31	0.559209	-0.008054	0.162026
0.250E-09	0.095423	20.42	0.554408	-0.008152	0.160068
0.160E-09	0.094136	20.52	0.550013	-0.008245	0.158270
0.100E-09	0.093009	20.63	0.545546	-0.008341	0.1566440

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIVATIVE THRESHOLD AMPLITUDE TO D RATIO.
- TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BIT RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND EYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.1800
PSEUDO FF/ROR RATE EQUALS 1.0 / 2800.

R/T ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.0915943	20.73	0.541308	-0.008435	0.154698
0.400E-10	0.099923	20.83	0.537280	-0.008527	0.153640
0.250E-10	0.089046	20.92	0.533251	-0.008620	0.151377
0.160E-10	0.088970	21.02	0.529547	-0.008705	0.149866
0.100E-10	0.088015	21.11	0.525769	-0.008800	0.148281
0.630E-11	0.087105	21.20	0.522171	-0.008890	0.146788
0.400E-11	0.086237	21.29	0.518740	-0.008977	0.145342
0.250E-11	0.085365	21.37	0.515296	-0.009066	0.143948
0.160E-11	0.084461	21.46	0.511210	-0.009151	0.142403
0.100E-11	0.083738	21.54	0.508870	-0.009239	0.141246
0.630E-12	0.082952	21.62	0.505767	-0.009324	0.139948
0.400E-12	0.082200	21.70	0.502799	-0.009408	0.138705
0.250E-12	0.081443	21.78	0.499811	-0.009494	0.137452
0.160E-12	0.080747	21.86	0.497049	-0.009574	0.136222
0.100E-12	0.080024	21.94	0.494216	-0.009659	0.135101
0.630E-13	0.079336	22.01	0.491503	-0.009741	0.133940
0.400E-13	0.078676	22.08	0.488903	-0.009821	0.132864
0.250E-13	0.078010	22.16	0.486280	-0.009904	0.131758
0.160E-13	0.077393	22.23	0.483849	-0.009982	0.130711
0.100E-13	0.076759	22.30	0.481351	-0.010063	0.129675
0.630E-14	0.076150	22.37	0.478953	-0.010142	0.128661
0.400E-14	0.075565	22.43	0.476651	-0.010220	0.127667
0.250E-14	0.074974	22.50	0.474323	-0.010299	0.126700
0.160E-14	0.074425	22.57	0.47163	-0.010374	0.125744
0.100E-14	0.073860	22.63	0.469938	-0.010453	0.124840

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF THE THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIOS.
- DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 1255600.
- DIVIDER RATIO INTO D/A C/WERTER = 4.

PRINTOUT		WHTUT	TABLE WAS CALLED.
0.100E-02	0.198317	14.05	0.121325
0.630E-03	0.109321	16.46	0.952134
0.400E-03	0.108432	16.83	0.930464
0.220E-03	0.174113	15.18	0.903695
0.150E-03	0.167841	15.50	0.876018
0.100E-03	0.161850	15.82	0.848729
0.630E-04	0.156492	16.11	0.826427
0.400E-04	0.151671	16.38	0.803474
0.250E-04	0.147093	16.65	0.783855
0.160E-04	0.143084	16.89	0.766971
0.100E-04	0.139177	17.13	0.750751
0.630E-05	0.136617	17.35	0.736118
0.400E-05	0.132358	17.57	0.722821
0.250E-05	0.129211	17.77	0.710053
0.160E-05	0.126614	17.96	0.698750
0.100E-05	0.123649	18.16	0.687613
0.630E-06	0.121094	18.34	0.677311
0.400E-06	0.118727	18.51	0.667859
0.250E-06	0.116413	18.68	0.658602
0.160E-06	0.114334	18.84	0.650293
0.100E-06	0.112257	19.00	0.642257
0.630E-07	0.110320	19.15	0.634284
0.400E-07	0.108507	19.29	0.627008
0.250E-07	0.106720	19.44	0.619962
0.160E-07	0.105102	19.57	0.613529
0.100E-07	0.103472	19.70	0.607060
0.630E-08	0.101941	19.83	0.600986
0.400E-08	0.100498	19.96	0.595234
0.250E-08	0.099067	20.08	0.589594
0.160E-08	0.097763	20.20	0.584427
0.100E-08	0.096442	20.31	0.579220
0.630E-09	0.095194	20.43	0.574262
0.400E-09	0.094012	20.54	0.569588
0.250E-09	0.092833	20.65	0.564930
0.160E-09	0.091753	20.75	0.560665
0.100E-09	0.090656	20.85	0.556329
0.630E-10	0.089313	20.95	0.552214
0.400E-10	0.088622	21.05	0.548303
0.250E-10	0.087630	21.15	0.544330
0.160E-10	0.086718	21.24	0.540792
0.100E-10	0.085787	21.33	0.537121
0.630E-11	0.084900	21.42	0.533685
0.400E-11	0.084054	21.51	0.530200
0.250E-11	0.083205	21.60	0.526922
0.160E-11	0.082421	21.68	0.523855
0.100E-11	0.081619	21.76	0.520656
0.630E-12	0.080853	21.85	0.517677
0.400E-12	0.080120	21.93	0.514791
0.250E-12	0.079381	22.01	0.511085
0.160E-12	0.078699	22.08	0.508198
0.100E-12	0.078221	22.16	0.506441
0.630E-13	0.077999	22.23	0.503802
0.400E-13	0.077328	22.31	0.501271
0.250E-13	0.076885	22.38	0.498718
0.160E-13	0.075434	22.45	0.496362
0.100E-13	0.074816	22.52	0.493920
0.630E-14	0.074223	22.59	0.491586
0.400E-14	0.073653	22.64	0.489344
0.250E-14	0.073076	22.72	0.487078
0.160E-14	0.072541	22.79	0.484974
0.100E-14	0.071990	22.85	0.482807

BASFBAND EYE PATTERN MONITOR TABLE

TARLF FOR AIDR EQUALS 0.2000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

N / S RATIO		SNR IN DB	A / D RATIO	DERRIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.198317	14.05	0.967592	-0.010755	0.121325
0.630E-03	0.19321	14.46	0.951214	-0.017705	0.175705
0.400E-03	0.181432	14.83	0.930864	-0.005535	0.255775
0.250E-03	0.174113	15.18	0.903495	-0.004880	0.278827
0.250E-03	0.167841	15.50	0.876018	-0.004515	0.289046
0.100E-03	0.161850	15.82	0.846122	-0.004638	0.281616
0.630E-04	0.156492	16.11	0.824627	-0.004846	0.269284
0.400E-04	0.151671	16.38	0.803747	-0.005057	0.288043
0.250E-04	0.147093	16.65	0.783865	-0.005260	0.268097
0.160E-04	0.143084	16.99	0.766620	-0.00435	0.240088
0.100E-04	0.139177	17.13	0.750751	-0.005605	0.232816
0.630E-05	0.135617	17.35	0.736118	-0.005160	0.266538
0.400E-05	0.132358	17.57	0.722221	-0.005905	0.220998
0.250E-05	0.129211	17.77	0.710053	-0.006047	0.215779
0.160E-05	0.126414	17.96	0.698750	-0.006178	0.211211
0.100E-05	0.123649	18.16	0.687131	-0.006312	0.206736
0.630E-06	0.121094	18.34	0.677351	-0.006440	0.206623
0.400E-06	0.118727	18.51	0.667859	-0.005563	0.198818
0.250E-06	0.116463	18.68	0.658802	-0.006688	0.195102
0.160E-06	0.114334	18.84	0.650293	-0.006605	0.191160
0.100E-06	0.112257	19.00	0.642007	-0.006926	0.188417
0.630E-07	0.110320	19.15	0.634284	-0.007042	0.185292
0.400E-07	0.108507	19.29	0.627068	-0.007156	0.182363
0.250E-07	0.106720	19.44	0.619962	-0.007271	0.179469
0.160E-07	0.105102	19.57	0.613519	-0.007379	0.176841
0.100E-07	0.103472	19.70	0.607060	-0.007491	0.174191
0.630E-08	0.101941	19.83	0.600984	-0.007600	0.171694
0.400E-08	0.099498	19.96	0.595264	-0.007706	0.169338
0.250E-08	0.099067	20.08	0.589746	-0.007814	0.166996
0.160E-08	0.097763	20.20	0.584427	-0.007915	0.164856
0.100E-08	0.096442	20.31	0.579200	-0.008021	0.162687
0.630E-09	0.095194	20.43	0.574262	-0.008124	0.160633
0.400E-09	0.094012	20.54	0.569588	-0.008223	0.158684
0.250E-09	0.092833	20.65	0.565930	-0.008325	0.156739
0.160E-09	0.091753	20.75	0.560665	-0.008421	0.154594
0.100E-09	0.090656	20.85	0.556219	-0.008521	0.153137

NOMENCLATURE:

- HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
 - THE THREE LEVEL EYE I.E., DECISION LEVEL * D RATIO.
 - AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 - SIGNAL POWER TO NOISE POWER IN DECIBELS.
 - ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 - DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 - QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600, AND ERROR SIGNAL DIVIDER RATED INTO D/A CONVERTER ■

BASEBAND EYE-PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.2000,
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV WRT A / D	TIME CONSTANT
0.030E-10	0.089613	20.95	0.552214	-0.008616	0.151410
0.400E-10	0.088622	21.05	0.548903	-0.008713	0.149765
0.250E-10	0.087630	21.15	0.544390	-0.008810	0.148117
0.140E-10	0.086718	21.24	0.540792	-0.008901	0.146600
0.100E-10	0.085787	21.33	0.537121	-0.008996	0.145050
0.630E-11	0.084900	21.42	0.533625	-0.009089	0.143572
0.400E-11	0.084054	21.51	0.530290	-0.009179	0.142161
0.250E-11	0.083205	21.60	0.526942	-0.009272	0.140743
0.160E-11	0.082421	21.68	0.523855	-0.009359	0.139434
0.100E-11	0.081619	21.76	0.520696	-0.009450	0.138092
0.630E-12	0.080853	21.85	0.517677	-0.009538	0.136810
0.400E-12	0.080120	21.93	0.514791	-0.009624	0.135282
0.250E-12	0.079381	22.01	0.511885	-0.009713	0.134346
0.160E-12	0.078699	22.08	0.509198	-0.009797	0.133201
0.100E-12	0.077999	22.16	0.506441	-0.009884	0.132027
0.630E-13	0.077322	22.23	0.503802	-0.009969	0.130901
0.400E-13	0.076685	22.31	0.501271	-0.010052	0.129821
0.250E-13	0.076036	22.38	0.498718	-0.010137	0.128731
0.160E-13	0.075434	22.45	0.496352	-0.010217	0.127720
0.100E-13	0.074816	22.52	0.493920	-0.010301	0.126680
0.630E-14	0.074223	22.59	0.491586	-0.010383	0.125682
0.400E-14	0.073653	22.66	0.489344	-0.010463	0.124722
0.250E-14	0.073076	22.72	0.487078	-0.010545	0.123752
0.160E-14	0.072541	22.79	0.484974	-0.010622	0.122551
0.100E-14	0.071990	22.85	0.482807	-0.010703	0.121923

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- ATDR = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INFRASYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRIT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- QUASI-LINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

15 PM ON MARCH 1911, WHICH TABLE WAS CALLED.
0.1000-0.2 0.19406 14.24 0.961952 -0.010875
0.1000-0.2 0.19531 14.25 0.962223 0.002520
0.1250-0.2 0.19531 14.25 0.962223 0.002520

JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER																																																																																																																																																																																																																								
MON	TUE	MON	TUE	MON	TUE	MON	TUE	MON	TUE	MON	TUE																																																																																																																																																																																																																							
0.1194106 0.100E-02	0.194106 0.630E-03	0.185131 0.400E-03	0.177282 0.250E-03	0.170018 0.160E-03	0.163810 0.100E-04	0.157893 0.630E-04	0.152611 0.400E-04	0.147873 0.250E-04	0.143377 0.160E-04	0.139446 0.100E-04	0.135620 0.630E-06	0.132137 0.400E-05	0.128951 0.250E-05	0.125877 0.160E-05	0.121346 0.100E-05	0.120468 0.630E-06	0.117956 0.400E-06	0.115647 0.250E-06	0.113392 0.160E-06	0.111365 0.100E-06	0.109341 0.630E-07	0.107453 0.400E-07	0.105687 0.250E-07	0.103966 0.160E-07	0.102369 0.100E-07	0.101782 0.630E-08	0.099290 0.400E-08	0.096491 0.250E-08	0.092220 0.160E-08	0.091394 0.100E-08	0.089297 0.630E-10	0.087282 0.400E-10	0.086317 0.250E-10	0.084535 0.160E-10	0.084463 0.100E-09	0.083556 0.630E-11	0.082692 0.400E-11	0.081868 0.250E-11	0.081040 0.160E-11	0.080277 0.100E-11	0.079496 0.630E-12	0.078749 0.400E-12	0.078035 0.250E-12	0.077317 0.160E-12	0.076652 0.100E-12	0.075970 0.630E-13	0.075316 0.400E-14	0.074690 0.250E-14	0.074058 0.160E-14	0.073472 0.100E-14	0.072870 0.630E-15	0.072292 0.400E-14	0.071737 0.250E-15	0.071176 0.160E-14	0.070655 0.100E-14	0.070118 0.630E-15	0.069674 0.400E-15	0.069266 0.250E-15	0.068854 0.160E-15	0.068442 0.100E-15	0.068030 0.630E-16	0.067618 0.400E-16	0.067205 0.250E-16	0.066793 0.160E-16	0.066381 0.100E-16	0.065969 0.630E-17	0.065556 0.400E-17	0.065144 0.250E-17	0.064732 0.160E-17	0.064320 0.100E-17	0.063908 0.630E-18	0.063496 0.400E-18	0.063084 0.250E-18	0.062672 0.160E-18	0.062260 0.100E-18	0.061848 0.630E-19	0.061436 0.400E-19	0.060924 0.250E-19	0.060512 0.160E-19	0.060000 0.100E-19	0.059588 0.630E-20	0.059176 0.400E-20	0.058764 0.250E-20	0.058352 0.160E-20	0.057940 0.100E-20	0.057528 0.630E-21	0.057116 0.400E-21	0.056694 0.250E-21	0.056282 0.160E-21	0.055870 0.100E-21	0.055458 0.630E-22	0.055046 0.400E-22	0.054634 0.250E-22	0.054222 0.160E-22	0.053810 0.100E-22	0.053398 0.630E-23	0.052986 0.400E-23	0.052574 0.250E-23	0.052162 0.160E-23	0.051750 0.100E-23	0.051338 0.630E-24	0.050926 0.400E-24	0.050514 0.250E-24	0.050002 0.160E-24	0.049590 0.100E-24	0.049178 0.630E-25	0.048766 0.400E-25	0.048354 0.250E-25	0.047942 0.160E-25	0.047530 0.100E-25	0.047118 0.630E-26	0.046696 0.400E-26	0.046284 0.250E-26	0.045872 0.160E-26	0.045460 0.100E-26	0.045048 0.630E-27	0.044636 0.400E-27	0.044224 0.250E-27	0.043812 0.160E-27	0.043399 0.100E-27	0.042987 0.630E-28	0.042575 0.400E-28	0.042163 0.250E-28	0.041751 0.160E-28	0.041339 0.100E-28	0.040927 0.630E-29	0.040515 0.400E-29	0.040093 0.250E-29	0.039681 0.160E-29	0.039269 0.100E-29	0.038857 0.630E-30	0.038445 0.400E-30	0.037933 0.250E-30	0.037521 0.160E-30	0.037109 0.100E-30	0.036697 0.630E-31	0.036285 0.400E-31	0.035873 0.250E-31	0.035461 0.160E-31	0.035049 0.100E-31	0.034637 0.630E-32	0.034225 0.400E-32	0.033813 0.250E-32	0.033399 0.160E-32	0.032987 0.100E-32	0.032575 0.630E-33	0.032163 0.400E-33	0.031751 0.250E-33	0.031339 0.160E-33	0.030927 0.100E-33	0.030515 0.630E-34	0.030093 0.400E-34	0.029681 0.250E-34	0.029269 0.160E-34	0.028857 0.100E-34	0.028445 0.630E-35	0.028033 0.400E-35	0.027621 0.250E-35	0.027209 0.160E-35	0.026797 0.100E-35	0.026385 0.630E-36	0.025973 0.400E-36	0.025561 0.250E-36	0.025149 0.160E-36	0.024737 0.100E-36	0.024325 0.630E-37	0.023913 0.400E-37	0.023499 0.250E-37	0.023087 0.160E-37	0.022675 0.100E-37	0.022263 0.630E-38	0.021851 0.400E-38	0.021439 0.250E-38	0.021027 0.160E-38	0.020615 0.100E-38	0.020203 0.630E-39	0.019791 0.400E-39	0.019379 0.250E-39	0.018967 0.160E-39	0.018555 0.100E-39	0.018143 0.630E-40	0.017731 0.400E-40	0.017319 0.250E-40	0.016897 0.160E-40	0.016485 0.100E-40	0.016073 0.630E-41	0.015661 0.400E-41	0.015249 0.250E-41	0.014837 0.160E-41	0.014425 0.100E-41	0.013993 0.630E-42	0.013581 0.400E-42	0.013169 0.250E-42	0.012757 0.160E-42	0.012345 0.100E-42	0.011933 0.630E-43	0.011521 0.400E-43	0.011109 0.250E-43	0.010697 0.160E-43	0.010285 0.100E-43	0.009873 0.630E-44	0.009461 0.400E-44	0.009049 0.250E-44	0.008637 0.160E-44	0.008225 0.100E-44	0.007813 0.630E-45	0.007401 0.400E-45	0.006989 0.250E-45	0.006577 0.160E-45	0.006165 0.100E-45	0.005755 0.630E-46	0.005343 0.400E-46	0.004931 0.250E-46	0.004520 0.160E-46	0.004108 0.100E-46	0.003696 0.630E-47	0.003284 0.400E-47	0.002872 0.250E-47	0.002460 0.160E-47	0.002048 0.100E-47	0.001636 0.630E-48	0.001224 0.400E-48	0.000812 0.250E-48	0.000399 0.160E-48	0.000087 0.100E-48	0.000000 0.630E-49

BASFRAUD FYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.22200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RAT FRRR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E+02	0.194106	14.24	0.967952	-0.010875	0.119990
0.630E+03	0.105131	14.65	0.952443	-0.00520	0.173536
0.400E+03	0.177282	15.03	0.931818	-0.005609	0.232662
0.250E+03	0.170018	15.39	0.904862	-0.004745	0.274993
0.160E+03	0.163810	15.71	0.878017	-0.004580	0.284911
0.100E+03	0.157893	16.03	0.851306	-0.004708	0.277167
0.630E+04	0.152614	16.33	0.827763	-0.004923	0.265090
0.400E+04	0.147873	16.60	0.807241	-0.005140	0.253883
0.250E+04	0.143377	16.87	0.788335	-0.005349	0.243970
0.160E+04	0.139446	17.11	0.771412	-0.005530	0.235984
0.100E+04	0.135620	17.35	0.755380	-0.005705	0.228733
0.630E+05	0.132137	17.58	0.741982	-0.005866	0.222470
0.400E+05	0.128951	17.79	0.728986	-0.006015	0.216945
0.250E+05	0.125877	18.00	0.716408	-0.006163	0.211740
0.160E+05	0.123146	18.19	0.70453	-0.006298	0.207185
0.100E+05	0.120448	18.38	0.694461	-0.006437	0.202726
0.630E+06	0.117956	18.57	0.684117	-0.006570	0.198629
0.400E+06	0.115647	18.74	0.675114	-0.006697	0.194841
0.250E+06	0.113392	18.91	0.666567	-0.006827	0.191164
0.160E+06	0.111365	19.07	0.658594	-0.006948	0.187820
0.100E+06	0.109341	19.22	0.650561	-0.007073	0.184497
0.630E+07	0.107453	19.38	0.642974	-0.007194	0.181393
0.400E+07	0.105687	19.52	0.635915	-0.007311	0.178485
0.250E+07	0.103946	19.66	0.62983	-0.007431	0.175614
0.160E+07	0.102369	19.80	0.622642	-0.007542	0.173008
0.100E+07	0.100782	19.93	0.616364	-0.007659	0.170381
0.630E+08	0.099290	20.06	0.610666	-0.007772	0.167908
0.400E+08	0.097885	20.19	0.605114	-0.007881	0.165575
0.250E+08	0.096491	20.31	0.599019	-0.007993	0.163258
0.160E+08	0.095220	20.43	0.594591	-0.008098	0.161142
0.100E+08	0.093934	20.56	0.589513	-0.008207	0.158998
0.630E+09	0.092718	20.66	0.584615	-0.008313	0.156968
0.400E+09	0.091566	20.77	0.580173	-0.008416	0.155045
0.250E+09	0.090418	20.87	0.575466	-0.008522	0.153125
0.160E+09	0.089367	20.98	0.571000	-0.008621	0.151364
0.100E+09	0.088297	21.08	0.567285	-0.008724	0.149572

NOMENCLATURE:
D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
A/D R = THE THREE LEVEL EYE I.E., DECISION LEVEL.
N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
SNR = RMS NOISE TO RMS SIGNAL RATIO.
A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
WHEN RATE RATE = 1252600. AND ERROR SIGNAL
DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D R = 1.0 / 2800.

PSFUDO ERROR RATE EQUALS 0.2200

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.087282	21.18	0.563284	-0.008825	0.147870
0.400E-10	0.06317	21.28	0.559480	-0.008922	0.146250
0.250E-10	0.085351	21.38	0.555674	-0.009023	0.146627
0.160E-10	0.084463	21.47	0.552174	-0.009117	0.147134
0.100E-10	0.083556	21.56	0.54803	-0.009215	0.146109
0.630E-11	0.082692	21.65	0.545201	-0.009310	0.140156
0.400E-11	0.081868	21.74	0.541956	-0.009404	0.138168
0.250E-11	0.081040	21.83	0.538695	-0.009499	0.137374
0.160E-11	0.080277	21.91	0.535693	-0.009589	0.136088
0.100E-11	0.079496	21.99	0.532618	-0.009682	0.134771
0.630E-12	0.078749	22.08	0.529879	-0.009774	0.133512
0.400E-12	0.078035	22.17	0.526869	-0.009863	0.132307
0.250E-12	0.077317	22.23	0.524040	-0.009954	0.131093
0.160E-12	0.076652	22.31	0.521424	-0.010040	0.129971
0.100E-12	0.075970	22.39	0.518739	-0.010130	0.128819
0.630E-13	0.075316	22.46	0.516169	-0.010217	0.127715
0.400E-13	0.074690	22.53	0.513704	-0.010303	0.126656
0.250E-13	0.074058	22.61	0.511217	-0.010390	0.125588
0.160E-13	0.073472	22.68	0.508913	-0.010473	0.124598
0.100E-13	0.072870	22.75	0.506544	-0.010559	0.123579
0.630E-14	0.072292	22.82	0.504270	-0.010643	0.122602
0.400E-14	0.071737	22.89	0.502086	-0.010726	0.121662
0.250E-14	0.071176	22.95	0.499878	-0.010810	0.120713
0.160E-14	0.070655	23.02	0.497829	-0.010890	0.119831
0.100E-14	0.070118	23.08	0.495718	-0.010973	0.118922

NOMENCLATURE:

- HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- THE THREE LEVEL EYE I.E., DECISION LEVEL.
- AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- RMS NOISE TO RMS SIGNAL RATIO.
- SIGNAL POWER TO NOISE POWER IN DECIBELS.
- ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIVATIVE OF PSFUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 125X600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER ■ 4.

TABLE 14. PRINTOUT WHICH TABLE WAS CALLED.

0.10E-02	0.189669	14.44	0.968388	0.011024
0.630E-03	0.180728	14.86	0.959468	0.017044
0.400E-03	0.172960	15.24	0.932960	0.005699
0.250E-03	0.165777	15.61	0.906662	0.004825
0.160E-03	0.159651	15.94	0.890308	0.004660
0.100E-03	0.153832	16.26	0.854227	0.004793
0.630E-04	0.148649	16.56	0.831281	0.005015
0.400E-04	0.144004	16.83	0.811211	0.005239
0.250E-04	0.139604	17.10	0.792640	0.005454
0.160E-04	0.135762	17.34	0.776710	0.005642
0.100E-04	0.132025	17.59	0.761423	0.005823
0.630E-05	0.128626	17.81	0.747649	0.005989
0.400E-05	0.125519	18.03	0.735142	0.006144
0.250E-05	0.122523	18.24	0.723138	0.006297
0.160E-05	0.119861	18.43	0.712514	0.006438
0.100E-05	0.117233	18.62	0.702047	0.006581
0.630E-06	0.114806	18.80	0.692402	0.006719
0.400E-06	0.112561	18.97	0.683479	0.006851
0.250E-06	0.110361	19.14	0.674774	0.006985
0.160E-06	0.108388	19.30	0.666960	0.007110
0.100E-06	0.106418	19.46	0.659162	0.007240
0.630E-07	0.104580	19.61	0.651189	0.007365
0.400E-07	0.102861	19.76	0.645098	0.007487
0.250E-07	0.101166	19.90	0.638404	0.007610
0.160E-07	0.099631	20.03	0.632341	0.007726
0.100E-07	0.098086	20.17	0.626241	0.007846
0.630E-08	0.096634	20.30	0.620510	0.007963
0.400E-08	0.095267	20.42	0.615114	0.008076
0.250E-08	0.093910	20.55	0.609762	0.008192
0.160E-08	0.092673	20.66	0.604883	0.008300
0.100E-08	0.091421	20.78	0.599466	0.008413
0.630E-09	0.090238	20.89	0.595280	0.008522
0.400E-09	0.089117	21.00	0.590863	0.008629
0.250E-09	0.088000	21.11	0.586459	0.008738
0.160E-09	0.086977	21.21	0.582425	0.008840
0.100E-09	0.085936	21.32	0.578324	0.008946
0.630E-10	0.084948	21.42	0.574431	0.009050
0.400E-10	0.084008	21.51	0.570730	0.009151
0.250E-10	0.083068	21.61	0.567025	0.009254
0.160E-10	0.082203	21.70	0.563619	0.009351
0.100E-10	0.081321	21.80	0.560143	0.009452
0.630E-11	0.080480	21.89	0.556831	0.009550
0.400E-11	0.079678	21.97	0.553672	0.009646
0.250E-11	0.078873	22.06	0.550500	0.009744
0.160E-11	0.078130	22.14	0.547755	0.009837
0.100E-11	0.077370	22.23	0.544580	0.009933
0.630E-12	0.076643	22.31	0.541719	0.010027
0.400E-12	0.075948	22.39	0.538983	0.010119
0.250E-12	0.075249	22.47	0.536228	0.010213
0.160E-12	0.074602	22.55	0.533680	0.010301
0.100E-12	0.073938	22.62	0.531066	0.010394
0.630E-13	0.073302	22.70	0.528562	0.010484
0.400E-13	0.072692	22.77	0.526162	0.010571
0.250E-13	0.072077	22.84	0.523740	0.010661
0.160E-13	0.071507	22.91	0.521496	0.010746
0.100E-13	0.070921	22.98	0.519188	0.010835
0.630E-14	0.070358	23.05	0.516973	0.010922
0.400E-14	0.069818	23.12	0.514846	0.011066
0.250E-14	0.069272	23.19	0.512695	0.011093
0.160E-14	0.068765	23.25	0.510675	0.011175
0.100E-14	0.068242	23.32	0.508642	0.011260

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.189649	16.44	0.963398	-0.011024	0.118374
0.630E-03	0.180728	14.16	0.953468	-0.007634	0.170944
0.400E-03	0.172949	15.74	0.932061	-0.005699	0.228971
0.250E-03	0.165670	15.61	0.906662	-0.004825	0.270463
0.160E-03	0.159651	15.04	0.880308	-0.004660	0.280449
0.100E-03	0.153832	16.26	0.855227	-0.004793	0.272251
0.630E-04	0.148649	16.16	0.831281	-0.005015	0.260226
0.400E-04	0.144004	16.83	0.811211	-0.005239	0.269087
0.250E-04	0.139604	17.10	0.792660	-0.005456	0.239238
0.160E-04	0.135762	17.34	0.776710	-0.005642	0.231303
0.100E-04	0.132025	17.59	0.761623	-0.005823	0.224698
0.630E-05	0.128626	17.01	0.747649	-0.005989	0.211876
0.400E-05	0.125519	18.13	0.735147	-0.006144	0.212388
0.250E-05	0.122523	18.26	0.723138	-0.006297	0.207220
0.160E-05	0.119861	18.43	0.712114	-0.006438	0.202701
0.100E-05	0.117233	18.62	0.702047	-0.006581	0.198278
0.630E-06	0.114806	18.10	0.692002	-0.006719	0.194218
0.400E-06	0.112557	18.07	0.683379	-0.006851	0.190467
0.250E-06	0.110361	19.14	0.676774	-0.006985	0.186307
0.160E-06	0.108388	19.30	0.666960	-0.007110	0.183520
0.100E-06	0.106418	19.46	0.659162	-0.007240	0.180236
0.630E-07	0.104580	19.61	0.651183	-0.007365	0.177170
0.400E-07	0.102861	19.76	0.645098	-0.007487	0.174299
0.250E-07	0.101166	19.90	0.638004	-0.007610	0.171467
0.160E-07	0.099631	20.03	0.632341	-0.007726	0.168898
0.100E-07	0.098086	20.17	0.626241	-0.007846	0.166309
0.630E-08	0.096634	20.30	0.620510	-0.007963	0.163874
0.400E-08	0.095267	20.42	0.615114	-0.008076	0.161578
0.250E-08	0.093910	20.55	0.609762	-0.008192	0.159298
0.160E-08	0.092673	20.67	0.604683	-0.008300	0.157218
0.100E-08	0.091421	20.78	0.599946	-0.008413	0.155111
0.630E-09	0.090238	20.99	0.595380	-0.008522	0.153117
0.400E-09	0.089117	21.00	0.590553	-0.008629	0.151229
0.250E-09	0.088007	21.11	0.586649	-0.008738	0.149344
0.160E-09	0.086977	21.21	0.582255	-0.008840	0.147617
0.100E-09	0.085936	21.32	0.578324	-0.008946	0.145360

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBLES.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BIT RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.2400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.084948	21.42	0.576631	-0.009050	0.144191
0.400E-10	0.044008	21.51	0.570130	-0.009151	0.142603
0.250E-10	0.083068	21.61	0.567025	-0.009254	0.141013
0.160E-10	0.082203	21.70	0.563619	-0.009351	0.139551
0.100E-10	0.081321	21.80	0.560143	-0.009452	0.138058
0.630E-11	0.080480	21.89	0.556831	-0.009550	0.136635
0.400E-11	0.079678	21.97	0.553672	-0.009646	0.135278
0.250E-11	0.078873	22.06	0.550500	-0.009744	0.133914
0.160E-11	0.078130	22.14	0.547375	-0.009837	0.132656
0.100E-11	0.077370	22.23	0.544380	-0.009933	0.131367
0.630E-12	0.076643	22.31	0.541379	-0.010027	0.130136
0.400E-12	0.075948	22.39	0.538983	-0.010119	0.128959
0.250E-12	0.075249	22.47	0.536228	-0.010213	0.127773
0.160E-12	0.074602	22.55	0.533680	-0.010301	0.126676
0.100E-12	0.073938	22.63	0.531086	-0.010394	0.125550
0.630E-13	0.073302	22.70	0.528562	-0.010484	0.124472
0.400E-13	0.072692	22.77	0.526162	-0.010571	0.123438
0.250E-13	0.072077	22.84	0.523140	-0.010661	0.122395
0.160E-13	0.071507	22.91	0.521496	-0.010746	0.121428
0.100E-13	0.070921	22.98	0.519188	-0.010835	0.120434
0.630E-14	0.070358	23.05	0.516973	-0.010922	0.119479
0.400E-14	0.069818	23.12	0.514866	-0.011006	0.118562
0.250E-14	0.069272	23.19	0.512695	-0.011093	0.117635
0.160E-14	0.068765	23.25	0.510699	-0.011175	0.116775
0.100E-14	0.068422	23.32	0.508662	-0.011260	0.115888

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE, I.E., DECISION LEVEL.
- A/D RATIO = AMPLITUDE OF INTENSITY-REL DIFFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BIT RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.184986	14.66	0.968900	-0.011206	0.116473
0.630E-03	0.176151	15.08	0.954304	-0.007770	0.167940
0.400E-03	0.168473	15.47	0.934257	-0.005807	0.224731
0.250E-03	0.161407	15.84	0.908588	-0.004919	0.265287
0.160E-03	0.155399	16.17	0.882851	-0.004753	0.274522
0.100E-03	0.146697	16.50	0.857436	-0.004893	0.266704
0.630E-04	0.144628	16.79	0.835107	-0.005127	0.254775
0.400E-04	0.140089	17.07	0.815598	-0.005354	0.243746
0.250E-04	0.135796	17.34	0.797560	-0.005577	0.233998
0.160E-04	0.132050	17.59	0.782097	-0.005770	0.226148
0.100E-04	0.128009	17.83	0.767262	-0.005958	0.219019
0.630E-05	0.125599	18.05	0.753897	-0.006130	0.212866
0.400E-05	0.122074	18.27	0.741762	-0.006290	0.207441
0.250E-05	0.119157	18.48	0.730115	-0.006469	0.202337
0.160E-05	0.116567	18.67	0.719805	-0.006595	0.197875
0.100E-05	0.114610	18.86	0.709647	-0.006743	0.193512
0.630E-06	0.111649	19.04	0.700284	-0.006886	0.189509
0.400E-06	0.109462	19.21	0.691621	-0.007023	0.185814
0.250E-06	0.107926	19.39	0.683168	-0.007161	0.182212
0.160E-06	0.105407	19.54	0.675578	-0.007291	0.178978
0.100E-06	0.103430	19.70	0.668004	-0.007425	0.175749
0.630E-07	0.101703	19.85	0.660941	-0.007556	0.172237
0.400E-07	0.100031	20.00	0.654337	-0.007680	0.169918
0.250E-07	0.988383	20.14	0.647831	-0.007807	0.167138
0.160E-07	0.966690	20.27	0.641938	-0.007927	0.164618
0.100E-07	0.953688	20.41	0.636003	-0.008051	0.162081
0.630E-08	0.93916	20.54	0.630436	-0.008171	0.159694
0.400E-08	0.922646	20.66	0.625189	-0.008288	0.157446
0.250E-08	0.909136	20.79	0.619984	-0.008407	0.155214
0.160E-08	0.900124	20.90	0.615239	-0.008519	0.153177
0.100E-08	0.889916	21.02	0.610436	-0.008635	0.151116
0.630E-09	0.877755	21.13	0.605897	-0.008748	0.149166
0.400E-09	0.866665	21.24	0.601600	-0.008858	0.147319
0.250E-09	0.855579	21.35	0.597315	-0.008970	0.145477
0.160E-09	0.84584	21.45	0.593390	-0.009075	0.143790
0.100E-09	0.835751	21.56	0.589400	-0.009185	0.142073
0.630E-10	0.82611	21.66	0.585611	-0.009291	0.140443
0.400E-10	0.81697	21.76	0.582009	-0.009395	0.138892
0.250E-10	0.80773	21.85	0.578406	-0.009501	0.137340
0.160E-10	0.79942	21.94	0.575089	-0.009601	0.135913
0.100E-10	0.79084	22.04	0.571706	-0.009705	0.134456
0.630E-11	0.78266	22.13	0.568483	-0.009806	0.133067
0.400E-11	0.77486	22.22	0.565408	-0.009905	0.131673
0.250E-11	0.76703	22.30	0.562321	-0.010006	0.130412
0.160E-11	0.75980	22.39	0.55947	-0.010101	0.129185
0.100E-11	0.75241	22.47	0.556558	-0.010200	0.127929
0.630E-12	0.74534	22.55	0.553773	-0.010297	0.126729
0.400E-12	0.73859	22.63	0.551109	-0.010391	0.125580
0.250E-12	0.73118	22.71	0.548427	-0.010488	0.124424
0.160E-12	0.72559	22.79	0.545947	-0.010578	0.123355
0.100E-12	0.71903	22.87	0.543402	-0.010673	0.122258
0.630E-13	0.71285	22.94	0.540965	-0.010766	0.121207
0.400E-13	0.706892	23.01	0.536628	-0.010856	0.120199
0.250E-13	0.70094	23.09	0.533408	-0.010949	0.119182
0.160E-13	0.695450	23.14	0.530485	-0.011036	0.118240
0.100E-13	0.68970	23.23	0.531838	-0.011127	0.117271
0.630E-14	0.68623	23.30	0.529682	-0.011216	0.116341
0.400E-14	0.67897	23.36	0.527611	-0.011303	0.115448
0.250E-14	0.67366	23.43	0.525517	-0.011392	0.114545
0.160E-14	0.66913	23.50	0.523574	-0.011476	0.113707
0.100E-14	0.66365	23.56	0.521571	-0.011564	0.112843

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 0.2600
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERRIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.184986	14.46	0.968900	-0.011204	0.116473
0.630E-03	0.176151	15.08	0.95304	-0.007770	0.167940
0.400E-03	0.168473	15.47	0.93257	-0.005807	0.224731
0.250E-03	0.161407	15.04	0.90568	-0.004919	0.265287
0.160E-03	0.155399	16.17	0.882851	-0.004753	0.274522
0.100E-03	0.149697	16.50	0.857436	-0.004893	0.266706
0.630E-04	0.144628	16.79	0.832107	-0.005122	0.254775
0.400E-04	0.140089	17.07	0.81598	-0.005354	0.243746
0.250E-04	0.135796	17.34	0.791560	-0.005577	0.233996
0.160E-04	0.132050	17.59	0.782097	-0.005770	0.226148
0.100E-04	0.128409	17.83	0.76262	-0.005958	0.219019
0.630E-05	0.125079	18.05	0.753897	-0.006130	0.212866
0.400E-05	0.122074	18.27	0.741762	-0.006290	0.207441
0.250E-05	0.119157	18.48	0.730115	-0.006449	0.202337
0.160E-05	0.116567	18.67	0.719805	-0.006595	0.197875
0.100E-05	0.114010	18.86	0.709647	-0.006743	0.193512
0.630E-06	0.111649	19.06	0.700284	-0.006886	0.189509
0.400E-06	0.109462	19.1	0.691621	-0.007023	0.185814
0.250E-06	0.107326	19.39	0.681168	-0.007161	0.182212
0.160E-06	0.105407	19.54	0.673578	-0.007291	0.178978
0.100E-06	0.103490	19.70	0.666004	-0.007425	0.175749
0.630E-07	0.101703	19.85	0.660941	-0.007554	0.172737
0.400E-07	0.10031	20.0	0.655131	-0.007680	0.169918
0.250E-07	0.098383	20.14	0.649331	-0.007807	0.167138
0.160E-07	0.096890	20.27	0.644938	-0.007927	0.164618
0.100E-07	0.095388	20.41	0.638008	-0.008051	0.162081
0.630E-08	0.093976	20.54	0.634336	-0.008171	0.159694
0.400E-08	0.092646	20.66	0.622189	-0.008288	0.157446
0.250E-08	0.091326	20.79	0.611984	-0.008404	0.155214
0.160E-08	0.090124	20.90	0.610239	-0.008519	0.153177
0.100E-08	0.088906	21.02	0.610436	-0.008635	0.151116
0.630E-09	0.087755	21.13	0.60897	-0.008748	0.149166
0.400E-09	0.086665	21.24	0.601600	-0.008858	0.147319
0.250E-09	0.085579	21.35	0.593135	-0.008970	0.145477
0.160E-09	0.084584	21.45	0.593390	-0.009075	0.143790
0.100E-09	0.083571	21.56	0.589400	-0.009185	0.142073

INNENCLATURE:

() = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.

- A/D RATIO = AMPLITUDE OF INTERSYMBOL DIFFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERRIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	S/N IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.082611	21.66	0.585611	-0.009291	0.160443
0.400E-10	0.081697	21.76	0.58395	-0.009395	0.138892
0.250E-10	0.080783	21.85	0.586009	-0.009501	0.137360
0.160E-10	0.079962	21.94	0.575089	-0.009601	0.135913
0.110E-10	0.079084	22.04	0.571706	-0.009705	0.134456
0.630E-11	0.078266	22.13	0.568483	-0.009806	0.133097
0.400E-11	0.077486	22.22	0.554048	-0.009905	0.131743
0.250E-11	0.076703	22.30	0.542321	-0.010006	0.130412
0.160E-11	0.075980	22.39	0.539473	-0.010101	0.129185
0.110E-11	0.075241	22.47	0.536558	-0.010200	0.127929
0.630E-12	0.074534	22.55	0.533773	-0.010297	0.126729
0.400E-12	0.073859	22.63	0.531109	-0.010391	0.125580
0.250E-12	0.073174	22.71	0.528427	-0.010488	0.124424
0.160E-12	0.072549	22.79	0.525947	-0.010578	0.123355
0.100E-12	0.071903	22.87	0.523602	-0.010673	0.122258
0.630E-13	0.071285	22.94	0.520965	-0.010766	0.121207
0.400E-13	0.070692	23.01	0.518628	-0.010856	0.120199
0.250E-13	0.070094	23.09	0.516270	-0.010949	0.119182
0.160E-13	0.069540	23.16	0.514085	-0.011036	0.118240
0.100E-13	0.068970	23.23	0.511838	-0.011127	0.117271
0.630E-14	0.068423	23.30	0.509682	-0.011216	0.116341
0.400E-14	0.067897	23.36	0.507611	-0.011303	0.115448
0.250E-14	0.067366	23.43	0.505517	-0.011392	0.114565
0.160E-14	0.066873	23.50	0.503574	-0.011476	0.113707
0.100E-14	0.066365	23.56	0.501571	-0.011564	0.112863

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- S/N = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBLES.
- TIME CONSTANT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RATE RATE = 12552800. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER.

4.

TRUNK 15 IN DEBUG PRINTOUT WHICH TABLE WAS CALLED

0.100E-02	0.100151	14.89	0.999485	0.011417
0.630E-03	0.171430	15.32	0.995242	0.007930
0.400E-03	0.163889	15.71	0.995691	0.005931
0.250E-03	0.156962	16.08	0.996449	0.005939
0.160E-03	0.151083	16.42	0.995600	0.006861
0.100E-03	0.145515	16.74	0.980871	0.005007
0.630E-04	0.140570	17.04	0.891666	0.002444
0.400E-04	0.136148	17.32	0.920217	0.005684
0.250E-04	0.131968	17.59	0.892706	0.005714
0.160E-04	0.128322	17.83	0.876997	0.022030
0.100E-04	0.124780	18.08	0.773299	0.006109
0.630E-05	0.121561	18.30	0.760329	0.006287
0.400E-05	0.118620	18.52	0.768551	0.020218
0.250E-05	0.115785	18.73	0.737245	0.006617
0.160E-05	0.113268	18.92	0.772736	0.006768
0.100E-05	0.110783	19.11	0.717372	0.006921
0.630E-06	0.108488	19.29	0.708279	0.007069
0.400E-06	0.106363	19.46	0.698275	0.007120
0.250E-06	0.104287	19.64	0.691653	0.007353
0.160E-06	0.102422	19.79	0.684278	0.017755
0.100E-06	0.100560	19.95	0.676918	0.017428
0.630E-07	0.098823	20.10	0.670054	0.007625
0.400E-07	0.097198	20.25	0.663636	0.007759
0.250E-07	0.095597	20.39	0.657312	0.008020
0.160E-07	0.094147	20.52	0.651583	0.008143
0.100E-07	0.092687	20.66	0.655818	0.008271
0.630E-08	0.091315	20.79	0.660400	0.008395
0.400E-08	0.090022	20.91	0.655297	0.008515
0.250E-08	0.088740	21.04	0.630236	0.015323
0.160E-08	0.087572	21.15	0.626622	0.016545
0.100E-08	0.086388	21.27	0.620951	0.016208
0.630E-09	0.085270	21.38	0.616536	0.014908
0.400E-09	0.084211	21.49	0.612356	0.014335
0.250E-09	0.083156	21.60	0.608189	0.014157
0.160E-09	0.082188	21.70	0.604372	0.013995
0.100E-09	0.081205	21.81	0.600490	0.013822
0.630E-10	0.080271	21.91	0.596805	0.012960
0.400E-10	0.079384	22.01	0.593301	0.011078
0.250E-10	0.078495	22.10	0.589194	0.010910
0.160E-10	0.077678	22.19	0.586569	0.009867
0.100E-10	0.076844	22.29	0.583278	0.009974
0.630E-11	0.076050	22.38	0.580142	0.010078
0.400E-11	0.075292	22.47	0.577151	0.010179
0.250E-11	0.074531	22.55	0.574147	0.010283
0.160E-11	0.073829	22.64	0.571372	0.010381
0.100E-11	0.073110	22.72	0.568571	0.012447
0.630E-12	0.072424	22.80	0.565832	0.010493
0.400E-12	0.071767	22.88	0.563240	0.010582
0.250E-12	0.071106	22.96	0.560630	0.011253
0.160E-12	0.070495	23.04	0.558217	0.011594
0.100E-12	0.069867	23.11	0.555742	0.010970
0.630E-13	0.069267	23.19	0.553370	0.011069
0.400E-13	0.068691	23.26	0.551097	0.011158
0.250E-13	0.068109	23.34	0.548803	0.011253
0.160E-13	0.067571	23.40	0.546677	0.011342
0.100E-13	0.067017	23.48	0.544649	0.011406
0.630E-14	0.066485	23.55	0.542393	0.011319
0.400E-14	0.065975	23.61	0.540378	0.011229
0.250E-14	0.065458	23.68	0.538341	0.011151
0.160E-14	0.064979	23.74	0.536450	0.011170
0.100E-14	0.064486	23.81	0.534502	0.011063

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR ADR EQUALS 1.0 / 0.2800 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DRIV PER WRIT A / D	TIME CONSTANT
0.100E-02	0.180151	14.89	0.969485	-0.0114298	0.114298
0.430E-03	0.171438	15.32	0.952262	-0.007930	0.166554
0.440E-03	0.163889	15.71	0.935691	-0.005931	0.219998
0.156962	0.156962	16.08	0.910649	-0.005028	0.259539
0.141083	0.151083	16.42	0.885600	-0.004861	0.268422
0.145515	0.145515	16.74	0.860871	-0.005007	0.260656
0.140570	0.140570	17.04	0.839166	-0.005244	0.248883
0.136148	0.136148	17.32	0.820217	-0.005484	0.237968
0.131968	0.131968	17.59	0.802706	-0.005714	0.228363
0.128322	0.128322	17.83	0.787697	-0.005914	0.220630
0.124780	0.124780	18.08	0.773299	-0.006109	0.213611
0.121561	0.121561	18.30	0.760329	-0.006287	0.207555
0.118620	0.118620	18.52	0.748551	-0.006453	0.202218
0.115785	0.115785	18.73	0.737245	-0.006617	0.197200
0.113268	0.113268	18.92	0.727236	-0.006768	0.192817
0.110783	0.110783	19.11	0.717372	-0.006921	0.188534
0.108488	0.108488	19.29	0.708279	-0.007069	0.184608
0.106363	0.106363	19.46	0.699865	-0.007210	0.180985
0.104287	0.104287	19.64	0.691653	-0.007353	0.177455
0.102422	0.102422	19.79	0.684278	-0.007487	0.174268
0.100560	0.100560	19.95	0.676918	-0.007625	0.171128
0.098823	0.098823	20.10	0.670054	-0.007759	0.168181
0.097198	0.097198	20.25	0.663636	-0.007888	0.165425
0.095597	0.095597	20.39	0.657312	-0.008020	0.162709
0.094147	0.094147	20.52	0.651583	-0.008143	0.160266
0.092687	0.092687	20.66	0.645818	-0.008271	0.157768
0.091315	0.091315	20.79	0.640400	-0.008395	0.155438
0.090022	0.090022	20.91	0.635297	-0.008515	0.153243
0.088740	0.088740	21.04	0.630236	-0.008638	0.151064
0.087572	0.087572	21.15	0.625622	-0.008753	0.149078
0.086388	0.086388	21.27	0.620951	-0.008873	0.147067
0.085270	0.085270	21.38	0.616536	-0.008989	0.145166
0.084211	0.084211	21.49	0.612356	-0.009102	0.143365
0.083156	0.083156	21.60	0.608189	-0.009217	0.141570
0.082188	0.082188	21.70	0.604372	-0.009326	0.139925
0.081205	0.081205	21.81	0.600690	-0.009439	0.138252

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THREE LEVEL EYE I.E., DECISION LEVEL.
- ADR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DRIV PER WRIT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- LOOP FOR SWAY CHANGES AROUND STEADY STATE VALUES WHEN RITE RATE = 1255200, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FVF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 2800.

PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.080271	21.91	0.596805	-0.009548	0.136664
0.630E-10	0.079384	22.01	0.593301	-0.009658	0.135154
0.630E-10	0.078495	22.10	0.589794	-0.009764	0.133642
0.630E-10	0.077678	22.19	0.586569	-0.009867	0.132231
0.630E-10	0.076844	22.29	0.583278	-0.009976	0.130832
0.630E-11	0.076050	22.38	0.580142	-0.010078	0.129400
0.630E-11	0.075292	22.47	0.577151	-0.010179	0.128190
0.630E-11	0.074531	22.55	0.574167	-0.010283	0.126898
0.630E-11	0.073829	22.64	0.571377	-0.010381	0.125700
0.630E-11	0.073110	22.72	0.568541	-0.010483	0.124677
0.630E-12	0.072424	22.80	0.565832	-0.010582	0.123369
0.630E-12	0.071767	22.88	0.563240	-0.010679	0.122191
0.630E-12	0.071106	22.96	0.560630	-0.010779	0.121045
0.630E-12	0.070465	23.04	0.558217	-0.010872	0.120025
0.630E-12	0.069867	23.11	0.555742	-0.010970	0.118957
0.630E-13	0.069267	23.19	0.553370	-0.011065	0.117934
0.630E-13	0.068691	23.26	0.551097	-0.011158	0.116934
0.630E-13	0.068109	23.34	0.548803	-0.011253	0.115804
0.630E-13	0.067571	23.40	0.546677	-0.011342	0.115047
0.630E-13	0.067017	23.48	0.544491	-0.011436	0.114104
0.630E-14	0.066445	23.55	0.542393	-0.011528	0.113199
0.630E-14	0.065975	23.61	0.540378	-0.011617	0.112359
0.630E-14	0.065458	23.68	0.538361	-0.011708	0.111451
0.630E-14	0.064979	23.74	0.536450	-0.011795	0.110835
0.630E-14	0.064486	23.81	0.534502	-0.011885	0.109794

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- ATDR = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- ADDITIONAL THRESHOLD AMPLITUDE TO D RATIO.
- DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RITF RATE = 12522600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TABLE 15 IN DEBUG PRINTOUT "CODE. TABLE WAS CALLED.						
0.100E-02	0.175100	15.13	0.970137	-0.011664	0.1111870	
0.630E-03	0.166622	15.57	-0.056269	-0.008113	0.166834	
0.400E-03	0.159229	15.96	0.937237	-0.006074	0.214845	
0.250E-03	0.152461	16.34	0.912869	-0.005151	0.253320	
0.160E-03	0.146727	16.67	0.888506	-0.004983	0.261862	
0.100E-03	0.141303	17.00	0.8664473	-0.005135	0.254133	
0.630E-04	0.136491	17.30	0.843392	-0.005380	0.242444	
0.400E-04	0.132191	17.58	0.824996	-0.005628	0.231866	
0.250E-04	0.128128	17.85	0.807999	-0.005866	0.222441	
0.160E-04	0.124585	18.09	0.793434	-0.006073	0.214556	
0.100E-04	0.121145	18.33	0.779460	-0.006274	0.20775	
0.630E-05	0.118019	18.56	0.766871	-0.006459	0.202040	
0.400E-05	0.115163	18.77	0.755438	-0.006630	0.198614	
0.250E-05	0.112410	18.98	0.744462	-0.006800	0.191902	
0.160E-05	0.109966	19.17	0.734743	-0.006955	0.187615	
0.100E-05	0.107553	19.37	0.725165	-0.007114	0.18328	
0.630E-06	0.105325	19.55	0.718334	-0.007266	0.179591	
0.400E-06	0.103262	19.72	0.708161	-0.007412	0.176552	
0.250E-06	0.101266	19.89	0.700184	-0.007560	0.172607	
0.160E-06	0.099436	20.05	0.693020	-0.007698	0.169516	
0.100E-06	0.097628	20.21	0.685868	-0.007840	0.166334	
0.630E-07	0.095942	20.36	0.679199	-0.007978	0.16360	
0.400E-07	0.094364	20.50	0.672962	-0.008111	0.160173	
0.250E-07	0.092810	20.65	0.666816	-0.008267	0.158226	
0.160E-07	0.091402	20.78	0.661248	-0.008374	0.155327	
0.100E-07	0.089984	20.92	0.655645	-0.008506	0.15313	
0.630E-08	0.088652	21.05	0.650380	-0.008634	0.151144	
0.400E-08	0.087398	21.17	0.645420	-0.008757	0.149006	
0.250E-08	0.086153	21.29	0.640970	-0.008886	0.146886	
0.160E-08	0.085016	21.41	0.636015	-0.008992	0.144952	
0.100E-08	0.083870	21.53	0.631475	-0.009126	0.142995	
0.630E-09	0.082784	21.64	0.627184	-0.009245	0.141145	
0.400E-09	0.081756	21.75	0.623121	-0.009361	0.139293	
0.250E-09	0.080731	21.86	0.619070	-0.009480	0.137446	
0.160E-09	0.079792	21.96	0.615359	-0.009592	0.136046	
0.100E-09	0.078837	22.07	0.611585	-0.009708	0.134218	
0.630E-10	0.077931	22.17	0.608003	-0.009821	0.132173	
0.400E-10	0.077069	22.26	0.604597	-0.009930	0.131404	
0.250E-10	0.076206	22.36	0.601187	-0.010043	0.12934	
0.160E-10	0.075413	22.45	0.598052	-0.010149	0.128381	
0.100E-10	0.074604	22.54	0.594852	-0.010259	0.127701	
0.630E-11	0.073832	22.64	0.591804	-0.010366	0.12586	
0.400E-11	0.073097	22.72	0.588896	-0.010470	0.124632	
0.250E-11	0.072358	22.81	0.585976	-0.010577	0.123372	
0.160E-11	0.071676	22.89	0.582082	-0.010678	0.122210	
0.100E-11	0.070979	22.98	0.580526	-0.010782	0.121021	
0.630E-12	0.070312	23.06	0.577891	-0.010885	0.119885	
0.400E-12	0.069675	23.14	0.575372	-0.010984	0.118798	
0.250E-12	0.069033	23.22	0.572835	-0.011086	0.117704	
0.160E-12	0.068439	23.29	0.570489	-0.011183	0.116692	
0.100E-12	0.067830	23.37	0.568082	-0.011283	0.115653	
0.630E-13	0.066547	23.45	0.555776	-0.011381	0.114659	
0.400E-13	0.066247	23.52	0.563566	-0.011476	0.113505	
0.250E-13	0.066123	23.59	0.561336	-0.011574	0.112743	
0.160E-13	0.065600	23.66	0.559269	-0.011666	0.111851	
0.100E-13	0.065063	23.73	0.557144	-0.011763	0.110934	
0.630E-14	0.064547	23.80	0.555104	-0.011857	0.110055	
0.400E-14	0.064051	23.87	0.553145	-0.011949	0.109209	
0.250E-14	0.063550	23.94	0.551165	-0.012043	0.108355	
0.160E-14	0.063085	24.00	0.549326	-0.012132	0.107562	
0.100E-14	0.062605	24.07	0.547432	-0.012225	0.106145	

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D R = 0.3000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

RIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.175180	15.13	0.970137	-0.011664	0.111670
0.630E-03	0.666622	15.57	0.956269	-0.008113	0.16034
0.400E-03	0.159229	15.96	0.937237	-0.006074	0.214845
0.250E-03	0.152461	16.34	0.912869	-0.005151	0.253310
0.160E-03	0.146727	16.67	0.888506	-0.004983	0.261862
0.100E-03	0.141303	17.00	0.864673	-0.005135	0.254133
0.630E-04	0.136491	17.30	0.843392	-0.005380	0.24244
0.400E-04	0.132191	17.58	0.824696	-0.005628	0.23186
0.250E-04	0.128128	17.85	0.807999	-0.005866	0.222441
0.160E-04	0.124585	18.09	0.793434	-0.006073	0.214896
0.100E-04	0.121145	18.33	0.779460	-0.006274	0.207975
0.630E-05	0.118019	18.56	0.766871	-0.006459	0.202040
0.400E-05	0.115163	18.77	0.746438	-0.006630	0.196814
0.250E-05	0.112410	18.98	0.724462	-0.006800	0.191012
0.160E-05	0.109966	19.17	0.704743	-0.006955	0.187615
0.100E-05	0.107553	19.37	0.685165	-0.007114	0.183468
0.630E-06	0.105325	19.55	0.671634	-0.007266	0.179991
0.400E-06	0.103262	19.72	0.678161	-0.007412	0.176012
0.250E-06	0.101246	19.89	0.700184	-0.007560	0.172607
0.160E-06	0.099336	20.05	0.693020	-0.007698	0.169516
0.100E-06	0.097628	20.21	0.685868	-0.007840	0.166434
0.630E-07	0.095942	20.36	0.679199	-0.007978	0.163560
0.400E-07	0.094364	20.50	0.672962	-0.008111	0.160813
0.250E-07	0.092810	20.65	0.668116	-0.008247	0.158216
0.160E-07	0.091402	20.78	0.661248	-0.008374	0.155817
0.100E-07	0.089984	20.92	0.655645	-0.008506	0.153413
0.630E-08	0.088652	21.05	0.650380	-0.008634	0.151144
0.400E-08	0.087398	21.17	0.645420	-0.008757	0.149006
0.250E-08	0.086153	21.29	0.640501	-0.008884	0.146886
0.160E-08	0.085018	21.41	0.636015	-0.009002	0.144912
0.100E-08	0.083870	21.53	0.631475	-0.009126	0.142995
0.630E-09	0.082784	21.64	0.627184	-0.009245	0.141145
0.400E-09	0.081756	21.75	0.623121	-0.009361	0.13933
0.250E-09	0.080731	21.86	0.619070	-0.009480	0.137646
0.160E-09	0.079792	21.96	0.615359	-0.009592	0.136046
0.100E-09	0.078837	22.07	0.611585	-0.009708	0.134418

DEFINITION:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D R = THE THREE LEVEL EYE, I.E., DFC STATION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE IN DECIBELS.
- SNR = SIGNAL POWER TO RMS SIGNAL RATIO.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STADY STATE VALUES WHEN BITE RATE = 1255200. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER ■ 4.

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.3000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

HIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.077931	22.17	0.608003	-0.009821	0.132873
0.400E-10	0.077069	22.26	0.604597	-0.009330	0.131404
0.250E-10	0.076206	22.36	0.601187	-0.010043	0.12934
0.160E-10	0.075413	22.45	0.598057	-0.010149	0.128581
0.100E-10	0.074604	22.54	0.594852	-0.010259	0.127201
0.630E-11	0.073832	22.64	0.591804	-0.010366	0.125886
0.400E-11	0.073097	22.72	0.588896	-0.010470	0.124632
0.250E-11	0.072358	22.81	0.585976	-0.010577	0.123372
0.160E-11	0.071676	22.89	0.583283	-0.010678	0.122210
0.100E-11	0.070979	22.98	0.580526	-0.010782	0.121021
0.630E-12	0.070312	23.06	0.577891	-0.010885	0.119885
0.400E-12	0.069675	23.14	0.575372	-0.010984	0.118798
0.250E-12	0.069033	23.22	0.572835	-0.011086	0.117704
0.160E-12	0.068439	23.29	0.570489	-0.011183	0.116692
0.100E-12	0.067830	23.37	0.568082	-0.011283	0.115653
0.630E-13	0.067247	23.45	0.565776	-0.011381	0.114659
0.400E-13	0.066668	23.52	0.563566	-0.011476	0.113705
0.250E-13	0.066123	23.59	0.561936	-0.011574	0.112743
0.160E-13	0.065600	23.66	0.559269	-0.011666	0.111851
0.100E-13	0.065063	23.73	0.557166	-0.011763	0.110934
0.630E-14	0.064547	23.80	0.555104	-0.011857	0.110055
0.400E-14	0.064051	23.87	0.553145	-0.011949	0.109209
0.250E-14	0.063550	23.94	0.551165	-0.012043	0.108355
0.160E-14	0.063085	24.00	0.549326	-0.012132	0.107562
0.100E-14	0.062605	24.07	0.547632	-0.012225	0.106745

NOMENCLATURE:
 D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE
 THE THREE LEVEL EYE I.E., DECISION LEVEL.
 A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
 SNR = SIGNAL POWER TO NOISE POWER IN DECIBLES.
 A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 DRIV PER WRT TMF CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TMF CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
 LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
 WHEN BIT RATE = 12532600. AND ERROR SIGNAL
 DIVIDED RATIO INTO D/A CONVERTER = 4.

TABLE IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED:

0.10E-02	0.110107	15.39	0.011947	0.109223
0.40E-03	0.161733	15.82	0.957268	0.156836
0.40E-03	0.145117	16.22	0.938871	0.006233
0.25E-03	0.17923	16.60	0.915191	0.005289
0.10E-03	0.12346	16.93	0.891525	0.005118
0.10E-03	0.13074	17.26	0.868889	0.005276
0.60E-04	0.112400	17.56	0.847728	0.005330
0.40E-04	0.128225	17.84	0.829877	0.005786
0.25E-04	0.14282	18.11	0.813385	0.006032
0.10E-04	0.120845	18.36	0.799252	0.006266
0.10E-04	0.117507	18.60	0.785633	0.007194
0.60E-05	0.114474	18.83	0.773476	0.006644
0.40E-05	0.111704	19.04	0.762380	0.006921
0.25E-05	0.109033	19.25	0.751775	0.006996
0.10E-05	0.106663	19.44	0.742291	0.007157
0.10E-05	0.104322	19.63	0.732392	0.007321
0.63E-06	0.102161	19.81	0.724419	0.007478
0.40E-06	0.100160	19.99	0.716383	0.007628
0.25E-06	0.098205	20.16	0.708736	0.007781
0.10E-06	0.096449	20.31	0.701779	0.007923
0.10E-06	0.094695	20.47	0.694634	0.008070
0.63E-07	0.093059	20.62	0.688357	0.008212
0.40E-07	0.091530	20.77	0.682200	0.008369
0.25E-07	0.090022	20.91	0.676331	0.008489
0.10E-07	0.088656	21.05	0.670523	0.008620
0.10E-07	0.087281	21.18	0.665781	0.008755
0.63E-08	0.085949	21.31	0.661887	0.008897
0.40E-08	0.084772	21.43	0.655249	0.009015
0.25E-08	0.083555	21.54	0.650711	0.009145
0.16E-08	0.082464	21.67	0.646643	0.009267
0.10E-08	0.081350	21.79	0.642203	0.009394
0.63E-09	0.080297	21.91	0.637835	0.009517
0.40E-09	0.079300	22.01	0.633688	0.009636
0.25E-09	0.078306	22.12	0.62993	0.009739
0.16E-09	0.077395	22.23	0.626348	0.009874
0.10E-09	0.076469	22.33	0.622682	0.009993
0.63E-10	0.075590	22.43	0.619202	0.010109
0.40E-10	0.074754	22.53	0.615884	0.010222
0.25E-10	0.073917	22.63	0.612581	0.010338
0.16E-10	0.073148	22.72	0.609536	0.010447
0.10E-10	0.072363	22.81	0.606628	0.010560
0.65E-11	0.071614	22.90	0.603667	0.010671
0.40E-11	0.070901	22.99	0.599042	0.010778
0.25E-11	0.070184	23.08	0.597005	0.010888
0.16E-11	0.069523	23.16	0.595189	0.010992
0.10E-11	0.068847	23.24	0.592511	0.011100
0.63E-12	0.068227	23.32	0.589952	0.011205
0.40E-12	0.066684	23.40	0.587504	0.011307
0.25E-12	0.064137	23.48	0.585050	0.011412
0.16E-12	0.063383	23.56	0.582751	0.011511
0.10E-12	0.062793	23.64	0.580422	0.011615
0.63E-13	0.062268	24.07	0.567816	0.012206
0.40E-13	0.062127	24.13	0.565913	0.012300
0.25E-13	0.061641	24.20	0.563989	0.012397
0.16E-13	0.061189	24.27	0.562202	0.012489
0.10E-14	0.060725	24.33	0.560362	0.012584

BASEBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.3200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.170107	15.39	0.970847	-0.011967	0.109223
0.630E-03	0.161733	15.82	0.957368	-0.008320	0.156836
0.400E-03	0.154517	16.22	0.938871	-0.006233	0.209377
0.250E-03	0.147923	16.60	0.915191	-0.005289	0.246735
0.160E-03	0.142346	16.93	0.891525	-0.005118	0.254954
0.100E-03	0.137074	17.26	0.868189	-0.005276	0.247336
0.630E-04	0.132400	17.56	0.847728	-0.005530	0.235955
0.400E-04	0.128255	17.84	0.829877	-0.005786	0.225547
0.250E-04	0.124282	18.11	0.813385	-0.006032	0.216327
0.160E-04	0.120845	18.36	0.799252	-0.006246	0.208915
0.100E-04	0.117507	18.60	0.785693	-0.006454	0.202104
0.630E-05	0.114474	18.83	0.773476	-0.006644	0.196400
0.400E-05	0.111704	19.04	0.762380	-0.006821	0.191300
0.250E-05	0.109033	19.25	0.751725	-0.006996	0.186509
0.160E-05	0.106663	19.44	0.742291	-0.007157	0.182329
0.100E-05	0.104322	19.63	0.732992	-0.007321	0.178249
0.630E-06	0.102161	19.81	0.724419	-0.007478	0.174511
0.400E-06	0.100160	19.99	0.716483	-0.007628	0.171065
0.250E-06	0.098205	20.16	0.708736	-0.007781	0.167710
0.160E-06	0.096669	20.31	0.701779	-0.007923	0.164703
0.100E-06	0.094665	20.47	0.694834	-0.008070	0.161703
0.630E-07	0.093059	20.62	0.688357	-0.008212	0.158908
0.400E-07	0.091530	20.77	0.682300	-0.008349	0.156294
0.250E-07	0.090022	20.91	0.676331	-0.008489	0.153719
0.160E-07	0.088656	21.05	0.670923	-0.008620	0.151387
0.100E-07	0.087281	21.18	0.665481	-0.008755	0.149040
0.630E-08	0.085959	21.31	0.660366	-0.008887	0.146834
0.400E-08	0.084777	21.43	0.655549	-0.009015	0.144756
0.250E-08	0.083565	21.56	0.650770	-0.009145	0.142695
0.160E-08	0.082464	21.67	0.646413	-0.009267	0.140816
0.100E-08	0.081350	21.79	0.642003	-0.009394	0.138914
0.630E-09	0.080297	21.91	0.637835	-0.009517	0.137116
0.400E-09	0.079304	22.01	0.633888	-0.009636	0.135413
0.250E-09	0.078306	22.12	0.629953	-0.009759	0.133716
0.160E-09	0.077395	22.23	0.626348	-0.009874	0.132161
0.100E-09	0.076669	22.33	0.622682	-0.009993	0.130580

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INFERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBLES.
- DERRIV PER WRT TIME CONSTANT = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIOS.
- DERRIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552000, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.3200
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

R/T ERROR RATE	N / S RATIO	S/N IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630E-10	0.075590	22.43	0.619202	-0.010109	0.122078
0.460E-10	0.074754	22.43	0.615694	-0.010222	0.127651
0.250E-10	0.073917	22.43	0.612881	-0.010338	0.126222
0.160E-10	0.073148	22.43	0.609336	-0.010447	0.124909
0.100E-10	0.072363	22.41	0.606228	-0.010560	0.123568
0.630E-11	0.071614	22.40	0.603667	-0.010671	0.122290
0.400E-11	0.070901	22.40	0.600442	-0.010778	0.121072
0.250E-11	0.070184	23.08	0.597005	-0.010888	0.119848
0.160E-11	0.069523	23.14	0.595189	-0.010992	0.118719
0.100E-11	0.068847	23.24	0.592511	-0.011100	0.117564
0.630E-12	0.068200	23.32	0.589912	-0.011205	0.116460
0.400E-12	0.067582	23.40	0.587504	-0.011307	0.115404
0.250E-12	0.066959	23.48	0.585040	-0.011412	0.114341
0.160E-12	0.066383	23.56	0.582561	-0.011511	0.113358
0.100E-12	0.065793	23.64	0.580422	-0.011615	0.112349
0.630E-13	0.065227	23.71	0.578183	-0.011716	0.111383
0.400E-13	0.0646684	23.78	0.576016	-0.011814	0.110456
0.250E-13	0.064137	23.86	0.573869	-0.011915	0.109522
0.160E-13	0.063630	23.93	0.571061	-0.012010	0.108656
0.100E-13	0.063108	24.00	0.569297	-0.012109	0.107765
0.630E-14	0.062608	24.07	0.567816	-0.012206	0.106910
0.400E-14	0.062127	24.13	0.565913	-0.012300	0.106089
0.250E-14	0.061641	24.20	0.563989	-0.012397	0.105259
0.160E-14	0.061189	24.27	0.562202	-0.012489	0.104489
0.100E-14	0.060725	24.33	0.560362	-0.012584	0.103695

NONMENCLATURE:
 D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE
 THREE LEVEL EYE I.E., DECISION LEVEL.
 A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
 N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
 S/R = SIGNAL POWER TO NOISE POWER IN DECIBELS.
 A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 DERIV PER WRT D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
 LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
 WHEN RITE RATE = 1252600. AND ERROR SIGNAL
 DIVIDER RATIO INTO D/A CONVERTER = 4.

TABLE XXXII	
0.100E-02	0.164961
0.630E-03	0.156795
0.400E-03	0.149772
0.250E-03	0.143365
0.160E-03	0.137951
0.100E-03	0.132816
0.630E-04	0.128304
0.400E-04	0.124257
0.250E-04	0.120435
0.160E-04	0.117103
0.100E-04	0.113869
0.630E-05	0.110929
0.400E-05	0.109245
0.250E-05	0.105627
0.160E-05	0.103360
0.100E-05	0.101091
0.630E-06	0.098997
0.400E-06	0.097058
0.250E-06	0.095164
0.160E-06	0.093462
0.100E-06	0.091763
0.630E-07	0.090177
0.400E-07	0.088695
0.250E-07	0.087234
0.160E-07	0.085910
0.100E-07	0.084578
0.630E-08	0.083326
0.400E-08	0.081477
0.250E-08	0.080977
0.160E-08	0.079910
0.100E-08	0.078831
0.630E-09	0.077610
0.400E-09	0.076844
0.250E-09	0.075881
0.160E-09	0.074998
0.100E-09	0.074101
0.630E-10	0.073249
0.400E-10	0.072439
0.250E-10	0.071628
0.160E-10	0.070882
0.100E-10	0.070121
0.630E-11	0.069397
0.400E-11	0.068705
0.250E-11	0.068011
0.160E-11	0.067370
0.100E-11	0.066714
0.630E-12	0.066088
0.400E-12	0.065489
0.250E-12	0.064885
0.160E-12	0.064327
0.100E-12	0.063755
0.630E-13	0.063207
0.400E-13	0.062681
0.250E-13	0.062151
0.160E-13	0.061659
0.100E-13	0.061154
0.630E-14	0.060659
0.400E-14	0.060203
0.250E-14	0.059732
0.160E-14	0.059294
0.100E-14	0.058844

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D EQUALS 0.3400
PSEUDORATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.164961	15.65	0.971605	-0.012265	0.106394
0.500E-03	0.156795	16.09	0.958523	-0.005650	0.152620
0.400E-03	0.149772	16.49	0.940569	-0.006409	0.203616
0.250E-03	0.143365	16.87	0.917585	-0.005440	0.239882
0.160E-03	0.137951	17.21	0.894619	-0.005266	0.247800
0.100E-03	0.132836	17.53	0.871979	-0.005430	0.240312
0.650E-04	0.128304	17.84	0.852133	-0.005692	0.229524
0.400E-04	0.124257	18.11	0.834819	-0.005957	0.219071
0.250E-04	0.120435	18.38	0.818824	-0.006211	0.210093
0.160E-04	0.117103	18.63	0.805116	-0.006432	0.202873
0.100E-04	0.113869	18.87	0.791964	-0.006647	0.196328
0.630E-05	0.110929	19.10	0.780113	-0.006843	0.190638
0.400E-05	0.108245	19.31	0.769346	-0.007026	0.185725
0.250E-05	0.105657	19.52	0.759012	-0.007207	0.181005
0.160E-05	0.103360	19.71	0.749859	-0.007372	0.177000
0.100E-05	0.101091	19.91	0.740835	-0.007541	0.173033
0.650E-06	0.098997	20.09	0.732516	-0.007703	0.169399
0.400E-06	0.097054	20.26	0.724815	-0.007858	0.166051
0.250E-06	0.095154	20.43	0.717298	-0.008016	0.162792
0.160E-06	0.093462	20.59	0.710546	-0.008162	0.159870
0.100E-06	0.091763	20.75	0.703807	-0.008314	0.156957
0.650E-07	0.090177	20.90	0.697521	-0.008460	0.154241
0.400E-07	0.088695	21.04	0.691642	-0.008602	0.151703
0.250E-07	0.087234	21.19	0.685849	-0.008743	0.149203
0.160E-07	0.085910	21.32	0.680600	-0.008881	0.146938
0.100E-07	0.084578	21.45	0.675318	-0.009021	0.144660
0.650E-08	0.083326	21.58	0.670354	-0.009156	0.142518
0.400E-08	0.082147	21.71	0.665679	-0.009288	0.140501
0.250E-08	0.080977	21.83	0.661041	-0.009422	0.138500
0.160E-08	0.079910	21.95	0.656812	-0.009547	0.136676
0.100E-08	0.078831	22.07	0.652532	-0.009678	0.133084
0.650E-09	0.077810	22.18	0.648486	-0.009805	0.130431
0.400E-09	0.076844	22.29	0.644656	-0.009928	0.129784
0.250E-09	0.075881	22.40	0.640836	-0.010054	0.128274
0.160E-09	0.074998	22.50	0.637338	-0.010173	0.126740
0.100E-09	0.074101	22.60	0.633780	-0.010296	0.125740

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF THE THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES.
- WHFN RITE RATE = 12552000. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3400
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PWR WRT A / D	TIME CONSTANT
0.630E-10	0.073249	22.70	0.630402	-0.010416	0.125282
0.400E-10	0.072430	22.80	0.627191	-0.010532	0.123897
0.250E-10	0.071628	22.90	0.625976	-0.010651	0.122510
0.160E-10	0.070887	22.99	0.621020	-0.010763	0.121235
0.100E-10	0.070121	23.08	0.618003	-0.010880	0.119934
0.630E-11	0.069397	23.17	0.615129	-0.010994	0.118694
0.400E-11	0.068705	23.26	0.612388	-0.011105	0.117511
0.250E-11	0.068011	23.35	0.609834	-0.011218	0.116323
0.160E-11	0.067370	23.43	0.607095	-0.011325	0.115228
0.100E-11	0.066714	23.52	0.606695	-0.011436	0.114106
0.630E-12	0.066088	23.60	0.602012	-0.011544	0.113035
0.400E-12	0.065489	23.68	0.599636	-0.011650	0.112010
0.250E-12	0.064885	23.76	0.597344	-0.011758	0.110978
0.160E-12	0.064327	23.83	0.595032	-0.011860	0.110024
0.100E-12	0.063755	23.91	0.592763	-0.011967	0.109045
0.630E-13	0.063207	23.98	0.590389	-0.012071	0.108107
0.400E-13	0.062681	24.06	0.588055	-0.012172	0.107208
0.250E-13	0.062151	24.13	0.586602	-0.012276	0.106301
0.160E-13	0.061659	24.20	0.584454	-0.012374	0.105460
0.100E-13	0.061154	24.27	0.582450	-0.012476	0.104595
0.630E-14	0.060669	24.34	0.580527	-0.012576	0.103766
0.400E-14	0.060203	24.41	0.578680	-0.012673	0.102969
0.250E-14	0.059732	24.48	0.576812	-0.012773	0.102163
0.160E-14	0.059294	24.54	0.575079	-0.012867	0.101415
0.100E-14	0.058844	24.61	0.573293	-0.012965	0.100645

NOMENCLATURE:

- D = HALF OF THF NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- THE THREE LEVEL EYE I.E., DECISION LEVEL.
- AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600, AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

LINK 15 IN DEBUT PRINTOUT MODE. TABLE WAS CALLED	
0.10E-02	0.159765
0.30E-02	0.151825
0.60E-03	0.145009
0.250E-03	0.138797
0.160E-03	0.133550
0.10E-03	0.128596
0.60E-05	0.124207
0.40E-04	0.120288
0.250E-04	0.116587
0.160E-04	0.113362
0.10E-04	0.110231
0.630E-04	0.095835
0.40E-05	0.097385
0.250E-05	0.094786
0.160E-05	0.092281
0.10E-05	0.090557
0.60E-05	0.088831
0.40E-07	0.087296
0.250E-07	0.085861
0.160E-07	0.084447
0.10E-07	0.083166
0.60E-08	0.081876
0.40E-08	0.080664
0.250E-08	0.079522
0.160E-08	0.078390
0.10E-08	0.077357
0.60E-09	0.076312
0.40E-09	0.075324
0.250E-09	0.074389
0.160E-09	0.073456
0.10E-09	0.072602
0.60E-10	0.071733
0.40E-10	0.070909
0.250E-10	0.070125
0.20E-10	0.069340
0.160E-10	0.068618
0.10E-10	0.067881
0.60E-11	0.067179
0.40E-11	0.066510
0.250E-11	0.065838
0.20E-11	0.065360
0.160E-11	0.065218
0.10E-11	0.064583
0.60E-12	0.063977
0.40E-12	0.063396
0.250E-12	0.062812
0.160E-12	0.062272
0.10E-12	0.059200
0.10E-13	0.059689
0.10E-13	0.059200
0.630E-14	0.058730
0.40E-14	0.058279
0.250E-14	0.057823
0.160E-14	0.057400
0.10E-14	0.056964

BASFBAND FYF PATTERN MONITOR TABLES

TABLE I FOR A/D EQUALS 0.3600
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.159765	15.93	0.977399	-0.012617	0.103424
0.630E-03	0.151825	16.37	0.957118	-0.008802	0.148246
0.400E-03	0.145009	16.77	0.92311	-0.006601	0.197698
0.250E-03	0.138797	17.15	0.920228	-0.005604	0.232849
0.160E-03	0.133556	17.49	0.897760	-0.005426	0.240485
0.100E-03	0.128596	17.82	0.875814	-0.005596	0.233196
0.630E-04	0.124207	18.12	0.85577	-0.005867	0.222417
0.400E-04	0.120288	18.40	0.83796	-0.006140	0.212516
0.250E-04	0.116587	18.67	0.82292	-0.006403	0.203789
0.160E-04	0.113362	18.91	0.811004	-0.006632	0.196774
0.100E-04	0.110231	19.15	0.79255	-0.006853	0.190416
0.630E-05	0.107385	19.38	0.786166	-0.007056	0.184938
0.400E-05	0.104786	19.59	0.776330	-0.007245	0.180120
0.250E-05	0.102281	19.80	0.763308	-0.007431	0.175595
0.160E-05	0.10057	20.00	0.751434	-0.007602	0.171650
0.100E-05	0.097862	20.19	0.746685	-0.007777	0.167800
0.630E-06	0.095835	20.37	0.740819	-0.007943	0.164274
0.400E-06	0.093957	20.54	0.731562	-0.008104	0.161025
0.250E-06	0.092123	20.71	0.728663	-0.008266	0.157864
0.160E-06	0.090476	20.87	0.719316	-0.008417	0.155029
0.100E-06	0.088831	21.03	0.712781	-0.008573	0.152203
0.630E-07	0.087296	21.18	0.706886	-0.008724	0.149570
0.400E-07	0.085861	21.32	0.700985	-0.008870	0.147108
0.250E-07	0.084467	21.47	0.693368	-0.009019	0.144683
0.160E-07	0.083166	21.60	0.689279	-0.009158	0.142487
0.100E-07	0.081876	21.74	0.683157	-0.009302	0.140277
0.630E-08	0.080664	21.87	0.680343	-0.009442	0.138200
0.400E-08	0.079522	21.99	0.675208	-0.009578	0.136244
0.250E-08	0.078390	22.11	0.671312	-0.009716	0.134304
0.160E-08	0.077357	22.23	0.666217	-0.009846	0.132535
0.100E-08	0.076312	22.35	0.661061	-0.009981	0.130744
0.630E-09	0.075324	22.46	0.655138	-0.010112	0.129051
0.400E-09	0.074389	22.57	0.655424	-0.010239	0.127449
0.250E-09	0.073456	22.68	0.651720	-0.010369	0.125851
0.160E-09	0.072602	22.78	0.645327	-0.010491	0.124387
0.100E-09	0.071733	22.89	0.644877	-0.010618	0.122899

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D = THE THREE LEVEL EYE 1.0 : 0.5 DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- S/R = RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRT A / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATED INTO D/A CONVERTER = 4.

BASFBAND EYF PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3600, 0.3600 / 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
2.630E-10	0.070909	22.99	0.61602	-0.010741	0.121486
2.4400E-10	0.070125	23.08	0.638488	-0.010861	0.120163
2.250E-10	0.069340	23.18	0.65371	-0.010984	0.118798
2.160E-10	0.068618	23.27	0.632504	-0.011100	0.117561
2.100E-10	0.067881	23.37	0.629579	-0.011220	0.116299
2.630E-11	0.067179	23.46	0.626792	-0.011357	0.115097
2.4400E-11	0.066510	23.54	0.624133	-0.011452	0.113950
2.250E-11	0.065838	23.63	0.621464	-0.011569	0.112798
2.160E-11	0.065218	23.71	0.619001	-0.011679	0.111736
2.100E-11	0.064583	23.80	0.616680	-0.011793	0.110648
2.630E-12	0.063977	23.88	0.614072	-0.011905	0.109609
2.4400E-12	0.063396	23.96	0.611768	-0.012014	0.108616
2.250E-12	0.062812	24.04	0.609469	-0.012126	0.107615
2.160E-12	0.062272	24.11	0.607304	-0.012231	0.106690
2.100E-12	0.061718	24.19	0.605103	-0.012341	0.105740
2.630E-13	0.061187	24.27	0.602996	-0.012448	0.104831
2.4400E-13	0.060679	24.34	0.600975	-0.012552	0.103959
2.250E-13	0.060165	24.41	0.598936	-0.012659	0.103079
2.160E-13	0.059689	24.48	0.597046	-0.012760	0.102244
2.100E-13	0.059200	24.55	0.595103	-0.012866	0.101426
2.630E-14	0.058730	24.62	0.593238	-0.012968	0.100622
2.4400E-14	0.058279	24.69	0.591447	-0.013069	0.099849
2.250E-14	0.057823	24.76	0.589636	-0.013172	0.099067
2.160E-14	0.057400	24.82	0.587955	-0.013269	0.098342
2.100E-14	0.056964	24.89	0.586224	-0.013371	0.097595

NOMENCLATURE:

- 2 = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- 3 = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- 4 = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- 5 = RMS NOISE TO RMS SIGNAL RATIO.
- S / R = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
- WHFN RATE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER ■

INPUT IS IN THIS MANNER WHEN TAUNT WAS CALLED	
0.100E-02	0.154538
0.630E-03	0.146680
0.400E-03	0.140238
0.250E-03	0.134225
0.160E-03	0.129148
0.100E-03	0.124356
0.630E-04	0.120111
0.400E-04	0.116321
0.250E-04	0.112742
0.160E-04	0.109624
0.100E-04	0.106595
0.630E-05	0.103844
0.400E-05	0.101330
0.250E-05	0.098908
0.160E-05	0.096757
0.100E-05	0.094636
0.630E-06	0.092674
0.400E-06	0.090858
0.250E-06	0.089085
0.160E-06	0.087492
0.100E-06	0.085901
0.630E-07	0.084417
0.400E-07	0.083029
0.250E-07	0.081662
0.160E-07	0.080423
0.100E-07	0.079176
0.630E-08	0.078003
0.400E-08	0.076900
0.250E-08	0.075804
0.160E-08	0.074880
0.100E-09	0.073795
0.630E-09	0.072840
0.400E-09	0.071936
0.250E-09	0.071034
0.160E-09	0.070208
0.100E-09	0.069368
0.630E-10	0.068570
0.400E-10	0.067812
0.250E-10	0.067053
0.160E-10	0.066355
0.100E-10	0.065642
0.630E-11	0.064964
0.400E-11	0.064316
0.250E-11	0.063666
0.160E-11	0.063067
0.100E-11	0.062453
0.630E-12	0.061867
0.400E-12	0.061306
0.250E-12	0.060741
0.160E-12	0.060218
0.100E-12	0.059683
0.630E-13	0.059169
0.400E-13	0.058677
0.250E-13	0.058181
0.160E-13	0.057721
0.100E-13	0.057268
0.630E-14	0.056791
0.400E-14	0.055916
0.250E-14	0.055507
0.160E-14	0.055084
0.100E-14	0.054581
0.630E-15	0.054083
0.400E-15	0.053599
0.250E-15	0.053116
0.160E-15	0.052634
0.100E-15	0.052152
0.630E-16	0.051671
0.400E-16	0.051209
0.250E-16	0.050737
0.160E-16	0.050266
0.100E-16	0.050000
0.630E-17	0.049597
0.400E-17	0.049135
0.250E-17	0.048673
0.160E-17	0.048211
0.100E-17	0.047749
0.630E-18	0.047287
0.400E-18	0.046825
0.250E-18	0.046363
0.160E-18	0.045901
0.100E-18	0.045439
0.630E-19	0.044937
0.400E-19	0.044475
0.250E-19	0.043913
0.160E-19	0.043451
0.100E-19	0.042989
0.630E-20	0.042477
0.400E-20	0.041915
0.250E-20	0.041453
0.160E-20	0.040991
0.100E-20	0.040529
0.630E-21	0.040068
0.400E-21	0.039606
0.250E-21	0.039144
0.160E-21	0.038682
0.100E-21	0.038220
0.630E-22	0.037759
0.400E-22	0.037307
0.250E-22	0.036845
0.160E-22	0.036383
0.100E-22	0.035921
0.630E-23	0.035460
0.400E-23	0.034998
0.250E-23	0.034536
0.160E-23	0.034074
0.100E-23	0.033612
0.630E-24	0.033153
0.400E-24	0.032691
0.250E-24	0.032229
0.160E-24	0.031767
0.100E-24	0.031305
0.630E-25	0.030782
0.400E-25	0.030320
0.250E-25	0.029858
0.160E-25	0.029396
0.100E-25	0.028934
0.630E-26	0.028325
0.400E-26	0.027863
0.250E-26	0.027391
0.160E-26	0.026929
0.100E-26	0.026467
0.630E-27	0.025858
0.400E-27	0.025396
0.250E-27	0.024934
0.160E-27	0.024472
0.100E-27	0.023990
0.630E-28	0.024297
0.400E-28	0.023835
0.250E-28	0.023373
0.160E-28	0.022911
0.100E-28	0.022449
0.630E-29	0.023786
0.400E-29	0.023324
0.250E-29	0.022862
0.160E-29	0.022390
0.100E-29	0.021928
0.630E-30	0.024579
0.400E-30	0.024116
0.250E-30	0.023654
0.160E-30	0.023192
0.100E-30	0.022730
0.630E-31	0.025376
0.400E-31	0.024914
0.250E-31	0.024452
0.160E-31	0.023980
0.100E-31	0.023518
0.630E-32	0.026173
0.400E-32	0.025711
0.250E-32	0.025249
0.160E-32	0.024777
0.100E-32	0.024315
0.630E-33	0.026956
0.400E-33	0.026494
0.250E-33	0.025932
0.160E-33	0.025470
0.100E-33	0.024998
0.630E-34	0.027144
0.400E-34	0.026681
0.250E-34	0.026119
0.160E-34	0.025657
0.100E-34	0.025195
0.630E-35	0.027339
0.400E-35	0.026877
0.250E-35	0.026315
0.160E-35	0.025853
0.100E-35	0.025391
0.630E-36	0.027526
0.400E-36	0.027064
0.250E-36	0.026492
0.160E-36	0.025930
0.100E-36	0.025468
0.630E-37	0.027716
0.400E-37	0.027254
0.250E-37	0.026682
0.160E-37	0.026119
0.100E-37	0.025657
0.630E-38	0.027904
0.400E-38	0.027442
0.250E-38	0.026870
0.160E-38	0.026398
0.100E-38	0.025936
0.630E-39	0.028095
0.400E-39	0.027633
0.250E-39	0.027061
0.160E-39	0.026499
0.100E-39	0.025937
0.630E-40	0.028282
0.400E-40	0.027820
0.250E-40	0.027248
0.160E-40	0.026686
0.100E-40	0.026124
0.630E-41	0.028469
0.400E-41	0.027997
0.250E-41	0.027425
0.160E-41	0.026864
0.100E-41	0.026302
0.630E-42	0.028656
0.400E-42	0.028194
0.250E-42	0.027622
0.160E-42	0.027050
0.100E-42	0.026488
0.630E-43	0.028844
0.400E-43	0.028382
0.250E-43	0.027809
0.160E-43	0.027237
0.100E-43	0.026675
0.630E-44	0.029032
0.400E-44	0.028560
0.250E-44	0.027988
0.160E-44	0.027416
0.100E-44	0.026844
0.630E-45	0.029219
0.400E-45	0.028747
0.250E-45	0.028175
0.160E-45	0.027603
0.100E-45	0.027031
0.630E-46	0.029407
0.400E-46	0.028935
0.250E-46	0.028363
0.160E-46	0.027791
0.100E-46	0.027219
0.630E-47	0.029595
0.400E-47	0.029123
0.250E-47	0.028551
0.160E-47	0.027979
0.100E-47	0.027407
0.630E-48	0.029783
0.400E-48	0.029311
0.250E-48	0.028739
0.160E-48	0.028167
0.100E-48	0.027595
0.630E-49	0.029971
0.400E-49	0.029509
0.250E-49	0.028937
0.160E-49	0.028365
0.100E-49	0.027795
0.630E-50	0.030159
0.400E-50	0.029687
0.250E-50	0.029115
0.160E-50	0.028543
0.100E-50	0.027971
0.630E-51	0.030347
0.400E-51	0.030875
0.250E-51	0.030303
0.160E-51	0.030231
0.100E-51	0.030169
0.630E-52	0.030535
0.400E-52	0.031063
0.250E-52	0.030561
0.160E-52	0.030489
0.100E-52	0.030427
0.630E-53	0.030723
0.400E-53	0.031255
0.250E-53	0.031183
0.160E-53	0.031111
0.100E-53	0.031049
0.630E-54	0.030907
0.400E-54	0.031436
0.250E-54	0.031364
0.160E-54	0.031292
0.100E-54	0.031230
0.630E-55	0.031133
0.400E-55	0.031658
0.250E-55	0.031586
0.160E-55	0.031514
0.100E-55	0.031452
0.630E-56	0.031229
0.400E-56	0.031757
0.250E-56	0.031684
0.160E-56	0.031612
0.100E-56	0.031540
0.630E-57	0.031427
0.400E-57	0.031955
0.250E-57	0.031883
0.160E-57	0.031811
0.100E-57	0.031739
0.630E-58	0.031255
0.400E-58	0.031783
0.250E-58	0.031711
0.160E-58	0.031639
0.100E-58	0.031567
0.630E-59	0.031155
0.400E-59	0.032184
0.250E-59	0.031912
0.160E-59	0.031839
0.100E-59	0.031767
0.630E-60	0.030997
0.400E-60	0.032739
0.250E-60	0.032567
0.160E-60	0.032495
0.100E-60	0.032423
0.630E-61	0.030782
0.400E-61	0.033444
0.250E-61	0.033212
0.160E-61	0.033139
0.100E-61	0.033067
0.630E-62	0.030559
0.400E-62	0.034177
0.250E-62	0.033905
0.160E-62	0.033833
0.100E-62	0.033761
0.630E-63	0.030450
0.400E-63	0.034642
0.250E-63	0.034410
0.160E-63	0.034338
0.100E-63	0.034266
0.630E-64	0.030359
0.400E-64	0.035317
0.250E-64	0.035085
0.160E-64	0.034913
0.100E-64	0.034841
0.630E-65	0.030256
0.400E-65	0.036072
0.250E-65	0.035840
0.160E-65	0.035768
0.100E-65	0.035696
0.630E-66	0.030154
0.400E-66	0.036241
0.250E-66	0.036009
0.160E-66	0.035937
0.100E-66	0.035865
0.630E-67	0.030057
0.400E-67	0.036429
0.250E-67	0.036217
0.160E-67	0.036145
0.100E-67	0.036073
0.630E-68	0.029954
0.400E-68	0.036793
0.250E-68	0.036581
0.160E-68	0.036509
0.100E-68	0.036437
0.630E-69	0.029852
0.400E-69	0.037162
0.250E-69	0.036940
0.160E-69	0.036868
0.100E-69	0.036796
0.630E-70	0.029751
0.400E-70	0.037436
0.250E-70	0.037224
0.160E-70	0.037152
0.100E-70	0.037080
0.630E-71	0.029653
0.400E-71	0.037709
0.250E-71	0.037497
0.160E-71	0.037425
0.100E-71	0.037353
0.630E-72	0.029555
0.400E-72	0.038388
0.250E-72	0.038176
0.160E-72	0.038104
0.100E-72	0.038032
0.630E-73	0.029456
0.400E-73	0.038667
0.250E-73	0.038455
0.160E-73	0.038383
0.100E-73	0.038311
0.630E-74	0.029357
0.400E-74	0.039044
0.250E-7	

BASFBAND FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 1.0 / 0.3800,
PSEUDO ERROR RATE EQUALS 2800.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.154530	16.22	0.973221	-0.013003	0.100351
0.630E-03	0.146840	16.66	0.960941	-0.009077	0.143761
0.400E-03	0.140228	17.00	0.944082	-0.006808	0.191663
0.250E-03	0.134225	17.44	0.922495	-0.005782	0.225701
0.160E-03	0.129146	17.78	0.89929	-0.005599	0.230772
0.100E-03	0.124356	18.11	0.879673	-0.005774	0.225983
0.630E-04	0.120111	18.41	0.861042	-0.006055	0.215220
0.400E-04	0.116322	18.49	0.844789	-0.006337	0.205914
0.250E-04	0.112742	18.96	0.829773	-0.006609	0.197449
0.160E-04	0.109624	19.20	0.816903	-0.006845	0.190481
0.100E-04	0.106595	19.45	0.804554	-0.007073	0.184481
0.630E-05	0.103866	19.47	0.793426	-0.007283	0.179170
0.400E-05	0.101330	19.89	0.78317	-0.007478	0.174499
0.250E-05	0.098908	20.10	0.773609	-0.007671	0.170115
0.160E-05	0.096757	20.29	0.765013	-0.007867	0.166291
0.100E-05	0.094634	20.48	0.756538	-0.008027	0.162560
0.630E-06	0.092674	20.66	0.748724	-0.008200	0.159143
0.400E-06	0.090856	20.83	0.741490	-0.008365	0.155995
0.250E-06	0.089085	21.00	0.734229	-0.008533	0.152932
0.160E-06	0.087492	21.16	0.728087	-0.008689	0.150186
0.100E-06	0.085901	21.32	0.721757	-0.008850	0.147448
0.630E-07	0.084417	21.47	0.715852	-0.009006	0.144896
0.400E-07	0.083029	21.62	0.710329	-0.009157	0.142512
0.250E-07	0.081662	21.76	0.704888	-0.009310	0.140162
0.160E-07	0.080423	21.89	0.699957	-0.009453	0.138034
0.100E-07	0.079176	22.03	0.699996	-0.009602	0.135893
0.630E-08	0.078003	22.16	0.693033	-0.009747	0.133881
0.400E-08	0.076900	22.28	0.685941	-0.009887	0.131936
0.250E-08	0.075806	22.41	0.681584	-0.010030	0.130107
0.160E-08	0.074806	22.52	0.677612	-0.010163	0.128393
0.100E-08	0.073795	22.64	0.673591	-0.010303	0.126658
0.630E-09	0.072840	22.75	0.669790	-0.010438	0.125019
0.400E-09	0.071936	22.86	0.666192	-0.010569	0.123466
0.250E-09	0.071034	22.97	0.662604	-0.010703	0.121918
0.160E-09	0.070208	23.07	0.659317	-0.010829	0.120500
0.100E-09	0.069364	23.18	0.655975	-0.010960	0.119058

DEFINITION:
 0 = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
 A/D R = AMPLITUDE OF THE THREE LEVEL EYE I.E., DECISION LEVEL.
 N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
 SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
 A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
 DERIV PER WRT A / D RATIO = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
 TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
 LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES
 WHEN R/T RATE = 1252600.
 DIVIDER RATIO INTO D/A CONVERTER = 4.

BASFBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.3800
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

A/D RATIO	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PFR WRT A / D	TIME CONSTANT
0.630E-10	0.068570	23.28	0.652802	-0.011088	0.117690
0.440E-10	0.087812	23.37	0.64785	-0.011217	0.116385
0.290E-10	0.067053	23.47	0.666765	-0.011339	0.115085
0.160E-10	0.066355	23.56	0.662949	-0.011458	0.113887
0.100E-10	0.065642	23.66	0.641155	-0.011582	0.112665
0.630E-11	0.064966	23.75	0.636455	-0.011703	0.111500
0.400E-11	0.064316	23.83	0.638779	-0.011821	0.110389
0.250E-11	0.063666	23.92	0.63293	-0.011942	0.109273
0.160E-11	0.063067	24.00	0.650907	-0.012055	0.108264
0.100E-11	0.062453	24.09	0.624465	-0.012174	0.107191
0.630E-12	0.061867	24.17	0.626132	-0.012289	0.106184
0.400E-12	0.061306	24.25	0.623931	-0.012402	0.105221
0.250E-12	0.060741	24.33	0.621654	-0.012517	0.104252
0.160E-12	0.060218	24.41	0.619576	-0.012625	0.103356
0.100E-12	0.059683	24.48	0.617444	-0.012739	0.102436
0.630E-13	0.059169	24.56	0.615402	-0.012849	0.101555
0.400E-13	0.058677	24.63	0.613464	-0.012957	0.100710
0.250E-13	0.058181	24.70	0.611469	-0.013068	0.099858
0.160E-13	0.057721	24.77	0.609338	-0.013172	0.099068
0.100E-13	0.057248	24.84	0.607256	-0.013281	0.098256
0.630E-14	0.056793	24.91	0.605190	-0.013387	0.097477
0.400E-14	0.056357	24.98	0.603214	-0.013490	0.096728
0.250E-14	0.055916	25.05	0.602260	-0.013597	0.095972
0.160E-14	0.055507	25.11	0.600831	-0.013697	0.095269
0.100E-14	0.055085	25.18	0.599156	-0.013802	0.094545

NOMENCLATURE:

- D ■ HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- A/D RATIO ■ THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO ■ AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR ■ RMS NOISE TO RMS SIGNAL RATIO.
- A / D RATIO ■ SIGNAL POWER TO NOISE POWER IN DECIBELS.
- DERIV PER WRT D RATIO ■ ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- TIME CONSTANT ■ DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD
- WIFN BIF RATE ■ 1252400. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER ■ 4.

TURK IS IN DEBUG PRINTOUT MODE.		TABLE MAS CALLUD
0.10E-02	0.149295	16.52
0.630E-03	0.141867	16.96
0.40E-03	0.135465	17.36
0.250E-03	0.129654	17.74
0.16E-03	0.124749	18.08
0.10E-03	0.120119	18.41
0.620E-04	0.116019	18.71
0.40E-04	0.112358	18.99
0.250E-04	0.108901	19.26
0.16E-04	0.105888	19.50
0.10E-04	0.102963	19.75
0.630E-05	0.000305	19.97
0.40E-05	0.007878	20.19
0.250E-05	0.095538	20.40
0.16E-05	0.093461	20.59
0.10E-05	0.091409	20.78
0.630E-06	0.091516	20.96
0.40E-06	0.087762	21.13
0.250E-06	0.086049	21.46
0.16E-06	0.084511	21.62
0.10E-06	0.082974	21.62
0.630E-07	0.081541	21.77
0.40E-07	0.080200	21.92
0.250E-07	0.078879	22.06
0.16E-07	0.077682	22.19
0.10E-07	0.076478	22.33
0.630E-08	0.075346	22.46
0.40E-08	0.074279	22.58
0.250E-08	0.073221	22.71
0.16E-08	0.072257	22.82
0.10E-08	0.071281	22.94
0.630E-09	0.070358	23.05
0.40E-09	0.069484	23.16
0.250E-09	0.068613	23.27
0.16E-09	0.067815	23.37
0.10E-09	0.067004	23.48
0.630E-10	0.066234	23.58
0.40E-10	0.065501	23.68
0.250E-10	0.064768	23.77
0.16E-10	0.064094	23.86
0.10E-10	0.063406	23.95
0.630E-11	0.062750	24.05
0.40E-11	0.062125	24.13
0.250E-12	0.058671	24.63
0.16E-12	0.061497	24.22
0.10E-11	0.060918	24.31
0.630E-12	0.057649	24.78
0.40E-12	0.05325	24.39
0.630E-13	0.057153	24.86
0.40E-13	0.059758	24.47
0.250E-12	0.059217	24.55
0.16E-13	0.056198	25.01
0.10E-12	0.055754	25.07
0.630E-14	0.05297	25.15
0.40E-14	0.054858	25.22
0.630E-14	0.054437	25.28
0.40E-13	0.056678	24.93
0.250E-13	0.056198	25.01
0.16E-13	0.055754	25.07
0.10E-13	0.055297	25.15
0.630E-14	0.054858	25.41
0.40E-14	0.054011	25.35
0.16E-14	0.053616	25.41
0.10E-14	0.053208	25.48

BASFRAUD FYF PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.4000
PSEUDON ERROR RATE EQUALS 1.0 / 2800.

RIT	ERROR	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.1492295	16.52	0.974061	-0.013424	0.097207	
0.630E-03	0.141847	16.96	0.96281	-0.009374	0.139206	
0.400E-03	0.135465	17.36	0.94569	-0.007032	0.185556	
0.250E-03	0.129654	17.74	0.924981	-0.005973	0.218485	
0.160E-03	0.124746	18.08	0.904112	-0.005784	0.225603	
0.100E-03	0.120119	18.41	0.883445	-0.005966	0.218727	
0.630E-04	0.116019	18.71	0.865517	-0.006256	0.208592	
0.400E-04	0.112358	18.99	0.849791	-0.006548	0.199289	
0.250E-04	0.108901	19.26	0.835261	-0.006829	0.191092	
0.160E-04	0.105888	19.50	0.822007	-0.007073	0.184504	
0.100E-04	0.102963	19.75	0.810557	-0.007309	0.178535	
0.630E-05	0.100305	19.97	0.800088	-0.007526	0.173395	
0.400E-05	0.098784	20.19	0.79006	-0.007727	0.168873	
0.250E-05	0.095538	20.40	0.78091	-0.007926	0.164629	
0.160E-05	0.093631	20.59	0.77297	-0.008109	0.160928	
0.110E-05	0.091409	20.78	0.764391	-0.008295	0.157317	
0.630E-06	0.089516	20.96	0.756829	-0.008473	0.156011	
0.400E-06	0.087762	21.13	0.749829	-0.008644	0.150964	
0.250E-06	0.086149	21.31	0.742996	-0.008817	0.147999	
0.160E-06	0.084511	21.46	0.736859	-0.008978	0.145361	
0.110E-06	0.082974	21.62	0.730732	-0.009145	0.142692	
0.630E-07	0.081547	21.77	0.725018	-0.009306	0.140223	
0.400E-07	0.080200	21.92	0.719674	-0.009462	0.137915	
0.250E-07	0.078879	22.06	0.714607	-0.009620	0.135641	
0.160E-07	0.077682	22.19	0.709636	-0.009779	0.133582	
0.110E-07	0.076478	22.33	0.704835	-0.009923	0.131510	
0.630E-08	0.075346	22.46	0.700322	-0.010072	0.129563	
0.400E-08	0.074279	22.58	0.696072	-0.010216	0.127729	
0.250E-08	0.073221	22.71	0.691855	-0.010364	0.125910	
0.160E-08	0.072257	22.82	0.688011	-0.010502	0.124251	
0.110E-08	0.071281	22.94	0.684120	-0.010646	0.122572	
0.630E-09	0.070358	23.05	0.680442	-0.010786	0.120986	
0.400E-09	0.069486	23.16	0.676960	-0.010921	0.119683	
0.250E-09	0.068613	23.27	0.673488	-0.011060	0.117985	
0.160E-09	0.067807	23.37	0.670307	-0.011190	0.116613	
0.110E-09	0.067004	23.48	0.667072	-0.011326	0.115214	

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THF
- ATOR = THE THREE LEVEL EYE I.E., DECISION LEVEL.
- N / S RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- SNR = RMS NOISE TO SIGNAL POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RATE = 1252600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 6.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR A/D RATIO EQUALS 0.40000
PSEUDO ERROR RATE EQUALS 1.0 / 2800.

PIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.630F-10	0.066236	23.98	0.664002	-0.011457	0.113893
0.440F-10	0.065501	23.68	0.661082	-0.011585	0.112630
0.250F-10	0.064768	23.77	0.659160	-0.011717	0.111373
0.110F-10	0.064096	23.86	0.659473	-0.011840	0.110214
0.100F-10	0.063360	23.96	0.659270	-0.011968	0.109031
0.630E-11	0.062750	24.05	0.659118	-0.012093	0.107903
0.440E-11	0.062125	24.13	0.646625	-0.012215	0.106828
0.250E-11	0.061497	24.22	0.659122	-0.012340	0.105746
0.160E-11	0.060918	24.31	0.642813	-0.012457	0.104752
0.100E-11	0.060325	24.39	0.640450	-0.012580	0.103733
0.630E-12	0.059758	24.47	0.639193	-0.012699	0.102759
0.440E-12	0.059217	24.55	0.636033	-0.012815	0.101827
0.250E-12	0.058671	24.63	0.633958	-0.012934	0.100889
0.160E-12	0.058167	24.71	0.631848	-0.013046	0.100022
0.100E-12	0.057649	24.78	0.629784	-0.013163	0.099131
0.630E-13	0.057153	24.86	0.627808	-0.013278	0.098279
0.440E-13	0.056678	24.93	0.625914	-0.013389	0.097462
0.250E-13	0.056198	25.01	0.624002	-0.013503	0.096637
0.160E-13	0.055754	25.07	0.62230	-0.013611	0.095873
0.100E-13	0.055297	25.15	0.620409	-0.013723	0.095087
0.630E-14	0.054858	25.22	0.618661	-0.013833	0.094331
0.440E-14	0.054437	25.28	0.616982	-0.013940	0.093608
0.250E-14	0.054011	25.35	0.615284	-0.014050	0.092876
0.160E-14	0.053616	25.41	0.613708	-0.014154	0.092196
0.100E-14	0.053208	25.48	0.612085	-0.014262	0.091496

NOMENCLATURE:

- D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THREE LEVEL EYE I.E., DECISION LEVEL.
- A/D RATIO = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.
- N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
- SNR = SIGNAL POWER TO NOISE POWER IN DECIBELS.
- A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
- DERIV PER WRT TIME CONSTANT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
- TIME CONSTANT = QUASILINEAR TIME CONSTANT OF THE ADAPTIVE THRESHOLD LOOP FOR SMALL CHANGES AROUND STEADY STATE VALUES WHEN RATE = 1255.2600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.