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RADC-TR-77-431, Volume III (of three)
Final Technical Report
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ATEC DIGITAL ADAPTATION STUDY, Development and Field Evaluation - Digital Automated Technical Control

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Performance Assessment, Fault Isolation, and Trend Analysis (PA/FI/TA) in Digital Transmission Systems
ATEC (Automatic Technical Control) Applicability for PA/FI/TA in the FKV Digital Transmission System
Sudden Service Failure Sensing System (SSFSS)

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

393 215

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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Because of the size of this report, it has been divided into 3 volumes:

Volume I contains Sections 1 through 5.

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Volume III contains Sections 7 and Appendices A and B.

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

Recommended System Features	Usefulness
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)

Recommended System Features	Usefulness
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:	Alerts nodal controller that:
(1) Monitor Immediate usage,	(1) The system is out of normal scan mode,
(2) Baseband (A or B) being monitored by BEM	(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 T1WB1 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/DATEC interface in an operational multilink environment
3. DATEC 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

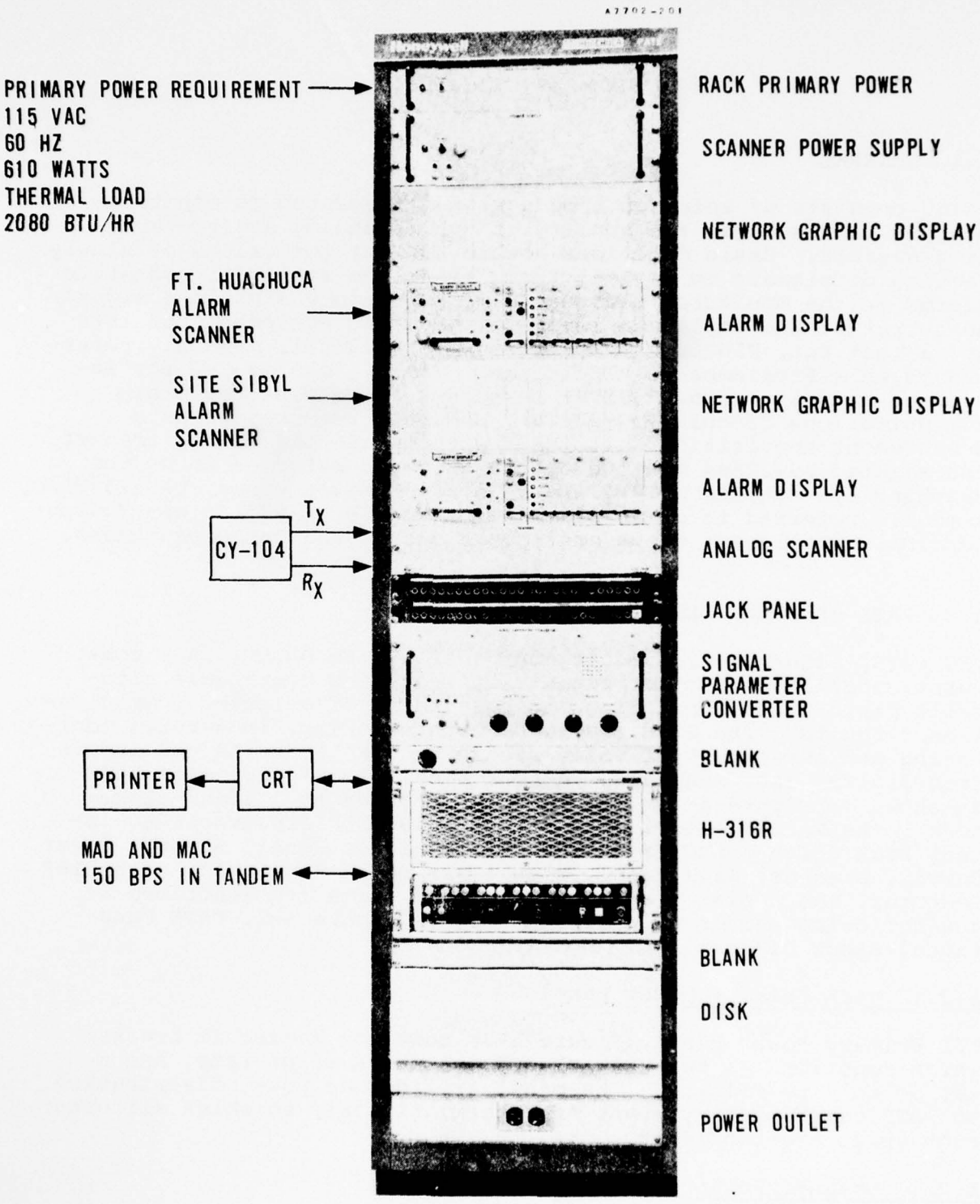


FIGURE A-1. PATE RACK ASSEMBLY, FORT HUACHUCA, ARIZONA

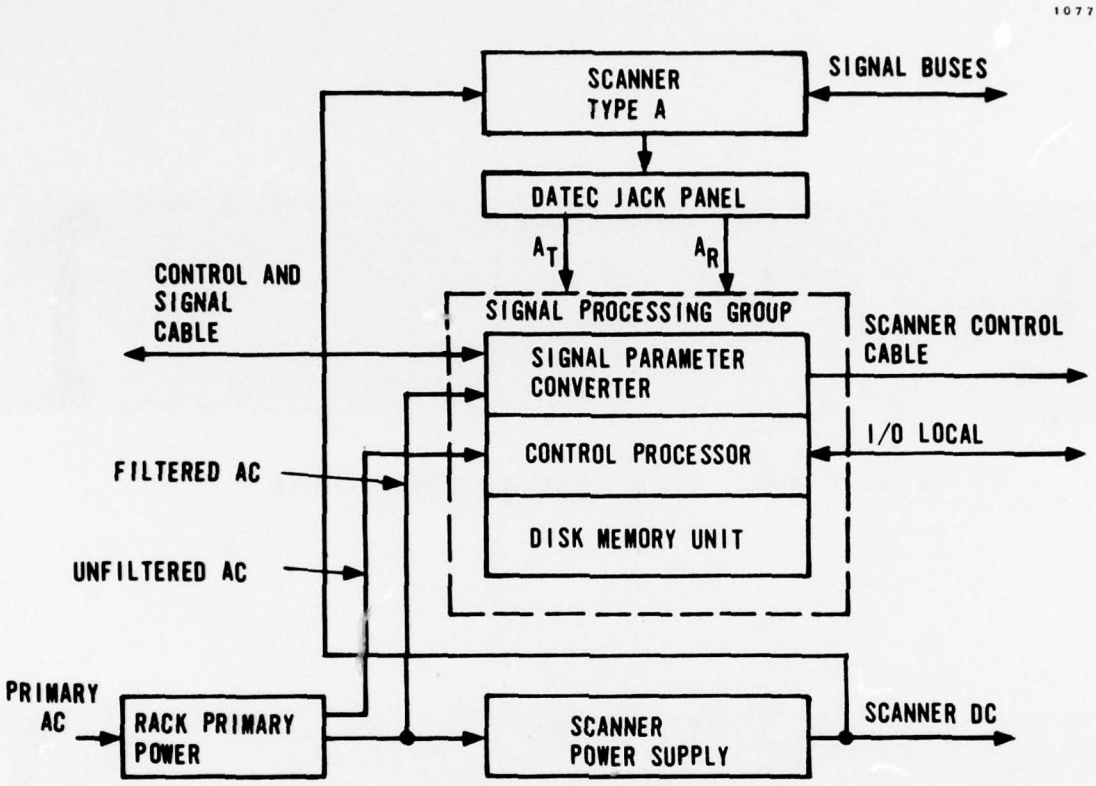


FIGURE A-2. PATE FUNCTIONAL BLOCK DIAGRAM

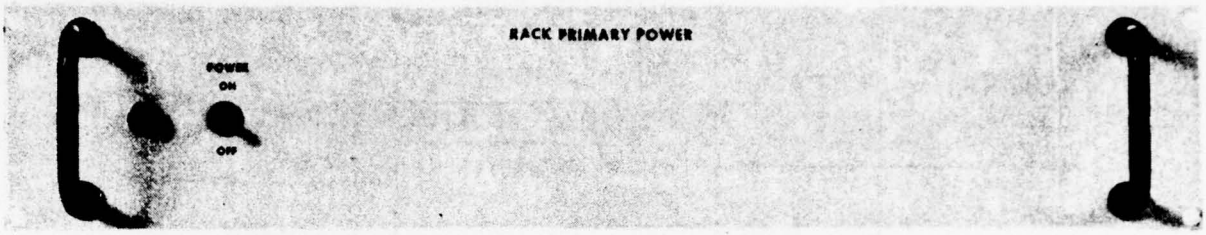


FIGURE A-3. RACK PRIMARY POWER PANEL

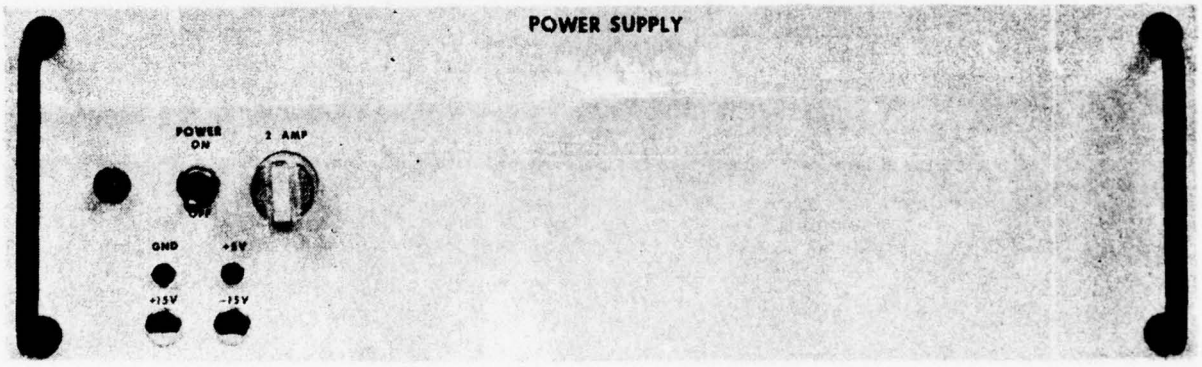


FIGURE A-4. SCANNER POWER SUPPLY PANEL

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 connnection. 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 overload and short circuits by current limiting circuits in the output stages and against internal component failure by an internal fuse.

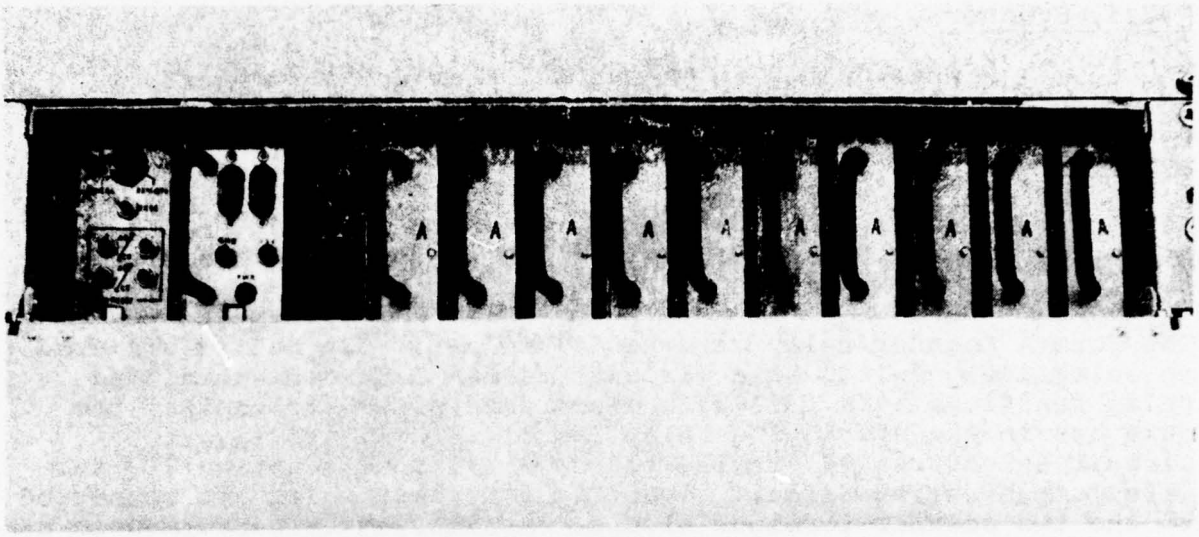


FIGURE A-5. ANALOG SCANNER, FORM A

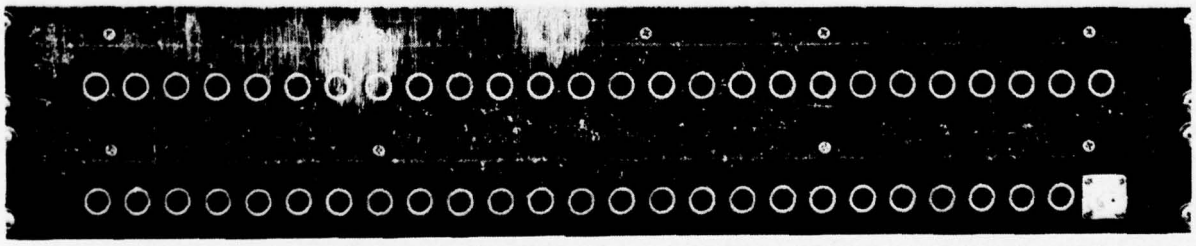


FIGURE A-6. JACK PANEL

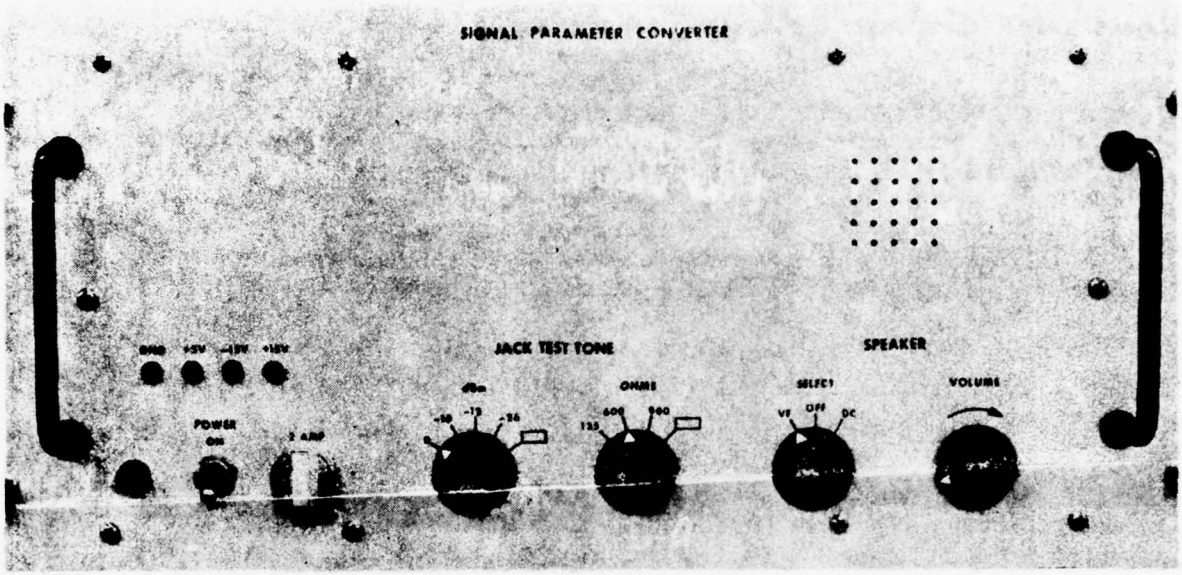


FIGURE A-7. SIGNAL PARAMETER CONVERTER

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.

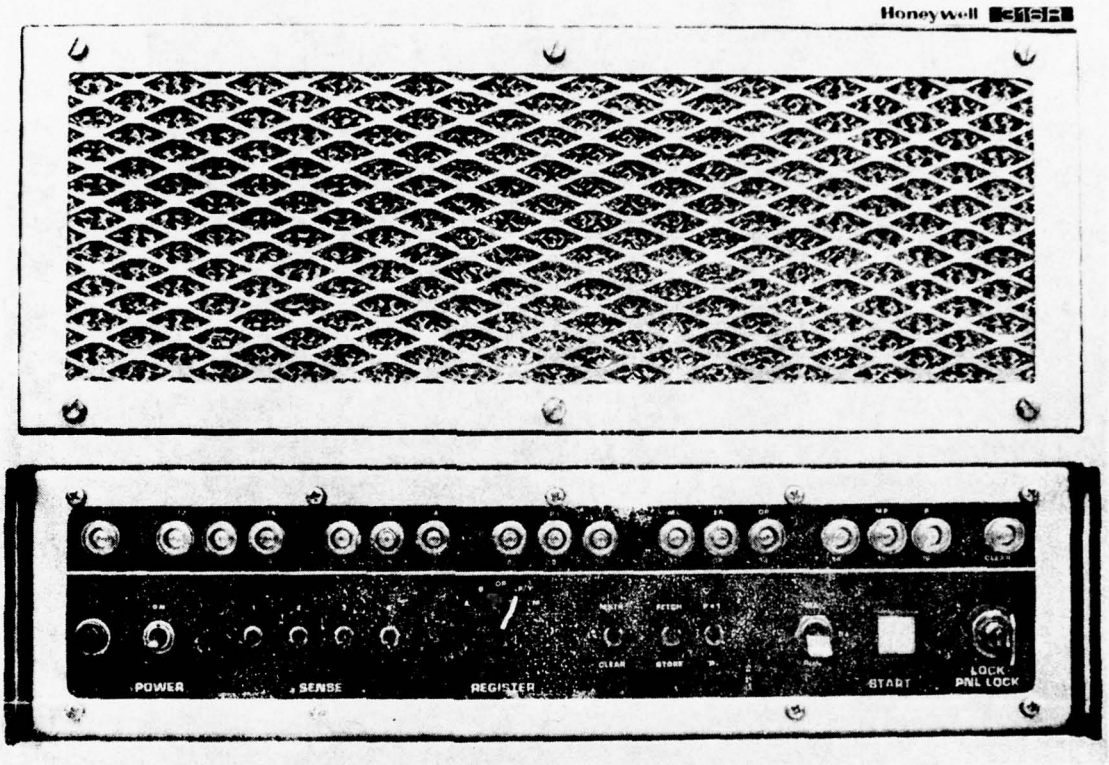


FIGURE A-8. H-316R COMPUTER

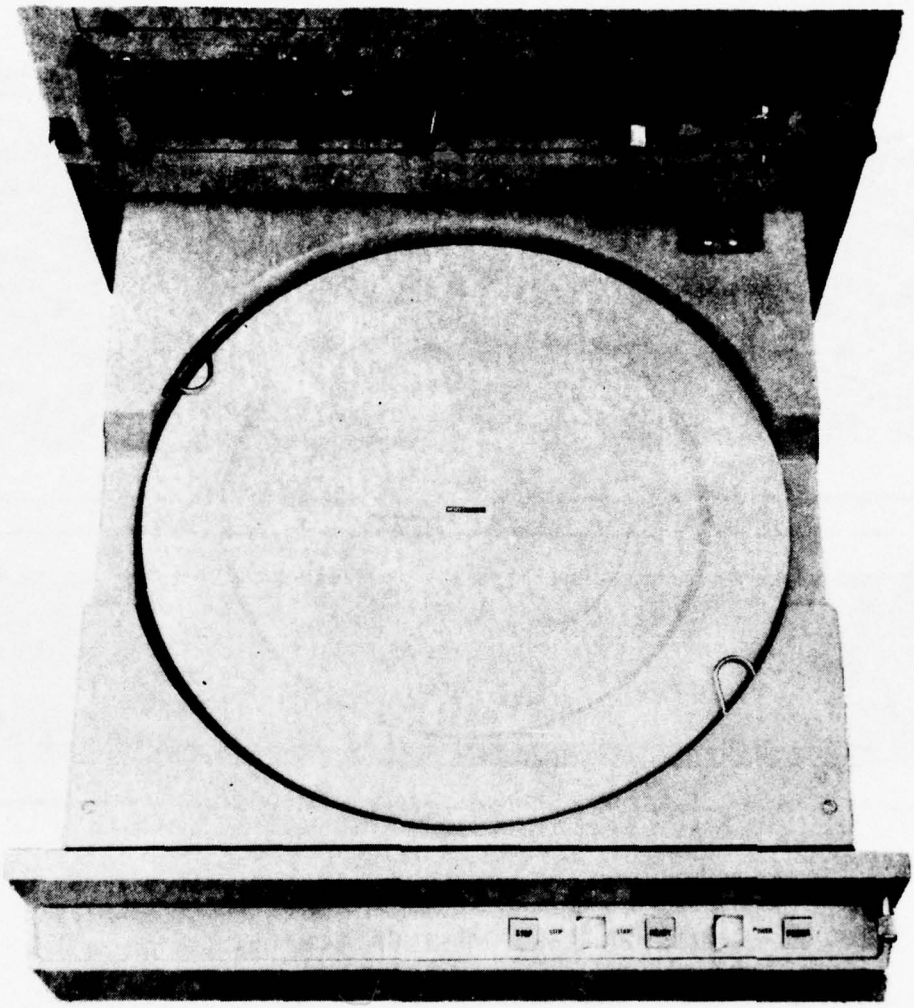


FIGURE A-9. DISK MEMORY UNIT

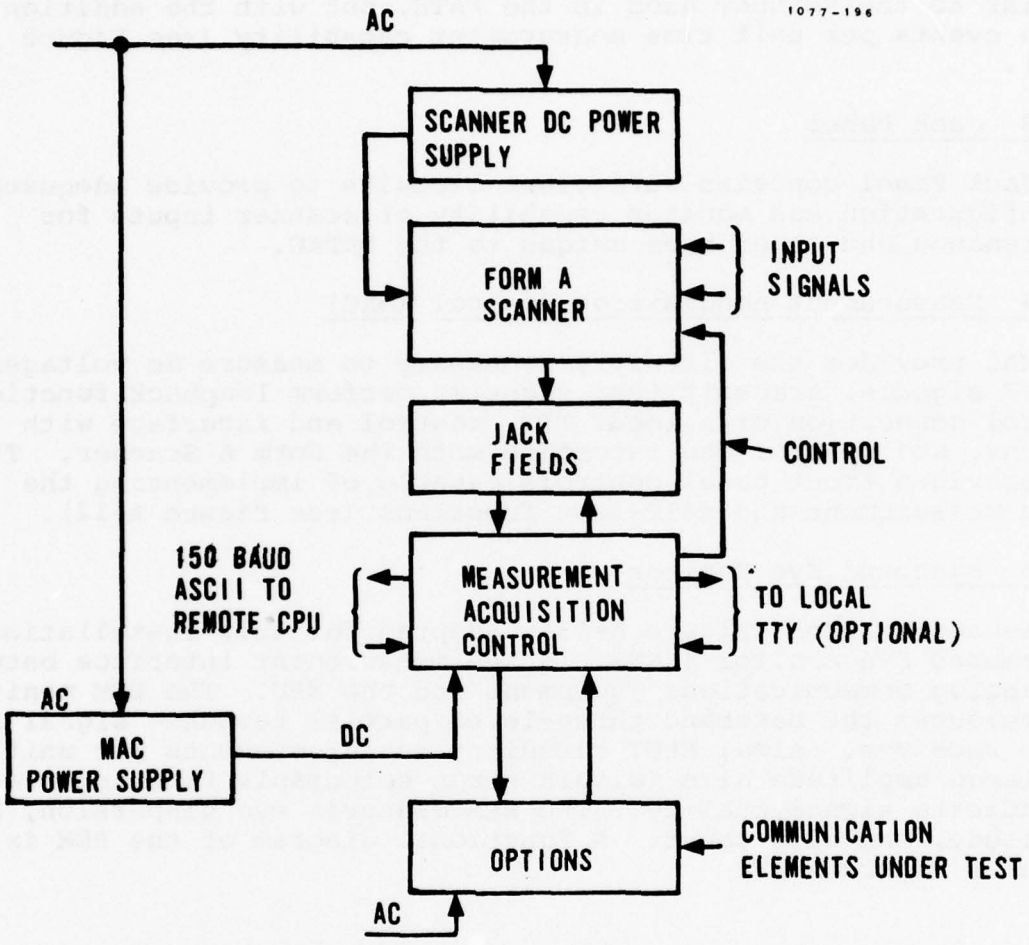


FIGURE A-10. MEASUREMENT ACQUISITION UNIT FUNCTIONAL DIAGRAM

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.

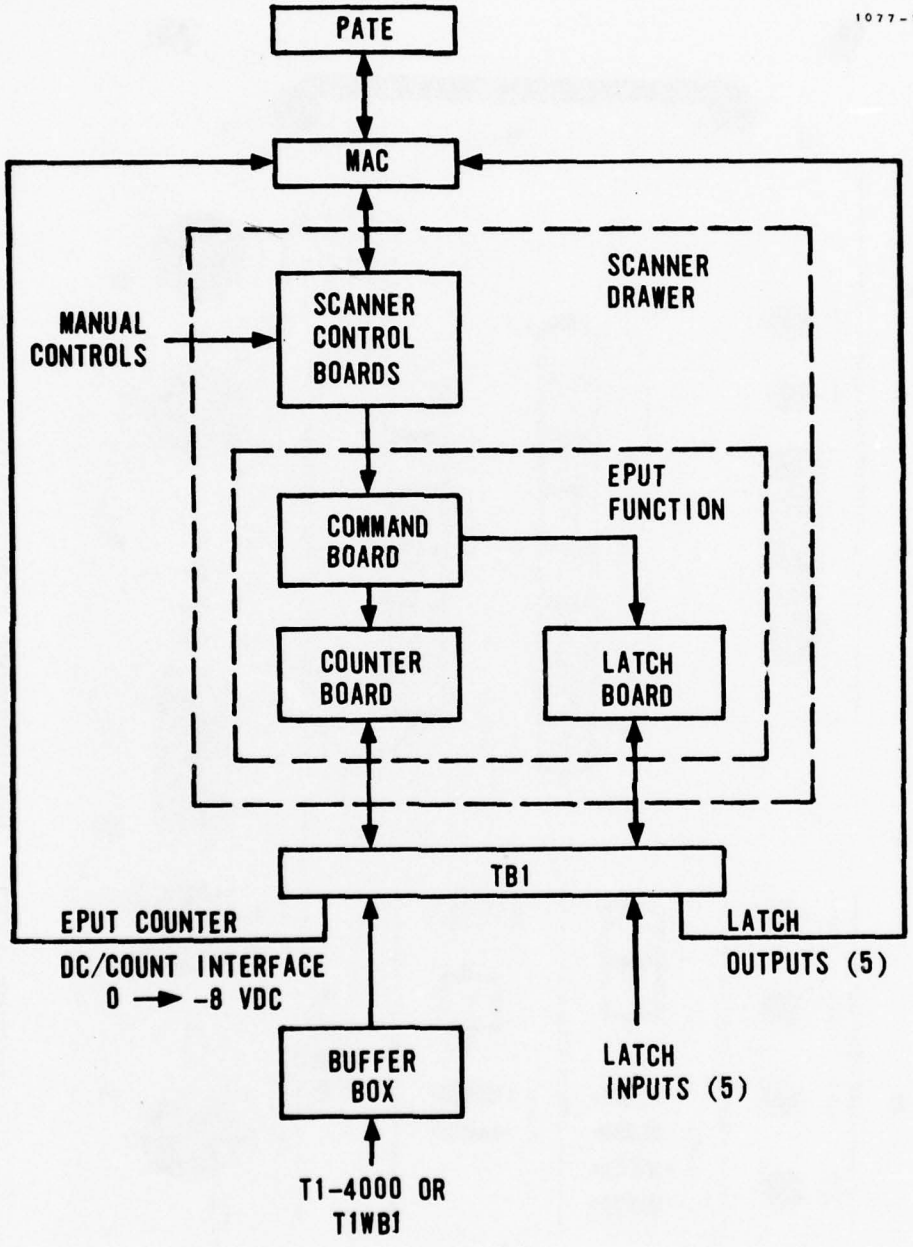


FIGURE A-11. BLOCK DIAGRAM OF SCANNER WITH EPUT FUNCTION

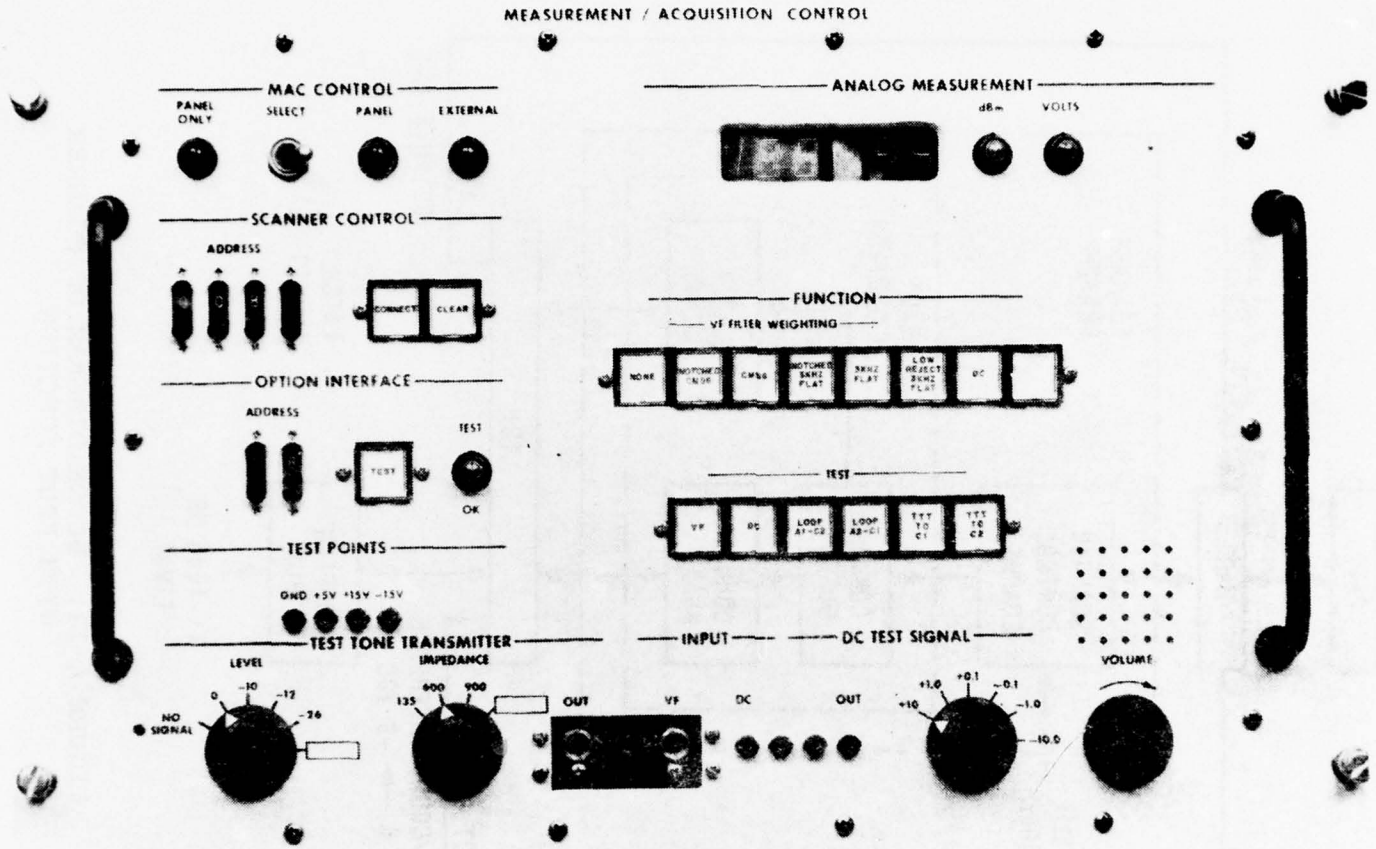


FIGURE A-12. MEASUREMENT ACQUISITION CONTROL

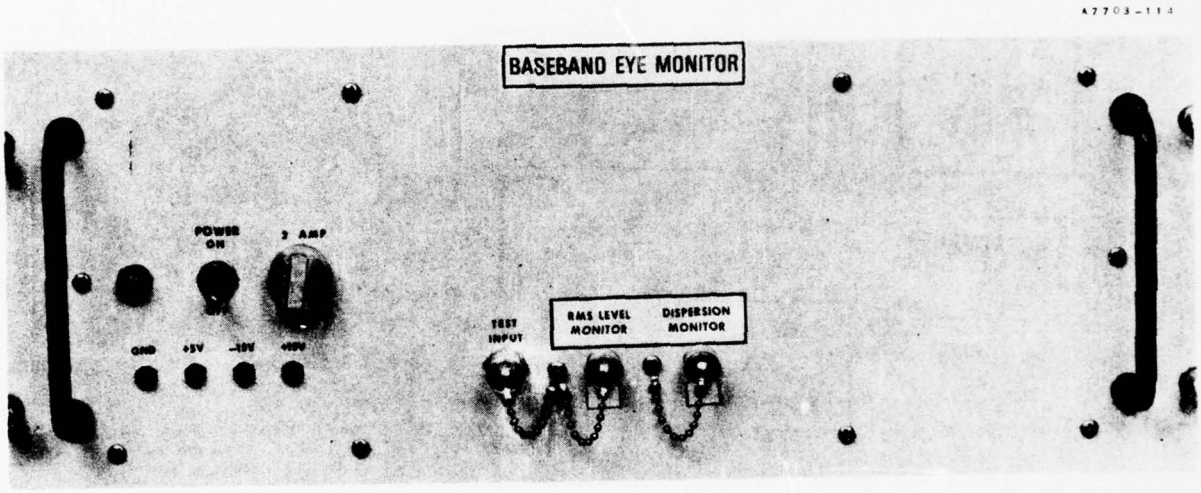


FIGURE A-13. BASEBAND EYE MONITOR

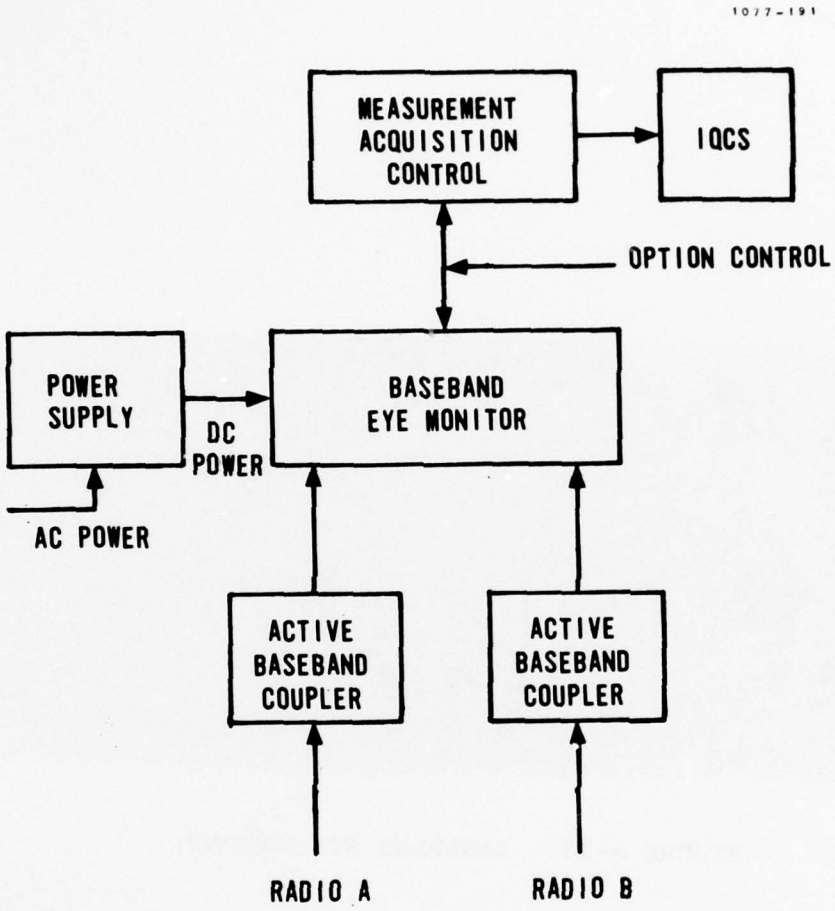


FIGURE A-14. BASEBAND EYE MONITOR FUNCTIONAL DIAGRAM

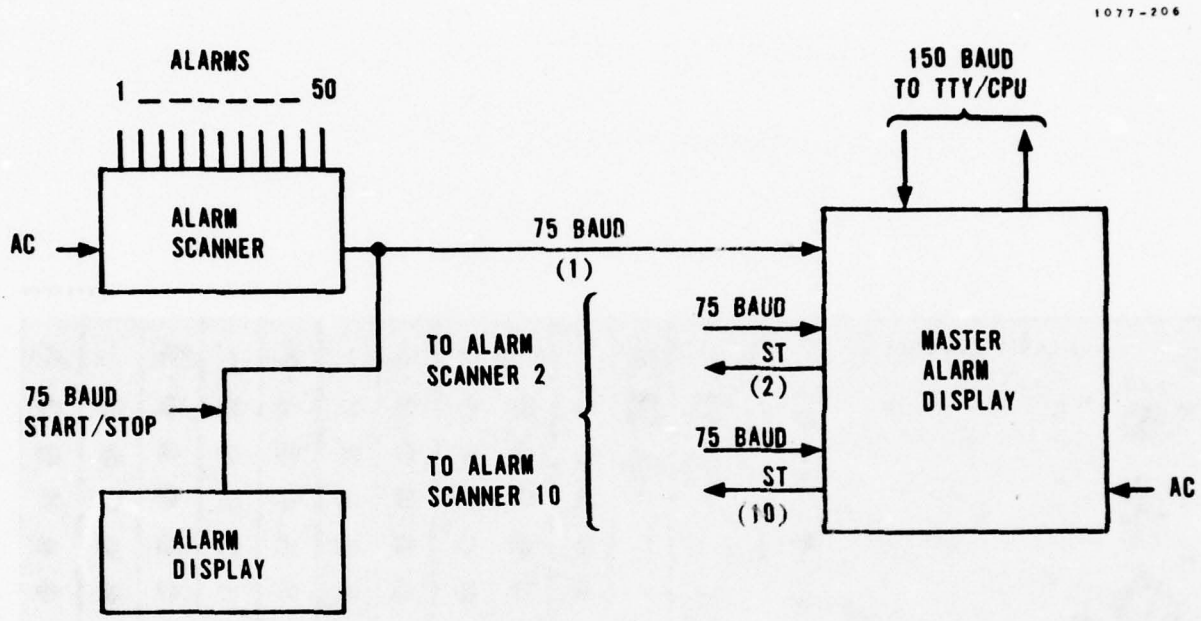


FIGURE A-15. ALARM REPORTING SET FUNCTIONAL DIAGRAM

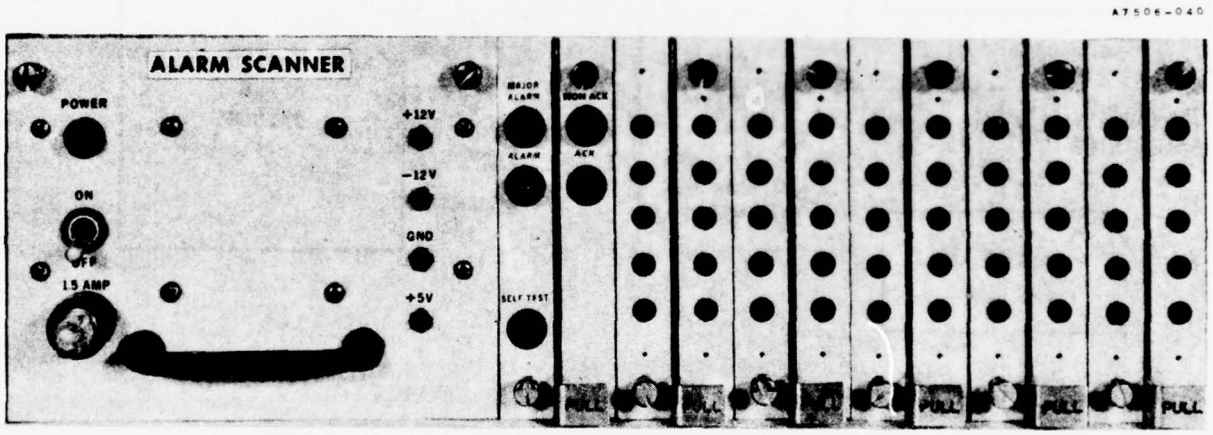


FIGURE A-16. ALARM SCANNER

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.

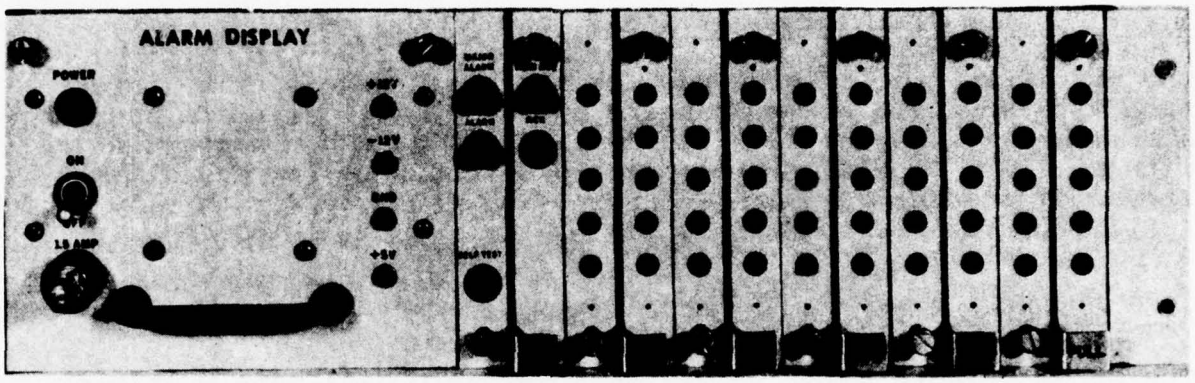


FIGURE A-17. ALARM DISPLAY

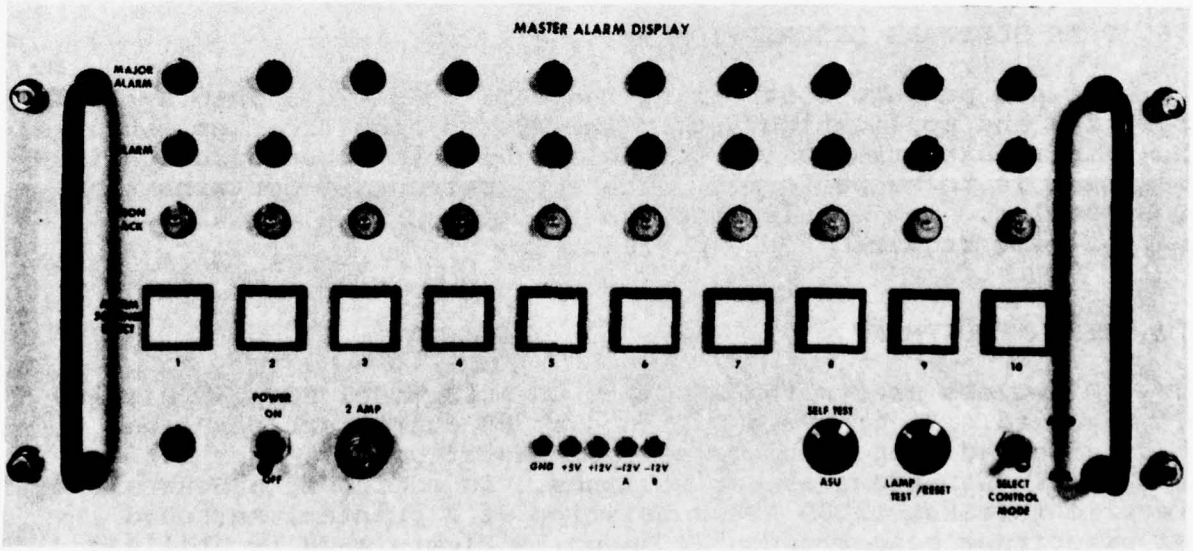


FIGURE A-18. MASTER ALARM DISPLAY

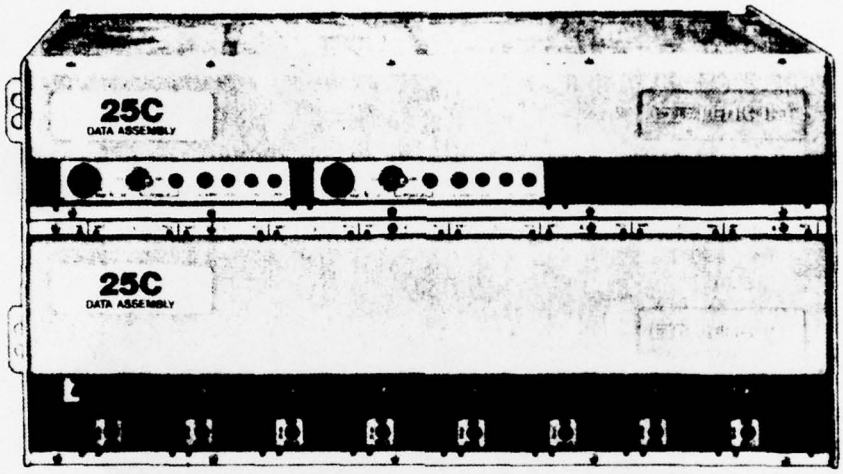


FIGURE A-19. DATA MODEM

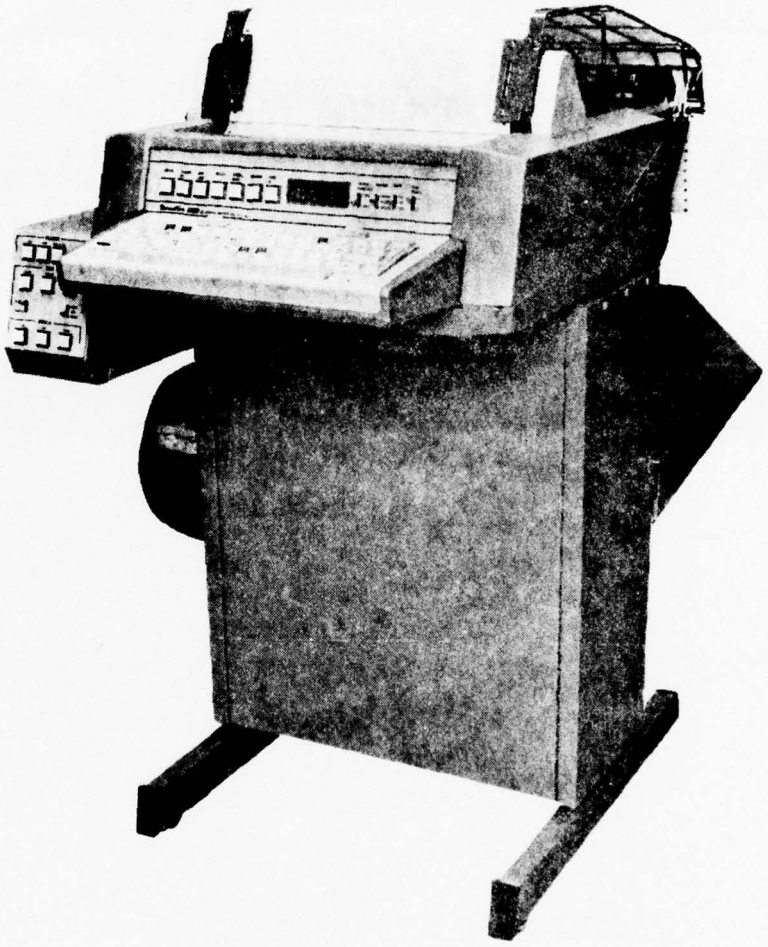


FIGURE A-20. TERMINET 1200 ASR

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

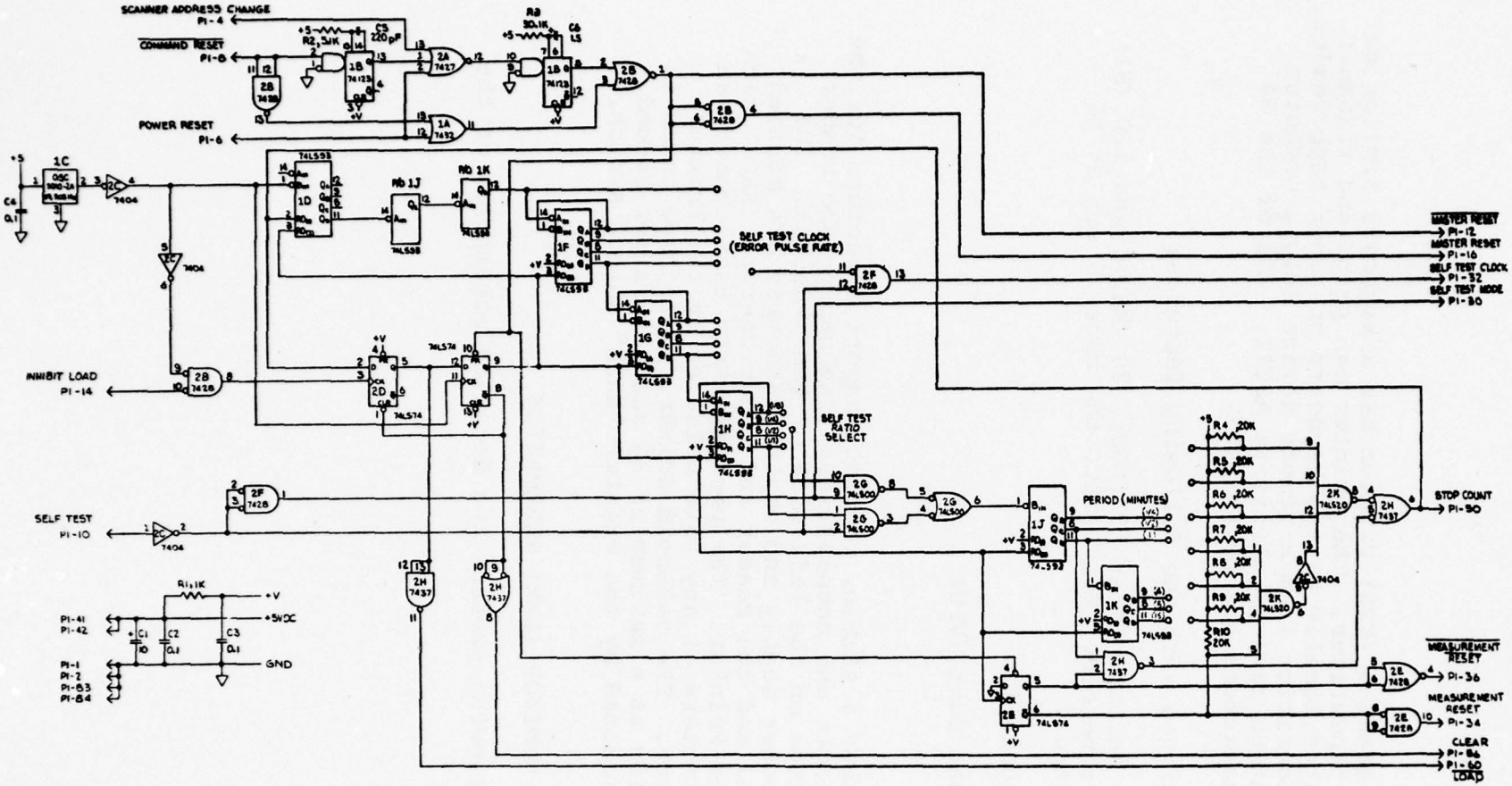
c. Vertical Format Unit (VFU)

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.

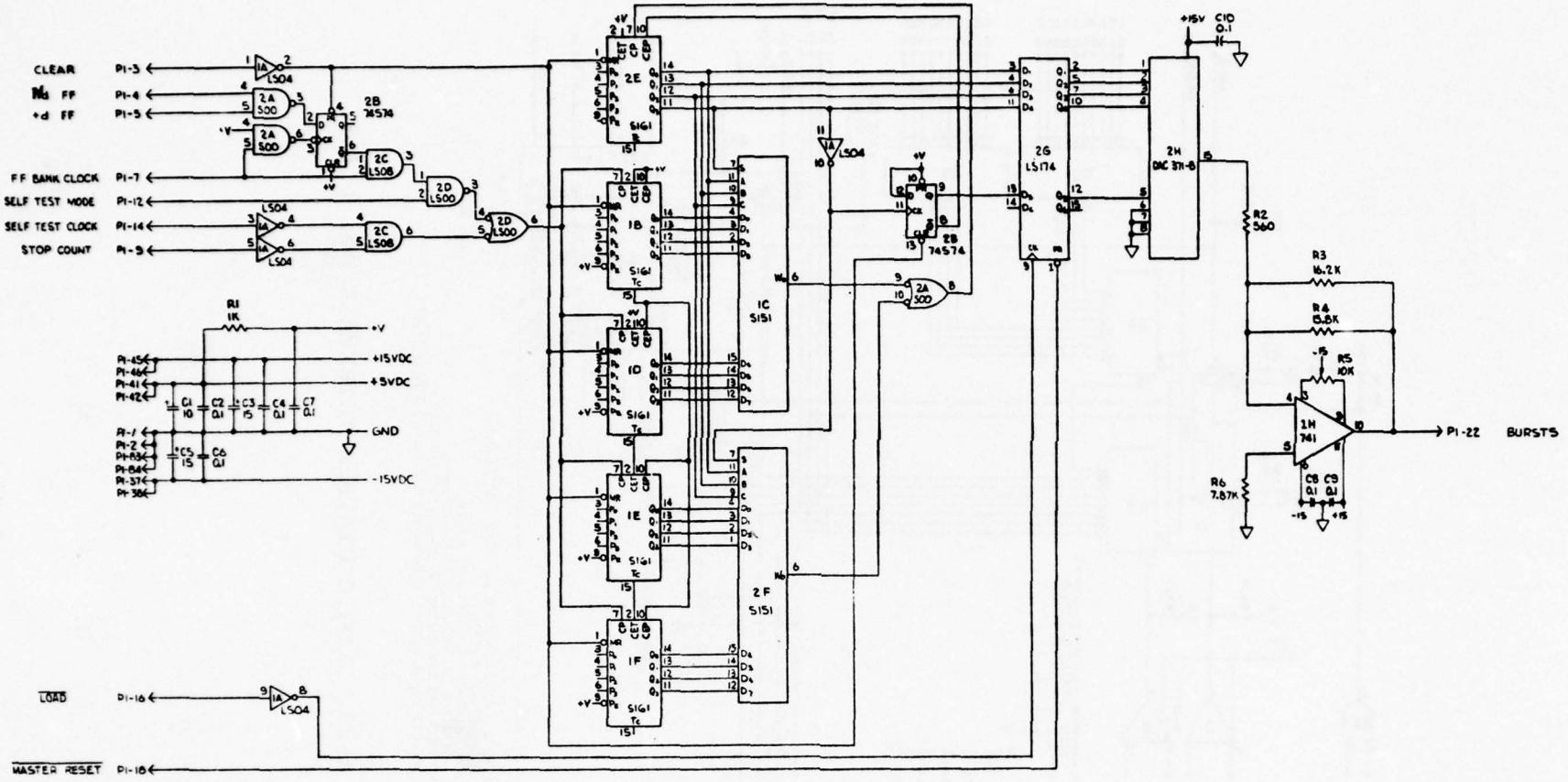
A.8 BASEBAND EYE MONITOR (BEM) SCHEMATICS

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



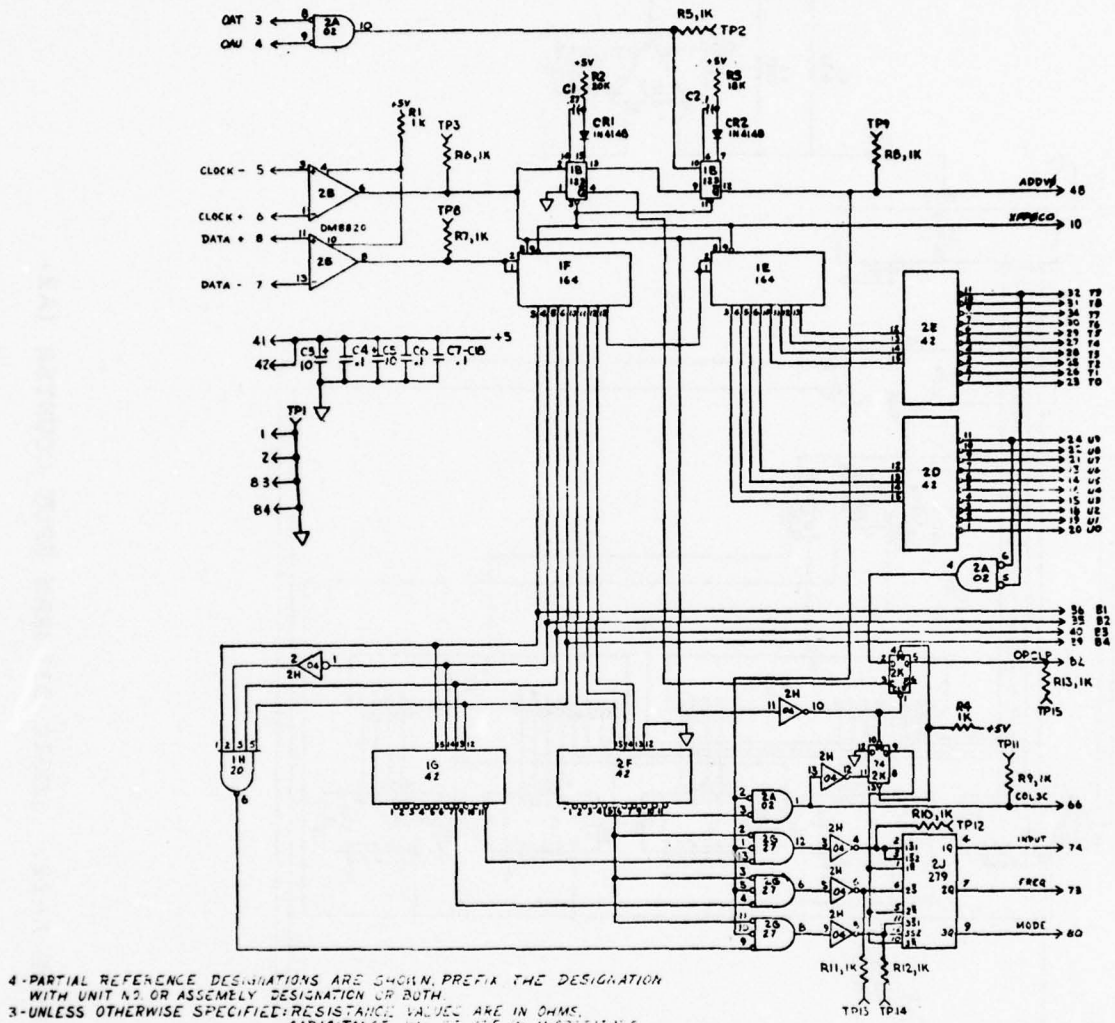
1 - UNLESS OTHERWISE SPECIFIED :
PIN 5 IS PWR & PIN 10 IS GND ON 1D, 1F, 1G, 1H, 1J, 1K
PIN 16 IS PWR & PIN 8 IS GND ON 1B,
PIN 14 IS PWR & PIN 7 IS GND ON 1A, 2A, 2B, 2C, 2E, 2F, 2G, 2H, 2K, 2D
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS

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



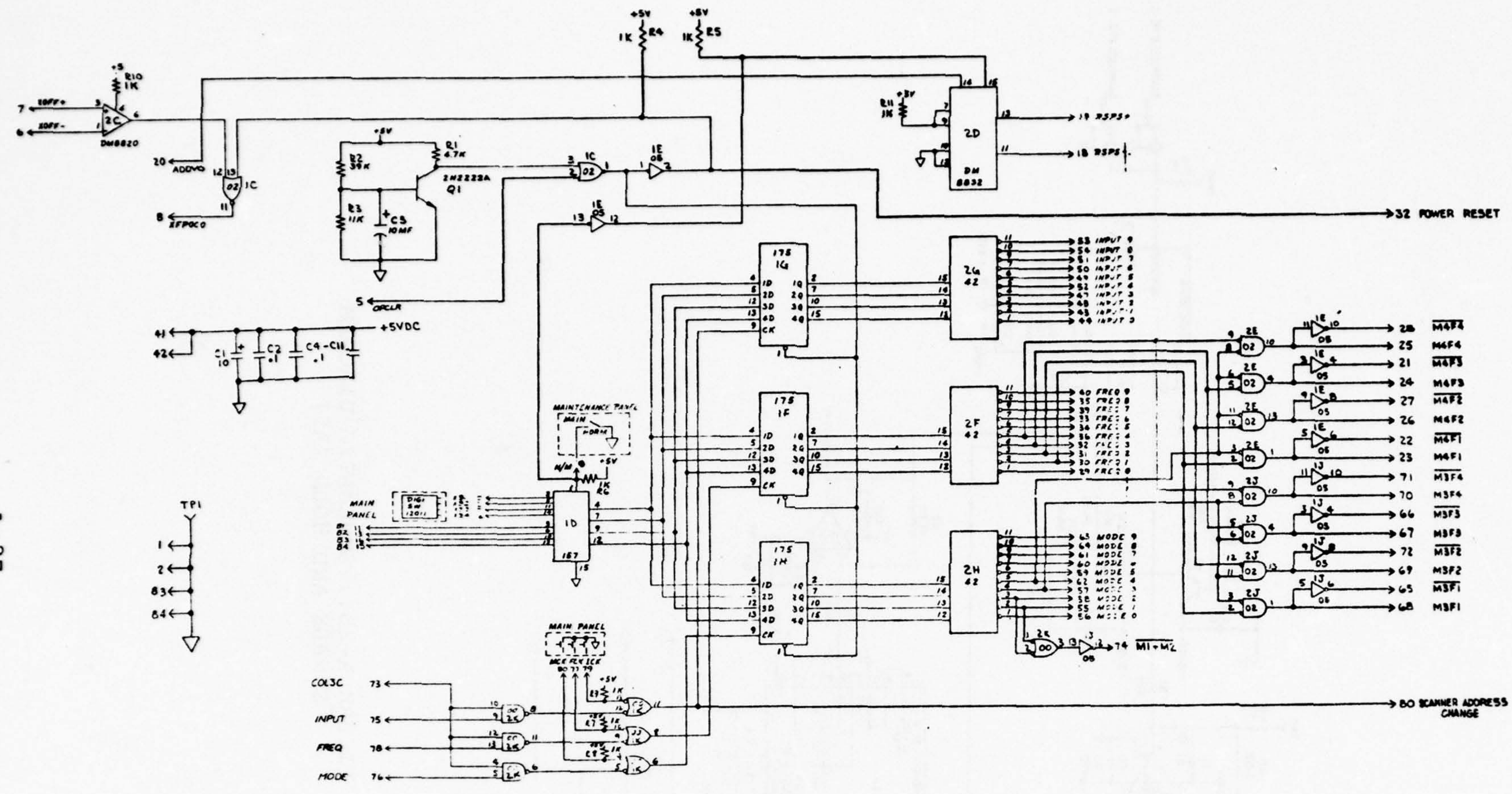
1 - UNLESS OTHERWISE SPECIFIED:
PIN 16 IS PWR & PIN 8 IS GND ON 1B, 1C, 1D, 1E, 1F, 2E, 2F, 2G, 2H
PIN 14 IS PWR & PIN 7 IS GND ON 1A, 2A, 2B, 2C, 2D
CAPACITOR VALUES ARE IN MICROFARADS
RESISTOR VALUES ARE IN OHMS

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



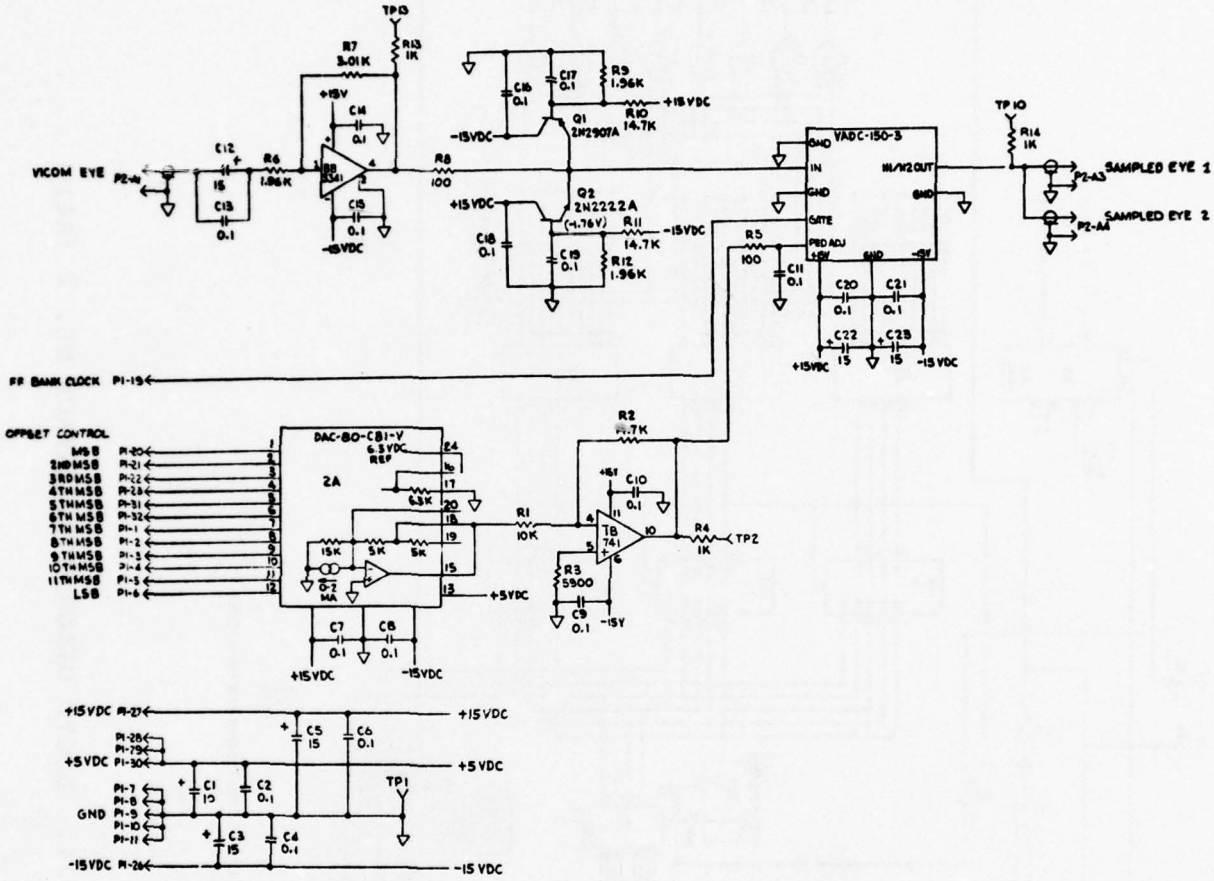
4 - PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. PREFIX THE DESIGNATION WITH UNIT NO. OR ASSEMBLY DESIGNATION OR BOTH.
3 - UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS. CAPACITANCE VALUES ARE IN MICROFARADS.
2 - REFERENCED INTEGRATED CIRCUIT PREFIXES ARE SN74, UNLESS OTHERWISE SPECIFIED.
1 - PIN 14 IS PWR & PIN 7 IS GND ON 1E, 1F, 1H, 2A, 2B, 2G, 2H, 2K ; PIN 16 IS PWR & PIN 8 IS GND ON 1B, 1G, 2D, 2E, 2F, 2J

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



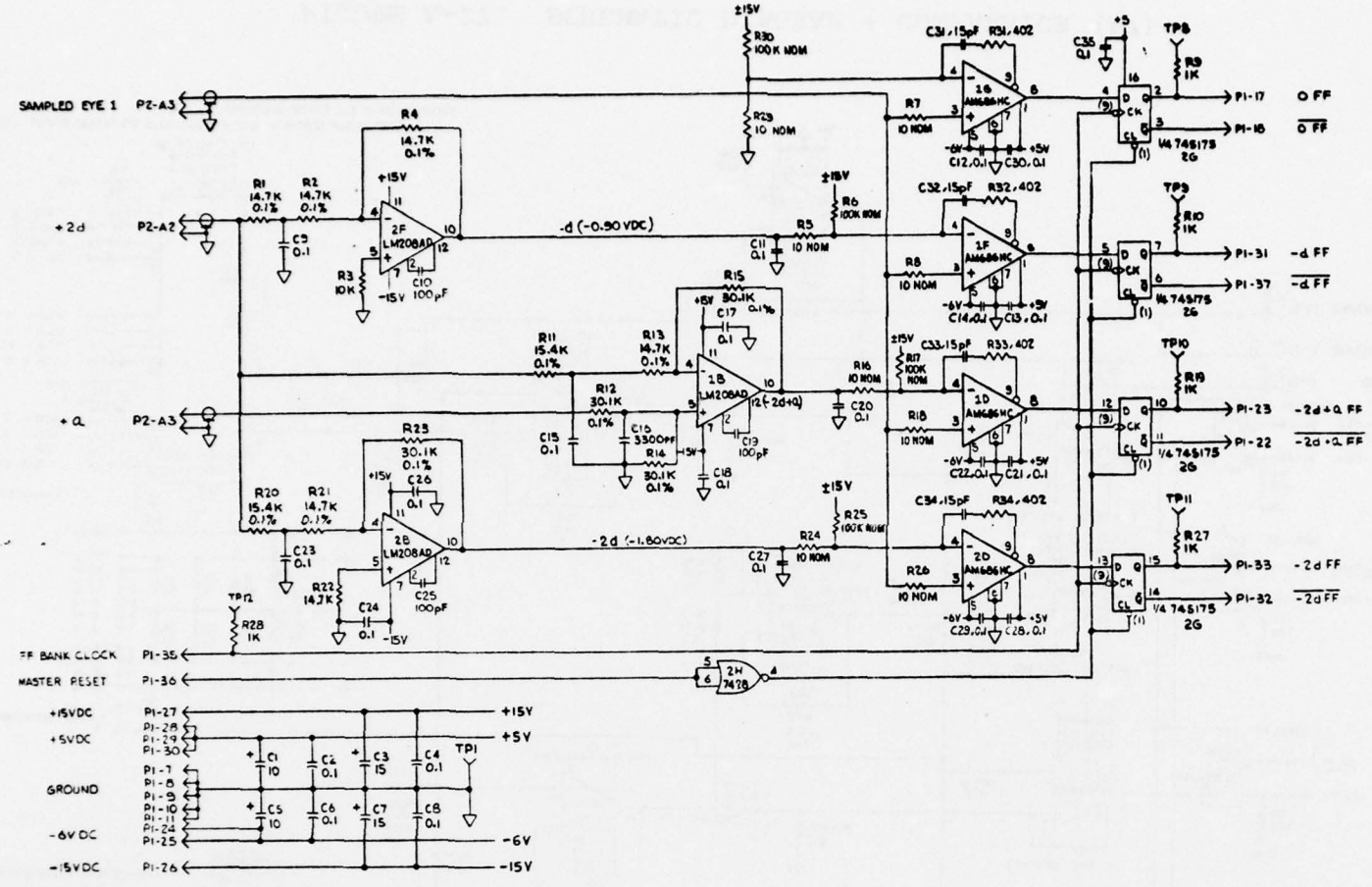
4- ALL IC'S PIN 8 IS GND AND PIN 16 IS +5V, EXCEPT IC'S 1C,1E [illegible] K,2C,2E,2K & 2J PIN 7 IS GND AND PIN 14 IS +5V
3- PARTIAL REFERENCE [illegible] ARE SHOWN, [illegible] THE DESIGNATION WITH UNIT [illegible] OR ASSEMBLY DESIGNATION OR BOTH.
2- UNLESS OTHERWISE SPECIFIED: [illegible] VALUES ARE [illegible] ALL [illegible] VALUES ARE [illegible]
1- REFERENCED INTEGRATED CIRCUIT PREFIXES ARE SN74, UNLESS OTHERWISE SPECIFIED.
NOTES:

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



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)

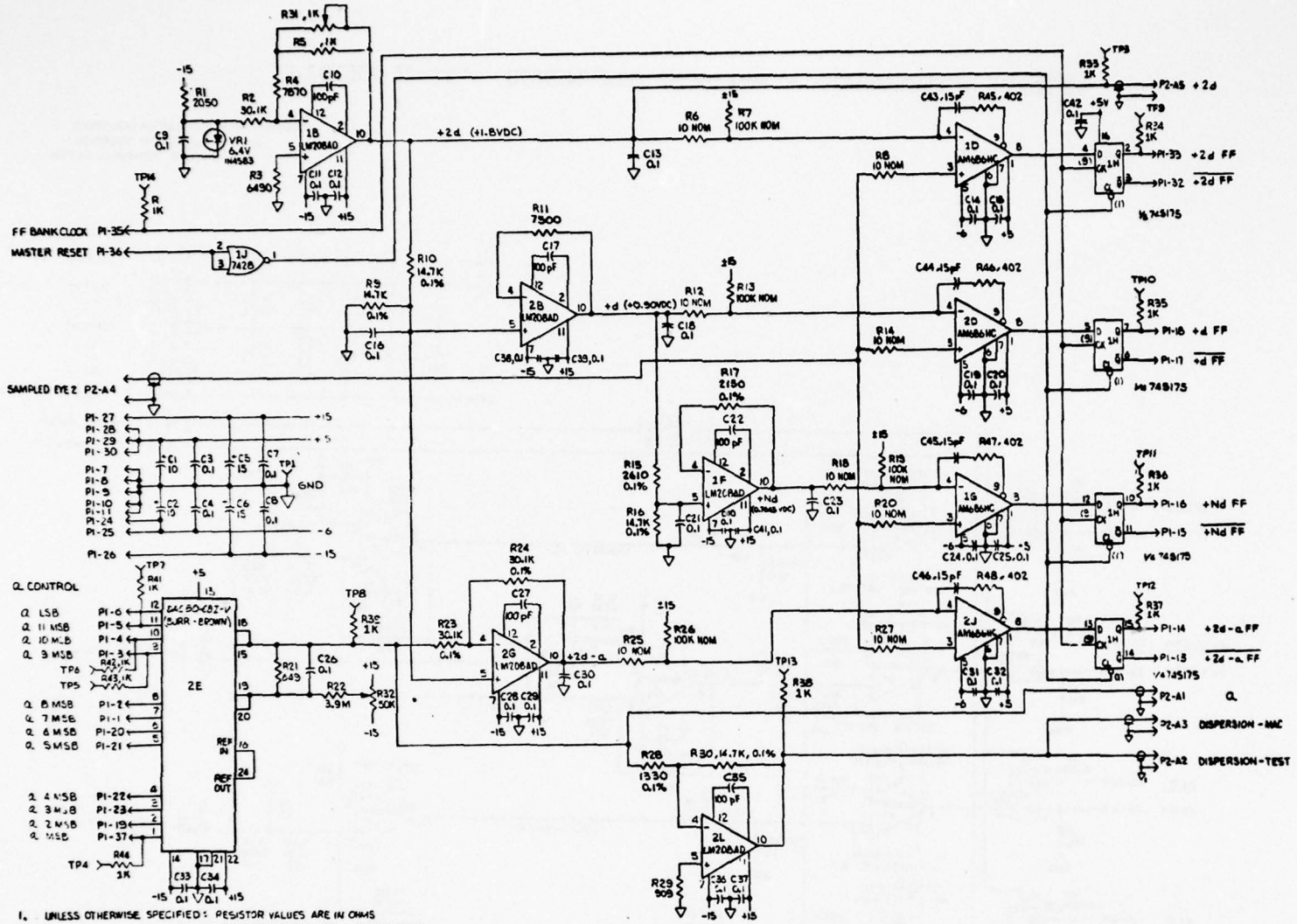


FIGURE A-27. SCHEMATIC DIAGRAM + COMPARATOR (A7)

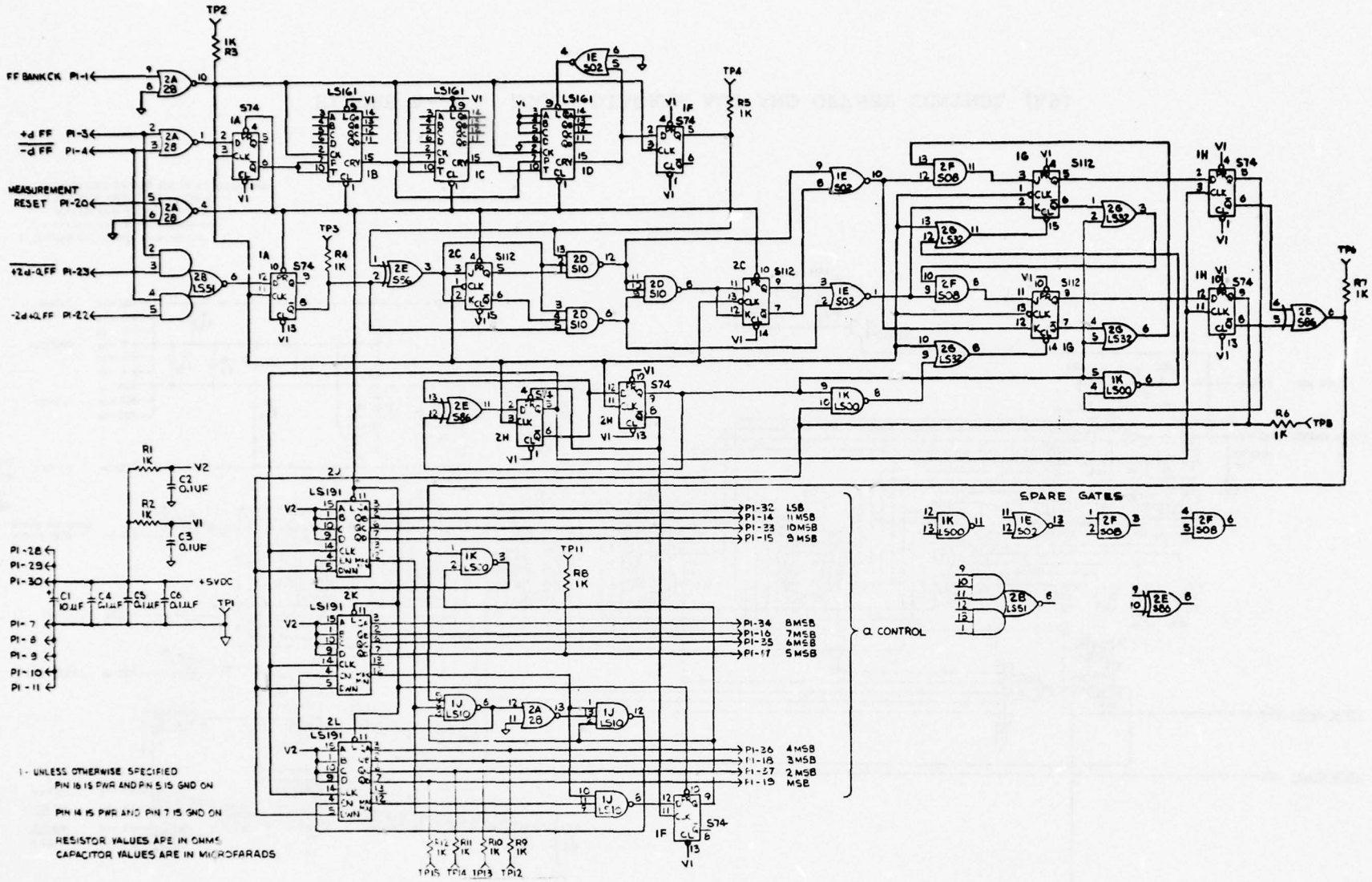
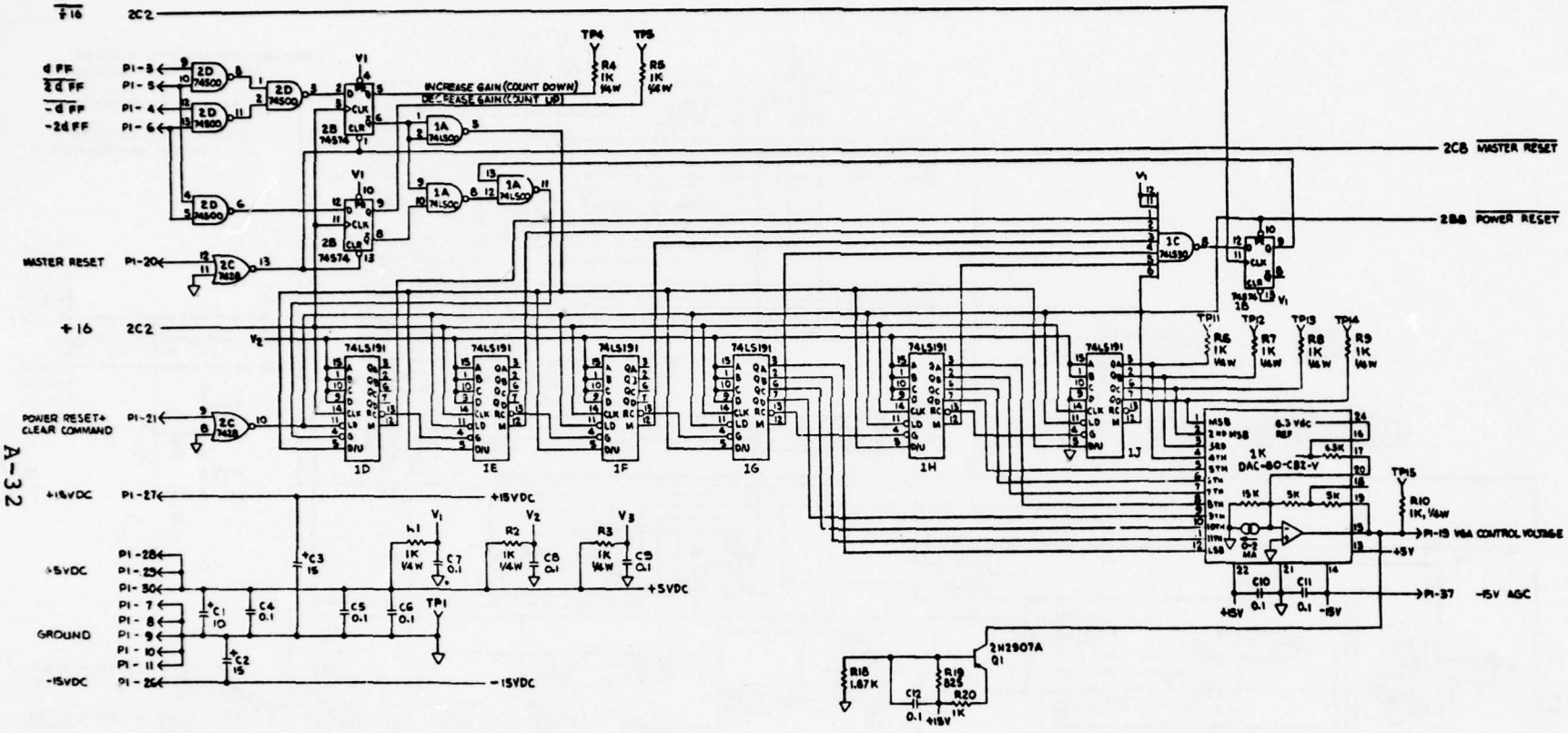


FIGURE A-28. LOGIC DIAGRAM a CONTROL (A8)



1- UNLESS OTHERWISE SPECIFIED:
PIN 16 IS PWR & PIN 8 IS GND ON
PIN 14 IS PWR & PIN 7 IS GND ON
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-29. LOGIC DIAGRAM AGC AND OFFSET CONTROL (A9)

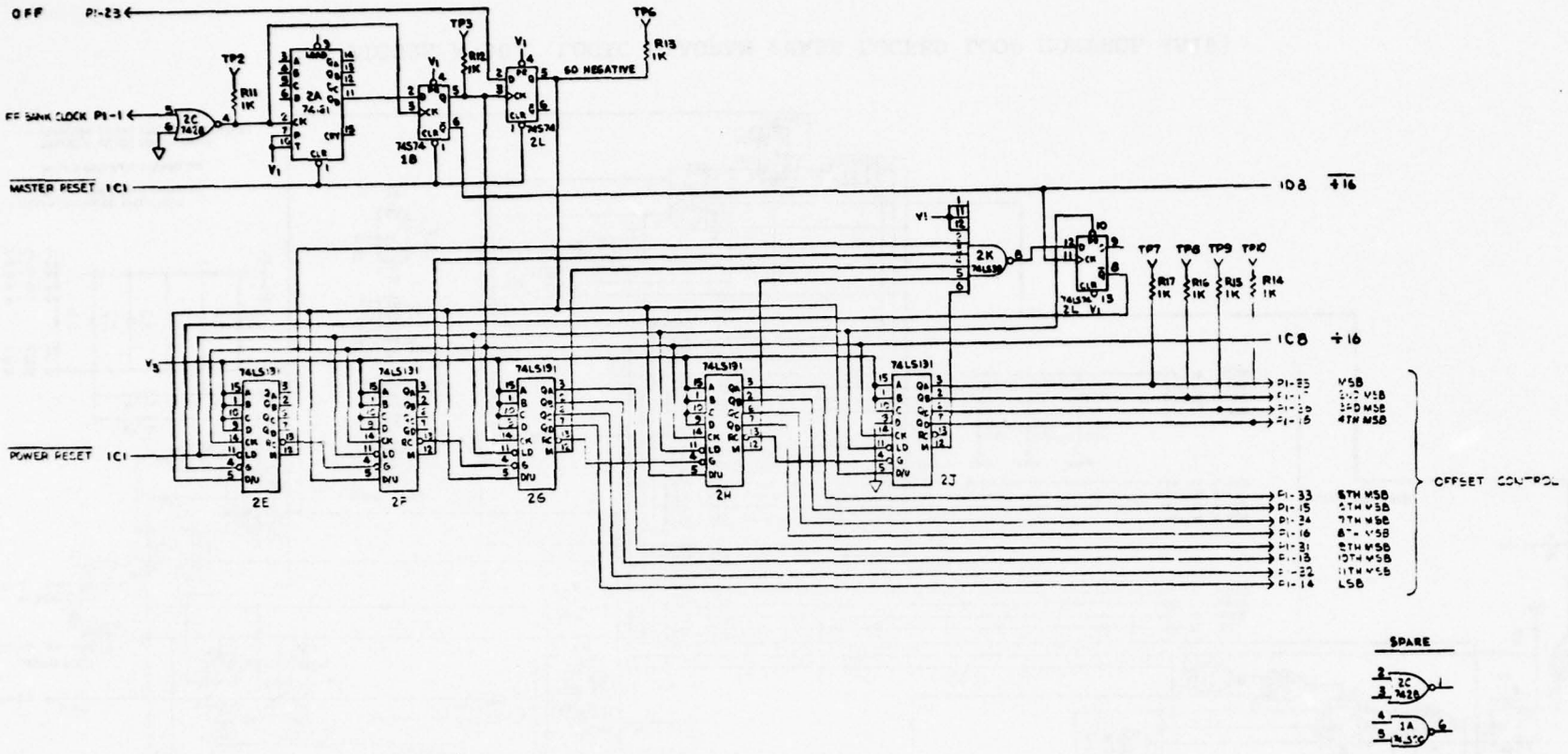


FIGURE A-29. LOGIC DIAGRAM AGC AND OFFSET CONTROL (A9) (Continued)

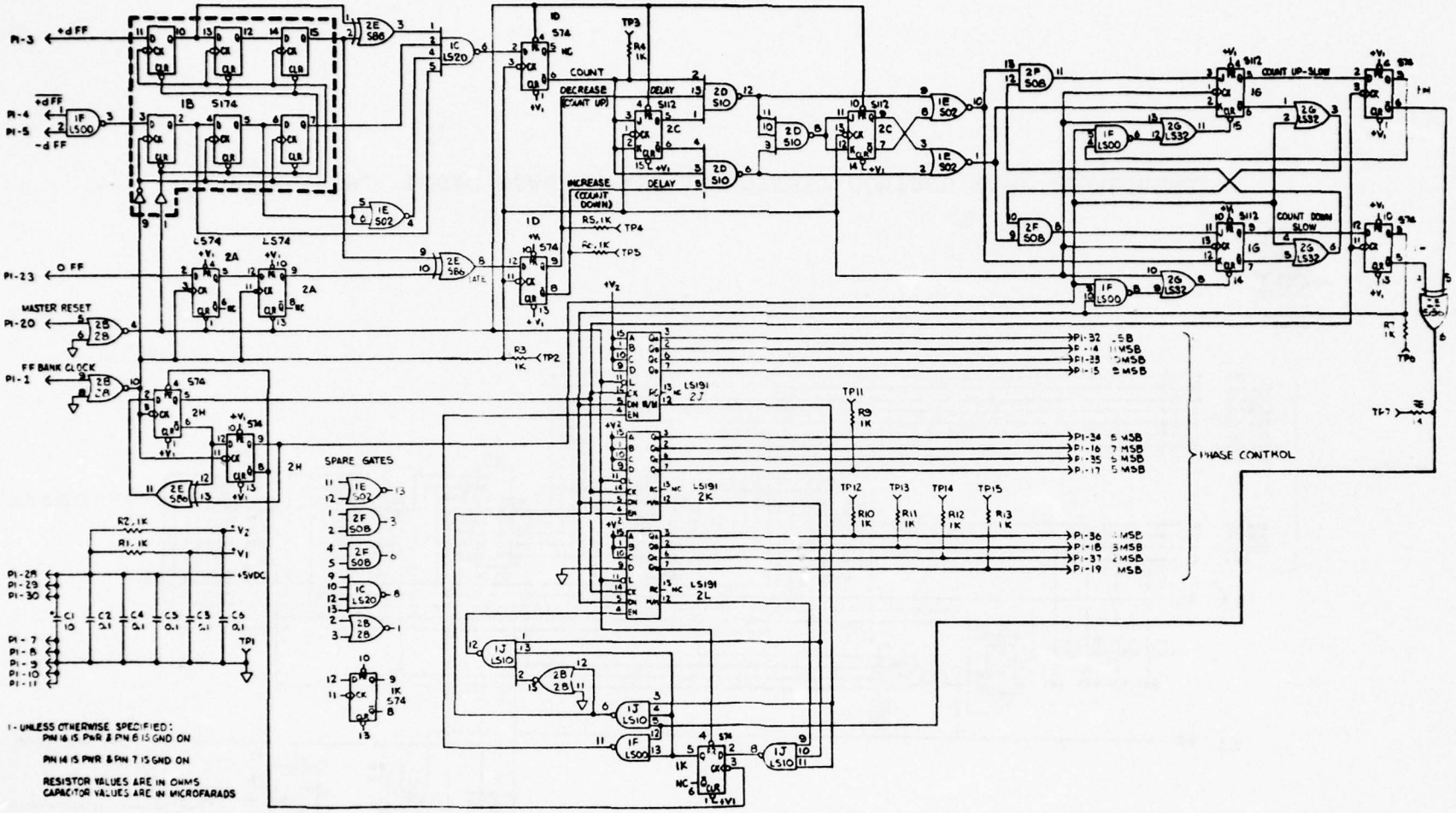
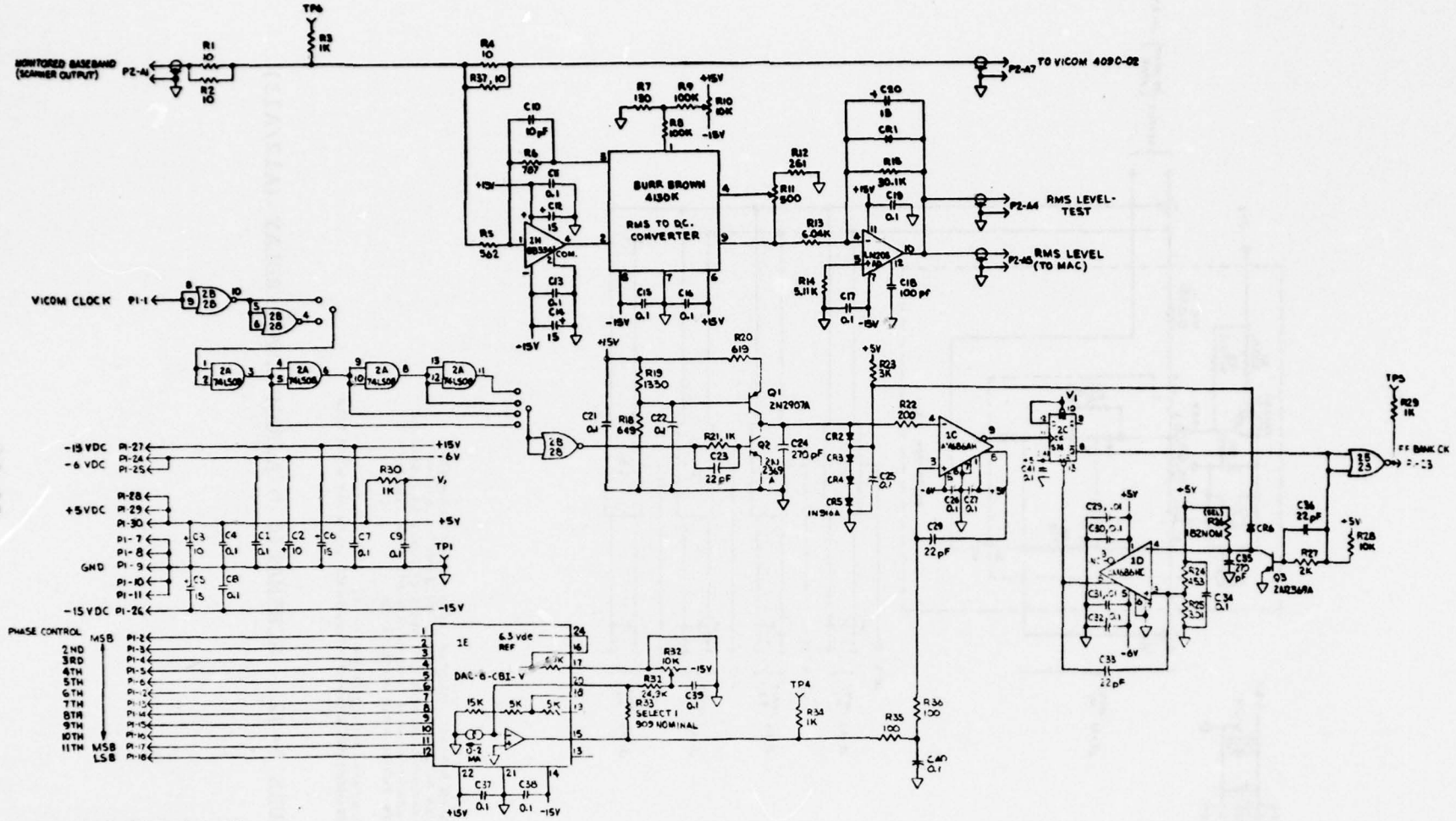
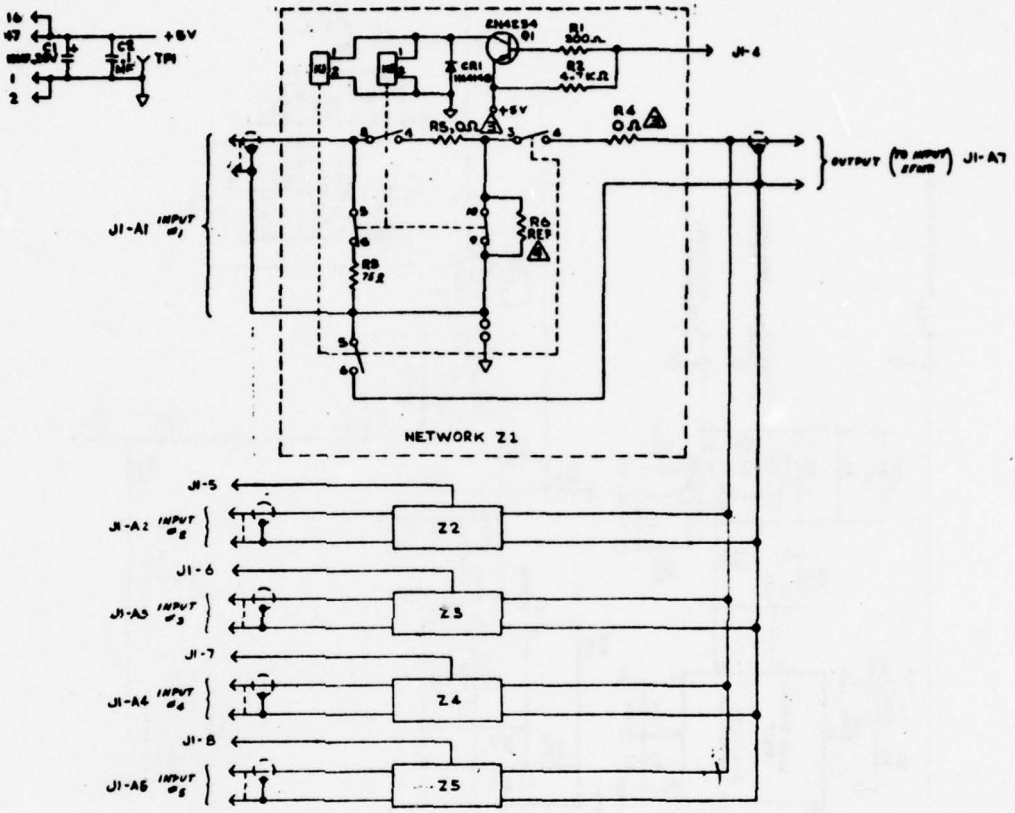


FIGURE A-30. LOGIC DIAGRAM PHASE LOCKED LOOP CONTROL (A10)



2 PIN 7 IS GND & PIN 14 IS PWR ON 2A & 2B
1 - UNLESS OTHERWISE SPECIFIED:
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-31. SCHEMATIC DIAGRAM INPUT BOARD (A11)



4 - R6 NOT INSTALLED FOR TEST. RESISTOR VALUE TO BE DETERMINED PER CUSTOMER REQUIREMENTS DURING FIELD INSTALLATION

3 - 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 GROUND 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)

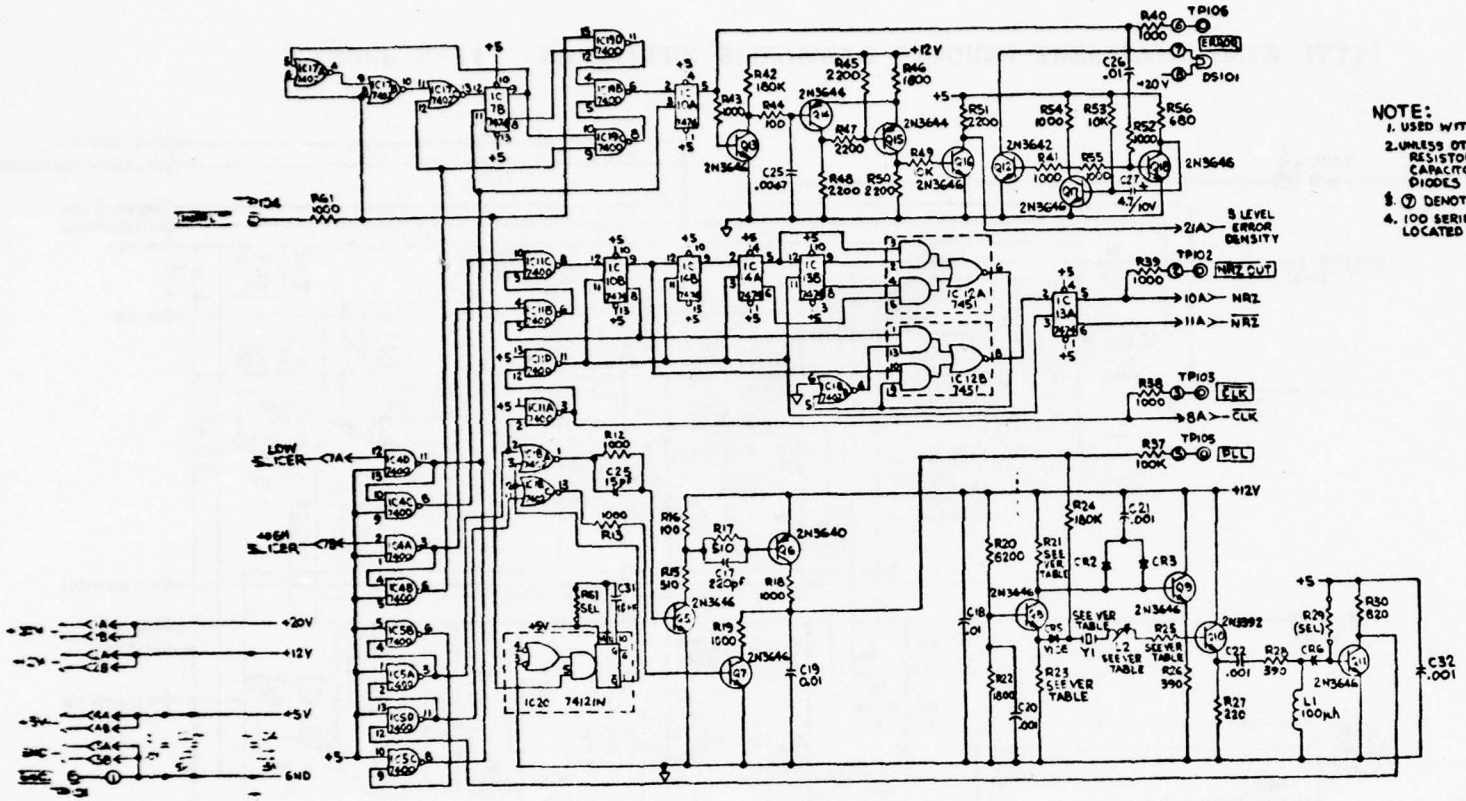


FIGURE A-33. MULTIPLEX SCHEMATIC DIAGRAM RECEIVE INPUT (A14)

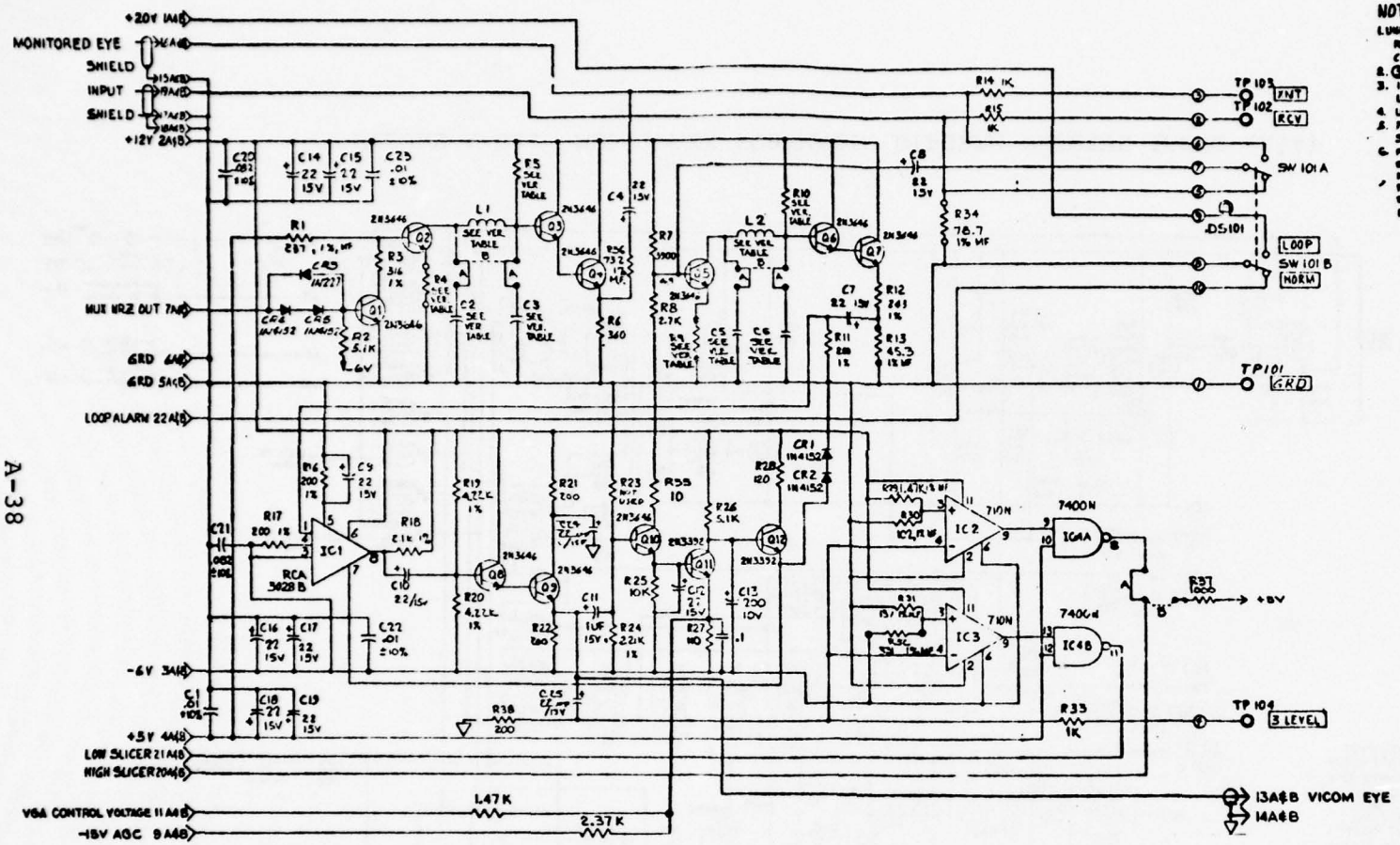
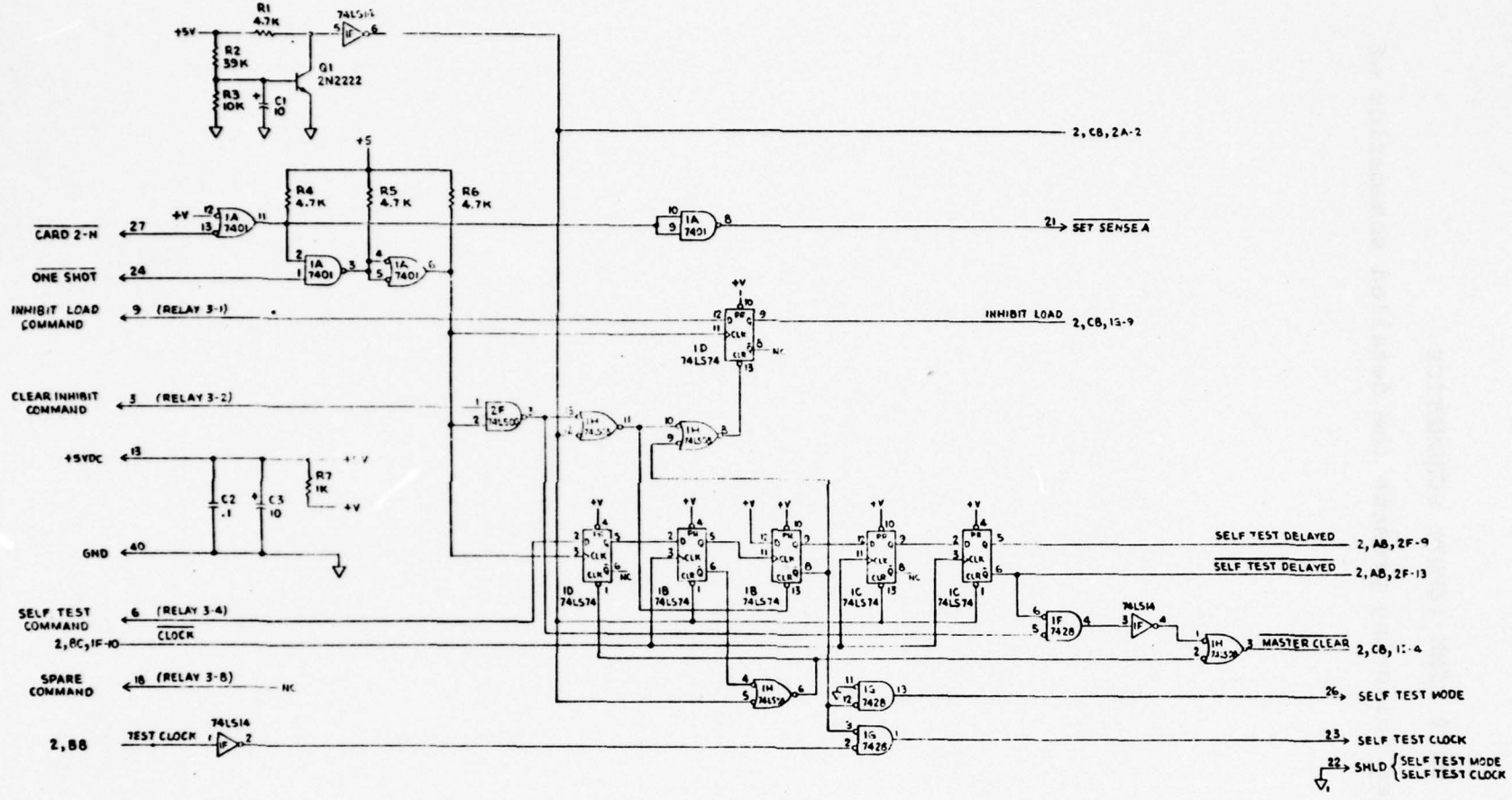


FIGURE A-34. MULTIPLEX SCHEMATIC DIAGRAM INTERFACE UNIT (A15)

A.9 EVENTS PER UNIT TIME (EPUT) SCHEMATICS

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



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

FIGURE A-35. LOGIC DIAGRAM EPUT COMMAND BOARD

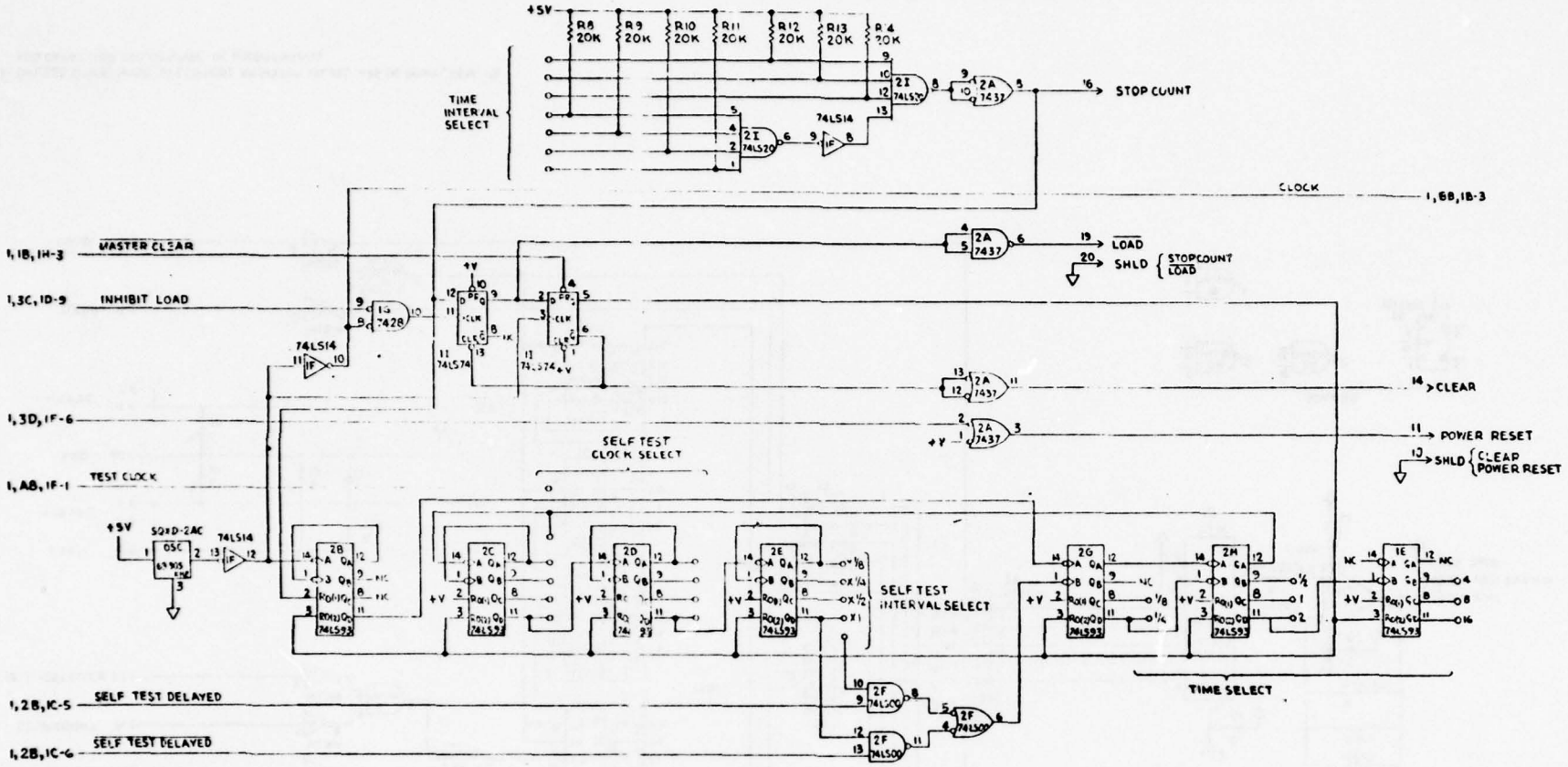
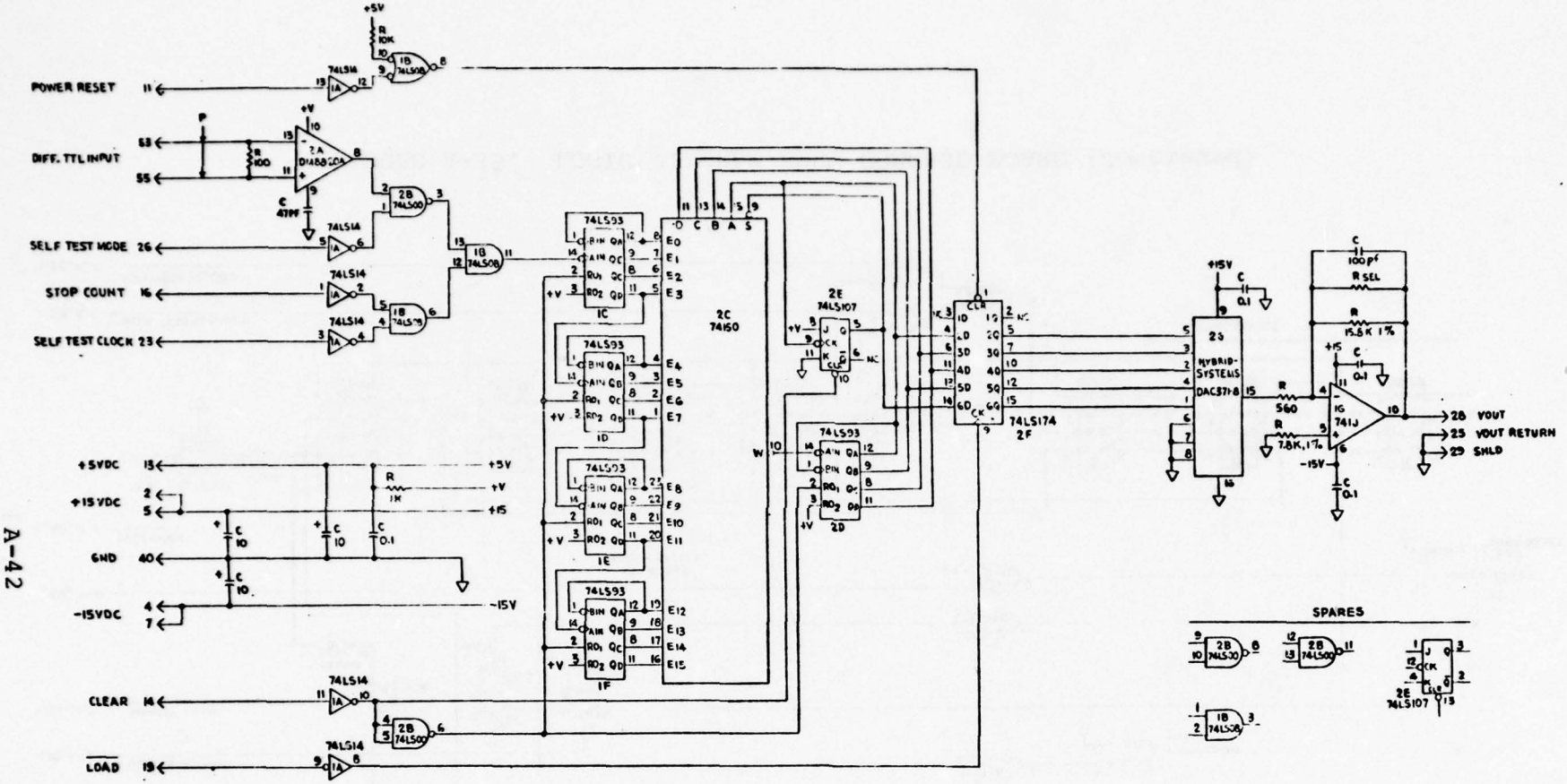


FIGURE A-35. LOGIC DIAGRAM EPUT COMMAND BOARD (Continued)



1- UNLESS OTHERWISE SPECIFIED: RESISTOR VALUES ARE IN OHMS, 1/8W, 1%
AND CAPACITOR VALUES ARE IN MICROFARADS

FIGURE A-36. LOGIC DIAGRAM EPUT COUNTER BOARD

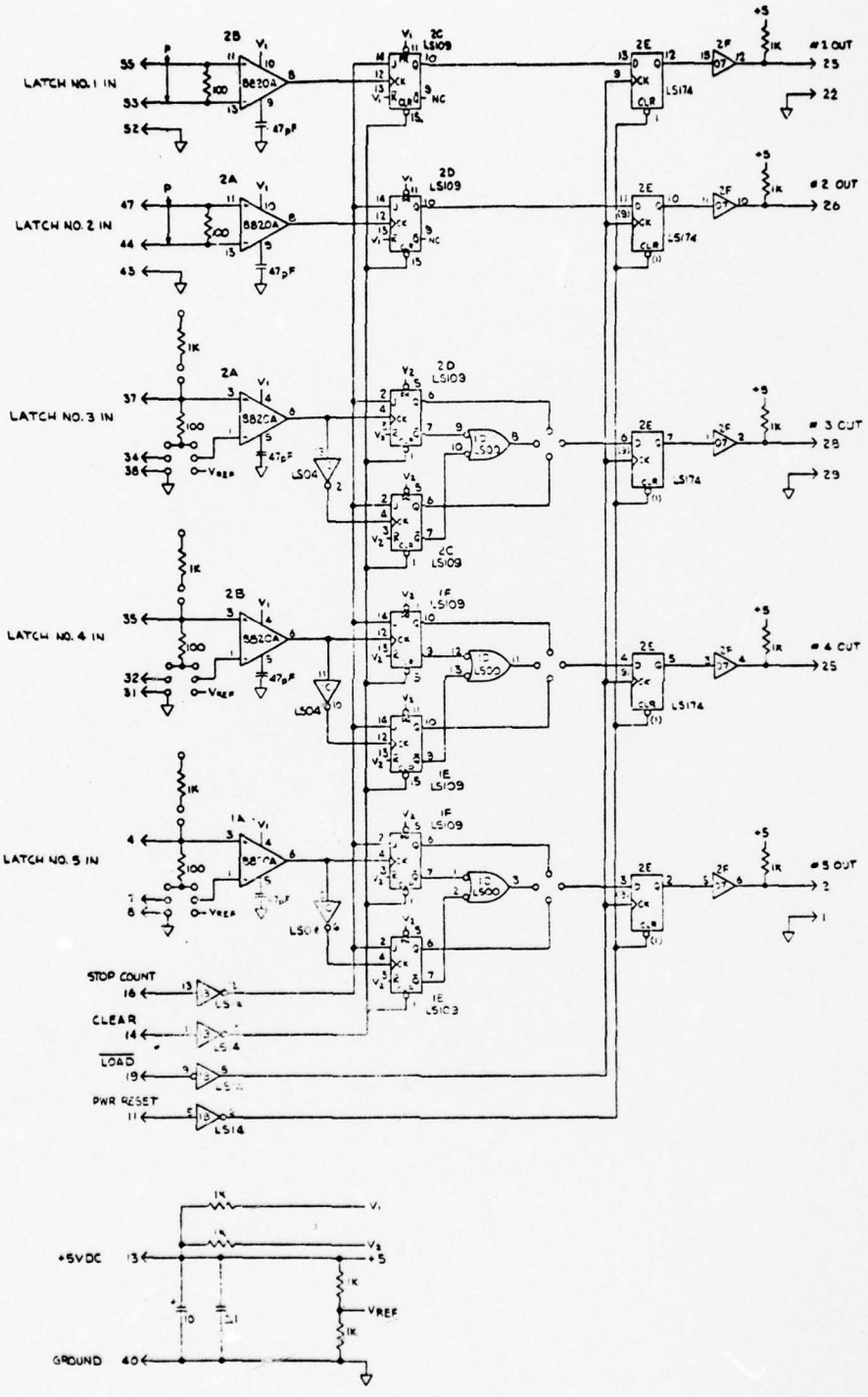


FIGURE A-37. LOGIC DIAGRAM EPUT LATCH BOARD

Appendix B

COMPUTER PROGRAM TO PRODUCE PERFORMANCE PREDICTION TABLES

```
C       TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR
C                     WRITTEN BY DR. W F ACKER,  16 MARCH 1977 REVISION
C       COMPUTES TABLES FOR DETERMINING THE SIGNAL TO NOISE RATIO AND
C       PREDICTING THE BIT ERROR RATE OF THE VICOM 4000 FROM THE OUTPUTS
C       OF THE ATEC ADAPTIVE-THRESHOLD BASEBAND EYE PATTERN MONITOR.
C
C       NEEDS SUBROUTINES DNL9LE, ADR9LE, AND TABLE
C       NEEDS FUNCTIONS DFNORM, QNORM, AND ZNORMQ STORED IN A03000/NORMAL
C
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 GAUSIAN NOISE
C           DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
C       THE NINE DATA LEVELS ARE THEN
C               ( +2*DHALF + EPSLN ), ( +2*DHALF ), ( +2*DHALF - EPSLN )
C               (    ZERO  + EPSLN ), (    ZERO  ), (    ZERO  - EPSLN )
C               ( -2*DHALF + EPSLN ), ( -2*DHALF ), ( -2*DHALF - EPSLN )
C
C       THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
C       OF GAUSSIAN NOISE.  TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
C       (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES),
C       VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
C       RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
C       AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
C       FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
C       EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
C               FROM ( +DHALF )  TO  ( +2*DHALF - ADAPT )
C          AND  FROM ( -DHALF )  TO  ( -2*DHALF + ADAPT )
C       THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
C       A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
C       EQUAL TO THE PRESET RATIO "PER" ( A SUBROUTINE INPUT VALUE ).
C       THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD,"ADAPT", IS THEN USED
C       (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR SIGNAL TO NOISE
C       RATIO TREND ANALYSIS AND PREDICTION OF BIT ERROR RATE.
C
C  --   EXTERNAL VARIABLES      ( NAMES ENDING IN "M" DESIGNATE ARRAYS )
C
        REAL    BITRATE                 !* BIT RATE
        REAL    PER                     !* PSEUDO BIT ERRORS / BITS TRANSM
        REAL    PERINVRS                !* BITS TRANSMITTED / PSEUDO ERROR
        REAL    RDIVBAD                 !* NUMBER THAT NET PSEUDO ERRORS A
C                               BY BEFORE THE A/D CONVERTER SETTING ADAPT.
        REAL    BERM(72)                !* BIT ERRORS PER BIT TRANSMITTED
        INTEGER NBER                    !* NUMBER OF BERM VALUES = NBR ROW
        REAL    AIDRM(25)               !* AMPLITUDE INTERSYMBOL INTERFERE
C                               DECISION LEVEL RATIO = EPSLN / DHALF
        INTEGER NAIDR                   !* NUMBER OF AIDRM VALUES = NUMBER
        REAL    AIDR                    !* = AIDRM(NTABLE) CONSTANT FOR AN
        REAL    DNR                     !* DECISION LEVEL TO NOISE RATIO=
        REAL    SDNR                    !* RMS SIGNAL TO DHALF VOLTAGE RAT
        REAL    NSRM(72)                !* RMS NOISE TO TOTAL RMS SIGNAL R
        REAL    SNRM(72)                !* SIGNAL TO NOISE RATIO IN DECIBE
        REAL    ADRM(72)                !* ADAPTIVE THRESHOLD TO D RATIO=
        REAL    DPERDADM(72)            !* DERIVATIVE OF PER WITH RESPECT
        REAL    TMCNSTM(72)             !* ADAPTIVE THRESHLD QUASILINEAR T
C
C  --   INTERNAL VARIABLES
C
        REAL    SCRATCH,T               !* SCRATCH PADS FOR TEMPORARY STOR
```

```
      INTEGER NROW                    ;* INDEX REGISTER FOR NUMBER OF RO
      INTEGER NTABLE                  ;* INDEX REGISTER FOR NUMBER OF TA
      LOGICAL DEBUG/T/                ;* FOR DIAGNOSTIC PRINTOUT SET DEB
1     FORMAT(3X,E11.3,F11.6,3X,F8.2,3(F11.6),/)
2     FORMAT (1H1,"TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.")
C
C**********************************************************************
C
C                             READ INPUT DATA
      READ, BITRATE
      READ, PERINVRS
      PER = 1. / PERINVRS
      READ, RDIVBAD
C
      NBER = 0
      READ, SCRATCH
      DOWHILE( SCRATCH .LT. 99. )
        NBER      = NBER + 1
        BERM(NBER) = SCRATCH
        READ, SCRATCH
      ENDO
C
      NAIDR = 0
      READ, SCRATCH
      DOWHILE( SCRATCH .LT. 99. )
        NAIDR       = NAIDR + 1
        AIDRM(NAIDR) = SCRATCH
        READ, SCRATCH
      ENDO
C
C                                 COMPUTE VALUES, STORE, PRINT TABLES
      NTABLE = 1
      DOWHILE( NTABLE .LE. NAIDR )
C                                 BEGIN A NEW TABLE
        AIDR = AIDRM(NTABLE)
        SDHR = SQRT(2.* (1.+ AIDR*AIDR/4.) )
        NROW  = 1
C
        DOWHILE( NROW .LE. NBER )
C                                 BEGIN A NEW ROW
          IF(DEBUG)PRINT,"AIDR =",AIDR,"     BER =",BERM(NROW)
          CALL DNR9LE(BERM(NROW), AIDR, DNR )
          NSRM(NROW) = 1./(DNR * SDHR)
          SNRM(NROW) = -20.*ALOG10( NSRM(NROW) )
          CALL ADR9LE(AIDR,DNR,PER,ADRM(NROW),T)
          DPERDADM(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) BERM(NROW),  NSRM(NROW), SNRM(NROW),
     1      ADRM(NROW), DPERDADM(NROW), TMCNSTM(NROW)
C                                 FINISHED A ROW
          NROW = NROW + 1
        ENDO
C                                 FINISHED STORING A TABLE
        CALL TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADRM,DPERDADM,TMCNSTM,
     1    PERINVRS,BITRATE,RDIVBAD )
        IF (DEBUG) WRITE (6,2)
C                                 STORAGE READY FOR A NEW TABLE
        NTABLE  = NTABLE + 1
      ENDO
      PRINT,"NORMAL END"
C
      STOP
      END
```

```
      SUBROUTINE ADR9LE (AIDR,DNR,PER,ADR,DPERDADR)
C
C         ( FINDS ADR FOR NINE-LEVEL 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 GAUSIAN NOISE
C         DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
C     THE NINE DATA LEVELS ARE THEN
C           ( +2*DHALF + EPSLN ), ( +2*DHALF ), ( +2*DHALF - EPSLN )
C           (   ZERO   + EPSLN ), (   ZERO   ), (   ZERO   - EPSLN )
C           ( -2*DHALF + EPSLN ), ( -2*DHALF ), ( -2*DHALF - EPSLN )
C
C     THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
C     OF GAUSSIAN NOISE.  TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
C     (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES),
C     VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
C     RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
C     AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
C     FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
C     EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
C           FROM ( +DHALF )  TO  ( +2*DHALF - ADAPT )
C        AND  FROM ( -DHALF )  TO  ( -2*DHALF + ADAPT )
C     THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
C     A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
C     EQUAL TO THE PRESET RATIO "PER" ( A SUBROUTINE INPUT VALUE ).
C     THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD,"ADAPT", IS THEN USED
C     (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR TREND ANALYSIS
C     AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DNR9LE)
C
C  --  INPUT VARIABLES
C
      REAL    AIDR                    !* AMPLITUDE INTERSYMBOL INTERFERE
      REAL    DNR                     !* DATA TO NOISE RATIO = (DHALF) /
C                           RATIO, EPSLN / DHALF
      REAL    PER                     !* VALUE OF PRESET PSEUDO ERROR RA
C
C  --  OUTPUT VARIABLES
C
      REAL    ADR                     !* ADAPTIVE THRESHOLD TO "D" RATIO
      REAL    DPERDADR                !* DERIVATIVE OF "PER" WITH RESPEC
C
C  --  INTERNAL VARIABLES
C  --  INTERNAL VARIABLES
C
      LOGICAL DEBUG/F/                !* FOR DIAGNOSTIC PRINTOUT SET DEB
      INTEGER NRAPHSON                !* COUNTS NEWTON-RAPHSON ITERATION
      REAL    A                       !* NEWEST GUESS FOR VALUE OF ("ADA
C                           TO ATTAIN THE SPECIFIED ERROR RATE
      REAL    ANROLD                  !* PREVIOUS GUESS FOR "ANR", THAT
      REAL D1,D2,D3,D4                !* INTEGER MULTIPLES OF "DNR"
      REAL    E                       !* "EPSLN"/"NOISE RATIO, THAT IS,
      REAL    PERNEW                  !* PSEUDO ERROR COMPUTED USING NEW
      REAL    DPERDANR                !* DERIVATIVE OF "PER" WITH RESPEC
      REAL    LNTARGET                !* NATURAL LOG OF "PER" (THE TARGE
      REAL    LNPERNEW                !* NATURAL LOG OF "PERNEW" (COMPUT
      REAL    ERRLNPER                !* = LNPERNEW - LNTARGET, ERROR IN
      REAL    ERRNEW                  !* ABSOLUTE VALUE OF ERRLNPER
      REAL    ERROLD                  !* PREVIOUS VALUE ERRNEW
      REAL    THING                   !* TEMPORARY STORAGE FOR SCRATCH P
      REAL    DLNPERDA                !* DERIVATIVE OF "LNPERNEW" WITH R
```

```
C*************************************************************************
C
      LNTARGET = ALOG( PER )
      E  = AIDR * DNR
C                              MAKE FIRST GUESS, A, AT PROPER VALUE FOR ANR
      A  = E + ZNORMQ( 4. * PER)       !* A=INVERSE OF 2*FIRST TERM PERNE
      A = AMIN1( A , .98*DNR )
      D1 = 1. * DNR
      D2 = 2. * DNR
      D3 = 3. * DNR
      D4 = 4. * DNR
C
C                              ADJUST THE ANR VALUE BY NEWTON-RAPHSON
C                              ITERATION USING ALOG(PERNEW/PER) RATHER THAN
C                              (PERNEW-PER) FOR THE ERROR TERM TO REDUCE
C                              SCALING PROBLEMS AND IMPROVE CONVERGENCE.
      NRAPHSON = 0
      ERROLD   = 1200.
      ERRNEW   = 1100.
      DOWHILE( ERRNEW .LT. ERROLD )
C
        IF( ERRNEW .LT. 1000. )        !* SKIPS THIS NEWTON RAPHSON
C                                        CORRECTION ONLY THE FIRST PASS
          THING =
     1      +     DFNORM(  +A-E) + 2.*DFNORM(  +A) +     DFNORM(  +A+E)
     2      + 2.*DFNORM(D2-A-E) + 4.*DFNORM(D2-A) + 2.*DFNORM(D2-A+E)
C                 TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
C    3      +     DFNORM(D4-A-E) + 2.*DFNORM(D4-A) +     DFNORM(  -A+E)
          DPERDANR = -THING / 8.
          DLNPERDA = DPERDANR / PERNEW
          ANROLD   = A
C                                    NOTICE (-0.5*LNTARGET) IS POSITIVE.
          IF( ERRLNPER .LE. -0.5*LNTARGET )
C                                       USE FULL-SIZED CORRECTION
            A = A - ERRLNPER / DLNPERDA
C
          ELSE
C                                     USE LIMITED CORRECTION TO
C                                     REDUCE OVERSHOOT TENDENCY
            LNPERNEW = ERRLNPER + LNTARGET
            A = A - LNPERNEW / DLNPERDA
          ENDIF
          NRAPHSON = NRAPHSON + 1
        ENDIF
C                          NEWTON RAPHSON CORRECTION, IF ANY, COMPLETED
C                            NOW EVALUATE THE RESIDUAL ERROR
        THING =
     1      +       QNORM(  +A-E) + 2. * QNORM(   A) +       QNORM(   A+E)
     2      +       QNORM(D1  -E) + 2. * QNORM(D1  ) +       QNORM(D1  +E)
     3      - 2. * QNORM(D2-A-E) - 4. * QNORM(D2-A) - 2. * QNORM(D2-A+E)
C                   TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
C    4      +       QNORM(D3  -E) + 2. * QNORM(D3  ) +       QNORM(D3  +E)
C    5      -       QNORM(D4-A-E) - 2. * QNORM(D4-A) -       QNORM(D4-A+E)
        PERNEW   = THING / 8.
        ERRLNPER = ALOG( PERNEW / PER )
        ERROLD   = ERRNEW
        ERRNEW   = ABS( ERRLNPER )
        IF(DEBUG) PRINT,"NRAPHSON =",NRAPHSON,"      NATURAL LOG ",
     1    "PERNEW/PERTARGET =", ERRLNPER
      ENDO
C
      ADR      = ANROLD   / DNR
      DPERDADR = DPERDANR * DNR
      RETURN
      END
```

```
      SUBROUTINE DNR9LE(BER,AIDR,DNR)      !* 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
C     BIT ERROR RATE (BER) FOR THREE LEVEL PARTIAL RESPONSE EYE PATTERN
C     WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE
C     THREE-LEVEL EYE INTO A NINE-LEVEL EYE
C
C     NEEDS DFNORM, QNORM, AND ZNORMQ (IN "NORMAL" FILE)
C
C  -- INPUT VARIABLES --
C
      REAL    BER                    !*  (BAUDS IN ERROR)/(BAUDS TRANSM
      REAL    AIDR                   !*  (AMPLITUDE OF INTERSYMBOL INTE
C                        WHERE 2D = NOMINAL DISTANCE BETWEEN LEVELS
C  -- OUTPUT --
C
      REAL    DNR                    !*  D / RMS NOISE AMPLITUDE, D DEF
C
C  -- INTERNAL VARIABLES
C
      LOGICAL DEBUG/F/               !*  TRUE GIVES DIAGNOSTIC PRINTOUT
      INTEGER NRAPHSON               !*  COUNTS NEWTON-RAPHSON ITERATIO
      REAL    DNRNEW                 !*  NEWEST APPROX TO DNR VALUE FOR
      REAL    DNROLD                 !*  PREVIOUS VALUE OF DNRNEW
      REAL    BERNEW                 !*  (BIT ERROR RATE COMPUTED FOR D
      REAL    ERRBER                 !*  (BERNEW - BER) * 1.E+10 TO AVO
      REAL    ERRNEW                 !*  ABSOLUTE VALUE OF ERRBER USING
      REAL    ERROLD                 !*  PREVIOUS VALUE OF ERRNEW
      REAL    DRVBER                 !*  DERIVATIVE OF BERNEW WRT DNRNE
C
C**********************************************************************
C
      DNRNEW = ZNORMQ(BER/1.5) / (1. - AIDR)
C                                     IMPROVE FIRST APPROXIMATION OF
C                                     DNR BY NEWTON-RAPHSON ITERATION
C                ERROR TERMS SCALED BY 1.E+10 TO AVOID UNDERFLOW
      ERROLD   = 10.E+10
      ERRNEW   =  2.E+10
      NRAPHSON = 0
C
      DOWHILE ( ERRNEW .LT. ERROLD )
        IF( NRAPHSON .GT.0 )         !* SKIPS THIS ONLY THE FIRST PASS
          DRVBER = -(
     1      + 6. * DFNORM( DNRNEW * (1.-AIDR) ) * (1.-AIDR)
     2      +12. * DFNORM( DNRNEW             )
     3      + 6. * DFNORM( DNRNEW * (1.+AIDR) ) * (1.+AIDR) ) / 16.
          DNROLD = DNRNEW
          DNRNEW = (DNRNEW*1.E+10 - ERRBER/DRVBER ) *1.E-10
        ENDIF
        BERNEW =  (
     1    + 6. *  QNORM( DNRNEW * (1.-AIDR) )
     2    +12. *  QNORM( DNRNEW             )
     3    + 6. *  QNORM( DNRNEW * (1.+AIDR) ) ) / 16.
        ERRBER = BERNEW * 1.E+10 - BER * 1.E+10
        IF( NRAPHSON .GT.0 )         !* SKIPS THIS ONLY THE FIRST PASS
          ERROLD = ERRNEW
          ERRNEW = ABS(ERRBER)
        ENDIF
        IF(DEBUG)PRINT,"NRAPHSON =",NRAPHSON,"ERR BER *1.E+10 =",ERRBER
        NRAPHSON = NRAPHSON + 1
      ENDO
      DNR = DNROLD
      RETURN
      END
```

```
      SUBROUTINE TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADRM,DPERDADM,
     1   TMCNSTM,PERINVPS,BITRATE,RDIVBAD )
C
C
C                    ALTERED BY  W. F. ACKER         MARCH 1977
C                    WRITTEN BY: R. A. MEREDITH        OCT 1976
C
C  --  EXTERNAL VARIABLES      ( NAMES ENDING IN "M" DESIGNATE ARRAYS )
C
      REAL     ADRM(72)                  !* ADAPTIVE THRESHOLD TO D RATIO=
      REAL     AIDR                      !* AMPLITUDE INTERSYMBOL INTERFERE
C                                 DECISION LEVEL RATIO = EPSLN / DHALF
      REAL     BERM(72)                  !* BIT ERRORS PER BIT TRANSMITTED
      REAL     DPERDADM(72)              !* DERIVATIVE OF PER WITH RESPECT
      REAL     NSRM(72)                  !* RMS NOISE TO TOTAL RMS SIGNAL R
      REAL     PERINVPS                  !* BITS TRANSMITTED / PSEUDO ERROR
      REAL     SNRM(72)                  !* SIGNAL TO NOISE RATIO IN DECIBE
      REAL     TMCNSTM(72)               !* ADAPTIVE THRESHLD QUASILINEAR T
      INTEGER  NBER                      !* NUMBER OF BERM VALUES = NBR ROW
      REAL     RDIVBAD                   !* NUMBER THAT NET PSEUDO ERRORS A
C                                 BY BEFORE THE A/D CONVERTER SETTING ADAPT.
C
C  --  INTERNAL VARIABLES
C
      INTEGER  LASTROW                   !* NUMBER OF LAST ROW ON PAGE
      INTEGER  NROW                      !* INDEX REGISTER FOR NUMBER OF RO
      INTEGER  ILINE                     !* LINE COUNTER
      INTEGER  NLINE                     !* LINE COUNTER FOR LINE SPACER
C
C  --  FORMAT STATEMENTS
C
1     FORMAT (1H1)
2     FORMAT (//)
3     FORMAT (24X,"BASEBAND EYE PATTERN MONITOR TABLES")
4     FORMAT (1H0,28X,"TABLE FOR AIDR EQUALS ",F9.4 )
5     FORMAT (1H ,23X,"PSEUDO ERROR RATE EQUALS   1.0 /",F9.0)
7     FORMAT (1H0,8X,"BIT ERROR",6X,"N / S",7X,"SNR",7X,"A / D",6X,
     1   "DERIV PER",7X,"TIME")
8     FORMAT (1H ,11X,"RATE",8X,"RATIO",6X,"IN DB",6X,"RATIO",6X,
     1   "WRT A / D",5X,"CONSTANT")
10    FORMAT (5X,E12.3,F13.6,F9.2,3F13.6)
11    FORMAT (1H )
12    FORMAT (8X,"NOMENCLATURE:")
13    FORMAT (8X,"D                 = HALF OF THE NORMAL DISTANCE ",
     1   "BETWEEN DATA LEVELS FOR THE",/,26X,"THE THREE LEVEL EYE ",
     2   "I.E., DECISION LEVEL." )
14    FORMAT (8X,"N / S RATIO       = RMS NOISE TO RMS SIGNAL RATIO.")
15    FORMAT (8X,"SNR               = SIGNAL POWER TO NOISE POWER IN ",
     1   "DECIBLES.")
16    FORMAT (8X,"A / D RATIO       = ADAPTIVE THRESHOLD AMPLITUDE TO ",
     1   "D RATIO.")
17    FORMAT (8X,"DERIV PER WRT     = DERIVATIVE OF PSEUDO ERROR RATE ",
     1   "WITH RESPECT TO A / D RATIO.")
18    FORMAT (8X,"TIME CONSTANT     = QUASILINEAR TIME CONSTANT OF THE ",
     1   "ADAPTIVE THRESHOLD",/,25X,"LOOP FOR SMALL CHANGES AROUND ",
     2   "STEADY STATE VALUES",/,25X,"WHEN BITE RATE = ",F14.0,
     3   "  AND ERROR SIGNAL",/,25X,"DIVIDER RATIO INTO D/A CONVERTER",
     4   " = ",F14.0 )
19    FORMAT (8X,"AIDR              = AMPLITUDE OF INTERSYMBOL",
     1   " INTERFERENCE TO D RATIO.")
C
C*********************************************************************
      NROW = 0
      DOWHILE (NROW .LT. NBER)
C                                                    PRINT A PAGE
```

```
C                               PRINT HEADINGS
        WRITE (6,1)
        WRITE (6,2)
        WRITE (6,3)
        WRITE (6,4) AIDR
        WRITE (6,5) PERINVRS
        WRITE (6,7)
        WRITE (6,8)
        WRITE (6,9)
9       FORMAT (1HO)
C                               PRINT ROWS OF D TA
        ILINE = 0
        LASTROW = MIN( NROW+36, NBER )
        DOWHILE( NROW .LT. LASTROW )
          NROW = NROW + 1
C                                                PRINT A ROW
          WRITE (6,10) BERM (NROW),NSRM(NROW ,SNRM(NROW),ADRM(NROW),
     1      DPERDADM(NROW),TMCNSTM(NROW)
C                               DOUBLE SPACE IF NUMBER OF DATA ROWS .LE.15
          IF (NBER .LE. 15)
            WRITE (6,11)
            ILINE = ILINE + 2
          ELSE
            ILINE = ILINE + 1
          ENDIF
        ENDO
C                               ALL DATA PRINTE . MAKE RESIDUAL ROWS BLANK
        NLINE = 39- ILINE
        DOWHILE (NLINE .GT. 0 )
          WRITE (6,11)
          NLINE = NLINE - 1
        ENDO
C                               WRITE FOOTNOTES
        WRITE (6,12)
        WRITE (6,13)
        WRITE (6,19)
        WRITE (6,14)
        WRITE (6,15)
        WRITE (6,16)
        WRITE (6,17)
        WRITE (6,18) BITRATE,RDIVRAD
      ENDO
      RETURN
      END
```

----------END-OF-THIS-ROUTINE----------

THERE WERE NO ERRORS IN THE ABOVE ROUTIN DETECTED BY THE SP PRECOMPILER

```
*****************************************  ******************************
*                                                                        *
*                                                                        *
*       PREFORTY NOW PROCESSES THE "INCLUDE"  TATEMENT,  SO THAT         *
*       COMMON STATEMENTS CAN BE WRITTEN ONCE  PUT AT THE BEGINNING      *
*       OF THE SOURCE INPUT, AND THEN INCLUDED IN SPECIFIC ROUTINES.     *
*                                                                        *
*       ALSO, COMMENTS PRECEDED BY C* ARE MOVED OUT TO COLUMN 40.        *
*                                                                        *
*      TWO ADDITIONAL SP STATEMENTS HAVE BEEN MECHANIZED.  THEY ARE      *
*      CLOSE AND EXITDO.                                                 *
```

```
LIST A01739/FORTY/INFO.R  FOR DETAILS.
```

```
      C     TRUNK PROGRAM FOR ATEC BASEBAND EYE PATTERN MONITOR
      C                  WRITTEN BY DR. W F ACKER.  16 MARCH 1977 REVISION
      C     COMPUTES TABLES FOR DETERMINING THE SIGNAL TO NOISE RATIO AND
      C     PREDICTING THE BIT ERROR RATE OF THE VICOM 4000 FROM THE OUTPUTS
      C     OF THE ATEC ADAPTIVE-THRESHOLD BASEBAND EYE PATTERN MONITOR.
      C
      C     NEEDS SUBROUTINES DNL9LE, ADR9LE, AND TABLE
      C     NEEDS FUNCTIONS DFNORM, QNORM, AND ZNORMQ STORED IN A03000/NORMAL
      C
      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 GAUSIAN NOISE
      C         DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
      C     THE NINE DATA LEVELS ARE THEN
      C           ( +2*DHALF + EPSLN ), ( +2*DHALF ), ( +2*DHALF - EPSLN )
      C           (   ZERO   + EPSLN ), (   ZERO   ), (   ZERO   - EPSLN )
      C           ( -2*DHALF + EPSLN ), ( -2*DHALF ), ( -2*DHALF - EPSLN )
      C
      C     THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
      C     OF GAUSSIAN NOISE.  TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
      C     (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES),
      C     VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
      C     RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
      C     AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
      C     FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
      C     EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
      C           FROM ( +DHALF )  TO  ( +2*DHALF - ADAPT )
      C        AND FROM ( -DHALF )  TO  ( -2*DHALF + ADAPT )
      C     THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
      C     A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
      C     EQUAL TO THE PRESET RATIO "PER" ( A SUBROUTINE INPUT VALUE ).
      C     THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD,"ADAPT", IS THEN USED
      C     (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR SIGNAL TO NOISE
      C     RATIO TREND ANALYSIS AND PREDICTION OF BIT ERROR RATE.
      C
      C  -- EXTERNAL VARIABLES     ( NAMES ENDING IN "M" DESIGNATE ARRAYS )
      C
            REAL    BITRATE      !* BIT RATE
            REAL    PER          !* PSEUDO BIT ERRORS / BITS TRANSMITTED
            REAL    PERINVRS     !* BITS TRANSMITTED / PSEUDO ERRORS
            REAL    RDIVBAD      !* NUMBER THAT NET PSEUDO ERRORS ARE DIVIDED
      C                             BY BEFORE THE A/D CONVERTER SETTING ADAPT.
            REAL    BERM(72)     !* BIT ERRORS PER BIT TRANSMITTED RATIO
            INTEGER NBER         !* NUMBER OF BERM VALUES = NBR ROWS PER TABLE
            REAL    AIDRM(25)    !* AMPLITUDE INTERSYMBOL INTERFERENCE TO
      C                             DECISION LEVEL RATIO = EPSLN / DHALF
            INTEGER NAIDR        !* NUMBER OF AIDRM VALUES = NUMBER OF TABLES
```

```
      REAL     AIDR          !* = AIDRM(NTABLE) CONSTANT FOR ANY ONE TABLE
      REAL     DNR           !* DECISION LEVEL TO NOISE RATIO= DHALF/NOISE
      REAL     SDHR          !* RMS SIGNAL TO DHALF VOLTAGE RATIO
      REAL     NSRM(72)      !* RMS NOISE TO TOTAL RMS SIGNAL RATIO
      REAL     SNRM(72)      !* SIGNAL TO NOISE RATIO IN DECIBELS
      REAL     ADRM(72)      !* ADAPTIVE THRESHOLD TO D RATIO= ADAPT/DHALF
      REAL     DPERDADM(72)  !* DERIVATIVE OF PER WITH RESPECT TO ADRM
      REAL     TMCNSTM(72)   !* ADAPTIVE THRESHLD QUASILINEAR TIME CNST
C
C  --  INTERNAL VARIABLES
C
      REAL     SCRATCH,T     !* SCRATCH PADS FOR TEMPORARY STORAGE
      INTEGER NROW           !* INDEX REGISTER FOR NUMBER OF ROWS
      INTEGER NTABLE         !* INDEX REGISTER FOR NUMBER OF TABLES
      LOGICAL DEBUG/T/       !* FOR DIAGNOSTIC PRINTOUT SET DEBUG = TRUE
1     FORMAT(3X,E11.3,F11.6,3X,F8.2,3(F11.6),/)
2     FORMAT (1H1,"TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.")
C
C#####################################################################
C
C                                   READ INPUT DATA
      READ, BITRATE
      READ, PERINVRS
      PER = 1. / PERINVRS
      READ, RDIVBAD
C
      NBER = 0
      READ, SCRATCH
C     DOWHILE( SCRATCH .LT. 99. )
        GO TO 9001
 9002   CONTINUE
        NBER      = NBER + 1
        BERM(NBER) = SCRATCH
        READ, SCRATCH
 9001   IF( SCRATCH .LT. 99. ) GO TO 9002
C     ENDO
C
      NAIDR = 0
      READ, SCRATCH
C     DOWHILE( SCRATCH .LT. 99. )
        GO TO 9003
 9004   CONTINUE
        NAIDR       = NAIDR + 1
        AIDRM(NAIDR) = SCRATCH
        READ, SCRATCH
 9003   IF( SCRATCH .LT. 99. ) GO TO 9004
C     ENDO
C
C                                       COMPUTE VALUES, STORE, PRINT TABLES
      NTABLE = 1
C     DOWHILE( NTABLE .LE. NAIDR )
        GO TO 9005
```

```
      9006    CONTINUE
      C                                 BEGIN A NEW TABLE
              AIDR = AIDRM(NTABLE)
              SDHR = SQRT(2.* (1.+ AIDR*AIDR/4.))
              NROW  = 1
      C
      C       DOWHILE( NROW .LE. NBER )
                GO TO 9007
       9008     CONTINUE
      C                                 BEGIN A NEW R
                IF(DEBUG)PRINT,"AIDR =",AIDR,"     BER =",BERM(NROW)
                CALL DNR9LE(BERM(NROW), AIDR, DN  )
                NSRM(NROW) = 1./(DNR * SDHR)
                SNRM(NROW) = -20.*ALOG10( NSRM(N  )W) )
                CALL ADR9LE(AIDR,DNR,PER,ADRM(NR  ),T)
                DPERDADM(NROW) = T
                TMCNSTM(NROW) = - RDIVBAD * 4095  / (BITRATE * T )
      C                                 "4095." FOR 4  5 BITS INTO A/D ACCUMULATOR
      C                                 CHANGE THE A/  OUTPUT FROM ZERO TO DHALF.
                IF(DEBUG) WRITE(6,1) BERM(NROW),  NSRM(NROW), SNRM(NROW),
           1      ADRM(NROW), DPERDADM(NROW), TM  STM(NROW)
      C                                 FINISHED A RO
                NROW = NROW + 1
       9007     IF( NROW .LE. NBER ) GO TO 9008
      C       ENDO
      C                                 FINISHED STORING A TABLE
                CALL TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADRM,DPERDADM,TMCNSTM,
           1    PERINVRS,BITRATE,RDIVBAD )
              IF (DEBUG) WRITE (6,2)
      C                                 STORAGE READY FOR A NEW TABLE
              NTABLE  = NTABLE + 1
       9005   IF( NTABLE .LE. NAIDR ) GO TO 9006
      C       ENDO
              PRINT,"NORMAL END"
      C
              STOP
              END
```

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

	ELAPSED TIME (SEC)	LINES/ MINUTE
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 COMPILATION
26K WORDS WERE USED FOR THIS COMPILATION

```
      SUBROUTINE ADR9LE (AIDR,DNR,PER,ADR,DPERDADR)
C
C         ( FINDS ADR FOR NINE-LEVEL 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 GAUSIAN NOISE
C         DEFINE "ADAPT" TO BE AN ADAPTIVELY CONTROLLED AMPLITUDE
C     THE NINE DATA LEVELS ARE THEN
C          ( +2*DHALF + EPSLN ), ( +2*DHALF ), ( +2*DHALF - EPSLN )
C          (   ZERO   + EPSLN ), (   ZERO   ), (   ZERO   - EPSLN )
C          ( -2*DHALF + EPSLN ), ( -2*DHALF ), ( -2*DHALF - EPSLN )
C
C     THE ABOVE NINE-LEVEL SIGNAL IS FURTHER DEGRADED BY THE ADDITION
C     OF GAUSSIAN NOISE.  TO MEASURE THE RMS AMPLITUDE OF THIS NOISE
C     (SO AS TO PROVIDE DATA FOR COMPUTING BAUD ERROR PROBABILITIES),
C     VOLTAGE COMPARITORS, LOGIC, AND COUNTERS ARE USED TO MEASURE THE
C     RELATIVE NUMBER OF BAUDS DETECTED WITHIN "PSEUDO ERROR" DETECTION
C     AMPLITUDE RANGES PER TOTAL NUMBER OF BAUDS EXAMINED.
C     FOR THIS SUBROUTINE IT IS ASSUMED THAT BAUDS WITH AMPLITUDES IN
C     EITHER OF THE FOLLOWING RANGES WILL BE COUNTED AS PSEUDO ERRORS.
C          FROM ( +DHALF )  TO  ( +2*DHALF - ADAPT )
C       AND FROM ( -DHALF )  TO  ( -2*DHALF + ADAPT )
C     THE OFFSET THRESHOLD AMPLITUDE "ADAPT" IS CONTINUALLY ADJUSTED BY
C     A CLOSED LOOP CONTROL SYSTEM SO AS TO KEEP THE PSEUDO ERROR RATE
C     EQUAL TO THE PRESET RATIO "PER" ( A SUBROUTINE INPUT VALUE ).
C     THE AMPLITUDE OF THE PSEUDO ERROR THRESHOLD,"ADAPT", IS THEN USED
C     (WITH THE AID OF TOOLS SUCH AS THIS PROGRAM) FOR TREND ANALYSIS
C     AND PREDICTION OF BAUD ERROR RATE ("BER" IN SUBROUTINE DNR9LE)
C
C  --  INPUT VARIABLES
C
      REAL    AIDR       ;* AMPLITUDE INTERSYMBOL INTERFERENCE TO DATA
      REAL    DNR        ;* DATA TO NOISE RATIO = (DHALF) / NOISE
C                           RATIO, EPSLN / DHALF
      REAL    PER        ;* VALUE OF PRESET PSEUDO ERROR RATE
C
C  --  OUTPUT VARIABLES
C
      REAL    ADR        ;* ADAPTIVE THRESHOLD TO "D" RATIO= ADAPT/DHALF
      REAL    DPERDADR   ;* DERIVATIVE OF "PER" WITH RESPECT TO "ADR"
C
C  --  INTERNAL VARIABLES
C  --  INTERNAL VARIABLES
C
      LOGICAL DEBUG/F/   ;* FOR DIAGNOSTIC PRINTOUT SET DEBUG = TRUE
      INTEGER NRAPHSON   ;* COUNTS NEWTON-RAPHSON ITERATIONS
      REAL    A          ;* NEWEST GUESS FOR VALUE OF ("ADAPT"/"NOISE)
```

```
C                                   TO ATTAIN THE SPECIFIED ERROR RATE
      REAL    ANROLD     !* PREVIOUS GUESS FOR "ANR", THAT IS OLD "A".
      REAL D1,D2,D3,D4   !* INTEGER MULTIPLES OF "DNR"
      REAL    E          !* "EPSLN"/"NOISE RATIO, THAT IS, (AIDR * DNR).
      REAL    PERNEW     !* PSEUDO ERROR COMPUTED USING NEWEST GUESS "A"
      REAL    DPERDANR   !* DERIVATIVE OF "PER" WITH RESPECT TO "ANR"
      REAL    LNTARGET   !* NATURAL LOG OF "PER" (THE TARGET VALUE)
      REAL    LNPERNEW   !* NATURAL LOG OF "PERNEW" (COMPUTED USING "A")
      REAL    ERRLNPER   !* = LNPERNEW - LNTARGET, ERROR IN LOG PERNEW
      REAL    ERRNEW     !* ABSOLUTE VALUE OF ERRLNPER
      REAL    ERROLD     !* PREVIOUS VALUE ERRNEW
      REAL    THING      !* TEMPORARY STORAGE FOR SCRATCH PAD NUMBERS
      REAL    DLNPERDA   !* DERIVATIVE OF "LNPERNEW" WITH RSPT TO "ANR"
C
C#####################################################################
C
      LNTARGET = ALOG( PER )
      E  = AIDR * DNR
C                                   MAKE FIRST GUESS, A, AT PROPER VALUE FOR ANR
      A  = E + ZNORMQ( 4. * PER)    !* A=INVERSE OF 2*FIRST TERM PERNEW
      A = AMIN1( A , .98*DNR )
      D1 = 1. * DNR
      D2 = 2. * DNR
      D3 = 3. * DNR
      D4 = 4. * DNR
C
C                                   ADJUST THE ANR VALUE BY NEWTON-RAPHSON
C                                   ITERATION USING ALOG(PERNEW/PER) RATHER THAN
C                                   (PERNEW-PER) FOR THE ERROR TERM TO REDUCE
C                                   SCALING PROBLEMS AND IMPROVE CONVERGENCE.
      NRAPHSON = 0
      ERROLD   = 1200.
      ERRNEW   = 1100.
C     DOWHILE( ERRNEW .LT. ERROLD )
        GO TO 9001
 9002   CONTINUE
C
        IF(.NOT.( ERRNEW .LT. 1000. ))GOTO 9003
C                                         CORRECTION ONLY THE FIRST PASS
          THING =
     1      +    DFNORM(  +A-E) + 2.*DFNORM(  +A) +    DFNORM(  +A+E)
     2      + 2.*DFNORM(D2-A-E) + 4.*DFNORM(D2-A) + 2.*DFNORM(D2-A+E)
C                 TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
C    3      +    DFNORM(D4-A-E) + 2.*DFNORM(D4-A) +    DFNORM(  -A+E)
          DPERDANR = -THING / 8.
          DLNPERDA = DPERDANR / PERNEW
          ANROLD   = A
C                                       NOTICE (-0.5*LNTARGET) IS POSITIVE.
          IF(.NOT.( ERRLNPER .LE. -0.5*LNTARGET ))GOTO 9004
C                                           USE FULL-SIZED CORRECTION
            A = A - ERRLNPER / DLNPERDA
C
```

```
                    GO TO 9005
C                 ELSE
 9004               CONTINUE
C                                                 USE LIMITED CORRECTION TO
C                                                 REDUCE OVERHOOT TENDENCY
                    LNPERNEW = ERRLNPER + LNTARGET
                    A = A - LNPERNEW / DLNPERDA
 9005               CONTINUE
C                 ENDIF
                  NRAPHSON = NRAPHSON + 1
 9003             CONTINUE
C               ENDIF
C                                 NEWTON RAPHSON CORRECTION, IF ANY, COMPLETED
C                                   NOW EVALUATE THE RESIDUAL ERROR
                THING =
     1            +       QNORM(   +A-E) + 2. * QNORM(    A) +       QNORM(   A+E)
     2            +       QNORM(D1  -E) + 2. * QNORM(D1   ) +       QNORM(D1  +E)
     3            - 2. * QNORM(D2-A-E) - 4. * QNORM(D2-A) - 2. * QNORM(D2-A+E)
C                           TERMS OF THING BELOW THIS COMMENT CARD ARE NEGLECTED
C    4               +       QNORM(D3  -E) + 2. * QNORM(D3   ) +       QNORM(D3  +E)
C    5               -       QNORM(D4-A-E) - 2. * QNORM(D4-A) -       QNORM(D4-A+E)
                  PERNEW    = THING / 8.
                  ERRLNPER = ALOG( PERNEW / PER )
                  ERROLD    = ERRNEW
                  ERRNEW    = ABS( ERRLNPER )
                  IF(DEBUG) PRINT,"NRAPHSON =",NRAPHSON,"     NATURAL LOG ",
     1              "PERNEW/PERTARGET =", ERRLNPER
 9001             IF( ERRNEW .LT. ERROLD ) GO TO 9002
C               ENDO
C
                ADR      = ANROLD   / DNR
                DPERDADR = DPERDANR * DNR
                RETURN
                END
```

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

	ELAPSED TIME (SEC)	LINES/ MINUTE
OVERHEAD	.07	
PHASE 1	.09	83754
PHASE 2	.00	
PHASE 4	.07	107992
PHASE 5	.18	45940
TOTAL	.43	19188

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

```
      SUBROUTINE DNR9LE(BER,AIDR,DNR)      ! * 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
C     BIT ERROR RATE (BER) FOR THREE LEVEL PARTIAL RESPONSE EYE PATTERN
C     WITH INTERSYMBOL INTERFERENCE (OF AMPLITUDE AIDR) DISTORTING THE
C     THREE-LEVEL EYE INTO A NINE-LEVEL EYE
C
C     NEEDS D NORM, QNORM, AND ZNORMQ (IN "NORMAL" FILE)
C
C   -- INPUT V RIABLES --
C
      REAL    BER     !*  (BAUDS IN ERROR)/(BAUDS TRANSMITTED)
      REAL    AIDR    !*  (AMPLITUDE OF INTERSYMBOL INTERFERENCE)/D
C                           WHERE 2D = NOMINAL DISTANCE BETWEEN LEVELS
C   -- OUTPUT -
C
      REAL    DNR     !*  D / RMS NOISE AMPLITUDE, D DEFINED ABOVE
C
C   -- INTERNA VARIABLES
C
      LOGICAL DEBUG/F/!*  TRUE GIVES DIAGNOSTIC PRINTOUT
      INTEGER NRAPHSON!*  COUNTS NEWTON-RAPHSON ITERATIONS
      REAL    DNRNEW  !*  NEWEST APPROX TO DNR VALUE FOR SPECIFIED BER
      REAL    DNROLD  !*  PREVIOUS VALUE OF DNRNEW
      REAL    BERNEW  !*  (BIT ERROR RATE COMPUTED FOR DNRNEW
      REAL    ERRBER  !*  (BERNEW - BER) * 1.E+10 TO AVOID UNDERFLOW
      REAL    ERRNEW  !*  ABSOLUTE VALUE OF ERRBER USING DNRNEW
      REAL    ERROLD  !*  PREVIOUS VALUE OF ERRNEW
      REAL    DRVBER  !*  DERIVATIVE OF BERNEW WRT DNRNEW
C
C**********************************************************************
C
      DNRNEW = ZNORMQ(BER/1.5) / (1. - AIDR)
C                                       IMPROVE FIRST APPROXIMATION OF
C                                       DNR BY NEWTON-RAPHSON ITERATION
C                 ERROR TERMS SCALED BY 1.E+10 TO AVOID UNDERFLOW
      ERROLD    = 10.E+10
      ERRNEW    =  2.E+10
      NRAPHSO   = 0
C
C     DOWHILE ( ERRNEW .LT. ERROLD )
        GO TO 9001
 9002   CONTI UE
        IF(.N T.( NRAPHSON .GT.0 ))GOTO 9003
          DRV ER = -(
     1      + ( * DFNORM( DNRNEW * (1.-AIDR) ) * (1.-AIDR)
     2      +12 * DFNORM( DNRNEW             )
     3      + ( * DFNORM( DNRNEW * (1.+AIDR) ) * (1.+AIDR) ) / 16.
          DNR LD = DNRNEW
          DNR EW = (DNRNEW*1.E+10 - ERRBER/DRVBER ) *1.E-10
 9003     CO INUE
C       ENDIF
```

```
      BERNEW =  (
     1      + 6.  *  QNORM( DNRNEW * (1.-AIDR) )
     2      +12.  *  QNORM( DNRNEW             )
     3      + 6.  *  QNORM( DNRNEW * (1.+AIDR) ) ) / 16.
      ERRBER = BERNEW * 1.E+10 - BER * 1.E+10
      IF(.NOT.( NRAPHSON .GT.0 ))GOTO 9004
        ERROLD = ERRNEW
        ERRNEW = ABS(ERRBER)
 9004   CONTINUE
C     ENDIF
      IF(DEBUG)PRINT,"NRAPHSON =",NRAPHSON,"ERR BER *1.E+10 =",ERRBER
      NRAPHSON = NRAPHSON + 1
 9001 IF( ERRNEW .LT. ERROLD ) GO TO 9002
C     ENDO
      DNR = DNROLD
      RETURN
      END
```

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

```
      SUBROUTINE TABLE (BERM,NBER,AIDR,NSRM,SNRM,ADRM,DPERDADM,
     1   TMCNSTM,PERINVRS,BITRATE,RDIVBAD )
C
C
C                    ALTERED BY  W. F. ACKER         MARCH 1977
C                    WRITTEN BY: R. A. MEREDITH        OCT 1976
C
C  --  EXTERNAL VARIABLES      ( NAMES ENDING IN "M" DESIGNATE ARRAYS ):
C
      REAL     ADRM(72)     !* ADAPTIVE THRESHOLD TO D RATIO= ADAPT/DHALF
      REAL     AIDR         !* AMPLITUDE INTERSYMBOL INTERFERENCE TO
C                              DECISION LEVEL RATIO = EPSLN / DHALF
      REAL     BERM(72)     !* BIT ERRORS PER BIT TRANSMITTED RATIO
      REAL     DPERDADM(72)   !* DERIVATIVE OF PER WITH RESPECT TO ADRM
      REAL     NSRM(72)     !* RMS NOISE TO TOTAL RMS SIGNAL RATIO
      REAL     PERINVRS     !* BITS TRANSMITTED / PSEUDO ERRORS
      REAL     SNRM(72)     !* SIGNAL TO NOISE RATIO IN DECIBELS
      REAL     TMCNSTM(72)    !* ADAPTIVE THRESHLD QUASILINEAR TIME CNST
      INTEGER NBER          !* NUMBER OF BERM VALUES = NAR ROWS PER TABLE
      REAL     RDIVBAD      !* NUMBER THAT NET PSEUDO ERRORS ARE DIVIDED
C                              BY BEFORE THE A/D CONVERTER SETTING ADAPT.
C
C  --  INTERNAL VARIABLES
C
      INTEGER LASTROW      !* NUMBER OF LAST ROW ON PAGE
      INTEGER NROW         !* INDEX REGISTER FOR NUMBER OF ROWS
      INTEGER ILINE        !* LINE COUNTER
      INTEGER NLINE        !* LINE COUNTER FOR LINE SPACER
C
C  --  FORMAT STATEMENTS
C
1     FORMAT (1H1)
2     FORMAT (//)
3     FORMAT (24X,"BASEBAND EYE PATTERN MONITOR TABLES")
4     FORMAT (1HO,28X,"TABLE FOR AIDR EQUALS ",F9.4 )
5     FORMAT (1H ,23X,"PSEUDO ERROR RATE EQUALS   1.0 /",F9.0)
7     FORMAT (1HO,8X,"BIT ERROR",6X,"N / S",7X,"SNR",7X,"A / D",6X,
     1        "DERIV PER",7X,"TIME")
8     FORMAT (1H ,11X,"RATE",8X,"RATIO",6X,"IN DB",6X,"RATIO",6X,
     1        "WRT A / D",5X,"CONSTANT")
10     FORMAT (5X,E12.3,F13.6,F9.2,3F13.6)
11    FORMAT (1H )
12    FORMAT (8X,"NOMENCLATURE:")
13    FORMAT (8X,"D                    = HALF OF THE NORMAL DISTANCE ",
     1   "BETWEEN DATA LEVELS FOR THE",/,26X,"THE THREE LEVEL EYE ",
     2   "I.E., DECISION LEVEL." )
14    FORMAT (8X,"N / S RATIO     = RMS NOISE TO RMS SIGNAL RATIO.")
15    FORMAT (8X,"SNR             = SIGNAL POWER TO NOISE POWER IN ",
     1   "DECIBLES.")
16    FORMAT (8X,"A / D RATIO     = ADAPTIVE THRESHOLD AMPLITUDE TO ",
     1   "D RATIO.")
17    FORMAT (8X,"DERIV PER WRT  = DERIVATIVE OF PSEUDO ERROR RATE ",
```

```
     1    "WITH RESPECT TO A / D RATIO.")
18   FORMAT (8X,"TIME CONSTANT  = QUASILINEAR TIME CONSTANT OF THE ",
     1    "ADAPTIVE THRESHOLD",/,25X,"LOOP FOR SMALL CHANGES AROUND ",
     2    "STEADY STATE VALUES",/,25X,"WHEN BITE RATE = ",F14.0,
     3    "  AND ERROR SIGNAL",/,25X,"DIVIDER RATIO INTO D/A CONVERTER",
     4    " = ",F14.0 )
19   FORMAT (8X,"AIDR           = AMPLITUDE OF INTERSYMBOL",
     1    " INTERFERENCE TO D RATIO.")
C
C##################################################################
      NROW = 0
C     DOWHILE (NROW .LT. NBER)
        GO TO 9001
 9002   CONTINUE
C                                              PRINT A PAGE
C
C
C                                 PRINT HEADINGS
      WRITE (6,1)
      WRITE (6,2)
      WRITE (6,3)
      WRITE (6,4) AIDR
      WRITE (6,5) PERINVRS
      WRITE (6,7)
      WRITE (6,8)
      WRITE (6,9)
9     FORMAT (1H0)
C                                 PRINT ROWS OF DATA
      ILINE = 0
      LASTROW = MIN( NROW+36, NBER )
C     DOWHILE( NROW .LT. LASTROW )
          GO TO 9003
 9004     CONTINUE
        NROW = NROW + 1
C                                              PRINT A ROW
      WRITE (6,10) BERM (NROW),NSRM(NROW),SNRM(NROW),ADRM(NROW),
     1               DPERDADM(NROW),TMCNSTM(NROW)
C                                 DOUBLE SPACE IF NUMBER OF DATA ROWS .LE.15
          IF(.NOT.(NBER .LE. 15))GOTO 9005
          WRITE (6,11)
      ILINE = ILINE + 2
          GO TO 9006
C     ELSE
 9005       CONTINUE
          ILINE = ILINE + 1
 9006     CONTINUE
C     ENDIF
 9003     IF( NROW .LT. LASTROW ) GO TO 9004
C     ENDO
C                                 ALL DATA PRINTED. MAKE RESIDUAL ROWS BLANK
      NLINE = 39- ILINE
C     DOWHILE (NLINE .GT. 0 )
          GO TO 9007
```

```
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                 WRITE (6,18) BITRATE,RDIVBAD
119       9001      IF(NROW .LT. NBER) GO TO 9002
120       C         ENDO
121                 RETURN
122                 END
```

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 COMPILATION
26K WORDS WERE USED FOR THIS COMPILATION

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

SUBPROGRAMS INCLUDED IN DECK.

			$	OPTION	FORTRAN
023434	08/10/77	....	.....	023434	
			.DATA.	022450	
022020	08/10/77	DR9L	ADR9LE	022020	
			.DATA.	021744	
021510	08/10/77	NR9L	DNR9LE	021510	
			.DATA.	021452	
021124	08/10/77	ABLE	TABLE	021124	
			.DATA.	020560	
020536	09/14/76	DFNO	DFNORM	020536	
			.DATA.	020526	
020506	09/14/76	PNOR	PNORM	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	ZNORMO	017446	
			.DATA.	017326	

SUBPROGRAMS OBTAINED FROM SYSTEM LIBRARY

017236	01/10/73	FSQR	.SQRT1	017240	SQRT	017236					
017100	01/10/73	FALG	.ALOG1	017110	.ALOGT	017102	ALOG10	017100	ALOG	017106	
016770	01/10/73	FEXP	.EXP1	016772	EXP	016770					
016442	75/03/21	FRDD	.FRDD.	016612	.FWRD.	016613	.FPUN.	016614	.FENC.	016615	.FDEC. 016616
			.FRCD.	016617	.FPRN.	016620	.FRTN.	016621	.FFIL.	016622	.DBCNV 016623
			.BDCNV	016645	..ABLK	016455	.QCOMP	016504	..LNSZ	016514	..A37R 016611
			.PRNIT	016457	.ASTRK	016764	..TC	016461	.POINT	016501	.SIGN 016502
			.FRMTR	016664	.FRMTZ	016664	.PUINT	016460	.FILL	016512	..A2 016446
			.FXMC.	016443	..A7	016510	..A1	016446	..A3	016456	..A4 016506
			..A8	016512	..A9	016515	..A13	016516	..A14	016517	..A15 016520
			..A17	016521	..A18	016446	..A21	016524	..A24	016446	..A30 016663
			..A31	016535	..A27	016532	..A32	016560	..A33	016562	..A34 016563
			..A35	016564	..A37	016605	..A51	016444	..A52	016442	.LPRCH 016450
			.CMACH	016451	.ECHR	016452	.OCT60	016447	.UPPRT	016453	.UPPRF 016454
			.LWRT	016453	.LWRF	016454	.RCW18	016534			
012756	75/02/14	FDIO	.FRD	015621	.FWRT	015533	.FPN	015526	.FNC	015750	.FDC 016001
			.FCD	015621	.FPR	015533	.FFL	015733	.FRT	015712	.I01 015365
			.I05	015460	.LBCTR	016347	.FFDBC	016432	.FCNVI	013557	.FCNVR 013566
			.FCNV2	013652	.SKPB1	013536	.INCTR	016434	.CKSTA	013761	.FMSC1 013011
			.FMSC2	012777	.FMSC4	013014	.FMSC5	013051	.FMSC6	013023	.EFFLG 016433
			.SVRG	012762	.RETIN	012775	.GTARG	015543	.SXIT	013066	.LNBGN 016027
			.SKPB4	013545	.VLIST	013472	.CSCFP	013104	.CFFXD	013074	.FEFLT 013156
			.FDFLT	013155	.CSLSH	015350	.CDCPT	013661	.CSCFM	013102	.CCMMA 013120
			.CRPAR	013214	.CLPAR	013160	.LBUFF	016350	.SKPB3	013553	.CKSTP 013742
			..CKST	013753	.DATUM	016332	..STOP	014154	.VCOMA	014604	..CCR 014617
			.CN1	013776	.FWSZ	016421	.FCNV.	013636	.STP	014147	.FCNVD 013575

ORIGIN	DATE	MODULE	ENTRY LOCATION	ENTRY LOCATION	ENTRY LOCATION	ENTRY LOCATION	ENTRY LOCATION
			.FCNVL 013605	.FCNVC 013614			
012702	74/01/11	FEOF	.FEOF. 012702				
012536	74/07/22	FSLW	.FSLFW 012536				
012210	09/01/73	FXEM	FXEM 012221	.FXEM. 012220	.F.XE 012231	F.XMC 012360	.TAB1 012510
			.LSTMS 012520	.KIND 012334	.BUGG 012333	.MXFRR 012222	..FX1 012224
			..FX2 012246	..FX3 012254	..FX10 012343	.LRG 012270	..FX8 012254
			..FX9 012245	.CLLR 012464	.EYDEE 012466	..FX4 012256	..FX5 012255
			..FX6 012321	..FX7 012350			
011030	75/02/14	FXER	.FXM. 011050	F.XM 011517	ANYERR 011666	FXOPT 011550	FXDVCK 011610
			.FGERR 011541	FXALT 011625	.FXALT 011637	S.REG. 011040	.FERTN 011516
			FXDV 012146	FXFDV 012144	FXCODE 011474	.TSMS 011641	.MSX 011645
			.FXPNT 011375	.FXTRC 011137	.FXSW1 011476	.FXSW2 011502	.FXSW3 011506
			FRRLK 011674	.FLTPR 011676			
010750	73/05/24	FXIT	.FEXIT 010750	EXIT 010750	.JEXIT 010750	JFXIT 010750	
010160	74/11/06	FOPE	.FOPEN 010207	.FBAD. 010202	.FBFTB 010672	.FXOP. 010431	.FGTFB 010203
			.FJOV. 010205				
007722	07/04/65	FDPT	.FIDO. 010036				
007576	73/09/05	FSTU	.FSETU 007623	.SETU. 007623	.RCOV 007612	FPARAM 007576	.FMDB. 007613
			.FTL 007621	.FLTX1 007621	.LINSZ 007614		
007574	73/09/03	FBCD	.ASCB. 007574	.ASCB 007574			
007372	03/05/73	FTAB	.GTAB. 007372				
007366	74/10/24	FMXN	.MXNO 007366	.NMXNO 007367	.GFLG 007370	.FRENT 007371	
007336	01/03/66	GSTI	.GSTIN 007336	SETIN 007336			
007242	01/03/66	GSTO	.GSTOT 007242	SETOUT 007242			
007172	07/07/69	GWRC	.GWTRC 007172	.GAWTR 007172	WTREC 007172		
006436	75/01/15	GGTB	.GGTBK 006436	GETBK 006436	.GGET 006440	GET 006440	.GAGTB 006436
			.GAGET 006440	.GR001 006442			
006430	07/07/69	GRMT	.GOPNP 006430	.GCLSR 006430	.GGETR 006430	.GPUTR 006430	
005666	75/03/21	GPTB	.GCOPY 005666	COPY 005666	.GPTBK 005671	PUTBK 005671	.GPUT 005674
			PUT 005674	.GACOP 005666	.GAPTB 005671	.GAPUT 005674	.GFR67 006403
			.GPSAV 005677				
005072	75/02/05	GOPE	.GOPEN 005072	.GAOPE 005072	OPEN 005072		
005064	04/29/72	GRNT	.GXREA 005064	.GXWRT 005064	.GXLAB 005064	.GXOPN 005065	
004374	74/12/06	GCLO	.GCLSF 004374	.GACLS 004374	.GR185 004504	.GR186 004604	.GR178 004511
			CLOSE 004374	.GBCLS 004374			
004210	73/12/03	G20R	.GR200 004210				
004122	75/01/08	G25R	.GR225 004122				
004046	04/25/73	G50R	.GR250 004046				
003574	75/02/03	G27R	.GR275 003574				
003412	75/02/05	G37R	.GR377 003450	.GR375 003412	.GR37X 003467	.GR390 003507	
003370	74/12/03	G60R	.GR960 003375	.GARTB 003370			
002774	75/02/05	G80R	.GR980 002774	.GR979 003077	.GR99X 003000	.GR984 003045	.GR985 003077
			.GR999 003013	ASCII 003075	ASCRPT 003102	NORRPT 003362	
002742	75/04/11	G90R	.GR990 002742	.GR991 002763			
002102	04/29/72	GLAB	.GINHD 002107	.GOUTH 002106	.GINTL 002105	.GOUTL 002104	.GJSWH 002103
			.GOVRL 002110	.GLREA 002200	.GRCVY 002102	.GRPRV 002137	
002100	03/07/66	GINI	.GINID 002100				

	RANGE	SIZE
ALLOCATED CORE	000000 THRU 023777	024000
RELOCATABLE	002100 THRU 023777	021700

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

FCB AND BUFFER SPACE

AVAILABLE	000101 THRU 002077	001777
FILE CTRL BLKS	001750 THRU 002100	000131
MAXIMUM BUFFER SPACE REQUIRED		001202

10K. IS THE MINIMUM MEMORY NEEDED TO LOAD THIS ACTIVITY WITH ALL FILES OPEN 740808 2/H

001164 LOCATIONS REQUIRED FOR LOAD TABLE

EXECUTION PROGRAM ENTERED AT 023434 THROUGH .FSETU

AIDR = 0.	BER = 0.10000000E-02
AIDR = 0.	BER = 0.63000000E-03
AIDR = 0.	BER = 0.40000000E-03
AIDR = 0.	BER = 0.25000000E-03
AIDR = 0.	BER = 0.16000000E-03
AIDR = 0.	BER = 0.10000000E-03
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AIDR = 0.	BER = 0.25000000E-04
AIDR = 0.	BER = 0.16000000E-04
AIDR = 0.	BER = 0.10000000E-04
AIDR = 0.	BER = 0.63000000E-05
AIDR = 0.	BER = 0.40000000E-05
AIDR = 0.	BER = 0.25000000E-05
AIDR = 0.	BER = 0.16000000E-05
AIDR = 0.	BER = 0.10000000E-05
AIDR = 0.	BER = 0.63000000E-06
AIDR = 0.	BER = 0.40000000E-06
AIDR = 0.	BER = 0.25000000E-06
AIDR = 0.	BER = 0.16000000E-06
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AIDR = 0.	BER = 0.25000000E-07
AIDR = 0.	BER = 0.16000000E-07
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AIDR = 0.	BER = 0.63000000E-08
AIDR = 0.	BER = 0.40000000E-08
AIDR = 0.	BER = 0.25000000E-08
AIDR = 0.	BER = 0.16000000E-08
AIDR = 0.	BER = 0.10000000E-08
AIDR = 0.	BER = 0.63000000E-09
AIDR = 0.	BER = 0.40000000E-09
AIDR = 0.	BER = 0.25000000E-09
AIDR = 0.	BER = 0.16000000E-09
AIDR = 0.	BER = 0.10000000E-09
AIDR = 0.	BER = 0.63000000E-10
AIDR = 0.	BER = 0.40000000E-10
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AIDR = 0.	BER = 0.16000000E-10
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AIDR = 0.	BER = 0.16000000E-11
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AIDR = 0.	BER = 0.16000000E-12
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AIDR = 0.	BER = 0.40000000E-14
AIDR = 0.	BER = 0.25000000E-14
AIDR = 0.	BER = 0.16000000E-14
AIDR = 0.	BER = 0.10000000E-14
AIDR = 0.20000000E-01	BER = 0.10000000E-02
AIDR = 0.20000000E-01	BER = 0.63000000E-03
AIDR = 0.20000000E-01	BER = 0.40000000E-03

AIDR	=	0.20000000E-01	BER = 0.25000000E-03
AIDR	=	0.20000000E-01	BER = 0.16000000E-03
AIDR	=	0.20000000E-01	BER = 0.10000000E-03
AIDR	=	0.20000000E-01	BER = 0.63000000E-04
AIDR	=	0.20000000E-01	BER = 0.40000000E-04
AIDR	=	0.20000000E-01	BER = 0.25000000E-04
AIDR	=	0.20000000E-01	BER = 0.16000000E-04
AIDR	=	0.20000000E-01	BER = 0.10000000E-04
AIDR	=	0.20000000E-01	BER = 0.63000000E-05
AIDR	=	0.20000000E-01	BER = 0.40000000E-05
AIDR	=	0.20000000E-01	BER = 0.25000000E-05
AIDR	=	0.20000000E-01	BER = 0.16000000E-05
AIDR	=	0.20000000E-01	BER = 0.10000000E-05
AIDR	=	0.20000000E-01	BER = 0.63000000E-06
AIDR	=	0.20000000E-01	BER = 0.40000000E-06
AIDR	=	0.20000000E-01	BER = 0.25000000E-06
AIDR	=	0.20000000E-01	BER = 0.16000000E-06
AIDR	=	0.20000000E-01	BER = 0.10000000E-06
AIDR	=	0.20000000E-01	BER = 0.63000000E-07
AIDR	=	0.20000000E-01	BER = 0.40000000E-07
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AIDR	=	0.20000000E-01	BER = 0.16000000E-07
AIDR	=	0.20000000E-01	BER = 0.10000000E-07
AIDR	=	0.20000000E-01	BER = 0.63000000E-08
AIDR	=	0.20000000E-01	BER = 0.40000000E-08
AIDR	=	0.20000000E-01	BER = 0.25000000E-08
AIDR	=	0.20000000E-01	BER = 0.16000000E-08
AIDR	=	0.20000000E-01	BER = 0.10000000E-08
AIDR	=	0.20000000E-01	BER = 0.63000000E-09
AIDR	=	0.20000000E-01	BER = 0.40000000E-09
AIDR	=	0.20000000E-01	BER = 0.25000000E-09
AIDR	=	0.20000000E-01	BER = 0.16000000E-09
AIDR	=	0.20000000E-01	BER = 0.10000000E-09
AIDR	=	0.20000000E-01	BER = 0.63000000E-10
AIDR	=	0.20000000E-01	BER = 0.40000000E-10
AIDR	=	0.20000000E-01	BER = 0.25000000E-10
AIDR	=	0.20000000E-01	BER = 0.16000000E-10
AIDR	=	0.20000000E-01	BER = 0.10000000E-10
AIDR	=	0.20000000E-01	BER = 0.63000000E-11
AIDR	=	0.20000000E-01	BER = 0.40000000E-11
AIDR	=	0.20000000E-01	BER = 0.25000000E-11
AIDR	=	0.20000000E-01	BER = 0.16000000E-11
AIDR	=	0.20000000E-01	BER = 0.10000000E-11
AIDR	=	0.20000000E-01	BER = 0.63000000E-12
AIDR	=	0.20000000E-01	BER = 0.40000000E-12
AIDR	=	0.20000000E-01	BER = 0.25000000E-12
AIDR	=	0.20000000E-01	BER = 0.16000000E-12
AIDR	=	0.20000000E-01	BER = 0.10000000E-12
AIDR	=	0.20000000E-01	BER = 0.63000000E-13
AIDR	=	0.20000000E-01	BER = 0.40000000E-13
AIDR	=	0.20000000E-01	BER = 0.25000000E-13
AIDR	=	0.20000000E-01	BER = 0.16000000E-13
AIDR	=	0.20000000E-01	BER = 0.10000000E-13
AIDR	=	0.20000000E-01	BER = 0.63000000E-14
AIDR	=	0.20000000E-01	BER = 0.40000000E-14
AIDR	=	0.20000000E-01	BER = 0.25000000E-14
AIDR	=	0.20000000E-01	BER = 0.16000000E-14
AIDR	=	0.20000000E-01	BER = 0.10000000E-14
AIDR	=	0.40000000E-01	BER = 0.10000000E-02
AIDR	=	0.40000000E-01	BER = 0.63000000E-03
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AIDR	=	0.40000000E-01	BER = 0.25000000E-03
AIDR	=	0.40000000E-01	BER = 0.16000000E-03
AIDR	=	0.40000000E-01	BER = 0.10000000E-03
AIDR	=	0.40000000E-01	BER = 0.63000000E-04
AIDR	=	0.40000000E-01	BER = 0.40000000E-04

AIDR =	0.40000000E-01	BER =	0.25000000E-04
AIDR =	0.40000000E-01	BER =	0.16000000E-04
AIDR =	0.40000000E-01	BER =	0.10000000E-04
AIDR =	0.40000000E-01	BER =	0.63000000E-05
AIDR =	0.40000000E-01	BER =	0.40000000E-05
AIDR =	0.40000000E-01	BER =	0.25000000E-05
AIDR =	0.40000000E-01	BER =	0.16000000E-05
AIDR =	0.40000000E-01	BER =	0.10000000E-05
AIDR =	0.40000000E-01	BER =	0.63000000E-06
AIDR =	0.40000000E-01	BER =	0.40000000E-06
AIDR =	0.40000000E-01	BER =	0.25000000E-06
AIDR =	0.40000000E-01	BER =	0.16000000E-06
AIDR =	0.40000000E-01	BER =	0.10000000E-06
AIDR =	0.40000000E-01	BER =	0.63000000E-07
AIDR =	0.40000000E-01	BER =	0.40000000E-07
AIDR =	0.40000000E-01	BER =	0.25000000E-07
AIDR =	0.40000000E-01	BER =	0.16000000E-07
AIDR =	0.40000000E-01	BER =	0.10000000E-07
AIDR =	0.40000000E-01	BER =	0.63000000E-08
AIDR =	0.40000000E-01	BER =	0.40000000E-08
AIDR =	0.40000000E-01	BER =	0.25000000E-08
AIDR =	0.40000000E-01	BER =	0.16000000E-08
AIDR =	0.40000000E-01	BER =	0.10000000E-08
AIDR =	0.40000000E-01	BER =	0.63000000E-09
AIDR =	0.40000000E-01	BER =	0.40000000E-09
AIDR =	0.40000000E-01	BER =	0.25000000E-09
AIDR =	0.40000000E-01	BER =	0.16000000E-09
AIDR =	0.40000000E-01	BER =	0.10000000E-09
AIDR =	0.40000000E-01	BER =	0.63000000E-10
AIDR =	0.40000000E-01	BER =	0.40000000E-10
AIDR =	0.40000000E-01	BER =	0.25000000E-10
AIDR =	0.40000000E-01	BER =	0.16000000E-10
AIDR =	0.40000000E-01	BER =	0.10000000E-10
AIDR =	0.40000000E-01	BER =	0.63000000E-11
AIDR =	0.40000000E-01	BER =	0.40000000E-11
AIDR =	0.40000000E-01	BER =	0.25000000E-11
AIDR =	0.40000000E-01	BER =	0.16000000E-11
AIDR =	0.40000000E-01	BER =	0.10000000E-11
AIDR =	0.40000000E-01	BER =	0.63000000E-12
AIDR =	0.40000000E-01	BER =	0.40000000E-12
AIDR =	0.40000000E-01	BER =	0.25000000E-12
AIDR =	0.40000000E-01	BER =	0.16000000E-12
AIDR =	0.40000000E-01	BER =	0.10000000E-12
AIDR =	0.40000000E-01	BER =	0.63000000E-13
AIDR =	0.40000000E-01	BER =	0.40000000E-13
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AIDR =	0.40000000E-01	BER =	0.10000000E-13
AIDR =	0.40000000E-01	BER =	0.63000000E-14
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AIDR =	0.60000000E-01	BER =	0.63000000E-03
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AIDR =	0.60000000E-01	BER =	0.10000000E-03
AIDR =	0.60000000E-01	BER =	0.63000000E-04
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AIDR =	0.60000000E-01	BER =	0.16000000E-04
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AIDR =	0.60000000E-01	BER =	0.63000000E-05
AIDR =	0.60000000E-01	BER =	0.40000000E-05

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AIDR =	0.60000000E-01	BER =	0.63000000E-06
AIDR =	0.60000000E-01	BER =	0.40000000E-06
AIDR =	0.60000000E-01	BER =	0.25000000E-06
AIDR =	0.60000000E-01	BER =	0.16000000E-06
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AIDR =	0.60000000E-01	BER =	0.63000000E-07
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AIDR =	0.80000000E-01	BER =	0.40000000E-06

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AIDR =	0.80000000E-01	BER =	0.63000000E-09
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AIDR =	0.80000000E-01	BER =	0.25000000E-09
AIDR =	0.80000000E-01	BER =	0.16000000E-09
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AIDR =	0.80000000E-01	BER =	0.63000000E-10
AIDR =	0.80000000E-01	BER =	0.40000000E-10
AIDR =	0.80000000E-01	BER =	0.25000000E-10
AIDR =	0.80000000E-01	BER =	0.16000000E-10
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AIDR =	0.80000000E-01	BER =	0.25000000E-11
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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
UNCLASSIFIED 1077-14813-VOL-3 RADC-TR-77-431-VOL-3 NL

2 OF 2
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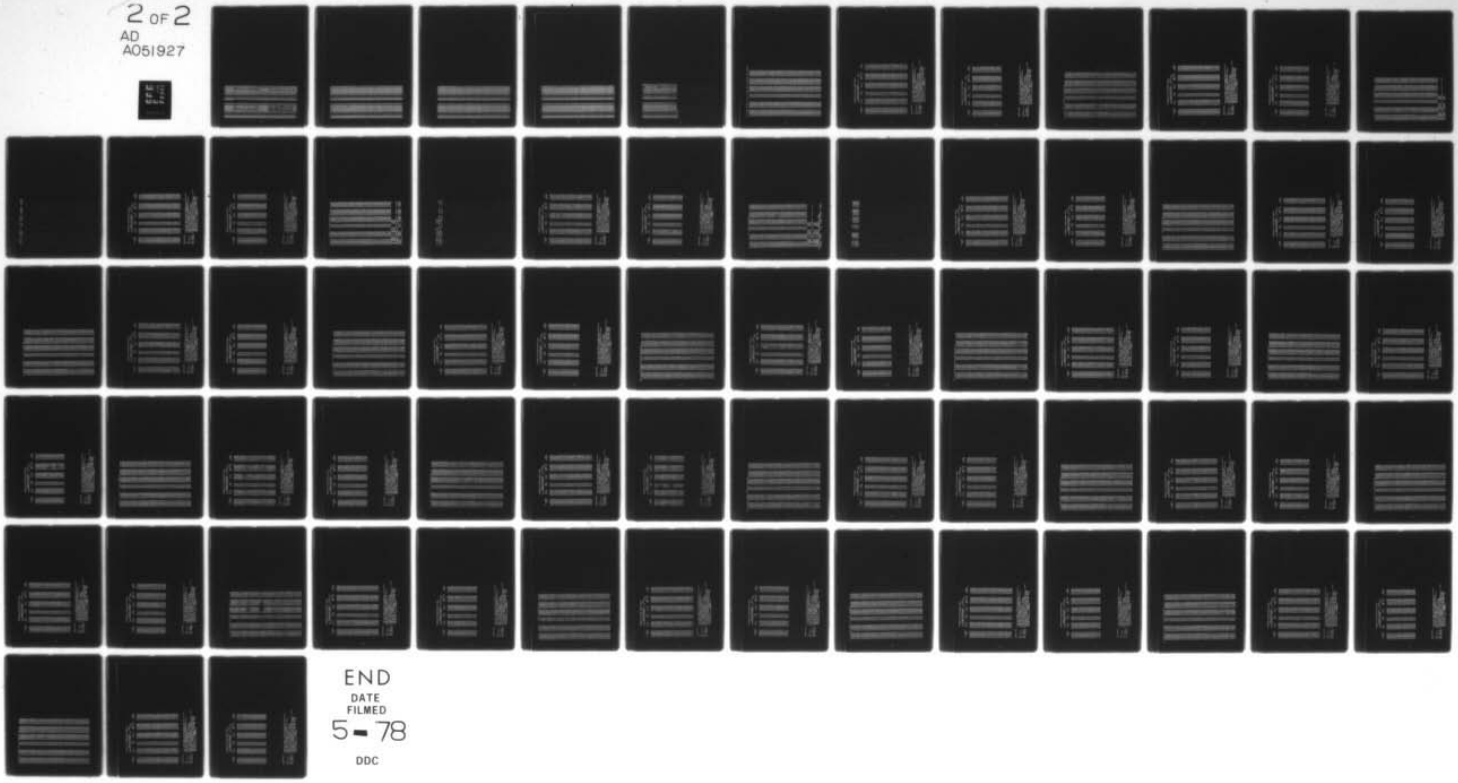

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0.250E-03	0.197080	14.11	0.899333	-0.004513	0.289160
0.160E-03	0.190972	14.38	0.870198	-0.004346	0.300260
0.100E-03	0.185096	14.65	0.841009	-0.004455	0.292938
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0.250E-05	0.152094	16.36	0.686040	-0.005731	0.227684
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0.400E-06	0.141029	17.01	0.636014	-0.006192	0.210738
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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	0.553592	-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	0.166303
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	-0.008440	0.154615
0.400E-11	0.102533	19.78	0.462388	-0.008520	0.153161
0.250E-11	0.101553	19.87	0.457972	-0.008602	0.151698
0.160E-11	0.100649	19.94	0.453893	-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	0.423848	-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	0.138212
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.

BIT ERROR RATE	N / S RATIO	SNR IN DB	A / D RATIO	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.220371	13.14	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	0.928164	-0.005345	0.244123
0.250E-03	0.197080	14.11	0.899333	-0.004513	0.289160
0.160E-03	0.190972	14.38	0.870198	-0.004346	0.300260
0.100E-03	0.185096	14.65	0.841009	-0.004455	0.292938
0.630E-04	0.179802	14.90	0.814950	-0.004644	0.280962
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	0.751241	-0.005181	0.251877
0.100E-04	0.162383	15.79	0.732912	-0.005334	0.244640
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	-0.005731	0.227684
0.160E-05	0.149167	16.53	0.672785	-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	0.214549
0.400E-06	0.141029	17.01	0.636014	-0.006192	0.210738
0.250E-06	0.138552	17.17	0.624836	-0.006304	0.207010
0.160E-06	0.136314	17.31	0.614740	-0.006408	0.203651
0.100E-06	0.134069	17.45	0.604611	-0.006515	0.200286
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	0.553592	-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	0.166303
0.100E-09	0.110084	19.17	0.496443	-0.007935	0.164442

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.
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	0.108899	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	-0.008440	0.154615
0.400E-11	0.102533	19.78	0.462388	-0.008520	0.153161
0.250E-11	0.101553	19.87	0.457972	-0.008602	0.151698
0.160E-11	0.100649	19.94	0.453893	-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	0.423848	-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	0.138212
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

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TAPE IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.220134	13.15	0.966668	-0.010461	0.124741
0.630E-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	0.899334	-0.004513	0.289159
0.160E-03	0.190701	14.39	0.870199	-0.004346	0.300258
0.100E-03	0.184817	14.67	0.841011	-0.004455	0.292937
0.630E-04	0.179516	14.92	0.814951	-0.004644	0.280960
0.400E-04	0.174710	15.15	0.791821	-0.004837	0.269766
0.250E-04	0.170110	15.39	0.770111	-0.005022	0.259853
0.160E-04	0.166052	15.60	0.751244	-0.005181	0.251875
0.100E-04	0.162068	15.81	0.732916	-0.005334	0.244638
0.630E-05	0.158410	16.00	0.716213	-0.005474	0.238392
0.400E-05	0.155038	16.19	0.700892	-0.005603	0.232880
0.250E-05	0.151760	16.38	0.686046	-0.005731	0.227683
0.160E-05	0.148827	16.55	0.672792	-0.005848	0.223128
0.100E-05	0.145909	16.72	0.659629	-0.005968	0.218661
0.630E-06	0.143198	16.88	0.647408	-0.006082	0.214548
0.400E-06	0.140670	17.04	0.636024	-0.006192	0.210737
0.250E-06	0.138187	17.19	0.624847	-0.006304	0.207009
0.160E-06	0.135944	17.33	0.614752	-0.006408	0.203650
0.100E-06	0.133693	17.48	0.604625	-0.006515	0.200286
0.630E-07	0.131583	17.62	0.595133	-0.006619	0.197136
0.400E-07	0.129600	17.75	0.586216	-0.006720	0.194178
0.250E-07	0.127638	17.88	0.577393	-0.006823	0.191253
0.160E-07	0.125853	18.00	0.569367	-0.006919	0.188593
0.100E-07	0.124050	18.13	0.561261	-0.007019	0.185907
0.630E-08	0.122349	18.25	0.553615	-0.007116	0.183373
0.400E-08	0.120742	18.36	0.546389	-0.007210	0.180979
0.250E-08	0.119142	18.48	0.539199	-0.007306	0.178597
0.160E-08	0.117679	18.59	0.532624	-0.007397	0.176418
0.100E-08	0.116194	18.70	0.525949	-0.007491	0.174207
0.630E-09	0.114786	18.80	0.519622	-0.007582	0.172111
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	0.110886	19.10	0.502103	-0.007846	0.166307
0.100E-09	0.109635	19.20	0.496485	-0.007935	0.164446
0.630E-10	0.108445	19.30	0.491141	-0.008022	0.162675
0.400E-10	0.107312	19.39	0.486049	-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	0.466836	-0.008439	0.154623
0.400E-11	0.102055	19.82	0.462449	-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	0.434519	-0.009067	0.143916
0.100E-12	0.095012	20.44	0.430847	-0.009144	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	0.420530	-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	0.407958	-0.009658	0.135115
0.250E-14	0.089228	20.99	0.404910	-0.009731	0.134105
0.160E-14	0.088596	21.05	0.402078	-0.009799	0.133166
0.100E-14	0.087945	21.12	0.399158	-0.009871	0.132199

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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
0.100E-02	0.220134	13.15	0.966668	-0.010461	0.124741
0.630E-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	0.899334	-0.004513	0.289159
0.160E-03	0.190701	14.39	0.870199	-0.004346	0.300258
0.100E-03	0.184817	14.67	0.841011	-0.004455	0.292937
0.630E-04	0.179516	14.92	0.814951	-0.004644	0.280960
0.400E-04	0.174710	15.15	0.791821	-0.004837	0.269766
0.250E-04	0.170110	15.39	0.770111	-0.005022	0.259853
0.160E-04	0.166052	15.60	0.751244	-0.005181	0.251875
0.100E-04	0.162068	15.81	0.732916	-0.005334	0.244638
0.630E-05	0.158410	16.00	0.716213	-0.005474	0.238392
0.400E-05	0.155038	16.19	0.700892	-0.005603	0.232880
0.250E-05	0.151760	16.38	0.686046	-0.005731	0.227683
0.160E-05	0.148827	16.55	0.672792	-0.005848	0.223128
0.100E-05	0.145909	16.72	0.659629	-0.005968	0.218661
0.630E-06	0.143198	16.88	0.647408	-0.006082	0.214548
0.400E-06	0.140670	17.04	0.636024	-0.006192	0.210737
0.250E-06	0.138187	17.19	0.624847	-0.006304	0.207009
0.160E-06	0.135944	17.33	0.614752	-0.006408	0.203650
0.100E-06	0.133693	17.48	0.604625	-0.006515	0.200286
0.630E-07	0.131583	17.62	0.595133	-0.006619	0.197136
0.400E-07	0.129600	17.75	0.586216	-0.006720	0.194178
0.250E-07	0.127638	17.88	0.577393	-0.006823	0.191253
0.160E-07	0.125853	18.00	0.569367	-0.006919	0.188593
0.100E-07	0.124050	18.13	0.561261	-0.007019	0.185907
0.630E-08	0.122349	18.25	0.553615	-0.007116	0.183373
0.400E-08	0.120742	18.36	0.546389	-0.007210	0.180979
0.250E-08	0.119142	18.48	0.539199	-0.007306	0.178597
0.160E-08	0.117679	18.59	0.532624	-0.007397	0.176418
0.100E-08	0.116194	18.70	0.525949	-0.007491	0.174207
0.630E-09	0.114786	18.80	0.519622	-0.007582	0.172111
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	0.110886	19.10	0.502103	-0.007846	0.166307
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 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.
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A / D RATIO = ADAPTIVE THRESHOLD AMPLITUDE TO D RATIO.
DERIV PER WRT = DERIVATIVE OF PSEUDO ERROR RATE WITH RESPECT TO A / D RATIO.
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BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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	0.486049	-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	0.466836	-0.008439	0.154623
0.400E-11	0.102055	19.82	0.462449	-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	0.434519	-0.009067	0.143916
0.100E-12	0.095012	20.44	0.430847	-0.009144	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	0.420530	-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	0.407958	-0.009658	0.135115
0.250E-14	0.089228	20.99	0.404910	-0.009731	0.134105
0.160E-14	0.088596	21.05	0.402078	-0.009799	0.133166
0.100E-14	0.087945	21.12	0.399158	-0.009871	0.132199

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

IN VERBOSE PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.219422	13.17	0.966670	-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	-0.005346	0.244105
0.250E-03	0.196032	14.15	0.899343	-0.004513	0.289138
0.160E-03	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	0.280936
0.400E-04	0.173839	15.20	0.791852	-0.004838	0.269741
0.250E-04	0.169219	15.43	0.770150	-0.005022	0.259828
0.160E-04	0.165142	15.64	0.751290	-0.005181	0.251850
0.100E-04	0.161139	15.86	0.732971	-0.005335	0.244613
0.630E-05	0.157463	16.06	0.716279	-0.005474	0.238367
0.400E-05	0.154073	16.25	0.700967	-0.005604	0.232855
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	0.214527
0.400E-06	0.139626	17.10	0.636165	-0.006193	0.210718
0.250E-06	0.137129	17.26	0.625003	-0.006304	0.206992
0.160E-06	0.134872	17.40	0.614924	-0.006408	0.203635
0.100E-06	0.132608	17.55	0.604814	-0.006516	0.200272
0.630E-07	0.130485	17.69	0.595341	-0.006620	0.197125
0.400E-07	0.128490	17.82	0.586443	-0.006720	0.194170
0.250E-07	0.126516	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	0.561550	-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	0.178609
0.160E-08	0.116493	18.67	0.533007	-0.007396	0.176435
0.100E-08	0.114999	18.79	0.526358	-0.007490	0.174228
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	0.110893	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	-0.007933	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	0.157809
0.100E-10	0.102787	19.76	0.472135	-0.008353	0.156222
0.630E-11	0.101759	19.85	0.467578	-0.008435	0.154708
0.400E-11	0.100777	19.93	0.463226	-0.008514	0.153261
0.250E-11	0.099789	20.02	0.458849	-0.008596	0.151806
0.160E-11	0.098876	20.10	0.454807	-0.008673	0.150463
0.100E-11	0.097940	20.18	0.450666	-0.008753	0.149086
0.630E-12	0.097045	20.26	0.446705	-0.008831	0.147769
0.400E-12	0.096188	20.34	0.442913	-0.008907	0.146508
0.250E-12	0.095323	20.42	0.439090	-0.008985	0.145237
0.160E-12	0.094523	20.49	0.435553	-0.009058	0.144060
0.100E-12	0.093701	20.57	0.431920	-0.009135	0.142852
0.630E-13	0.092913	20.64	0.428438	-0.009209	0.141693
0.400E-13	0.092157	20.71	0.425097	-0.009282	0.140581
0.250E-13	0.091392	20.78	0.421724	-0.009357	0.139459
0.160E-13	0.090684	20.85	0.418595	-0.009427	0.138418
0.100E-13	0.089954	20.92	0.415377	-0.009501	0.137346
0.630E-14	0.089254	20.99	0.412287	-0.009573	0.136317
0.400E-14	0.088580	21.05	0.409317	-0.009643	0.135328

EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464

0.250E-14	0.087899	21.12	0.406312	-0.009714	0.134328

EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464

EXP UNDERFLO AT LOCATION 020464

0.160E-14	0.087265	21.18	0.403522	-0.009782	0.133398
0.100E-14	0.086613	21.25	0.400646	-0.009853	0.132440

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0400
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	0.219422	13.17	0.966670	-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	-0.005346	0.244105
0.250E-03	0.196032	14.15	0.899343	-0.004513	0.289138
0.160E-03	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	0.280936
0.400E-04	0.173839	15.20	0.791852	-0.004838	0.269741
0.250E-04	0.169219	15.43	0.770150	-0.005022	0.259828
0.160E-04	0.165142	15.64	0.751290	-0.005181	0.251850
0.100E-04	0.161139	15.86	0.732971	-0.005335	0.244613
0.630E-05	0.157463	16.06	0.716279	-0.005474	0.238367
0.400E-05	0.154073	16.25	0.700967	-0.005604	0.232855
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	0.214527
0.400E-06	0.139626	17.10	0.636165	-0.006193	0.210718
0.250E-06	0.137129	17.26	0.625003	-0.006304	0.206992
0.160E-06	0.134872	17.40	0.614924	-0.006408	0.203635
0.100E-06	0.132608	17.55	0.604814	-0.006516	0.200272
0.630E-07	0.130485	17.69	0.595341	-0.006620	0.197125
0.400E-07	0.128490	17.82	0.586443	-0.006720	0.194170
0.250E-07	0.126516	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	0.561550	-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	0.178609
0.160E-08	0.116493	18.67	0.533007	-0.007396	0.176435
0.100E-08	0.114999	18.79	0.526358	-0.007490	0.174228
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	0.110893	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	-0.007933	0.164493

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0400
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	0.107203	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	0.157809
0.100E-10	0.102737	19.76	0.472135	-0.008353	0.156222
0.630E-11	0.101759	19.85	0.467578	-0.008435	0.154708
0.400E-11	0.100777	19.93	0.463226	-0.008514	0.153261
0.250E-11	0.099789	20.02	0.458849	-0.008596	0.151806
0.160E-11	0.098876	20.10	0.454807	-0.008673	0.150463
0.100E-11	0.097940	20.18	0.450666	-0.008753	0.149086
0.630E-12	0.097045	20.26	0.446705	-0.008831	0.147769
0.400E-12	0.096188	20.34	0.442913	-0.008907	0.146508
0.250E-12	0.095323	20.42	0.439090	-0.008985	0.145237
0.160E-12	0.094523	20.49	0.435553	-0.009058	0.144060
0.100E-12	0.093701	20.57	0.431920	-0.009135	0.142852
0.630E-13	0.092913	20.64	0.428438	-0.009209	0.141693
0.400E-13	0.092157	20.71	0.425097	-0.009282	0.140581
0.250E-13	0.091392	20.78	0.421724	-0.009357	0.139459
0.160E-13	0.090684	20.85	0.418595	-0.009427	0.138418
0.100E-13	0.089954	20.92	0.415377	-0.009501	0.137346
0.630E-14	0.089254	20.99	0.412287	-0.009573	0.136317
0.400E-14	0.088580	21.05	0.409317	-0.009643	0.135328
0.250E-14	0.087899	21.12	0.406312	-0.009714	0.134328
0.160E-14	0.087265	21.18	0.403522	-0.009782	0.133398
0.100E-14	0.086613	21.25	0.400646	-0.009853	0.132440

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

THERE IS A DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.218245	13.22	0.966677	-0.010464	0.124706
0.630E-03	0.209554	13.57	0.950531	-0.007195	0.181362
0.400E-03	0.201892	13.90	0.928195	-0.005347	0.244031
0.250E-03	0.194739	14.21	0.899383	-0.004515	0.289047
0.160E-03	0.188567	14.49	0.870270	-0.004348	0.300137
0.100E-03	0.182627	14.77	0.841108	-0.004457	0.292810
0.630E-04	0.177273	15.03	0.815079	-0.004647	0.280831
0.400E-04	0.172418	15.27	0.791982	-0.004840	0.269634
0.250E-04	0.167769	15.51	0.770310	-0.005024	0.259720
0.160E-04	0.163666	15.72	0.751482	-0.005184	0.251742
0.100E-04	0.159637	15.94	0.733199	-0.005337	0.244505
0.630E-05	0.155937	16.14	0.716544	-0.005477	0.238260
0.400E-05	0.152526	16.33	0.701273	-0.005607	0.232749
0.250E-05	0.149209	16.52	0.686484	-0.005734	0.227555
0.160E-05	0.146240	16.70	0.673287	-0.005852	0.223004
0.100E-05	0.143288	16.88	0.660187	-0.005971	0.218541
0.630E-06	0.140543	17.04	0.648033	-0.006085	0.214433
0.400E-06	0.137985	17.20	0.636717	-0.006195	0.210628
0.250E-06	0.135472	17.36	0.625614	-0.006307	0.206908
0.160E-06	0.133202	17.51	0.615593	-0.006411	0.203556
0.100E-06	0.130924	17.66	0.605546	-0.006518	0.200201
0.630E-07	0.128789	17.80	0.596138	-0.006622	0.197060
0.400E-07	0.126783	17.94	0.587306	-0.006722	0.194113
0.250E-07	0.124799	18.08	0.578574	-0.006825	0.191199
0.160E-07	0.122994	18.20	0.570637	-0.006921	0.188551
0.100E-07	0.121171	18.33	0.562628	-0.007020	0.185878
0.630E-08	0.119452	18.46	0.555079	-0.007117	0.183358
0.400E-08	0.117828	18.58	0.547953	-0.007210	0.180978
0.250E-08	0.116212	18.69	0.540868	-0.007306	0.178611
0.160E-08	0.114735	18.81	0.534395	-0.007395	0.176448
0.100E-08	0.113236	18.92	0.527830	-0.007489	0.174253
0.630E-09	0.111815	19.03	0.521614	-0.007579	0.172174
0.400E-09	0.110467	19.14	0.515719	-0.007667	0.170202
0.250E-09	0.109121	19.24	0.509833	-0.007757	0.168232
0.160E-09	0.107885	19.34	0.504434	-0.007841	0.166424
0.100E-09	0.106625	19.44	0.498937	-0.007929	0.164582
0.630E-10	0.105428	19.54	0.493713	-0.008014	0.162831
0.400E-10	0.104287	19.64	0.488741	-0.008097	0.161164
0.250E-10	0.103144	19.73	0.483760	-0.008182	0.159493
0.160E-10	0.102091	19.82	0.479176	-0.008261	0.157954
0.100E-10	0.101015	19.91	0.474494	-0.008344	0.156382
0.630E-11	0.099988	20.00	0.470030	-0.008425	0.154883
0.400E-11	0.099008	20.09	0.465770	-0.008504	0.153451
0.250E-11	0.098022	20.17	0.461490	-0.008584	0.152011
0.160E-11	0.097112	20.25	0.457540	-0.008660	0.150683
0.100E-11	0.096180	20.34	0.453496	-0.008739	0.149321
0.630E-12	0.095288	20.42	0.449630	-0.008816	0.148019
0.400E-12	0.094435	20.50	0.445932	-0.008891	0.146773
0.250E-12	0.093574	20.58	0.442207	-0.008967	0.145517
0.160E-12	0.092778	20.65	0.438762	-0.009040	0.144355
0.100E-12	0.091961	20.73	0.435227	-0.009115	0.143162
0.630E-13	0.091177	20.80	0.431841	-0.009188	0.142019
0.400E-13	0.090426	20.87	0.428594	-0.009260	0.140922
0.250E-13	0.089667	20.95	0.425318	-0.009333	0.139815
0.160E-13	0.088963	21.02	0.422282	-0.009402	0.138788
EXP UNDERFLO AT LOCATION 020464					
EXP UNDERFLO AT LOCATION 020464					
EXP UNDERFLO AT LOCATION 020464					
EXP UNDERFLO AT LOCATION 020464					
0.100E-13	0.088240	21.09	0.419161	-0.009474	0.137732
EXP UNDERFLO AT LOCATION 020464					
0.630E-14	0.087545	21.16	0.416168	-0.009545	0.136718
0.400E-14	0.086877	21.22	0.413288	-0.009613	0.135743
0.250E-14	0.086201	21.29	0.410380	-0.009683	0.134757
EXP UNDERFLO AT LOCATION 020464					

EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
0.100E-14 0.085574 21.35 0.407680 -0.009750 0.133842
EXP UNDERFLO AT LOCATION 020464
0.100E-14 0.084927 21.42 0.404900 -0.009819 0.132898

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0600
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	0.218245	13.22	0.966677	-0.010464	0.124706
0.630E-03	0.209554	13.57	0.950531	-0.007195	0.181362
0.400E-03	0.201892	13.90	0.928195	-0.005347	0.244031
0.250E-03	0.194739	14.21	0.899383	-0.004515	0.289047
0.160E-03	0.188567	14.49	0.870270	-0.004348	0.300137
0.100E-03	0.182627	14.77	0.841108	-0.004457	0.292810
0.630E-04	0.177273	15.03	0.815079	-0.004647	0.280831
0.400E-04	0.172418	15.27	0.791982	-0.004840	0.269634
0.250E-04	0.167769	15.51	0.770310	-0.005024	0.259720
0.160E-04	0.163666	15.72	0.751482	-0.005186	0.251742
0.100E-04	0.159637	15.94	0.733199	-0.005337	0.244505
0.630E-05	0.155937	16.14	0.716544	-0.005477	0.238260
0.400E-05	0.152526	16.33	0.701273	-0.005607	0.232749
0.250E-05	0.149209	16.52	0.686484	-0.005734	0.227555
0.160E-05	0.146240	16.70	0.673287	-0.005852	0.223004
0.100E-05	0.143288	16.88	0.660187	-0.005971	0.218541
0.630E-06	0.140543	17.04	0.648033	-0.006085	0.214433
0.400E-06	0.137985	17.20	0.636717	-0.006195	0.210628
0.250E-06	0.135472	17.36	0.625614	-0.006307	0.206908
0.160E-06	0.133202	17.51	0.615593	-0.006411	0.203556
0.100E-06	0.130924	17.66	0.605546	-0.006518	0.200201
0.630E-07	0.128789	17.80	0.596138	-0.006622	0.197060
0.400E-07	0.126783	17.94	0.587306	-0.006722	0.194113
0.250E-07	0.124799	18.08	0.578574	-0.006825	0.191199
0.160E-07	0.122994	18.20	0.570637	-0.006921	0.188551
0.100E-07	0.121171	18.33	0.562628	-0.007020	0.185878
0.630E-08	0.119452	18.46	0.555079	-0.007117	0.183358
0.400E-08	0.117828	18.58	0.547953	-0.007210	0.180978
0.250E-08	0.116212	18.69	0.540868	-0.007306	0.178611
0.160E-08	0.114735	18.81	0.534395	-0.007395	0.176448
0.100E-08	0.113236	18.92	0.527830	-0.007489	0.174253
0.630E-09	0.111815	19.03	0.521614	-0.007579	0.172174
0.400E-09	0.110467	19.14	0.515719	-0.007667	0.170202
0.250E-09	0.109121	19.24	0.509833	-0.007757	0.168232
0.160E-09	0.107885	19.34	0.504434	-0.007841	0.166424
0.100E-09	0.106625	19.44	0.498937	-0.007929	0.164582

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0600
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	0.105428	19.54	0.493713	-0.008014	0.162831
0.400E-10	0.104287	19.64	0.488741	-0.008097	0.161164
0.250E-10	0.103144	19.73	0.483760	-0.008182	0.159493
0.160E-10	0.102091	19.82	0.479176	-0.008261	0.157954
0.100E-10	0.101015	19.91	0.474494	-0.008344	0.156382
0.630E-11	0.099988	20.00	0.470030	-0.008425	0.154883
0.400E-11	0.099008	20.09	0.465770	-0.008504	0.153451
0.250E-11	0.098022	20.17	0.461490	-0.008584	0.152011
0.160E-11	0.097112	20.25	0.457540	-0.008660	0.150683
0.100E-11	0.096180	20.34	0.453496	-0.008739	0.149321
0.630E-12	0.095288	20.42	0.449630	-0.008816	0.148019
0.400E-12	0.094435	20.50	0.445932	-0.008891	0.146773
0.250E-12	0.093574	20.58	0.442207	-0.008967	0.145517
0.160E-12	0.092778	20.65	0.438762	-0.009040	0.144355
0.100E-12	0.091961	20.73	0.435227	-0.009115	0.143162
0.630E-13	0.091177	20.80	0.431841	-0.009188	0.142019
0.400E-13	0.090426	20.87	0.428594	-0.009260	0.140922
0.250E-13	0.089667	20.95	0.425318	-0.009333	0.139815
0.160E-13	0.088963	21.02	0.422282	-0.009402	0.138788
0.100E-13	0.088240	21.09	0.419161	-0.009474	0.137732
0.630E-14	0.087545	21.16	0.416165	-0.009545	0.136718
0.400E-14	0.086877	21.22	0.413288	-0.009613	0.135743
0.250E-14	0.086201	21.29	0.410380	-0.009683	0.134757
0.160E-14	0.085574	21.35	0.407680	-0.009750	0.133842
0.100E-14	0.084927	21.42	0.404900	-0.009819	0.132898

NOMENCLATURE:

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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 = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

...TABLE WAS CALLED.

0.100E-02	0.216611	13.29	0.966698	-0.010470	0.124632
0.630E-03	0.207868	13.64	0.950568	-0.007200	0.181234
0.400E-03	0.200159	13.97	0.928258	-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	0.292542
0.630E-04	0.175379	15.12	0.815341	-0.004651	0.280556
0.400E-04	0.170491	15.37	0.792310	-0.004845	0.269356
0.250E-04	0.165812	15.61	0.770712	-0.005030	0.259439
0.160E-04	0.161682	15.83	0.751960	-0.005189	0.251460
0.100E-04	0.157628	16.05	0.733763	-0.005343	0.244223
0.630E-05	0.153905	16.25	0.717198	-0.005483	0.237978
0.400E-05	0.150474	16.45	0.702021	-0.005613	0.232469
0.250E-05	0.147139	16.65	0.687334	-0.005741	0.227278
0.160E-05	0.144155	16.82	0.674240	-0.005859	0.222730
0.100E-05	0.141189	17.00	0.661253	-0.005978	0.218272
0.630E-06	0.138433	17.18	0.649214	-0.006093	0.214171
0.400E-06	0.135865	17.34	0.638016	-0.006203	0.210374
0.250E-06	0.133344	17.50	0.627038	-0.006314	0.206661
0.160E-06	0.131068	17.65	0.617140	-0.006418	0.203319
0.100E-06	0.128785	17.80	0.607226	-0.006525	0.199974
0.630E-07	0.126647	17.95	0.597951	-0.006629	0.196844
0.400E-07	0.124639	18.09	0.589253	-0.006729	0.193909
0.250E-07	0.122654	18.23	0.580662	-0.006832	0.191008
0.160E-07	0.120850	18.36	0.572861	-0.006927	0.188372
0.100E-07	0.119029	18.49	0.564996	-0.007026	0.185713
0.630E-08	0.117313	18.61	0.557592	-0.007123	0.183207
0.400E-08	0.115692	18.73	0.550609	-0.007216	0.180842
0.250E-08	0.114081	18.86	0.543673	-0.007311	0.178490
0.160E-08	0.112609	18.97	0.537342	-0.007400	0.176341
0.100E-08	0.111117	19.08	0.530928	-0.007493	0.174162
0.630E-09	0.109703	19.20	0.524861	-0.007582	0.172098
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	0.104546	19.61	0.502777	-0.007929	0.164568
0.630E-10	0.103358	19.71	0.497701	-0.008014	0.162833
0.400E-10	0.102227	19.81	0.492874	-0.008096	0.161181
0.250E-10	0.101094	19.91	0.488043	-0.008180	0.159525
0.160E-10	0.100051	20.00	0.483599	-0.008259	0.158001
0.100E-10	0.098986	20.09	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	-0.008653	0.150800
0.100E-11	0.094207	20.52	0.458774	-0.008731	0.149452
0.630E-12	0.093327	20.60	0.455046	-0.008807	0.148163
0.400E-12	0.092485	20.68	0.451482	-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
0.100E-12	0.090046	20.91	0.441178	-0.009103	0.143355
0.630E-13	0.089274	20.99	0.437923	-0.009175	0.142222

EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464

0.400E-13	0.088534	21.06	0.434803	-0.009246	0.141136

EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464
EXP UNDERFLO AT LOCATION 020464

**THIS IS THE LAST TIME THE ABOVE MESSAGE WILL APPEAR*

0.250E-13	0.087787	21.13	0.431656	-0.009318	-0.140039
0.160E-13	0.087095	21.20	0.428742	-0.009384	0.139022

0.100E-13	0.086382	21.27	0.425747	-0.009458	0.137976
0.630E-14	0.085699	21.34	0.422874	-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
0.100E-14	0.083126	21.61	0.412082	-0.009798	0.133185

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0800
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	0.216611	13.29	0.966698	-0.010470	0.124632
0.630E-03	0.207868	13.64	0.950568	-0.007200	0.181234
0.400E-03	0.200159	13.97	0.928258	-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	0.292542
0.630E-04	0.175379	15.12	0.815341	-0.004651	0.280556
0.400E-04	0.170491	15.37	0.792310	-0.004845	0.269356
0.250E-04	0.165812	15.61	0.770712	-0.005030	0.259439
0.160E-04	0.161682	15.83	0.751960	-0.005189	0.251460
0.100E-04	0.157628	16.05	0.733763	-0.005343	0.244223
0.630E-05	0.153905	16.25	0.717198	-0.005483	0.237978
0.400E-05	0.150474	16.45	0.702021	-0.005613	0.232469
0.250E-05	0.147139	16.65	0.687334	-0.005741	0.227278
0.160E-05	0.144155	16.82	0.674240	-0.005859	0.222730
0.100E-05	0.141189	17.00	0.661253	-0.005978	0.218272
0.630E-06	0.138433	17.18	0.649214	-0.006093	0.214171
0.400E-06	0.135865	17.34	0.638016	-0.006203	0.210374
0.250E-06	0.133344	17.50	0.627038	-0.006314	0.206661
0.160E-06	0.131068	17.65	0.617140	-0.006418	0.203319
0.100E-06	0.128785	17.80	0.607226	-0.006525	0.199974
0.630E-07	0.126647	17.95	0.597951	-0.006629	0.196844
0.400E-07	0.124639	18.09	0.589253	-0.006729	0.193909
0.250E-07	0.122654	18.23	0.580662	-0.006832	0.191008
0.160E-07	0.120850	18.36	0.572861	-0.006927	0.188372
0.100E-07	0.119029	18.49	0.564996	-0.007026	0.185713
0.630E-08	0.117313	18.61	0.557592	-0.007123	0.183207
0.400E-08	0.115692	18.73	0.550609	-0.007216	0.180842
0.250E-08	0.114081	18.86	0.543673	-0.007311	0.178490
0.160E-08	0.112609	18.97	0.537342	-0.007400	0.176341
0.100E-08	0.111117	19.08	0.530928	-0.007493	0.174162
0.630E-09	0.109703	19.20	0.524861	-0.007582	0.172098
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	0.104546	19.61	0.502777	-0.007929	0.164568

NOMENCLATURE:

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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.
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 = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.0800
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	0.103358	19.71	0.497701	-0.008014	0.162833
0.400E-10	0.102227	19.81	0.492874	-0.008096	0.161181
0.250E-10	0.101094	19.91	0.488043	-0.008180	0.159525
0.160E-10	0.100051	20.00	0.483599	-0.008259	0.158001
0.100E-10	0.098986	20.09	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	-0.008653	0.150800
0.100E-11	0.094207	20.52	0.458774	-0.008731	0.149452
0.630E-12	0.093327	20.60	0.455046	-0.008807	0.148163
0.400E-12	0.092485	20.68	0.451482	-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
0.100E-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
0.100E-13	0.086382	21.27	0.425747	-0.009458	0.137976
0.630E-14	0.085699	21.34	0.422874	-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
0.100E-14	0.083126	21.61	0.412082	-0.009798	0.133185

NOMENCLATURE:

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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 = 12592600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

...K IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.214535	13.37	0.966738	-0.010483	0.124481
0.630E-03	0.205734	13.73	0.950642	-0.007210	0.180974
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	0.792947	-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	0.734833	-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	0.640332	-0.006219	0.209824
0.250E-06	0.130874	17.66	0.629554	-0.006331	0.206120
0.160E-06	0.128605	17.81	0.619849	-0.006435	0.202787
0.100E-06	0.126330	17.97	0.610140	-0.006542	0.199451
0.630E-07	0.124202	18.12	0.601067	-0.006646	0.196332
0.400E-07	0.122205	18.26	0.592570	-0.006747	0.193408
0.250E-07	0.120232	18.40	0.584186	-0.006849	0.190518
0.160E-07	0.118441	18.53	0.576582	-0.006945	0.187893
0.100E-07	0.116634	18.66	0.568924	-0.007044	0.185246
0.630E-08	0.114933	18.79	0.561723	-0.007140	0.182752
0.400E-08	0.113327	18.91	0.554938	-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	0.535851	-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	0.513801	-0.007860	0.166024
0.100E-09	0.102318	19.80	0.508642	-0.007947	0.164207
0.630E-10	0.101148	19.90	0.503747	-0.008031	0.162480
0.400E-10	0.100034	20.00	0.499095	-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	0.485802	-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	0.470054	-0.008671	0.150496
0.100E-11	0.092151	20.71	0.466308	-0.008749	0.149152
0.630E-12	0.091287	20.79	0.462731	-0.008825	0.147866
0.400E-12	0.090461	20.87	0.459312	-0.008899	0.146635
0.250E-12	0.089629	20.95	0.455872	-0.008975	0.145394
0.160E-12	0.088859	21.03	0.452694	-0.009046	0.144245
0.100E-12	0.088069	21.10	0.449435	-0.009121	0.143065
0.630E-13	0.087313	21.18	0.446316	-0.009194	0.141934
0.400E-13	0.086587	21.25	0.443327	-0.009265	0.140848
0.250E-13	0.085855	21.32	0.440314	-0.009337	0.139751
0.160E-13	0.085177	21.39	0.437524	-0.009406	0.138733
0.100E-13	0.084479	21.47	0.434657	-0.009477	0.137686
0.630E-14	0.083809	21.53	0.431907	-0.009547	0.136680
0.400E-14	0.083166	21.60	0.429268	-0.009615	0.135712
0.250E-14	0.082516	21.67	0.426601	-0.009685	0.134733
0.160E-14	0.081912	21.73	0.424127	-0.009751	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.

BIT 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	0.124481
0.630E-03	0.205734	13.73	0.950642	-0.007210	0.180974
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	0.792947	-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	0.734833	-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	0.640332	-0.006217	0.209824
0.250E-06	0.130874	17.66	0.629554	-0.006331	0.206120
0.160E-06	0.128605	17.81	0.619849	-0.006435	0.202787
0.100E-06	0.126330	17.97	0.610140	-0.006542	0.199451
0.630E-07	0.124202	18.12	0.601067	-0.006646	0.196332
0.400E-07	0.122205	18.26	0.592570	-0.006747	0.193408
0.250E-07	0.120232	18.40	0.584186	-0.006849	0.190518
0.160E-07	0.118441	18.53	0.576582	-0.006945	0.187893
0.100E-07	0.116634	18.66	0.568924	-0.007044	0.185246
0.630E-08	0.114933	18.79	0.561723	-0.007140	0.182752
0.400E-08	0.113327	18.91	0.554938	-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	0.535851	-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	0.513801	-0.007860	0.166024
0.100E-09	0.102318	19.80	0.508642	-0.007947	0.164207

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE 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	0.101148	19.90	0.503747	-0.008031	0.162480
0.400E-10	0.100034	20.00	0.499095	-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	0.485802	-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	0.470054	-0.008671	0.150496
0.100E-11	0.092151	20.71	0.466308	-0.008749	0.149152
0.630E-12	0.091287	20.79	0.462731	-0.008825	0.147866
0.400E-12	0.090461	20.87	0.459312	-0.008899	0.146635
0.250E-12	0.089629	20.95	0.455872	-0.008975	0.145394
0.160E-12	0.088859	21.03	0.452694	-0.009046	0.144245
0.100E-12	0.088069	21.10	0.449435	-0.009121	0.143065
0.630E-13	0.087313	21.18	0.446316	-0.009194	0.141934
0.400E-13	0.086587	21.25	0.443327	-0.009265	0.140848
0.250E-13	0.085855	21.32	0.440314	-0.009337	0.139751
0.160E-13	0.085177	21.39	0.437524	-0.009406	0.138733
0.100E-13	0.084479	21.47	0.434657	-0.009477	0.137686
0.630E-14	0.083809	21.53	0.431907	-0.009547	0.136680
0.400E-14	0.083166	21.60	0.429268	-0.009615	0.135712
0.250E-14	0.082516	21.67	0.426601	-0.009685	0.134733
0.160E-14	0.081912	21.73	0.424127	-0.009751	0.133823
0.100E-14	0.081290	21.80	0.421581	-0.009820	0.132885

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

RUN IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.212037	13.47	0.966810	-0.010505	0.124218
0.630E-03	0.203176	13.84	0.950771	-0.007228	0.180523
0.400E-03	0.195364	14.18	0.928603	-0.005375	0.242789
0.250E-03	0.188070	14.51	0.900035	-0.004539	0.287508
0.160E-03	0.181780	14.81	0.871202	-0.004372	0.298463
0.100E-03	0.175731	15.10	0.842376	-0.004483	0.291068
0.630E-04	0.170283	15.38	0.816709	-0.004676	0.279053
0.400E-04	0.165348	15.63	0.793998	-0.004872	0.267834
0.250E-04	0.160630	15.88	0.772754	-0.005060	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	0.242668
0.630E-05	0.148662	16.56	0.720385	-0.005519	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	0.666148	-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	-0.006248	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	0.198479
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	0.581823	-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	0.179456
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	0.542466	-0.007551	0.172817
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	0.095685	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	0.092749	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	-0.008884	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

BASEBAND EYE 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	DERIV PER WRT A / D	TIME CONSTANT
0.100E-02	0.212037	13.47	0.966810	-0.010505	0.124218
0.630E-03	0.203176	13.84	0.950771	-0.007228	0.180523
0.400E-03	0.195364	14.18	0.928603	-0.005375	0.242789
0.250E-03	0.188070	14.51	0.900035	-0.004539	0.287508
0.160E-03	0.181780	14.81	0.871202	-0.004372	0.298463
0.100E-03	0.175731	15.10	0.842376	-0.004483	0.291068
0.630E-04	0.170283	15.38	0.816709	-0.004676	0.279053
0.400E-04	0.165348	15.63	0.793998	-0.004872	0.267834
0.250E-04	0.160630	15.88	0.772754	-0.005060	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	0.242668
0.630E-05	0.148662	16.56	0.720385	-0.005519	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	0.666148	-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	-0.006248	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	0.198479
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	0.581823	-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	0.179456
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	0.542466	-0.007551	0.172817
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

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL
DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE 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	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	0.092749	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	-0.008884	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:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

...NK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.209139	13.59	0.966921	-0.010540	0.123806
0.630E-03	0.200222	13.97	0.950970	-0.007257	0.179823
0.400E-03	0.192365	14.32	0.928938	-0.005398	0.241760
0.250E-03	0.185036	14.65	0.900561	-0.004559	0.286231
0.160E-03	0.178721	14.96	0.871946	-0.004393	0.297074
0.100E-03	0.172654	15.26	0.843375	-0.004505	0.289628
0.630E-04	0.167197	15.54	0.817978	-0.004701	0.277590
0.400E-04	0.162260	15.80	0.795545	-0.004899	0.266357
0.250E-04	0.157546	16.05	0.774599	-0.005089	0.256416
0.160E-04	0.153397	16.28	0.756493	-0.005253	0.248418
0.100E-04	0.149337	16.52	0.739001	-0.005411	0.241164
0.630E-05	0.145620	16.74	0.723149	-0.005555	0.234905
0.400E-05	0.142204	16.94	0.708689	-0.005689	0.229387
0.250E-05	0.138895	17.15	0.694756	-0.005821	0.224190
0.160E-05	0.135944	17.33	0.682387	-0.005941	0.219641
0.100E-05	0.133019	17.52	0.670170	-0.006064	0.215184
0.630E-06	0.130310	17.70	0.658890	-0.006182	0.211087
0.400E-06	0.127793	17.87	0.648439	-0.006295	0.207297
0.250E-06	0.125330	18.04	0.638232	-0.006409	0.203594
0.160E-06	0.123112	18.19	0.629061	-0.006516	0.200262
0.100E-06	0.120894	18.35	0.619907	-0.006626	0.196928
0.630E-07	0.118822	18.50	0.611371	-0.006733	0.193811
0.400E-07	0.116881	18.65	0.603391	-0.006836	0.190889
0.250E-07	0.114967	18.79	0.595531	-0.006941	0.188000
0.160E-07	0.113230	18.92	0.588414	-0.007039	0.185377
0.100E-07	0.111482	19.06	0.581257	-0.007141	0.182729
0.630E-08	0.109837	19.19	0.574536	-0.007240	0.180235
0.400E-08	0.108287	19.31	0.568211	-0.007336	0.177879
0.250E-08	0.106749	19.43	0.561941	-0.007434	0.175536
0.160E-08	0.105346	19.55	0.556231	-0.007526	0.173395
0.100E-08	0.103925	19.67	0.550455	-0.007621	0.171223
0.630E-09	0.102582	19.78	0.545001	-0.007714	0.169165
0.400E-09	0.101310	19.89	0.539841	-0.007804	0.167212
0.250E-09	0.100042	20.00	0.534702	-0.007896	0.165261
0.160E-09	0.098879	20.10	0.529998	-0.007983	0.163469
0.100E-09	0.097697	20.20	0.525218	-0.008073	0.161644
0.630E-10	0.096575	20.30	0.520685	-0.008160	0.159907
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	0.153501
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	0.146465
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	0.476401	-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	0.135907
0.100E-13	0.080631	21.87	0.456770	-0.009677	0.134844
0.630E-14	0.079992	21.94	0.454224	-0.009751	0.133822
0.400E-14	0.079377	22.01	0.451780	-0.009823	0.132839
0.250E-14	0.078756	22.07	0.449310	-0.009897	0.131844
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

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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
0.100E-02	0.209139	13.59	0.966921	-0.010540	0.123806
0.630E-03	0.200222	13.97	0.950970	-0.007257	0.179823
0.400E-03	0.192365	14.32	0.928938	-0.005398	0.241760
0.250E-03	0.185036	14.65	0.900561	-0.004559	0.286231
0.160E-03	0.178721	14.96	0.871946	-0.004393	0.297074
0.100E-03	0.172654	15.26	0.843375	-0.004505	0.289628
0.630E-04	0.167197	15.54	0.817978	-0.004701	0.277590
0.400E-04	0.162260	15.80	0.795545	-0.004899	0.266357
0.250E-04	0.157546	16.05	0.774599	-0.005089	0.256416
0.160E-04	0.153397	16.28	0.756493	-0.005253	0.248418
0.100E-04	0.149337	16.52	0.739001	-0.005411	0.241164
0.630E-05	0.145620	16.74	0.723149	-0.005555	0.234905
0.400E-05	0.142204	16.94	0.708689	-0.005689	0.229387
0.250E-05	0.138895	17.15	0.694756	-0.005821	0.224190
0.160E-05	0.135944	17.33	0.682387	-0.005941	0.219641
0.100E-05	0.133019	17.52	0.670170	-0.006064	0.215184
0.630E-06	0.130310	17.70	0.658890	-0.006182	0.211087
0.400E-06	0.127793	17.87	0.648439	-0.006295	0.207297
0.250E-06	0.125330	18.04	0.638232	-0.006409	0.203594
0.160E-06	0.123112	18.19	0.629061	-0.006516	0.200262
0.100E-06	0.120894	18.35	0.619907	-0.006626	0.196928
0.630E-07	0.118822	18.50	0.611371	-0.006733	0.193811
0.400E-07	0.116881	18.65	0.603391	-0.006836	0.190889
0.250E-07	0.114967	18.79	0.595531	-0.006941	0.188000
0.160E-07	0.113230	18.92	0.588414	-0.007039	0.185377
0.100E-07	0.111482	19.06	0.581257	-0.007141	0.182729
0.630E-08	0.109837	19.19	0.574536	-0.007240	0.180235
0.400E-08	0.108287	19.31	0.568211	-0.007336	0.177879
0.250E-08	0.106749	19.43	0.561941	-0.007434	0.175536
0.160E-08	0.105346	19.55	0.556231	-0.007526	0.173395
0.100E-08	0.103925	19.67	0.550455	-0.007621	0.171223
0.630E-09	0.102582	19.78	0.545001	-0.007714	0.169165
0.400E-09	0.101310	19.89	0.539841	-0.007804	0.167212
0.250E-09	0.100042	20.00	0.534702	-0.007896	0.165261
0.160E-09	0.098879	20.10	0.529998	-0.007983	0.163469
0.100E-09	0.097697	20.20	0.525218	-0.008073	0.161644

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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	0.159907
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	0.153501
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	0.146465
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	0.476401	-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	0.135907
0.100E-13	0.080631	21.87	0.456770	-0.009677	0.134844
0.630E-14	0.079992	21.94	0.454224	-0.009751	0.133822
0.400E-14	0.079377	22.01	0.451780	-0.009823	0.132839
0.250E-14	0.078756	22.07	0.449310	-0.009897	0.131844
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 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 DECIBLES.

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 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	0.951256	-0.007297	0.178818
0.400E-03	0.189016	14.47	0.929412	-0.005431	0.240288
0.250E-03	0.181668	14.81	0.901300	-0.004588	0.284407
0.160E-03	0.175345	15.12	0.872983	-0.004422	0.295092
0.100E-03	0.169279	15.43	0.844754	-0.004538	0.287580
0.630E-04	0.163832	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	0.759325	-0.005298	0.246312
0.100E-04	0.146076	16.71	0.742215	-0.005459	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	0.227251
0.250E-05	0.135750	17.35	0.699076	-0.005877	0.222043
0.160E-05	0.132840	17.53	0.687051	-0.006000	0.217485
0.100E-05	0.129959	17.72	0.675188	-0.006126	0.213019
0.630E-06	0.127293	17.90	0.664246	-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	0.635361	-0.006588	0.198065
0.100E-06	0.118047	18.56	0.626508	-0.006701	0.194724
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	0.596085	-0.007125	0.183143
0.100E-07	0.108829	19.27	0.589176	-0.007230	0.180497
0.630E-08	0.107220	19.39	0.582689	-0.007332	0.177985
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	0.565024	-0.007626	0.171123
0.100E-08	0.101441	19.88	0.559451	-0.007724	0.168943
0.630E-09	0.100129	19.99	0.554188	-0.007820	0.166878
0.400E-09	0.098886	20.10	0.549208	-0.007912	0.164918
0.250E-09	0.097647	20.21	0.544248	-0.008008	0.162959
0.160E-09	0.096512	20.31	0.539708	-0.008097	0.161161
0.100E-09	0.095357	20.41	0.535094	-0.008190	0.159328
0.630E-10	0.094261	20.51	0.530718	-0.008281	0.157585
0.400E-10	0.093219	20.61	0.526560	-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	0.152724
0.100E-10	0.090237	20.89	0.514680	-0.008633	0.151155
0.630E-11	0.089304	20.98	0.510968	-0.008719	0.149658
0.400E-11	0.088415	21.07	0.507430	-0.008803	0.148228
0.250E-11	0.087521	21.16	0.503878	-0.008890	0.146789
0.160E-11	0.086697	21.24	0.500604	-0.008971	0.145459
0.100E-11	0.085853	21.32	0.497255	-0.009056	0.144096
0.630E-12	0.085047	21.41	0.494056	-0.009139	0.142792
0.400E-12	0.084276	21.49	0.490998	-0.009219	0.141543
0.250E-12	0.083499	21.57	0.487920	-0.009302	0.140283
0.160E-12	0.082781	21.64	0.485076	-0.009380	0.139117
0.100E-12	0.082045	21.72	0.482158	-0.009461	0.137919
0.630E-13	0.081339	21.79	0.479365	-0.009541	0.136770
0.400E-13	0.080663	21.87	0.476688	-0.009619	0.135662
0.250E-13	0.079980	21.94	0.473987	-0.009698	0.134553
0.160E-13	0.079348	22.01	0.471486	-0.009773	0.133518
0.100E-13	0.078697	22.08	0.468915	-0.009852	0.132454
0.630E-14	0.078073	22.15	0.466448	-0.009928	0.131431
0.400E-14	0.077474	22.22	0.464079	-0.010003	0.130448
0.250E-14	0.076867	22.29	0.461685	-0.010080	0.129455
0.160E-14	0.076305	22.35	0.459463	-0.010153	0.128529
0.100E-14	0.075725	22.42	0.457175	-0.010229	0.127575

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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
0.100E-02	0.205866	13.73	0.967083	-0.010591	0.123208
0.630E-03	0.196905	14.11	0.951256	-0.007297	0.178818
0.400E-03	0.189016	14.47	0.929412	-0.005431	0.240288
0.250E-03	0.181668	14.81	0.901300	-0.004588	0.284407
0.160E-03	0.175345	15.12	0.872983	-0.004422	0.295092
0.100E-03	0.169279	15.43	0.844754	-0.004538	0.287580
0.630E-04	0.163832	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	0.759325	-0.005298	0.246312
0.100E-04	0.146076	16.71	0.742215	-0.005459	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	0.227251
0.250E-05	0.135750	17.35	0.699076	-0.005877	0.222043
0.160E-05	0.132840	17.53	0.687051	-0.006000	0.217485
0.100E-05	0.129959	17.72	0.675188	-0.006126	0.213019
0.630E-06	0.127293	17.90	0.664246	-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	0.635361	-0.006588	0.198065
0.100E-06	0.118047	18.56	0.626508	-0.006701	0.194724
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	0.596085	-0.007125	0.183143
0.100E-07	0.108829	19.27	0.589176	-0.007230	0.180487
0.630E-08	0.107220	19.39	0.582689	-0.007332	0.177985
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	0.565024	-0.007626	0.171123
0.100E-08	0.101441	19.88	0.559451	-0.007724	0.168943
0.630E-09	0.100129	19.99	0.554188	-0.007820	0.166878
0.400E-09	0.098886	20.10	0.549208	-0.007912	0.164918
0.250E-09	0.097647	20.21	0.544248	-0.008008	0.162959
0.160E-09	0.096512	20.31	0.539708	-0.008097	0.161161
0.100E-09	0.095357	20.41	0.535094	-0.008190	0.159328

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12592600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND FYP PATTERN MONITOR TABLES

TABLE FOR AIDR 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
0.630E-10	0.094261	20.51	0.530718	-0.008281	0.157585
0.400E-10	0.093219	20.61	0.526560	-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	0.152724
0.100E-10	0.090237	20.89	0.514680	-0.008633	0.151155
0.630E-11	0.089304	20.98	0.510968	-0.008719	0.149658
0.400E-11	0.088415	21.07	0.507430	-0.008803	0.148228
0.250E-11	0.087521	21.16	0.503878	-0.008890	0.146789
0.160E-11	0.086697	21.24	0.500604	-0.008971	0.145459
0.100E-11	0.085853	21.32	0.497255	-0.009056	0.144096
0.630E-12	0.085047	21.41	0.494056	-0.009139	0.142792
0.400E-12	0.084276	21.49	0.490998	-0.009219	0.141543
0.250E-12	0.083499	21.57	0.487920	-0.009302	0.140283
0.160E-12	0.082781	21.64	0.485076	-0.009380	0.139117
0.100E-12	0.082045	21.72	0.482158	-0.009461	0.137919
0.630E-13	0.081339	21.79	0.479365	-0.009541	0.136770
0.400E-13	0.080663	21.87	0.476688	-0.009619	0.135666
0.250E-13	0.079980	21.94	0.473987	-0.009698	0.134552
0.160E-13	0.079348	22.01	0.471486	-0.009773	0.133518
0.100E-13	0.078697	22.08	0.468915	-0.009852	0.132454
0.630E-14	0.078073	22.15	0.466448	-0.009928	0.131431
0.400E-14	0.077474	22.22	0.464079	-0.010003	0.130448
0.250E-14	0.076867	22.29	0.461685	-0.010080	0.129453
0.160E-14	0.076305	22.35	0.459463	-0.010153	0.128529
0.100E-14	0.075725	22.42	0.457175	-0.010229	0.127575

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 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	0.202249	13.88	0.967304	-0.010662	0.122390
0.630E-03	0.193259	14.28	0.951640	-0.007353	0.177457
0.400E-03	0.185358	14.64	0.930044	-0.005476	0.238309
0.250E-03	0.178011	14.99	0.902274	-0.004628	0.281957
0.160E-03	0.171701	15.30	0.874337	-0.004462	0.292434
0.100E-03	0.165660	15.62	0.846538	-0.004581	0.284845
0.630E-04	0.160246	15.90	0.821930	-0.004784	0.272760
0.400E-04	0.155366	16.17	0.800288	-0.004990	0.261510
0.250E-04	0.150721	16.44	0.780165	-0.005187	0.251555
0.160E-04	0.146648	16.67	0.762838	-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	0.224452
0.250E-05	0.132510	17.56	0.704222	-0.005952	0.219235
0.160E-05	0.129652	17.74	0.692558	-0.006079	0.214668
0.100E-05	0.126825	17.94	0.681061	-0.006208	0.210194
0.630E-06	0.124212	18.12	0.670464	-0.006332	0.206080
0.400E-06	0.121789	18.29	0.660660	-0.006451	0.202275
0.250E-06	0.119420	18.46	0.651097	-0.006572	0.198557
0.160E-06	0.117290	18.61	0.642515	-0.006685	0.195211
0.100E-06	0.115162	18.77	0.633954	-0.006801	0.191864
0.630E-07	0.113176	18.92	0.625977	-0.006914	0.188735
0.400E-07	0.111318	19.07	0.618524	-0.007023	0.185800
0.250E-07	0.109487	19.21	0.611185	-0.007135	0.182899
0.160E-07	0.107827	19.35	0.604543	-0.007239	0.180265
0.100E-07	0.106156	19.48	0.597864	-0.007347	0.177606
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	0.096452	20.31	0.559209	-0.008054	0.162026
0.250E-09	0.095243	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	0.156440
0.630E-10	0.091940	20.73	0.541308	-0.008435	0.154698
0.400E-10	0.090923	20.83	0.537280	-0.008527	0.153040
0.250E-10	0.089906	20.92	0.533251	-0.008620	0.151377
0.160E-10	0.088970	21.02	0.529547	-0.008708	0.149846
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	0.145362
0.250E-11	0.085365	21.37	0.515296	-0.009066	0.143928
0.160E-11	0.084561	21.46	0.512120	-0.009151	0.142603
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	0.080742	21.86	0.497049	-0.009574	0.136292
0.100E-12	0.080024	21.94	0.494216	-0.009659	0.135101
0.630E-13	0.079336	22.01	0.491503	-0.009741	0.133960
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	0.130731
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	0.127687
0.250E-14	0.074974	22.50	0.474323	-0.010299	0.126700
0.160E-14	0.074425	22.57	0.472163	-0.010374	0.125784
0.100E-14	0.073860	22.63	0.469938	-0.010453	0.124840

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.1800
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	0.202249	13.88	0.967304	-0.010662	0.122390
0.630E-03	0.193259	14.28	0.951640	-0.007353	0.177457
0.400E-03	0.185358	14.64	0.930044	-0.005476	0.238309
0.250E-03	0.178011	14.99	0.902274	-0.004628	0.281957
0.160E-03	0.171701	15.30	0.874337	-0.004462	0.292434
0.100E-03	0.165660	15.62	0.846538	-0.004581	0.284845
0.630E-04	0.160246	15.90	0.821930	-0.004784	0.272760
0.400E-04	0.155366	16.17	0.800288	-0.004990	0.261510
0.250E-04	0.150721	16.44	0.780165	-0.005187	0.251555
0.160E-04	0.146648	16.67	0.762838	-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	0.224452
0.250E-05	0.132510	17.56	0.704222	-0.005952	0.219235
0.160E-05	0.129652	17.74	0.692558	-0.006079	0.214668
0.100E-05	0.126825	17.94	0.681061	-0.006208	0.210194
0.630E-06	0.124212	18.12	0.670464	-0.006332	0.206080
0.400E-06	0.121789	18.29	0.660660	-0.006451	0.202275
0.250E-06	0.119420	18.46	0.651097	-0.006572	0.198557
0.160E-06	0.117290	18.61	0.642515	-0.006685	0.195211
0.100E-06	0.115162	18.77	0.633954	-0.006801	0.191864
0.630E-07	0.113176	18.92	0.625977	-0.006914	0.188735
0.400E-07	0.111318	19.07	0.618524	-0.007023	0.185800
0.250E-07	0.109487	19.21	0.611185	-0.007135	0.182899
0.160E-07	0.107827	19.35	0.604543	-0.007239	0.180265
0.100E-07	0.106156	19.48	0.597864	-0.007347	0.177606
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	0.096452	20.31	0.559209	-0.008054	0.162026
0.250E-09	0.095243	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	0.156440

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.1800
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	0.091940	20.73	0.541308	-0.008435	0.154698
0.400E-10	0.090923	20.83	0.537280	-0.008527	0.153040
0.250E-10	0.089906	20.92	0.533251	-0.008620	0.151377
0.160E-10	0.088970	21.02	0.529547	-0.008708	0.149846
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	0.145362
0.250E-11	0.085365	21.37	0.515296	-0.009066	0.143928
0.160E-11	0.084561	21.46	0.512120	-0.009151	0.142603
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	0.080742	21.86	0.497049	-0.009574	0.136292
0.100E-12	0.080024	21.94	0.494216	-0.009659	0.135101
0.630E-13	0.079336	22.01	0.491503	-0.009741	0.133960
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	0.130731
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	0.127687
0.250E-14	0.074974	22.50	0.474323	-0.010299	0.126700
0.160E-14	0.074425	22.57	0.472163	-0.010374	0.125784
0.100E-14	0.073860	22.63	0.469938	-0.010453	0.124840

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12582600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

RUN IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.198317	14.05	0.967592	-0.010755	0.121325
0.630E-03	0.189321	14.46	0.952134	-0.007427	0.175705
0.400E-03	0.181432	14.83	0.930844	-0.005535	0.235775
0.250E-03	0.174113	15.18	0.903495	-0.004680	0.278827
0.160E-03	0.167841	15.50	0.876018	-0.004515	0.289046
0.100E-03	0.161850	15.82	0.848729	-0.004638	0.281376
0.630E-04	0.156492	16.11	0.824627	-0.004846	0.269284
0.400E-04	0.151671	16.38	0.803474	-0.005057	0.258043
0.250E-04	0.147093	16.65	0.783845	-0.005260	0.248097
0.160E-04	0.143084	16.89	0.766971	-0.005435	0.240088
0.100E-04	0.139177	17.13	0.750751	-0.005605	0.232816
0.630E-05	0.135617	17.35	0.736118	-0.005760	0.226538
0.400E-05	0.132358	17.57	0.722821	-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	0.687613	-0.006312	0.206736
0.630E-06	0.121094	18.34	0.677351	-0.006440	0.202623
0.400E-06	0.118727	18.51	0.667859	-0.006563	0.198818
0.250E-06	0.116413	18.68	0.658602	-0.006688	0.195102
0.160E-06	0.114334	18.84	0.650293	-0.006805	0.191760
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	0.613529	-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	0.100498	19.96	0.595264	-0.007706	0.169338
0.250E-08	0.099067	20.08	0.589594	-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	0.564930	-0.008325	0.156739
0.160E-09	0.091753	20.75	0.560665	-0.008421	0.154954
0.100E-09	0.090656	20.85	0.556329	-0.008521	0.153137
0.630E-10	0.089613	20.95	0.552214	-0.008618	0.151410
0.400E-10	0.088622	21.05	0.548303	-0.008713	0.149765
0.250E-10	0.087630	21.15	0.544390	-0.008810	0.148117
0.160E-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	0.135582
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	0.077328	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	0.122851
0.100E-14	0.071990	22.85	0.482807	-0.010703	0.121923

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2000
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	0.198317	14.05	0.967592	-0.010755	0.121325
0.630E-03	0.189321	14.46	0.952134	-0.007427	0.175705
0.400E-03	0.181432	14.83	0.930844	-0.005535	0.235775
0.250E-03	0.174113	15.18	0.903495	-0.004680	0.278827
0.160E-03	0.167841	15.50	0.876018	-0.004515	0.289046
0.100E-03	0.161850	15.82	0.848729	-0.004638	0.281376
0.630E-04	0.156492	16.11	0.824627	-0.004846	0.269284
0.400E-04	0.151671	16.38	0.803474	-0.005057	0.258043
0.250E-04	0.147093	16.65	0.783845	-0.005260	0.248097
0.160E-04	0.143084	16.89	0.766971	-0.005435	0.240088
0.100E-04	0.139177	17.13	0.750751	-0.005605	0.232816
0.630E-05	0.135617	17.35	0.736118	-0.005760	0.226538
0.400E-05	0.132358	17.57	0.722821	-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	0.687613	-0.006312	0.206736
0.630E-06	0.121094	18.34	0.677351	-0.006440	0.202623
0.400E-06	0.118727	18.51	0.667859	-0.006563	0.198818
0.250E-06	0.116413	18.68	0.658602	-0.006688	0.195102
0.160E-06	0.114334	18.84	0.650293	-0.006805	0.191760
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	0.613529	-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	0.100498	19.96	0.595264	-0.007706	0.169338
0.250E-08	0.099067	20.08	0.589594	-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	0.564930	-0.008325	0.156739
0.160E-09	0.091753	20.75	0.560665	-0.008421	0.154954
0.100E-09	0.090656	20.85	0.556329	-0.008521	0.153137

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2000
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	0.089613	20.95	0.552214	-0.008618	0.151410
0.400E-10	0.088622	21.05	0.548303	-0.008713	0.149765
0.250E-10	0.087630	21.15	0.544390	-0.008810	0.148117
0.160E-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	0.135582
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	0.077328	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	0.122851
0.100E-14	0.071990	22.85	0.482807	-0.010703	0.121923

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

...K IS IN DEMOD PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.194106	14.24	0.967952	-0.010875	0.119990
0.630E-03	0.185131	14.65	0.952743	-0.007520	0.173536
0.400E-03	0.177282	15.03	0.931818	-0.005609	0.232662
0.250E-03	0.170018	15.39	0.904962	-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	0.807141	-0.005140	0.253883
0.250E-04	0.143377	16.87	0.788035	-0.005349	0.243970
0.160E-04	0.139446	17.11	0.771632	-0.005530	0.235984
0.100E-04	0.135620	17.35	0.755880	-0.005705	0.228733
0.630E-05	0.132137	17.58	0.741682	-0.005866	0.222470
0.400E-05	0.128951	17.79	0.728786	-0.006015	0.216945
0.250E-05	0.125877	18.00	0.716408	-0.006163	0.211740
0.160E-05	0.123146	18.19	0.705453	-0.006298	0.207185
0.100E-05	0.120448	18.38	0.694661	-0.006437	0.202726
0.630E-06	0.117956	18.57	0.684717	-0.006570	0.198629
0.400E-06	0.115647	18.74	0.675519	-0.006697	0.194841
0.250E-06	0.113392	18.91	0.666547	-0.006827	0.191144
0.160E-06	0.111365	19.07	0.658494	-0.006948	0.187820
0.100E-06	0.109341	19.22	0.650461	-0.007073	0.184497
0.630E-07	0.107453	19.38	0.642974	-0.007194	0.181393
0.400E-07	0.105687	19.52	0.635975	-0.007311	0.178485
0.250E-07	0.103946	19.66	0.629083	-0.007431	0.175614
0.160E-07	0.102369	19.80	0.622842	-0.007542	0.173008
0.100E-07	0.100782	19.93	0.616564	-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	0.599609	-0.007993	0.163258
0.160E-08	0.095220	20.43	0.594591	-0.008098	0.161142
0.100E-08	0.093934	20.54	0.589513	-0.008207	0.158998
0.630E-09	0.092718	20.66	0.584715	-0.008313	0.156968
0.400E-09	0.091566	20.77	0.580173	-0.008416	0.155045
0.250E-09	0.090418	20.87	0.575646	-0.008522	0.153125
0.160E-09	0.089367	20.98	0.571500	-0.008621	0.151364
0.100E-09	0.088297	21.08	0.567285	-0.008724	0.149572
0.630E-10	0.087282	21.18	0.563284	-0.008825	0.147870
0.400E-10	0.086317	21.28	0.559480	-0.008922	0.146250
0.250E-10	0.085351	21.38	0.555674	-0.009023	0.144627
0.160E-10	0.084463	21.47	0.552174	-0.009117	0.143134
0.100E-10	0.083556	21.56	0.548603	-0.009215	0.141609
0.630E-11	0.082692	21.65	0.545201	-0.009310	0.140156
0.400E-11	0.081868	21.74	0.541956	-0.009404	0.138768
0.250E-11	0.081040	21.83	0.538698	-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	0.529679	-0.009774	0.133512
0.400E-12	0.078035	22.15	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

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2200
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	0.194106	14.24	0.967952	-0.010875	0.119990
0.630E-03	0.183131	14.65	0.952743	-0.007520	0.173536
0.400E-03	0.177282	15.03	0.931818	-0.005609	0.232662
0.250E-03	0.170018	15.39	0.904962	-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	0.807141	-0.005140	0.253883
0.250E-04	0.143377	16.87	0.788035	-0.005349	0.243970
0.160E-04	0.139446	17.11	0.771632	-0.005530	0.235984
0.100E-04	0.135620	17.35	0.755880	-0.005705	0.228733
0.630E-05	0.132137	17.58	0.741682	-0.005866	0.222470
0.400E-05	0.128951	17.79	0.728786	-0.006015	0.216945
0.250E-05	0.125877	18.00	0.716408	-0.006163	0.211740
0.160E-05	0.123146	18.19	0.705453	-0.006298	0.207185
0.100E-05	0.120448	18.38	0.694661	-0.006437	0.202726
0.630E-06	0.117956	18.57	0.684717	-0.006570	0.198629
0.400E-06	0.115647	18.74	0.675519	-0.006697	0.194841
0.250E-06	0.113392	18.91	0.666547	-0.006827	0.191144
0.160E-06	0.111365	19.07	0.658494	-0.006948	0.187820
0.100E-06	0.109341	19.22	0.650461	-0.007073	0.184497
0.630E-07	0.107453	19.38	0.642974	-0.007194	0.181393
0.400E-07	0.105687	19.52	0.635975	-0.007311	0.178485
0.250E-07	0.103946	19.66	0.629083	-0.007431	0.175614
0.160E-07	0.102369	19.80	0.622842	-0.007542	0.173008
0.100E-07	0.100782	19.93	0.616564	-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	0.599609	-0.007993	0.163258
0.160E-08	0.095220	20.43	0.594591	-0.008098	0.161142
0.100E-08	0.093934	20.54	0.589513	-0.008207	0.158998
0.630E-09	0.092718	20.66	0.584715	-0.008313	0.156968
0.400E-09	0.091566	20.77	0.580173	-0.008416	0.155045
0.250E-09	0.090418	20.87	0.575646	-0.008522	0.153125
0.160E-09	0.089367	20.98	0.571500	-0.008621	0.151364
0.100E-09	0.088297	21.08	0.567285	-0.008724	0.149572

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2200
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	0.087282	21.18	0.563284	-0.008825	0.147870
0.400E-10	0.086317	21.28	0.559480	-0.008922	0.146250
0.250E-10	0.085351	21.38	0.555674	-0.009023	0.144627
0.160E-10	0.084463	21.47	0.552174	-0.009117	0.143134
0.100E-10	0.083556	21.56	0.548603	-0.009215	0.141609
0.630E-11	0.082692	21.65	0.545201	-0.009310	0.140156
0.400E-11	0.081868	21.74	0.541956	-0.009404	0.138768
0.250E-11	0.081040	21.83	0.538698	-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	0.529679	-0.009774	0.133512
0.400E-12	0.078035	22.15	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:

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

AIDR = AMPLITUDE OF INTERSYMBOL INTERFERENCE TO D RATIO.

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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 = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

...IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.189649	14.44	0.968388	-0.011024	0.118374
0.630E-03	0.180728	14.86	0.959468	-0.007634	0.170944
0.400E-03	0.172949	15.24	0.932960	-0.005699	0.228971
0.250E-03	0.165770	15.61	0.906662	-0.004825	0.270463
0.160E-03	0.159651	15.94	0.880308	-0.004660	0.280049
0.100E-03	0.153832	16.26	0.854227	-0.004793	0.272251
0.630E-04	0.148649	16.56	0.831281	-0.005015	0.260226
0.400E-04	0.144004	16.83	0.811211	-0.005239	0.249087
0.250E-04	0.139604	17.10	0.792640	-0.005454	0.239238
0.160E-04	0.135762	17.34	0.776710	-0.005642	0.231303
0.100E-04	0.132025	17.59	0.761423	-0.005823	0.224098
0.630E-05	0.128626	17.81	0.747649	-0.005989	0.217876
0.400E-05	0.125519	18.03	0.735142	-0.006144	0.212388
0.250E-05	0.122523	18.24	0.723138	-0.006297	0.207220
0.160E-05	0.119861	18.43	0.712514	-0.006438	0.202701
0.100E-05	0.117233	18.62	0.702047	-0.006581	0.198278
0.630E-06	0.114806	18.80	0.692402	-0.006719	0.194218
0.400E-06	0.112557	18.97	0.683479	-0.006851	0.190467
0.250E-06	0.110361	19.14	0.674774	-0.006985	0.186807
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	0.651893	-0.007365	0.177170
0.400E-07	0.102861	19.76	0.645098	-0.007487	0.174299
0.250E-07	0.101166	19.90	0.638404	-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	20.66	0.604883	-0.008300	0.157218
0.100E-08	0.091421	20.78	0.599946	-0.008413	0.155111
0.630E-09	0.090238	20.89	0.595280	-0.008522	0.153117
0.400E-09	0.089117	21.00	0.590863	-0.008629	0.151229
0.250E-09	0.088000	21.11	0.586459	-0.008738	0.149344
0.160E-09	0.086977	21.21	0.582425	-0.008840	0.147617
0.100E-09	0.085936	21.32	0.578324	-0.008946	0.145860
0.630E-10	0.084948	21.42	0.574431	-0.009050	0.144191
0.400E-10	0.084008	21.51	0.570730	-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	0.547575	-0.009837	0.132656
0.100E-11	0.077370	22.23	0.544580	-0.009933	0.131367
0.630E-12	0.076643	22.31	0.541719	-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	0.127783
0.160E-12	0.074602	22.55	0.533680	-0.010301	0.126676
0.100E-12	0.073938	22.62	0.531066	-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	0.523740	-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	0.514846	-0.011006	0.118562
0.250E-14	0.069272	23.19	0.512695	-0.011093	0.117636
0.160E-14	0.068765	23.25	0.510699	-0.011175	0.116775
0.100E-14	0.068242	23.32	0.508642	-0.011260	0.115888

BASEBAND EYE 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	14.44	0.968388	-0.011024	0.118374
0.630E-03	0.180728	14.86	0.953468	-0.007634	0.170944
0.400E-03	0.172949	15.24	0.932960	-0.005699	0.228971
0.250E-03	0.165770	15.61	0.906642	-0.004825	0.270463
0.160E-03	0.159651	15.94	0.880308	-0.004660	0.280049
0.100E-03	0.153832	16.26	0.854227	-0.004793	0.272251
0.630E-04	0.148649	16.56	0.831281	-0.005015	0.260226
0.400E-04	0.144004	16.83	0.811211	-0.005239	0.249087
0.250E-04	0.139604	17.10	0.792640	-0.005454	0.239238
0.160E-04	0.135762	17.34	0.776710	-0.005642	0.231303
0.100E-04	0.132025	17.59	0.761423	-0.005823	0.224098
0.630E-05	0.128626	17.81	0.747649	-0.005989	0.217876
0.400E-05	0.125519	18.03	0.735142	-0.006144	0.212388
0.250E-05	0.122523	18.24	0.723138	-0.006297	0.207220
0.160E-05	0.119861	18.43	0.712514	-0.006438	0.202701
0.100E-05	0.117233	18.62	0.702047	-0.006581	0.198278
0.630E-06	0.114806	18.80	0.692402	-0.006719	0.194218
0.400E-06	0.112557	18.97	0.683479	-0.006851	0.190467
0.250E-06	0.110361	19.14	0.674774	-0.006985	0.186807
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	0.651893	-0.007365	0.177170
0.400E-07	0.102861	19.76	0.645098	-0.007487	0.174299
0.250E-07	0.101166	19.90	0.638404	-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	20.66	0.604883	-0.008300	0.157218
0.100E-08	0.091421	20.78	0.599946	-0.008413	0.155111
0.630E-09	0.090238	20.89	0.595280	-0.008522	0.153117
0.400E-09	0.089117	21.00	0.590853	-0.008629	0.151229
0.250E-09	0.088000	21.11	0.586459	-0.008738	0.149344
0.160E-09	0.086977	21.21	0.582425	-0.008840	0.147617
0.100E-09	0.085936	21.32	0.578324	-0.008946	0.145860

NOMENCLATURE:

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N / S RATIO = RMS NOISE TO RMS SIGNAL RATIO.
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BASEBAND EYE 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
0.630E-10	0.084948	21.42	0.574631	-0.009050	0.144191
0.400E-10	0.084008	21.51	0.570730	-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	0.547575	-0.009837	0.132656
0.100E-11	0.077370	22.23	0.544580	-0.009933	0.131367
0.630E-12	0.076643	22.31	0.541719	-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	22.62	0.531066	-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	0.523760	-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	0.514846	-0.011006	0.118562
0.250E-14	0.069272	23.19	0.512695	-0.011093	0.117636
0.160E-14	0.068765	23.25	0.510699	-0.011175	0.116775
0.100E-14	0.068242	23.32	0.508642	-0.011260	0.115888

NOMENCLATURE:

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TRUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.184986	14.66	0.968900	-0.011204	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	0.908568	-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	0.266704
0.630E-04	0.144628	16.79	0.835107	-0.005122	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	0.128409	17.83	0.767262	-0.005958	0.219019
0.630E-05	0.125099	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	19.04	0.700284	-0.006886	0.189509
0.400E-06	0.109462	19.21	0.691621	-0.007023	0.185814
0.250E-06	0.107326	19.39	0.683168	-0.007161	0.182212
0.160E-06	0.105407	19.54	0.675578	-0.007291	0.178978
0.100E-06	0.103490	19.70	0.668004	-0.007425	0.175749
0.630E-07	0.101703	19.85	0.660941	-0.007554	0.172737
0.400E-07	0.100031	20.00	0.654337	-0.007680	0.169918
0.250E-07	0.098383	20.14	0.647831	-0.007807	0.167138
0.160E-07	0.096890	20.27	0.641938	-0.007927	0.164618
0.100E-07	0.095388	20.41	0.636008	-0.008051	0.162081
0.630E-08	0.093976	20.54	0.630436	-0.008171	0.159694
0.400E-08	0.092646	20.66	0.625189	-0.008288	0.157446
0.250E-08	0.091326	20.79	0.619984	-0.008407	0.155214
0.160E-08	0.090124	20.90	0.615239	-0.008519	0.153177
0.100E-08	0.088906	21.02	0.610436	-0.008635	0.151116
0.630E-09	0.087755	21.13	0.605897	-0.008748	0.149166
0.400E-09	0.086665	21.24	0.601600	-0.008858	0.147319
0.250E-09	0.085579	21.35	0.597315	-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
0.630E-10	0.082611	21.66	0.585611	-0.009291	0.140443
0.400E-10	0.081697	21.76	0.582009	-0.009395	0.138892
0.250E-10	0.080783	21.85	0.578404	-0.009501	0.137340
0.160E-10	0.079942	21.94	0.575089	-0.009601	0.135913
0.100E-10	0.079084	22.04	0.571706	-0.009705	0.134456
0.630E-11	0.078266	22.13	0.568483	-0.009806	0.133067
0.400E-11	0.077486	22.22	0.565408	-0.009905	0.131743
0.250E-11	0.076703	22.30	0.562321	-0.010006	0.130412
0.160E-11	0.075980	22.39	0.559473	-0.010101	0.129185
0.100E-11	0.075241	22.47	0.556558	-0.010200	0.127929
0.630E-12	0.074534	22.55	0.553773	-0.010297	0.126729
0.400E-12	0.073859	22.63	0.551109	-0.010391	0.125580
0.250E-12	0.073178	22.71	0.548427	-0.010488	0.124424
0.160E-12	0.072549	22.79	0.545947	-0.010578	0.123355
0.100E-12	0.071903	22.87	0.543402	-0.010673	0.122258
0.630E-13	0.071285	22.94	0.540965	-0.010766	0.121207
0.400E-13	0.070692	23.01	0.538628	-0.010856	0.120199
0.250E-13	0.070094	23.09	0.536270	-0.010949	0.119182
0.160E-13	0.069540	23.16	0.534085	-0.011036	0.118240
0.100E-13	0.068970	23.23	0.531838	-0.011127	0.117271
0.630E-14	0.068423	23.30	0.529682	-0.011216	0.116341
0.400E-14	0.067897	23.36	0.527611	-0.011303	0.115448
0.250E-14	0.067366	23.43	0.525517	-0.011392	0.114545
0.160E-14	0.066873	23.50	0.523574	-0.011476	0.113707
0.100E-14	0.066365	23.56	0.521571	-0.011564	0.112843

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2600
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	0.184986	14.66	0.968900	-0.011204	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	0.908568	-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	0.266704
0.630E-04	0.144628	16.79	0.835107	-0.005122	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	0.128409	17.83	0.767262	-0.005958	0.219019
0.630E-05	0.125099	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	19.04	0.700284	-0.006886	0.189509
0.400E-06	0.109462	19.21	0.691621	-0.007023	0.185814
0.250E-06	0.107326	19.39	0.683168	-0.007161	0.182212
0.160E-06	0.105407	19.54	0.675578	-0.007291	0.178978
0.100E-06	0.103490	19.70	0.668004	-0.007425	0.175749
0.630E-07	0.101703	19.85	0.660941	-0.007554	0.172737
0.400E-07	0.100031	20.00	0.654337	-0.007680	0.169918
0.250E-07	0.098383	20.14	0.647831	-0.007807	0.167138
0.160E-07	0.096890	20.27	0.641938	-0.007927	0.164618
0.100E-07	0.095388	20.41	0.636008	-0.008051	0.162081
0.630E-08	0.093976	20.54	0.630436	-0.008171	0.159694
0.400E-08	0.092646	20.66	0.625189	-0.008288	0.157446
0.250E-08	0.091326	20.79	0.619984	-0.008407	0.155214
0.160E-08	0.090124	20.90	0.615239	-0.008519	0.153177
0.100E-08	0.088906	21.02	0.610436	-0.008635	0.151116
0.630E-09	0.087755	21.13	0.605897	-0.008748	0.149166
0.400E-09	0.086665	21.24	0.601600	-0.008858	0.147319
0.250E-09	0.085579	21.35	0.597315	-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

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.2600
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	0.082611	21.66	0.585611	-0.009291	0.140443
0.400E-10	0.081697	21.76	0.582009	-0.009395	0.138892
0.250E-10	0.080783	21.85	0.578404	-0.009501	0.137340
0.160E-10	0.079942	21.94	0.575089	-0.009601	0.135913
0.100E-10	0.079084	22.04	0.571706	-0.009705	0.134456
0.630E-11	0.078266	22.13	0.568483	-0.009806	0.133067
0.400E-11	0.077486	22.22	0.565408	-0.009905	0.131743
0.250E-11	0.076703	22.30	0.562321	-0.010006	0.130412
0.160E-11	0.075980	22.39	0.559473	-0.010101	0.129185
0.100E-11	0.075241	22.47	0.556558	-0.010200	0.127929
0.630E-12	0.074534	22.55	0.553773	-0.010297	0.126729
0.400E-12	0.073859	22.63	0.551109	-0.010391	0.125580
0.250E-12	0.073178	22.71	0.548427	-0.010488	0.124424
0.160E-12	0.072549	22.79	0.545947	-0.010578	0.123355
0.100E-12	0.071903	22.87	0.543402	-0.010673	0.122258
0.630E-13	0.071285	22.94	0.540965	-0.010766	0.121207
0.400E-13	0.070692	23.01	0.538628	-0.010856	0.120199
0.250E-13	0.070094	23.09	0.536270	-0.010949	0.119182
0.160E-13	0.069540	23.16	0.534085	-0.011036	0.118240
0.100E-13	0.068970	23.23	0.531838	-0.011127	0.117271
0.630E-14	0.068423	23.30	0.529682	-0.011216	0.116341
0.400E-14	0.067897	23.36	0.527611	-0.011303	0.115448
0.250E-14	0.067366	23.43	0.525517	-0.011392	0.114545
0.160E-14	0.066873	23.50	0.523574	-0.011476	0.113707
0.100E-14	0.066365	23.56	0.521571	-0.011564	0.112843

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.

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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

THERM IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.180151	14.89	0.969485	-0.011417	0.114298
0.630E-03	0.171438	15.32	0.955242	-0.007930	0.164554
0.400E-03	0.163889	15.71	0.935691	-0.005931	0.219998
0.250E-03	0.156962	16.08	0.910649	-0.005028	0.259539
0.160E-03	0.151083	16.42	0.885600	-0.004861	0.268422
0.100E-03	0.145515	16.74	0.860871	-0.005007	0.260626
0.630E-04	0.140570	17.04	0.839166	-0.005244	0.248843
0.400E-04	0.136148	17.32	0.820217	-0.005484	0.237968
0.250E-04	0.131968	17.59	0.802706	-0.005714	0.228363
0.160E-04	0.128322	17.83	0.787697	-0.005914	0.220630
0.100E-04	0.124780	18.08	0.773299	-0.006109	0.213611
0.630E-05	0.121561	18.30	0.760329	-0.006287	0.207555
0.400E-05	0.118620	18.52	0.748551	-0.006453	0.202218
0.250E-05	0.115785	18.73	0.737245	-0.006617	0.197200
0.160E-05	0.113268	18.92	0.727236	-0.006768	0.192817
0.100E-05	0.110783	19.11	0.717372	-0.006921	0.188534
0.630E-06	0.108488	19.29	0.708279	-0.007069	0.184608
0.400E-06	0.106363	19.46	0.699865	-0.007210	0.180985
0.250E-06	0.104287	19.64	0.691653	-0.007353	0.177455
0.160E-06	0.102422	19.79	0.684278	-0.007487	0.174288
0.100E-06	0.100560	19.95	0.676918	-0.007625	0.171128
0.630E-07	0.098823	20.10	0.670054	-0.007759	0.168181
0.400E-07	0.097198	20.25	0.663636	-0.007888	0.165425
0.250E-07	0.095597	20.39	0.657312	-0.008020	0.162708
0.160E-07	0.094147	20.52	0.651583	-0.008143	0.160246
0.100E-07	0.092687	20.66	0.645818	-0.008271	0.157768
0.630E-08	0.091315	20.79	0.640400	-0.008395	0.155438
0.400E-08	0.090022	20.91	0.635297	-0.008515	0.153243
0.250E-08	0.088740	21.04	0.630236	-0.008638	0.151064
0.160E-08	0.087572	21.15	0.625622	-0.008753	0.149078
0.100E-08	0.086388	21.27	0.620951	-0.008873	0.147067
0.630E-09	0.085270	21.38	0.616536	-0.008989	0.145166
0.400E-09	0.084211	21.49	0.612356	-0.009102	0.143365
0.250E-09	0.083156	21.60	0.608189	-0.009217	0.141570
0.160E-09	0.082188	21.70	0.604372	-0.009326	0.139925
0.100E-09	0.081205	21.81	0.600490	-0.009439	0.138252
0.630E-10	0.080271	21.91	0.596805	-0.009548	0.136664
0.400E-10	0.079384	22.01	0.593301	-0.009655	0.135154
0.250E-10	0.078495	22.10	0.589794	-0.009764	0.133642
0.160E-10	0.077678	22.19	0.586569	-0.009867	0.132251
0.100E-10	0.076844	22.29	0.583278	-0.009974	0.130832
0.630E-11	0.076050	22.38	0.580142	-0.010078	0.129480
0.400E-11	0.075292	22.47	0.577151	-0.010179	0.128190
0.250E-11	0.074531	22.55	0.574147	-0.010283	0.126895
0.160E-11	0.073829	22.64	0.571377	-0.010381	0.125700
0.100E-11	0.073110	22.72	0.568541	-0.010483	0.124477
0.630E-12	0.072424	22.80	0.565832	-0.010582	0.123309
0.400E-12	0.071767	22.88	0.563240	-0.010679	0.122191
0.250E-12	0.071106	22.96	0.560630	-0.010779	0.121065
0.160E-12	0.070495	23.04	0.558217	-0.010872	0.120025
0.100E-12	0.069867	23.11	0.555742	-0.010970	0.118957
0.630E-13	0.069267	23.19	0.553370	-0.011065	0.117934
0.400E-13	0.068691	23.26	0.551097	-0.011158	0.116953
0.250E-13	0.068109	23.34	0.548803	-0.011253	0.115964
0.160E-13	0.067571	23.40	0.546677	-0.011342	0.115047
0.100E-13	0.067017	23.48	0.544491	-0.011436	0.114104
0.630E-14	0.066485	23.55	0.542393	-0.011528	0.113199
0.400E-14	0.065975	23.61	0.540378	-0.011617	0.112329
0.250E-14	0.065458	23.68	0.538341	-0.011708	0.111451
0.160E-14	0.064979	23.74	0.536450	-0.011795	0.110635
0.100E-14	0.064486	23.81	0.534502	-0.011885	0.109794

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 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
0.100E-02	0.180151	14.89	0.969485	-0.011417	0.114298
0.630E-03	0.171438	15.32	0.955242	-0.007930	0.164554
0.400E-03	0.163889	15.71	0.935691	-0.005931	0.219998
0.250E-03	0.156962	16.08	0.910649	-0.005028	0.259539
0.160E-03	0.151083	16.42	0.885600	-0.004861	0.268422
0.100E-03	0.145515	16.74	0.860871	-0.005007	0.260626
0.630E-04	0.140570	17.04	0.839166	-0.005244	0.248843
0.400E-04	0.136148	17.32	0.820217	-0.005484	0.237968
0.250E-04	0.131968	17.59	0.802706	-0.005714	0.228363
0.160E-04	0.128322	17.83	0.787697	-0.005914	0.220630
0.100E-04	0.124780	18.08	0.773299	-0.006109	0.213611
0.630E-05	0.121561	18.30	0.760329	-0.006287	0.207555
0.400E-05	0.118620	18.52	0.748551	-0.006453	0.202218
0.250E-05	0.115785	18.73	0.737245	-0.006617	0.197200
0.160E-05	0.113268	18.92	0.727236	-0.006768	0.192817
0.100E-05	0.110783	19.11	0.717372	-0.006921	0.188534
0.630E-06	0.108488	19.29	0.708279	-0.007069	0.184608
0.400E-06	0.106363	19.46	0.699865	-0.007210	0.180985
0.250E-06	0.104287	19.64	0.691653	-0.007353	0.177455
0.160E-06	0.102422	19.79	0.684278	-0.007487	0.174288
0.100E-06	0.100560	19.95	0.676918	-0.007625	0.171128
0.630E-07	0.098823	20.10	0.670054	-0.007759	0.168181
0.400E-07	0.097198	20.25	0.663636	-0.007888	0.165425
0.250E-07	0.095597	20.39	0.657312	-0.008020	0.162708
0.160E-07	0.094147	20.52	0.651583	-0.008143	0.160246
0.100E-07	0.092687	20.66	0.645818	-0.008271	0.157768
0.630E-08	0.091315	20.79	0.640400	-0.008395	0.155438
0.400E-08	0.090022	20.91	0.635297	-0.008515	0.153243
0.250E-08	0.088740	21.04	0.630236	-0.008638	0.151064
0.160E-08	0.087572	21.15	0.625622	-0.008753	0.149078
0.100E-08	0.086388	21.27	0.620951	-0.008873	0.147067
0.630E-09	0.085270	21.38	0.616536	-0.008989	0.145166
0.400E-09	0.084211	21.49	0.612356	-0.009102	0.143365
0.250E-09	0.083156	21.60	0.608189	-0.009217	0.141570
0.160E-09	0.082188	21.70	0.604372	-0.009326	0.139925
0.100E-09	0.081205	21.81	0.600490	-0.009439	0.138252

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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.

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BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 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
0.400E-10	0.079384	22.01	0.593301	-0.009655	0.135154
0.250E-10	0.078495	22.10	0.589794	-0.009764	0.133642
0.160E-10	0.077678	22.19	0.586569	-0.009867	0.132251
0.100E-10	0.076844	22.29	0.583278	-0.009974	0.130832
0.630E-11	0.076050	22.38	0.580142	-0.010078	0.129480
0.400E-11	0.075292	22.47	0.577151	-0.010179	0.128190
0.250E-11	0.074531	22.55	0.574147	-0.010283	0.126895
0.160E-11	0.073829	22.64	0.571377	-0.010381	0.125700
0.100E-11	0.073110	22.72	0.568541	-0.010483	0.124477
0.630E-12	0.072424	22.80	0.565832	-0.010582	0.123309
0.400E-12	0.071767	22.88	0.563240	-0.010679	0.122191
0.250E-12	0.071106	22.96	0.560630	-0.010779	0.121065
0.160E-12	0.070495	23.04	0.558217	-0.010872	0.120025
0.100E-12	0.069867	23.11	0.555742	-0.010970	0.118957
0.630E-13	0.069267	23.19	0.553370	-0.011065	0.117934
0.400E-13	0.068691	23.26	0.551097	-0.011158	0.116953
0.250E-13	0.068109	23.34	0.548803	-0.011253	0.115964
0.160E-13	0.067571	23.40	0.546677	-0.011342	0.115047
0.100E-13	0.067017	23.48	0.544491	-0.011436	0.114104
0.630E-14	0.066485	23.55	0.542393	-0.011528	0.113199
0.400E-14	0.065975	23.61	0.540378	-0.011617	0.112329
0.250E-14	0.065458	23.68	0.538341	-0.011708	0.111451
0.160E-14	0.064979	23.74	0.536450	-0.011795	0.110635
0.100E-14	0.064486	23.81	0.534502	-0.011885	0.109794

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

TRANS IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.175180	15.13	0.970137	-0.011664	0.111870
0.630E-03	0.166622	15.57	0.956269	-0.008113	0.160834
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	0.864473	-0.005135	0.254133
0.630E-04	0.136491	17.30	0.843392	-0.005380	0.242544
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	0.214856
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	0.755438	-0.006630	0.196814
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	0.183428
0.630E-06	0.105325	19.55	0.716334	-0.007266	0.179591
0.400E-06	0.103262	19.72	0.708161	-0.007412	0.176052
0.250E-06	0.101246	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	0.166434
0.630E-07	0.095942	20.36	0.679199	-0.007978	0.163560
0.400E-07	0.094364	20.50	0.672962	-0.008111	0.160873
0.250E-07	0.092810	20.65	0.666816	-0.008247	0.158226
0.160E-07	0.091402	20.78	0.661248	-0.008374	0.155827
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	0.144952
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	0.139393
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
0.630E-10	0.077931	22.17	0.608003	-0.009821	0.132873
0.400E-10	0.077069	22.26	0.604597	-0.009930	0.131404
0.250E-10	0.076206	22.36	0.601187	-0.010043	0.129934
0.160E-10	0.075413	22.45	0.598052	-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	0.066688	23.52	0.563566	-0.011476	0.113705
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	0.106745

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3000
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	0.175180	15.13	0.970137	-0.011664	0.111870
0.630E-03	0.166622	15.57	0.956269	-0.008113	0.160834
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	0.864473	-0.005135	0.254133
0.630E-04	0.136491	17.30	0.843392	-0.005380	0.242544
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	0.214856
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	0.755438	-0.006630	0.196814
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	0.183428
0.630E-06	0.105325	19.55	0.716334	-0.007266	0.179591
0.400E-06	0.103262	19.72	0.708161	-0.007412	0.176052
0.250E-06	0.101246	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	0.166434
0.630E-07	0.095942	20.36	0.679199	-0.007978	0.163560
0.400E-07	0.094364	20.50	0.672962	-0.008111	0.160873
0.250E-07	0.092810	20.65	0.666816	-0.008247	0.158226
0.160E-07	0.091402	20.78	0.661248	-0.008374	0.155827
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	0.144952
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	0.139393
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

NOMENCLATURE:

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

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SNR = SIGNAL POWER TO NOISE POWER IN DECIBLES.

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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.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3000
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	0.077931	22.17	0.608003	-0.009821	0.132873
0.400E-10	0.077069	22.26	0.604597	-0.009930	0.131404
0.250E-10	0.076206	22.36	0.601187	-0.010043	0.129934
0.160E-10	0.075413	22.45	0.598052	-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	0.066688	23.52	0.563566	-0.011476	0.113705
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	0.106745

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

THICK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.170107	15.39	0.970847	-0.011947	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	0.209357
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	0.235985
0.400E-04	0.128225	17.84	0.829877	-0.005786	0.225541
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	0.202194
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	0.096449	20.31	0.701779	-0.007923	0.164703
0.100E-06	0.094695	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	0.085989	21.31	0.660384	-0.008887	0.146834
0.400E-08	0.084772	21.43	0.655549	-0.009015	0.144756
0.250E-08	0.083565	21.54	0.650772	-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	0.079300	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	0.076469	22.33	0.622682	-0.009993	0.130580
0.630E-10	0.075590	22.43	0.619202	-0.010109	0.129078
0.400E-10	0.074754	22.53	0.615894	-0.010222	0.127651
0.250E-10	0.073917	22.63	0.612581	-0.010338	0.126222
0.160E-10	0.073148	22.72	0.609536	-0.010447	0.124909
0.100E-10	0.072363	22.81	0.606428	-0.010560	0.123568
0.630E-11	0.071614	22.90	0.603467	-0.010671	0.122290
0.400E-11	0.070901	22.99	0.600642	-0.010778	0.121072
0.250E-11	0.070184	23.08	0.597805	-0.010888	0.119848
0.160E-11	0.069523	23.16	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	0.589952	-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	0.582761	-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	0.064684	23.78	0.576036	-0.011814	0.110456
0.250E-13	0.064137	23.86	0.573869	-0.011915	0.109522
0.160E-13	0.063630	23.93	0.571861	-0.012010	0.108656
0.100E-13	0.063108	24.00	0.569797	-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

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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	-0.011947	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	0.209357
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	0.235985
0.400E-04	0.128225	17.84	0.829877	-0.005786	0.225541
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	0.202194
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	0.096440	20.31	0.701779	-0.007923	0.164703
0.100E-06	0.094695	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	0.085989	21.31	0.660366	-0.008887	0.146834
0.400E-08	0.084772	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	0.079300	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	0.076469	22.33	0.622682	-0.009993	0.130580

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR 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
0.630E-10	0.075590	22.43	0.619207	-0.010109	0.129078
0.400E-10	0.074754	22.53	0.615894	-0.010227	0.127651
0.250E-10	0.073917	22.63	0.612581	-0.010338	0.126222
0.160E-10	0.073148	22.72	0.609536	-0.010447	0.124909
0.100E-10	0.072363	22.81	0.606428	-0.010560	0.123568
0.630E-11	0.071614	22.90	0.603467	-0.010671	0.122290
0.400E-11	0.070901	22.99	0.600642	-0.010778	0.121072
0.250E-11	0.070184	23.08	0.597805	-0.010888	0.119848
0.160E-11	0.069523	23.16	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	0.589952	-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	0.582761	-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	0.064684	23.78	0.576036	-0.011814	0.110456
0.250E-13	0.064137	23.86	0.573869	-0.011915	0.109522
0.160E-13	0.063630	23.93	0.571861	-0.012010	0.108656
0.100E-13	0.063108	24.00	0.569797	-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

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

... TABLE WAS CALLED.

0.100E-02	0.164961	15.65	0.971605	-0.012265	0.106394
0.630E-03	0.156795	16.09	0.958523	-0.008550	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	0.240332
0.630E-04	0.128304	17.84	0.852133	-0.005692	0.229254
0.400E-04	0.124257	18.11	0.834819	-0.005957	0.219071
0.250E-04	0.120635	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	0.190688
0.400E-05	0.108245	19.31	0.769348	-0.007026	0.185725
0.250E-05	0.105657	19.52	0.759012	-0.007207	0.181065
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
0.630E-06	0.098997	20.09	0.732516	-0.007703	0.169399
0.400E-06	0.097058	20.26	0.724815	-0.007858	0.166051
0.250E-06	0.095164	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
0.630E-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	-0.008746	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
0.630E-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	0.134829
0.630E-09	0.077810	22.18	0.648486	-0.009805	0.133084
0.400E-09	0.076844	22.29	0.644656	-0.009928	0.131431
0.250E-09	0.075881	22.40	0.640836	-0.010054	0.129784
0.160E-09	0.074998	22.50	0.637338	-0.010173	0.128274
0.100E-09	0.074101	22.60	0.633780	-0.010296	0.126740
0.630E-10	0.073249	22.70	0.630402	-0.010416	0.125282
0.400E-10	0.072439	22.80	0.627191	-0.010532	0.123897
0.250E-10	0.071628	22.90	0.623976	-0.010651	0.122510
0.160E-10	0.070882	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	0.609634	-0.011218	0.116323
0.160E-11	0.067370	23.43	0.607095	-0.011325	0.115228
0.100E-11	0.066714	23.52	0.604495	-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	0.597244	-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	0.590589	-0.012071	0.108107
0.400E-13	0.062681	24.06	0.588505	-0.012172	0.107208
0.250E-13	0.062151	24.13	0.586402	-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

BASEBAND EYE 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 PER WRT A / D	TIME CONSTANT
0.100E-02	0.164961	15.65	0.971605	-0.012265	0.106394
0.630E-03	0.156795	16.09	0.958523	-0.008550	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	0.240332
0.630E-04	0.128304	17.84	0.852133	-0.005692	0.229254
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	0.190688
0.400E-05	0.108245	19.31	0.769348	-0.007026	0.185725
0.250E-05	0.105657	19.52	0.759012	-0.007207	0.181065
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
0.630E-06	0.098997	20.09	0.732516	-0.007703	0.169399
0.400E-06	0.097058	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
0.630E-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	-0.008746	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
0.630E-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	0.134829
0.630E-09	0.077810	22.18	0.648486	-0.009805	0.133084
0.400E-09	0.076844	22.29	0.644656	-0.009928	0.131431
0.250E-09	0.075881	22.40	0.640836	-0.010054	0.129784
0.160E-09	0.074998	22.50	0.637338	-0.010173	0.128274
0.100E-09	0.074101	22.60	0.633780	-0.010296	0.126740

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE 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 PER WRT A / D	TIME CONSTANT
0.630E-10	0.073249	22.70	0.630402	-0.010416	0.125282
0.400E-10	0.072439	22.80	0.627191	-0.010532	0.123897
0.250E-10	0.071628	22.90	0.623976	-0.010651	0.122510
0.160E-10	0.070882	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	0.609634	-0.011218	0.116323
0.160E-11	0.067370	23.43	0.607095	-0.011325	0.115228
0.100E-11	0.066714	23.52	0.604495	-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	0.597244	-0.011758	0.110978
0.160E-12	0.064327	23.83	0.595038	-0.011860	0.110024
0.100E-12	0.063755	23.91	0.592763	-0.011967	0.109045
0.630E-13	0.063207	23.98	0.590589	-0.012071	0.108107
0.400E-13	0.062681	24.06	0.588505	-0.012172	0.107208
0.250E-13	0.062151	24.13	0.586402	-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 THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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.
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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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

THUNK IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.159765	15.93	0.972399	+0.012617	0.103424
0.630E-03	0.151825	16.37	0.959718	+0.008802	0.148246
0.400E-03	0.145009	16.77	0.942311	+0.006601	0.197698
0.250E-03	0.138797	17.15	0.920026	+0.005604	0.232849
0.160E-03	0.133550	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	0.856577	+0.005867	0.222417
0.400E-04	0.120288	18.40	0.839796	-0.006140	0.212516
0.250E-04	0.116587	18.67	0.824292	-0.006403	0.203789
0.160E-04	0.113362	18.91	0.811004	-0.006632	0.196774
0.100E-04	0.110231	19.15	0.798255	-0.006853	0.190416
0.630E-05	0.107385	19.38	0.786766	-0.007056	0.184938
0.400E-05	0.104786	19.59	0.776330	-0.007245	0.180120
0.250E-05	0.102281	19.80	0.766308	-0.007431	0.175595
0.160E-05	0.100057	20.00	0.757494	-0.007602	0.171650
0.100E-05	0.097862	20.19	0.748685	-0.007777	0.167800
0.630E-06	0.095835	20.37	0.740619	-0.007943	0.164274
0.400E-06	0.093957	20.54	0.733152	-0.008104	0.161025
0.250E-06	0.092123	20.71	0.725863	-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	0.706686	-0.008724	0.149570
0.400E-07	0.085861	21.32	0.700985	-0.008870	0.147108
0.250E-07	0.084447	21.47	0.695368	-0.009019	0.144683
0.160E-07	0.083166	21.60	0.690279	-0.009158	0.142487
0.100E-07	0.081876	21.74	0.685157	-0.009302	0.140277
0.630E-08	0.080664	21.87	0.680343	-0.009442	0.138200
0.400E-08	0.079522	21.99	0.675810	-0.009578	0.136244
0.250E-08	0.078390	22.11	0.671312	-0.009716	0.134304
0.160E-08	0.077357	22.23	0.667212	-0.009846	0.132535
0.100E-08	0.076312	22.35	0.663061	-0.009981	0.130744
0.630E-09	0.075324	22.46	0.659138	-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	0.648327	-0.010491	0.124387
0.100E-09	0.071733	22.89	0.644877	-0.010618	0.122899
0.630E-10	0.070909	22.99	0.641602	-0.010741	0.121486
0.400E-10	0.070125	23.08	0.638488	-0.010861	0.120143
0.250E-10	0.069340	23.18	0.635371	-0.010984	0.118798
0.160E-10	0.068618	23.27	0.632504	-0.011100	0.117561
0.100E-10	0.067881	23.37	0.629579	-0.011220	0.116299
0.630E-11	0.067179	23.46	0.626792	-0.011337	0.115097
0.400E-11	0.066510	23.54	0.624133	-0.011452	0.113950
0.250E-11	0.065838	23.63	0.621464	-0.011569	0.112798
0.160E-11	0.065218	23.71	0.619001	-0.011679	0.111736
0.100E-11	0.064583	23.80	0.616480	-0.011793	0.110648
0.630E-12	0.063977	23.88	0.614072	-0.011905	0.109609
0.400E-12	0.063396	23.96	0.611768	-0.012014	0.108616
0.250E-12	0.062812	24.04	0.609449	-0.012126	0.107615
0.160E-12	0.062272	24.11	0.607304	-0.012231	0.106690
0.100E-12	0.061718	24.19	0.605103	-0.012341	0.105740
0.630E-13	0.061187	24.27	0.602996	-0.012448	0.104831
0.400E-13	0.060679	24.34	0.600975	-0.012552	0.103959
0.250E-13	0.060165	24.41	0.598936	-0.012659	0.103079
0.160E-13	0.059689	24.48	0.597046	-0.012760	0.102264
0.100E-13	0.059200	24.55	0.595103	-0.012866	0.101426
0.630E-14	0.058730	24.62	0.593238	-0.012968	0.100621
0.400E-14	0.058279	24.69	0.591447	-0.013069	0.099849
0.250E-14	0.057823	24.76	0.589636	-0.013172	0.099067
0.160E-14	0.057400	24.82	0.587955	-0.013269	0.098342
0.100E-14	0.056964	24.89	0.586224	-0.013371	0.097595

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3600
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	0.159765	15.93	0.972399	-0.012617	0.103424
0.630E-03	0.151825	16.37	0.959718	-0.008802	0.148246
0.400E-03	0.145009	16.77	0.942311	-0.006601	0.197698
0.250E-03	0.138797	17.15	0.920028	-0.005604	0.232849
0.160E-03	0.133550	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	0.856577	-0.005867	0.222417
0.400E-04	0.120288	18.40	0.839796	-0.006140	0.212516
0.250E-04	0.116587	18.67	0.824292	-0.006403	0.203789
0.160E-04	0.113362	18.91	0.811004	-0.006632	0.196774
0.100E-04	0.110231	19.15	0.798255	-0.006853	0.190416
0.630E-05	0.107385	19.38	0.786766	-0.007056	0.184938
0.400E-05	0.104786	19.59	0.776330	-0.007245	0.180120
0.250E-05	0.102281	19.80	0.766308	-0.007431	0.175595
0.160E-05	0.100057	20.00	0.757434	-0.007602	0.171650
0.100E-05	0.097862	20.19	0.748685	-0.007777	0.167800
0.630E-06	0.095835	20.37	0.740619	-0.007943	0.164274
0.400E-06	0.093957	20.54	0.733152	-0.008104	0.161025
0.250E-06	0.092123	20.71	0.725863	-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	0.706686	-0.008724	0.149570
0.400E-07	0.085861	21.32	0.700985	-0.008870	0.147108
0.250E-07	0.084447	21.47	0.695368	-0.009019	0.144683
0.160E-07	0.083166	21.60	0.690279	-0.009158	0.142487
0.100E-07	0.081876	21.74	0.685157	-0.009302	0.140277
0.630E-08	0.080664	21.87	0.680343	-0.009442	0.138200
0.400E-08	0.079522	21.99	0.675810	-0.009578	0.136244
0.250E-08	0.078390	22.11	0.671312	-0.009716	0.134304
0.160E-08	0.077357	22.23	0.667217	-0.009846	0.132535
0.100E-08	0.076312	22.35	0.663061	-0.009981	0.130744
0.630E-09	0.075324	22.46	0.659138	-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	0.648327	-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 THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3600
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	0.070909	22.99	0.641602	-0.010741	0.121486
0.400E-10	0.070125	23.08	0.638488	-0.010861	0.120143
0.250E-10	0.069340	23.18	0.635371	-0.010984	0.118798
0.160E-10	0.068618	23.27	0.632504	-0.011100	0.117561
0.100E-10	0.067881	23.37	0.629579	-0.011220	0.116299
0.630E-11	0.067179	23.46	0.626792	-0.011337	0.115097
0.400E-11	0.066510	23.54	0.624133	-0.011452	0.113950
0.250E-11	0.065838	23.63	0.621464	-0.011569	0.112798
0.160E-11	0.065218	23.71	0.619001	-0.011679	0.111736
0.100E-11	0.064583	23.80	0.616480	-0.011793	0.110648
0.630E-12	0.063977	23.88	0.614072	-0.011905	0.109609
0.400E-12	0.063396	23.96	0.611768	-0.012014	0.108616
0.250E-12	0.062812	24.04	0.609449	-0.012126	0.107615
0.160E-12	0.062272	24.11	0.607306	-0.012231	0.106690
0.100E-12	0.061718	24.19	0.605103	-0.012341	0.105740
0.630E-13	0.061187	24.27	0.602996	-0.012448	0.104831
0.400E-13	0.060679	24.34	0.600975	-0.012552	0.103959
0.250E-13	0.060165	24.41	0.598936	-0.012659	0.103079
0.160E-13	0.059689	24.48	0.597046	-0.012760	0.102264
0.100E-13	0.059200	24.55	0.595103	-0.012866	0.101426
0.630E-14	0.058730	24.62	0.593238	-0.012968	0.100621
0.400E-14	0.058279	24.69	0.591447	-0.013069	0.099849
0.250E-14	0.057823	24.76	0.589636	-0.013172	0.099067
0.160E-14	0.057400	24.82	0.587955	-0.013269	0.098342
0.100E-14	0.056964	24.89	0.586224	-0.013371	0.097595

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

FROMA IS IN DEBUG PRINTOUT MODE. TABLE WAS CALLED.

0.100E-02	0.154538	16.22	0.973221	-0.013003	0.100351
0.630E-03	0.146840	16.66	0.960941	-0.009077	0.143761
0.400E-03	0.140238	17.06	0.944082	-0.006808	0.191663
0.250E-03	0.134225	17.44	0.922495	-0.005782	0.225701
0.160E-03	0.129148	17.78	0.900929	-0.005599	0.233072
0.100E-03	0.124356	18.11	0.879673	-0.005774	0.225983
0.630E-04	0.120111	18.41	0.861042	-0.006055	0.215520
0.400E-04	0.116321	18.69	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	0.190646
0.100E-04	0.106595	19.45	0.804554	-0.007073	0.184481
0.630E-05	0.103844	19.67	0.793426	-0.007283	0.179170
0.400E-05	0.101330	19.89	0.783317	-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	-0.007847	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	0.090858	20.83	0.741490	-0.008365	0.155995
0.250E-06	0.089085	21.00	0.734429	-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	0.694996	-0.009602	0.135893
0.630E-08	0.078003	22.16	0.690333	-0.009747	0.133881
0.400E-08	0.076900	22.28	0.685941	-0.009887	0.131986
0.250E-08	0.075804	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	0.069368	23.18	0.655975	-0.010960	0.119058
0.630E-10	0.068570	23.28	0.652802	-0.011088	0.117690
0.400E-10	0.067812	23.37	0.649785	-0.011212	0.116388
0.250E-10	0.067053	23.47	0.646765	-0.011339	0.115085
0.160E-10	0.066355	23.56	0.643989	-0.011458	0.113887
0.100E-10	0.065642	23.66	0.641155	-0.011582	0.112665
0.630E-11	0.064964	23.75	0.638455	-0.011703	0.111500
0.400E-11	0.064316	23.83	0.635879	-0.011821	0.110389
0.250E-11	0.063666	23.92	0.633293	-0.011942	0.109273
0.160E-11	0.063067	24.00	0.630907	-0.012055	0.108244
0.100E-11	0.062453	24.09	0.628465	-0.012174	0.107191
0.630E-12	0.061867	24.17	0.626132	-0.012289	0.106184
0.400E-12	0.061306	24.25	0.623901	-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	0.613444	-0.012957	0.100710
0.250E-13	0.058181	24.70	0.611469	-0.013068	0.099858
0.160E-13	0.057721	24.77	0.609638	-0.013172	0.099068
0.100E-13	0.057248	24.84	0.607756	-0.013281	0.098256
0.630E-14	0.056793	24.91	0.605950	-0.013387	0.097477
0.400E-14	0.056357	24.98	0.604214	-0.013490	0.096728
0.250E-14	0.055916	25.05	0.602460	-0.013597	0.095972
0.160E-14	0.055507	25.11	0.600831	-0.013697	0.095269
0.100E-14	0.055084	25.18	0.599154	-0.013802	0.094545

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3800
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	0.154538	16.22	0.973221	-0.013003	0.100351
0.630E-03	0.146840	16.66	0.960941	-0.009077	0.143761
0.400E-03	0.140238	17.06	0.944082	-0.006808	0.191663
0.250E-03	0.134225	17.44	0.922495	-0.005782	0.225701
0.160E-03	0.129148	17.78	0.900929	-0.005599	0.233072
0.100E-03	0.124356	18.11	0.879673	-0.005774	0.225983
0.630E-04	0.120111	18.41	0.861042	-0.006055	0.215520
0.400E-04	0.116321	18.69	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	0.190646
0.100E-04	0.106595	19.45	0.804554	-0.007073	0.184481
0.630E-05	0.103844	19.67	0.793426	-0.007283	0.179170
0.400E-05	0.101330	19.89	0.783317	-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	-0.007847	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	0.090858	20.83	0.741490	-0.008365	0.155995
0.250E-06	0.089085	21.00	0.734429	-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	0.694996	-0.009602	0.135893
0.630E-08	0.078003	22.16	0.690333	-0.009747	0.133881
0.400E-08	0.076900	22.28	0.685941	-0.009887	0.131986
0.250E-08	0.075804	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	0.069368	23.18	0.655975	-0.010960	0.119058

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.3800
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	0.068570	23.28	0.652802	-0.011088	0.117690
0.400E-10	0.067812	23.37	0.649785	-0.011217	0.116388
0.250E-10	0.067053	23.47	0.646765	-0.011339	0.115085
0.160E-10	0.066355	23.56	0.643989	-0.011458	0.113887
0.100E-10	0.065642	23.66	0.641155	-0.011582	0.112665
0.630E-11	0.064964	23.75	0.638455	-0.011703	0.111500
0.400E-11	0.064316	23.83	0.635879	-0.011821	0.110389
0.250E-11	0.063666	23.92	0.633293	-0.011942	0.109273
0.160E-11	0.063067	24.00	0.630907	-0.012055	0.108244
0.100E-11	0.062453	24.09	0.628465	-0.012174	0.107191
0.630E-12	0.061867	24.17	0.626132	-0.012289	0.106184
0.400E-12	0.061304	24.25	0.623901	-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	0.613444	-0.012957	0.100710
0.250E-13	0.058181	24.70	0.611469	-0.013068	0.099858
0.160E-13	0.057721	24.77	0.609638	-0.013172	0.099068
0.100E-13	0.057248	24.84	0.607756	-0.013281	0.098256
0.630E-14	0.056793	24.91	0.605950	-0.013387	0.097477
0.400E-14	0.056357	24.98	0.604214	-0.013490	0.096728
0.250E-14	0.055916	25.05	0.602460	-0.013597	0.095972
0.160E-14	0.055507	25.11	0.600831	-0.013697	0.095269
0.100E-14	0.055085	25.18	0.599154	-0.013802	0.094545

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE THE THRFE 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 DECIBLES.
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 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	0.149295	16.52	0.974061	-0.013424	0.097207
0.630E-03	0.141847	16.96	0.962181	-0.009374	0.139206
0.400E-03	0.135465	17.36	0.945869	-0.007032	0.185556
0.250E-03	0.129654	17.74	0.924981	-0.005973	0.218485
0.160E-03	0.124749	18.08	0.904112	-0.005784	0.225603
0.100E-03	0.120119	18.41	0.883545	-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	0.822807	-0.007073	0.184504
0.100E-04	0.102963	19.75	0.810857	-0.007309	0.178535
0.630E-05	0.100305	19.97	0.800088	-0.007526	0.173395
0.400E-05	0.097878	20.19	0.790306	-0.007727	0.168873
0.250E-05	0.095538	20.40	0.780911	-0.007926	0.164629
0.160E-05	0.093461	20.59	0.772592	-0.008109	0.160928
0.100E-05	0.091409	20.78	0.764391	-0.008295	0.157317
0.630E-06	0.089516	20.96	0.756829	-0.008473	0.154011
0.400E-06	0.087762	21.13	0.749829	-0.008644	0.150964
0.250E-06	0.086049	21.31	0.742996	-0.008817	0.147999
0.160E-06	0.084511	21.46	0.736859	-0.008978	0.145341
0.100E-06	0.082974	21.62	0.730732	-0.009145	0.142692
0.630E-07	0.081541	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	0.714407	-0.009620	0.135641
0.160E-07	0.077682	22.19	0.709636	-0.009769	0.133582
0.100E-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
0.100E-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	0.069484	23.16	0.676960	-0.010921	0.119483
0.250E-09	0.068613	23.27	0.673488	-0.011060	0.117985
0.160E-09	0.067815	23.37	0.670307	-0.011190	0.116613
0.100E-09	0.067004	23.48	0.667072	-0.011326	0.115218
0.630E-10	0.066234	23.58	0.664002	-0.011457	0.113893
0.400E-10	0.065501	23.68	0.661082	-0.011585	0.112634
0.250E-10	0.064768	23.77	0.658160	-0.011717	0.111373
0.160E-10	0.064094	23.86	0.655473	-0.011840	0.110214
0.100E-10	0.063406	23.96	0.652730	-0.011968	0.109031
0.630E-11	0.062750	24.05	0.650118	-0.012093	0.107903
0.400E-11	0.062125	24.13	0.647625	-0.012215	0.106828
0.250E-11	0.061497	24.22	0.645122	-0.012340	0.105748
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	0.638193	-0.012699	0.102759
0.400E-12	0.059217	24.55	0.636033	-0.012815	0.101827
0.250E-12	0.058671	24.63	0.633858	-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
0.400E-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	0.622230	-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	0.094333
0.400E-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

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.4000
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	0.149295	16.52	0.974061	-0.013424	0.097207
0.630E-03	0.141847	16.96	0.962181	-0.009374	0.139206
0.400E-03	0.135465	17.36	0.945869	-0.007032	0.185556
0.250E-03	0.129654	17.74	0.924981	-0.005973	0.218485
0.160E-03	0.124749	18.08	0.904112	-0.005784	0.225603
0.100E-03	0.120119	18.41	0.883545	-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	0.822807	-0.007073	0.184504
0.100E-04	0.102963	19.75	0.810857	-0.007309	0.178535
0.630E-05	0.100305	19.97	0.800088	-0.007526	0.173395
0.400E-05	0.097878	20.19	0.790306	-0.007727	0.168873
0.250E-05	0.095538	20.40	0.780911	-0.007926	0.164629
0.160E-05	0.093461	20.59	0.772592	-0.008109	0.160928
0.100E-05	0.091409	20.78	0.764391	-0.008295	0.157317
0.630E-06	0.089516	20.96	0.756829	-0.008473	0.154011
0.400E-06	0.087762	21.13	0.749829	-0.008644	0.150964
0.250E-06	0.086049	21.31	0.742996	-0.008817	0.147999
0.160E-06	0.084511	21.46	0.736859	-0.008978	0.145341
0.100E-06	0.082974	21.62	0.730732	-0.009145	0.142692
0.630E-07	0.081541	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	0.714407	-0.009620	0.135641
0.160E-07	0.077682	22.19	0.709636	-0.009769	0.133582
0.100E-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
0.100E-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	0.069484	23.16	0.676960	-0.010921	0.119483
0.250E-09	0.068613	23.27	0.673488	-0.011060	0.117985
0.160E-09	0.067815	23.37	0.670307	-0.011190	0.116613
0.100E-09	0.067004	23.48	0.667072	-0.011326	0.115214

NOMENCLATURE:

D = HALF OF THE NORMAL DISTANCE BETWEEN DATA LEVELS FOR THE 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 DECIBLES.
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 BITE RATE = 12582600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.

BASEBAND EYE PATTERN MONITOR TABLES

TABLE FOR AIDR EQUALS 0.4000
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	0.066234	23.58	0.664002	-0.011457	0.113893
0.400E-10	0.065501	23.68	0.661082	-0.011585	0.112634
0.250E-10	0.064768	23.77	0.658160	-0.011717	0.111373
0.160E-10	0.064094	23.86	0.655473	-0.011840	0.110214
0.100E-10	0.063406	23.96	0.652730	-0.011968	0.109031
0.630E-11	0.062750	24.05	0.650118	-0.012093	0.107903
0.400E-11	0.062125	24.13	0.647625	-0.012215	0.106828
0.250E-11	0.061497	24.22	0.645122	-0.012340	0.105748
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	0.638193	-0.012699	0.102759
0.400E-12	0.059217	24.55	0.636033	-0.012815	0.101827
0.250E-12	0.058671	24.63	0.633858	-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
0.400E-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	0.622230	-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	0.094333
0.400E-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 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 DECIBLES.
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 BITE RATE = 12552600. AND ERROR SIGNAL DIVIDER RATIO INTO D/A CONVERTER = 4.