

GBPPR 'Zine



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*"He's the self-righteous over-privileged son of well-to-do yard residents who has made a career of self-aggrandizement, and markets himself to maladjusted teens and pre-teens, clinging desperately to the idea that they're not just *weird*, they're *special*. Making vague associations with people he is in no way a peer of, he's managed to build a tiny little empire which prevents him from a) having to work, and b) having to deal with the humility of taking money from mommy and daddy. Having had in-depth person to person conversations with him, as well as countless wasted hours of IRC, I know enough about him to know that reading his socio-political self-martyring diatribe is, for me, a waste of time."*

--- Quote from Mohammed Sayeed in "Eric Corley is Not a Regular New Yorker," a thread discussing \$2600 Magazine's 2004 RNC propaganda:
(<http://www.hulver.com/scoop/comments/2004/9/15/105845/643/21#21>)

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Operation, Administration, and Maintenance Features

Multifrequency Signaling on Bylink Trunks (BYMF) [1E3/1AE4] (AT&T 231-090-409) provides for reuse of existing bylink trunk circuits with multifrequency signaling for traffic other than step-by-step.

Multiple Trunk Test Capability [CTX-7/1AE1] provides the software capability to conduct a number of trunk tests (up to a maximum of eight) in parallel. This increases the ability to test by interrogators or diagnostics.

Network Management (NM) [CTX-6/1AE1] (AT&T 231-190-305 and AT&T 231-390-305) improves total network processing by selectively limiting traffic destined for congested offices or areas. It allows as many calls as possible to be completed while utilizing as much capacity as possible via the network without allowing the congestion to spread.

Capabilities include:

- Code Blocking (Local)
- Trunk Group Controls
- Generation of Dynamic Overload Control Signals
- Discrete Machine and Network Status Indicators
- Reroute Controls
- Response to CCIS data link dynamic overload control and group signaling congestion signals
- Interface With EADAS
- Toll Code Blocking (through 1E7/1AE7 only)
- Selective Incoming Load Control (q.v.) (1E8A/1AE8A)
- Call Gapping (q.v.) (1E8A/1AE8A)
- Enhanced Reroute Controls (q.v.) (1AE8A only).

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Feature groups required for network management are EDAS, NMRR, and, prior to 1E8A/1AE8A, NMTC. Enhanced reroute controls require NMER.

No. 2 Service Evaluation System Interface [1AE9] (AT&T 231-390-225) provides an end-to-end objective measurement of the network from the customer point of view. Primarily SES II provides call disposition and timing information. It also provides the potential for recovering lost revenue due to answer supervision problems by examining calls with long holding times without supervision being returned.

Nonsynchronous Test Line [CC-1/1AE1] tests ringing, tripping, and supervisory features of incoming trunk relay equipment. Supervisory pulses are repeated until disconnection takes place.

Office Alarm Subsystem [CC-1/1AE1] (AT&T 231-035-000) reports system trouble conditions to office personnel located on site or remotely. The severity of each trouble will be indicated via one of three levels of urgency: critical, major, and minor.

Office Overload Controls [CC-1/1AE1] (AT&T 231-190-190 and AT&T 231-390-190) provide the means to detect, control, and alleviate various system overload conditions. System overload occurs when excessive demands are made on any of three basic system resources: hardware, software, and real time. An overload condition exists when the office's call handling capacity is exceeded for a sustained period or when one or more of the system resources are exhausted. (Also see Line Service Overload Strategy.)

Off-Line Single Card Writing (OFLN) [CTX-7] (AT&T 231-104-302) provides the 1 ESS switch the ability, via TTY message, to single card write using an off-line PS module as the card source. This permits a defective module to be loaded off-line and corrected via single card writing.

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Open Switching Interval Protection (OSIP) [CTX-4/1AE1] (AT&T 231-090-192) protects customer line equipment from momentary loss of central office battery during switching intervals.

Operation With No. 5 Crossbar Synchronous Test Line With Centrex Transfer [CTX-4/1AE1] permits test calls to be made to synchronous test lines in No. 5 Crossbar offices which transfer to a centrex trunk at the end of the synchronous test.

Outgoing Trunks Call Cutoff Enhancement [1AE10.06] provides a LT01 output message that can be used to detect defective outgoing trunks. These defective outgoing trunks may be causing call cutoffs. Printing the LT01 message with the outgoing trunks phase is controlled by the MISC-FLAG input message. The LT01 output message is output 10 or 11 seconds after a line to outgoing trunk connection has disconnected at the trunk side and the line is still off-hook. This enhancement is only useful when used in conjunction with the SCCS programs to gather and pattern outgoing information retrieved from the LT01 outgoing message.

Overflow Registers [CC-1/1AE1] (AT&T 231-090-207) provide measurement and accumulation of the number of overflows to selected trunk groups, service circuit groups and selected subscriber line groups which occur during the traffic measurement periods. Overflow information is retrievable by TTY.

Pair Gain Systems Interface (AT&T 231-090-308) provides a method of reducing the number of loop circuits required to serve a group of low-usage subscriber lines. (Also see Remote Switching System.)

- a. **Loop Switching System (LSS) [CTX-7/1AE1]** concentrates 96 customer lines into 32 trunks and is easily expandable to 192 lines and 64 trunks. The LSS is intended for use as a temporary cable/structure deferral vehicle in suburban and rural areas and/or for permanent applications on the longer cable routes.

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- b. **SLC® 96 Carrier System (Mode II) [CTX-7/1AE1]** is a combined digital carrier and digital concentrator system for subscriber loop service. It provides two independent concentrators, each handling up to 48 customer lines on 24 derived digital trunks (2 to 1 concentration). The SLC 96 carrier is designed for permanent applications in concentrated growth situations in suburban areas, but can be used in rural areas as well.
- c. **SLM Multiplex System [CTX-7/1AE1]** is a combined digital carrier and loop switching system for subscriber loop service. It provides 24 low-loss, low-noise, digitally derived channels shared by 80 customer lines. The SLM multiplexers are designed primarily for applications on rural routes exceeding 40 kilofeet in length and having a growth rate of approximately ten lines per year.
- d. **1A Line Concentrator [CTX-7/1AE1]** is an electromechanical device which provides a flexible, economical substitute for a customer cable plant. By utilizing a 5-to-1 concentration ratio, the 1A line concentrator allows a large number of low-usage customer lines to be connected to the central office via a few high-usage trunks.

PBX Ringing and Battery Feeders [CC-1/1AE1] provide remotely located PBX equipment with access to central office immediate ringing, audible ring circuits, and reserve battery power.

Periodic Traffic Count [1AE10.07] enhancement assists maintenance personnel in analyzing repairs made to faulty carrier systems after a failure. The periodic traffic count enhancement will separately accumulate (on an hourly basis) both incoming and outgoing trunk time-outs. Each hour these counts will be printed at the maintenance TTY via output message TN24. The HINTO (first) count will hold the accumulated value of incoming trunk time-outs and the HOUTO (second) count will hold the accumulated value of outgoing trunk time-outs. Each hour these values will be zeroed

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thus ensuring that the TN24 output message reflects only the most recent hourly collection of counts.

Peripheral Data Storage Processor (PDSP) [1E5] (AT&T 231-190-136) enables the 1 ESS switch call processing programs to communicate with a 3A auxiliary processor for EPSCS or E911 service. The feature group required to provide PDSP is PIU.

Peripheral Unit Controller/Data Link (PUC/DL) [1E6/1AE6] (AT&T 231-090-062) is a self-checking microprocessor controller. The PUC/DL is a particular application of this general purpose microprocessor based controller. It is designed to serve as a general purpose data link controller for a number of projects requiring a data link from ESS switching equipment. The feature groups required to provide PUC/DL are PDL and PUC.

Peripheral Unit Parity (PUP) [1E6/1AE6] (AT&T 231-090-062) provides improved error detection on the scanner answer bus.

Permanent Signal and Partial Dial Treatment and Administration (PSPD) [CTX-2/1AE1] (AT&T 231-090-205) provides for handling customer permanent signals (off-hooks without dialing) or partial dial. Options are included for routing the calling party to tone, announcement, or operator as well as provisions for handling lines not cleared by these options.

Plant Measurements [CC-1/1AE1] (AT&T 231-120-302 and AT&T 231-300-015) provide a concise quantitative summary of the state of central office hardware and its impact on customer service. This data is printed out via TTY as an aid to maintenance personnel in locating and repairing central office problems.

Plug-Up Lists for Trouble Interrupt Routing [CC-1/1AE1] provide a special case of permanent signal treatment. Such lines, when in trouble, can be placed in the plug-up state via a TTY

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message. Calls to lines in this state are routed to a trouble intercept. When the line changes state (off- to on-hook or vice-versa), it is automatically restored to service.

Printout of Call Forwarding Entries [CTX-7/1AE1] provides a printout of all telephone numbers that currently have their call forwarding service activated. The printout contains the base station DN and a 7- or 10-digit remote station telephone number. The printout is initiated by a TTY request and the list data is printed on the requesting terminal.

Print Trunk-Out-of-Service (TOS) List [CTX-6/1AE1] outputs, upon TLTP/STTP request, all trunks on the TOS list to be printed in the order of TNN or TGN, depending on an input parameter defining the format desired.

Pseudo Point Code [1AE10.07] capability allows a new 5ESS switch to assume the same CCS7 point code as held by the 1AESS switch. The result is simplified pre-cutover trunk testing procedures and the elimination of numerous recent changes at far-end offices.

Pseudo Route Index (PRI) [1E3/1AE4], 200 route indices, that are currently reserved for fixed RI assignment are near exhaustion. A translator is provided to expand the ability beyond 200.

With the 1AE11 generic program, **Pseudo Route Index Expansion** expands the pseudo route index translator from 200 words to 400 words. This is a nonsignaling related capability.

QZ Billing [CC-1/1AE1] (AT&T 231-090-278) (sometimes called special trunk billing) is a CAMA-ONI billing arrangement that is used when a customer requires special toll call records such as on a per department or contract basis.

Receiver Attachment Delay Report (RADR) [CTX-7/1AE1] (AT&T 231-090-309) provides an ESS switch with an indication that

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the office is experiencing delays in providing receiver connections for incoming traffic.

Recent Change Administration [CTX-7/1AE1] (AT&T 231-104-305) provides the following administrative controls:

- a. Manual inhibition of Customer Originated RCs (CORCs)
- b. Automatic inhibit of CORCs when the RC fills beyond an office-defined limit
- c. Warning messages that alert the office to certain RC over-load conditions
- d. A report on the status and composition of the RC area of call store when any of the above control or warnings are in effect.

Recent Change Keyword Acceptance Control [1E3/1AE4] [AT&T 231-048-301 and AT&T 231-318-319 (1AE9)] provides the ability to prevent the entry of RC keyword data if related modular feature packages are not present. It also provides the ability to remove translation data related to a nonpresent package.

Recorded Announcement Frame (RAF) [CC-1/1AE1] [AT&T 231-090-106 (J1A058C) and AT&T 231-090-107 (J1A058A)] provides the capability for the ESS switch to provide standard recorded announcements to customers. There are two types of frames used. The J1A058C RAF contains a magnetic bubble memory to provide for the recorded announcements; it is a replacement for the J1A058A RAF which contains a rotating magnetic drum. Effective with the 1AE7/1E8A generic programs the J1A058C RAF may contain eight rather than six channels.

Remote Office Test Line (ROTL) and Processor Controlled Interrogator (PCI) [CTX-6/1AE1] (AT&T 231-090-219) provides the capability to originate automatic trunk transmission test calls

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under automatic control of a CAROT System from a remote location, under manual control of a PCI in the testing office, or under manual control of a RCU (ROTL control unit) from a remote station.

Remote Switching System (RSS), Operation With [1E6/1AE6] (AT&T 231-090-153) RSS, operating under the software control of a host ESS switch, provides remote switching capabilities with a wide range of ESS switch features and services. By sharing control with the host ESS switch, the RSS arrangement allows ESS switch features to be offered to a small number of lines which otherwise would be too few to support an independent stored program machine. The RSS is intended to economically serve as few as 150 lines and has the capability to serve up to 2048 lines.

With 1E7/1AE7 and later generic programs, improved switch host real time utilization for originating, terminating, and intra-RSS calls is provided. In addition, dial tone delay improvements have been incorporated, reducing the nominal dial tone delay of RSS lines. The improved nominal delay is 500 milliseconds.

The feature groups required to provide RSS are PUC, PDL, and RSS.

Remote Trunk and Line Testing [1E7/1AE7] (AT&T 231-190-405 and AT&T 231-390-405) provides all the maintenance test capabilities available at the MTTP and TLTP via a RTTU (remote trunk test unit) interface to a CTTU (central trunk test unit) located at the SCC.

The two types of RTTU interfaces are as follows:

- a. **MTTP Interface** is a "hardware only" interface that supports access to 2-wire and HILO trunks only.
- b. **MTTP/TLTP Interface** is a hardware and software interface that supports access to both trunks and lines.

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Both interfaces require the MTTP feature group. The MTTP/TLTP interface also requires the R2C2 feature group.

Remreed Grid Diagnostic [1E7/1AE7] (AT&T 231-051-022) is used as a manually requested test tool. It provides a systematic diagnosis of the current product remreed pulse matrix.

Report on Invalid Input Messages to Custom I/O Channel [1AE9.07] enhancement detects and reports every 15 minutes any erroneous input messages received from individual custom I/O channels. The message is printed at the maintenance TTY allowing the maintenance personnel to determine the input message problem.

Reverse Battery [CC-1/1AE1] is a method of loop signaling in which battery and ground are reversed on the tip and ring leads to indicate changes between on-hook and off-hook states.

Revertive Pulsing Trunks [CC-1/1AE1] (AT&T 231-090-191) provide for collection of revertive pulses and conversion to a 4- or 7-digit DN for local termination or tandem processing. Communication capability is also provided for outgoing calls to a crossbar office.

Route Index Loop Prevention [1AE9.09] enhancement prevents new route indexes from being built in a looped condition (via recent change). When the recent change message RC:RI is input with a route index and next route index that cause a loop, a new validity error is output on the TTY. It is recommended that the XLDC library program is run prior to updating to the 1AE9.09 PPU to test for any looped route indexes.

Routing-Selected Transmission Control (RSTC) [1E7/1AE7] (AT&T 231-090-146) enables the 1 and 1A ESS switch to insert gain into a trunk-to-trunk transmission path on a call-by-call basis when the operation of another feature, such as Remote Call

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Forwarding, could result in a degradation of transmission standards. The amount of gain added is a function of the office class, the incoming trunk category, the outgoing trunk category, and the other feature.

With the 1AE9.07 generic program, the **Routing Selected Transmission Control Redesign** feature enables the 1A ESS switch to insert gain into trunk-to-trunk transmission paths on a call-by-call basis when the operation of the RCF (Remote Call Forwarding) or SLRCF (Single Line Remote Call Forwarding) features could result in a degradation of transmission. This redesign makes the RSTC feature compatible with the Carrier Interconnect feature and central offices that have multiple rate centers.

Sanity Tests and Test Calls [CC-1/1AE1] are made to ensure that the call processing program modules are cycling in proper sequence and on a timely basis.

Saving Path on Network Failures [1E7/1AE7] (AT&T 231-051-001) provides the capability to trap and release a network path involved in a call failure. A TTY message is used to specify the network path to be trapped. Only one failure trap at a time is permitted to avoid network congestion.

Selective Carrier Denial (SCD) [1AE9.07] (AT&T 231-090-120) feature provides a capability which selectively inhibits certain carrier handled calls from those lines which have been designated as nonpayer subscribers. A line which is denied access to a particular carrier is routed to error tone or announcement. This function is provided on a per line, per carrier basis.

With the 1AE9.08 generic program, **Selective Carrier Denial Phase II** feature provides additional recent change and verify capabilities for the SCD translator.

The SCD feature (Phase I) provides a capability which selectively inhibits certain carrier handled calls from those lines which have

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been designated as nonpayer subscribers. A line which is denied access to a particular carrier is routed to error tone or announcement. This function is provided on a per line, per carrier basis.

The SCD translator can be modified with the new phase II RC:SCD: recent change input message. The SCD translator can be verified with the VF:ICSVY input message using the new phase II (SCD) keyword.

Selective Incoming Load Control (SILC) [1E8A/1AE8A] (AT&T 231-190-305 and AT&T 231-390-305), part of Network Management, provides automatic control of incoming traffic by limiting the percentage of calls processed from selected trunk groups.

Selective Inhibit of Scheduled Routine Exercises [CTX-6/1AE1] (AT&T 231-045-200), during growth or retrofit testing, may interfere with the installation effort. A selective inhibit is therefore provided to eliminate one or more types of these routine exercises. The inhibit function can be initiated and canceled via TTY input messages.

Separate Routing of 7-Digit and 1 + 7-Digit Calls [CTX-5/1AE1] (AT&T 231-045-105) provides the flexibility of routing 7-digit calls to certain office codes differently if prefixed by the digit 1. This is useful near the border of an NPA where it is not desirable to force customers to dial 10 digits to get to a nearby office in the local dialing area.

Service Evaluation System—See No. 2 Service Evaluation System.

Service Observing Functions [CC-1/1AE1] (AT&T 231-090-188 and AT&T 231-090-410) provide the means to evaluate the quality of service provided by the ESS switch. Observations may be based on a toll call, business office call, etc., and may include complaint observing, service observing, DDD observing, and PBX terminating observing.

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Signaling Irregularities (SIGI) [1E6/1AE6] detect calls with improper signaling sequence and check for subsequent digit signals used for fraudulent purposes. The operating company security personnel are notified via private TTY line of suspected fraudulent calls. Relevant information is recorded on the AMA tape with normal billing data. The feature group required to provide SIGI is SIGI.

Simulated Facilities [CTX-7/1AE1] (AT&T 231-090-229) provide a software method of restricting certain customer services sold on a limited access basis. A SFG (simulated facilities group) simulates hardware facilities and is assigned on a per customer basis. The quantity of facilities purchased is stored in memory and is used to identify and control the number of simultaneous calls for a given customer service.

Standard Billing Number for WATS (SWAB) [1E3/1AE4] (AT&T 231-090-273) provides a standard billing number format for all OUTWATS calls and eliminates certain billing errors that can occur on operator-assisted OUTWATS calls.

Stand-Alone Touch-Tone Receiver Diagnostic [1E7/1AE7] provides a diagnostic in the 1 and 1A ESS switches which routinely exercises the stand-alone touch-tone receivers so that failures can be detected before they are required for service in a stand-alone situation.

Station Ringer and Touch-Tone Test (SRTT) [CC-1/1AE1] (AT&T 231-090-053) permits the performance of the touch-tone dial test, station ground test, and ringer test on a station set. The SRTT feature also allows the performance (with the aid of the customer) of a station touch-tone dial test from the local test desk.

Supplementary Office Options Table [1AE11] is a new translator that is used in the same manner as the translations office options table. This translator has a length of 20 words in the fixed

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translation area, starting at address 7724246, and is pointed to from the master head table +247.

Switchboards, Interface With [CC-1/1AE1] (AT&T 231-090-112) provides the ESS switch with the capability to operate with standard toll and other switchboard positions.

Switching Control Center System (SCCS), Interface With [CTX-7/1AE1] (AT&T 231-190-405 and AT&T 231-390-405) is a centrally-located facility capable of accommodating administrative, operational, and maintenance functions for several central offices. There are four basic areas in which the ESS switch and the SCC interface. These are as follows:

- Telemetry System
- MCC Interface
- TTY System
- Remote Trunk and Line Testing (q.v.).

Synchronous Test Line [CTX-4/1AE1] (AT&T 231-090-103) provides marginal tests of ringing, tripping, and supervisory features of incoming trunk relay equipment.

Synchronization With EADAS (SWED) [1E7/1AE7] (AT&T 231-190-314 and AT&T 231-390-314) provides added intelligence to the EADAS interface in the ESS switch. This added intelligence minimizes clock synchronization problems by giving the EADAS a larger polling window and more control over the interface. In addition, the ESS switch can now detect when synchronization is being lost.

Tandem Office [CC-3/1AE1] (AT&T 231-090-372) serves local offices in the same manner that local offices serve individual subscribers. The tandem office is an intermediate switching center primarily used to switch trunks between local or tandem offices and other local or tandem offices or toll offices.

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Tandem Test Line [1E3/1AE4] (AT&T 231-090-104) permits direct dial access into a toll or tandem switch in order to perform certain maintenance tasks and/or network management tasks.

Ten-Digit Intraoffice Calling (TDIAC) [1E7/1AE7] allows 1 and 1A ESS switches to locally service office codes in multiple NPAs where intraoffice calls from one served NPA to another are dialed using the standard North American DDD pattern.

Through Balance Test Facilities (TBTF) [CTX-7/1AE1] (AT&T 231-090-316) is a machine aid which allows individual performance of balance adjustments on 4-wire intertoll trunk circuits. After initiation by TTY message, through balance adjustments proceed on signal from the user from one trunk circuit to the next consecutive trunk circuit in the trunk frame. One maintenance person per code 100-type test line in the office can be active concurrently on different trunk frames. Summary and trouble output messages are printed.

TNN-to-TNN Connection [CTX-7/1AE1] allows TTY input messages to be used to set up or disconnect stable connections between various trunks and service or test circuits. Hourly print-outs are provided as a reminder of active paths.

Toll Operator Signaling and Compatibility With TSPS Residual Traffic (TORT) [CTX-7/1AE1] (AT&T 231-090-234) provide the ability to receive and transmit operator control signals such as ringback and ring forward when the ESS switch is acting as a toll office or combined local/toll office. If this office interfaces with TSPS, certain operator-assisted calls require switchboard handling and are passed to a toll switchboard operator by a TSPS operator.

Touch-Tone Detection on Dial Pulse Lines [CTX-7/1AE1] provides the ability to detect touch-tone digits originating from a customer dial pulse line in an office which has only combined touch-tone/dial pulse receivers.

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Traffic Data on Specific DN Groups [CC-1/1AE1] (AT&T 231-090-207) provides a method for accumulating peg and overflow counts to specified DNs or groups of DNs (traffic line groups).

Traffic Dial Service TTY—Remote—Overload [CC-1/1AE1] provides messages to remote TTY of overload indicators such as excessive dial tone delay, excessive overflow, excessive call attempts, etc.

Traffic Measurement Output on Punched Tape and Printer or EADAS [CC-1/1AE1] provides periodic and demand retrieval of all accumulated traffic data in a permanent record medium.

Traffic Measurements [CC-1/1AE1] (AT&T 231-090-207) provide measurements internal to the ESS switch. These measurements, output via TTY, are used to evaluate the performance of the switching system or to indicate possible trouble conditions.

Traffic Service Position System, Interface With [CC-1/1AE1] (AT&T 231-090-114) gives the ESS switch the ability to interface or operate with a TSPS. A TSPS is a switching system interposed between local and toll offices that provides various operator services to telephone subscribers. The TSPS is a stored program electronic switch. In addition to providing for operator services, the TSPS can record CAMA.

Translation Verification Message Improvements—Phase 1 (VMI1) [1E7/1AE7] (AT&T 231-048-301) provide several TTY data verification messages. Among these are "search" (survey) messages which can print and/or count LENSs, pseudo LENSs, DNs, and TNNs which have certain features, equipment options, and data structures. The VMI1 feature group is required.

Trunk Failure Treatment [1E3/1AE4] permits selective inhibiting of diagnostic TTY printouts based on pulsing type and direction (incoming/outgoing). The message also provides a hold and trace function on revertive and immediate dial pulse outpulsing failures

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based on pulsing type. All messages resulting from trunk diagnostics will be printed unconditionally and so flagged.

Trunk Make-Busy (TMB) [CTX-6/1AE1] (AT&T 231-090-084) provides the capability to manually remove from service any associated trunks. Primarily, the TMB feature is used to make busy groups of operator trunks when unattended.

Two-Digit Translation on Incoming Trunks [CTX-5/1AE1] (AT&T 231-045-105) is required on incoming trunks from CDOs where first digit of 411 (for example) is absorbed in SXS switches, and receipt of 11 in the central office should be interpreted as 411.

Two-Way Trunk Maintenance [CC-1/1AE1] allows a trunk out-of-service state, called lockout, to be designated for 2-way trunks. In this state, outgoing calls are blocked, but incoming calls are accepted. A second state which blocks calls in both directions is called disable.

Verification of Billing Number Assignments [CTX-6/1AE1] provides the capability to verify via a TTY input message single or multiple assignments of billing numbers to terminal equipment numbers.

Verification of H and C Traffic Schedules (VFHC) [1E3/1AE4] provides TTY messages to print (on demand) the translation data in the H and C traffic schedules. This feature also provides the ability to search for and identify a particular traffic measurement in the H and C traffic schedules.

Verifying Long Duration AMA Calls [1E7/1AE7] provides an AM01 output message that is printed every midnight. This output message provides greater accuracy and additional verification methods for each AMA call that has been in progress for more than 24 hours.

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WATS Band Indication on AMA [CTX-6/1AE1] (AT&T 231-090-273) is provided to furnish complete detail billing on a WATS call. This entry includes both the WATS band number and the calling station number.

0+, 1+ Dialing [CC-1/1AE1] (AT&T 231-090-095, AT&T 231-090-114, and AT&T 231-090-159) provides the routing of 0 + 7 or 10-digit calls to Operator Assistance or Special Toll. 1 + 10-digit calls are routed to the DDD network.

000 to TSPS Operator [CTX-2/1AE1] provides routing of assistance and special toll calls over a combined trunk group, instead of separate groups, to a TSPS operator.

1, 3, 7, 10-Digit Dialing [CC-1/1AE1] (AT&T 231-045-105) allows routing of calls (exclusive of access code) based on 1, 3, 7, or 10-dialed digits.

100-Second Usage Scan Cycle Count (T100) [1E6/1AE6] (AT&T 231-090-207) provides the number of 100-second usage cycle counts used in accumulating usage measurements. This allows for proper validation and identification of the H- and C-schedule usage measurements delivered to EADAS (when so equipped).

10th 32K Call Store (TEN32K) [1E6] (AT&T 231-025-101) provides the capability for 10 32K call stores. The 10th 32K call store provides memory capability equivalent to 8K call store offices.

1A ESS Switch Library Packages [1AE9] currently there are a number of special 1A ESS switch Library Packages available that will support unique requirements or conditions. None of the packages described below are available as part of the generic RTU fee. Instead, they are available on J6A002AC-1 with a separate RTU fee being applied.

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A general description and release information of each special package follows:

- a. **Automatic Message Accounting Tape Copy [1AE9, 1AE10 and 1AE11]** program, functionally, provides a method for producing a "Backup" copy of each AMA tape. This AMA tape produced in an operational 1A ESS switch, greatly reduces the possibility of "Revenue Loss," in the event an original AMA tape is damaged or misplaced while being shipped to an AMA processing center.
- b. **Merging of 1024 to 2048 Trunk Link Networks [1AE9, 1AE10 and 1AE11]** program, functionally, provides a program controlled, office "data storage type" selective, nonservice interrupting, method for merging TLNs (trunk link networks) in operational 1A ESS switches.
- c. **Packed to Unpacked Supplementary Translations [1AE9]** program, functionally, provides a method for "unpacking" any packed OE or REN supplementary translators. These translators MUST BE in the "UNPACKED" format for the 1AE9 generic program. All 1AE8A offices with packed LEN/REN supplementary translations retrofitting to the 1AE9 generic program must use this package to change over these translators to the unpacked state before the retrofit is begun. Ordering information is obtained from J6A002AC-1 under package name APT31, List 31.
- d. **Customer Carrier Identification Program [1AE9, 1AE10 and 1AE11]**, functionally, provides a method to verify customer carrier assignments in the 1A ESS switches that have loaded the 1AE9 generic program. Operationally, this program processes translations in an office to extract DNs and PIC (primary inter-LATA carrier) information. The DN and PIC information may then be output to tape for regional processing or to a terminal for local processing. Either method of processing provides customer PIC assignment information. Ordering information must be taken from J6A002AC-1 under package name APT33, List 33.

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- e. **Centrex Line Primary Interexchange Carriers Unassign Program [1AE9, 1AE10 and 1AE11]**, functionally, provides for locating and unassigning selective Centrex LPIC (line primary interexchange carriers) in the LEN supplementary translators. Operationally, this package enables 1A ESS switches that are on the 1AE9 generic program, and centrex equipped, to selectively locate LPICs in the LEN supplementary translator and unassign them. LPIC unassignment is accomplished by overwriting them with the value of the default PIC indicator. Ordering information must be taken from J6A002AC-1.
- f. **Simultaneous Trunk Conversion via Automated Recent Change Program [1AE10 and 1AE11]** provides an automated method for two 1A ESS, or one 1A ESS switches and one 5ESS switch, to simultaneously convert trunks to support CCS7 signaling. Operationally, this package, via automated recent changes, enables two 1A ESS switches to convert their trunks, update their data bases, and test and verify the voice path. In addition, this package also enables a 1A ESS switch and a 5ESS switch (using their version of this package), via automated recent changes, to convert their trunks, update their data bases, and "test and verify" the voice path between the switches. At the completion of "trunk conversions" the converted trunks in both switches can be placed in a predetermined state. Ordering information for the 1A ESS switch must be taken from J6A002AC-1.
- g. **1AE8A to 1AE10 Retrofit Program** provides a method to skip a generic in the 1A ESS switch retrofit procedure primarily through translation data mapping control enhancements. Operationally, this package enables 1A ESS switches, currently on any supported 1AE8A PPU, to retrofit to any supported 1AE10 PPU. Ordering information for the 1A ESS switch is available from J6A002AC-1 under package name APT45, List 45.

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- h. **Local Area Signaling Services Feature Support Package [1AE10]** contains a program (SCFMAP) that supports the initialization of LASS features that have been loaded in a 1AE10 switch. Operationally, this software maps translations associated with the supported LASS features after the features have been loaded in a switch. Ordering information for the 1A ESS switch must be taken from J6A002AC-1 under package name APT47, List 47.

Listed are the SCFMAP tests and the features supported by each:

1. Test 1—Designed to map Call Forwarding Variable (CFV) to CFV and Selected Call Forwarding. This is needed for switches planning to retrofit or update to 1AE10.02 or later generic programs.
2. Test 2/3—Designed to map Automatic Recall (AR) to AR and Automatic Callback. This is needed for switches planning to retrofit or update to 1AE10.01 or later generic programs.

With the 1AE11 generic program, LASS feature support contains a program (SCFMAP) that supports the initialization of LASS features that have been loaded in a 1AE11 switch. Operationally, this software maps translations associated with the supported LASS features after the features have been loaded in a switch. Ordering information for the 1A ESS switch must be taken from J6A002AC-1 under package name APT51, List 51.

Listed are the SCFMAP tests and the feature supported by each:

1. Test 1—Designed to map Call Forwarding Variable (CFV) to CFV and Selected Call Forwarding (SCF). This is needed for switches planning to retrofit or update to 1AE10.02 or later generic programs.

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2. Test 2/3—Designed to map Automatic Recall (AR) to AR and Automatic Callback. This is needed for switches planning to retrofit or update to 1AE10.01 or later generic programs.
3. Test 4—Designed for switches that have chosen selective allocations of outgoing line history blocks. This test will be used by switches planning to retrofit or update to 1AE11.02 or later generic programs.
 - i. **1AE8A to 1AE11 Retrofit**, functionally, provides a method to skip a generic in the 1A ESS switch retrofit procedure primarily through translation data mapping control enhancements. Operationally, this package enables 1A ESS switches, currently on any supported 1AE8A PPU, to retrofit to any supported 1AE11 PPU. Ordering information for the 1A ESS switch is available from J6A002AC-1 under package name APT57, List 57.

800 Service Billing [CTX-1/1AE1] (formerly INWATS Billing) (AT&T 231-090-275) provides an AMA record for calls terminating to an 800 Service SFG. The AMA record is made at the terminating central office. AMA records are made on all call attempts that are both completed and incompleting. In addition, a daily AMA record is provided per 800 Service group which lists the total number of overflows to that group.

800 Service—Originating Screening Office (OSO) [1E7/1AE7] (AT&T 231-090-274) provides single number DDD calling and improved routing by use of CCIS direct signaling. This feature allows a customer to receive and pay for calls from specified NPAs. No charge is made to the originating (calling) party for these calls. This feature is loaded with the CCIS feature group.

2048 Junctor Trunk Link Network (2048-TLN) [CTX-7/1AE1] [AT&T 231-031-100 (Ferreed) and AT&T 231-031-010 (Remreed)] is a switching network which terminates 2048 junctors. The 2048-TLN feature provides an increase in both network terminal and network

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traffic capacities and is intended for use in large 1 and 1A ESS switches.

Nortel DMS-100 Trunk Maintenance Overview

Functional Description

This document describes the DMS-100 family trunk maintenance subsystem. The trunk maintenance subsystem shows how to test and monitor trunk operation. The subsystem also shows how to detect, identify, and locate trunk problems. In addition, the trunk maintenance subsystem performs tests and maintenance functions for several non-trunk circuits. The circuits include the circuits associated with receivers and test equipment. *Figure 1* shows a block diagram of the trunk maintenance subsystem.

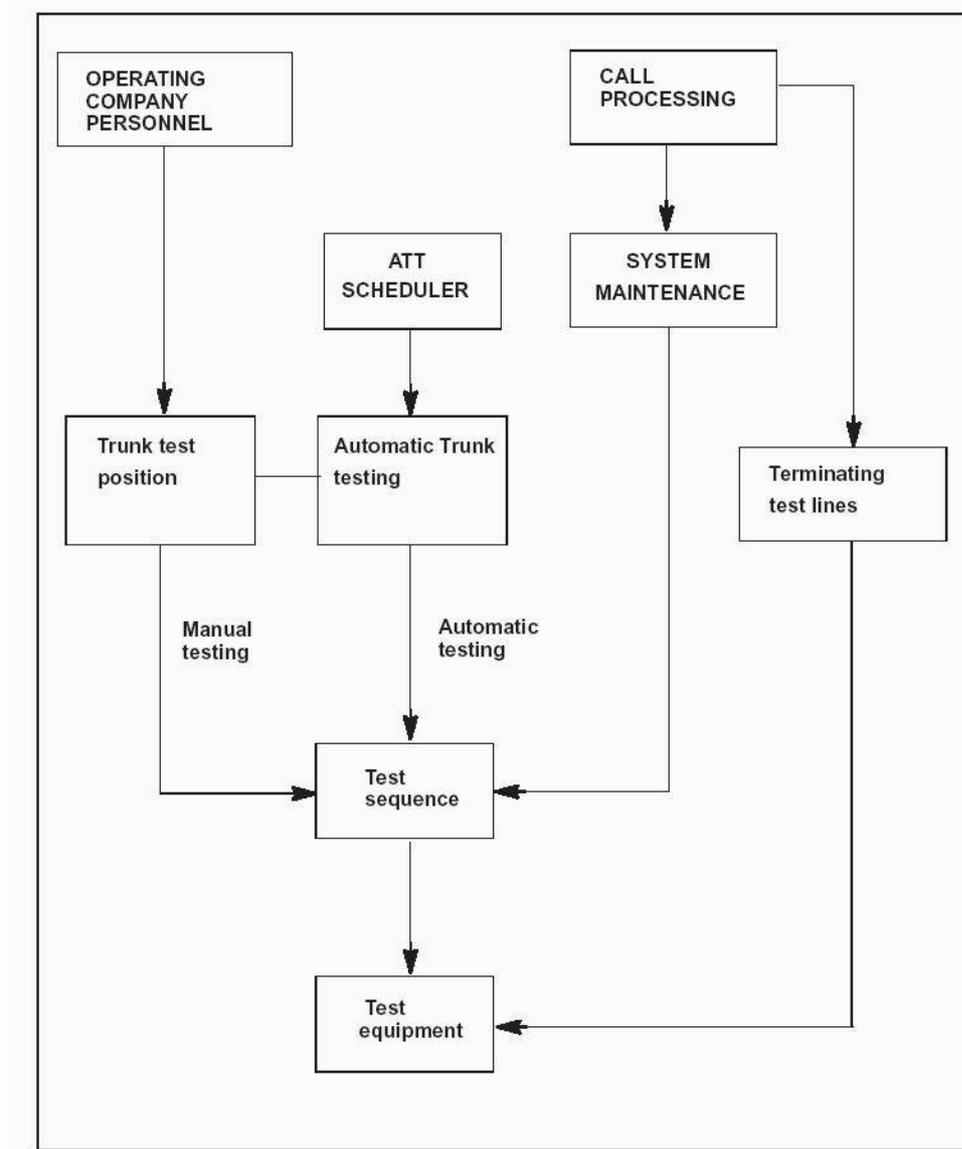


Figure 1 – Block Diagram of the Trunk Maintenance Subsystem

The trunk subsystem can transmit analog voice or digital voice signals. Trunk Peripheral Modules (PM) transmit signals. You *cannot* process analog and digital signals on the same trunk PM. Each type of signal requires separate PMs. You can also use trunk PMs for maintenance and service activities.

Three categories of trunks are:

- Analog Voice Trunks
- Digital Voice Trunks
- Analog Test Equipment and Service Trunks

Analog Voice Trunks

Analog voice trunks transmit voice signals.

Trunk Module

The Trunk Module (TM) is a subsystem that occupies a single shelf. The TM provides an interface to analog trunks from the outside plant through a distributing frame. Trunk modules can contain special service circuits and internal test equipment. Use the test equipment to test both inside and outside plant facilities.

The trunk module consists of four common circuit packs (excluding power) with many trunk interfaces that you can change.

The primary functions and features of the TM are the following:

- Converts analog trunk speech and signaling information to (or from) a 2.56 MB/s digital stream.
- Connects a maximum of 30 analog voice trunks to the network ports through a DS-30 link to the network.

TM features include:

- A maximum of 15 trunk circuit cards.
- Modular shelf design.
- No concentration.
- Digital and analog loopback circuits for maintenance.
- Firmware control of supervision and signaling functions.
- Storage and control of incoming and outgoing digits (up to 15 digits).
- Message error checking.
- Automatic switch over between network planes when integrity message discontinuity occurs.
- Digitally derived tones supply to precise tone plan.

All trunk modules share the basic functions and features described above. Several types of trunk modules are present for different types of trunk facilities. A "TM2" is a TM cabled for 2-wire trunks. In the same way, "TM4" and "TM8" are 4-wire and 8-wire trunk modules in the sequence given. A "TM8A" is also a 8-wire trunk.

The Analog Interface Module (AIM) provides emulation of analog trunks. This series-1 TM peripheral replaces the older version TM and Maintenance Trunk Modules (MTM) analog trunk cards and the Remote Maintenance Module (RMM) controller. For call processing, trunk and TM maintenance, you manage all AIM trunks the same as previous generation analog trunks

In central offices, AIM consists of the AIM controller card (NTFX46AA) with an internal Integrated Service Module (ISM) controller to interface DS-30 trunks. The AIM also consists of the DSP processor that controls the operation of six analog trunks and generates signaling tones. The AIM card B (NTFX48AA) is an extension of the controller card. When you use the AIM card B with the controller card, analog trunk emulation increases to 18. You can use the controller card alone. The card requires the AIM signal routing card (NTFX15AA) to replace AIM card B.

Remote AIM consists of the AIM-based RMM controller (NTFX14AA). This card contains an internal RMM controller to interface DS-30A links. This card also contains a DSP processor that operates a maximum of four NT2X90AD analog trunks.

Digital Voice Trunks

Digital voice trunks enter the DMS switch through a Digital Trunk Controller (DTC). One 24 channel DS-1 carrier (also called T-span or T-1) transmits 24 digital voice trunks.

Each DTC can accommodate up to 20 DS-1 carriers, to a maximum of 480 (24 x 20 = 480) digital trunk circuits. The capacity of the DTC is higher than the capacity of a TM.

Analog Test Equipment and Service Trunks

Maintenance Trunk Modules (MTM) control the analog test equipment and service trunks. The structure of a MTM is the same as a modified TM. MTMs use the same control cards as TMs. MTMs have all the basic functions of a TM. MTMs interface with all of the TM interface cards and special test and service circuits.

The maintenance trunk module is a peripheral module located in a TM equipment frame. The primary functions and features of the MTM are the following:

- Converts analog trunk speech and signaling information to (or from) a 2.56 MB/s digital stream.
- Connects as many as 28 analog test trunks to network ports through a DS-30 link to network.
- Acts as switching center for control messages sent between the Central Control Complex (CCC) and separate test or service circuit cards.

MTM features include:

- A maximum of 12 or 14 service circuit cards, depending on the shelf design.
- Modular shelf design, with odd and even slot card connections.
- No concentration.
- Digital and analog loopback circuits for maintenance.
- Firmware control of supervision and signaling functions.
- Storage and control of a maximum of 15 incoming and outgoing digits.
- Message error checking.
- Automatic switch over between network planes when integrity message discontinuity occurs.
- Digitally derived tones supply to precise tone plan.
- Possible configuration as an Office Alarm Unit (OAU) or Digital Recorded Announcement Machine (DRAM).

The Service Trunk Module (STM) is a peripheral module that consists of two compact MTMs. The primary functions and features of the STM are the following:

- Converts analog trunk speech and signaling information to (or from) a 2.56 MB/s digital stream.
- Connects different numbers of analog trunks to network ports through a DS-30 link to network. The number of trunks depends on the type of STM configuration, NT1X58 or NT7X30.

STM features include:

- A maximum of 5, 6, or 7 service circuit cards, according to shelf design.
- Modular shelf design that can contain two STMs.
- No concentration.
- Digital and analog loopback circuits for maintenance.
- Firmware control of supervision and signaling functions.
- Storage and control of a maximum of 15 incoming and outgoing digits.
- Message error checking.
- Automatic switch over between network planes when an integrity message discontinuity occurs.
- Digitally derived tones supply to precise tone plan.

The Office Alarm Unit (OAU) is a peripheral module in a TM equipment frame. The OAU is like the MTM. The primary functions and features of the OAU are the following:

- Converts analog trunk speech and signaling information to (or from) a 2.56 MB/s digital stream.
- Connects a maximum of 28 analog trunks to network ports through a DS-30 link to network.

OAU features include:

- A maximum of 11 OAU cards, including scan/SD/OAU alarm group/OAU dead system cards.
- Modular shelf design.
- No concentration.
- Digital and analog loopback circuits for maintenance.
- Firmware control of supervision and signaling functions.
- Storage and control of a maximum of 15 incoming and outgoing digits.
- Message error checking.
- Automatic switch over between network planes when integrity message discontinuity occurs.
- Digitally derived tones supply to precise tone plan.

The primary functions and features of the Digital Recorded Announcement Machine (DRAM) are the following:

- Converts analog trunk speech and signaling information to (or from) a 2.56 MB/s digital stream.
- Connects a maximum of 28 analog trunks to network ports through a DS-30 link to network.
- Provides digital recorded announcements.

DRAM features include:

- A maximum of eight memory cards.
- Modular shelf design, with card bus linking the first ten card slots.
- No concentration.
- Digital and analog loopback circuits for maintenance.
- Firmware control of supervision and signaling functions.
- Storage and control of a maximum of 15 incoming and outgoing digits.
- Message error checking.
- Automatic switch over between network planes when integrity message discontinuity occurs.
- Digitally derived tones supply to precise tone plan.

TM/MTM/STM Configuration

The TM, MTM, and STM modules have a common configuration. The modules provide an interface between network C-side and P-side links. Other common characteristics include a shelf with a common control section that performs four functions. The four functions are network interface, processor, control, and group CODEC (PCM/PAM coder/decoder). The TM Interface card, the TM processor card, the TM control card, and the group CODEC card provide these functions. *Figure 2* shows an example of a shelf from this group of modules (the trunk module shelf).

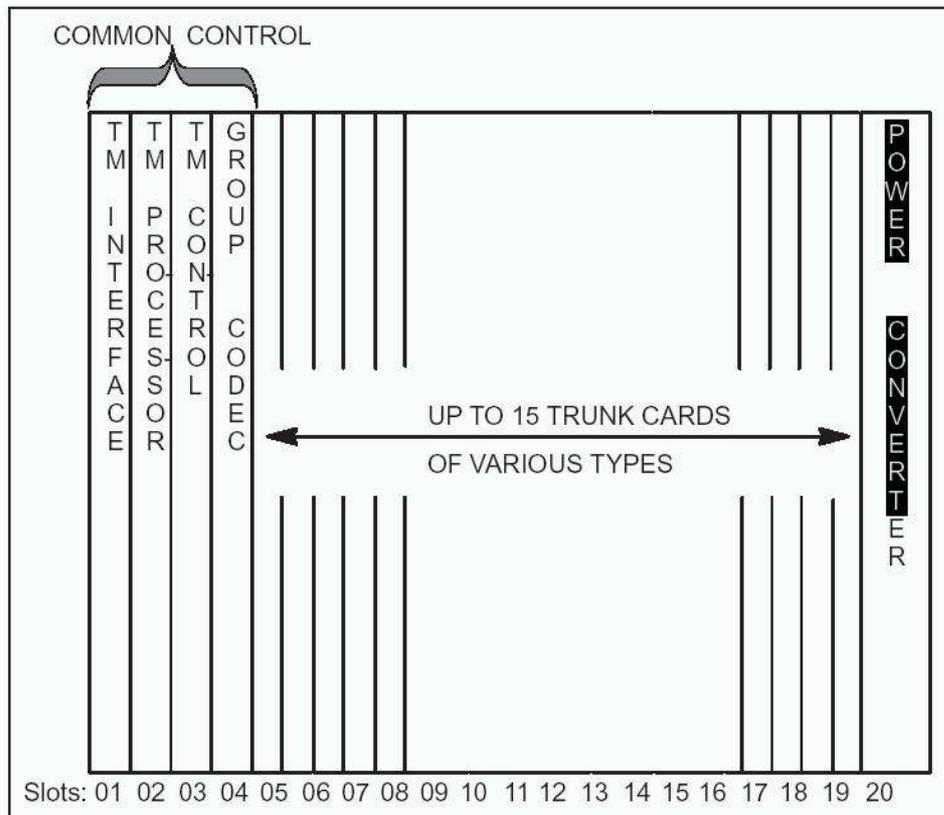


Figure 2 – Trunk Module Shelf

Shelves with AIM conform to present ISM and RMM shelf designs. Mount the AIM controller card (NTFX46AA) in any *even-numbered* slot (6 through 16) in MTM shelves. If you use card B (NTFX48AA), the card occupies the *odd-numbered* slot to the left-side.

Unless you have an ISM shelf in a Cabinetized Integrated Services Module (CISM), you can install AIM card A. You must install AIM card (NTFX46AA) in *even-numbered* slots from 6 through 16. If you have an ISM shelf in a CISM cabinet, you can install the NTFX46AA. You must install NTFX46AA in *even-numbered* slots from 10 through 16. You must install AIM card B (NTFX48AA) to the left-side of card A, in an *odd-numbered* slot. If you do not require card B, you must replace the card with an AIM signal routing card (NTFX15AA).

In RMM shelves, you must mount the remote AIM card (NTFX14AA) in slot 3, with slot 4 left empty. You do not need NTFX15AA and NTFX48AA. *Figure 3* and *Figure 4* show shelf locations for AIM cards in ISM and Trunk Module Equipment (TME) frames.

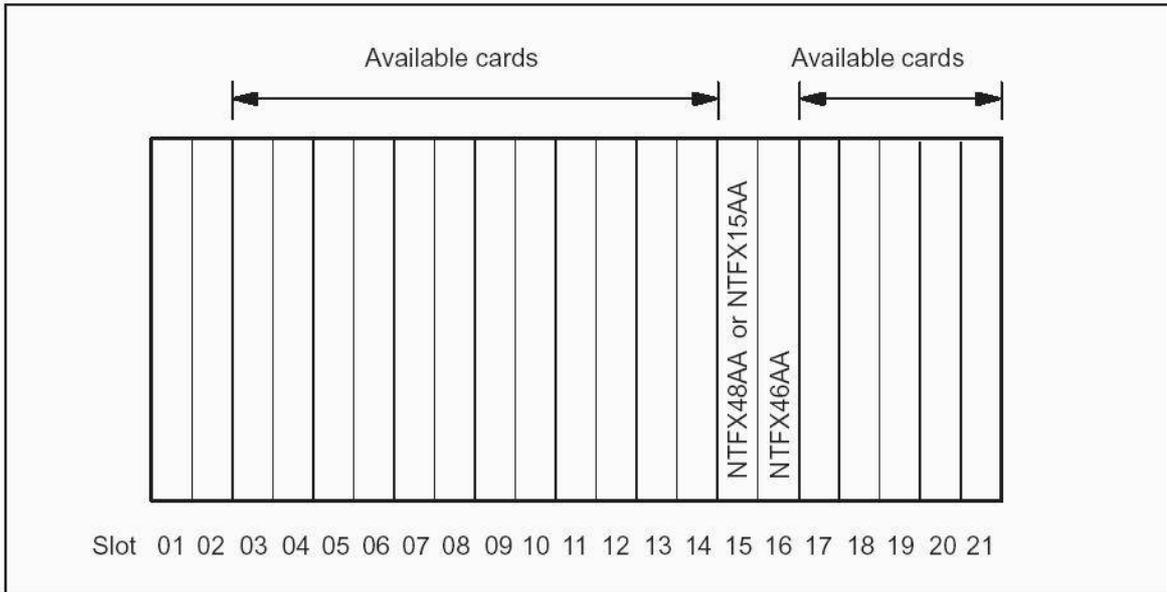


Figure 3 – AIM Shelf for Integrated Services Modules

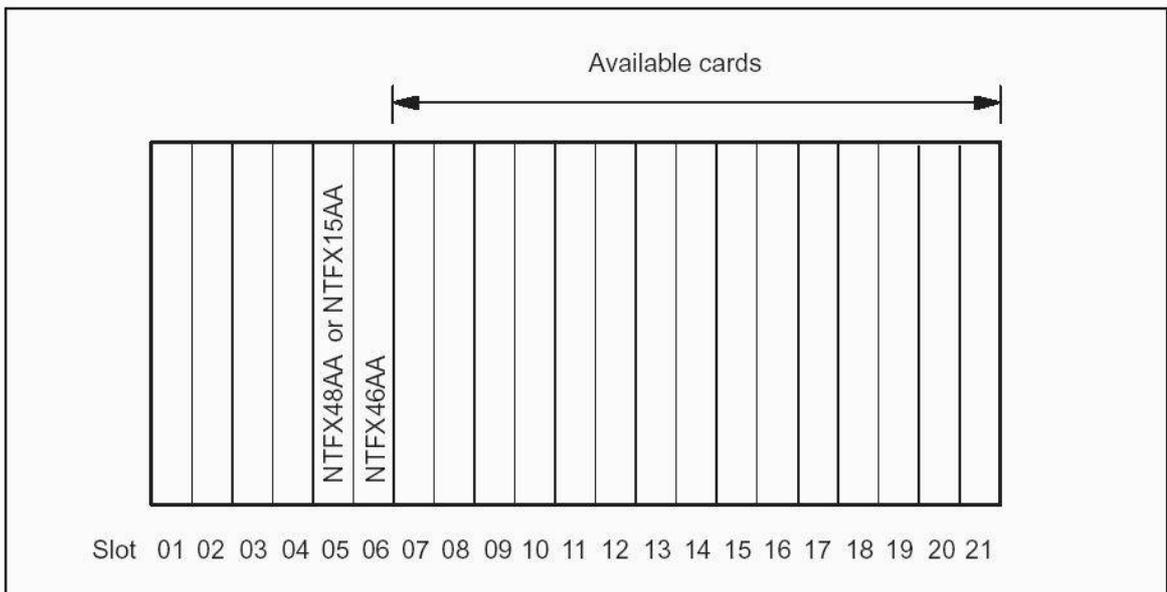


Figure 4 – AIM Shelf for Trunk Module Equipment Frame

TM/MTM/STM Messages and Data Flow

The best method to describe the operation of these modules is to divide data flow into receive paths and transmit paths.

When the network or central control sends data, a network interface card in the trunk PM shelf receives the data. The data passes through the receive path of the shelf to one of two points. These points are a trunk interface, service circuit, or other personality card, or the peripheral processor.

When a personality card or peripheral processor sends data, the data passes through the transmit path of the trunk PM shelf. The card or processor sends the data to the network or to central control.

Note: Personality cards, which normally associate with XMS–based Peripheral Modules (XPM), give a trunk PM a different identity. Trunk circuit cards are like personality cards. Trunk circuit cards give a trunk module a personality or different identity. Different trunk PMs have different personality cards.

The *receive path* in the TM, MTM, and STM shelves operates as follows:

- Data on the receive channels of the speech links from network module Plane–0 or Plane–1 enters the shelf through the network interface card.
- The network interface card aligns and formats the data again. The network interface card separates Pulse Code Modulated (PCM) speech samples from control messages. PCM speech samples go through automatic level adjustment.
- PCM speech samples travel through the speech bus to the Code/Decode (CODEC) card. The CODEC decodes PCM into Pulse Amplitude Modulated (PAM) speech samples. The CODEC places the PAM speech samples on the Receive PAM (RPAM) bus.
- A trunk interface, service circuit, or other personality card receives the PAM speech samples and constructs the original analog signal again.
- The trunk transmission facilities receive the original analog signal.
- The network or central control puts control messages in one of two places. The two places are the Receive Data Bus (RDAT) and the data bus to the Peripheral Processor (PP). The placement occurs at the same time that the CODEC places the PAM speech samples on the RPAM bus.
- Some control messages pass through the RDAT bus to a trunk interface, service circuit, or other personality card. The trunk interface, service circuit, or other personality card translates the data into signals. These signals are compatible with the signaling method of the associated trunk facility. Other control messages pass through the data bus to the PP.

The *transmit path* in the TM, MTM, and STM shelves operates as follows:

- Analog speech samples from trunk transmission facilities enter the analog side of a trunk interface, service circuit, or other personality card.
- The trunk interface, service circuit, or other personality card converts the speech samples to PAM samples. The personality card multiplexes the PAM samples on the Transmit PAM (XPAM) bus.
- PAM samples pass from the XPAM bus to the CODEC card. The CODEC card encodes the PAM samples into PCM samples.
- PCM samples pass through the speech bus to the network interface card. The network interface card passes the PCM samples to the network or to central control.
- At the same time, data from a trunk transmission facility convert to digital data.
- The digital data reads out on the Transmit Data (XDAT) bus and travels to the network interface card.
- The network interface card combines and formats the PCM samples and their associated digital data again into a data stream.
- The network interface card places the data stream on the speech link transmit path.
- A control circuit handles the PP responses to messages from the central control. The control circuit controls the transmission of the Channel Supervisory Message (CSM). The responses pass through the data bus to the network interface card for insertion on the speech link transmit message channel.

Problem Conditions

Focused Trunks Maintenance in feature package NTX272AA monitors trunk faults through the Trunks Trouble (TRKSTRBL) level of the MAP display. When you access the TRKSTRBL through the Trunk Test Position (TTP) level, the TRKSTRBL identifies trunks and trunk groups that have faults and cause alarms. TRKSTRBL alarms do not generate the same audible alarms as out–of–service alarms. The Maintenance (MTC) and TRKSTRBL MAP levels indicate that TRKSTRBL alarms are present. The TRKSTRBL level identifies trunks that have faults so that you can take maintenance action. Do not perform maintenance action from the TRKSTRBL level.

Incrementing Buffer and Display of Alarms

The failure rate of a trunk group generates alarms when the failure rate exceeds acceptable limits. Trunk faults cause the alarms. A buffer records the rate of failure. When a customer cannot complete a call because of a trunk fault, the failure count in the buffer increases by one. The failure count decreases by one for a given quantity of successful attempts on the same trunk group. For the failure count to decrease, the trunk group must accumulate the quantity of successful attempts defined by the operating company. The quantity of failures generates an alarm when the quantity reaches the defined limits.

The different degrees of alarm codes displayed for the DMS trunks are:

- Minor Alarm (MN)
- Major Alarm (MJ)
- Critical Alarm (CR)

Note: If the failure rate on a trunk or trunk group rises quickly, the alarm degree increases from minor to critical. The increase indicates the degree of the fault.

When the increase in failure rate generates a TRKSTRBL alarm, the trunk fault flags the alarm. The alarm can be a Maintenance (M) or a Call Processing (CP) alarm. When you access the TRKSTRBL MAP level, the level displays the alarm. The `LISTALM` command displays and identifies the trunk group that causes the alarm. The display helps you take the correct alarm clearing action.

If the command `LISTALM` does not display a trunk group, increase the threshold levels. You can increase the threshold levels in field `ATMPCNT` of data table `TRKMTCE`.

The alarm display at the MTC MAP level updates to show the most important alarm generated by TRKSTRBL. The alarm switches every 30 seconds with the current alarm to represent the percentage of out-of-service trunks. The out-of-service alarm is more important than the TRKSTRBL alarm. The alarm display shows the out-of-service alarm when no TRKSTRBL alarm is present. When a TRKSTRBL alarm is present and there is no out-of-service alarm, the alarms switch every 30 seconds. The difference between the two displays is that the alarm display does not show an out-of-service alarm. If the alarm display shows the TRKSTRBL alarm, the alarm display will change if the out-of-service alarm changes. The alarm display will change to show the out-of-service alarm. After 30 seconds, the alarm display shows the TRKSTRBL alarm again. The alarm codes MN, MJ, and CR show the degree of the TRKSTRBL. The codes M or CP next to the alarm code indication show either it is a maintenance or call processing alarm.

A delay in the buffering of trunk troubles reduces CPU use during and immediately after a restart. This delay occurs until two minutes after the restart is complete.

Call Processing Error Threshold on Trunks

Call processing errors appear at a slower continuous rate. Other types of error messages, like false seizures on trunks, occur quickly.

When messages from a trunk result in many call processing errors, a SWER log entry and additional log entries are output. Additional log entries display the Call Condense Block (CCB), Call Data Block (CDB), and other extension blocks the call involves. The call process terminates and diagnoses the trunk fault. These actions cause loss of call processing time. Switch performance degradation may result if a large number of call processing errors occur.

Call processing error thresholds and trunk handling procedures decrease large numbers of CP errors.

The operating company sets the CP error rate threshold for a trunk. The operating company places the entry for the office parameter CPERRORTHRESHOLD in the table OFCENG.

A trunk exceeds the threshold if any of the following occurs:

Error Count	Time (Consecutive Minute)
X	1
1.5X	2
2.0X	3

Where X has a value ranging from 5-10. The value entered in table OFCENG for parameter CPERRORTHRESHOLD is X. The default value is 5.

Figure 5 – Threshold Limitations

The administration of trunks with many call processing errors causes the system to proceed as follows:

- The first time a trunk exceeds the error threshold, the system outputs a log message. The system removes the trunk from service for a system diagnostic.
- If the trunk passes the system diagnostic, the trunk returns to service.
- A record of the time of events and activities appears in the CPTERMERR queue.

If the trunk fails the system diagnostic, or if the trunk exceeds the error threshold for a second time within 15 minutes:

- If the trunk is an outgoing trunk, the system removes the trunk from service for additional testing.
- If the trunk is an incoming or two-way trunk, the trunk state sets to Remote Make Busy (RMB). The trunk must support RMB.
- If the trunk does not support RMB, and if the trunk is an incoming or two-way trunk, the trunk returns to service.

Trunk Test Position

The Trunk Test Position (TTP) is a MAP level associated with hardware components used for trunk testing. You may use any MAP display (including remote) for trunk testing. The types of tests available depends on the hardware configuration of the trunks in the office.

Detached users can use all of the TTP abilities, except for the abilities that require dedicated hardware.

A TTP normally includes:

- A Visual Display Unit (VDU) with a keyboard.
- A voice communication facility.
- A printer.
- Two jack fields.
- Associated furniture.

The VDU is the main Man–Machine Interface (MMI) device used to perform trunk tests. You enter commands to test and monitor at the keyboard. The screen displays and updates trunk status information and test results.

For voice communication, use:

- Key Telephone Set (KTS), normally of the LOGIC 10 or 20 series.
- NT5X64 communication module.

The lines of the telephone set connect to the NE–1A2 KTS, which provides:

- Access to 101 test trunks (101 test lines that terminate).
- Communication trunks (test lines that originate).
- A headset trunk, used to talk and listen over a circuit.

You can obtain a hardcopy of the status and test information from a printer accessed from a VDU.

A TTP contains two identical jack fields connected in parallel, one on each side of the VDU. Each jack field has four configurations. Each configuration has two jacks. One jack transmits and one jack receives. Three of the jack configurations connect to jack–ended trunks through the Main Distribution Frame (MDF). Jack–ended trunks connect circuits under test to portable test equipment. Use the portable test equipment when you require tests different from those provided by the internal equipment. Functions determined by the operating company use the fourth jack configuration. The fourth jack also connects to the MDF. An example of a function defined by the operating company is connection to a voice frequency patch bay. Circuit numbers of the jack–ended trunks are assigned in sequence according to the TTP number. For example, circuits 0, 1, 2 are assigned to TTP 0, and circuits 3, 4, 5 to TTP 1.

Related to TTP Switch Hardware

The main test hardware for maintenance requests in the DMS switch is in a MTM.

The TTP switch hardware uses the following equipment:

- A Transmission Test Trunk (TTT), which includes:
 - ◆ PCM Level Meter (PLM) card (NT2X96). The PLM card measures the incoming signal levels and frequencies in transmission, loss, and noise tests. The PLM card also identifies supervisory signal tones.
 - ◆ Test Signal Generator (TSG) card (NT1X90), which contains signal generator circuits and filter circuits.
 - ◆ **Note:** The cards described operate together. The GS2X96 and GS1X90 describe the PLM and TSG.
- A Transmission Test Unit (TTU), which includes:
 - ◆ Control Processor (CP) (NT2X47), which communicates with the Central Control (CC) and generates outgoing test tones.
 - ◆ Digital Filter (DF) (NT2X56), which receives incoming tones and determines their level at selected filters.
 - ◆ **Note:** The GS2X47 and GS2X56 describe CP and DF.
- A milliwatt supply (from a standard 1,004 Hz source) used for the 102 test line test.

All the connections between test equipment and a circuit under test are through the Network Module (NM). The system selects an idle TTT, TTU, or milliwatt supply to use this test equipment. The selection depends upon the test. The system provides a connection with the circuit under test. When the test is complete, the equipment becomes available to other users.

Trouble Tests

To locate faults, perform trouble tests manually. The following reports identify faults:

- Subscriber Reports
- Call Processing Test Reports
- Automatic Line Testing (ALT) Reports

You can perform most of the problem tests from the TTP level and from the following TTP sublevels:

- ATT
- TRKSTRBL
- CARRIER

The menus at each level include commands for most of the tests. The menus also include commands for maintenance actions for the tests.

Maintenance Tests

Maintenance tests:

- Check the accuracy of trunks as a routine to make sure that all circuits work correctly.
- Determine the cause of a fault that is present and isolate the correct circuit.

You can perform all trunk tests manually. You can schedule the system to run some tests automatically.

Manual Testing

To perform a manual test, use commands at the MAP level. The MAP level is the level that associates with the hardware and software that you test. Command entry establishes, holds, and releases test connections. Connected test equipment continuously transmits information until you stop the equipment.

For test functions not provided by the DMS switch, you can connect external testing equipment to the switch by the TTP jacks. Tests run from external equipment include:

- Singing Point
- Frequency Attenuation Distortion
- Harmonic Distortion
- Longitudinal Balance
- Envelope Delay Distortion
- Absolute Delay Distortion
- Level Tracking Distortion
- Foldover Distortion
- Phase Jitter
- Echo Return Loss

Note: The term "manual testing" does not refer to the MANUAL level of the MAP display.

Automatic Maintenance

Automatic Trunk Testing (ATT) allows you to schedule the system to run trunk maintenance tests to be run by the system automatically. The ATT is in feature package in NTX051AA. You can schedule at the ATT level of the MAP, or in data table ATTSCHED. Automatic tests do not occur as a result of a hardware or software failure.

You can schedule, initiate, monitor, or stop the tests at the ATT level. You can run a maximum of 15 tests at the same time.

The ATT does not support all the tests scheduled at the ATT MAP level. When a test the system does not support begins, the system generates an ATT log. The system bypasses the test and the ATT log indicates the system cannot complete the test.

Escalation to Manual Maintenance

When automatic (system) maintenance fails to correct a fault in the subsystem of the trunks, the switch provides problem (fault) indicators. The indicators identify the fault condition is present. Alarms are examples of these fault indicators. Operational Measurements (OM) and logs also indicate a failure of automatic maintenance. When automatic maintenance fails to clear a fault, you must clear the fault manually.

AC Mains Isolation Transformer

Overview

An AC mains isolation transformer is an important piece of test equipment for both the experimenter and the security conscience individual. For the experimenter, connecting the equipment you are working on through an isolation transformer will "isolate" the unit from the incoming AC power line, should the hot and neutral lines be reversed for whatever reason. Anyone who has ever felt an electric shock while moving an old TV set will be very familiar with this. This particular isolation transformer will also include a switchable output current limit. This is a handy addition when checking the operation of those old radios or unknown voltage transformers you find cheap at hamfests.

For the security conscience individuals out there, an AC mains isolation transformer can help to isolate your security compound from the "real world." The audio from hidden surveillance devices routinely rides atop the AC power lines coming into everyone's home. This method of transmission is called "carrier current," and has been used for many years to extend the range of baby monitors and those "no-wire" extension telephones. Modern carrier current surveillance devices used by federal intelligence agencies use spread spectrum modulation to hide the signal even further into the background noise and voltage spikes which are unavoidable in the AC power distribution system. Using an isolation transformer, and a good AC line filter, will help to remove any unwanted signals piggybacked on your incoming AC power lines.

From the National Technical Investigators Association (NTIA):

1) Advanced Carrier Current Monitoring System

Carrier current transmission is often used for audio monitoring within a facility where it is impractical to install special wiring. In the past, however, this approach has been limited to one or at the best a few voice conversations being carried over the AC power line at the same time.

Using advanced spread spectrum technology, it is now possible to transmit up to 200 voice conversations simultaneously on a single AC line. The same line can also carry coded commands for activating or de-activating selected microphones, video cameras, tape recorders, lighting, doors, and other functions.

Entire facilities such as prisons, hotels, and office buildings can now be pre-wired, with the assurance that specific areas can later be monitored on command.

The main component of the AC mains isolation transformer is, of course, the isolation transformer itself. The good news is that these are available for *free* at ham radio swapfests. The bad news is that you may need to look around a bit to find one, but you shouldn't pay too much for one. For this isolation transformer, I managed to find a fairly heavy-duty AC voltage transformer which appears to have both high-current capacity and a "130 VAC" secondary winding (close enough to 120 VAC). By tapping this 130 VAC output secondary, we essentially have a 1-to-1 ratio voltage transformer that can handle several amps of continuous output current. This will be perfect for powering a small computer system in a "secure" location. It would probably be a good idea to add a large fan to the transformer to prevent it from overheating or over saturating if you do use it continuously, though.

Construction Notes & Pictures



Needed parts overview. A large ammo box will house the transformer along with an incoming AC line filter and circuit breaker. A shatter-proof lightbulb, holder, and octagon box are also needed, along with the assorted support hardware.

The lightbulb will act as an output current limit and can be switched in and out of transformer's secondary. A 15 amp circuit breaker will protect the transformer's primary and a 5 amp fuse will protect the secondary.

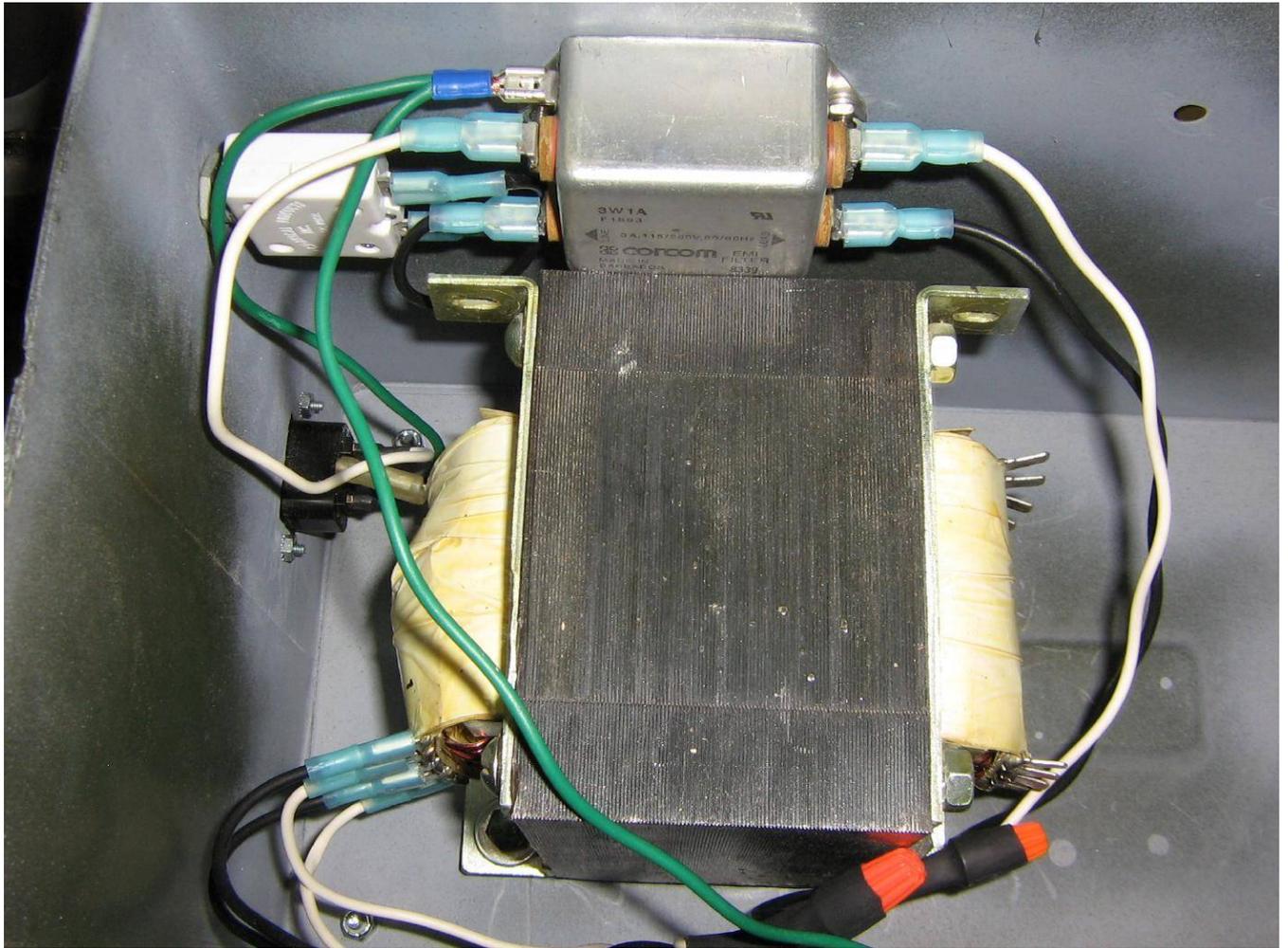
The final isolated 120 VAC output will be from a standard, single-gang AC outlet.

An external Earth ground post and neon light indicator are also added, but are not required.

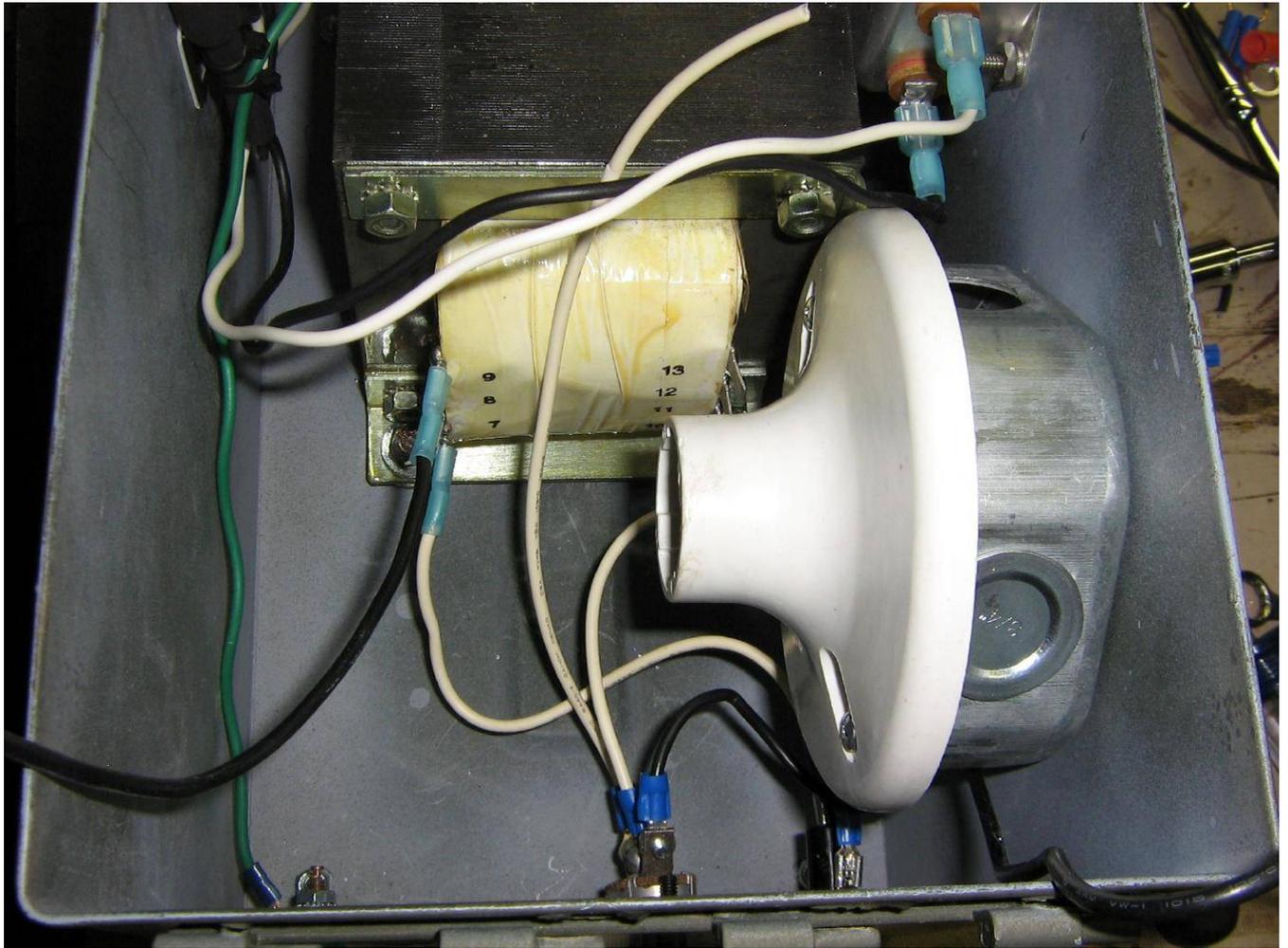


The transformer used. No idea who made it or what its specifications are, but it's heavy and has a 130 VAC secondary winding.

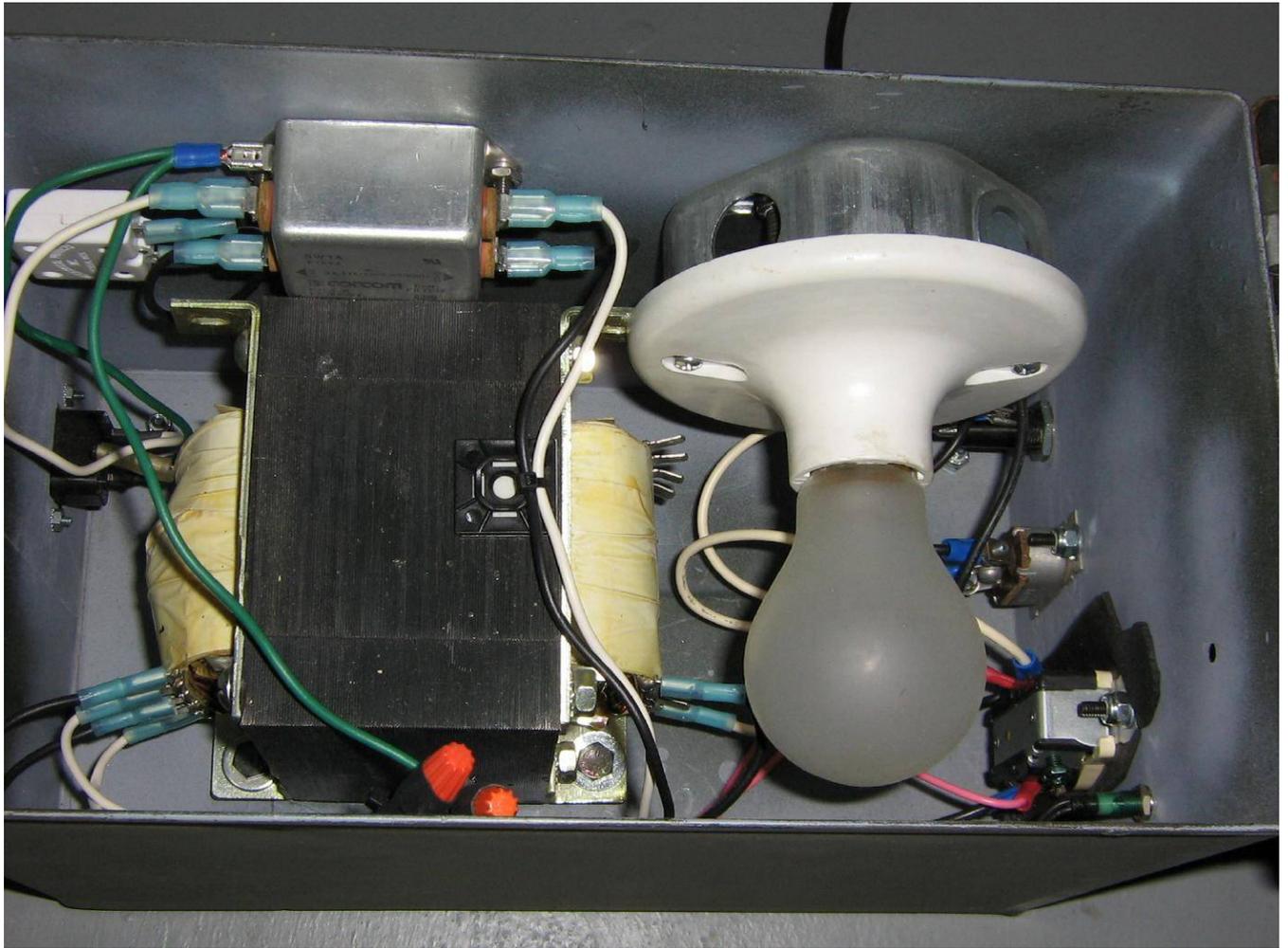
Because of the transformer's large inductance, they only pass low frequencies. This makes them natural bandpass filters for cleaning up AC line voltage.



Mount the transformer in the ammo box as so. The primary connection passes through a resettable 15 amp circuit breaker and a grounded AC line filter. Be sure the transformer has good mechanical support to prevent it from "humming" while in operation.



The transformer's secondary passes through a 5 amp fuse and then onto a SPDT switch with a "center off" position. One switch position sends the output directly to the AC outlet, the other switch position selects a series-connected 150 watt lightbulb. This lightbulb limits the output current to around one amp in case of a short circuit.



Completed overview. Since the lightbulb is just a temporary current limit and is not meant to be left in the circuit, you should not have to worry about it overheating and melting any nearby wiring.

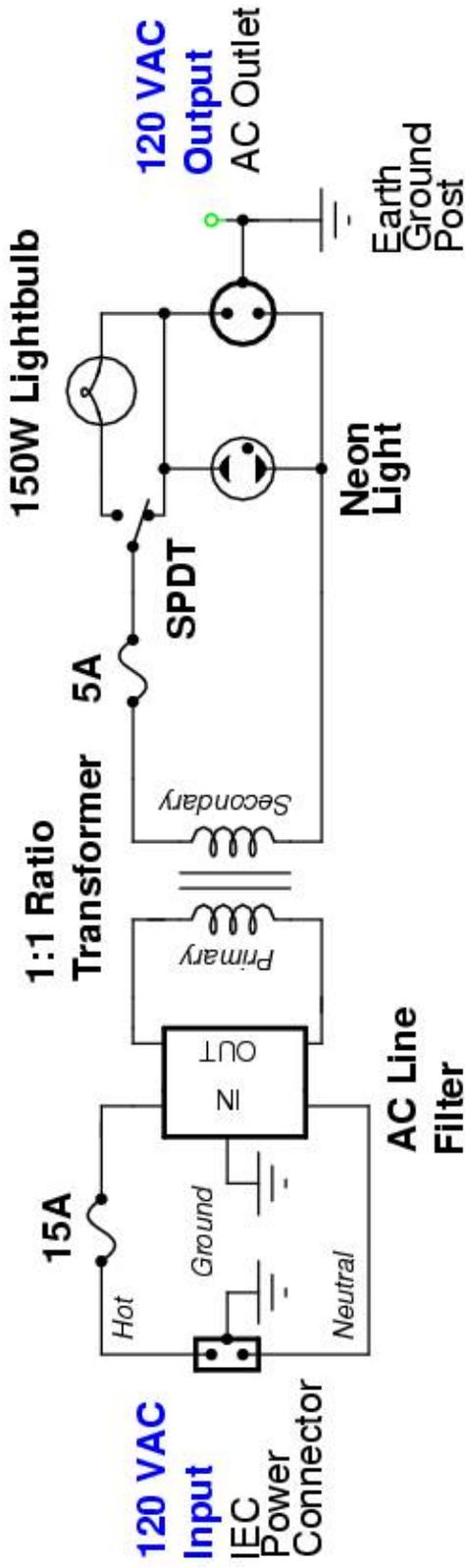


Overview, alternate view.



Outside case overview. A short AC power cord with three alligator clips connects to the equipment under test. A small hole in the front panel is used to monitor the internal lightbulb. The green Earth ground post is on the lower-left.

AC Main Isolation Transformer



Use heavy-gauge wiring for all connections.
Lower lightbulb wattage to lower output current limit.
Tie all grounds together.

AT&T Repair Order Procedures for Nortel DMS Offices

Advance Shipment Service (Like-for-Like)

Advance Shipment Service provides AT&T with replacement Field Replaceable Units (FRUs) prior to receiving defective FRUs. Under Advance Shipment Service, Nortel Networks dispatches replacement hardware normally within five business days after capture of a customer order. Nortel Networks offers three options for placing repair orders.

Repair Order by Phone Procedures

Dial 1-800-466-7835. Listen carefully to the menu prompts. Input 1 for Express Routing Code (ERC) and then input 181 (DMS Switching) to reach your repair destination.

AT&T personnel should have the following required information ready when placing a phone repair order with Nortel Networks:

- Company name and AT&T contact information.
- Office code, site ID, or project number.
- AT&T purchase order number or credit card number.
- Order codes (or PEC) of each piece of equipment being repaired, quantity of each type, and warranty date/serial number for each pack.
- Shipping address for the office code.

A Part Request Form must be sent to Nortel Networks via e-mail or fax on all phone orders.

Repair Order by Fax Procedures

Fax completed part request forms to Nortel Networks at 972-685-8862.

Repair Order by Email Procedures

Email completed part request forms to Nortel Networks at rich.repair@nortelnetworks.com.

Return Material Authorization Numbers

Each repair order is issued a Return Material Authorization (RMA) number by Nortel Networks. This number is critical for tracking individual orders and must be referenced on failure tags, shipping/packing lists, returned defectives, and any correspondence or inquiries concerning the order.

Emergency Part Dispatch Fees

Emergency Part Dispatch provides AT&T, during emergency circumstances, accelerated order fulfillment.

This service is not meant to replace AT&T carrying critical spares.

Nortel Networks can provide emergency advanced replacement 24 hours a day, seven days a week. Nortel Networks will usually ship the replacement unit to AT&T within 24 hours of the receipt of a purchase order for the emergency request, provided that Nortel Networks has a functionally equivalent circuit pack in stock.

Nortel Networks will charge AT&T a fee of \$400 per advanced replacement circuit pack to cover all Nortel Networks expediting costs. If requested, Nortel Networks can also provide counter-to-counter expedited shipment service for an additional \$400 per repair order. Counter-to-counter is a service where at AT&T's request, Nortel Networks will hand-deliver the emergency replacement to an airline counter in order to expedite shipment even quicker than the normal advanced replacement service. The replacement would be delivered to an airline counter at the airport nearest to AT&T's location via the next commercial flight.

Material On Loan Policy

AT&T must return the faulty circuit pack to Nortel Networks so that Nortel Networks can close out the RMA within 30 calendar days from the receipt of the original order. If Nortel Networks has not received the circuit pack within 15 calendar days, Nortel Networks will notify AT&T of the impending billing situation. If Nortel Networks does not close out the RMA within 30 calendar days, Nortel Networks will bill AT&T the "A" stock value of the circuit pack shipped when the RMA was opened.

Defective Return Packing Slips

Defective return packing slips should be used to return all defective parts to Nortel Networks. Nortel Networks will provide defective return packing slips for use by customers in return shipments. A copy of the defective return packing slip should be placed in all the cartons and attached outside. Nortel Networks recommends that a copy of the packing slip be attached to the outside of the shipment as well as put in carton to aid in processes and proper identification of returned material. The Nortel Networks Part Request Form may be used as a packing list. The RMA number should be clearly marked on the outside of each box. All equipment returned to Nortel Networks must be shipped in appropriate static bags or approved ESD treated packing boxes.

If AT&T supplies their own defective return packing slip it must contain these pieces of information and must be included on the shipping/packing list for proper handling:

Item	Required Information
1. From	Company name, return address, and telephone number.
2. Ship Date	Date parts are shipped from the customer.
3. Ship Via	Shipping carrier name.
4. Waybill Number	Shipping carrier tracking number.
5. Number of Cartons	Number of cartons being sent on shipment.
6. Customer's P.O.#	Provided, if applicable.
7. Repair order number	RMA number issued when order is placed.
8. Site ID or Project Number	
9. Item Number	
10. Quantity Ordered	
11. Quantity Returned	
12. Nortel Networks Part Number	
13. Description of Item	
14. Serial Number	The serial number for each item in the shipment.
15. Shipment Requested By	Customer's representative signature.

Nortel Networks Repair Facility Address (DMS Switching)

Nortel Networks
 C/O CTDI
 1334 Enterprise Drive
 West Chester, PA 19380
 Attn: Receiving Department (RMA Number)

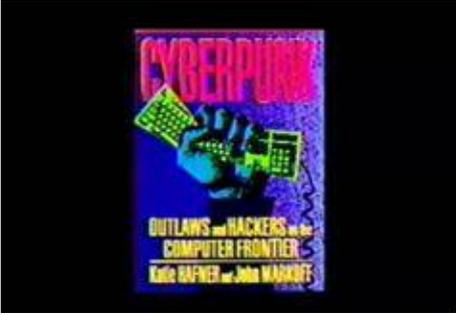
AT&T Local Network Services DMS-500 Installation Base

Customer	City/State	CLLI Code	Project Number/Office Code/Site ID
ALNS-Atlanta 1	Norcross, GA	NRCRGAISDS0	D222
ALNS-Atlanta 2	Atlanta, GA	ATLNGATLDS7	RL01
ALNS-Austin 1	Austin, TX	AUSTTXGRDS0	JN63
ALNS-Baltimore 2	Comumbia, MD	CLMAMDNIDS1	RZ83
ALNS-Baltimore 1	Baltimore, MD	BLTMMDFMDS0	J345
ALNS-Birmingham	Birmingham, AL	BRHMALPODS0	L484
ALNS-Boston 4	Boston, MA	BSTNMALBDS1	JN50
ALNS-Camden	Camden, NJ	CMDNNJCEDS2	JG09
ALNS-Charlotte	Charlotte, NC	CHRLNCNADS0	D441
ALNS-Chattanooga	Chattanooga, TN	CHTGTNKVDS0	L485
ALNS-Cheshire	Cheshire, CT	CHSHCT02DS1	SY94
ALNS-Chicago 5	Chicago, IL	CHCGILCGDS1	JW47
ALNS-Chicago 6	Lisle, IL	LSLEILAADS1	SX72
ALNS-Cincinnati	Cincinnati, OH	CNCOOHFPDS1	D442
ALNS-Cleveland	Independence, OH	INDPOHDBDS0	L186
ALNS-Columbus	Columbus, OH	CLMBOHFQDS2	JM56
ALNS-Dallas 1	Dallas, TX	DLBTPXPVDS0	Q023
ALNS-Dallas 2	Dallas, TX	DLLSTXTLDS8	RC57
ALNS-Dallas 4	Dallas, TX	PLANTXXZDS0	5Z33
ALNS-Denver 1	Aurora, CO	AURRCOBUDS0	K677
ALNS-Denver 2	Denver, CO	DNVRCOMDDS0	JN53
ALNS-Detroit 2	Detroit, MI	DTRTMIBADS0	D445
ALNS-Dix Hills	Huntington, NY	HNTNNTSUDS2	JM57
ALNS-Greensboro 1	Greensboro, NC	GNBONCEUDS4	JP55
ALNS-Hartford 1	Hartford, CT	HRFRCTCRDS0	J155
ALNS-Houston 1	Houston, TX	HSTNTX1301T	Q264
ALNS-Houston 2	Houston, TX	HSTNTX01DS5	JL88
ALNS-Indianapolis 1	Indiannapolis, IN	IPLTINMADS1	K872
ALNS-ITN3 DMS-500	Warrenville, IL	WNVLILAADS5	RA10
ALNS-Jacksonville 1	Jacksonville, FL	JCVLFLCLDS6	JP43
ALNS-Knoxville	Knoxville, TN	KNVLTNBHDS0	D446
ALNS-LA 4	Los Angeles, CA	LSANCA03DS7	JN51
ALNS-Louisville	Louisville, KY	LSVLKYCSDS4	RP26
ALNS-Manhattan 8	New York, NY	NYCMNYBWDS6	JW46
ALNS-Manhattan 9	New York, NY	NYCMNYBWDS5	JM07
ALNS-Nashville	Nashville, TN	NSVLTN48DS0	L486
ALNS-NJ 3	Newark, NJ	NWRKNJ02DSA	JN49
ALNS-Oakland 2	Oakland, CA	OKLDCA03DS5	JN52
ALNS-Oakland 3	Oakland, CA	OKLDCA03DS6	6E15
ALNS-Miami 3	Ojus, FL	OJUSFLTLDS3	SB35
ALNS-Philly 2	Philadelphia, PA	PHLAPASBDS3	JG08
ALNS-Philly 4	Philadelphia, PA	PHLAPASBDS4	3R20
ALNS-Philly 1	Philadelphia, PA	PHLAPAAZ01T	J105
ALNS-Pittsburgh 3	Pittsburgh, PA	PITBPADGDS7	SD73
ALNS-Portland 2	Portland, OR	PTLDOR62DS2	JM54
ALNS-Providence	Providence, RI	PRVDRIUFDS1	JM46
ALNS-Raleigh	Raleigh, NC	RLGHNCMODS1	JN64
ALNS-Richmond	Richmond, VA	RCMDVAGRDS5	JP65
ALNS-NJ 2	Rochelle Park, NJ	RCPKNJ02DS1	JL89
ALNS-Salt Lake City 1	Salt Lake City, UT	WVCYUTBXDS0	D443
ALNS-Salt Lake City 2	Salt Lake City, UT	WVCYUTBXDS1	9A55
ALNS-San Antonio	San Antonio, TX	SNANTXCADS7	JM02
ALNS-San Diego 2	San Diego, CA	SNDGCA02DS3	RW05
ALNS-San Francisco 3	San Francisco, CA	SNFFCADKDS0	RK24
ALNS-San Jose	San Jose, CA	SNJSCA02DS4	JL91
ALNS-Stamford	Stamford, CT	SMFRCTCTDS0	RW11
ALNS-Staten Lab	Staten Island, NY	NYCRNYEGDS1	J985
ALNS-Seattle 3	Tacoma, WA	TACNWACRDS0	RW49
ALNS-WDC 1	Washington, DC	WASHDCTTDS0	L185

ALNS-WDC 2	Washington, DC	WASHDCDTDS1	JL90
ALNS-White Plains	White Plains, NY	WHPLNY02DS5	JM55

-End-

Bonus



"Cyberpunk was published in 1991 by Katie Hafner and then husband John Markoff, and it relied almost entirely on the words of people who Kevin had a falling out with. As well as those who didn't know him at all."

--- Quote from Boyfucker in *Freedom Downtime* \$30 discussing Katie Hafner/John Markoff's book *Cyberpunk*.

Justin Petersen (Agent Steal) had *nothing* to do with the writing of this book, or any of the stories in it. Guess who did?

Acknowledgments

Hundreds of people agreed to be interviewed for this book. Many sat patiently, explaining again and again some of the more technical aspects of the subject. Many others helped us to reconstruct events, hauling out their old calendars and notebooks and computer printouts. We are especially grateful to Renate and Gottfried Hübner, Bob and Anne Morris and Gil DiCicco for spending time with us to talk about their sons. Thanks, too, to Bonnie Mitnick for speaking with us about Kevin Mitnick who, despite repeated requests, refused to be interviewed.

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End of Issue #45



Any Questions?

Editorial and Rants

Help fight global warming, err... global cooling. No, now it's global "climate change."

A Cold Spell Soon to Replace Global Warming

January 3, 2008 – From: en.rian.ru

By Dr. Oleg Sorokhtin

MOSCOW – Stock up on fur coats and felt boots! This is my paradoxical advice to the warm world.

Earth is now at the peak of one of its passing warm spells. It started in the 17th century when there was no industrial influence on the climate to speak of and no such thing as the hothouse effect. The current warming is evidently a natural process and utterly independent of hothouse gases.

The real reasons for climate changes are uneven solar radiation, terrestrial precession (that is, axis gyration), instability of oceanic currents, regular salinity fluctuations of the Arctic Ocean surface waters, etc. There is another, principal reason—solar activity and luminosity. The greater they are the warmer is our climate.

Astrophysics knows two solar activity cycles, of 11 and 200 years. Both are caused by changes in the radius and area of the irradiating solar surface. The latest data, obtained by Habibullah Abdusamatov, head of the Pulkovo Observatory space research laboratory, say that Earth has passed the peak of its warmer period, and a fairly cold spell will set in quite soon, by 2012. Real cold will come when solar activity reaches its minimum, by 2041, and will last for 50–60 years or even longer.

This is my point, which environmentalists hotly dispute as they cling to the hothouse theory. As we know, hothouse gases, in particular, nitrogen peroxide, warm up the atmosphere by keeping heat close to the ground. Advanced in the late 19th century by Svante A. Arrhenius, Swedish physical chemist and Nobel Prize winner, this theory is taken for granted to this day and has not undergone any serious check.

It determines decisions and instruments of major international organizations—in particular, the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Signed by 150 countries, it exemplifies the impact of scientific delusion on big politics and economics. The authors and enthusiasts of the Kyoto Protocol based their assumptions on an erroneous idea. As a result, developed countries waste huge amounts of money to fight industrial pollution of the atmosphere. What if it is a Don Quixote's duel with the windmill?

Hothouse gases may not be to blame for global warming. At any rate, there is no scientific evidence to their guilt. The classic hothouse effect scenario is too simple to be true. As things really are, much more sophisticated processes are on in the atmosphere, especially in its dense layer. For instance, heat is not so much radiated in space as carried by air currents—an entirely different mechanism, which cannot cause global warming.

The temperature of the troposphere, the lowest and densest portion of the atmosphere, does not depend on the concentration of greenhouse gas emissions—a point proved theoretically and empirically. True, probes of Antarctic ice shield, taken with bore specimens in the vicinity of the Russian research station Vostok, show that there are close links between atmospheric concentration of carbon dioxide and temperature changes. Here, however, we cannot be quite sure which is the cause and which the effect.

Temperature fluctuations always run somewhat ahead of carbon dioxide concentration changes. This means that warming is primary. The ocean is the greatest carbon dioxide depository, with concentrations 60–90 times larger than in the atmosphere. When the ocean's surface warms up, it produces the "champagne effect." Compare a foamy spurt out of a warm bottle with wine pouring smoothly when served properly cold.

Likewise, warm ocean water exudes greater amounts of carbonic acid, which evaporates to add to industrial pollution—a factor we cannot deny. However, man-caused pollution is negligible here. If industrial pollution with carbon dioxide keeps at its present-day 5–7 billion metric tons a year, it will not change global temperatures up to the year 2100. The change will be too small for humans to feel even if the concentration of greenhouse gas emissions doubles.

Carbon dioxide cannot be bad for the climate. On the contrary, it is food for plants, and so is beneficial to life on Earth. Bearing out this point was the Green Revolution—the phenomenal global increase in farm yields in the mid-20th century. Numerous experiments also prove a direct proportion between harvest and carbon dioxide concentration in the air.

Carbon dioxide has quite a different pernicious influence—not on the climate but on synoptic activity. It absorbs infrared radiation. When tropospheric air is warm enough for complete absorption, radiation energy passes into gas fluctuations. Gas expands and dissolves to send warm air up to the stratosphere, where it clashes with cold currents coming down. With no noticeable temperature changes, synoptic activity skyrockets to whip up cyclones and anticyclones. Hence we get hurricanes, storms, tornados and other natural disasters, whose intensity largely depends on carbon dioxide concentration. In this sense, reducing its concentration in the air will have a positive effect.

Carbon dioxide is not to blame for global climate change. Solar activity is many times more powerful than the energy produced by the whole of humankind. Man's influence on nature is a drop in the ocean.

Earth is unlikely to ever face a temperature disaster. Of all the planets in the solar system, only Earth has an atmosphere beneficial to life. There are many factors that account for development of life on Earth: Sun is a calm star, Earth is located an optimum distance from it, it has the Moon as a massive satellite, and many others. Earth owes its friendly climate also to dynamic feedback between biotic and atmospheric evolution.

The principal among those diverse links is Earth's reflective power, which regulates its temperature. A warm period, as the present, increases oceanic evaporation to produce a great amount of clouds, which filter solar radiation and so bring heat down. Things take the contrary turn in a cold period.

What can't be cured must be endured. It is wise to accept the natural course of things. We have no reason to panic about allegations that ice in the Arctic Ocean is thawing rapidly and will soon vanish altogether. As it really is, scientists say the Arctic and Antarctic ice shields are growing. Physical and mathematical calculations predict a new Ice Age. It will come in 100,000 years, at the earliest, and will be much worse than the previous. Europe will be ice-bound, with glaciers reaching south of Moscow.

Meanwhile, Europeans can rest assured. The Gulf Stream will change its course only if some evil magic robs it of power to reach the north—but Mother Nature is unlikely to do that.

Dr. Oleg Sorokhtin, Merited Scientist of Russia and fellow of the Russian Academy of Natural Sciences, is staff researcher of the Oceanology Institute.

Here we go again! Note how they blame "climate change" and not overpopulation by third-world trash.

World Food Stocks Dwindling Rapidly, UN Warns

December 17, 2007 – From: www.iht.com

By Elisabeth Rosenthal

ROME: In an "unforeseen and unprecedented" shift, the world food supply is dwindling rapidly and food prices are soaring to historic levels, the top food and agriculture official of the United Nations warned Monday.

The changes created "a very serious risk that fewer people will be able to get food," particularly in the developing world, said Jacques Diouf, head of the UN Food and Agriculture Organization.

The agency's food price index rose by more than 40 percent this year, compared with 9 percent the year before – a rate that was already unacceptable, he said. New figures show that the total cost of foodstuffs imported by the neediest countries rose 25 percent, to \$107 million, in the last year.

At the same time, reserves of cereals are severely depleted, FAO records show. World wheat stores declined 11 percent this year, to the lowest level since 1980. That corresponds to 12 weeks of the world's total consumption – much less than the average of 18 weeks consumption in storage during the period 2000–2005. There are only 8 weeks of corn left, down from 11 weeks in the earlier period.

Prices of wheat and oilseeds are at record highs, Diouf said Monday. Wheat prices have risen by \$130 per ton, or 52 percent, since a year ago. U.S. wheat futures broke \$10 a bushel for the first time Monday, the agricultural equivalent of \$100 a barrel oil.

Diouf blamed a confluence of recent supply and demand factors for the crisis, and he predicted that those factors were here to stay. On the supply side, these include the early effects of global warming, which has decreased crop yields in some crucial places, and a shift away from farming for human consumption toward crops for biofuels and cattle feed. Demand for grain is increasing with the world population, and more is diverted to feed cattle as the population of upwardly mobile meat-eaters grows.

"We're concerned that we are facing the perfect storm for the world's hungry," said Josette Sheeran, executive director of the World Food Program, in a telephone interview. She said that her agency's food procurement costs had gone up 50 percent in the past 5 years and that some poor people are being "priced out of the food market."

To make matters worse, high oil prices have doubled shipping costs in the past year, putting enormous stress on poor nations that need to import food as well as the humanitarian agencies that provide it.

"You can debate why this is all happening, but what's most important to us is that it's a long-term trend, reversing decades of decreasing food prices," Sheeran said.

Climate specialists say that the vulnerability will only increase as further effects of climate change are felt. "If there's a significant change in climate in one of our high production areas, if there is a disease that effects a major crop, we are in a very risky situation," said Mark Howden of the Commonwealth Scientific and Industrial Research Organization in Canberra.

Already "unusual weather events," linked to climate change – such as droughts, floods and storms – have decreased production in important exporting countries like Australia and Ukraine, Diouf said.

In Southern Australia, a significant reduction in rainfall in the past few years led some farmers to sell their land and move to Tasmania, where water is more reliable, said Howden, one of the authors of a recent series of papers in the Proceedings of the National Academy of Sciences on climate change and the world food supply.

"In the U.S., Australia, and Europe, there's a very substantial capacity to adapt to the effects on food – with money, technology, research and development," Howden said. "In the developing world, there isn't."

Sheeran said, that on a recent trip to Mali, she was told that food stocks were at an all time low. The World Food Program feeds millions of children in schools and people with HIV/AIDS. Poor nutrition in these groups increased the risk serious disease and death.

Diouf suggested that all countries and international agencies would have to "revisit" agricultural and aid policies they had adopted "in a different economic environment." For example, with food and oil prices approaching record, it may not make sense to send food aid to poorer countries, but instead to focus on helping farmers grow food locally.

FAO plans to start a new initiative that will offer farmers in poor countries vouchers that can be redeemed for seeds and fertilizer, and will try to help them adapt to climate change.

The recent scientific papers concluded that farmers could adjust to 1 degree Celsius (1.8 degrees Fahrenheit) to 3 degrees Celsius (5.4 degrees) of warming by switching to more resilient species, changing planting times, or storing water for irrigation, for example.

But that after that, "all bets are off," said Francesco Tubiello, of Columbia University Earth Institute. "Many people assume that we will never have a problem with food production on a global scale, but there is a strong potential for negative surprises."

In Europe, officials said they were already adjusting policies to the reality of higher prices. The European Union recently suspended a "set-aside" of land for next year – a longstanding program that essentially paid farmers to leave 10 percent of their land untilled as a way to increase farm prices and reduce surpluses. Also, starting in January, import tariffs on all cereal will be eliminated for six months, to make it easier for European countries to buy grain from elsewhere. But that may make it even harder for poor countries to obtain the grain they need.

In an effort to promote free markets, the European Union has been in the process of reducing farm subsidies and this has accelerated the process.

"It's much easier to do with the new economics," said Michael Mann a spokesman for the EU agriculture commission. "We saw this coming to a certain extent, but we are surprised at how quickly it is happening."

But he noted that farm prices the last few decades have been lower than at any time in history, so the change seems extremely dramatic.

Diouf noted that there had been "tension and political unrest related to food markets" in a number of poor countries this year, including Morocco, Senegal and Mauritania. "We need to play a catalytic role to quickly boost crop production in the most affected countries," he said.

Part of the current problem is an outgrowth of prosperity. More people in the world now eat meat, diverting grain from humans to livestock. A more complicated issue is the use of crops to make biofuels, which are often heavily subsidized. A major factor in rising corn prices globally is that many farmers in the United States are now selling their corn to make subsidized ethanol.

Mann said the European Union had intentionally set low targets for biofuel use – 10 per cent by 2020 – to limit food price rises and that it plans to import some biofuel. "We don't want all our farmers switching from food to biofuel," he said.

This Jay R. Grodner idiot needs to be killed.

For Marine's Sendoff, His Car is Keyed

January 3, 2008 – From: www.chicagotribune.com

By John Kass

Marine Sgt. Michael McNulty -- now on his way to Iraq for his second tour of duty in the war -- took meticulous care of his car.

It is a black two-door BMW, an expensive ride for a young Marine from Chicago, but then, McNulty didn't exactly join up for the big paycheck and luxury vacations.

The 26-year-old McNulty was a trader at the exchange and enlisted in the Reserves after 9/11. He babied his car so much that he had military vanity plates along with a sticker in his window that let people know that a Marine or a Marine supporter drove that car.

But someone didn't like the Marine sticker, or the pro-military plates, and decided to stage an anti-war protest, with a key or hard piece of metal, on the shiny black finish of Sgt. McNulty's car that caused \$2,400 in damage.

"It's a really nice car. It's in perfect condition. He keeps it meticulous. And he was going to sell it," said Sgt. McNulty's friend, Tom Sullivan, a college buddy from Loyola University.

The last time Sgt. McNulty was in Iraq, he worked a .50-caliber machine gun from a Humvee. Now that he's going back, he really doesn't need a shiny black BMW that shows dust.

"There wasn't a scratch on his car," Sullivan said. But there is one now.

It is a big scratch, a particularly long scratch in that black paint, a scratch stretching from the rear driver's side around the back, across the trunk, then up to the passenger's side.

If you have a car, and parked it on the street, surely you've thought about what an angry key could do to it.

According to the Cook County state's attorney's office, it wasn't an accident, but a deliberate key job, not done by some kid or street thug, but by a Chicago lawyer who apparently can't stand the military.

Private attorney Jay R. Grodner, 55, of Chicago has been charged with a class A misdemeanor -- criminal damage to property -- punishable by up to one year in jail and up to a \$2,500 fine, said Andy Conklin, spokesman for the state's attorney's office.

Late Wednesday, I reached Sgt. McNulty, who declined to comment for the paper but confirmed the facts in the police report.

And I wanted to get Grodner's side of it because he's been accused but not convicted of anything. So we called all the Grodner numbers we could find -- home and business -- including those on the police report and others in the suburbs and Chicago. Many were disconnected, and his cell phone voice mail was full.

I'd like to ask him two questions:

Why?

And, are you proud?

"McNulty was just coming to pick me up for breakfast, because he was going to training just before deployment," Sullivan said of that morning on Dec. 1 in Rogers Park.

There are several one-way streets near Sullivan's home, but McNulty missed the turn, and rather than drive two or three blocks around, he put the car in reverse and backed up a hundred or so feet. He pulled up in front of his friend's house, rang the bell and Sullivan came downstairs. McNulty then turned around and saw Grodner's hands on his black car.

"Mike says, 'Hey, what are you doing to my car? Open up your hand!'" Sullivan told us. "And [Grodner] goes, '[Blank] you! Just because you're in the military you don't run the roost!'"

There were allegedly many more epithets and cuss words, some allegedly applied to the United States Marine Corps, to the U.S. armed forces and to Sgt. McNulty himself.

"Quite frankly, you don't even look like a soldier. You're a small little [blank]," Grodner said according to Sullivan.

This last bit really bothers William McNulty, who is Sgt. McNulty's brother, and he called me.

"My brother should be commended for not just smashing that guy's windpipe right there for all the stuff he said about our military, and the insults," William McNulty said. "Instead, my brother called the police, as he should have."

According to the police report I read, other investigative accounts and interviews, Grodner was upset to have been accused of purposely scratching the car. So upset, that he accused his accusers of being anti-Semitic.

The Chicago police officer responding to the call didn't take the accusation seriously, according to the report, because he couldn't justify it. And Sgt. McNulty's brother and Sullivan say it is outrageous and nonsensical.

"The officer wasn't going to hear this kind of talk. He put the kibosh on the whole thing," Sullivan said. "So [Grodner] became apologetic."

According to the police report, "The offender denied scratching the victim's vehicle, but did admit to rubbing past it." Rubbing past it? I guess it all depends on what the definition of "rubbing" is.

That's where it is now, awaiting another court date, set for Jan. 18, after Sgt. McNulty refused to back off and drop the charges in earlier court appearances.

Lawyers know how to drag things out, with continuance aftercontinuance, stalling until complaining witnesses get tired and move on.

But Marines on their way to war don't seek continuances.

And all Sgt. McNulty wanted was a little respect, and the chance to sell that car of his, without a scratch.



Jay R. Grodner (jayrg8@aol.com)

Dating Profile
Personality

normal member

jayrg8 *I should have more fun*

Personal Information
 55-year-old **Male** from **Illinois, United States.**

Interested in Dating

Status: Divorced / Separated **Sexuality:** Straight

Horoscope: Taurus

Chinese Horoscope: Water Dragon

Physical

Height: 168 cm (5 ft 6.0 in)	Body Type: A Little Extra Padding
Weight: 93 kg (205 lbs)	Eye color: Blue
Hair color: Multi-Colored	

Background

Educational Level: PhD/Post doctorate

Occupation: Lawyer

Language: English (Spoken & Written)
 French (Spoken & Written)
 Spanish (Spoken & Written)

Have Children: I do but they don't live with me

Heritage: Caucasian

Religion: Judaism

Social Preferences

Smoke: Don't Smoke **Drink:** Light Drinker

In my own words

I love sex. I'm wild about so many ways that sex makes life worth living. I joined this site because the women I'm seeing are both beautiful and adventurous. I have plenty of work a free time to talk. sometimes one needs to act.

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Anti-War Soros Funded Iraq Study

January 13, 2008 – From: www.timesonline.co.uk

By Brendan Montague

A STUDY that claimed 650,000 people were killed as a result of the invasion of Iraq was partly funded by the antiwar billionaire George Soros.

Soros, 77, provided almost half the £50,000 cost of the research, which appeared in *The Lancet*, the medical journal. Its claim was 10 times higher than consensus estimates of the number of war dead.

The study, published in 2006, was hailed by antiwar campaigners as evidence of the scale of the disaster caused by the invasion, but Downing Street and President George Bush challenged its methodology.

New research published by *The New England Journal of Medicine* estimates that 151,000 people – less than a quarter of *The Lancet* estimate – have died since the invasion in 2003.

"The authors should have disclosed the [Soros] donation and for many people that would have been a disqualifying factor in terms of publishing the research," said Michael Spagat, economics professor at Royal Holloway, University of London.

The *Lancet* study was commissioned by the Massachusetts Institute of Technology (MIT) and led by Les Roberts, an associate professor and epidemiologist at Columbia University. He reportedly opposed the war from the outset.

His team surveyed 1,849 homes at 47 sites across Iraq, asking people about births, deaths and migration in their households.

Professor John Tirman of MIT said this weekend that \$46,000 (£23,000) of the approximate £50,000 cost of the study had come from Soros's Open Society Institute.

Roberts said this weekend: "In retrospect, it was probably unwise to have taken money that could have looked like it would result in a political slant. I am adamant this could not have affected the outcome of the research."

The *Lancet* did not break any rules by failing to disclose Soros's sponsorship.

