

SWITCHING SYSTEMS MANAGEMENT
NO. 2 ELECTRONIC SWITCHING SYSTEMS (2-WIRE)
GENERAL INTRODUCTION

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1. GENERAL

1.01 This section introduces Division H, Section 10, Dial Facilities Management Practices for the No. 2 Electronic Switching System (ESS). The No. 2 Electronic Switching System portion is divided into many categories, not necessarily in the order of importance to the network administrator. It is expected that these publications will give network administrators ready reference material for the day to day as well as for the long range administration of a No. 2 ESS system. Knowledge of the terminology and the configuration of the equipment components of a No. 2 ESS is essential before these practices can be used successfully. These practices are only a supplement to No. 2 ESS classroom training sessions and should be used accordingly.

1.02 This section is being reissued to include a list of definitions of features, services, etc. which are germane to No. 2 ESS. These terms are used throughout the DFMP sections dealing with No. 2 ESS.

2. THE No. 2 ESS SYSTEM

2.01 The configuration of a No. 2 Electronic Switching System (ESS) is of singular design developed from No. 101 ESS and No. 1 ESS concepts. The No. 2 ESS was developed for use where the installation of another type of dial system would be prohibitive in cost and available capacity.

Because the design of the No. 2 ESS is such that customer lines, outgoing and incoming trunks, and service circuits are assigned within the same frame, network administrators may be responsible for **all** equipment assignments in the system.

2.02 Although the design of the No. 2 ESS is radically different from other switching systems, the network administrators must be sure that the maximum load is carried and the system is providing the best possible service to customers for the load offered on the system. To achieve this load-service relationship, various tools and indicators are available to the network administrator. These practices should help clarify how these tools and indicators can best be used.

The generic programs provided in the No. 2 ESS provide for different features and measurements. The network administrator should be cognizant of the generic program and the type of the program installed in his/her office. Currently EO-1 and EF-1 are existing with EF-2 planned. Also, the 2B ESS using the 3A Central Control will become generally available during 1977. Sections of the DFMP will be revised to reflect any changes which may occur.

3. TERMS AND DEFINITIONS

3.01 This part contains definitions that are in use in No. 2 Electronic Switching System (ESS) documents.

3.02 These definitions, which have been prepared alphabetically are intended to be used in all No. 2 ESS documents to provide consistency among these documents.

3.03 It is anticipated that eventually common definitions among documents and systems

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may be reached, however, no commonality between the definitions in this document and any other document is assured.

Abbreviated Code—A 1-, 2-, or 4-digit number that is dialed to access a number that is stored in a speed calling list.

Access Code—Those digits dialed to activate the change speed calling function.

Add-On—A station can add another party to an existing incoming exchange network, or CCSA call to establish a 3-party conference. This can be done without attendant assistance, by flashing the switchhook after utilizing the consultation hold feature. (Similar to Threeway Calling)

Attendant Call Forwarding of Stations—This feature provides the attendant with the ability to call forward any station with the call forwarding feature.

Attendant Camp-On—Any call which the attendant attempts to complete to a busy station line within the PBX or centrex system is held waiting until the called station becomes idle. The called station is then automatically rung and connected to the incoming call upon answer.

Attendant Conference (ATND CONF)—The attendant conference feature allows the attendant to establish a conference connection, via the switching equipment, of up to five conferees.

Attendant Control of Trunk Group Access—Attendant Control of Facilities (ACOF)—An attendant can restrict dial access by all station lines to FX, WATS, and/or tie trunk groups by operating a key or dialing a code. When control is activated, calls to trunk groups so restricted will be routed to the attendant for subsequent completion or to a tone or announcement. Trunk group busy (TGB) lamps on the universal attendant consoles may be assigned to indicate activation of ACOF.

Attendant Direct Station Selection (DSS) with Busy Lamp Field—Not available.

Attendant Hold—Attendant hold allows the attendant to put any call in progress on hold by operating a momentary key for the purpose of supervising the call throughout its duration and at

the same time releasing the attendant from the loop.

Attendant Joint Holding of Stations—Attendant may hold a station busy, and be connected to it even though the station might be on-hook.

Attendant Position—The equipment, usually a console, from which listed directory number and other calls requiring assistance can be answered and completed by the attendant. A 1B- or 2B-type universal console is the standard attendant position for all service packages.

Attendant Restriction—See Miscellaneous Trunk Restriction.

Audible Coded Tone—Coded tones returned to the user through the handset receiver to indicate the results of a test sequence.

Automatic Message Accounting (AMA)—A mechanized system used to record charging information in telephone switching systems.

Automatic Wake-Up Service—Not available.

Busy Lamp Field Only—Not available.

Busy Verification, Station Lines (BVL)—Busy verification of station lines is a PBX or centrex feature which permits the attendant to establish a "talking" connection to an apparently busy station line in order to determine if the station line is in working order. When the attendant is connected to a busy line, the switching system provides periodic bursts of tone which are applied to alert the talking parties of the attendant's presence.

Busy Verification Trunks—Not available.

Call Forwarding (Noncentrex)—Call forwarding is an arrangement that allows a local office customer to redirect calls intended for his telephone to another telephone. The customer initiates call forwarding by dialing the call forward activate code followed by the directory number to which calls are to be forwarded. The customer cancels call forwarding by dialing the call forward cancel code.

Call Forwarding—When call forwarding is activated by a station user, calls intended for the station line automatically route to any other station line selected (or to the attendant) within the same

centrex group. The attendant may also activate call forwarding for a station line. (See Attendant Call Forwarding of Stations).

Call Forwarding-Busy Line (CFBL)—Incoming DID or CCSA calls are automatically routed to the attendant or another centrex line within the same centrex group when the called station line is busy, if that station has CFBL.

Call Forwarding—Don't Answer (CFDA)—Incoming DID or CCSA calls are automatically routed to the attendant or another centrex line within the same centrex group when the called station does not answer within a prespecified amount of time if that station has CFDA. (The exact time is an option varying between 11 and 58 seconds for each centrex group.)

Call Forwarding—Don't Answer—All Calls—This feature is similar to CFDA but works with all calls. When used, CFBL, CFDA, CFDA—All Calls, and station hunting must all hunt to the same centrex extension (or to the attendant). Separate hunt numbers are not available. Also, CFBL and station hunting are mutually exclusive; CFDA and CFDA—All Calls are mutually exclusive.

Call Hold—Call hold allows a station user to put any call in progress on hold by flashing the switchhook and then dialing a hold code, thus freeing the same line for the purpose of originating another call, answering an attendant camp-on call, or returning to a previously held call. Only one call per station line may be held at a time. The held call cannot be added to the other call.

Call Pickup—Call pickup is a feature which allows a telephone user to answer other nearby ringing telephones from the user's telephone in the following manner: Assume a person hears a nearby telephone ring. Normally, he would walk over to the ringing phone to answer it. With the call pickup feature, this person can pick up his own phone (or another nearby phone if he chooses) and dial a special access code. This will automatically cause the call to the other ringing phone to be transferred to his phone. Any phone within a specified pickup group is able to exercise this feature.

Call Store (CS)—The equipment unit of the No. 2 ESS that provides temporary memory storage

of information pertaining to call processing, maintenance, and traffic measurement data.

Call Transfer—Attendant—Call transfer—attendant allows the called station user, while connected to an incoming exchange network or CCSA call, to reach (recall) the attendant by flashing the switchhook so that the attendant may transfer the call to another party. (Certain stations with custom calling features may receive dial tone and will have to dial the attendant access code to reach the attendant.

Call Transfer—Individual—A station user can transfer incoming exchange network, or CCSA calls to another party without the assistance of the attendant. This is accomplished by hanging up after utilizing the consultation hold and/or add-on features.

Call Transfer—Individual—All Calls—A station user can transfer any established call to another party without the assistance of the attendant. This is accomplished by hanging up after utilizing the consultation hold—all calls, and/or the Threeway Calling feature.

Call Waiting—Not available.

Central Office (CO)—The switching equipment in a building which provides exchange telephone service for a given geographical area.

Centralized Automatic Message Accounting (CAMA)—AMA recording equipment located in a centrally located office and records charging information for more than one local office.

Centralized Automatic Reporting on Trunks (CAROT)—A centralized test center with a computerized trunk testing system that has the ability to test central office trunks.

Centrex Access Treatment (CAT)

Centrex Call Transfer Service—Centrex call transfer service is a set of features which, in general, is arranged so that a person talking to another person can involve a third person in the call. The third person may converse with either of the original parties depending upon which individual feature or features the parties' telephones are equipped with and the parties choose to use.

Centrex Group—All directory numbers and lines assigned to the same centrex customer that are treated as a group.

Centrex Service—Centrex Service is an automatic switching system service providing PBX capabilities and in addition direct inward dialing and identified outward dialing.

Centrex CO—Centrex-CO is the provision of Centrex service by switching equipment located on the telephone company-owned or leased premises; the station equipment and attendant facilities are located on the premises of the customer.

Centrex-CU (customer)—Centrex-CU is the provision of centrex service by switching equipment, station equipment, and attendant facilities located on the premises of the customer.

Charge Index (CI)—A code in the 3-digit translator that indicates or points to information concerning the type of charging to be done on a particular call.

Code Call—The code call feature allows attendants and station users to dial an access code and a called party code to activate signaling devices (bells, gongs, horns, etc.) with a coded signal corresponding to the called code. The called party can then be connected to the calling party when the called party dials an answering code from any nonrestricted station within the centrex group.

Coded Ringing—Special ringing returned to the coin station to indicate the results of a test sequence.

Code Restriction—Code restriction is a feature that denies selected station lines completion of dialed outgoing exchange network calls to selected office and area codes. The restricted calls are routed to the attendant, to an announcement, or to a tone.

Coin Station Test Line—The coin station test line is a facility which enables a craftsman to test the operation of a coin station from the coin station without aid of central office personnel.

Conference Calling—Not available.

Combined Distributing Frame (CDF)

Common Control Switching Arrangement (CCSA)—CCSA is an assemblage of switching and other facilities used to arrange an automatic switching system to serve as a switching center for one or more switched services networks. In addition, CCSA provides access to a CCSA network for network inward calling to the centrex group, direct outward dialing to the network, and other features similar to access to the exchange network.

Confirmation Tone (CT)

Consultation Hold—Using consultation hold a station user can hold incoming exchange network or CCSA calls by flashing the switchhook and, on the same line, originate a call to another party for private consultation. After consultation or answer, the station user can, by flashing a second time: (1) return to the original call after the second party hangs up, or (2) add this party to the original call (add-on). The station user can also transfer this party to the original call by hanging up after consulting with, or adding on, the second party (call transfer—individual). Consultation hold is included with add-on and call transfer.

Consultation Hold—All Calls—A station user can hold any existing call by flashing the switchhook and, on the same line, originate a call to another party in or outside the centrex group for private consultation. After consultation or answer, the station user can, by flashing a second time: (1) return to the original call after the second party hangs up, or (2) add this party to the original call (add-on). The station user can also transfer this party to the original call by hanging up after consulting with or adding on the second party (call transfer—individual—all calls).

"C" Tone—Alternating high and low tones with interruptions.

Dial Access to Attendant—This feature allows station users, within the switching system or via dial repeating tie trunks, to reach the centrex attendant by dialing a code, usually a single digit 0. The attendant may complete these calls to trunk facilities or station lines.

Dial Line Service Observing—Obtaining, recording, and summarizing observations on calls originating from customer lines in dial central offices.

Dial Tone (DT)

Dial Tone Speed Test (DTST)—The No. 2 ESS DTST measures the grade of dial tone service to actual customer requests rather than system-oriented test calls. This type of DTST can measure dial tone delay to any class of service to any type of line that needs dial tone, and from anywhere in the network. The DTST program for the No. 2 ESS consists of three parts: the Recognition Time Test (RTT), the Connection Time Test (CTT), and the Elapsed Time Test (ETT).

Digit Interpreter Table (DIT)—A part of the centrex number translator that provides initial digit(s) interpretation for calls dialed from a centrex station or an attendant.

Direct Distance Dialing (DDD)

Direct Inward Dialing (DID)—DID is a centrex feature which allows an incoming exchange network call (not foreign exchange or wide area telephone service type calls) to reach a specified station without attendant assistance. The DID feature is flexible and can be provided according to customer needs by restricting to capabilities of stations in the customer group. Flexibility is further increased if the customer group is equipped with call forward and station hunt features.

Direct Outward Dialing (DOD)—DOD allows a centrex station user to gain access to the exchange network without the assistance of the attendant by dialing an access code and receiving a second dial tone. The user may then proceed to dial the desired exchange network number. DOD access is always provided to the local central office, which must be the No. 2 ESS serving this customer group.

Direct Trunk Termination—Not available.

Directed Call Pickup—Directed call pickup is a centrex feature that enables a station user to answer calls to a specified telephone from any other phone in the centrex group by dialing the answer code of the phone to be answered. When a centrex station user is alerted that a designated

Dial Long Line (DLL)—Circuit used to buffer the customer premises equipment from the switching system and provide a steady source of battery and ground.

telephone in the centrex group is ringing, the call may be answered at a nearby telephone by dialing a custom answer code associated with the ringing station. The user may be alerted by various commercially available alerting devices, by a BELLBOY® device, or by merely hearing the ringing station.

Directory Assistance Charging (DAC)—DAC is a plan whereby the customer's station may be charged for calls to directory assistance (information).

DP Bit—Directed call pickup bit in the centrex line 4- or 6-word expansion. This bit must be set to allow a station's calls to be pickup up on a directed basis.

Dynamic Service Protection (DSP)—Dynamic service protection is a feature designed to protect certain lines with priority status from degraded service during extended overloads on the switching system by automatically giving preferential dial tone access to those lines during overload conditions.

EF-1—Extended feature generic program.

Emergency Night Service—If all attendants have their headsets unplugged or consoles out of service, or there is a power failure at the console control cabinet or on the associated data link, emergency night service is automatically engaged by the system. Emergency night service operates the same as ordinary night service.

Far-End Office—A term that applies to the office in which another office's trunks terminate.

Far-End Test Line—Terminating test line in the far-end office which allows the remote test center to test trunks to the far-end.

Flexible Numbering of Stations—Flexible numbering of stations allows station numbers to be assigned to lines at the line of installation in accordance with a customer desired numbering plan.

Foreign Exchange Access—This feature provides access to a distant central office via foreign exchange trunks. Incoming calls to the centrex group which are placed to the listing foreign exchange directory number are answered by the centrex attendant. Outgoing calls are made on a dial access basis.

Foreign Exchange (FX) Service—An exchange service furnished under tariff provisions by means of a circuit connecting a subscriber's main station of PBX system with a central office of an exchange other than that which regularly serves the exchange area in which the subscriber is located.

Foreign Exchange Trunks (FX)—A foreign exchange trunk is a trunk from a centrex customer served by the No. 2 ESS, which appears as a line in a distant central office.

Fully Restricted Station—This feature denied selected station lines the ability to place or receive any but station-to-station calls. Restricted calls are routed to an announcement or to a tone.

Fully Restricted Terminating Station—This feature denies selected station lines the ability to receive any but station-to-station calls. Restricted calls are routed to the appropriate error treatment.

Hundred Call Seconds (CCS)—A measure of telephone traffic load obtained by multiplying the number of calls in an hour by the average holding time per call in seconds and dividing the product by one hundred.

Identified Outward Dialing (IOD)—Identified outward dialing provides either automatic or operator identification of the calling station line number to permit individual station billing on toll calls.

Incoming Call Identification (ICI)—This feature allows an attendant at a switched-loop console position to identify visually the type of service or trunk group associated with a call directed to that position.

Indication of Camp-On—This feature, which is always provided with attendant camp-on (except under special cases such as data stations), provides audible burst of tone to the busy called station to indicate that the incoming call is camped on. Subsequent bursts of tone are applied each time the attendant leaves the waiting connection after

reverifying the caller's desire to wait. This feature can interrupt data set transmission. Stations expecting to use data facilities can be restricted from having this feature.

Inward Restriction—See Fully Restricted Terminating Station.

Intercentrex Calling Group—This feature allows a centrex station in one centrex customer group to dial station in another centrex customer group within the same No. 2 ESS on a 4-digit basis. There is no limitation to the number of centrex groups that can belong to one intercentrex calling group. There is a maximum of seven intercentrex calling groups within one No. 2 ESS.

Interrupted Dial Tone—Regular dial tone with interruptions to indicate the system is waiting for a test digit.

Listed Directory Number (LDN)—Incoming exchange network calls to the centrex attendant are placed via the assigned local listed directory number. The attendant may complete these calls to station lines within the system or to certain trunk facilities. When direct inward dialing is not provided, all incoming exchange network calls must be made on a listed directory number basis.

List Entry—Refers to the contents of a speed calling list associated with a particular abbreviated code.

Local Automatic Message Accounting (LAMA)—The LAMA feature is provided at a local central office and is used to record automatically on paper or magnetic tape (No. 2 ESS uses magnetic tape) certain telephone call information on calls being processed by that office. The recorded information is used for computing charges for customer-dialed billable calls and special studies performed by the operating companies.

Local Office Generic Program (LO-1)

Local Test Desk (LTD)—A desk equipped for performing primary testing. It may also be used to test parts of the toll plant for which the testing facilities of the desk are suitable.

Lockout—Not available.

Main Distributing Frame (MDF)

Manual Line Service—This feature provides for station lines which are arranged to alert the attendant when the station user goes off-hook for service. Dial tone is not provided for these lines, and all originating connections are made by the attendant.

Message Billing Index (MBI)

Message Waiting—Not available.

Miscellaneous Trunk Restrictions—Miscellaneous trunk restriction denies attendants and/or stations and/or incoming tie trunks the ability to use certain access codes to gain access to the various types of trunks or features. This is accomplished by use of the centrex access treatment code.

Most Economical Routing (MER)—The MER feature is an arrangement which permits the centrex station user to dial an access code (set of preassigned digits), followed by a directory number, and have the call automatically routed to its destination in a preselected pattern (which is usually the “most economical” route).

Multifrequency (MF)—Type of signaling arrangement, usually used for TOUCH-TONE® calling.

Multiline Hunt Group (MLGH)—A customer optional feature which allows calls to hunt over a group of customer facilities in order to connect a calling party with an idle facility within the group.

Night Position—Not applicable.

Night Service—Night service is a feature of a centrex or PBX system which allows a designated telephone(s) within the centrex or PBX system to assume some of the attendant functions when the attendant positions are not manned.

NNX—An abbreviation commonly used to represent a 3-digit code.

Nonconsole Attendant—A nonconsole attendant refers to a CALL DIRECTOR® type of telephone, keyset, or a standard telephone set.

Normalized Office Code (NOC)—A 3- (LO-1) or 4- (EF-1) bit number which represents a 3-digit office code. The NOC is required to access the 4-digit translator.

Number Plan Area Code (NPA)

Office Data Administration System (ODA)—This system provides the facility for generating the required office tables and related computer generated documentation of these data tables.

Office Data Administration (ODA) Run—Mechanism by which software may be assembled or changed for a No. 2 ESS. Information from the ESS input forms are inputted into the regional ODA computer; assembled, then sent to the No. 2 ESS.

Originating Register (OR)—A register used to collect and store dial pulse or TOUCH-TONE® digits.

Pad Switching—Pad switching allows for switching transmission pads in or out on calls involving via net loss (VNL) facilities.

Paging, Loudspeaker—Allows attendants and station users to dial customer-owned paging equipment and alert individuals by voice page.

Paging, Radio—Radio paging allows attendants and station users to dial customer-owned radio paging equipment to selectively alert (by tone) or page (by voice) individuals carrying pocket radio receivers. Optional arrangements may be provided whereby the paged party may be connected to the calling party by dialing an answering code from any station within the centrex group.

Panel Call Indicator (PCI) (Now obsolete)

Peripheral Decoder (PD)

Permanent Signal and Partial Dial (PSPD) Treatment—PSPD treatment is used when the customer does not complete dialing when originating calls. If the customer fails to start dialing within a certain interval after receiving dial tone or fails to go on-hook after the other part of a call has disconnected, the customer's line is considered to be in a permanent signal condition. Similarly, after the customer dials one or more digits but fails to dial an appropriate number of digits in the time allotted for completing a call, the customer's line is considered to be in a partial dial connection.

Plain Old Telephone Service (POTS)—Voice communication telephone service provided via switched facilities between two main telephones.

Power Failure Transfer, Attendant—With this feature, calls to the attendant are routed to the night station during a power failure at a customer location where reserve power to the attendant consoles is not provided or, where battery reserve is provided, when the reserve is depleted. Service to and from the station lines is maintained by the power facilities at the central office location.

Power Failure Transfer, Station—Not applicable.

Private Branch Exchange (PBX)—A switching system which provides internal telephone communications between stations located on a customer's premises as well as between these stations and exterior networks.

Private Branch Exchange (PBX) Service—PBX service is a service which provides internal telecommunications among a group of stations and the exchange network. All outgoing toll calls are billed to the LDN and all incoming exchange network calls are completed by the attendant.

Program Store (PS)—The equipment unit of ESS that stores the program and the translation information regarding lines and trunks.

Pseudo Office Codes—Pseudo office codes are 3-digit prefixes which do not correspond to real prefixed (or office codes). Pseudo office codes are used for groups of extensions which are not to be assigned real directory numbers (such as groups of fully restricted terminating extensions or "PBX-CO" extensions). Pseudo office codes are also used for special billing numbers (like WATS billing numbers) where it is undesirable to use real office codes.

Receiver Off-Hook (ROH) Tone —An audible steady signal sent over the customer's line to attract attention when there is a continuing off-hook condition but the station is not in use.

Recent Change (RC)—Mechanism for making changes to information stored in the program store. These changes are accomplished via TTY input messages and are stored in the recent change area

of call store until some later time when the program store can be updated.

Recorded Telephone Dictation—This feature permits access to and control of customer-owned dictating equipment by station users within the centrex group.

Remote Office Test Line (ROTL)—The ROTL frame is a facility that allows interoffice trunk testing automatically from a Centralized Automatic Reporting on Trunks (CAROT) system or manually from a central office with optional ROTL equipment.

Remote Office Test Line (ROTL) Office—A No. 2 ESS office containing equipment necessary to allow trunk testing to a far-end office via the CAROT system.

Reserve Power—This feature provides an alternate, independent source of power to maintain attendant console service for a limited time (normally eight hours) during a power failure at the customer location.

Restriction From Outgoing Calls—Refer to Miscellaneous Trunk Restriction.

Route Index (RI)—A code in the 3-digit translator that indicates what route a call will take, which trunk group, trunk, etc) through a No. 2 ESS office.

Secrecy—Not available.

Service Observing (SO)

Sharp (#)—The # is the twelfth digit on a TOUCH-TONE telephone and is used in the same way that time-out is used.

Simulated Facilities—The number of simultaneous WATS calls, DOD calls and LDN calls, are limited by software counters instead of hardware limitations.

Single-Digit Dialing—Not available.

Soft-Hold—With a standard attendant position, when the ringing of the third party begins, the attendant usually releases to become available for other calls. The call still remains on the loop during ringing and at any time during the ringing period the attendant may reenter the call. When the called party answers and the attendant is in

the released condition the call automatically reconfigures to a 2-party call, freeing the loop.

Speed Calling—Speed calling is an arrangement that allows a customer to call frequently called numbers using fewer digits than normally required.

Station DSS—Not available.

Station Hunting—Station hunting routes a call to a preselected station line when the called station line is busy. This feature can be arranged over a group of lines to provide circular hunting or terminal hunting. In the No. 2 ESS, the number of lines busy tested is limited to 12 for any call.

Station Message Registers—The station user can directly dial other stations within the same centrex group without the assistance of the attendant by dialing two, three, four, or five digits, depending on the customer group dialing plan.

Status Display—Not available.

Supervisory Cabinet (Supervisor's Turret)—Not available.

Switchboard Trunk Interface Using DC Signaling—The Switchboard Trunk Interface Using DC Signaling feature provides for the use of direct current (DC) signaling for coin collect, coin return, and telephone rering control from switchboards to central offices. When an operator is required to collect coins, return coins, or apply ringback to a telephone, signals must be sent from the operator's switchboard to the central office where these functions are performed. The signals from the switchboard to the central office may be either DC or multifrequency (MF). This feature is concerned only with the use of DC signals.

Switched Loop—Switched loop is an attendant feature whereby a call requiring attendant assistance is automatically switched to one of six idle loops appearing as a key and a lamp on an idle position. After extending a call to the desired station, the call will automatically release from the position when it is answered by the called station, and the attendant is released.

Tandem Tie Trunk Dialing—Tandem tie trunk dialing is a method of allowing station users to dial over private tie trunk facilities which may be

switched through several additional switching points, under control of the originating party.

Teletypewriter (TTY)

Terminal Equipment Number (TEN)—A 6-digit number representing the physical location of a line, trunk or service circuit in the switching network. This number includes the network number, concentrator, grid, switch, and level assigned to the terminal.

Test Line Coupler Circuit—A cut-through circuit that provides the test line access to the No. 2 ESS switching network.

Threeway Calling—With this feature a station user can add a third party to any established call for a 3-party conference, without the assistance of the attendant, by flashing the switchhook after utilizing the consultation hold-all calls feature (similar to add-on). A subsequent flash will disconnect the third party.

Thru Dialing—This feature allows the attendant to dial a trunk access code, receive second dial tone, and pass the second dial tone to the SOURCE party (a centrex extension) thereby allowing this SOURCE party to complete dialing.

Tie Trunks—Tie trunks provide one or more 1- or 2-way circuits interconnecting two PBX or centrex systems. The trunks can be either manual or dial repeating. They are dial-selected by station users, or attendants.

Timed Reminders—With this feature, the attendant is automatically alerted, after a prescribed time interval, to a camped-on or an unanswered call completed through the attendant console position, so that the calling party may be given a progress report.

Time-Out—Time-out occurs if no action is taken by the customer for a period of four seconds after dialing one or two digits. It is used to signify the completion of dialing for 1- and 2-digit access codes on dial-type telephones. It is also an alternative to the sharp (#) button on a TOUCH-TONE receiver.

Toll Restriction—See Code Restriction.

Toll Terminal—Not available.

Translation Office Record Generation System (TORG)—A subsystem of the ODA which permits scheduled acquisition of office records by use of a data link; these records may be utilized by network and trunk administrators and by maintenance personnel.

TOUCH-TONE Calling—TOUCH-TONE calling offers greater speed and convenience in dial through the use of pushbuttons instead of rotary dials, to transmit digits via audible tones to the switching equipment. Some or all of the stations may be equipped with TOUCH-TONE sets. The 1B- and 2B-type console positions are always equipped for TOUCH-TONE calling.

Traffic Service Position System (TSPS)—An electronic stored program control system in a central location that provides operator and charging functions for associated offices.

Transient Call Record (TCR)—Consists of eight call store words and controls the progress of the call from origination until an answer signal has been received and the connection is placed in a talking state. It also controls the action taken to disconnect a call.

Transient Call Register (TCR)—A call store register designated for storage of information concerning calls in progress.

Trunk Answer From Any Station (TAS)—When the attendant positions are in night service, calls normally directed to the attendant activate a common alerting signal on the customer's premises. These calls may then be answered by any nonrestricted station in the centrex system which dials the special "Trunk Answer" code.

Trunk Group Busy Lamps (TGB)—Trunk group busy lamps provide the attendant at a switch-loop console position with a visual indication when all trunks in a given trunk group are busy.

Simulated trunk groups may also be associated with TGB lamps.

Two-Way Splitting—The attendant can consult privately with either party on a call connected to the attendant's position.

Universal Emergency Service Number 911—Nine-one-one (911) is the 3-digit telephone number that has been designated for public use throughout the United States in reporting an emergency and requesting emergency assistance. It is intended as a nationwide telephone number giving the public access to an emergency vehicles directly or transfers or relays calls to participating agencies for dispatch. The 911 bureau frequently is located within a police department although some communities locate the center in a fire department or in an independent agency which serves as a communication center.

WATS Access—WATS access provides the customer with the capability to access the outward WATS service for outgoing calls. In the No. 2 ESS, outward WATS service is provided for by a combination of simulated facility groups and screening and charging by translations.

Inward WATS Service—Not available.

Outward WATS Service—Is a direct distance dialing service whereby a customer has the ability to make calls to specified bands with a special tariff based on unlimited or limited usage.

Zone 16 Service—Zone 16 service is a subscriber long route design plan that permits extending the conductor loop resistance of the subscriber lines to 1600 ohms as described in the subscriber long route design plan (refer to Section 902-215-120). In the No. 2 ESS, this service is provided by increasing the supervisory range of the ringing circuit and the customer dial pulse receiver, and a redesign of the station ringer test circuit, the customer dial pulse receiver test circuit, and the ring control test circuit.