

FEATURE DOCUMENT
DIAL-TONE-FIRST COIN
NO. 3 ELECTRONIC SWITCHING SYSTEM

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NOTICE

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INTRODUCTION

1. GENERAL INFORMATION

1.01 The Dial-Tone-First (DTF) Coin feature provides dial tone immediately after going off-hook. This permits customers to dial certain calls without requiring an initial coin deposit. These include operator assisted calls (0, 0+), information calls (411), emergency service bureau calls (ie, 911 service), and any other calls so designated by the telephone company. This class of calls is usually allowed to complete without a deposit while other calls are blocked until a deposit is made. If the customer wishes to make a local sent-paid type call, the deposit is made after dial tone is provided. The No. 3 Electronic Switching System (ESS) will complete these calls only if the deposit is made. If an insufficient deposit is detected, the No. 3 ESS connects the customer to a recorded announcement which instructs the customer to deposit a coin before dialing.

1.02 This document is being revised to include 3E3 generic program information and other information not previously included. Since this is a general reissue, no revision arrows will be used.

1.03 The Dial-Tone-First Coin feature requires both software and hardware. The software required includes several subprograms of the No. 3 ESS program. The hardware required consists of coin control circuits (SD-3H411, FB423) and dial-tone-first coin line circuits (SD-3H205, FB428) in the central office. Also, modification of the coin stations is necessary.

1.04 The Dial-Tone-First Coin feature is available with all versions of the No. 3 ESS program.

2. DEFINITION

2.01 The DTF Coin feature enables customers to dial certain coin telephone calls (ie, "0", 411, 911, etc) without requiring an initial coin deposit. Dial tone is provided immediately after the customer goes off-hook. Local and toll calls may be made from a DTF coin telephone station set. Dial-tone-first coin service is available with the following features:

- Local untimed charging
- Local overtime charging

- Various operator handled calls
- Stuck coin administration
- Coin station testing.

2.02 Local untimed charging provides an unlimited talking period after receiving an initial deposit.

2.03 Local overtime charging provides for an overtime charge (usually a nickel) on local calls after an initial talk period has elapsed.

2.04 Operator handled calls are those that may be connected through a cord switchboard (3CL) or a Traffic Service Position System (TSPS) for completion through the toll network. In some cases, sent-paid coin toll calls are handled by Automated Coin Toll Service (ACTS) equipment at TSPS rather than an operator.

2.05 The stuck coin administration feature identifies lines with stuck coin indications.

2.06 Operation of a coin telephone station and its associated circuits can be manually tested from available test facilities.

DESCRIPTION

3. USER OPERATION

3.01 The DTF Coin feature enables customers to dial certain operator assisted calls and free calls (eg, emergency service bureau calls) without making an initial coin deposit. Operator assisted calls (dial 0 and 0+) include person-to-person calls, collect calls, credit card calls, and toll information calls. Station-to-station toll calls (1+ or no prefix) can also be placed without an initial deposit and an operator will request and monitor the deposit for the initial talk period before allowing the call to complete. Three-digit service code calls such as directory assistance (411) or universal emergency service bureau (911) are allowed without an initial deposit, as are any other calls so designated by the telephone company.

3.02 A dial-tone-first coin station receives dial tone immediately after a customer goes off-hook. When dialing a number that requires no initial deposit, the number can be dialed immediately after obtaining dial tone. When dialing a number that requires an initial coin deposit, the

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deposit must be made before dialing is completed. Otherwise, when the initial deposit present test is made and no coin is present, the customer receives a recording instructing the customer to reinitiate the call with the proper deposit.

3.03 The DTF Coin feature does provide the advantage of minimizing customer dissatisfaction with inoperative station sets. When using a dial-tone-first coin station and dial tone is present, a customer can be reasonably certain that the coin station is in working order before any money is committed. Customers are also more apt to report coin station malfunctions when they are not risking their own money. Inconvenience and irritation to customers caused by coin station malfunctions are minimized.

Local Untimed Charging

3.04 A local coin call is a call within the coin customer's local calling area. One or more coins (typically 10 to 25 cents, depending on the local initial rate) must be deposited before the call is allowed to be completed. In DTF, the coin(s) must be deposited after dial tone is returned and before dialing is completed. There is usually no time limit on a local call. If the called customer does not answer, the deposit is returned upon disconnect.

Local Overtime Charging

3.05 A local coin call with overtime is divided into two distinct periods: initial and overtime. Both periods are defined by the operating company and each may be from 1 to 7 minutes in 1-minute increments. The initial period begins when the called party answers. Thirty seconds before the end of the initial period, the initial deposit is automatically collected by the No. 3 ESS. This collection is an indication to the coin customer that the period is near completion and that an overtime deposit is required in order to continue the call.

3.06 At the expiration of the initial period, the No. 3 ESS tests the coin station for the coin deposit. If the deposit is present, the call is marked in overtime and is allowed to continue for the overtime period. If the coin is not present, the call is routed to a coin overtime announcement. If the overtime deposit is not present at the end of 30 seconds, the connection is torn down. In SO-2 offices, the caller is then given overflow tone.

In 3E3 offices, the call will be disconnected and dial tone returned.

Toll Charging

3.07 A call from a coin telephone to a point outside the local calling area is a toll call. The several methods of toll charging available interact with the customer in different ways as described in the following paragraph.

Operator Assisted Calls

3.08 All customers have access to an assistance operator by dialing "0". No initial deposit is required. The operator (either 3CL or TSPS) will place the call, request required coin deposits, and supervise the call for overtime or disconnect. If TSPS is available, the customer may dial the called number with a "1" prefix (sent-paid) or "0" prefix (nonsent-paid). Nonsent-paid calls include credit card, bill to third number, and collect calls.

Automated Coin Toll Service (ACTS)

3.09 Sent-paid toll calls completed via TSPS may be handled by ACTS equipment at the TSPS rather than by an operator. With this option, announcements are provided to the customer for both the initial deposit and overtime deposits. The ACTS equipment monitors for the deposits and if the required deposit is not made, a TSPS operator is connected.

4. SYSTEM OPERATION

4.01 A dial-tone-first coin line (which must always be loop start) is activated by the customer going off-hook. The tip and ring closure is detected by an associated line ferrod. Scan point number (SPN) and line translations identify the line by its originating major class as a dial-tone-first coin line. A customer dial pulse receiver (CDPR) is connected and dial tone is returned.

4.02 After the prefix digit and/or first three digits have been dialed, the 3-digit translator determines route index and charge index information. If no deposit is required, the call is completed immediately after the last digit has been dialed. Dial 0, 0+, and 1+ calls are routed to a TSPS or 3CL position operator who handles further routing and any charges which may apply (covered in paragraph 4.12). Calls to directory assistance, the

emergency service bureau (911 service is described in Section 233-190-203), or any other calls so designated in translations by the telephone company are handled similar to a local untimed call. Any initial deposit which may have been made is automatically returned upon completion to a free number. If this is a charge call, a test is made for the presence of the initial rate coin deposit as soon as the last digit has been dialed. The tip is grounded if the proper deposit is present. This is detected and reported by the CDPB and the No. 3 ESS allows the call to be completed. An insufficient deposit causes the customer to be connected to a recorded announcement which requests the customer to reinitiate the call and deposit the required initial rate. Upon answer, a 2-second charge delay occurs. If disconnect occurs during the charge delay interval, the initial rate is returned.

Local Coin Call

4.03 A local coin call is a call within the coin subscriber's local calling area which can be either timed or untimed. No time limit on the call exists when overtime charging is not required. The charge index in translations indicates if timing is required for the call.

Local Untimed Charging

4.04 A local untimed call proceeds as a normal call up to answer detection. At answer recognition, a 2-second charge delay interval is timed before the call is considered a chargeable call. If either subscriber disconnects before the end of the charge delay period, the coin deposit is returned and the call is removed from the system. Once the charge delay period is over and the calling and called subscribers are in the talking state, no further action is needed until recognition of a disconnect.

4.05 Upon disconnect, the talk path is removed and the coin station is connected to a coin control circuit (SD-3H411, FB423). The coin control circuit applies collect or return voltage (± 130 volts, depending on an office option) and then for 900 milliseconds (ms), the ferrod associated with the coin control circuit is scanned for coin presence. A successful coin drop will be indicated by first seeing the coin present followed by a coin not present on a subsequent scan. After the completion of the coin disposal cycle, a status check is made.

The presence of a coin indicates a failure to collect or return and the required voltage is applied again. If the coin is still present, a stuck coin printout is made on the Repair Service Bureau (RSB) teletypewriter (TTY):

```
tt REPT LINE a bcde TN f g TRBL STUCK
COIN
```

The tt designates the time past the hour in which the alarm occurred, a bcde is the office equipment number of the line, and f g is the telephone number of the line.

4.06 A maintenance TTY printout is also made:

```
tt REPT CKT TRBL SCC b cd
```

The b, c, and d are the contents of the error analysis input buffer. The c (bits 12-0) is the coin line terminal equipment number and d (bits 12-0) is the coin control circuit scan point number.

4.07 For calls that required no deposit, return voltage is always applied even though a coin may never have been present and no action occurs at the coin station.

4.08 When a call is abandoned during dial tone, dialing, or ringing, a coin return action is initiated whether a coin had been deposited or not. If no coin had been deposited, no action occurs in the coin station when the return voltage is applied.

Local Overtime Charging

4.09 This type of call is processed the same as local untimed charging until the end of the charge delay interval. After the charge delay, the No. 3 ESS initiates a timing entry in the terminal memory record (TMR) for an initial interval determined by the operating company. The initial interval is limited by local operating company option to 1 to 7 minutes in 1-minute increments. Thirty seconds before the timing interval ends, collect voltage is applied from a coin control circuit to collect the initial deposit (no check is made to see if the collect action was successful or not). This is done to alert the customer that an additional deposit is required if uninterrupted conversation is to continue. After the coin collect, the system continues timing the interval. This is to permit an additional deposit to be made or for the parties

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to terminate their conversation. Should the call terminate during the last 30-second interval and an overtime deposit had been made, the overtime deposit is returned before the circuits are idled.

4.10 If the call remains in the talking state and the end of the timing interval is reached, a test is made for the overtime deposit. Before the coin presence check can be made, the coin totalizer in the coin station must be restored to its home position by reversing the polarity of the line voltage from -48 volts to +48 volts for 600 ms. This is done by the dial-tone-first coin line circuit. If the coin test shows that a coin is present, timing starts for the overtime period. This timing is also determined by the operating company and need not be the same length as the initial rate timing period.

4.11 If no coin was present, both parties are connected to an optional coin overtime announcement. The coin customer is given 30 additional seconds to deposit a coin for the overtime period. If the coin is not present after this 30-second period, the connection is torn down and the line is disconnected. Refer to Section 233-190-151 for details of local coin overtime.

Operator Handled Calls

4.12 Provision for completing toll calls may be made on a manual basis by providing a trunk group to a 3CL toll switchboard. Routing in the No. 3 ESS translations is arranged so a coin customer dialing "0" is connected to the switchboard via this trunk group. The operator completes the call and performs the timing and billing function on a manual basis. Local assistance, person-to-person, collect calls, bill to third party calls, and credit card calls can also be completed by a 3CL operator.

4.13 When TSPS is available, operator services involving toll calls may be provided by this means. A TSPS operator can handle "0-", "0+", and "1+" calls from coin stations. Alternatively, ACTS equipment at TSPS can handle "1+" (sent-paid) calls. When a customer places a toll call from a coin station, the instructions on the telephone direct that the called number (area code, if any, and 7-digit telephone number) be dialed. The No. 3 ESS will connect the call to a TSPS trunk and forward the calling and called number to the TSPS. When the dial-tone-first station is connected to the operator trunk, the TOUCH-TONE® dial is disabled. This prevents TOUCH-TONE end-to-end

signaling unless multiwink signaling, which is covered in paragraph 4.16, or a 1D/2D telephone set is provided. On a station-to-station non-ACTS call, the TSPS connects an idle position and gives the initial charge and time period for the call on a numerical display. The TSPS operator requests the deposit required for the initial talk period, monitors the coin tone signals for correct deposit, and releases the position from the call. After the called party answers, the TSPS times the call and at the end of the initial charge period signals the ESS to collect the initial deposit and routes the call to an idle TSPS position. (This need not be the same operator as before.) The operator is connected to the call and instructs the customer to signal when finished. The position is released, and the TSPS continues to time the call automatically. When the customer flashes the switchhook at the end of a call, an idle TSPS position is connected. (If the calling customer is on-hook, the operator rings the station.) The operator requests a coin deposit in the amount displayed at the console, monitors the coin tone signals for the correct deposit, signals the ESS to collect the deposit, and releases the position. If the operator fails to collect the deposit, it is not collected by the ESS after the customer goes on-hook (only a call via a cord switchboard is automatically collected by the ESS). Therefore, any collect or return action must be accomplished by the operator before the operator releases the position. After a coin presence test is made, the station is idled and ready for another call. If a coin is present, a stuck coin action will occur (described in paragraph 4.18).

4.14 If ACTS is provided at TSPS, calls are handled as previously described, except that deposit request and monitoring are accomplished by a TSPS subsystem rather than an operator. Customers failing to deposit, or making a partial deposit, are provided prompting announcements and ultimately connected to an operator if a correct deposit is not forthcoming. With ACTS, customers depositing a coin of too large a denomination are automatically given credit toward overtime.

4.15 Person-to-person, collect calls, bill to third party calls, and credit card calls are handled by an operator who remains on the call as necessary to supervise the progress of the call and enter needed billing data.

4.16 To provide proper signaling when the dial-tone-first station is connected to the

operator trunk, multiwink signaling can be used. Multiple wink coin control uses multiple on-hook signals of 70 to 130 milliseconds to indicate when an operator is attached or released and to provide coin collect, coin return, and ringback signals. The operator-attached signal is used to disable and the operator-released signal is used to restore the TOUCH-TONE dial in the coin station.

4.17 A feature flow diagram giving the functional operation of an originating coin call in No. 3 ESS is shown in Figure 1.

Stuck Coin Administration

4.18 After the collect or return action at the end of a call, a coin presence check is made. If a coin is still present, a second collect or return action is initiated and the coin present check is made again. If the second collect or return action was successful, no further action occurs; but, if the coin is still present, a stuck coin printout is made on the RSB TTY, call status information is loaded into the error analysis buffer (this condition may indicate a bad coin control circuit), and the line is idled and given permanent signal treatment.

Testing

4.19 A limited amount of testing of coin stations can be performed in the No. 3 ESS using the trunk and line test panel. Tests such as line leakage, continuity, coin collect and return, and ringing may be performed. More complete testing of coin stations is performed at the No. 14 or No. 16 local test desk.

4.20 Manual testing of coin stations for operate and nonoperate current requirements of the coin relay must be performed from a No. 14 or No. 16 local test desk.

CHARACTERISTICS

5. FEATURE ASSIGNMENT

5.01 Dial-tone-first coin service is provided on a per-line basis to business and nonbusiness areas where public telephone service is desired or deemed necessary.

6. LIMITATIONS

Operational

6.01 Coin lines can work out to a maximum loop resistance of 1300 ohms. This assumes a minimum central office voltage of 47 volts and a maximum of 50-ohm central office resistance. To extend beyond this maximum loop resistance, dial long lines equipment must be used.

6.02 When a dial-tone-first coin station is connected to an operator trunk, the line voltage is changed from -48 volts to +48 volts so that the coin station can properly transmit coin deposit signals. This also prevents TOUCH-TONE end-to-end signaling unless multiwink signaling (see paragraph 4.16) or a 1D/2D coin telephone is provided.

6.03 Coin station test line and coin zone calling are not presently provided in the No. 3 ESS.

6.04 In offices with the SO-2 generic program, the local coin overtime announcement is connected over one of the two no-test circuits. The maximum number of coin lines in a local coin overtime area should be limited to 96 per office. Since with the 3E3 generic program the announcement is connected over a 3-port conference circuit, this limitation does not apply.

Assignment

6.05 The coin control circuit service group must be assigned to trunk group number 71. Operator trunk groups must be assigned trunk group numbers 129 through 225.

6.06 Coin service directory numbers should, if possible, be assigned in the 9000 series (eg, NNX-9XXX). This enables toll operators to identify coin stations as such in the event of a collect toll call being attempted to the coin station.

7. INTERACTIONS

7.01 With SO-2, Issue 4A and later, the TSPS operator coin control functions have been removed from the no-test verticals and now use direct switching through the network. With 3E3 and later generics, the local coin overtime announcement, coin presence test, and coin collect functions will no longer be performed through the

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no-test verticals. The resulting removal of coin call processing from the no-test verticals will improve the grade of service for coin services. Refer to Sections 233-190-028, No-Test Vertical Access, and 233-190-151, Local Coin Overtime, for details.

8. RESTRICTION CAPABILITY

8.01 The use of coin telephone service can be restricted by the operating telephone company to those places where public telephone service is desired or otherwise deemed necessary. These lines can be denied termination by the appropriate TTY input message. Only those coin lines and stations which have been modified for DTF service can be used to provide DTF service.

INCORPORATION INTO SYSTEM

9. INSTALLATION/ADDITION/DELETION

9.01 The software part of this feature is available with all versions of the No. 3 ESS program. The translation changes required to retrofit dial-tone-first coin service are made by using the RC messages described in Part 12.

9.02 Hardware requirements for retrofitting dial-tone-first coin service are the same as those described in Part 10.

9.03 The step-by-step sequence for retrofitting dial-tone-first in a No. 3 ESS is as follows:

- (1) Install the necessary number of new or additional SD-3H411, FB423 coin control circuits.
- (2) Install the required number of SD-3H205, FB428 dial-tone-first coin line circuits.
- (3) Provide any additional service circuits required (eg, CDPRs) because of additional holding time involved with dial-tone-first.
- (4) Add one 7A or 13A announcement machine for the announcement required for dial-tone-first (eg, "No Coin Deposit").
- (5) Input all software data required to activate the hardware installed or changed up to this point. This will be the items covered in Parts 11 and 12. Do not change any line translations until Step 7 of this procedure.

(6) Convert station equipment from coin first to dial-tone-first. This must be done concurrently with the next step.

(7) Convert the coin line ferroids from ground start to loop start and input the line translation changes required to change the ground start bit from 1 to 0 and the major class from 24 to 25 plus any other line data.

9.04 Deletion of this feature is accomplished by using the proper RC messages to remove the coin lines and by removal of any unneeded circuits.

10. HARDWARE REQUIREMENTS

10.01 To initially equip a No. 3 ESS office for dial-tone-first coin telephone service, the following items are required.

- One dial-tone-first coin line circuit (SD-3H205, FB428) pack must be installed per two coin lines. Each dial-tone-first coin line circuit unit consists of 8 circuit packs and can handle up to 16 coin lines. These units are normally mounted on a miscellaneous frame (J3H100-1). A +48V converter (SD-82255, 184A power unit) is used to supply these circuits with the +48V supervision voltage required for coin lines that are connected to operator trunks. The converter can supply current to a maximum of 32 coin lines simultaneously. While more than 32 coin lines can be equipped in an office and served by a single converter, a maximum of 32 operator trunks can be equipped for a single converter. If more than this number of trunks is required, another +48V converter must be installed.
- If no coin lines were previously installed, coin control circuits (SD-3H411, FB423) must be installed (up to a maximum of four) in the control frame (J3H001C-1). These circuits have one OEN appearance each and comprise service circuit trunk group 071 and have a circuit code of 15.
- All ground start coin line ferroids must be converted from ground start to loop start. This must be coordinated with coin station modifications and line translation changes.

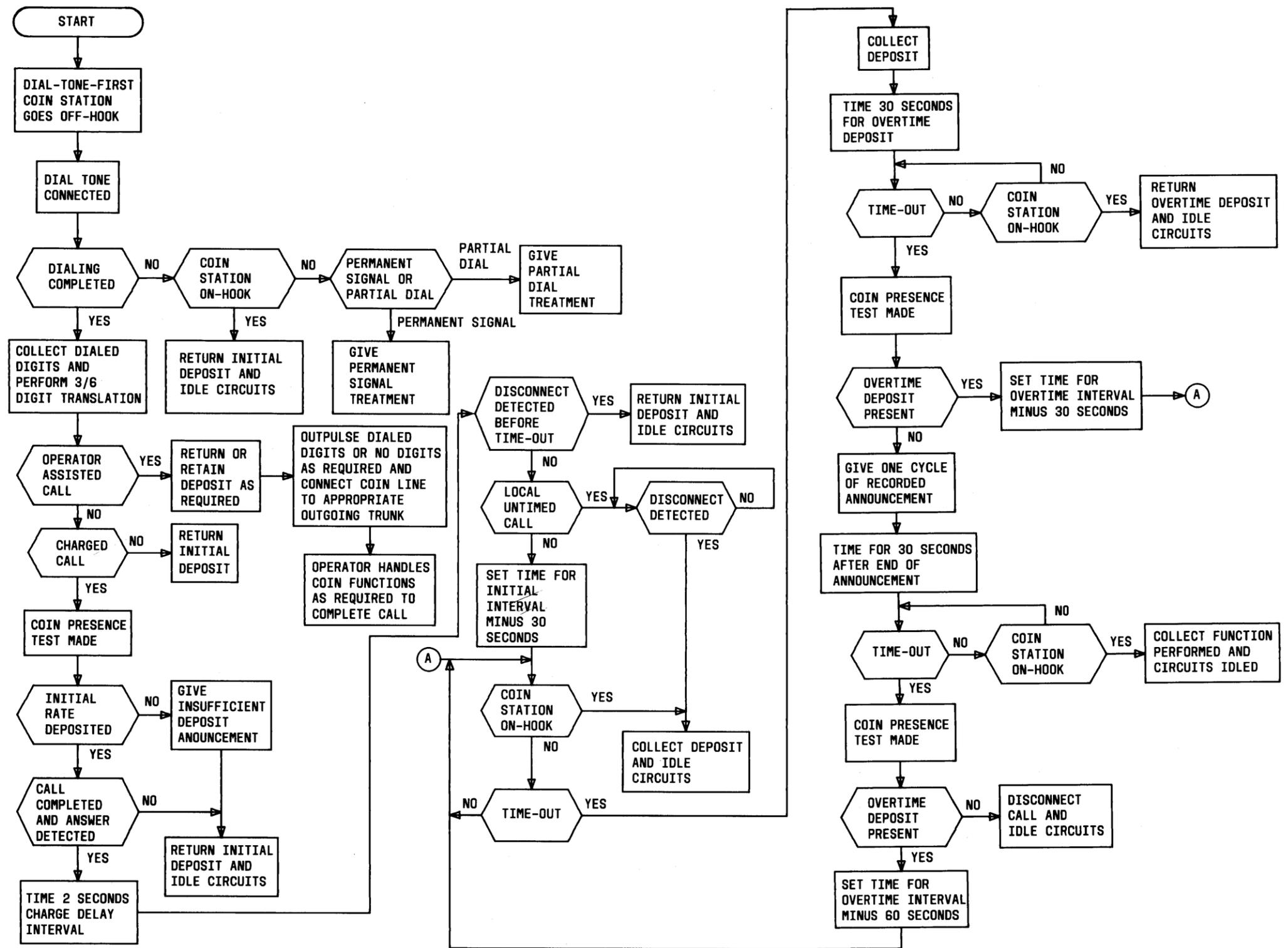


Fig. 1—Dial-Tone-First Feature Flow Diagram

- Modification of the coin stations should be performed as described in Section 506-410-400.
- One 7A or 13A announcement machine is required for the announcement needed for dial-tone-first coin service (refer to Section 233-190-023 for details).
- With the 3E3 generic program, a 3-port conference circuit is used to connect the local coin overtime announcement. Traffic engineering procedures for 3-port circuits should take into account an average announcement use of 0.5 per coin line and heavy announcement use of 1.5 per coin line per busy hour. An estimated 15 seconds holding time per announcement is expected.

10.02 Refer to the Network Switching Practices, Section 233-060-ZZZ series, for the type, order code, schematic drawing, and functional use of all circuits and trunks that may be used in a No. 3 ESS.

11. SOFTWARE REQUIREMENTS

11.01 System program requirements include parts of four common programs; three-digit translations (XSL3DG) program, PR-3H181, local charging-coin and message register (LCLCHG) program, PR-3H161, completion of incoming and intraoffice calls (TERM) program, PR-3H175, and operator calls (OPER) program, PR-3H164, and all of the coin cleanup routine (COIN) program, PR-3H150.

11.02 Software requirements for this feature are dependent on the number of coin lines and their associated service circuits. A coin triplet address table entry must be created for each distributor triplet used by the dial-tone-first coin (DTFC) line circuits. Entries in this table are allocated via the 'DIST:CNTRIP' message. A DTFC line circuit requires one distributor point; therefore, a distributor triplet per three circuits is normally allocated. Because a DTFC line circuit pack (FB428) contains two circuits instead of three, often only two of three points in a triplet are used. If this is the case, a coin triplet address table entry per two DTFC line circuits (one FB428 circuit pack) is required.

11.03 The following translation words are required for this feature:

- For the SO-2 generic program, each coin line requires in translation store two words in the line subtranslator and two words in the terminating translator. For the 3E3 generic program, each coin line requires in translation store two words in the line subtranslator and three words in the terminating translator. For every 12 coin lines in either generic, one word of temporary store is needed for coin line status bits.
- Two words are required in the line subtranslator expansion entry for each dial-tone-first coin line circuit (SD-3H205).
- One word per three coin lines is required in the Coin Triplet Address Table.
- Four words per service circuit group for trunk and service circuit group data.
- One and a half words per circuit for member list data.
- Five words (minimum) of temporary store per service circuit group for a selection status block are required with one bit assigned per circuit for status.

11.04 Processor real-time data required by this feature will be supplied when the data becomes available.

11.05 Specific software requirements are provided in the applicable section, 233-060-ZZZ series, Network Switching Practices. Also refer to the PA-3H3XX for specific word layout details.

12. DATA ASSIGNMENTS AND RECORDS

12.01 Software for DTF service is provided in any current issue of the system program. The following Translation Input Forms must be completed when implementing this feature and submitted to the WEC Co Regional Center using normal schedule procedures for the initial office data administration (ODA) run. Refer to Translation Guide, TG-3, for details concerning the completion of these forms.

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FORMS	TITLE		
3100	Telephone Number Table	RC:CKT/	Used to associate SPNs, TENs and member numbers with particular circuits of a service circuit group.
3107	Supplementary Information Table	RC:DIG/	Defines the code index for a 3- or 6-digit translation or a default code index for an area translator.
3201	Trunk Assignment Table		
3202	Trunk Group Table	RC:GRP/	Used to define the trunk or service circuit features for a group.
3204	Trunk Feature Table		
3300	Three- & Six-Digit Translations	RC:LCC/	Used to associate an originating major class, a terminating major class, and a screening class with a line class code and rate area.
3301	Rate and Route Table		
3302	Charge Table	RC:LINE/	Used to add, change, or remove individual LINE information.
3303	Route Index Expansion Table		
3304	Code Index Table	RC:OFFICE/	Defines the office options and the office identification used to assign, collect, and return voltages for coin stations and to allow or disallow 0+ calls.
3306	Line Class Code Table		
3500	General Information Table.		

12.02 Figures 2 and 3 show the interrelation of translation data involved in processing a call dialed from a DTF station. As an aid to understanding the translation process, the flow is presented from the point of view of the translation forms rather than the actual structure of translations in program store. For referencing actual word layouts, refer to the applicable issue of PA-3H3XX, No. 3 ESS Office Data Layout Specifications.

12.03 The following RC messages are used to add to or change translations required for the Dial-Tone-First feature. Refer to Input Message Manual, IM-3H300, for details of these messages and their associated keywords.

RC:RTI/	Adds, changes, or deletes a route index expansion entry and its alternate route index expansion entry.
RC:SCR/	Used to add, change, or remove a screening class expansion entry.
DIST:CNTRIP	This message generates a coin triplet table and an associated coin triplet status table for nnnn distributor triplets. Each triplet serves three dial-tone-first coin line circuits.
DIST:GRP	This message generates a group table for a specified group such as ggg = 71 for coin control circuits, 77 for local overtime coin and/or stuck coin announcement, or 78 for the dial-tone-first coin announcement.

RC MESSAGE	EXPLANATION OF MESSAGE
RC:CDI/	Used to define, change, or remove a code index expansion entry.
RC:CHI/	Used to define a new charge index, to change an existing charge index, or to delete an existing charge index. Used to define charge status for calls which require no initial deposit.

13. TESTING

13.01 All trunks and service circuits associated with coin service can be tested at the No. 3 ESS maintenance center using the maintenance TTY and trunk and line test panel (TLTP).

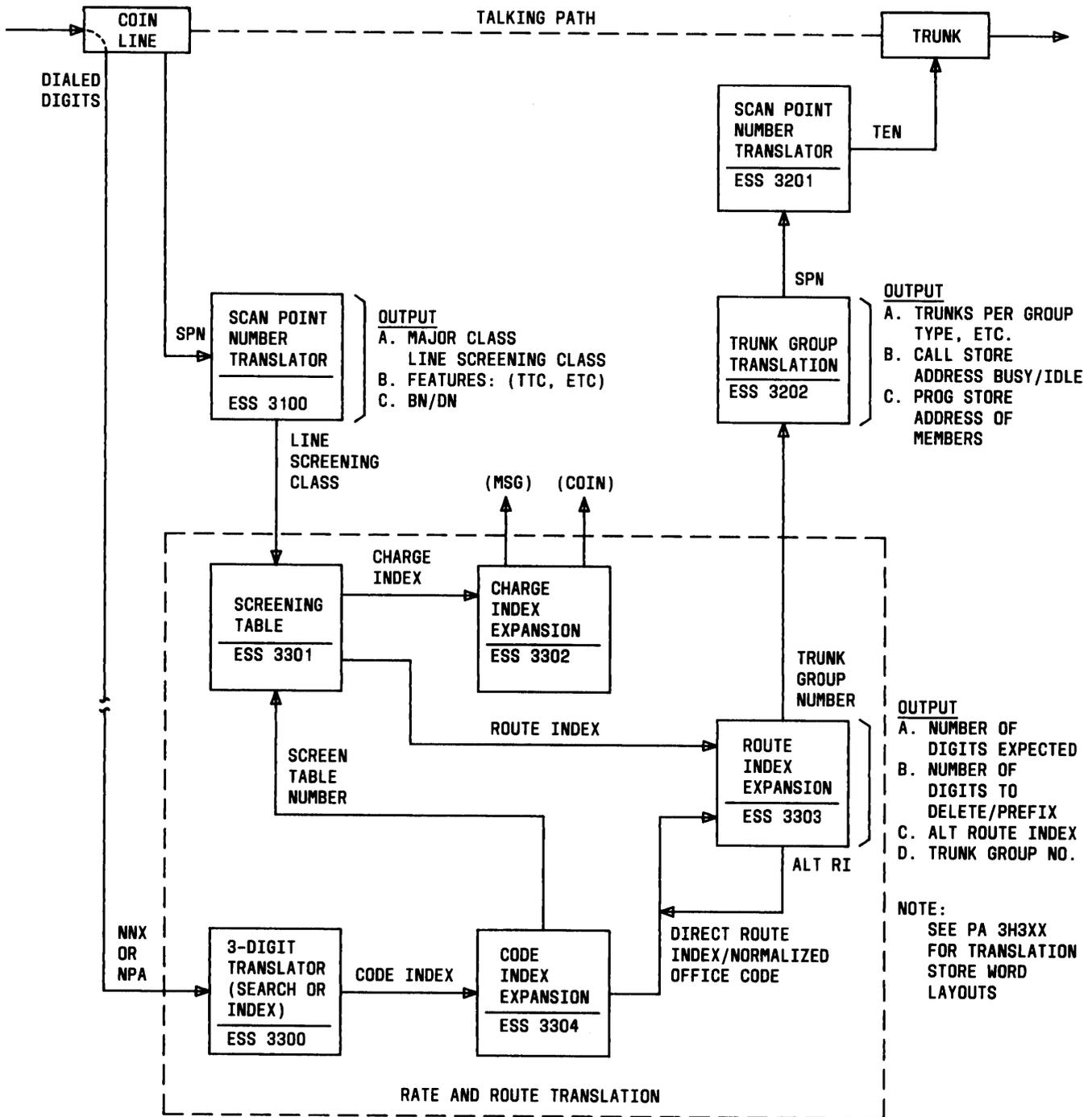


Fig. 3—Translation of Outgoing Coin Call

13.02 A limited amount of testing of coin stations and lines can be performed in the No. 3 ESS using the trunk and line test panel. Tests such as line leakage, continuity, coin collect and return, and ringing may be performed.

13.03 Testing of coin lines may also be performed at the No. 14 or No. 16 local test desk such as coin collect and return, ringing test, coin magnet test, and station ground test.

13.04 Manual testing of coin stations for operate and nonoperate current requirements of the coin relay must be performed from a No. 14 or No. 16 local test desk.

13.05 Tests to verify translation information in the No. 3 ESS consist of various verify and office record form messages at the TTY. Refer to the IM-3H300 and OM-3H300 for information pertaining to the variable fields of the messages and the interpretation for the response to these messages.

13.06 The following verification messages are used to verify the proper assignment of this feature for the SO-2 generic program:

- **VER:GRP** is used to verify assignment of group and member data.
- **VER:LCC** is used to verify the line class code assignments.
- **VER:LINE** is used to verify line information.

- **VER:OE** is used to verify customer line originating translations.
- **VER:OFFICE** is used to verify the office options and the terminal identification.
- **VER:SCR** is used to verify the screening table entries.

13.07 The following verification messages are used to verify the proper assignment of this feature for the 3E3 generic program:

- **OP:OFR** with keyword **GRP** is used to verify assignment of the group and member data.

- **OP:OFR** with keyword **LCC** is used to verify the line class code assignments.

- **VER:LINE** and/or **OP:OFR** with keyword **TN** is used to verify line information.

- **VER:OE** and/or **OP:OFR** with keyword **OE** is used to verify customer line originating translations.

- **OP:OFR** with keyword **FORM** and specifying form 3500-1 is used to verify the office options and the terminal identification.

- **OP:OFR** with keyword **SCR** is used to verify the screening table entries.

- **OP:OFR** with keyword **DIG** is used to verify 3- and 6-digit translations.

- **OP:OFR** with keyword **CHI** is used to verify charge table entries.

- **OP:OFR** with keyword **RTI** is used to verify route index table entries.

- **OP:OFR** with keyword **CDI** is used to verify code index table entries.

- **OP:OFR** with keyword **THDIG** is used to verify office code table entries.

13.08 A general method to verify that a coin station is properly installed is described below:

- Verify the line translation information using a RC verify message and compare the TTY output to office records.

- Test the coin station from the TLTP for correct coin collect and return functions. In addition, check coin relay operate current and call thru functions via a No. 14 or No. 16 local test desk.

- All features of DTF coin service not directly related to coin stations may be tested by verification of all coin related trunk and service circuit groups using the messages referred to in paragraph 13.05 of this section. Compare the TTY response with office records to insure the proper data has been inputted to translations by recent change

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messages and/or ODA. Make overall trunk test on coin related trunks and service circuits using the TLTP and TTY.

14. OTHER PLANNING TOPICS

14.01 Those offices that are updated to SO-2, Issue 4A or later, should plan for circuit changes required by the deloading of the no-test verticals as described in Part 7 of this section.

ADMINISTRATION

15. MEASUREMENTS

15.01 Peg count, usage, overflow, and maintenance busy traffic measurements are available for the lines, trunks, and service circuits associated with the DTF Coin feature. The details of these measurements can be found in Section 233-152-135, Traffic and Plant Measurements, No. 3 ESS.

16. CHARGING

16.01 The various coin charging arrangements are specified for a No. 3 ESS office on ESS form 3302. Initial deposit and overtime deposit amounts and initial talk period and overtime period time are entered on this form. Refer to the TG-3 for details.

16.02 Toll charging is handled by means external to the No. 3 ESS by various methods depending on the system of connecting the calls to the toll network. Either a 3CL or TSPS supervises the coin collect or return functions and the amount of deposit. Manual billing records must be prepared or automatic message accounting entries made (TSPS) in the case of a nonsent-paid call.

SUPPLEMENTARY INFORMATION

17. GLOSSARY

17.01 The following list identifies terms used in this document.

- Automatic Message Accounting (AMA)—The overall facility for automatically recording on paper tapes or magnetic tapes the numbers of the calling and called customers and other information required for automatically computing charges for customer-dialed calls.

- Automatic Coin Telephone Service (ACTS)—A subsystem of TSPS that uses announcements to notify the coin customer of the proper initial and overtime deposits and also monitors these deposits for the proper amounts. An operator is not called in unless a problem occurs.

- Customer Dial Pulse Receiver (CDPR)

- Coin Clean Up Routine (COIN) Program—The No. 3 ESS program that collects or returns coins from coin stations and idles these lines after coin disposal.

- Initial Period—The initial unit of time for which a call is charged a predetermined amount.

- Loop Start—A line which requires a short on the tip and ring conductors to saturate the line ferrod as a request for dial tone.

- Local Charging—Coin and Message Register (LCLCHG) Program—The No. 3 ESS program that controls timing and charging for coin calls.

- Office Equipment Number (OEN)

- Operator Calls (OPER) Program—The No. 3 ESS program that is used to access an operator and supervise the operator trunk for control signals required to process the call.

- Overtime Period—The talking period after the initial period requiring an additional deposit.

- Three-Digit Translation (XSL3DIG) Program—The No. 3 ESS program that translates a prefix digit and/or first three digits into the routing and charging information required to process a call origination from a No. 3 ESS office.

- Completion of Incoming and Intraoffice Calls (TERM) Program—The No. 3 ESS program that serves to complete all calls terminating to lines in the No. 3 ESS office. It is used in reference to this feature to make coin present test after a collect action.

- Teletypewriter (TTY)
- Trunk and Line Test Panel (TLTP)
- Traffic Service Position System (TSPS).

18. REFERENCES

18.01 The following documents may be referred to for supplementary information concerning the Dial-Tone-First Coin feature.

- PA-3H3XX—No. 3 ESS Office Data Tables Layout Specification
- PR-3H175—Completion of Incoming and Intraoffice Calls (TERM) Program
- PR-3H150—Coin Clean Up Routine (COIN) Program
- PR-3H181—Three-Digit Translation (XSL3DIG) Program
- PR-3H161—Local Charging-Coin and Message Register (LCLCHG)
- PR-3H164—Operator Calls (OPER) Program
- SD-3H205, FB428—Dial-Tone-First Coin Line Circuit
- SD-3H411, FB423—Coin Control Circuit

- Sections
 - 233-060-ZZZ Series—Network Switching Practices
 - 233-190-023—Announcement Systems
 - 233-190-112—Basic Coin Service
 - 233-190-203—Universal Emergency Service Number 911
 - 506-410-400—Single Slot Coin Telephone Sets
 - 233-154-130—Recent Change Users Guide
 - 233-190-151—Local Coin Overtime
 - 233-190-028—No-Test Vertical Access
 - 233-135-105—Trunk and Line Test Panel
 - 233-152-120—Teletypewriter
 - 233-152-135—Traffic and Plant Measurements
- IM-3H300—Input Message Manual
- OM-3H300—Output Message Manual
- Translation Guide—TG-3
- GL 76-04-225 (EL 4630, April 29, 1976)—Dial Tone First Conversion