

**TRAFFIC MEASUREMENT RECENT CHANGE PROCEDURES
FOR DIGTRN, TRFSLB, TRFLCU, TRFHC, TNCTX, CTRF, AND NUTS
(CTX-6 THROUGH 1E5 GENERIC PROGRAMS)
2-WIRE NO. 1 ELECTRONIC SWITCHING SYSTEM**

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NOTICE

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1. GENERAL

1.01 This section covers traffic measurement recent change (RC) procedures for CTX-6 through 1E5 generic programs for a 2-Wire No. 1 Electronic Switching System (ESS).

1.02 This section is reissued for the following reasons:

- (a) To include Issue 5, Addendum 1,
- (b) To include the 1E5 generic program
- (c) To add keywords INDX, CNTX, S1, S2, and S3 to RC:TRFHC message
- (d) To add keywords EPSID and CNTX to RC:CTRF message and make necessary flowchart revisions.
- (e) To delete Part 12, the abbreviations. The definitions can be found in the keyword charts accompanying each RC message.

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

2. REFERENCES

2.01 The following applies to all RC messages in this section:

- Refer to Section 231-120-301 for a list of type measurement codes (TMC).
- Refer to Section 231-118-321 for information on RC message formats and the interpretation of message flowcharts.
- Refer to the information accompanying the message flowcharts for definitions of keywords used in the messages.
- The order number can be entered as an option in any message by typing the following RC message:

ORD mnnnnnn

m = Letter. This variable is slashed because it need not be present.

nnnnnn = Decimal number. Leading zeros can be omitted.

For example, the following are valid order numbers:

ORD B123456
ORD F6
ORD 23

- Refer to Section 231-118-320 for RC message program listings, system acknowledgment, and RC18 and RC16 output messages.
- Refer to translation guide TG-1A for documentation of feature engineering and associated ESS forms.
- Refer to translation output configuration PA-591003 for information relating the ESS forms 1400 to the ESS translation memory (translators).
- Refer to Section 231-118-337 for adding or removing plant measurement destination codes.

FLOWCHART SYMBOLS

2.02 The following flowchart symbols are used in RC message flowcharts.

○ **OPTION Symbol:** The OPTION symbol is used to indicate that all flowlines leaving the symbol are optional. None, one, some, or all such flowlines (keywords units) may be selected.

⊗ **EXCLUSIVE OR Symbol:** The EXCLUSIVE OR symbol is used to indicate that exactly one of two or more flowlines (keyword units) leaving the symbol must be selected.

⊕ **NON-EXCLUSIVE OR Symbol:** The NON-EXCLUSIVE OR symbol is used to indicate that one or more of the flowlines (keyword units) leaving the symbol must be selected (no less than one, but more than one may be selected).

● **AND Symbol:** The AND symbol is used to indicate that all flowlines (keyword units) leaving the symbol must be used.

Repeatable Segment: The repeatable segment symbol is used to indicate that the keyword unit or the specific group of keyword units within the segment bracket can be repeated within an RC message without reentering previous keyword units. Each segment is terminated by the percent sign (%).

VERIFICATION

2.03 In CTX-6 and CTX-7 generic programs, the verification of H and C registers requires personnel to T-READ sizeable blocks of traffic translations from program store. The T-READ printouts are in a format which requires data to be broken down into item boundaries (see H and C traffic translators—PA-591003) and then converted to decimal.

2.04 Beginning with CTX-8, Issue 2, and later generic programs, one TTY input message (TRF-VFY) and two TTY output messages (TC17 and TC18) have been devised to simplify the verification of the H and C registers. Identification of all traffic registers in the H or C schedule (or any range of H or C registers), or a search for a particular TMC and equipment, group, or office count (EGO) may be requested. The TMC and EGO along with the register list number are printed out in a format similar to ESS Form 1400. The output message is then manually checked against ESS Form 1400 (see Section 231-120-301).

Note: High priority traffic measurements can interrupt the verification of the H or C traffic register translations and take an extended period of time to print. It is suggested that verification of requested traffic registers be made during low traffic periods.

3. TRAFFIC REGISTERS, MEASUREMENT TYPES AND CODES

3.01 The memory and data processing features of the No. 1 ESS are utilized by the program to accumulate and to store traffic counts in areas of the call store memory called traffic registers. A separate traffic register, consisting of one or more counters, is required for each item measured. Certain registers can be read when a TTY printout is requested by a TTY input message or when the traffic data is automatically printed out in

accordance with assigned time schedules as controlled by the dial administrator.

TYPES OF REGISTERS

3.02 The traffic registers or counters in the No. 1 ESS are divided into two groups:

- (a) **Standard Registers:** The standard group of registers is provided in every No. 1 ESS office. Standard registers include type measurement codes 05, 11, 12, 13, 14, and 15. (Refer to Section 231-120-301.)
- (b) **Variable Registers:** The variable group of registers is provided in accordance with the need, size, and makeup of the No. 1 ESS office. Variable registers include all type measurement codes except those indicated as standard registers.

MEASUREMENT (COUNT) TYPES

3.03 There are basically three types of traffic counts: peg, overflow, and usage. These are described as follows:

- **Peg count (PC)** is a cumulative count of the number of times a given event occurs during a fixed time interval.
- **Overflow (OVFL)** is a cumulative count of the number of times an attempt to cause a specific event failed (during a fixed time interval) because of network blocking or lack of specific facilities (circuits or paths).
- **Usage (U)** is a cumulative count of the number of facilities (eg, trunks in a trunk group, registers of a certain kind, paths in a specified part of the network, etc.) found in a busy state during each periodic scan. The counts are incremented or decremented when the facilities measured are made busy or idle. Up-down counters are used for usage counts to record the number of facilities simultaneously in use.

MEASUREMENT CODE

3.04 The traffic measurement code describes the type of measurement being made. It consists of a three-digit code related to a traffic item. A type measurement code (TMC) must be assigned

to every register including those reserved for future use. The measurement codes and associated equipment, group, or office count are grouped as follows:

- TMC 000-004, 006, 023—Trunk Groups
- TMC 005—Office Counts
- TMC 007—Centrex Attendant
- TMC 008—Juncture Groups
- TMC 009, 010—Reserved (TMC 009 involved for CTX-7 and later generic programs)
- TMC 011, 012—LLN Peg Count and Overflow
- TMC 013, 014—TLN Peg Count and Overflow
- TMC 015—General Purpose Registers (maximum of 150 registers)
- TMC 016, 017, 018—Multiline Hunt Groups
- TMC 019-022, 032-046, 052—Centrex Group Measurements
- TMC 027-031—Simulated Facilities Groups
- TMC 047—Coin Attempt by Initial Charge Condition
- TMC 048-050—Automatic Queueing of Trunks and Lines
- TMC 051—Network Management Preprogram Trunk Group Control
- TMC 057-058—Traffic Line Group Measurement (CTX-7 and later generic programs)
- TMC 059-084—Automatic Call Distribution (CTX-8 and later generic programs)
- TMC 085-092—Used only if BQTL package is loaded (1E4 and later generics)
- TMC 093-098—Used only if ACDT2 package is loaded (1E4 and later generics)
- TMC 099—Used only if CRAF package is loaded
- TMC 100-102—Used only if DLIO package is loaded (1E4 and later generics)
- TMC 103-105—Customer Facilities Group; only if package ESSX is loaded (1E5 and later generics)
- TMC 106—Centrex Total Overflow; only if package ESSX is loaded (1E5 and later generics)
- TMC 107-108—Customer Facilities Group; only if package ESSX is loaded (1E5 and later generics)
- TMC 109-110—Common Channel Interoffice Signaling, Toll; only if package CCIST2 is loaded (1E5 and later generics)
- TMC 111—3-port Conference Circuits for Centrex (1E5 and later generics)
- STOP (TMC 127)—Terminates collection and printout of registers within a schedule (CTX-7 and later generic programs).

REGISTER SCORING

3.05 In the standard and variable group of registers, various types of counters may be associated with each register (count). The type of counters include accumulators, up-down counters, holding and totaling registers.

A. Accumulators

3.06 Peg count, overflow, and usage accumulators are used on all items for which peg, overflow, and usage counts are maintained. Each time a given event occurs (or for overflow, each time a given event fails) one score is added to the corresponding accumulator. For usage counts, the content of an up-down counter is added to the corresponding accumulator after each periodic scan.

B. Up-Down Counters

3.07 Up-Down counters are provided for most groups of items for which usage is measured. Such items are trunks, service circuits, nonequipment registers, etc. Each time the item is busied, one is added to the up-down counter corresponding to its group. When the item is idled, one is subtracted from the up-down counter. In other words, the

contents of the up-down counter associated with any group of items should equal the number of busy items in that group. The up-down counter contents cannot be zeroed automatically by the system at the end of a given time period.

C. Holding and Totaling Registers

3.08 Holding registers are provided for all counts assigned to a collection schedule. A collection period may span a 15-minute period, an hour, a day, or a week. At collection time, the contents of specified accumulators are moved to corresponding holding registers, and the accumulators are zeroed to be ready for a new collection period. The counts are subsequently printed out from the holding registers if requested on the printout schedule.

3.09 Totaling registers are provided for all counts assigned to more than one collection schedule eg, four quarter hour accumulations are added in an hourly totaling register to obtain both quarter hourly counts and hourly counts.

4. INITIATING OR CANCELING A PREROUTE PEG COUNT ON A DIALED CODE RC: DIGTRN (PR-1A328)

Initiating a Preroute Peg Count on a Dialed Code

INITIAL CONDITIONS: The 3/6-digit translator exists, and no temporary RC exists for the specified pattern number.

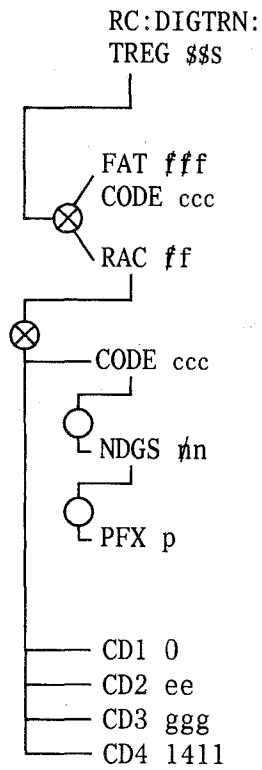
RESULTS OF MESSAGE: A temporary RC is assigned on the specified rate and route pattern entry in the 3/6-digit subtranslator. The temporary RC causes a peg count to be maintained for the specified code.

REGISTER ASSIGNMENT, REASSIGNMENT, AND SCANNING

3.10 When initial translations are prepared, traffic registers are assigned to the measured traffic items. Thereafter, assignment or reassignment of registers must be done via an RC TTY input message.

3.11 The traffic measurement program accumulates usage counts during the 100-second scan routines. These counts are added to the contents of a usage accumulator register every 100 seconds; thus, direct hundred call seconds (CCS) data is obtained for the individual items measured. For some items, CCS data is obtained by determining the number of busy bits in a busy-idle word and by adding the number to an accumulating register after each 100-second scan.

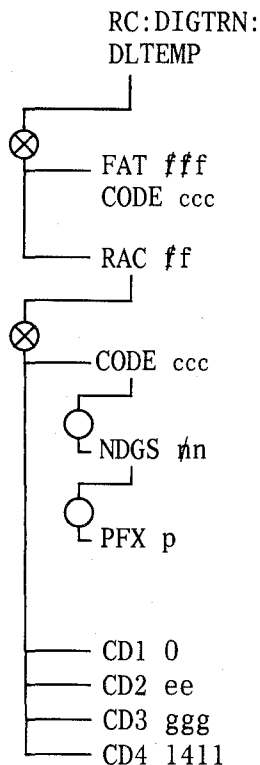
3.12 A 10-second scan instead of a 100-second scan is used for items with short holding times. The usage counts accumulated by the 10-second routines must be divided by ten to calculate the CCS for these items.



Canceling a Preroute Peg Count on a Dialed Code

INITIAL CONDITIONS: A temporary RC for a preroute peg count or for an AMA record (see Section 231-118-324) exists on the specified code.

RESULTS OF MESSAGE: The temporary RC is deleted. (This message will not delete a CLID or network management code blocking temporary RC).



KEYWORD UNIT	DEFINITION
CD1 0	One-Digit Dialed Code; use 0
CD2 ee	Two-Digit Dialed Code; use 00 (emergency operator)
CD3 ggg	Three-Digit Dialed Code; use 411, 011, or 11X (X = 0 through 9)
CD4 1411	Four-Digit Dialed Code; use 1411
CODE ccc	Dialed NXX code
DLTEMP	Delete Temporary Recent Change
FAT fff	Foreign Area Translator; also called normalized area code. With the 1E4 generic, the number of FATs is increased to 256.
NDGS n	Number of Digits (7 or 10)
PFX p	Prefix code (0 or 1)
RAC ff	Rate center
TREG sss	Traffic Register number (0-149)

Verification and Hunting Information

There is no verification format provided for this type of RC. This temporary type RC is effective in call processing.

5. INITIATING OR CANCELING A SUBSCRIBER LINE BUSY PEG COUNT RC:TRFSLB (PR-1A337)

Initiating a Subscriber Line Busy Peg Count

INITIAL CONDITIONS: Each specified TN (telephone number) does not have a major class of MCC (denied termination, Centrex LDN/Attendant) and there is no temporary RC on it.

RESULTS OF MESSAGE: To each TN specified, a temporary RC is assigned that causes the specified general purpose traffic register to be used to count call attempts that find the line busy.

```

RC:TRFSLB:
-----
TN aaaaaaa
REG 000
-----
%
```

Canceling a Subscriber Line Busy Peg Count

INITIAL CONDITIONS: The TN specified has a temporary RC assigned to it.

RESULTS OF MESSAGE: The temporary RC for the specified TN is deleted.

```

RC:TRFSLB;OUT:
-----
TN aaaaaaa
-----
%
```

KEYWORD UNIT	DEFINITION
REG 000	General Purpose Traffic Register number
TN aaaaaaa	Telephone Number

Verification and Hunting Information

This temporary type RC is effective in call processing. Verify the changed information by typing in:

VFY-DN-30 aaaaaaa.

aaaaaaa = Telephone number

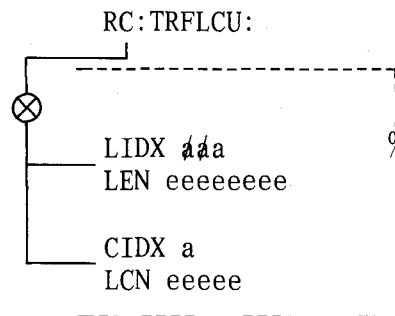
System response TR01 contains information that count is or is not in effect. (Reference should be made to output message manual OM-1A001.)

6. INITIATING OR CANCELING TRAFFIC USAGE COUNTS FOR CUSTOMER LINES INDIVIDUALLY OR BY LINE CONCENTRATOR RC:TRFLCU (PR-1A365)

Initiating Traffic Usage Counts for Customer Lines Individually or by Line Concentrator

INITIAL CONDITIONS: The line or concentrator traffic count block exists.

RESULTS OF MESSAGE: The word at each specified index is assigned to the specified LEN or LCN.

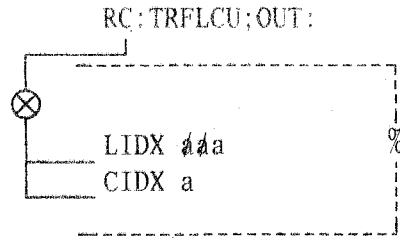


Canceling Traffic Usage Counts for Customer Lines Individually or by Line Concentrator

INITIAL CONDITIONS: The specified index is assigned.

RESULTS OF MESSAGE: The specified slot is zeroed (thus marking it as the end of the effective traffic count list).

Caution: Canceling a specified slot in the LEN or LCN block zeros the slot and marks the end of the effective traffic count list. Therefore, this procedure must only be used to zero slots from the bottom of the block.



KEYWORD UNIT	DEFINITION
CIDX a	Index for Customer Line Total Usage (CLTA) Table (by concentrator)
LCN eeeee	Line Concentrator Number
LEN eeeeeeee	Line Equipment Number
LIDX 333	Index for customer line selected (CLSA) table

Verification and Hunting Information

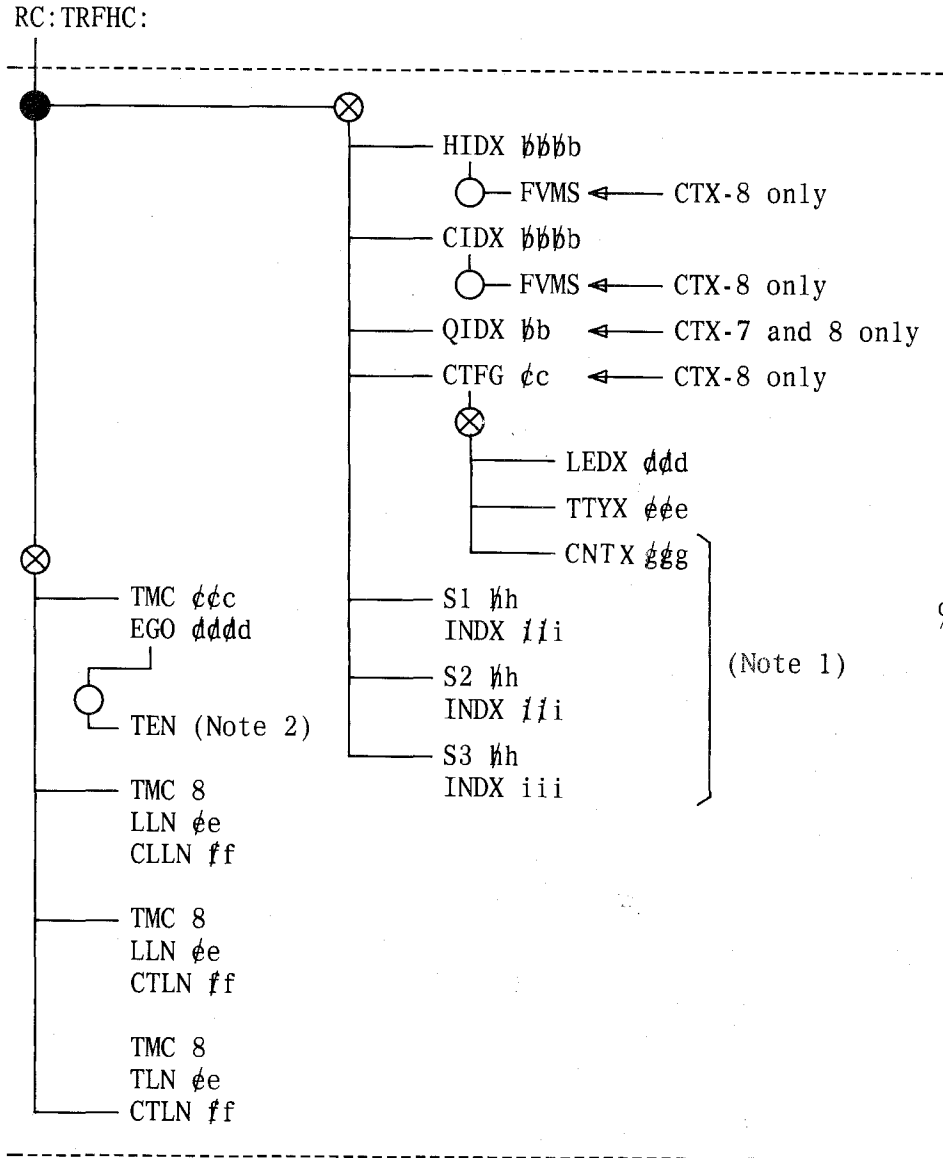
There is no verification format provided for RCs of this type. This RC is effective in call processing.

7. INITIATING, CANCELING, OR SUSPENDING A TRAFFIC COUNT ON AN H, C OR Q SCHEDULE, OR A CUSTOMER TRAFFIC GROUP RC:TRFHC (PR-1A335)

Initiating Traffic Counts for Usage, Peg, and Overflow

INITIAL CONDITIONS: The specified traffic subtranslators (H, C, or Q) exist with an unassigned code (TMC 10) in the word at each specified index.

RESULTS OF MESSAGE: The specified entry is made in the specified H, C, or Q subtranslator for each segment.



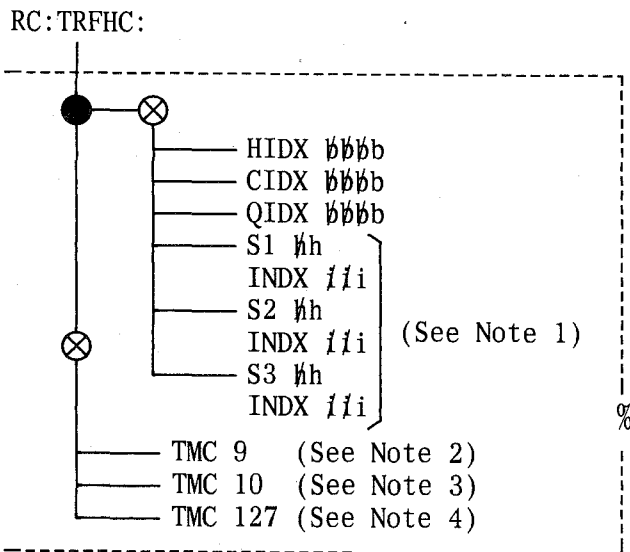
NOTES:

1. 1E5 and later generics.
2. Use keyword TEN only for TMC 0. TEN is not valid with keyword HIDX *bbbb* greater than 127. TEN is not valid with keyword CIDX or CTFG.

Canceling or Suspending Traffic Counts

INITIAL CONDITIONS: The specified entries are assigned in the H, C, or Q schedule.

RESULTS OF MESSAGE: The unassigned or suspended code is placed in the specified traffic schedule (see Notes 1, 2, and 3).



NOTES:

1. 1E5 and later generics.
2. In CTX-6, when TMC 9 is used, a dummy 1-word call store entry is built to cancel a TMC with a 1-word call store entry. In CTX-7 and later generic programs, 9 is not needed since all entries consist of 2 words.
3. When TMC 10 is used, a dummy 2-word call store entry is built. In CTX-6, 10 is used only to cancel a TMC with a 2-word call store entry. In CTX-7 and later generic programs, all entries consist of two words.
4. When TMC 127 is used in CTX-7 and later generic programs, a suspend entry is placed in the specified traffic schedule, causing all entries that follow in the schedule to be ignored for both collection and printing.

KEYWORD UNIT	DEFINITION
CIDX bbbb	Index for Traffic Measurements C (continuous) Schedule (TMTC) Table
CLLN ff	Connecting Line Link Network
CNTX ggg	Number of Traffic Counts. ggg = 0 - 249 (PKG:EPSCS)
CTFG cc	Customer Traffic Group Number (1 - 22)
CTLN ff	Connecting Trunk Link Network

KEYWORD UNIT	DEFINITION
EGO dddd	Equipment, Group, or Office Count Number. For a functional group (FG) or reporting group (RG), EGO = 32 X DAG + FG (or RG). (dddd = 0 - 2047)
FVMS	Five-Minute Schedule
HIDX bbbb	Index for Traffic Measurements H (Hourly) Schedule (TMTH) Table
INDX yyi	Index into special studies traffic schedule subtranslator. yyi = 0 - 127 (PKG:EPSCS)
LEDX ddd	Index into LED (Light Emitting Diode display) traffic count section of Customer Traffic Group aux block
LLN ee	Line Link Network
QIDX bb	Index for Traffic Measurements Q (Selected Quarter Hour) Schedule (TMTA) Table. (Items entered on DA15 A Schedule.)
S1 kh	Special studies traffic schedule S1 subtranslator number. kh = 0 - 10 (PKG:EPSCS)
S2 kh	Special studies traffic schedule S2 subtranslator number. kh = 0 - 10 (PKG:EPSCS)
S3 kh	Special studies traffic schedule S3 subtranslator number. kh = 0 - 10 (PKG:EPSCS)
TEN	Ten-Second Timing Scan
TLN ee	Trunk Link Network
TMC ecc	Type Measurement Code
TTYX eee	Index into TTY traffic count section of Customer Traffic Group aux block.

Verification and Hunting Information

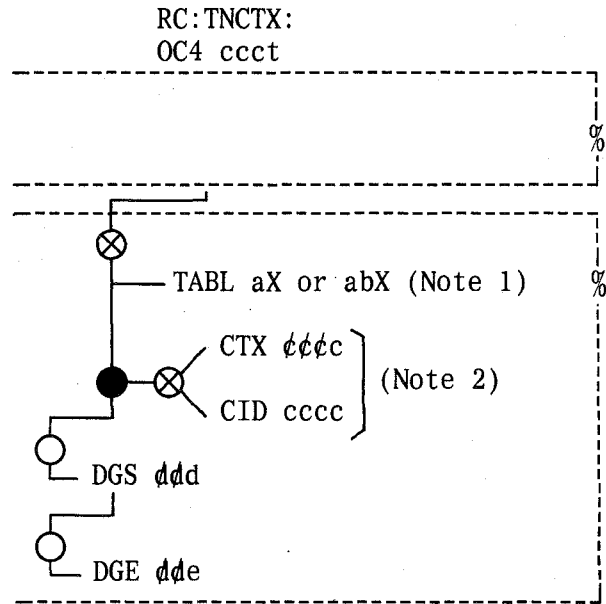
There is no verification format provided for this type of RC. The RC is effective in call processing.

8. MODIFYING THE TELEPHONE NUMBER TO CENTREX/CUSTOMER IDENTIFICATION TRANSLATOR RC:TNCTX (PR-1A366)

Adding Tables, CTX Numbers, or CID Numbers to the Translator

INITIAL CONDITIONS: If a table is to be added, the preceding table or head table exists with a zero word for the address of the new table. If CTX or CID numbers are to be added to table words, those words are zero.

RESULTS OF MESSAGE: If the empty segment (a segment with no keywords) is entered, an initial 10-word table (D5 Interpreter Table) is seized and linked to the TN-to-CTX/CID head table at the NOG index corresponding to the input OC4. If keyword TABL is entered, a further 10-word table is seized and linked to the preceding table. If CTX or CID is entered, the specified number is placed in the specified table word (or words, if DGE is entered.)



NOTE 1: TABL aX or abX builds a 10-word table with its address in the list at the preceding level. Specifically, the two variables in this keyword unit are explained as follows:

(1) TABL aX builds a 10-word table (D6 Interpreter Table) with its address in the a-th word (a=1 through 0 with 0 = 10) of the already existing table (D5 Interpreter Table). (This existing table is the one that is built by an empty segment and has its address in the head table at the slot determined by the NOG.)

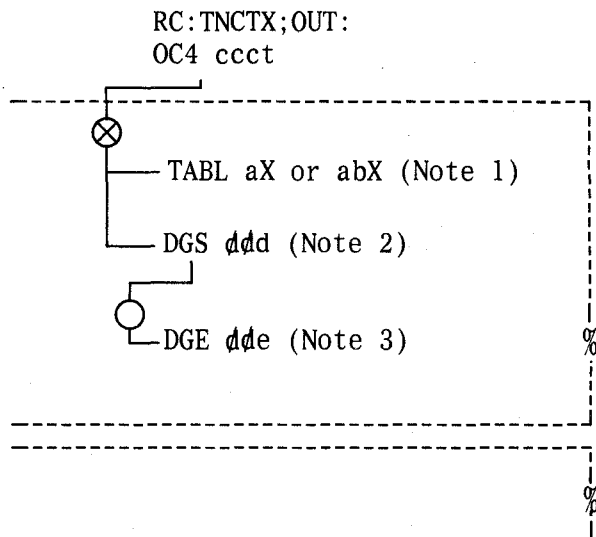
(2) TABL abX builds a 10-word table (D7 Interpreter Table) with its address in the b-th word (b=1 through 0 with 0 = 10) of a table built as described in part 1 of this note.

NOTE 2: If there is only one number (CTX or CID) in the entire number group specified by OC4, DGS and DGE are not needed, since the CTX or CID number can appear in the head table. When there is more than one CTX or CID number, additional 10-word tables must be built until all CTX and/or CID numbers can be distinguished. The variables associated with DGS and DGE can be 1, 2, or 3 digits representing D5, or D5 and D6, or D5, D6, and D7 of the telephone numbers in the range. Originally designed for DID peg counts which used only enough digits (1, 2, or 3) to differentiate the CTX or CID numbers from others in the number group. For ESSX, the DN-CTX translator must contain a CTXN which will yield the proper customer facilities group, using the centrex supplementary translator. This includes every directory number (DN) in a customer extension range; unassigned extensions, satellite DNs, DNs with queing and remote call forwarding DNs. Other noncentrex DNs must be unassigned (i.e., CTXN = 0) except for CID information. Both table building and entry making can be accomplished in separate segments of the same message.

Removing CTX Numbers or CID Numbers or Returning Tables

INITIAL CONDITIONS: The table(s) and/or numbers to be removed exist in the TN-to-CTX/CID translator.

RESULTS OF MESSAGE: The specified words are zeroed and/or the specified tables are returned.



NOTE 1: TABL in an OUT order returns the identified table to the idle link lists and zeros the pointer to it in the preceding table. If any words in the table being returned contain a pointer to another table, the message will be rejected. This means that a message must first be used to return the table(s) whose address(es) is in the rejected table.

NOTE 2: A 1-digit to 3-digit code (DGS) or a digit code range (DGS and DGE) in an OUT order zeros the corresponding words if they contain Centrex or CID numbers. If any of the words contain addresses (pointers) to other tables, the message will be rejected (See Note 1).

NOTE 3: An empty segment in an OUT order refers to the TN-to-CTX/CID head table word identified by the OC4 (converted to a Number Group Number). If the word contains a Centrex or CID number, it is zeroed. If it contains a pointer to a table (which must not contain any pointers to other tables), it returns the table to the idle link list and zeros the pointer. (The empty segment is shown below the other segment in the flowchart because this erasing of the head table must be the last thing done—just the reverse of the sequence in building the translator with a NEW order. However, this empty segment could be the only segment in the message.) Refer to Example 3 at the end of this part (Part 8).

Examples:

Example 1: This message builds a 10-word table and links it to the TN-to-CTX/CID head table by the use of an empty segment, and a second 10-word table with its address in the first 10-word table by use of the keyword TABL 3X. See Fig. 1.

```
RC:TNCTX:
OC4 4581%
TABL 3X!
```

Example 2: This 2-segment message puts CTX number 95 in the second word of the D6 interpreter table (for telephone numbers in the range 458-1321 through 458-1320), and CID number 3001 in the last 3 words of the D6 interpreter table (for telephone numbers in the range 458-1381 through 458-1300). (Observe that since 0 is greater than 9, the range 132X means 1321 through 1320.)

```
RC:TNCTX:
OC4 4581
CTX 95
DGS 32%
CID 3001
DGS 38
DGE 30!
```

Example 3: This 4-segment message zeros the four words in the above example, returns the two tables to the idle link lists, and zeros the pointer in the head table.

```
RC:TNCTX;OUT:
OC4 4581
DGS 32%
DGS 38
DGE 30%
TABL 3X%
!
```

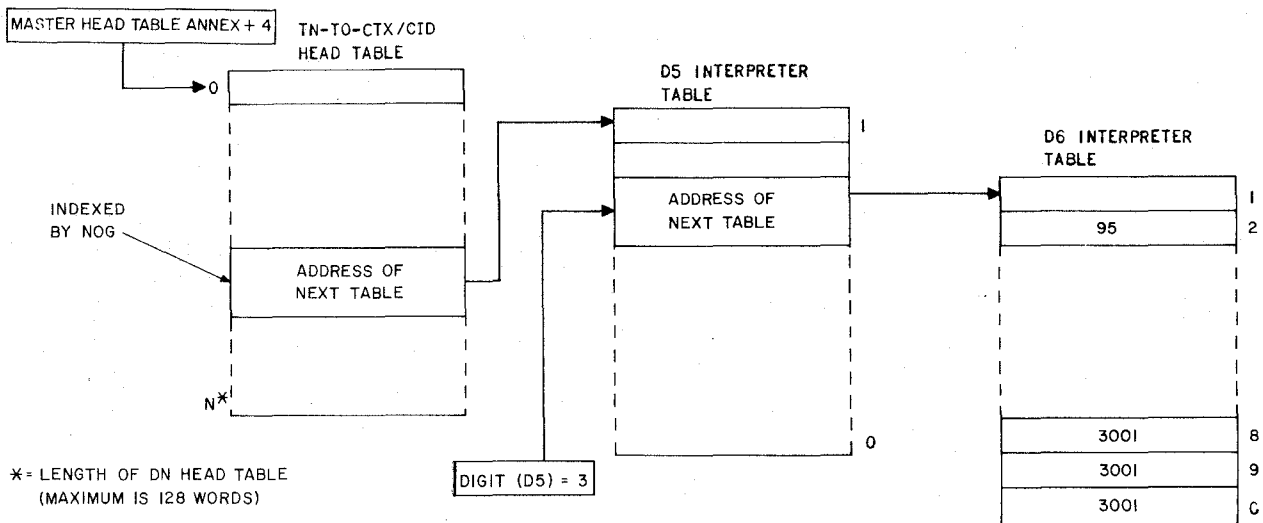


Fig. 1—Example 1, Digit Interpreter Table

KEYWORD UNIT	DEFINITION
CID <i>cccc</i>	Customer Identification Number (2048 - 4095) for CCSA AMA records. (ESS Form 1118)
CTX <i>cccc</i>	Centrex Group Number
DGE <i>ddd</i>	End of Digit Range; 1 to 3 digits which differ only in the last digit from those with DGS. The last digit for DGE must be greater than the last digit for DGS, in the 0>9 ordering. (For example DGS 125, DGE 120 is valid, as is DGS 02, DGE 08, but DGS 546, DGE 468 is not valid.)
DGS <i>dde</i>	Digits or not of start of digit range to interpret; 1 to 3 digits which represent D5 or D5 and D6, or D5, D6, and D7 of directory number.
OC4 <i>ccct</i>	<i>ccc</i> = Office Code (D1, D2, and D3) <i>t</i> = Thousands Digits (D4).
TABL <i>aX</i> or <i>abX</i>	Digits that will be interpreted [the digit or digits before the X lead to the table; the X represents the 10 numbers (1,2,...,0) that will index into the table].

Verification and Hunting Information

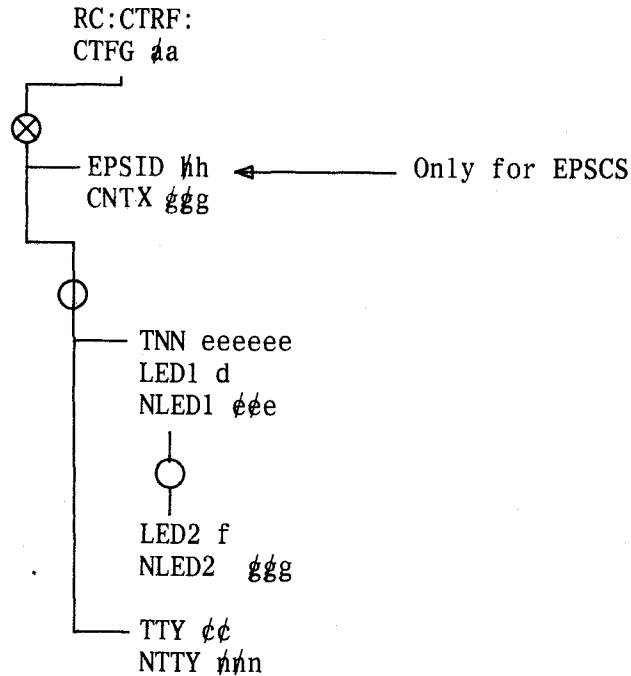
There is no verification format provided for this type of RC. With the 1E4 and later generics, the RC is effective immediately in call processing (i.e. recent change hunted). With previous generics, the RC is effective in call processing only after PS memory cards have been updated.

9. ASSIGNING, CHANGING, OR UNASSIGNING A CUSTOMER TRAFFIC GROUP RC:CTRF (PR-1A373)

Assigning a New Customer Traffic Group

INITIAL CONDITIONS: Customer traffic group translator exists with the word in the head table specified by the CTFG keyword unassigned (all zero).

RESULTS OF MESSAGES: Auxiliary block seized and built as specified. Customer traffic count call store audit requested.



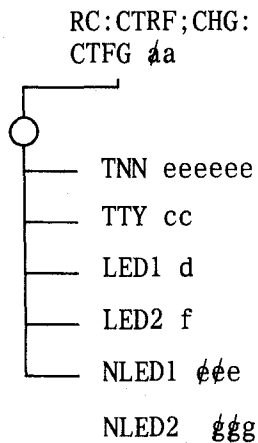
Changing Data For A Customer Traffic Group

INITIAL CONDITIONS: Specified CTFG is assigned.

RESULTS OF MESSAGE: Changes made as specified.

Note 1: NTTYC cannot be changed, nor can the sum of NLED1 and NLED2, without unassigning the customer traffic group and starting over.

Note 2: EPSID is not allowed on a change order.



Unassigning A Customer Traffic Group

INITIAL CONDITIONS: Specified CTFG is assigned.

RESULTS OF MESSAGE: Specified CTFG index is zeroed in translator head table and auxiliary block is released. Customer traffic count call store audit is requested.

Note: EPSID is not allowed on an out order.

RC:CTRF;OUT:
CTFG aa

KEYWORD UNIT	DEFINITION
CTFG aa	Customer Traffic Group Number (1 - 22)
EPSID hh	Enhanced Private Switching Communications Service (EPSCS) Customer Identification number (unique in entire Bell System. hh = 1 - 63 (PKG:EPSCS))
LED1 d	Code for first group of LED counts 0 = No display 1 = ACD Split (attendant group) display format 2 = general purpose display format
LED2 f	Code for second group of LED counts (same code values as for LED1)
CNTX ggg	Number of Traffic Counts. ggg = 0 - 249, divisible by 5. (PKG:EPSCS)
NLED1 eee	Number of counts to be displayed in the first group (LED1 format) (0 - 155) divisible by 5
NLED2 ggg	Number of counts to be displayed in the second group (LED2 format) (0 - 155) divisible by 5
NTTYC hhn	Number of TTY customer traffic counts (5 - 245) divisible by 5
TNN eeeee	Trunk network number of the LED display
TTY ee	Index for TTY channel for customer traffic counts (0 - 3)

Verification Information

There is no verification format for this type of RC previous to CTX-8, Issue 3.1.

Beginning with CTX-8, Issue 3.1, verify by typing in

VFY-CTG-aa.

aa = customer traffic group number

System response is OK followed by TR66 with translation information.

Hunting Information

The RC is effective immediately in call processing.

10. BUILDING AND LINKING A CUSTOMER TRAFFIC LABEL AUXILIARY BLOCK

10.01 Each customer traffic group (CTFG) requires labels to indicate the type of data to be printed out on a customer traffic TTY which consists of row identifiers and column headings. Each label consists of up to three alphanumeric characters and is stored in bits 20-0 of a translation word in the auxiliary block as shown in Fig. 2. The auxiliary block is of variable length with a maximum of 257 words. The block uses the minus one word for the auxiliary block length if greater than 31 and the zero word for the length of 31 or less. The last word of a customer traffic (CTRF) label auxiliary block must be all ones. As an auxiliary block is related to a specific CTFG, a CTRF may have up to 254 labels.

10.02 Labels, as specified by the auxiliary block can be used as either column headers, in which case there would always be five columns, or as row labels, in which case the label would be followed by five counts. Refer to Fig. 2 for an example of these two methods. The column header method is distinguished from the row method by having bit 22 (C bit) of the five consecutive column label entries (5 translation words) equal to 1. Blank lines exist on the TTY printout if the column header label method is used in the auxiliary block with all five labels equaling ASCII codes for blank characters.

10.03 Form ESS 1408 contains a record of labels that are stored in the customer traffic label auxiliary block. The ESS 1408 form must be filled out in conjunction with the ESS 1406 form. An example of building a customer traffic label auxiliary block is given in Fig. 2.

**11. ADDING, REPLACING, OR DELETING TRUNK(S) FOR NONUSAGE TRUNK SCAN COUNT
RC:NUTS (PR-1A379)**

Seizing Nonusage Trunk Scan Auxiliary Block for a Customer Traffic Group

INITIAL CONDITIONS: Nonusage trunk scan translator exists. Specified CTFG has a zero word in this translator head table but is assigned in the customer traffic group translator.

ESS 140B (01)TG-1A
 TEL CO 024
 3 5
 BASE 6H23 CONT GR CO
 6 9 10 11
 FORM CODE 8 6
 14 15

CUSTOMER TRAFFIC LABEL
 TRANSLATOR RECORD

DATE 2/15/76
 CTFG 0 1
 16 17
 PAGE 1 OF 1

ESS UNIT DISTRICT (BEM CO.)

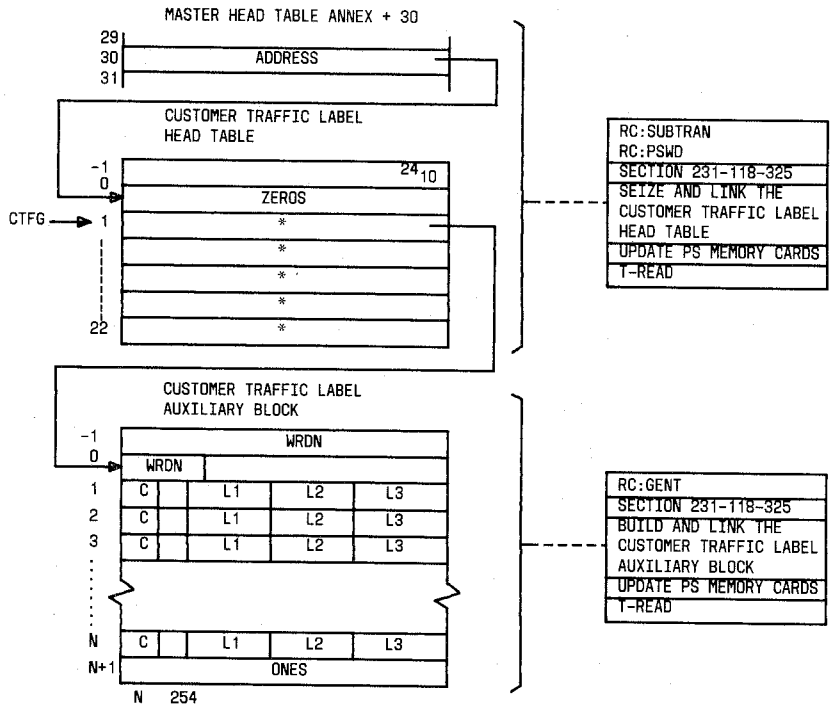
1ST DIGIT OF ITEM																											
							21																				
ITEM	ROW IDENT	COLUMN HEADINGS					REMARKS	ITEM	ROW IDENT	COLUMN HEADINGS					REMARKS												
		COL 1	COL 2	COL 3	COL 4	COL 5				COL 1	COL 2	COL 3	COL 4	COL 5													
22	23	28	DO	31	33	34	36	37	39	40	42		22	23	25	27	28	30	31	33	34	36	37	39	40	42	
00		POU	AXU	ACU	NEC			50																			
01	2S1							51																			
02	2S2							52																			
03	2R1							53																			
04	Q4	NDC	TQU	NGX	NLX	PLX		54																			
05	Q5							55																			
06	Q5							56																			

A. CUSTOMER TRAFFIC LABEL TRANSLATOR RECORD (ESS 1408 FORM)
 - SAMPLE ENTRIES

	POU	AXU	ACU	NEC	
2S1	0000009	0000002	00000013	0000003	0000000
2S2	0000002	0000001	00000009	0000005	0000000
2R1	0000008	0000000	00000007	0000002	0000000
	NDC	TQU	NGX	NLX	PLX
Q4	0000678	0135600	000012	0000008	0000045
Q5	0000530	0106005	000010	0000016	0000066

B. CUSTOMER TRAFFIC TTY SUMMARY SAMPLE PRINTOUT

RC:GENT:
 AX 30
 X 1
 SZ 17
 W 1
 DI (1, 22-22)
 ASC PDU%
 W 2
 DI (1, 22-22)
 ASC AXU%
 W 3
 DI (1, 22-22)
 ASC ACU%
 W 4
 DI (1, 22-22)
 ASC NEC%
 W 5
 DI (1, 22-22)
 OI (0, 20-0)
 W 6
 ASC 2S1%
 W 7
 ASC 2S2%
 W 8
 ASC 2R1%
 W 9
 DI (1, 22-22)
 ASC NDC%
 W 10
 DI (1, 22-22)
 ASC TQU%
 W 11
 DI (1, 22-22)
 ASC NGX%
 W 12
 DI (1, 22-22)
 ASC NLX%
 W 13
 DI (1, 22-22)
 ASC PLX%
 W 14
 ASC Q4%
 W 15
 ASC Q5%
 W 16
 OD 377777
 OT (7, 22-20)



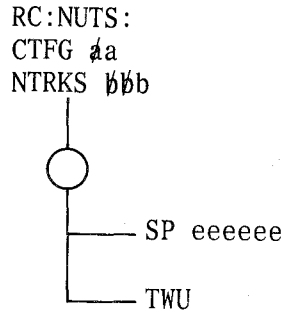
LEGEND
 * INITIALLY UNASSIGNED (ZEROS)
 C - EQUALS 1 IF THE NEXT 5 LABELS ARE TO BE USED AS COLUMN HEADER (ALWAYS 5 AT A TIME)
 CTFG - CUSTOMER TRAFFIC GROUP (1-22)
 L1 - 1ST LETTER IN 3 CHARACTER LABEL
 L2 - 2ND LETTER IN 3 CHARACTER LABEL
 L3 - 3RD LETTER IN 3 CHARACTER LABEL

D. CUSTOMER TRAFFIC LABEL TRANSLATOR

C. EXAMPLE OF BUILDING A CUSTOMER TRAFFIC LABEL AUXILIARY BLOCK FROM SAMPLE ENTRIES ON ESS 1408 FORM

Fig. 2—Customer Traffic Label Translator

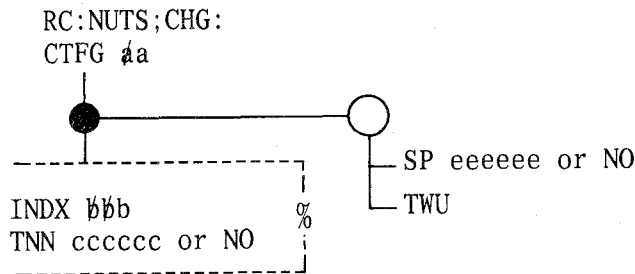
RESULTS OF MESSAGE: Auxiliary block of required size seized and zeroed. Customer traffic count call store audit requested. Optional data stored if specified.



Adding, Replacing, or Deleting Trunks from Nonusage Trunk Scan Count

INITIAL CONDITIONS: NUTS auxiliary block exists for specified CTFG and is large enough for all indexes (INDX) specified.

RESULTS OF MESSAGE: Words overwritten as specified (TNN NO zeroes the word.)



Removing the Nonusage Trunk Scan Count Feature From a Customer Traffic Group

INITIAL CONDITIONS: NUTS auxiliary block exists (regardless of contents).

RESULTS OF MESSAGE: Specified CTFG word in NUTS translator head table is zeroed and the auxiliary block released. Customer traffic count call store audit requested.

```

RC:NUTS;OUT:
CTFG aa
  
```

KEYWORD UNIT	DEFINITION
CTFG aa	Customer Traffic Group Number (1 - 22)
INDX bbb	Trunk index in Nonusage Trunk Count (1 - 255)
NTRKS bbb	Number of trunks to be given nonusage counts (1 - 255)
TNN ccccc	Trunk Network Number (NO used to write 0 for unassigned)
SP eeeee	Scan point (MSN) for NUTS reports via key control (NO used to write 0 unassigned)
TWU	Two way usage — Usage to include outgoing calls as well as incoming calls

Verification Information

There is no verification format for this type of RC previous to CTX-8, Issue 3.1.

Beginning with CTX-8, Issue 3.1, verify by typing in

VFY-NUTS-aa.

aa = customer traffic group number

System response is OK followed by TR65 with the translation information.

Hunting Information

The RC is effective immediately in call processing.