ADDING NONCENTREX SPEED CALLING TRANSLATORS MANUAL TRANSLATION MODIFICATION PROCEDURE (LO-1, EF-1, AND EF-2) NO. 2/2B ELECTRONIC SWITCHING SYSTEM

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1. GENERAL

1.01 This section provides the procedures to make the following translation changes:

- Initially add speed calling capabilities to a noncentrex office.
- Allocate program store for 8-code or 30-code speed call list.

- Return unused speed calling translator to spare program store.

The manual translation modification procedures in this section can be used with the No. 2/2B Electronic Switching System (ESS) having any generic.

1.02 This section is reissued to incorporate changes due to field evaluation and to upgrade the rating to AT&TCo Standard. Since this is a general revision, no revision arrows have been used to denote significant changes.

1.03 ***The use of a manual translation change procedure is not intended to be a part of the day-to-day routine or course of action. Manual translation changes should be performed only when there is no practical alternative and normal scheduling of an office data administration (ODA) update procedure is not feasible.***

1.04 The ODA update procedures can be performed with greater accuracy due to the inherent error check in the ODA routines. The manual translation modification procedure contains a much greater probability of error due to hand manipulation and recording of the address numbers and memory contents. ***When performing any manual translation procedure, the process must be performed error free. The parity of the bits on any word that is changed must be even. In the event the parity is not even, when the word is addressed by the ESS program, a system initialization will occur.***

1.05 The manual modification procedures are designed to provide all information necessary to complete the forms to add or change 8- and 30-code speed calling capabilities. This information will be utilized when using change in program store (CHIPS) procedures.

1.06 The ability to add and subtract in octal is essential to the successful utilization of the procedure in this section. The size and address of each block of program store will be read out of the No. 2 ESS program store or 2B main store in response to a TTY input message. The standard CHIPS procedure required to change the program store cards or 2B main store requires an octal input. All address calculation and indexing is done by octal addition and subtraction. The user must also be able to calculate parity by adding the bits that are the contents of the new translator words to be written. See Section 232-127-101 for methods of performing binary and octal calculations. In addition, Section 232-127-101 shows how parity is calculated and also contains binary-to-octal and octal-to-decimal conversion tables.

1.07 Parity will not be computed in this section for words where the parity bit is the most significant bit. In these cases, parity will be calculated when the procedures in Sections 232-127-303 and 232-327-303, Manual Translation Procedure— Formatting Changes in Program Store, are performed.

A. Restrictions

1.08 Speed calling is assigned on a per-station basis and each station may be assigned an 8-code list, a 30-code list, neither, or both.

1.09 The speed calling feature cannot be assigned to party lines, manual lines, or coin lines.

B. Hardware and Memory Requirements

1.10 Speed calling is a software feature; therefore, no additional hardware is required.

1.11 Program store requirements for speed calling include:

(a) Two bits per customer in the custom calling words, one for each list that the customer is allowed to change.

(b) Two bits per customer to indicate the size list (8- and/or 30-code) available. These bits are located in the custom calling word of the originating line translation.

(c) Two words in the Master Table Index (MTI).

(d) A number of words equal to two times the maximum number of 8- or 30-code lists as indicated by the table size indicator in the MTI entry.

(e) Eight-code list—sixteen words per list.

(f) Thirty-code list—sixty words per list.

1.12 Call store is required to store the recent change information resulting from a customer

dialed or telephone company administered speed calling change. The call store is required until the next recent change update is performed by plant personnel. Four words of call store are needed for each change.

1.13 Reproducible forms used in adding and changing speed calling capabilities are provided in Fig. 10, 11, and 12.

2. DESCRIPTION

2.01 Speed calling is a feature that allows station users to dial selected stations using fewer numbers than normally required.

A. Line Translation Expansion Table

2.02 Each customer that subscribes to speed calling requires a 4-word line translation expansion table (Fig. 1). Word 0 of this table does not have any options. Words 1 and 2 have two options each, and word 3 has four options. This line translation table contains bits which indicate which custom calling features the customer has.

2.03 If the customer has 1-digit speed calling (8-code list), bit 19 of word 2, option 2 is set to 1. If the customer has 2-digit speed calling (30-code list), bit 20 of word 2, option 2 is set to 1.

2.04 Two of the bits in word 2, option 2 indicate if the customer has the ability to dial a special code and change the entries in the speed calling list. If the customer can change the entries in the 8-code list, bit 13 is set to 1. If the customer can change the entries in the 30-code list, bit 14 is set to 1.

2.05 If either or both types of speed calling lists are subscribed to, the low ten bits of word 2, option 2 contain a list selector. This list selector is used to index the speed calling translator.

B. Eight-Code List

2.06 The 8-code list is available when there is a zero in the speed call 8-code (SCE) bit of the speed calling translator word pair. The 8-code lists are 16 words long, consisting of eight 2-word pairs. The starting address of each 8-code list is recorded in the speed calling translator table.

2.07 The 8-code list entries contain the binary coded decimal (BCD) encoding of the digits of the number to be called by speed calling. There are three speed calling list formats as shown in Fig. 2, 3, and 4. The format shown in Fig. 2 and 3 allows storage of up to ten digits either with or without a prefix. If there is no prefix, zero is entered in bit 20 of each word pair (Fig. 2).

2.08 When there is a prefix, a one is entered in bit 20 of the first word and the prefix (either 1 or 0) is entered in bit 20 of the second word as shown in Fig. 3.

2.09 The format shown in Fig. 4 allows storage of 11 to 14 digits. When this number of digits are required, a 2-word general purpose expansion table entry is required in addition to the 2-word speed calling list entry. Bits 16 through 19 of word 1 in the speed calling entry define the number of digits stored. Bits 0 through 13 of this word point to the 2-word general purpose expansion table. The location of the digits in this format is shown in Fig. 4.

2.10 After the program determines the start of the 8-code list, the word pair containing the number being called is indexed as a function of the dialed digit. Valid dialed digits for 8-code speed calling are "2" through "9."

2.11 Once the program has obtained the digits of the number being called from the list, the digits are placed in the originating register just as if the customer dialed without using speed calling.

C. Thirty-Code Lists

2.12 The 30-code list is available when there is a zero in the speed call 30-code (SCT) bit of the Speed Calling Translator Table. The 30-code lists are 60 words long, consisting of thirty 2-word pairs.

2.13 The word content layout of the 8-code lists is applicable to 30-code lists. (See Fig. 2, 3, and 4.)

2.14 Valid dialed digits for 30-code speed calling are digits "20" through "49."

2.15 Once the digits are obtained from the list, the program places the digits in the originating register.

D. Master Table Index

2.16 There are two words at the SPDCAL location in the MTI. The first word contains the speed

calling translator table size indicator. The second word contains the starting address of the speed calling translator table. If the system is No. 2 ESS with the LO-1 or EF-1 generic, the starting address of the speed calling translator table is located in bit 0 through bit 17 of the second word (Fig. 5). If the system is No. 2 ESS with the EF-2 generic or No. 2B with 2B-EF-1 or 2B-EF-2 generic, the starting address of the speed calling translator is located in bit 0 through bit 19 of the second word (Fig. 6).

E. Speed Calling Translator

2.17 The speed calling translator table can consist of up to a maximum of 1024 word pairs. These word pairs contain information bits pertaining to the availability of 8- and 30-code lists. The first word of the pair contains the program store (PS) address of an 8-code list. The second word contains the PS address of a 30-code list.

2.18 Each word pair is indexed by the speed calling list selector (Fig. 1). A customer can have either 8- or 30-code lists available or both. Two customers can use the same word pair, with one customer having the 8-code list and the other having the 30-code list.

2.19 Due to the difference between generics, there are two speed calling translator word formats used in No. 2/2B ESS. These two formats involve the following system-generic combinations:

(a) ***Format 1:*** This format (shown in Fig. 5) is used with the No. 2 ESS that has the LO-1 or EF-1 generic. In this format, speed calling indicator bits for the 8-code (SCE) and 30-code (SCT) lists and the program store starting address for the 8-code list are located in the first word of the word pair. The program store starting address for the 30-code list is located in the second word.

(b) ***Format 2:*** This format (shown in Fig. 6) is used with the No. 2 ESS that has the EF-2 generic and with the No. 2B ESS that has the 2B-EF-1 or 2B-EF-2 generic. In this format, the speed calling indicator bit for the 8-code (SCE) list and the program store starting address for the 8-code list are located in the first word of the word pair. The equivalent bits for 30-code speed calling are located in the second word.

3. ADDING SPEED CALLING CAPABILITIES TO NO. 2/2B ESS FOR ALL GENERICS

3.01 The following steps must be accomplished to add speed calling capabilities to a system:

(1) Complete applicable ESS forms. (Steps 1 and 2 of procedure below).

(2) Determine the number of entries and record as table size indicator information in MTI.

(3) Allocate program store for speed calling translator.

(4) Record speed calling translator starting address as pointer in MTI.

(5) Allocate program store for 8-code and 30-code speed calling list.

(6) Record 8-code and 30-code speed calling starting address and set SCE and SCT bits to "0." This information will be entered into the speed calling translator via CHIPS procedures.

(7) Examples of completed SPDCAL forms are shown in Fig. 7, 8, and 9.

3.02 To add speed calling capabilities, perform the following procedures.

STEP	PROCEDURE
1	Form 2101-1—Directory Number Table. Fill out columns 1 through 11, 17 through 30, 39, 47, and 48. Instructions for completing this form are provided by TG-2H.

STEP	PROCEDURE

2 Form 2105-2—Multiline Hunting Group Table. Fill out columns 1 through 11, 17 through 19, and 34 through 37. Instructions for completing this form are provided by TG-2H.

3 Determine the number of 8- and 30-code speed calling lists required (up to 1024 each). Record the number of 8-code lists as item 1(a) and the number of 30-code lists as item 1(b) on the SPDCAL-1 form (Fig. 10).

4 Compare item 1(a) and item 1(b); if equal, record the value in item 2. If 1(a) and 1(b) are not equal, record the larger value in item 2. This is the number of 2-word entries in the translator table.

5 The data in item 2 is used to obtain the translator table size indicator to record in the MTI. Find the value of item 2 in Table A and record as item 3(c).

6 Refer to the MTI of the appropriate PA-2H2XX. Locate the address of SPDCAL and record the address in item 3(a). Add one to the address and record the result in item 3(d).

7 Perform a program store read of the addresses in item 3(a) and item 3(d). Use the following message:

For No. 2 ESS offices:

UB PS:RP:aaaaaa bbbbbb!

aaaaaa = address located in item 3(a)

bbbbbb = address located in item 3(d).

For No. 2B ESS Offices:

DMP:PS aa!

aa = address located in item 3(a).

Record the contents of the two words in item 3(b) and item 3(e). Item 3(e) must initially contain all zeros.

8 Allocate a block of program store, length equal to two times item 2.

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Allocate program store using procedures in Section 232-127-302.

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

STEP	PROCEDURE
	Type in: A RC:PST:ssss 00! ssss = two times item 2. System Response: AR RC PST ssss 00 ADR aaaaaaa bbbbbbb aaaaaaa = octal starting address of spare program store bbbbbbb = octal stopping address of spare program store.
9	Record the starting address of the block of memory allocated as item 3(f). If the starting address is only six digits, precede it with a zero in order to have seven digits.
10	On a SPDCAL-2 form (Fig. 11), circle ***NEW***. Record the starting address of the allocated memory block as the address at the START location. Calculate the remaining addresses in the block and record them on the SPDCAL-2 form. Use as many SPDCAL-2 forms as necessary.
11	Perform a program store read of the memory block. Record the contents under OLD CONTENTS of the SPDCAL-2 form. The contents should be all zeros. Use the following message to perform the read: ***For No. 2 ESS Offices:*** UB PS:RP:aaaaaa bbbbbb! aaaaaa = octal address, starting with SPDCAL-1 form, item 4(f), and incremented by octal 4 each read bbbbbb = octal address aaaaaa plus octal 2. ***For No. 2B ESS Offices:*** DMP:PS aa! aa = octal address, starting with SPDCAL-1 form, item 3(f), and incremented by octal 10 each read.
12	Allocate a 16-word block of memory for the 8-code list. ***For LO-1, EF-1, and 2B-EF-1 Generic Programs:*** Allocate program store using procedures in Section 232-127-302.

STEP	PROCEDURE

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

Type in:

RC:PST:0016 00!

System Response:

AR RC PST 0016 00

ADR aaaaaaa bbbbbbb

aaaaaaa = octal starting address of spare program store

bbbbbbb = octal stopping address of spare program store.

Record the starting address of the 8-code list on the SPDCAL-2 form as the NEW CONTENTS of the pointer. If the starting address is only six digits, precede it with a zero in order to have seven digits.

13 Allocate a 60-word block of memory for the 30-code list.

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Allocate program store using procedures in Section 232-127-302.

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

Type in:

A RC:PST:0060 00!

System Response:

AR RC PST 0060 00

ADR aaaaaaa bbbbbbb

aaaaaaa = octal address of spare program store

bbbbbbb = octal stopping address of spare program store.

Record the starting address of the 30-code list on the SPDCAL-2 form as the NEW CONTENTS of the pointer. If the starting address is only six digits, precede it with a zero in order to have seven digits.

STEP	PROCEDURE
14	Repeat Step 12 and Step 13 until a list has been allocated for the number of 8-code and 30-code pointers in item 1. If a pointer will not contain an address, its contents will be all zeros.
15	To implement the changes on the SPDCAL forms into the No. 2 ESS, execute the procedures provided in Section 232-127-303. To implement the changes into the No. 2B ESS, execute the procedures provided in Section 232-327-303. The CHIPS data is contained in item 4 of the SPDCAL-1 form and on the SPDCAL-2 form.

3.03 Once the changes are implemented, Part 5 of this section explains how speed calling is assigned to customers.

4. EXPANDING SPEED CALLING CAPABILITIES

4.01 The procedures in this section can be used to expand speed calling capabilities for all generics. To expand speed calling capabilities, perform the following procedures:

STEP	PROCEDURE
1	Using the appropriate PA-2H2XX, find the address of SPDCAL in the MTI. Record this address in item 1(a) of the SPDCAL-3 form (Fig. 12). Add one to the address and record the result in item 1(d).
2	Perform a 2-word program store read at the address in items 1(a) and 1(d). Use the following message: ***For No. 2 ESS Offices:*** UB PS:RP:aaaaaa bbbbbb! aaaaaa = item 1(a) bbbbbb = item 1(d). ***For No. 2B ESS Offices:*** DMP:PS aa! aa = item 1(a). Record the contents of the two words in item 1(b) and item 1(e).

STEP	PROCEDURE
3	Item 1(b) contains the size indicator for the speed calling translator. (a) Find the value of item 1(b) in Table A and record this value in item 2(a). (b) Multiply the value of item 2(a) times two and record the result in item 2(b). (c) Convert item 2(b) to octal and record in item 2(c).
4	Record the seven least significant digits of item 1(e) in item 3(a). This is the program store starting address of the speed calling translator.
5	Determine the address of the last word in the speed calling translator using the following formula: ADDRESS = item 3(a) plus item 2(c) minus 1. Record the result in item 3(b).
6	On a SPDCAL-2 form (Fig. 11), circle ***OLD.*** Using the two addresses in item 3 on the SPDCAL-3 form as the first and last addresses, record the address of each word in the speed calling translator on the SPDCAL-2 form.
7	Perform a program store read of the speed calling translator. Record its old contents on the SPDCAL-2 form. Use the following message: ***For No. 2 ESS Offices:*** UB PS:RP:aaaaaa bbbbbb! aaaaaa = octal address, starting with item 8(a) and incremented by 4 each read bbbbbb = octal address aaaaaa plus 2. ***For No. 2B ESS offices:*** DMP:PS aa! aa = octal address, starting with item 3(a) and incremented by 10 octal each read. Repeat the message until all addresses on the SPDCAL-2 form are read.
8	On the SPDCAL-3 form, record the number of new 8-code lists to be added in item 4(a).
9	Record the number of 30-code lists to be added in item 4(b).
10	On the SPDCAL-2 form, look for 8-code slots in the speed calling translator that do not contain a list address. (a) For LO-1 and EF-1 generic, this is indicated by all zeros or octal contents 14000000 at an 8-code slot on the SPDCAL-2 form.

STEP	PROCEDURE

(b) For EF-2, 2B-EF-1, and 2B-EF-2 generics, this is indicated by all zeros as the contents of an 8-code slot on the SPDCAL-2 form.

Record the number of 8-code slots that do not contain a list address in item 5(a) of the SPDCAL-3 form.

11 On the SPDCAL-2 form, look for 30-code slots in the speed calling translator that do not contain a list address. This is indicated by all zeros as the contents of a 30-code slot on the SPDCAL-2 form for all generics. Record the number of 30-code slots that do not contain a list address in item 5(b) of the SPDCAL-3 form.

12 Compare item 4(a) to item 5(a). If item 4(a) is larger than item 5(a), record the difference in item 6(a).

13 Compare item 4(b) to item 5(b). If item 4(b) is larger than item 5(b), record the difference in item 6(b).

14 If a difference is recorded in item 6, a larger speed calling translator must be allocated using Step 15 through Step 21. If a difference is not recorded in item 6, proceed to Step 22.

15 Compare item 6(a) to item 6(b), add the larger value to item 2(a), and record in item 7(a).

16 Find the value of item 7(a) in Table A and record the result in item 1(c).

17 Allocate the new speed calling translator. The length of the new translator is recorded in item 7(b).

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Allocate the new translator using procedures in Section 232-127-302.

For EF-2 and 2B-EF-2 Generic Programs:

Type in:

A RC:PST:ssss 00!

ssss = item 7(b).

Record the starting address of the new speed calling translator in item 1(f). If the address is only six digits, precede the address with a zero in order to have seven digits.

18 On a new SPDCAL-2 form, circle ***NEW***. Record the addresses of the words in the new speed calling translator on the new SPDCAL-2 form.

19 Perform a program store read of the new speed calling translator and record its initial contents on the new SPDCAL-2 form. Use the following message:

STEP	PROCEDURE

For No. 2 ESS Offices:

UB RS:RP:aaaaaa bbbbbb!

aaaaaa = octal address, beginning with starting address of the new translator and incremented by 4 for each read

bbbbbb = octal address aaaaaa plus 2.

For No. 2B ESS Offices:

DMP:PS aa!

aa = octal address, beginning with starting address of the new translator and incremented by octal 10 for each read.

Note: New translator ***must*** initially contain all zeros.

20 Transfer the contents of the words that contained pointers in the SPDCAL-2 form for the ***old*** translator to the corresponding word in the ***new*** translator. Record this information as the new contents.

21 Record all zeros as the new contents of the SPDCAL-2 form for the ***old*** speed calling translator.

22 Allocate a 16-word block of memory for an 8-code list.

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Allocate the 16-word block of memory using Section 232-127-302.

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

Type in:

A RC:PST:0016 00!

Record the starting address of the block as the new contents of an 8-code slot in the speed calling translator on the SPDCAL-2 form. The new contents must be seven digits; use preceding zeros if necessary. For LO-1 and EF-1 generics, if an 8-code slot had the octal contents 14000000, octal 4 should be added to the most significant digit.

23 Allocate a 60-word block of memory for a 30-code list.

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Allocate the 60-word block using the procedures in Section 232-127-302.

STEP	PROCEDURE

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

Type in:

A RC:PST:0060 00!

Record the starting address of the 30-code list as the new contents of a 30-code slot in the speed calling translator on the SPDCAL-2 form. The new contents must be seven digits; use preceding zeros if necessary.

24 Repeat Step 22 and Step 23 until all new lists have been allocated.

25 Before performing CHIPS procedures, if a new translator table has been set up, the old translator table must be returned to spare memory once all the changes are complete.

For LO-1, EF-1, and 2B-EF-1 Generic Programs:

Return the old translator to spare using Section 232-127-302.

For EF-2 and 2B-EF-2 Generic Programs:

At maintenance TTY—

Type in:

A RC:PST:ssss

ADR 0 aaaaaaa

END!

ssss = number of words in old translator

aaaaaaa = octal starting address of old translator.

26 Use Section 232-127-303 to implement changes into the No. 2 ESS or Section 232-327-303 to implement changes into the No. 2B ESS. The CHIPS data is contained in item 1 of the SPDCAL-2 and SPDCAL-3 forms.

5. ASSIGNING SPEED CALLING TO LINES

5.01 Once speed calling capabilities are added to a system, recent change messages are used to enter information into the speed calling lists and in assigning speed calling to lines.

5.02 For directions on using recent change messages, refer to the appropriate section as follows:

Section 232-118-102 or 680-536-010 for LO-1 Generic

Section 232-118-103 or 680-536-011 for EF-1 and 2B-EF-1 Generics

Section 232-118-104 or 680-536-012 for EF-2 and 2B-EF-2 Generics.

TABLE A

TRANSLATOR SIZE INDICATOR TABLE

1 = 17777741	51 = 17771561	101 = 17763361
2 = 17777661	52 = 17771441	102 = 17763241
3 = 17777561	53 = 17771361	103 = 17763141
4 = 17777441	54 = 17771241	104 = 17763061
5 = 17777361	55 = 17771141	105 = 17762761
6 = 17777241	56 = 17771061	106 = 17762641
7 = 17777141	57 = 17770761	107 = 17762541
8 = 17777061	58 = 17770641	108 = 17762461
9 = 17776761	59 = 17770541	109 = 17762341
10 = 17776641	60 = 17770461	110 = 17762261
11 = 17776541	61 = 17770341	111 = 17762161
12 = 17776461	62 = 17770261	112 = 17762041
13 = 17776341	63 = 17770161	113 = 17761761
14 = 17776261	64 = 17770041	114 = 17761641
15 = 17776161	65 = 17767761	115 = 17761541
16 = 17776041	66 = 17767641	116 = 17761461
17 = 17775761	67 = 17767541	117 = 17761341
18 = 17775641	68 = 17767461	118 = 17761261
19 = 17775541	69 = 17767341	119 = 17761161
20 = 17775461	70 = 17767261	120 = 17761041
21 = 17775341	71 = 17767161	121 = 17760741
22 = 17775261	72 = 17767041	122 = 17760661
23 = 17775161	73 = 17766741	123 = 17760561
24 = 17775041	74 = 17766661	124 = 17760441
25 = 17774741	75 = 17766561	125 = 17760361
26 = 17774661	76 = 17766441	126 = 17760241
27 = 17774561	77 = 17766361	127 = 17760141
28 = 17774441	78 = 17766241	128 = 17760061
29 = 17774361	79 = 17766141	129 = 17757761
30 = 17774241	80 = 17766061	130 = 17757641
31 = 17774141	81 = 17765741	131 = 17757541
32 = 17774061	82 = 17765661	132 = 17757461
33 = 17773761	83 = 17765561	133 = 17757341
34 = 17773641	84 = 17765441	134 = 17757261
35 = 17773541	85 = 17765361	135 = 17757161
36 = 17773461	86 = 17765241	136 = 17757041
37 = 17773341	87 = 17765141	137 = 17756741
38 = 17773261	88 = 17765061	138 = 17756661
39 = 17773161	89 = 17764761	139 = 17756561
40 = 17773041	90 = 17764641	140 = 17756441
41 = 17772741	91 = 17764541	141 = 17756361
42 = 17772661	92 = 17764461	142 = 17756241
43 = 17772561	93 = 17764341	143 = 17756141
44 = 17772441	94 = 17764261	144 = 17756061
45 = 17772361	95 = 17764161	145 = 17755741
46 = 17772241	96 = 17764041	146 = 17755661
47 = 17772141	97 = 17763741	147 = 17755561
48 = 17772061	98 = 17763661	148 = 17755441
49 = 17771741	99 = 17763561	149 = 17755361
50 = 17771661	100 = 17763441	150 = 17755241

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

151 = 17755141	201 = 17746761	251 = 17740541
152 = 17755061	202 = 17746641	252 = 17740461
153 = 17754761	203 = 17746541	253 = 17740341
154 = 17754641	204 = 17746461	254 = 17740261
155 = 17754541	205 = 17746341	255 = 17740161
156 = 17754461	206 = 17746261	256 = 17740041
157 = 17754341	207 = 17746161	257 = 17737761
158 = 17754261	208 = 17746041	258 = 17737641
159 = 17754161	209 = 17745761	259 = 17737541
160 = 17754041	210 = 17745641	260 = 17737461
161 = 17753741	211 = 17745541	261 = 17737341
162 = 17753661	212 = 17745461	262 = 17737261
163 = 17753561	213 = 17745341	263 = 17737161
164 = 17753441	214 = 17745261	264 = 17737041
165 = 17753361	215 = 17745161	265 = 17736741
166 = 17753241	216 = 17745041	266 = 17736661
167 = 17753141	217 = 17744741	267 = 17736561
168 = 17753061	218 = 17744661	268 = 17736441
169 = 17752761	219 = 17744561	269 = 17736361
170 = 17752641	220 = 17744441	270 = 17736241
171 = 17752541	221 = 17744361	271 = 17736141
172 = 17752461	222 = 17744241	272 = 17736061
173 = 17752341	223 = 17744141	273 = 17735741
174 = 17752261	224 = 17744061	274 = 17734661
175 = 17752161	225 = 17743761	275 = 17735561
176 = 17752041	226 = 17743641	276 = 17735441
177 = 17751761	227 = 17743541	277 = 17735361
178 = 17751641	228 = 17743461	278 = 17735241
179 = 17751541	229 = 17743341	279 = 17735141
180 = 17751461	230 = 17743261	280 = 17735061
181 = 17751341	231 = 17743161	281 = 17734761
182 = 17751261	232 = 17743041	282 = 17734641
183 = 17751161	233 = 17742741	283 = 17734541
184 = 17751041	234 = 17742661	284 = 17734461
185 = 17750741	235 = 17742561	285 = 17734341
186 = 17750661	236 = 17742441	286 = 17734261
187 = 17750561	237 = 17742361	287 = 17734161
188 = 17750441	238 = 17742241	288 = 17734041
189 = 17750361	239 = 17742141	289 = 17733741
190 = 17750241	240 = 17742061	290 = 17733661
191 = 17750141	241 = 17741741	291 = 17733561
192 = 17750061	242 = 17741661	292 = 17733441
193 = 17747741	243 = 17741561	293 = 17733361
194 = 17747661	244 = 17741441	294 = 17733241
195 = 17747561	245 = 17741361	295 = 17733141
196 = 17747441	246 = 17741241	296 = 17733061
197 = 17747361	247 = 17741141	297 = 17732761
198 = 17747241	248 = 17741061	298 = 17732641
199 = 17747141	249 = 17740761	299 = 17732541
200 = 17747061	250 = 17740641	300 = 17732461

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

301 = 17732341	351 = 17724141	401 = 17715761
302 = 17732261	352 = 17724061	402 = 17715641
303 = 17732161	353 = 17723761	403 = 17715541
304 = 17732041	354 = 17723641	404 = 17715461
305 = 17731761	355 = 17723541	405 = 17715341
306 = 17731641	356 = 17723461	406 = 17715261
307 = 17731541	357 = 17723341	407 = 17715161
308 = 17731461	358 = 17723261	408 = 17715041
309 = 17731341	359 = 17723161	409 = 17714741
310 = 17731261	360 = 17723041	410 = 17714661
311 = 17731161	361 = 17722741	411 = 17714561
312 = 17731041	362 = 17722661	412 = 17714441
313 = 17730741	363 = 17722561	413 = 17714361
314 = 17730661	364 = 17722441	414 = 17714241
315 = 17730561	365 = 17722361	415 = 17714141
316 = 17730441	366 = 17722241	416 = 17714061
317 = 17730361	367 = 17722141	417 = 17713761
318 = 17730241	368 = 17722061	418 = 17713641
319 = 17730141	369 = 17721741	419 = 17713541
320 = 17730061	370 = 17721661	420 = 17713461
321 = 17727741	371 = 17721561	421 = 17713341
322 = 17727661	372 = 17721441	422 = 17713261
323 = 17727561	373 = 17721361	423 = 17713161
324 = 17727441	374 = 17721241	424 = 17713041
325 = 17727361	375 = 17721141	425 = 17712741
326 = 17727241	376 = 17721061	426 = 17712661
327 = 17727141	377 = 17720761	427 = 17712561
328 = 17727061	378 = 17720641	428 = 17712441
329 = 17726761	379 = 17720541	429 = 17712361
330 = 17726641	380 = 17720461	430 = 17712241
331 = 17726541	381 = 17720341	431 = 17712141
332 = 17726461	382 = 17720261	432 = 17712061
333 = 17726341	383 = 17720161	433 = 17711741
334 = 17726261	384 = 17720041	434 = 17711661
335 = 17726161	385 = 17717741	435 = 17711561
336 = 17726041	386 = 17717661	436 = 17711441
337 = 17725761	387 = 17717561	437 = 17711361
338 = 17725641	388 = 17717441	438 = 17711241
339 = 17725541	389 = 17717361	439 = 17711141
340 = 17725461	390 = 17717241	440 = 17711061
341 = 17725341	391 = 17717141	441 = 17710761
342 = 17725261	392 = 17717061	442 = 17710641
343 = 17725161	393 = 17716761	443 = 17710541
344 = 17725041	394 = 17716641	444 = 17710461
345 = 17724741	395 = 17716541	445 = 17710341
346 = 17724661	396 = 17716461	446 = 17710261
347 = 17724561	397 = 17716341	447 = 17710161
348 = 17724441	398 = 17716261	448 = 17710041
349 = 17724361	399 = 17716161	449 = 17707761
350 = 17724241	400 = 17716041	450 = 17707641

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

451 = 17707541	501 = 17701341	551 = 17673141
452 = 17707461	502 = 17701261	552 = 17673061
453 = 17707341	503 = 17701161	553 = 17672761
454 = 17707261	504 = 17701041	554 = 17672641
455 = 17707161	505 = 17700741	555 = 17672541
456 = 17707041	506 = 17700661	556 = 17672461
457 = 17706741	507 = 17700561	557 = 17672341
458 = 17706661	508 = 17700441	558 = 17672261
459 = 17706561	509 = 17700361	559 = 17672161
460 = 17706441	510 = 17700241	560 = 17672041
461 = 17706361	511 = 17700141	561 = 17671761
462 = 17706241	512 = 17700061	562 = 17671641
463 = 17706141	513 = 17677761	563 = 17671541
464 = 17706061	514 = 17677641	564 = 17671461
465 = 17705741	515 = 17677541	565 = 17671341
466 = 17705661	516 = 17677461	566 = 17671261
467 = 17705561	517 = 17677341	567 = 17671161
468 = 17705441	518 = 17677261	568 = 17671041
469 = 17705361	519 = 17677161	569 = 17670741
470 = 17705241	520 = 17677041	570 = 17670661
471 = 17705141	521 = 17676741	571 = 17670561
472 = 17705061	522 = 17676661	572 = 17670441
473 = 17704761	523 = 17676561	573 = 17670361
474 = 17704641	524 = 17676441	574 = 17670241
475 = 17704541	525 = 17676361	575 = 17670141
476 = 17704461	526 = 17676241	576 = 17670061
477 = 17704341	527 = 17676141	577 = 17667741
478 = 17704261	528 = 17676061	578 = 17667661
479 = 17704161	529 = 17675741	579 = 17667561
480 = 17704041	530 = 17675661	580 = 17667441
481 = 17703741	531 = 17675561	581 = 17667361
482 = 17703661	532 = 17675441	582 = 17667241
483 = 17703561	533 = 17675361	583 = 17667141
484 = 17703441	534 = 17675241	584 = 17667061
485 = 17703361	535 = 17675141	585 = 17666761
486 = 17703241	536 = 17675061	586 = 17666641
487 = 17703141	537 = 17674761	587 = 17666541
488 = 17703061	538 = 17674641	588 = 17666461
489 = 17702761	539 = 17674541	589 = 17666341
490 = 17702641	540 = 17674461	590 = 17666261
491 = 17702541	541 = 17674341	591 = 17666161
492 = 17702461	542 = 17674261	592 = 17666041
493 = 17702341	543 = 17674161	593 = 17665761
494 = 17702261	544 = 17475041	594 = 17665641
495 = 17702161	545 = 17673741	595 = 17665541
496 = 17702041	546 = 17673661	596 = 17665461
497 = 17701761	547 = 17673561	597 = 17665341
498 = 17701641	548 = 17673441	598 = 17665261
499 = 17701541	549 = 17673361	599 = 17665161
500 = 17701461	550 = 17673241	600 = 17665041

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

601 = 17664741	651 = 17656541	701 = 17650341
602 = 17664661	652 = 17656461	702 = 17650261
603 = 17664561	653 = 17656341	703 = 17650161
604 = 17664441	654 = 17656261	704 = 17650041
605 = 17664361	655 = 17656161	705 = 17647761
606 = 17664241	656 = 17656041	706 = 17647641
607 = 17664141	657 = 17655761	707 = 17647541
608 = 17664061	658 = 17655641	708 = 17647461
609 = 17663761	659 = 17655541	709 = 17647341
610 = 17663641	660 = 17655461	710 = 17647261
611 = 17663541	661 = 17655341	711 = 17647161
612 = 17663461	662 = 17655261	712 = 17647041
613 = 17663341	663 = 17655161	713 = 17646741
614 = 17663261	664 = 17655041	714 = 17646661
615 = 17663161	665 = 17654741	715 = 17646561
616 = 17663041	666 = 17654661	716 = 17646441
617 = 17662741	667 = 17654561	717 = 17646361
618 = 17662661	668 = 17654441	718 = 17646241
619 = 17662561	669 = 17654361	719 = 17646141
620 = 17662441	670 = 17654241	720 = 17646061
621 = 17662361	671 = 17654141	721 = 17645741
622 = 17662241	672 = 17654061	722 = 17645661
623 = 17662141	673 = 17653761	723 = 17645561
624 = 17662061	674 = 17653641	724 = 17645441
625 = 17661741	675 = 17653541	725 = 17645361
626 = 17661661	676 = 17653461	726 = 17645241
627 = 17661561	677 = 17653341	727 = 17645141
628 = 17661441	678 = 17653261	728 = 17645061
629 = 17661361	679 = 17653161	729 = 17644761
630 = 17661241	680 = 17653041	730 = 17644641
631 = 17661141	681 = 17652741	731 = 17644541
632 = 17661061	682 = 17652661	732 = 17644461
633 = 17660761	683 = 17652561	733 = 17644341
634 = 17660641	684 = 17652441	734 = 17644261
635 = 17660541	685 = 17652361	735 = 17644161
636 = 17660461	686 = 17652241	736 = 17644041
637 = 17660341	687 = 17652141	737 = 17643741
638 = 17660261	688 = 17652061	738 = 17643661
639 = 17660161	689 = 17651741	739 = 17643561
640 = 17660041	690 = 17651661	740 = 17643441
641 = 17657741	691 = 17651561	741 = 17643361
642 = 17657661	692 = 17651441	742 = 17643241
643 = 17657561	693 = 17651361	743 = 17643141
644 = 17657441	694 = 17651241	744 = 17643061
645 = 17657361	695 = 17651141	745 = 17642761
646 = 17657241	696 = 17651061	746 = 17642641
647 = 17657141	697 = 17650761	747 = 17642541
648 = 17657061	698 = 17650641	748 = 17642461
649 = 17656761	699 = 17650541	749 = 17642341
650 = 17656641	700 = 17650461	750 = 17642261

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

751 = 17642161	801 = 17633761	851 = 17625561
752 = 17642041	802 = 17633641	852 = 17625441
753 = 17641761	803 = 17633541	853 = 17625361
754 = 17641641	804 = 17633461	854 = 17625241
755 = 17641541	805 = 17633341	855 = 17625141
756 = 17641461	806 = 17633261	856 = 17625061
757 = 17641341	807 = 17633161	857 = 17624761
758 = 17641261	808 = 17633041	858 = 17624641
759 = 17641161	809 = 17632741	859 = 17624541
760 = 17641041	810 = 17632661	860 = 17624441
761 = 17640741	811 = 17632561	861 = 17624341
762 = 17640661	812 = 17632441	862 = 17624261
763 = 17640561	813 = 17632361	863 = 17624161
764 = 17640441	814 = 17632241	864 = 17624041
765 = 17640361	815 = 17632141	865 = 17623741
766 = 17640241	816 = 17632061	866 = 17623661
767 = 17640141	817 = 17631741	867 = 17623561
768 = 17640061	818 = 17631661	868 = 17623441
769 = 17637741	819 = 17631561	869 = 17623361
770 = 17637661	820 = 17631441	870 = 17623241
771 = 17637561	821 = 17631361	871 = 17623141
772 = 17637441	822 = 17631241	872 = 17623061
773 = 17637361	823 = 17631141	873 = 17622761
774 = 17637241	824 = 17631061	874 = 17622641
775 = 17637141	825 = 17630761	875 = 17622541
776 = 17637061	826 = 17630641	876 = 17622461
777 = 17636761	827 = 17630541	877 = 17622341
778 = 17636641	828 = 17630461	878 = 17622261
779 = 17636541	829 = 17630341	879 = 17622161
780 = 17636461	830 = 17630261	880 = 17622041
781 = 17636341	831 = 17630161	881 = 17621761
782 = 17636261	832 = 17630041	882 = 17621641
783 = 17636161	833 = 17627761	883 = 17621541
784 = 17636041	834 = 17627641	884 = 17621461
785 = 17635761	835 = 17627541	885 = 17621341
786 = 17635641	836 = 17627461	886 = 17621261
787 = 17635541	837 = 17627341	887 = 17621161
788 = 17635461	838 = 17627261	888 = 17621041
789 = 17635341	839 = 17627161	889 = 17620741
790 = 17635261	840 = 17627041	890 = 17620661
791 = 17635161	841 = 17626741	891 = 17620561
792 = 17635041	842 = 17626661	892 = 17620441
793 = 17634741	843 = 17626561	893 = 17620361
794 = 17634661	844 = 17626441	894 = 17620241
795 = 17634561	845 = 17626361	895 = 17620141
796 = 17634441	846 = 17626241	896 = 17620061
797 = 17634361	847 = 17626141	897 = 17617761
798 = 17634241	848 = 17626061	898 = 17617641
799 = 17634141	849 = 17625741	899 = 17617541
800 = 17634061	850 = 17625661	900 = 17617461

TABLE A (Contd)

TRANSLATOR SIZE INDICATOR TABLE

901 = 17617341	943 = 17612161	985 = 17604741
902 = 17617261	944 = 17612041	986 = 17604661
903 = 17617161	945 = 17611761	987 = 17604561
904 = 17617041	946 = 17611641	988 = 17604441
905 = 17616741	947 = 17611541	989 = 17604361
906 = 17616661	948 = 17611461	990 = 17604241
907 = 17616561	949 = 17611341	991 = 17604141
908 = 17616441	950 = 17611261	992 = 17604061
909 = 17616361	951 = 17611161	993 = 17603761
910 = 17616241	952 = 17611041	994 = 17603641
911 = 17616141	953 = 17610741	995 = 17603541
912 = 17616061	954 = 17610661	996 = 17603461
913 = 17615741	955 = 17610561	997 = 17603341
914 = 17615661	956 = 17610441	998 = 17603261
915 = 17615561	957 = 17610361	999 = 17603161
916 = 17615441	958 = 17610241	1000 = 17603041
917 = 17615361	959 = 17610141	1001 = 17602741
918 = 17615241	960 = 17610061	1002 = 17602661
919 = 17615141	961 = 17607741	1003 = 17602561
920 = 17615061	962 = 17607661	1004 = 17602441
921 = 17614761	963 = 17607561	1005 = 17602361
922 = 17614641	964 = 17607441	1006 = 17602241
923 = 17614541	965 = 17607361	1007 = 17602141
924 = 17614461	966 = 17607241	1008 = 17602061
925 = 17614341	967 = 17607141	1009 = 17601741
926 = 17614261	968 = 17607061	1010 = 17601661
927 = 17624161	969 = 17606761	1011 = 17601561
928 = 17614041	970 = 17606641	1012 = 17601441
929 = 17613741	971 = 17606541	1013 = 17601361
930 = 17613661	972 = 17606461	1014 = 17601241
931 = 17613561	973 = 17606341	1015 = 17601141
932 = 17613441	974 = 17606261	1016 = 17601061
933 = 17613361	975 = 17606161	1017 = 17600761
934 = 17613241	976 = 17606041	1018 = 17600641
935 = 17613141	977 = 17605761	1019 = 17600541
936 = 17613061	978 = 17605641	1020 = 17600461
937 = 17612761	979 = 17605541	1021 = 17600341
938 = 17612641	980 = 17605461	1022 = 17600261
939 = 17612541	981 = 17605341	1023 = 17600161
940 = 17612461	982 = 17605261	xxxx = xxxxxxxx
941 = 17612341	983 = 17605161	xxxx = xxxxxxxx
942 = 17612261	984 = 17605041	xxxx = xxxxxxxx

LINE TRANSLATOR EXPANSION TABLE

	21							0
WORD 0								
WORD 1								
WORD 2	(P)	THR	EHT		CTH	CET		SPEED CALLING LIST SELECTOR
OPTION 2	(21)	(20)	(19)		(14)	(13)		(9-0)
WORD 3								

CTH-1 = CUSTOMER PERMITTED TO CHANGE 30-CODE SPEED CALLING LIST
CET-1 = CUSTOMER PERMITTED TO CHANGE 8-CODE SPEED CALLING LIST
THR-1 = 30-CODE LIST AVAILABLE
EHT-1 = 8-CODE LIST AVAILABLE

Fig. 1—Four-Word Expansion Showing the Portion Used for Speed Calling

SPEED CALLING LIST - TEN DIGIT, NO PREFIX

21						0
P (21)	0 (20)	D8 (19-16)	D0 (15-12)	D1 (11-8)	D2 (7-4)	D3 (3-0)
P (21)	0 (20)	D9 (19-16)	D4 (15-12)	D5 (11-8)	D6 (7-4)	D7 (3-0)

Fig. 2—Translation Arrangement for Storing up to Ten Digits With No Prefix

SPEED CALLING LIST - TEN DIGIT, WITH PREFIX

21						0
P (21)	1 (20)	D8 (19-16)	D0 (15-12)	D1 (11-8)	D2 (7-4)	D3 (3-0)
P (21)	PFX (20)	D9 (19-16)	D4 (15-12)	D5 (11-8)	D6 (7-4)	D7 (3-0)

PFX 1 = PREFIX DIGIT "1"
0 = PREFIX DIGIT "0"

Fig. 3—Translation Arrangement for Storing up to Ten Digits Plus a Prefix

SPEED CALLING LIST - ELEVEN TO FOURTEEN DIGITS

23. 22.	21.	20.	19. 18. 17 16.	15. 14. 13. 12.	11. 10. 9. 8.	7. 6. 5. 4.	3. 2. 1. 0.
	P		SDC		EXPANSION TABLE & ENTRY TABLE		ENTRY
	P		1 1 1 1	D4	D5	D6	D7

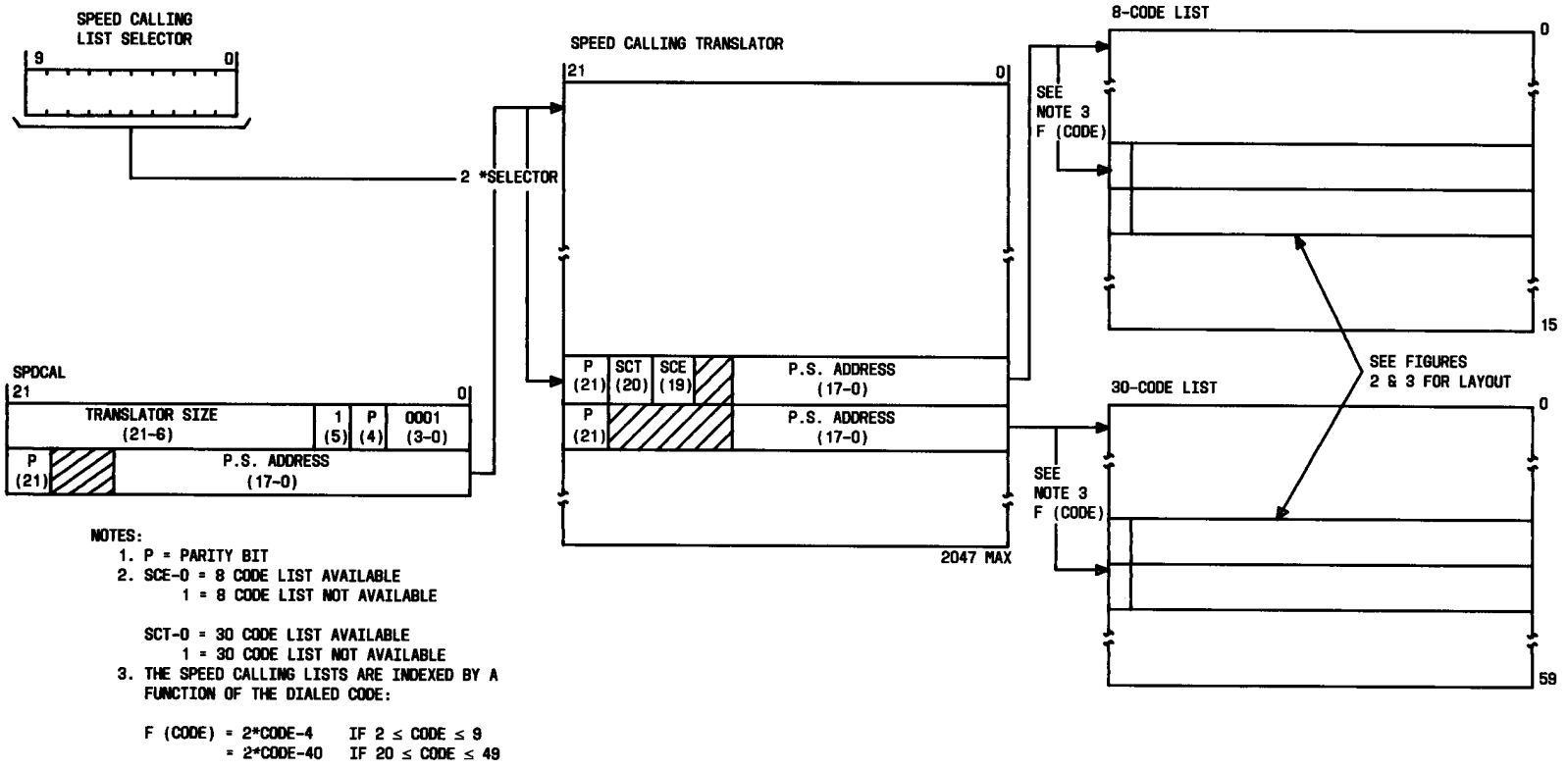
GENERAL PURPOSE EXPANSION TABLE ENTRY

23. 22.	21.	20.	19. 18. 17 16.	15. 14. 13. 12.	11. 10. 9. 8.	7. 6. 5. 4.	3. 2. 1. 0.
	P		D12	D0	D1	D2	D3
	P		D13	D8	D9	D10	D11

DN = THE DIGITS OF THE NUMBER TO BE CALLED.
THE DIGITS "1" TO "9" ARE REPRESENTED BY
BCD ENCODING; DIGIT "0" BY BINARY 1010

SDC = THE NUMBER OF DIGITS STORED IN THIS ENTRY.

Fig. 4—Translation Arrangement for Storing 11 to 14 Digits

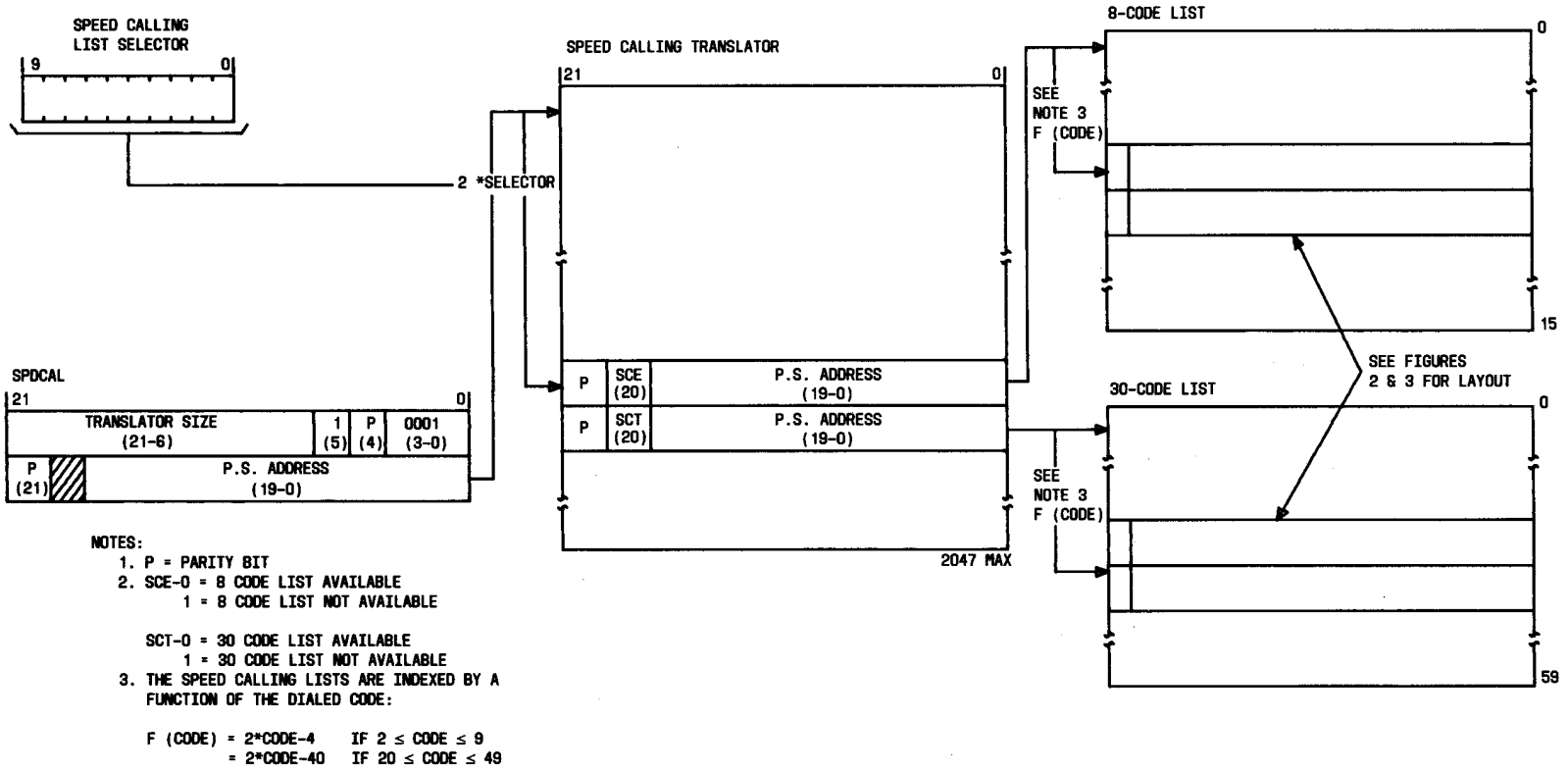


NOTES:
1. P = PARITY BIT
2. SCE-0 = 8 CODE LIST AVAILABLE
   1 = 8 CODE LIST NOT AVAILABLE

   SCT-0 = 30 CODE LIST AVAILABLE
   1 = 30 CODE LIST NOT AVAILABLE
3. THE SPEED CALLING LISTS ARE INDEXED BY A FUNCTION OF THE DIALED CODE:

   F (CODE) = 2*CODE-4 IF $2 \leq$ CODE ≤ 9
   = 2*CODE-40 IF $20 \leq$ CODE ≤ 49

Fig. 5—Speed Calling Translation Arrangement for No. 2 ESS With LO-1 or EF-1 Generic



NOTES:

1. P = PARITY BIT
2. SCE-0 = 8 CODE LIST AVAILABLE
   1 = 8 CODE LIST NOT AVAILABLE

   SCT-0 = 30 CODE LIST AVAILABLE
   1 = 30 CODE LIST NOT AVAILABLE
3. THE SPEED CALLING LISTS ARE INDEXED BY A FUNCTION OF THE DIALED CODE:

   F (CODE) = 2*CODE-4 IF $2 \leq$ CODE ≤ 9
   = 2*CODE-40 IF $20 \leq$ CODE ≤ 49

Fig. 6—Speed Calling Translation Arrangement for EF-2, 2B-EF-1, or 2B-EF-2 Generic

ADDING SPEED CALLING

OFFICE_____ SPDCAL-1 FORM

DATE_____ CHIPS Address Range(.740134...) START

(.740135..) STOP

NOTE: Enter data from right to left starting with the least significant digit.

1. (a) Number of 8-code lists required = 20

   (b) Number of 30-code lists required = 14

2. Number of two-word entries in Speed Calling Translator Table = 20

3. MTI SPDCAL CHIPS DATA

	ADDRESS	OLD CONTENTS	NEW CONTENTS
(a)	740134	00000077	(c) 17775461
(d)	740135	(e) 00000000	(f) 06370000

Fig. 7—Example of a Completed SPDCAL-1 Form

SPEED CALLING TRANSLATOR
8-CODE AND 30-CODE SPDCAL-2 FORM

OFFICE Fieldale
DATE 4-12-79

CHIPS Address Range(.....)
START
(0637050)
STOP

Circle (NEW) or OLD

NOTE: Enter data from right to left starting with the least significant digit.

LIST NUMBER	TYPE LIST		ADDRESS	OLD CONTENTS	NEW CONTENTS
0	8	START+ 0 octal	0637000	00000000	04200102
0	30	START+ 1 octal	0637001	---1----	10010102
1	8	START+ 2 octal	0637002	---1----	06443262
1	30	START+ 3 octal	0637003	---1----	06443572
2	8	START+ 4 octal	0637004	---1----	--------
2	30	START+ 5 octal	0637005	---1----	--------
3	8	START+ 6 octal	0637006	---1----	--------
3	30	START+ 7 octal	0637007	---1----	--------
4	8	START+10 octal	0637010	---1----	--------
4	30	START+11 octal	0637011	---1----	--------
5	8	START+12 octal	0637012	---1----	--------
5	30	START+13 octal	0637013	---1----	--------
6	8	START+14 octal	0637014	---1----	--------
6	30	START+15 octal	0637015	---1----	--------
7	8	START+16 octal	0637016	---1----	--------
7	30	START+17 octal	0637017	00000000	--------

Fig. 8—Example of a Completed SPDCAL-2 Form (Sheet 1 of 2)

Circle NEW or OLD

SPDCAL-2 FORM

LIST NUMBER	TYPE LIST		ADDRESS	OLD CONTENTS	NEW CONTENTS
8	8	START+ 20 octal	0637020	0000000	
8	30	START+ 21 octal	0637021		
9	8	START+ 22 octal	0637022		
9	30	START+ 23 octal	0637023		
10	8	START+ 24 octal	0637024		
10	30	START+ 25 octal	0637025		
11	8	START+ 26 octal	0637026		
11	30	START+ 27 octal	0637027		
12	8	START+ 30 octal	0637030		
12	30	START+ 31 octal	0637031		
13	8	START+ 32 octal	0637032		
13	30	START+ 33 octal	0637033		
14	8	START+ 34 octal	0637034		
14	30	START+ 35 octal	0637035		
15	8	START+ 36 octal	0637036		
15	30	START+ 37 octal	0637037		
16	8	START+ 40 octal	0637040		
16	30	START+ 41 octal	0637041		
17	8	START+ 42 octal	0637042		
17	30	START+ 43 octal	0637043		
18	8	START+ 44 octal	0637044		
18	30	START+ 45 octal	0637045		
19	8	START+ 46 octal	0637046		
19	30	START+ 47 octal	0637047		
20	8	START+ 50 octal	0637050	0000000	
0	30	START+ 1 octal			
1	8	START+ 2 octal			
1	30	START+ 3 octal			
2	8	START+ 4 octal			
2	30	START+ 5 octal			
3	8	START+ 6 octal			
3	30	START+ 7 octal			
4	8	START+ 0 octal			
4	30	START+ 1 octal			
5	8	START+ 2 octal			
5	30	START+ 3 octal			
6	8	START+ 4 octal			
6	30	START+ 5 octal			
7	8	START+ 6 octal			
7	30	START+ 7 octal			

Fig. 8—Example of a Completed SPDCAL-2 Form (Sheet 2 of 2)

EXPANDING SPEED CALLING WORKSHEET

SPDCAL-3 FORM

OFFICE Fieldale
DATE 4-12-79

CHIPS Address Range(.740134. START) (.740135. STOP)

NOTE: Enter data from right to left starting with the least significant digit.

1. SPDCAL MTI CHIPS DATA

	ADDRESS	OLD CONTENTS	NEW CONTENTS
a)	740134	b) 17755361	c) 17753361
d)	740135	e) 01110400	f) 11000651

2. (a) Value of item 1(b) from Table A = 149

   (b) Item 2(a) times two = 298.

   (c) Convert to octal 452.

3. (a) Seven least significant digits of item 1(e) = 1110400 octal

   (b) Item 2(c) + item 3(a) −1 = 1111051 octal

4. (a) New 8-code lists = 16 (b) New 30-code lists = 10

5. (a) 8-code slots = 0 (b) 30-code slots = 3

6. (a) 4(a) − 5(a) = 16 (b) 4(b) − 5(b) = 7

7. (a) Larger value in item 6 + value in item 2(a) = 165

   (b) Item 7(a) times 2 = 330

Fig. 9—Example of a Completed SPDCAL-3 Form

ADDING SPEED CALLING

OFFICE_____ SPDCAL-1 FORM

DATE_____ CHIPS Address Range(.....)
START
(.....)
STOP

NOTE: Enter data from right to left starting with the least significant digit.

1. (a) Number of 8-code lists required = _____

   (b) Number of 30-code lists required = _____

2. Number of two-word entries in Speed Calling Translator Table = _____

3. MTI SPDCAL CHIPS DATA

ADDRESS	OLD CONTENTS	NEW CONTENTS
(a) _ _ _ _ _ _ _	(b) _ _ _ _ _ _ _ _	(c) _ _ _ _ _ _ _ _
(d) _ _ _ _ _ _ _	(e) _ _ _ _ _ _ _ _	(f) _ _ _ _ _ _ _ _

Fig. 10—Reproducible SPDCAL-1 Form

SPEED CALLING TRANSLATOR
8-CODE AND 30-CODE SPDCAL-2 FORM

OFFICE_____
DATE_____

CHIPS Address Range(.....)
START
(.....)
STOP

Circle NEW or OLD

NOTE: Enter data from right to left starting with the least significant digit.

LIST NUMBER	TYPE LIST		ADDRESS	OLD CONTENTS	NEW CONTENTS
0	8	START+ 0 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
0	30	START+ 1 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
1	8	START+ 2 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
1	30	START+ 3 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
2	8	START+ 4 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
2	30	START+ 5 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
3	8	START+ 6 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
3	30	START+ 7 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
4	8	START+10 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
4	30	START+11 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
5	8	START+12 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
5	30	START+13 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
6	8	START+14 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
6	30	START+15 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
7	8	START+16 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
7	30	START+17 octal	_ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _

Fig. 11—Reproducible SPDCAL-2 Form (Sheet 1 of 2)

Circle NEW or OLD

SPDCAL-2 FORM

LIST NUMBER	TYPE LIST		ADDRESS	OLD CONTENTS	NEW CONTENTS
_ _ _ 8	8	START+_ _ _ 0 octal			
_ _ _ 8	30	START+_ _ _ 1 octal			
_ _ _ 9	8	START+_ _ _ 2 octal			
_ _ _ 9	30	START+_ _ _ 3 octal			
_ _ _ 0	8	START+_ _ _ 4 octal			
_ _ _ 0	30	START+_ _ _ 5 octal			
_ _ _ 1	8	START+_ _ _ 6 octal			
_ _ _ 1	30	START+_ _ _ 7 octal			
_ _ _ 2	8	START+_ _ _ 0 octal			
_ _ _ 2	30	START+_ _ _ 1 octal			
_ _ _ 3	8	START+_ _ _ 2 octal			
_ _ _ 3	30	START+_ _ _ 3 octal			
_ _ _ 4	8	START+_ _ _ 4 octal			
_ _ _ 4	30	START+_ _ _ 5 octal			
_ _ _ 5	8	START+_ _ _ 6 octal			
_ _ _ 5	30	START+_ _ _ 7 octal			
_ _ _ 6	8	START+_ _ _ 0 octal			
_ _ _ 6	30	START+_ _ _ 1 octal			
_ _ _ 7	8	START+_ _ _ 2 octal			
_ _ _ 7	30	START+_ _ _ 3 octal			
_ _ _ 8	8	START+_ _ _ 4 octal			
_ _ _ 8	30	START+_ _ _ 5 octal			
_ _ _ 9	8	START+_ _ _ 6 octal			
_ _ _ 9	30	START+_ _ _ 7 octal			
_ _ _ 0	8	START+_ _ _ 0 octal			
_ _ _ 0	30	START+_ _ _ 1 octal			
_ _ _ 1	8	START+_ _ _ 2 octal			
_ _ _ 1	30	START+_ _ _ 3 octal			
_ _ _ 2	8	START+_ _ _ 4 octal			
_ _ _ 2	30	START+_ _ _ 5 octal			
_ _ _ 3	8	START+_ _ _ 6 octal			
_ _ _ 3	30	START+_ _ _ 7 octal			
_ _ _ 4	8	START+_ _ _ 0 octal			
_ _ _ 4	30	START+_ _ _ 1 octal			
_ _ _ 5	8	START+_ _ _ 2 octal			
_ _ _ 5	30	START+_ _ _ 3 octal			
_ _ _ 6	8	START+_ _ _ 4 octal			
_ _ _ 6	30	START+_ _ _ 5 octal			
_ _ _ 7	8	START+_ _ _ 6 octal			
_ _ _ 7	30	START+_ _ _ 7 octal			

Fig. 11—Reproducible SPDCAL-2 Form (Sheet 2 of 2)

EXPANDING SPEED CALLING WORKSHEET

SPDCAL-3 FORM

OFFICE_____
DATE_____

CHIPS Address Range(.....)
START
(.....)
STOP

NOTE: Enter data from right to left starting with the least significant digit.

1. SPDCAL MTI CHIPS DATA

ADDRESS	OLD CONTENTS	NEW CONTENTS
a) _ _ _ _ _ _ _	b) _ _ _ _ _ _ _ _	c) _ _ _ _ _ _ _ _
d) _ _ _ _ _ _ _	e) _ _ _ _ _ _ _ _	f) _ _ _ _ _ _ _ _

2. (a) Value of item 1(b) from Table A = _____

   (b) Item 2(a) times two = _____.

   (c) Convert to octal _____.

3. (a) Seven least significant digits of item 1(e) = _ _ _ _ _ _ _ octal

   (b) Item 2(c) + item 3(a) -1 = _ _ _ _ _ _ _ octal

4. (a) New 8-code lists = _____ (b) New 30-code lists = _____

5. (a) 8-code slots = _____ (b) 30-code slots = _____

6. (a) 4(a) - 5(a) = _____ (b) 4(b) - 5(b) = _____

7. (a) Larger value in item 6 + value in item 2(a) = _____

   (b) Item 7(a) times 2 = _____

Fig. 12—Reproducible SPDCAL-3 Form