

MANUAL TRANSLATION MODIFICATION PROCEDURE (LO-1, EF-1 AND EF-2)
GENERAL DESCRIPTION
NO. 2 AND NO. 2B ELECTRONIC SWITCHING SYSTEMS

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in program store (CHIPS) procedure. Unlike the recent change procedure, the manual translation modification procedures do not have a built-in program control. Therefore, any item that can be recent changed into translations is not dealt with by a manual translation modification procedure. Heretofore, many translator and subtranslator tables in the No. 2 ESS or No. 2B ESS translation structure could not be defined, by any documented procedure, in a working office by local effort only. Also; heretofore, there has not been a manual on-site procedure to allocate call store or program store. These changes required on ODA run. Now, with the advent of manual translation modification procedures, these translation needs have been met.

1.02 This is the initial issue of this section.

1.03 A manual translation modification procedure is a step-by-step procedure which includes all of the necessary functions to perform a particular translation modification. Several manual translation modification procedures have been written to cover several different translation change procedures. Each procedure consists of a detailed step-by-step procedure, and a set of translator change forms, one form for every translation table involved in a particular change procedure. The forms are designed to record the ESS memory location, original data and any new overwrite data related to a translation table. This section covers general information and index applicable to all of the manual translation modification procedures.

1. GENERAL

A. Purpose

1.01 A set of on-site manual translation modification procedures has been developed to cover all the operations necessary to add, delete, or modify translation data, by manual means using the change

B. When to Use the Procedure

1.04 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. A manual translation change procedure should only be used when there is no practical alternative and normal scheduling of an ODA update procedure is

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not feasible. The ODA update procedures can be performed with a greater accuracy due to the inherent error check in the ODA routine. 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.

C. Cautions

1.05 Through any hand translation change procedure, the craftsperson performing the process must execute the procedure error free. The parity of the binary bits on any word modified must end up even. In the event the parity is not even, the first time an ESS program references an odd parity word, a system initialization will occur. Calculating the value of the offices' translation expansion block tables size indicators is difficult. If the calculation is done incorrectly, it will cause translation tables to overlap. The table size indicator is of particular importance, because it is a two's complement and is decremented by incrementing it by the number of table entries used, and *not* by words used. In addition, there is a chance of error due to the three numbering systems, binary, octal, and decimal, that must be used together. Therefore, care must be taken to keep track of which numbering system is being used before the teletypewriter input messages or arithmetic operations are performed.

2. INITIAL REQUIREMENTS

A. ODA Run

2.01 Translation store tables for controlling spare call store and translation store were developed to go along with the related BSP procedure for CHIPS. These procedures require the spare call store and translation store be organized by the ODA. The ODA program assembles the spare call store and spare translation store in new tables located by the master table index. This provides a permanent patch area record in an offices' translation memory.

2.02 Some manual translation modification procedures are primarily for use with LO-1 and EF-1 generics. Others are also compatible with the EF-2 generic.

2.03 Prior to any manipulation of call store or translation store area, users will be required to follow a procedure documenting the changes to

be made on the appropriate translator change forms. These procedures will require the use of the appropriate BSP and a No. 2 or No. 2B ESS maintenance teletypewriter to read the current translator contents. The translator contents are then examined for subsequent recording on the translator change forms. The forms are structured to show any changes from the initial contents for each word in each translator involved. After the translator change forms are completed, the information is placed in a CHIPS format using the procedures in Section 232-127-303 for No. 2 ESS or 232-327-303 for No. 2B ESS. These procedures transfer all the changes recorded on the translator change forms onto the CHIPS message guide (CMG-1 for No. 2 ESS or CMG-2 for No. 2B ESS) form. This form provides the user with all the CHIPS messages needed to transfer the new translation changes onto the No. 2 ESS program store cards or into the No. 2B ESS main store. The actual transfer is made using the CHIPS procedures in Section 232-004-303 for No. 2 ESS or 232-304-303 for No. 2B ESS along with the completed CMG-1 or CMG-2 form.

B. Tables (SPAREPS and SPARECS)

2.04 The manual translation modification procedure requires two 10-word master table index tables "SPAREPS" and "SPARECS". The two tables are used to locate, use and release translation store and transient cleared call store blocks. The two tables provide bookkeeping capability for up to 200 blocks of translation store and 200 blocks of call store spare area. The call store and translation store translators can independently have up to ten subtranslators, which may contain up to 20 pointers each. Each subtranslator is 40 words and uses two words for the pointer to each spare block. Each pointer uses one word to store the block size and one to store the block location. Call store blocks can be of any size or location as long as they are unused and found in a transient clearing table. Translation store blocks can be at any unused translation address; however, it may not extend over the program store address limitations or into the reserved address maintenance locations.

C. CHIPS

2.05 At the end of the procedure for completing the translator change forms, the forms will show the current memory contents and the desired memory contents, to provide a new translation

configuration. To activate the new translations all changes must be transferred into the ESS memory by CHIPS procedures. The CHIPS formatting, Section 232-127-303, for No. 2 ESS or 232-327-303 for No. 2B ESS, should be used to direct users to form the CHIPS input messages for the ESS. After the appropriate forms are initiated and sorted in ascending address order, even parity is calculated for all of the change data. The CHIPS input message sequence is then written to execute the changes on the forms. When all of the CHIPS messages are written for all of the changes on all the forms of the desired procedure, a subsequent CHIPS execution procedure provided in Section 232-004-303 for No. 2 ESS or 232-304-303 for No. 2B ESS is used to put the changes into program store.

3. USER REQUIREMENTS

NUMBERING SYSTEMS

3.01 Due to the manual manipulation of data in the manual translation modification procedure sections, all users should be capable of adding and subtracting in the octal numbering system. All address calculations and indexing is done by octal addition and subtraction. The user must be capable

of calculating parity by adding the binary bits that make up the contents of the new translator words.

3.02 The following binary to octal conversion (Table A) illustrations are included in this section to refresh the users memory with adding and subtracting in octal, conversion of binary to octal and calculating parity.

TABLE A

BINARY TO OCTAL CONVERSION

BINARY	=	OCTAL
001	=	1
010	=	2
011	=	3
100	=	4
101	=	5
110	=	6
111	=	7

BINARY TO OCTAL CONVERSION:

BINARY = 1011011111001

OCTAL = 1 3 3 7 1

TABLE B

OCTAL SCALE FOR ADDITION AND SUBTRACTION

		NUMBER HEADING							
		0	1	2	3	4	5	6	7
NUMBER HEADING	0	0	1	2	3	4	5	6	7
	1	1	2	3	4	5	6	7	10
	2	2	3	4	5	6	7	10	11
	3	3	4	5	6	7	10	11	12
	4	4	5	6	7	10	11	12	13
	5	5	6	7	10	11	12	13	14
	6	6	7	10	11	12	13	14	15
	7	7	10	11	12	13	14	15	16

Numbers of 7 and below may be quickly added or subtracted with the use of the octal scale for addition and subtraction provided in Table B. For instance: to add octal 4 to octal 5, simply locate 4 on the horizontal number heading and 5 on the vertical number heading. Follow the column and row of numbers down and across, to a crosspoint. The summation is found to be 11. To subtract octal 3 from octal 10, locate 3 on the horizontal number heading, then follow the column of number down to 10. The remainder (5) is located in the vertical number heading row to the left of 10.

CALCULATING PARITY:

OCTAL NO.		BINARY NO.		PARITY
0	—	000	—	EVEN
1	—	001	—	ODD
2	—	010	—	ODD
3	—	011	—	EVEN
4	—	100	—	ODD
5	—	101	—	EVEN
6	—	110	—	EVEN
7	—	111	—	ODD

The following example is given to show the procedure for calculating parity.

- (1) given, octal word: (P) 0 1 2 4 5 6
- (2) binary equivalent: 000 001 010 011 100
101 110
- (3) add the digits in the binary number, in decimal, to obtain an odd or even number. In the example there are 9 ones. Since 9 is an odd decimal number the parity bit must be set to 1. The parity bit in the example is the eighth octal bit; however, in some cases the parity bit may be bit 4. Refer to the appropriate figure in the PA to determine which bit is the parity bit.

4. DESCRIPTION AND APPLICATION OF MANUAL TRANSLATION MODIFICATION PROCEDURES

A. Listing and Description of Procedures

4.01 The following is a listing and description of the sections involved in the manual translation modification procedure:

SECTION	TITLE	DESCRIPTION
232-127-101	Manual Translation Modification Procedure General Description (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Description of the Manual Translation Mod. Change Procedures
232-127-301	Allocation of Call Store (LO-1 and EF-1) No. 2 and No. 2B ESS	Procedure to allocate call store memory translations or spare
232-127-302	Allocation of Program Store (LO-1 and EF-1) No. 2 and No. 2B ESS	Procedure to allocate program store Memory to translations or spare
232-127-303	Change in Program Store Formatting (LO-1, EF-1, and EF-2) No. 2 ESS	Procedure for formatting changes for subsequent CHIPS
232-127-310	Allocating New Centrex Group/ Changing Size (EF-1) No. 2 and No. 2B ESS	Procedures for adding new centrex groups or changing size of existing centrex groups
232-127-311	Allocating FSH Group/Changing Size (EF-2) No. 2 and No. 2B ESS	Procedures for adding new flexible station hunt group or changing size of FSH groups
232-127-312	Allocating New Trunk Group/ Changing Size (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Procedures for adding a new trunk group or changing size of a trunk group
232-127-313	Allocating New MLHG and AIOD/ Changing MLHG Size (LO-1, EF-1, and EF-2) No. 1 and No. 2B ESS	Procedures for adding a new multiline hunt group or changing size of a MLHG
232-127-314	Adding Additional Trunks/Service Ckts (LO-1 and EF-1) No. 2 ESS	Procedures for changing and constucting translation data necessary to define new trunks and service circuits
232-127-315	Allocation of New Expansion Tables (LO-1 and EF-1) No. 2 and No. 2B ESS	Allocates general expansion tables of 2, 4 and 6 words
232-127-316	Allocation of New Carrier Group Table (EF-1 and EF-2) No. 2 and No. 2B ESS	Provides additional carrier group number tables and translation data defining the tables
232-127-317	Changing NOCBCD Table (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Changes the translation data in the nor- malized office code binary coded decimal table
232-127-318	Changing TOTANI Table (LO-1 and EF-1) No. 2 and No. 2B ESS	Provides a manual means of changing the terminating office test access number index table
232-127-319	Allocating New SIM Group/ Changing Size (EF-1 and EF-2) No. 2 and No. 2B ESS	Procedures for providing and changing size of simulated facilities groups

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SECTION	TITLE	DESCRIPTION
232-127-320	Adding Non-CTX Speed Calling Translators (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Provides necessary translation changes to point to non-centrex calling lists
232-127-321	Allocating Additional ACOF Tables (EF-2 and EF-2) No. 2 and No. 2B ESS	Provide necessary translation changes to define new attendant control of facilities
232-127-322	Increasing Flexible CS Block (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Description to be provided at a later date
232-127-326	Changing Range Extension Capability (LO-1, EF-1, and EF-2) No. 2 and No. 2B ESS	Changes translation code indicating which concentrator groups are equipped with range extension
232-127-327	Adding Additional Trunks/Service Ckts (EF-2) No. 2 and No. 2B ESS	Procedures for changing and constructing translation data necessary to define new trunks and service circuits
232-327-303	Change in Program Store Formatting (EF-1 and EF-2) No. 2B ESS	Procedure for formatting changes for subsequent CHIPS
232-327-314	Adding Additional Trunks/Service Ckts (EF-1) No. 2B ESS	Procedures for changing and constructing translation data necessary to define new trunks and service circuits

B. Forms and Tables

4.02 Each of the sections listed in 4.01 contains examples of the necessary unique forms, as they would appear after the proper entries are made.

5. APPENDIX 1 AND APPENDIX 2

5.01 Appendix 1 of this section contains the blank translation change forms and tables used in some of the procedural sections listed in the index above. Other blank translation change forms and

tables will be in the individual sections as they become available.

5.02 In appendix 2 there are 4 pages of decimal to octal conversion tables. The tables are to be used as a aid to quickly convert decimal numbers from 0 to 1019, to octal numbers from 0 to 1773; or to convert octal numbers to decimal numbers. The decimal numbers in the tables are located on the left side of each column and are indicated by the base (10) designation. The octal numbers, in the tables, are located on the right side of each column and are indicated by the base (8) designation.

SECTION 232-127-101

Appendix 1

11. FOR MISCELLANEOUS TRUNK AND SERVICE CIRCUITS ONLY

TSCK-1

PD BUFFER ADDRESS

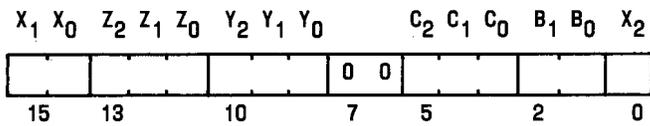
CPD FR - 10 $\overline{C_2} \overline{C_1} \overline{C_0}^2$

NEST - 10 $\overline{X_2} \overline{X_1} \overline{X_0}^2$

CARD - 10 $\overline{Z_2} \overline{Z_1} \overline{Z_0}^2$

POINT - 10 $\overline{Y_2} \overline{Y_1} \overline{Y_0}^2$

BUFFER - 10 $\overline{B_1} \overline{B_0}^2$



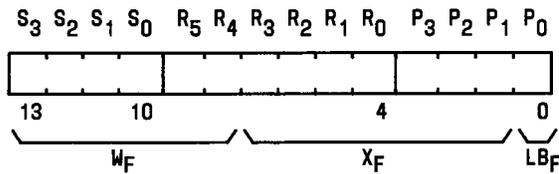
PD BUFFER ADDRESS - - - - - 8

12. FIRST SCAN POINT NUMBER

TRUNK SCANNER - - 10 $\overline{S_3} \overline{S_2} \overline{S_1} \overline{S_0}^2$

ROW - - 10 $\overline{R_5} \overline{R_4} \overline{R_3} \overline{R_2} \overline{R_1} \overline{R_0}^2$

COLUMN POINT - - 10 $\overline{P_3} \overline{P_2} \overline{P_1} \overline{P_0}^2$



$W_f = - - - 8$

$X_f = - - - 8$

$L_b f = -$

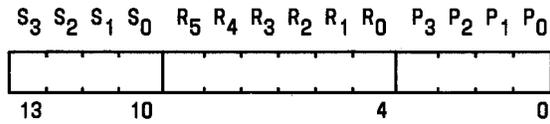
13. PRINCIPLE SCAN POINT NUMBER

TSCK-1

TRUNK SCANNER --10 $\overline{S_3} \overline{S_2} \overline{S_1} \overline{S_0}$

ROW --10 $\overline{R_5} \overline{R_4} \overline{R_3} \overline{R_2} \overline{R_1} \overline{R_0}$

COLUMN POINT --10 $\overline{P_3} \overline{P_2} \overline{P_1} \overline{P_0}$



14. TERMINAL EQUIPMENT NUMBER

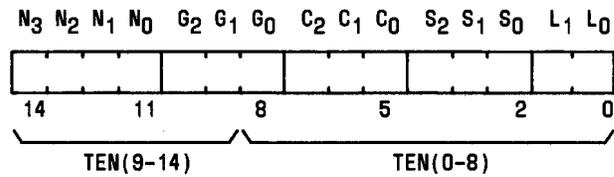
NETWORK --10 $\overline{N_3} \overline{N_2} \overline{N_1} \overline{N_0}^2$

CONCENTRATOR GROUP -10 $\overline{G_2} \overline{G_1} \overline{G_0}^2$

CONCENTRATOR -10 $\overline{C_2} \overline{C_1} \overline{C_0}^2$

SWITCH -10 $\overline{S_2} \overline{S_1} \overline{S_0}^2$

LEVEL -10 $\overline{L_1} \overline{L_0}^2$



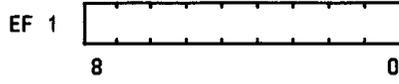
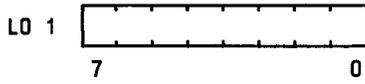
TEN(9-14) = --8

TEN(0-8) = --8

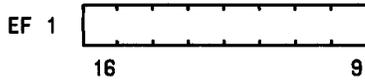
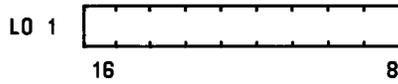
SECTION 232-127-101
Appendix 1

TSCK-1

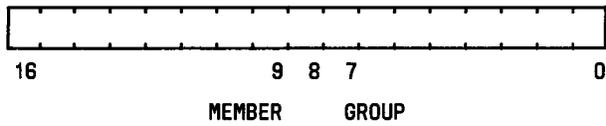
15. TRUNK GROUP ---10 ---8



16. MEMBER ---10 ---8



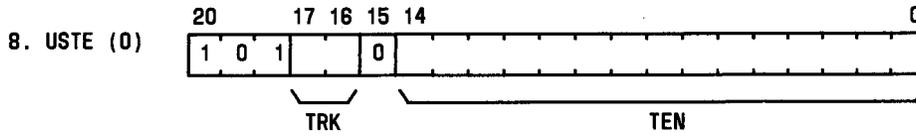
17. MEMBER AND GROUP



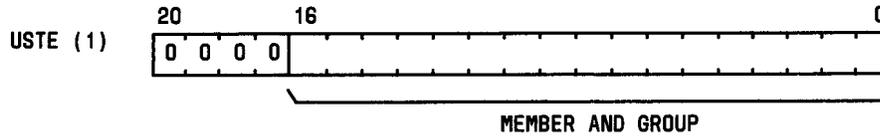
SECTION 232-127-101

Appendix 1

TSCK-2



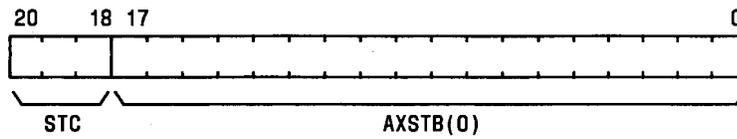
PS LOCATION -----8 NEW CONTENTS -----8



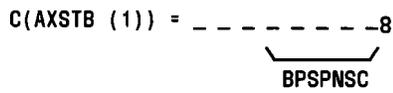
PS LOCATION -----8 NEW CONTENTS -----8

SPN TRANSLATOR (MISCELLANEOUS TRUNK AND SERVICE CIRCUITS)

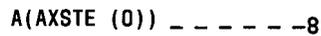
1. A(SPTBL) = -----8
 2. C(SPTBL) = -----8
 3. + W_F = -----8
-
4. A(SPTEV) = -----8
 4. C(SPTEV) = -----8



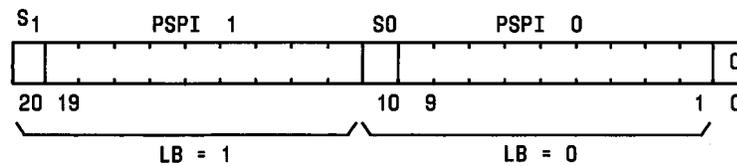
- A(AXSTB (0)) = -----8
 5. C(AXSTB (0)) = -----8
-



6. A(AXSTB (0)) -----8
- + X_F -----8
- + 2 -----2



7. AXSTE (0) OLD CONTENTS -----8



SECTION 232-127-101
Appendix 1

TSCK-3

8. REQUIRED FOR DC OPERATOR SIGNALING ONLY

C(AXSTE (1)) 7 4 0 0 0 0 1

9. REQUIRED FOR MISCELLANEOUS TRUNKS ONLY

BPSPNT - - - - -8
 + 2

IPSPN - - - - -8

BPSPNT - - - - -8
 + 1 0 0 0

MAXPSPN - - - - -8

10. REQUIRED FOR SERVICE CIRCUITS ONLY

BPSPNSC = - - - - -8
 + 2

IPSPN = - - - - -8

BPSPNSC = - - - - -8
 + 1 0 0 0

MAXPSPN = - - - - -8

11. CURRENT PSPN - - - - -8

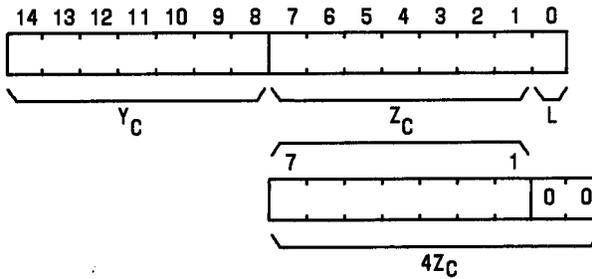
Y_C = - - - -8

4Z_C = - - - -8

12. C(SPTBL) - - - - -8

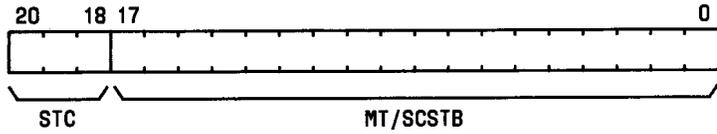
+ Y_C - - - -8

A(SPTBLPSPN) - - - - -8



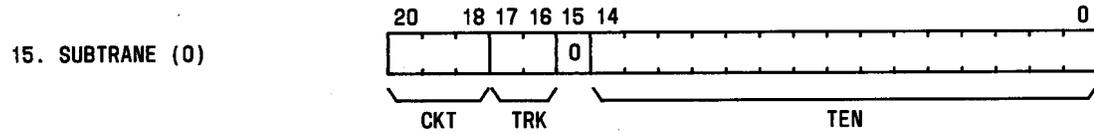
TSCK-3

13. C(SPTBLPSPN) = -----8

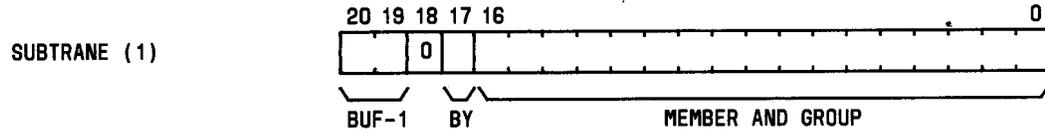


14. MT/SCSTB -----8
 +4Z_C -----8
 + 1

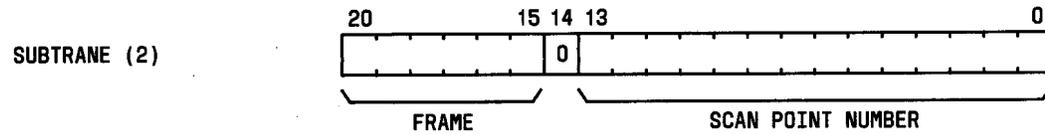
A(SUBTRANE (0)) -----8



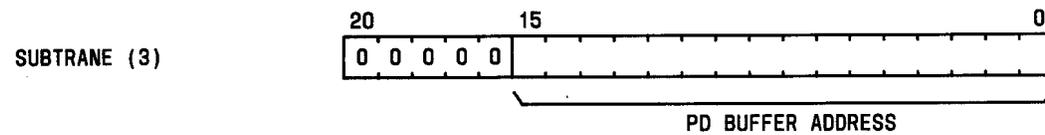
PS LOCATION -----8 NEW CONTENTS -----8



PS LOCATION -----8 NEW CONTENTS -----8



PS LOCATION -----8 NEW CONTENTS -----8



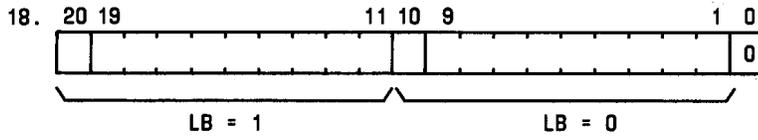
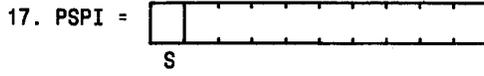
PS LOCATION -----8 NEW CONTENTS -----8

16. CURRENT PSPN -----8
 BPSPN -----8
 PSPI = -----8

SECTION 232-127-101

Appendix 1

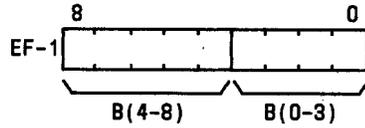
TSCK-3



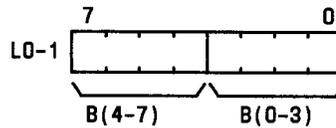
AXSTE (0) P.S. LOC -----8 NEW CONTENTS -----8

TRUNK GROUP TRANSLATOR

1. TRUNK GROUP ---8



B(4-8) = ---8
B(0-3) = ---8

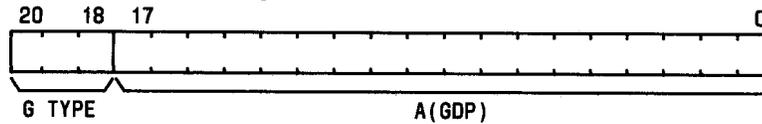


B(4-7) = ---8
B(0-3) = ---8

2. A(GRPTBL) = -----8
+B(4-8) OR (4-7) = ---8

A(GDBPTR) = -----8

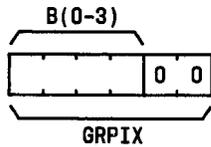
3. GDBPTR OLD CONTENTS -----8



4. G TYPE = ---8

5. A(GDP) = -----8

6. FOR SERVICE CIRCUITS ONLY



GRPIX = ---8

7. FOR UNIVERSAL AND MISCELLANEOUS TRUNKS ONLY

GRPIX = ---⁰8
B(0-3)

8. A(GDP) = -----8

+GRPIX = ---8

A(GRP (0)) -----8

9. OLD GRP DATA

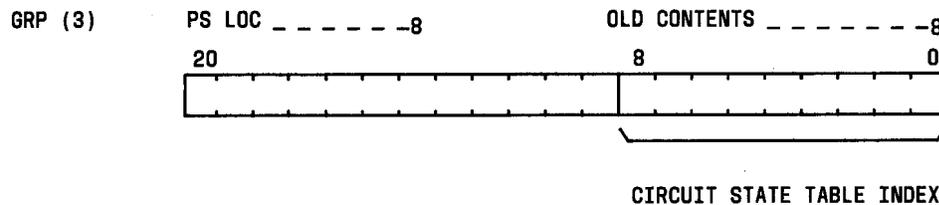
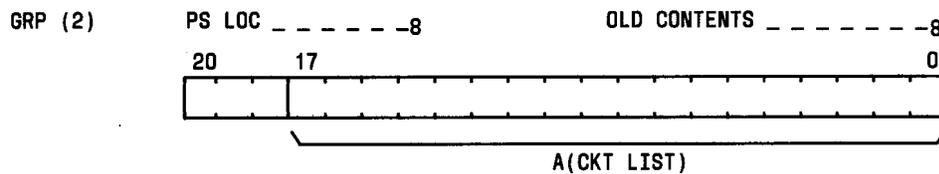
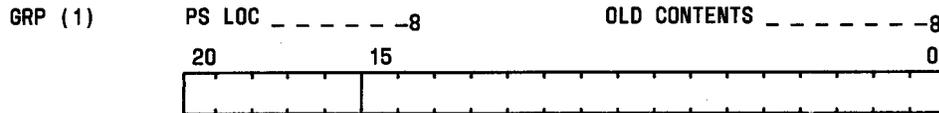
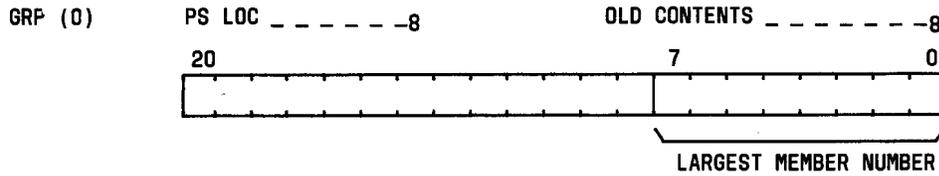
C(GRP (0)) = -----8

C(GRP (1)) = -----8

C(GRP (2)) = -----8

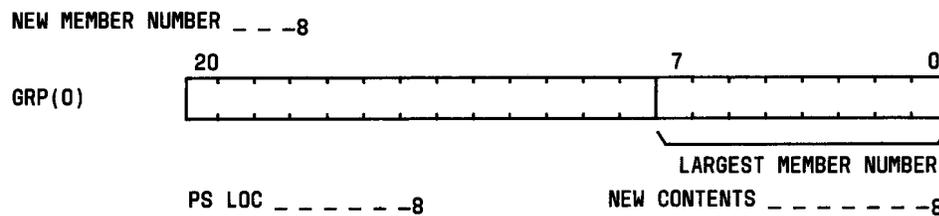
C(GRP (3)) = -----8

10. OLD GRP INFORMATION



LARGEST MEMBER NO. -----8
 A(CKT LIST) -----8
 CIRCUIT STATE TABLE INDEX -----8

11. IF NEW MEMBER NUMBER IS LARGER THAN LARGEST MEMBER NUMBER



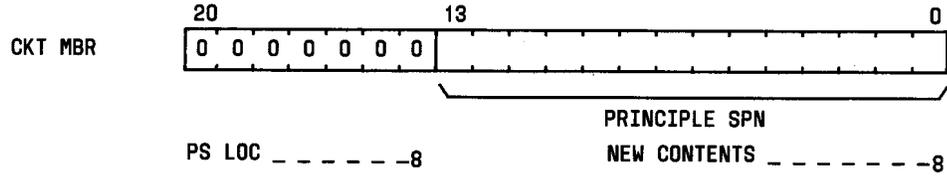
12. FOR UNIVERSAL AND MISCELLANEOUS TRUNKS ONLY

A(CKT LIST) = -----8
 + MEMBER NUMBER = -- --8

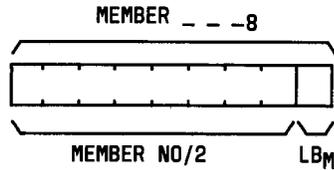
 A(CKT MBR) = -----8

TSCK-4

13. FOR UNIVERSAL AND MISCELLANEOUS TRUNKS ONLY



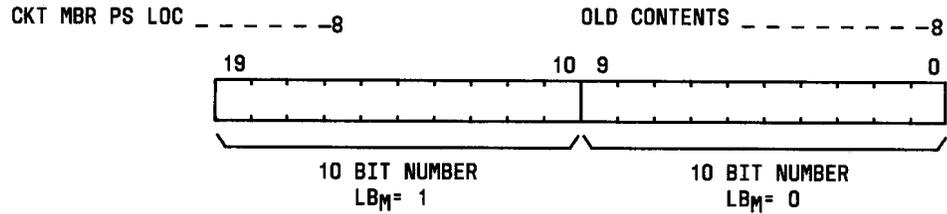
14. FOR SERVICE CIRCUITS ONLY



15. FOR SERVICE CIRCUITS ONLY

MEMBER NO/2 = -----8
 A(CKT LIST) = -----8
 A(CKT MBR) = -----8

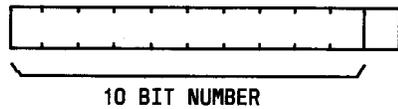
16. FOR SERVICE CIRCUITS ONLY



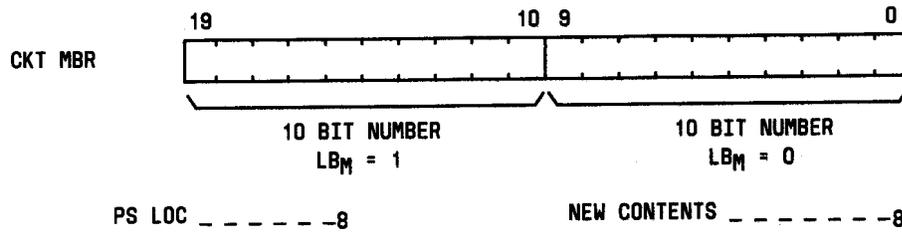
17. FOR SERVICE CIRCUITS ONLY

PSPN = -----8
 - 3 5 4 0 0
 2*(10 BIT NUMBER) -----8

18. FOR SERVICE CIRCUITS ONLY



19. FOR SERVICE CIRCUITS ONLY



TSCK-5

TEN TRANSLATOR

1. A(TENTBL) -----8
+ TEN(9-14) -----8

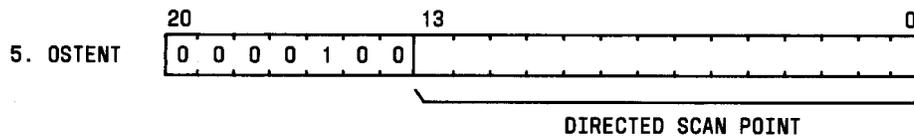
A(OTENT) -----8

2. C(OTENT) = -----8
 └-----┘
 OSTBASE

3. OSTBASE = -----8
+ TEN(0-8) = -----8

A(OSTENT) = -----8

4. C(OSTENT) -----8



PS LOC -----8

NEW CONTENTS -----8

6. FOR CIRCUITS WHICH HAVE BOTH DIRECTED AND SUPERVISORY SCAN POINTS
DIRECTED SCAN POINT NUMBER

TRUNK SCANNER --10

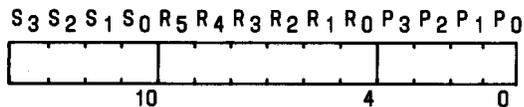
$\overline{S_3}$ $\overline{S_2}$ $\overline{S_1}$ $\overline{S_0}$

ROW --10

$\overline{R_5}$ $\overline{R_4}$ $\overline{R_3}$ $\overline{R_2}$ $\overline{R_1}$ $\overline{R_0}$

COLUMN POINT --10

$\overline{P_3}$ $\overline{P_2}$ $\overline{P_1}$ $\overline{P_0}$



NO. 2 CHIPS TABLE

A. TRUNK GROUP DATA MODIFICATIONS

1. DATA BLOCK ENTRY (LARGEST MEMBER NUMBER)

GRP (0) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
----------------	--------	-----------------	--------	-----------------	--------

2. TRUNK CIRCUIT LIST ENTRY (PRINCIPLE SPN)

CKT MBR PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
----------------	--------	-----------------	--------	-----------------	--------

3. SERVICE CIRCUIT LIST ENTRY (10 BIT NUMBER)

CKT MBR PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
----------------	--------	-----------------	--------	-----------------	--------

B. SCAN POINT TRANSLATION MODIFICATIONS

1. UNIVERSAL SUBTRANSLATOR ENTRY

USTE (0) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
-----------------	--------	-----------------	--------	-----------------	--------

USTE (1) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
-----------------	--------	-----------------	--------	-----------------	--------

2. MISCELLANEOUS TRUNK OR SERVICE CIRCUIT SUBTRANSLATOR ENTRY

SUBTRANE (0) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
---------------------	--------	-----------------	--------	-----------------	--------

SUBTRANE (1) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
---------------------	--------	-----------------	--------	-----------------	--------

SUBTRANE (2) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
---------------------	--------	-----------------	--------	-----------------	--------

SUBTRANE (3) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
---------------------	--------	-----------------	--------	-----------------	--------

3. AUXILIARY SUBTRANSLATOR ENTRY

AXSTE (0) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
------------------	--------	-----------------	--------	-----------------	--------

AXSTE (1) PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
------------------	--------	-----------------	--------	-----------------	--------

C. TEN TRANSLATOR MODIFICATION

OSTENT PS LOC	-----8	OLD CONTENTS	-----8	NEW CONTENTS	-----8
---------------	--------	-----------------	--------	-----------------	--------

SECTION 232-127-101

Appendix 1

NO. 2 AND NO. 2B ESS EXPANSION TABLE ALLOCATION FORM EXP-1

OFFICE _____ FORM CHIPS ADDRESS RANGE
 DATE _____ ITEM 2B _____
 ITEM 3 _____
 ITEM 4 _____

1. A = ADDRESS OF EXPTBL IN OCTAL _____

2. CONTENTS OF EXPTBL (17 - 0) IN OCTAL _____

 B

3. J = ADDRESS OF EMPTY 2 WORD ENTRY IN OCTAL _____
 CONTENTS = _____

4. K = J + 1 IN OCTAL _____
 CONTENTS = _____

5. N = $\frac{2, 4, \text{ OR } 6 \times \text{ NUMBER OF ENTRIES WANTED}}{\text{WORDS PER ENTRY}}$ = _____ NUMBER OF ENTRIES
 N

6. H = SPARE TRANSLATION BLOCK ADDRESS IN OCTAL _____

7. USING "N", LOOK UP "D" IN SIZE INDICATOR TABLE AND RECORD HERE IN OCTAL _____

8. CONTENTS OF WORD 0 IN HEAD TABLE _____

9. CONVERT ITEM 8 TO BINARY 0 0 0 0 0 0 0 0 1 1 1 1
 AND RECORD BITS 15-8 HEAR _____ P _____

OLD "C" = NUMBER OF TABLES

10. ITEM 9 WITH NEW C & P 0 0 0 0 0 0 0 0 1 1 1 1
 _____ P _____

NEW "C" = NUMBER OF TABLES WITH ADDITION

11. NEW CONTENTS OF WORD 0 (ITEM 10) IN OCTAL _____

12. FG = 0001 (2 WORDS)
 0010 (4 WORDS) = _____ (BINARY)
 1010 (6 WORDS)

13. NEW CONTENT OF J IN BINARY _____
 _____ E P _____
 D FG

NO. 2 AND NO. 2B ESS EXPANSION TABLE ALLOCATION FORM EXP-1 - CONTINUED

14. NEW CONTENTS OF J (ITEM 13) IN OCTAL _ _ _ _ _

15. CHIPS INFORMATION

ADDRESS	INITIAL DATA	CHANGED DATA
ITEM 2B _ _ _ _ _	ITEM 8 _ _ _ _ _	ITEM 11 _ _ _ _ _
ITEM 3 _ _ _ _ _	ITEM 3 _ _ _ _ _	ITEM 14 _ _ _ _ _
ITEM 4 _ _ _ _ _	ITEM 4 _ _ _ _ _	ITEM 6* _ _ _ _ _

16. ENTER ITEMS 2B, 3 AND 4 IN THE APPROPRIATE SPACES UNDER "FORM CHIPS ADDRESS RANGE" AT THE TOP OF THE FIRST SHEET OF THIS FORM.

*PARITY WILL BE CALCULATED IN SECTION 232-127-303 FOR CHIPS.

NOTE: IF ITEM 8 AND ITEM 11 ARE THE SAME, NO ACTION IS REQUIRED TO CHIPS CHANGE THE CONTENTS AT THIS ADDRESS.

OFFICE _____

NO. 2 ESS CENTREX GROUP MTI TRANSLATOR CHANGE FORM

CTX-1 FORM (EF-1)

DATE _____

FORM CHIPS ADDRESS RANGE=(341205)-(341404)

MTI ADDRESS	INITIAL GROUP TABLE POINTER	CHANGE	MTI ADDRESS	INITIAL GROUP TABLE POINTER	CHANGE
CTXTBL-----> (341205)	()	()	CTXGRP 64=(341305)	()	()
CTXGRP 1=(341206)	()	()	CTXGRP 65=(341306)	()	()
CTXGRP 2=(341207)	()	()	CTXGRP 66=(341307)	()	()
CTXGRP 3=(341210)	()	()	CTXGRP 67=(341310)	()	()
CTXGRP 4=(341211)	()	()	CTXGRP 68=(341311)	()	()
CTXGRP 5=(341212)	()	()	CTXGRP 69=(341312)	()	()
CTXGRP 6=(341213)	()	()	CTXGRP 70=(341313)	()	()
CTXGRP 7=(341214)	()	()	CTXGRP 71=(341314)	()	()
CTXGRP 8=(341215)	()	()	CTXGRP 72=(341315)	()	()
CTXGRP 9=(341216)	()	()	CTXGRP 73=(341316)	()	()
CTXGRP 10=(341217)	()	()	CTXGRP 74=(341317)	()	()
CTXGRP 11=(341220)	()	()	CTXGRP 75=(341320)	()	()
CTXGRP 12=(341221)	()	()	CTXGRP 76=(341321)	()	()
CTXGRP 13=(341222)	()	()	CTXGRP 77=(341322)	()	()
CTXGRP 14=(341223)	()	()	CTXGRP 78=(341323)	()	()
CTXGRP 15=(341224)	()	()	CTXGRP 79=(341324)	()	()
CTXGRP 16=(341225)	()	()	CTXGRP 80=(341325)	()	()
CTXGRP 17=(341226)	()	()	CTXGRP 81=(341326)	()	()
CTXGRP 18=(341227)	()	()	CTXGRP 82=(341327)	()	()
CTXGRP 19=(341230)	()	()	CTXGRP 83=(341330)	()	()
CTXGRP 20=(341231)	()	()	CTXGRP 84=(341331)	()	()
CTXGRP 21=(341232)	()	()	CTXGRP 85=(341332)	()	()
CTXGRP 22=(341233)	()	()	CTXGRP 86=(341333)	()	()
CTXGRP 23=(341234)	()	()	CTXGRP 87=(341334)	()	()
CTXGRP 24=(341235)	()	()	CTXGRP 88=(341335)	()	()
CTXGRP 25=(341236)	()	()	CTXGRP 89=(341336)	()	()
CTXGRP 26=(341237)	()	()	CTXGRP 90=(341337)	()	()
CTXGRP 27=(341240)	()	()	CTXGRP 91=(341340)	()	()
CTXGRP 28=(341241)	()	()	CTXGRP 92=(341341)	()	()
CTXGRP 29=(341242)	()	()	CTXGRP 93=(341342)	()	()
CTXGRP 30=(341243)	()	()	CTXGRP 94=(341343)	()	()
CTXGRP 31=(341244)	()	()	CTXGRP 95=(341344)	()	()
CTXGRP 32=(341245)	()	()	CTXGRP 96=(341345)	()	()
CTXGRP 33=(341246)	()	()	CTXGRP 97=(341346)	()	()
CTXGRP 34=(341247)	()	()	CTXGRP 98=(341347)	()	()
CTXGRP 35=(341250)	()	()	CTXGRP 99=(341350)	()	()
CTXGRP 36=(341251)	()	()	CTXGRP 100=(341351)	()	()
CTXGRP 37=(341252)	()	()	CTXGRP 101=(341352)	()	()
CTXGRP 38=(341253)	()	()	CTXGRP 102=(341353)	()	()
CTXGRP 39=(341254)	()	()	CTXGRP 103=(341354)	()	()
CTXGRP 40=(341255)	()	()	CTXGRP 104=(341355)	()	()
CTXGRP 41=(341256)	()	()	CTXGRP 105=(341356)	()	()
CTXGRP 42=(341257)	()	()	CTXGRP 106=(341357)	()	()
CTXGRP 43=(341260)	()	()	CTXGRP 107=(341360)	()	()
CTXGRP 44=(341261)	()	()	CTXGRP 108=(341361)	()	()
CTXGRP 45=(341262)	()	()	CTXGRP 109=(341362)	()	()
CTXGRP 46=(341263)	()	()	CTXGRP 110=(341363)	()	()
CTXGRP 47=(341264)	()	()	CTXGRP 111=(341364)	()	()
CTXGRP 48=(341265)	()	()	CTXGRP 112=(341365)	()	()
CTXGRP 49=(341266)	()	()	CTXGRP 113=(341366)	()	()
CTXGRP 50=(341267)	()	()	CTXGRP 114=(341367)	()	()
CTXGRP 51=(341270)	()	()	CTXGRP 115=(341370)	()	()
CTXGRP 52=(341271)	()	()	CTXGRP 116=(341371)	()	()
CTXGRP 53=(341272)	()	()	CTXGRP 117=(341372)	()	()
CTXGRP 54=(341273)	()	()	CTXGRP 118=(341373)	()	()
CTXGRP 55=(341274)	()	()	CTXGRP 119=(341374)	()	()
CTXGRP 56=(341275)	()	()	CTXGRP 120=(341375)	()	()
CTXGRP 57=(341276)	()	()	CTXGRP 121=(341376)	()	()
CTXGRP 58=(341277)	()	()	CTXGRP 122=(341377)	()	()
CTXGRP 59=(341300)	()	()	CTXGRP 123=(341400)	()	()
CTXGRP 60=(341301)	()	()	CTXGRP 124=(341401)	()	()
CTXGRP 61=(341302)	()	()	CTXGRP 125=(341402)	()	()
CTXGRP 62=(341303)	()	()	CTXGRP 126=(341403)	()	()
CTXGRP 63=(341304)	()	()	CTXGRP 127=(341404)	()	()

OFFICE _____

NO. 2 ESS CENTREX GROUP EXPANSION CHANGE FORM

CTX-2 FORM

DATE _____

CENTREX GROUP NUMBER _____

FORM CHIPS ADDRESS RANGE=()-()

(EF-1)

ADDRESS	GROUP EXPANSION		CHANGES	
	INITIAL CONTENTS			
WORD 0 ADDRESS----->= ()	WORD 0	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 1= ()	WORD 1	()		<--ATTENDANT IDLE LIST / CALLS WAITING QUEUE
WORD 0 ADDRESS+OCTAL 2= ()	WORD 2	()		<--ATTENDANT LIST (SEE CTX-4 FORM)
WORD 0 ADDRESS+OCTAL 3= ()	WORD 3	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 4= ()	WORD 4	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 5= ()	WORD 5	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 6= ()	WORD 6	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 7= ()	WORD 7	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 10= ()	WORD 8	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 11= ()	WORD 9	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 12= ()	WORD 10	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 13= ()	WORD 11	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 14= ()	WORD 12	()		<--6 CODE SPEED CALL POINTER (SEE CTX-6 FORM)
WORD 0 ADDRESS+OCTAL 15= ()	WORD 13	()		<--30 CODE SPEED CALL POINTER (SEE CTX-7 FORM)
WORD 0 ADDRESS+OCTAL 16= ()	WORD 14	()		<--MTD/GBI TABLE (SEE CTX-8 FORM)
WORD 0 ADDRESS+OCTAL 17= ()	WORD 15	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 20= ()	WORD 16	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 21= ()	WORD 17	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 22= ()	WORD 18	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 23= ()	WORD 19	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 24= ()	WORD 20	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 25= ()	WORD 21	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 26= ()	WORD 22	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 27= ()	WORD 23	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 30= ()	WORD 24	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 31= ()	WORD 25	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 32= ()	WORD 26	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 33= ()	WORD 27	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 34= ()	WORD 28	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 35= ()	WORD 29	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 36= ()	WORD 30	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	
WORD 0 ADDRESS+OCTAL 37= ()	WORD 31	()	ALTER THIS WORD BY	
			RECENT CHANGE ONLY	

OFFICE _____

NO 2. ES8 CENTREX TRAFFIC TRANSLATOR MTI CHANGE FORM

CTX-3 FORM (EF-1)

DATE _____

FORM CHIPS ADDRESS RANGE=(341473)-(341672)

MTI ADDRESS	INITIAL CALL STORE POINTER	CHANGE	MTI ADDRESS	INITIAL CALL STORE POINTER	CHANGE
CTXTRF----->(341473)	()	()	CTXGRP 64=(341573)	()	()
CTXGRP 1=(341474)	()	()	CTXGRP 65=(341574)	()	()
CTXGRP 2=(341475)	()	()	CTXGRP 66=(341575)	()	()
CTXGRP 3=(341476)	()	()	CTXGRP 67=(341576)	()	()
CTXGRP 4=(341477)	()	()	CTXGRP 68=(341577)	()	()
CTXGRP 5=(341500)	()	()	CTXGRP 69=(341600)	()	()
CTXGRP 6=(341501)	()	()	CTXGRP 70=(341601)	()	()
CTXGRP 7=(341502)	()	()	CTXGRP 71=(341602)	()	()
CTXGRP 8=(341503)	()	()	CTXGRP 72=(341603)	()	()
CTXGRP 9=(341504)	()	()	CTXGRP 73=(341604)	()	()
CTXGRP 10=(341505)	()	()	CTXGRP 74=(341605)	()	()
CTXGRP 11=(341506)	()	()	CTXGRP 75=(341606)	()	()
CTXGRP 12=(341507)	()	()	CTXGRP 76=(341607)	()	()
CTXGRP 13=(341510)	()	()	CTXGRP 77=(341610)	()	()
CTXGRP 14=(341511)	()	()	CTXGRP 78=(341611)	()	()
CTXGRP 15=(341512)	()	()	CTXGRP 79=(341612)	()	()
CTXGRP 16=(341513)	()	()	CTXGRP 80=(341613)	()	()
CTXGRP 17=(341514)	()	()	CTXGRP 81=(341614)	()	()
CTXGRP 18=(341515)	()	()	CTXGRP 82=(341615)	()	()
CTXGRP 19=(341516)	()	()	CTXGRP 83=(341616)	()	()
CTXGRP 20=(341517)	()	()	CTXGRP 84=(341617)	()	()
CTXGRP 21=(341520)	()	()	CTXGRP 85=(341620)	()	()
CTXGRP 22=(341521)	()	()	CTXGRP 86=(341621)	()	()
CTXGRP 23=(341522)	()	()	CTXGRP 87=(341622)	()	()
CTXGRP 24=(341523)	()	()	CTXGRP 88=(341623)	()	()
CTXGRP 25=(341524)	()	()	CTXGRP 89=(341624)	()	()
CTXGRP 26=(341525)	()	()	CTXGRP 90=(341625)	()	()
CTXGRP 27=(341526)	()	()	CTXGRP 91=(341626)	()	()
CTXGRP 28=(341527)	()	()	CTXGRP 92=(341627)	()	()
CTXGRP 29=(341530)	()	()	CTXGRP 93=(341630)	()	()
CTXGRP 30=(341531)	()	()	CTXGRP 94=(341631)	()	()
CTXGRP 31=(341532)	()	()	CTXGRP 95=(341632)	()	()
CTXGRP 32=(341533)	()	()	CTXGRP 96=(341633)	()	()
CTXGRP 33=(341534)	()	()	CTXGRP 97=(341634)	()	()
CTXGRP 34=(341535)	()	()	CTXGRP 98=(341635)	()	()
CTXGRP 35=(341536)	()	()	CTXGRP 99=(341636)	()	()
CTXGRP 36=(341537)	()	()	CTXGRP 100=(341637)	()	()
CTXGRP 37=(341540)	()	()	CTXGRP 101=(341640)	()	()
CTXGRP 38=(341541)	()	()	CTXGRP 102=(341641)	()	()
CTXGRP 39=(341542)	()	()	CTXGRP 103=(341642)	()	()
CTXGRP 40=(341543)	()	()	CTXGRP 104=(341643)	()	()
CTXGRP 41=(341544)	()	()	CTXGRP 105=(341644)	()	()
CTXGRP 42=(341545)	()	()	CTXGRP 106=(341645)	()	()
CTXGRP 43=(341546)	()	()	CTXGRP 107=(341646)	()	()
CTXGRP 44=(341547)	()	()	CTXGRP 108=(341647)	()	()
CTXGRP 45=(341550)	()	()	CTXGRP 109=(341650)	()	()
CTXGRP 46=(341551)	()	()	CTXGRP 110=(341651)	()	()
CTXGRP 47=(341552)	()	()	CTXGRP 111=(341652)	()	()
CTXGRP 48=(341553)	()	()	CTXGRP 112=(341653)	()	()
CTXGRP 49=(341554)	()	()	CTXGRP 113=(341654)	()	()
CTXGRP 50=(341555)	()	()	CTXGRP 114=(341655)	()	()
CTXGRP 51=(341556)	()	()	CTXGRP 115=(341656)	()	()
CTXGRP 52=(341557)	()	()	CTXGRP 116=(341657)	()	()
CTXGRP 53=(341560)	()	()	CTXGRP 117=(341660)	()	()
CTXGRP 54=(341561)	()	()	CTXGRP 118=(341661)	()	()
CTXGRP 55=(341562)	()	()	CTXGRP 119=(341662)	()	()
CTXGRP 56=(341563)	()	()	CTXGRP 120=(341663)	()	()
CTXGRP 57=(341564)	()	()	CTXGRP 121=(341664)	()	()
CTXGRP 58=(341565)	()	()	CTXGRP 122=(341665)	()	()
CTXGRP 59=(341566)	()	()	CTXGRP 123=(341666)	()	()
CTXGRP 60=(341567)	()	()	CTXGRP 124=(341667)	()	()
CTXGRP 61=(341570)	()	()	CTXGRP 125=(341670)	()	()
CTXGRP 62=(341571)	()	()	CTXGRP 126=(341671)	()	()
CTXGRP 63=(341572)	()	()	CTXGRP 127=(341672)	()	()

THE ATTENDANT LIST WORD 0 ADDRESS SHOULD BE STORED IN BITS 17-0 OF WORD 2 OF THE CENTREX GROUP EXPANSION CENTREX GROUP _____
LIST = (NEW) OR (OLD) FORM CHIPS ADDRESS RANGE= () - ()

WORD NUMBER col 1	ADDRESS INCREMENT WITH RESPECT TO WORD 0 ADDRESS col 2	ADDRESS col 3	ATTENDANT LIST INITIAL CONTENTS col 4	CHANGES col 5	MAX UNIVERSAL ATTENDANTS PER LIST LENGTH col 6	COMPLEMENT OF MAXIMUM ATTENDANTS col 7	ATTENDANT IDLE LIST CALLS WAITING QUEUE CALL STORE REQUIRED col 8
0	+ OCTAL 0 =	()	()	()	0 = NO LIST	- - - -	- - - -
1	+ OCTAL 1 =	()	()	()	1 = 2 WORDS	10177776	7 WORDS
2	+ OCTAL 2 =	()	()	()	2 = 3 WORDS	10177775	12 WORDS
3	+ OCTAL 3 =	()	()	()	3 = 4 WORDS	00177774	17 WORDS
4	+ OCTAL 4 =	()	()	()	4 = 5 WORDS	10177773	22 WORDS
5	+ OCTAL 5 =	()	()	()	5 = 6 WORDS	00177772	27 WORDS
6	+ OCTAL 6 =	()	()	()	6 = 7 WORDS	00177771	32 WORDS
7	+ OCTAL 7 =	()	()	()	7 = 8 WORDS	10177770	37 WORDS
8	+ OCTAL 10 =	()	()	()	8 = 9 WORDS	10177767	42 WORDS
9	+ OCTAL 11 =	()	()	()	9 = 10 WORDS	00177766	47 WORDS
10	+ OCTAL 12 =	()	()	()	10 = 11 WORDS	00177765	52 WORDS
11	+ OCTAL 13 =	()	()	()	11 = 12 WORDS	10177764	57 WORDS
12	+ OCTAL 14 =	()	()	()	12 = 13 WORDS	00177763	62 WORDS
13	+ OCTAL 15 =	()	()	()	13 = 14 WORDS	10177762	67 WORDS
14	+ OCTAL 16 =	()	()	()	14 = 15 WORDS	10177761	72 WORDS
15	+ OCTAL 17 =	()	()	()	15 = 16 WORDS	00177760	77 WORDS
16	+ OCTAL 20 =	()	()	()	16 = 17 WORDS	10177757	82 WORDS
17	+ OCTAL 21 =	()	()	()	17 = 18 WORDS	00177756	87 WORDS
18	+ OCTAL 22 =	()	()	()	18 = 19 WORDS	00177755	92 WORDS
19	+ OCTAL 23 =	()	()	()	19 = 20 WORDS	10177754	97 WORDS
20	+ OCTAL 24 =	()	()	()	20 = 21 WORDS	00177753	102 WORDS
21	+ OCTAL 25 =	()	()	()	21 = 22 WORDS	10177752	107 WORDS
22	+ OCTAL 26 =	()	()	()	22 = 23 WORDS	10177751	112 WORDS
23	+ OCTAL 27 =	()	()	()	23 = 24 WORDS	00177750	117 WORDS
24	+ OCTAL 30 =	()	()	()	24 = 25 WORDS	00177747	122 WORDS
25	+ OCTAL 31 =	()	()	()	25 = 26 WORDS	10177746	127 WORDS
26	+ OCTAL 32 =	()	()	()	26 = 27 WORDS	10177745	132 WORDS
27	+ OCTAL 33 =	()	()	()	27 = 28 WORDS	00177744	137 WORDS
28	+ OCTAL 34 =	()	()	()	28 = 29 WORDS	10177743	142 WORDS
29	+ OCTAL 35 =	()	()	()	29 = 30 WORDS	00177742	147 WORDS
30	+ OCTAL 36 =	()	()	()	30 = 31 WORDS	00177741	152 WORDS
31	+ OCTAL 37 =	()	()	()	31 = 32 WORDS	10177740	157 WORDS
32	+ OCTAL 40 =	()	()	()	32 = 33 WORDS	10177737	162 WORDS
33	+ OCTAL 41 =	()	()	()	33 = 34 WORDS	00177736	167 WORDS
34	+ OCTAL 42 =	()	()	()	34 = 35 WORDS	00177735	172 WORDS
35	+ OCTAL 43 =	()	()	()	35 = 36 WORDS	10177734	177 WORDS
36	+ OCTAL 44 =	()	()	()	36 = 37 WORDS	00177733	182 WORDS
37	+ OCTAL 45 =	()	()	()	37 = 38 WORDS	10177732	187 WORDS
38	+ OCTAL 46 =	()	()	()	38 = 39 WORDS	10177731	192 WORDS
39	+ OCTAL 47 =	()	()	()	39 = 40 WORDS	00177730	197 WORDS
40	+ OCTAL 50 =	()	()	()	40 = 41 WORDS	00177727	202 WORDS
41	+ OCTAL 51 =	()	()	()	41 = 42 WORDS	10177726	207 WORDS
42	+ OCTAL 52 =	()	()	()	42 = 43 WORDS	10177725	212 WORDS
43	+ OCTAL 53 =	()	()	()	43 = 44 WORDS	00177724	217 WORDS
44	+ OCTAL 54 =	()	()	()	44 = 45 WORDS	10177723	222 WORDS
45	+ OCTAL 55 =	()	()	()	45 = 46 WORDS	00177722	227 WORDS
46	+ OCTAL 56 =	()	()	()	46 = 47 WORDS	00177721	232 WORDS
47	+ OCTAL 57 =	()	()	()	47 = 48 WORDS	10177720	237 WORDS
48	+ OCTAL 60 =	()	()	()	48 = 49 WORDS	00177717	242 WORDS
49	+ OCTAL 61 =	()	()	()	49 = 50 WORDS	10177716	247 WORDS
50	+ OCTAL 62 =	()	()	()	50 = 51 WORDS	10177715	252 WORDS
51	+ OCTAL 63 =	()	()	()	51 = 52 WORDS	00177714	257 WORDS
52	+ OCTAL 64 =	()	()	()	52 = 53 WORDS	10177713	262 WORDS
53	+ OCTAL 65 =	()	()	()	53 = 54 WORDS	00177712	267 WORDS
54	+ OCTAL 66 =	()	()	()	54 = 55 WORDS	00177711	272 WORDS
55	+ OCTAL 67 =	()	()	()	55 = 56 WORDS	10177710	277 WORDS
56	+ OCTAL 70 =	()	()	()	56 = 57 WORDS	10177707	282 WORDS
57	+ OCTAL 71 =	()	()	()	57 = 58 WORDS	00177706	287 WORDS
58	+ OCTAL 72 =	()	()	()	58 = 59 WORDS	00177705	292 WORDS
59	+ OCTAL 73 =	()	()	()	59 = 60 WORDS	10177704	297 WORDS
60	+ OCTAL 74 =	()	()	()	60 = 61 WORDS	00177703	302 WORDS
61	+ OCTAL 75 =	()	()	()	61 = 62 WORDS	10177702	307 WORDS
62	+ OCTAL 76 =	()	()	()	62 = 63 WORDS	10177701	312 WORDS
63	+ OCTAL 77 =	()	()	()	63 = 64 WORDS	00177700	317 WORDS

OFFICE _____
 DATE _____

CENTREX 6 CODE SPEED CALL EXPANSION TABLE CHANGE FORM

CTX-6 FORM
 (EF-1)

CENTREX GROUP _____

FORM CHIPS ADDRESS RANGE= () - ()

THE ADDRESS OF WORD 0 OF THE 6 CODE EXPANSION TABLE
 IS FOUND IN BITS 17-0 OF WORD 12 OF THE CENTREX EXPANSION

WORD NUMBER col 1	ADDRESS INCREMENT col 2	ADDRESS col 3	6 CODE TABLE INITIAL CONTENTS col 4	CHANGES col 5	6 CODE LIST RANGE col 6
0	+ OCTAL 0 =	()	()	()	0 TO 15
1	+ OCTAL 1 =	()	()	()	16 TO 31
2	+ OCTAL 2 =	()	()	()	32 TO 47
3	+ OCTAL 3 =	()	()	()	48 TO 63
4	+ OCTAL 4 =	()	()	()	64 TO 79
5	+ OCTAL 5 =	()	()	()	80 TO 95
6	+ OCTAL 6 =	()	()	()	96 TO 111
7	+ OCTAL 7 =	()	()	()	112 TO 127
8	+ OCTAL 10 =	()	()	()	128 TO 143
9	+ OCTAL 11 =	()	()	()	144 TO 159
10	+ OCTAL 12 =	()	()	()	160 TO 175
11	+ OCTAL 13 =	()	()	()	176 TO 191
12	+ OCTAL 14 =	()	()	()	192 TO 207
13	+ OCTAL 15 =	()	()	()	208 TO 223
14	+ OCTAL 16 =	()	()	()	224 TO 239
15	+ OCTAL 17 =	()	()	()	240 TO 255
16	+ OCTAL 20 =	()	()	()	256 TO 271
17	+ OCTAL 21 =	()	()	()	272 TO 287
18	+ OCTAL 22 =	()	()	()	288 TO 303
19	+ OCTAL 23 =	()	()	()	304 TO 319
20	+ OCTAL 24 =	()	()	()	320 TO 335
21	+ OCTAL 25 =	()	()	()	336 TO 351
22	+ OCTAL 26 =	()	()	()	352 TO 367
23	+ OCTAL 27 =	()	()	()	368 TO 383
24	+ OCTAL 30 =	()	()	()	384 TO 399
25	+ OCTAL 31 =	()	()	()	400 TO 415
26	+ OCTAL 32 =	()	()	()	416 TO 431
27	+ OCTAL 33 =	()	()	()	432 TO 447
28	+ OCTAL 34 =	()	()	()	448 TO 463
29	+ OCTAL 35 =	()	()	()	464 TO 479
30	+ OCTAL 36 =	()	()	()	480 TO 495
31	+ OCTAL 37 =	()	()	()	496 TO 511
32	+ OCTAL 40 =	()	()	()	512 TO 527
33	+ OCTAL 41 =	()	()	()	528 TO 543
34	+ OCTAL 42 =	()	()	()	544 TO 559
35	+ OCTAL 43 =	()	()	()	560 TO 575
36	+ OCTAL 44 =	()	()	()	576 TO 591
37	+ OCTAL 45 =	()	()	()	592 TO 607
38	+ OCTAL 46 =	()	()	()	608 TO 623
39	+ OCTAL 47 =	()	()	()	624 TO 639
40	+ OCTAL 50 =	()	()	()	640 TO 655
41	+ OCTAL 51 =	()	()	()	656 TO 671
42	+ OCTAL 52 =	()	()	()	672 TO 687
43	+ OCTAL 53 =	()	()	()	688 TO 703
44	+ OCTAL 54 =	()	()	()	704 TO 719
45	+ OCTAL 55 =	()	()	()	720 TO 735
46	+ OCTAL 56 =	()	()	()	736 TO 751
47	+ OCTAL 57 =	()	()	()	752 TO 767
48	+ OCTAL 60 =	()	()	()	768 TO 783
49	+ OCTAL 61 =	()	()	()	784 TO 799
50	+ OCTAL 62 =	()	()	()	800 TO 815
51	+ OCTAL 63 =	()	()	()	816 TO 831
52	+ OCTAL 64 =	()	()	()	832 TO 847
53	+ OCTAL 65 =	()	()	()	848 TO 863
54	+ OCTAL 66 =	()	()	()	864 TO 879
55	+ OCTAL 67 =	()	()	()	880 TO 895
56	+ OCTAL 70 =	()	()	()	896 TO 911
57	+ OCTAL 71 =	()	()	()	912 TO 927
58	+ OCTAL 72 =	()	()	()	928 TO 943
59	+ OCTAL 73 =	()	()	()	944 TO 959
60	+ OCTAL 74 =	()	()	()	960 TO 975
61	+ OCTAL 75 =	()	()	()	976 TO 991
62	+ OCTAL 76 =	()	()	()	992 TO 1007
63	+ OCTAL 77 =	()	()	()	1008 TO 1023

OFFICE _____
DATE _____

CENTREX 30 CODE SPEED CALL EXPANSION TABLE CHANGE FORM

CTX-7 FORM
(EF-1)

CENTREX GROUP _____

FORM CHIPS ADDRESS RANGE=(

) - ()

THE ADDRESS OF WORD 0 OF THE 30 CODE EXPANSION TABLE
IS FOUND IN BITS 17-0 OF WORD 13 OF THE CENTREX EXPANSION

WORD NUMBER col 1	ADDRESS INCREMENT col 2	ADDRESS col 3	30 CODE TABLE INITIAL CONTENTS col 4	CHANGES col 5	30 CODE LIST NUMBER col 6
0	+ OCTAL 0 =	()	()	()	0
1	+ OCTAL 1 =	()	()	()	1
2	+ OCTAL 2 =	()	()	()	2
3	+ OCTAL 3 =	()	()	()	3
4	+ OCTAL 4 =	()	()	()	4
5	+ OCTAL 5 =	()	()	()	5
6	+ OCTAL 6 =	()	()	()	6
7	+ OCTAL 7 =	()	()	()	7
8	+ OCTAL 10 =	()	()	()	8
9	+ OCTAL 11 =	()	()	()	9
10	+ OCTAL 12 =	()	()	()	10
11	+ OCTAL 13 =	()	()	()	11
12	+ OCTAL 14 =	()	()	()	12
13	+ OCTAL 15 =	()	()	()	13
14	+ OCTAL 16 =	()	()	()	14
15	+ OCTAL 17 =	()	()	()	15
16	+ OCTAL 20 =	()	()	()	16
17	+ OCTAL 21 =	()	()	()	17
18	+ OCTAL 22 =	()	()	()	18
19	+ OCTAL 23 =	()	()	()	19
20	+ OCTAL 24 =	()	()	()	20
21	+ OCTAL 25 =	()	()	()	21
22	+ OCTAL 26 =	()	()	()	22
23	+ OCTAL 27 =	()	()	()	23
24	+ OCTAL 30 =	()	()	()	24
25	+ OCTAL 31 =	()	()	()	25
26	+ OCTAL 32 =	()	()	()	26
27	+ OCTAL 33 =	()	()	()	27
28	+ OCTAL 34 =	()	()	()	28
29	+ OCTAL 35 =	()	()	()	29
30	+ OCTAL 36 =	()	()	()	30
31	+ OCTAL 37 =	()	()	()	31
32	+ OCTAL 40 =	()	()	()	32
33	+ OCTAL 41 =	()	()	()	33
34	+ OCTAL 42 =	()	()	()	34
35	+ OCTAL 43 =	()	()	()	35
36	+ OCTAL 44 =	()	()	()	36
37	+ OCTAL 45 =	()	()	()	37
38	+ OCTAL 46 =	()	()	()	38
39	+ OCTAL 47 =	()	()	()	39
40	+ OCTAL 50 =	()	()	()	40
41	+ OCTAL 51 =	()	()	()	41
42	+ OCTAL 52 =	()	()	()	42
43	+ OCTAL 53 =	()	()	()	43
44	+ OCTAL 54 =	()	()	()	44
45	+ OCTAL 55 =	()	()	()	45
46	+ OCTAL 56 =	()	()	()	46
47	+ OCTAL 57 =	()	()	()	47
48	+ OCTAL 60 =	()	()	()	48
49	+ OCTAL 61 =	()	()	()	49
50	+ OCTAL 62 =	()	()	()	50
51	+ OCTAL 63 =	()	()	()	51
52	+ OCTAL 64 =	()	()	()	52
53	+ OCTAL 65 =	()	()	()	53
54	+ OCTAL 66 =	()	()	()	54
55	+ OCTAL 67 =	()	()	()	55
56	+ OCTAL 70 =	()	()	()	56
57	+ OCTAL 71 =	()	()	()	57
58	+ OCTAL 72 =	()	()	()	58
59	+ OCTAL 73 =	()	()	()	59
60	+ OCTAL 74 =	()	()	()	60
61	+ OCTAL 75 =	()	()	()	61
62	+ OCTAL 76 =	()	()	()	62
63	+ OCTAL 77 =	()	()	()	63

OFFICE _____
 DATE _____

MANUAL TRUNK DISPOSITION-GROUP BILLING INDEX TABLE CHANGE FORM

CTX-8 FORM
 (EF-1)

CENTREX GROUP _____ FORM CHIPS ADDRESS RANGE=() - ()

THE ADDRESS OF WORD 0 OF THE MTD/GBI TABLE IS FOUND
 IN BITS 17-0 OF WORD 14 OF THE CENTREX EXPANSION

WORD NUMBER col 1	ADDRESS INCREMENT col 2	ADDRESS col 3	MTD/GBI TABLE INITIAL CONTENTS col 4	CHANGES col 5	MTD/GBI INDEX col 6	BILLING/DIRECTORY NUMBER col 7
0	+ OCTAL 0 = ()	()	()	()	ILLEGAL	
1	+ OCTAL 1 = ()	()	()	()	1	_____
2	+ OCTAL 2 = ()	()	()	()	2	_____
3	+ OCTAL 3 = ()	()	()	()	3	_____
4	+ OCTAL 4 = ()	()	()	()	4	_____
5	+ OCTAL 5 = ()	()	()	()	5	_____
6	+ OCTAL 6 = ()	()	()	()	6	_____
7	+ OCTAL 7 = ()	()	()	()	7	_____
8	+ OCTAL 10 = ()	()	()	()	8	_____
9	+ OCTAL 11 = ()	()	()	()	9	_____
10	+ OCTAL 12 = ()	()	()	()	10	_____
11	+ OCTAL 13 = ()	()	()	()	11	_____
12	+ OCTAL 14 = ()	()	()	()	12	_____
13	+ OCTAL 15 = ()	()	()	()	13	_____
14	+ OCTAL 16 = ()	()	()	()	14	_____
15	+ OCTAL 17 = ()	()	()	()	15	_____

OFFICE _____
 DATE _____

NO. 2 ESS SIX-CODE SPEED CALL TABLE CLEARING FORM

CTX-9 FORM
(EF-1)

THIS FORM IS USED ONLY TO CLEAR A BLOCK OF
 16 SIX-CODE SPEED CALL LISTS FOR RETURN TO SPARE.

FORM CHIPS ADDRESS RANGE= () - ()

CENTREX GROUP _____
 SIXCODE LIST RANGE _____

WORD col 1	ADDRESS INCREMENT WITH RESPECT TO POINTER ADDRESS col 2	ADDRESS col 3	INITIAL CONTENTS col 4	ZERO col 5	WORD col 6	ADDRESS INCREMENT WITH RESPECT TO POINTER ADDRESS col 7	ADDRESS col 8	INITIAL CONTENTS col 9	ZERO col 10
0	+ 4 OCT	()	()	(0)	96	+144 OCT	()	()	(0)
1	+ 5 OCT	()	()	(0)	97	+145 OCT	()	()	(0)
2	+ 6 OCT	()	()	(0)	98	+146 OCT	()	()	(0)
3	+ 7 OCT	()	()	(0)	99	+147 OCT	()	()	(0)
4	+ 10 OCT	()	()	(0)	100	+150 OCT	()	()	(0)
5	+ 11 OCT	()	()	(0)	101	+151 OCT	()	()	(0)
6	+ 12 OCT	()	()	(0)	102	+152 OCT	()	()	(0)
7	+ 13 OCT	()	()	(0)	103	+153 OCT	()	()	(0)
8	+ 14 OCT	()	()	(0)	104	+154 OCT	()	()	(0)
9	+ 15 OCT	()	()	(0)	105	+155 OCT	()	()	(0)
10	+ 16 OCT	()	()	(0)	106	+156 OCT	()	()	(0)
11	+ 17 OCT	()	()	(0)	107	+157 OCT	()	()	(0)
12	+ 20 OCT	()	()	(0)	108	+160 OCT	()	()	(0)
13	+ 21 OCT	()	()	(0)	109	+161 OCT	()	()	(0)
14	+ 22 OCT	()	()	(0)	110	+162 OCT	()	()	(0)
15	+ 23 OCT	()	()	(0)	111	+163 OCT	()	()	(0)
16	+ 24 OCT	()	()	(0)	112	+164 OCT	()	()	(0)
17	+ 25 OCT	()	()	(0)	113	+165 OCT	()	()	(0)
18	+ 26 OCT	()	()	(0)	114	+166 OCT	()	()	(0)
19	+ 27 OCT	()	()	(0)	115	+167 OCT	()	()	(0)
20	+ 30 OCT	()	()	(0)	116	+170 OCT	()	()	(0)
21	+ 31 OCT	()	()	(0)	117	+171 OCT	()	()	(0)
22	+ 32 OCT	()	()	(0)	118	+172 OCT	()	()	(0)
23	+ 33 OCT	()	()	(0)	119	+173 OCT	()	()	(0)
24	+ 34 OCT	()	()	(0)	120	+174 OCT	()	()	(0)
25	+ 35 OCT	()	()	(0)	121	+175 OCT	()	()	(0)
26	+ 36 OCT	()	()	(0)	122	+176 OCT	()	()	(0)
27	+ 37 OCT	()	()	(0)	123	+177 OCT	()	()	(0)
28	+ 40 OCT	()	()	(0)	124	+200 OCT	()	()	(0)
29	+ 41 OCT	()	()	(0)	125	+201 OCT	()	()	(0)
30	+ 42 OCT	()	()	(0)	126	+202 OCT	()	()	(0)
31	+ 43 OCT	()	()	(0)	127	+203 OCT	()	()	(0)
32	+ 44 OCT	()	()	(0)	128	+204 OCT	()	()	(0)
33	+ 45 OCT	()	()	(0)	129	+205 OCT	()	()	(0)
34	+ 46 OCT	()	()	(0)	130	+206 OCT	()	()	(0)
35	+ 47 OCT	()	()	(0)	131	+207 OCT	()	()	(0)
36	+ 50 OCT	()	()	(0)	132	+210 OCT	()	()	(0)
37	+ 51 OCT	()	()	(0)	133	+211 OCT	()	()	(0)
38	+ 52 OCT	()	()	(0)	134	+212 OCT	()	()	(0)
39	+ 53 OCT	()	()	(0)	135	+213 OCT	()	()	(0)
40	+ 54 OCT	()	()	(0)	136	+214 OCT	()	()	(0)
41	+ 55 OCT	()	()	(0)	137	+215 OCT	()	()	(0)
42	+ 56 OCT	()	()	(0)	138	+216 OCT	()	()	(0)
43	+ 57 OCT	()	()	(0)	139	+217 OCT	()	()	(0)
44	+ 60 OCT	()	()	(0)	140	+220 OCT	()	()	(0)
45	+ 61 OCT	()	()	(0)	141	+221 OCT	()	()	(0)
46	+ 62 OCT	()	()	(0)	142	+222 OCT	()	()	(0)
47	+ 63 OCT	()	()	(0)	143	+223 OCT	()	()	(0)
48	+ 64 OCT	()	()	(0)	144	+224 OCT	()	()	(0)
49	+ 65 OCT	()	()	(0)	145	+225 OCT	()	()	(0)
50	+ 66 OCT	()	()	(0)	146	+226 OCT	()	()	(0)
51	+ 67 OCT	()	()	(0)	147	+227 OCT	()	()	(0)
52	+ 70 OCT	()	()	(0)	148	+230 OCT	()	()	(0)
53	+ 71 OCT	()	()	(0)	149	+231 OCT	()	()	(0)
54	+ 72 OCT	()	()	(0)	150	+232 OCT	()	()	(0)
55	+ 73 OCT	()	()	(0)	151	+233 OCT	()	()	(0)
56	+ 74 OCT	()	()	(0)	152	+234 OCT	()	()	(0)
57	+ 75 OCT	()	()	(0)	153	+235 OCT	()	()	(0)
58	+ 76 OCT	()	()	(0)	154	+236 OCT	()	()	(0)
59	+ 77 OCT	()	()	(0)	155	+237 OCT	()	()	(0)
60	+100 OCT	()	()	(0)	156	+240 OCT	()	()	(0)
61	+101 OCT	()	()	(0)	157	+241 OCT	()	()	(0)
62	+102 OCT	()	()	(0)	158	+242 OCT	()	()	(0)
63	+103 OCT	()	()	(0)	159	+243 OCT	()	()	(0)
64	+104 OCT	()	()	(0)	160	+244 OCT	()	()	(0)
65	+105 OCT	()	()	(0)	161	+245 OCT	()	()	(0)
66	+106 OCT	()	()	(0)	162	+246 OCT	()	()	(0)
67	+107 OCT	()	()	(0)	163	+247 OCT	()	()	(0)
68	+110 OCT	()	()	(0)	164	+250 OCT	()	()	(0)
69	+111 OCT	()	()	(0)	165	+251 OCT	()	()	(0)
70	+112 OCT	()	()	(0)	166	+252 OCT	()	()	(0)
71	+113 OCT	()	()	(0)	167	+253 OCT	()	()	(0)
72	+114 OCT	()	()	(0)	168	+254 OCT	()	()	(0)
73	+115 OCT	()	()	(0)	169	+255 OCT	()	()	(0)
74	+116 OCT	()	()	(0)	170	+256 OCT	()	()	(0)
75	+117 OCT	()	()	(0)	171	+257 OCT	()	()	(0)
76	+120 OCT	()	()	(0)	172	+260 OCT	()	()	(0)
77	+121 OCT	()	()	(0)	173	+261 OCT	()	()	(0)
78	+122 OCT	()	()	(0)	174	+262 OCT	()	()	(0)
79	+123 OCT	()	()	(0)	175	+263 OCT	()	()	(0)
80	+124 OCT	()	()	(0)	176	+264 OCT	()	()	(0)
81	+125 OCT	()	()	(0)	177	+265 OCT	()	()	(0)
82	+126 OCT	()	()	(0)	178	+266 OCT	()	()	(0)
83	+127 OCT	()	()	(0)	179	+267 OCT	()	()	(0)
84	+130 OCT	()	()	(0)	180	+270 OCT	()	()	(0)
85	+131 OCT	()	()	(0)	181	+271 OCT	()	()	(0)
86	+132 OCT	()	()	(0)	182	+272 OCT	()	()	(0)
87	+133 OCT	()	()	(0)	183	+273 OCT	()	()	(0)
88	+134 OCT	()	()	(0)	184	+274 OCT	()	()	(0)
89	+135 OCT	()	()	(0)	185	+275 OCT	()	()	(0)
90	+136 OCT	()	()	(0)	186	+276 OCT	()	()	(0)
91	+137 OCT	()	()	(0)	187	+277 OCT	()	()	(0)
92	+140 OCT	()	()	(0)	188	+300 OCT	()	()	(0)
93	+141 OCT	()	()	(0)	189	+301 OCT	()	()	(0)
94	+142 OCT	()	()	(0)	190	+302 OCT	()	()	(0)
95	+143 OCT	()	()	(0)	191	+303 OCT	()	()	(0)

OFFICE _____
DATE _____

NO. 2 ESS THIRTY-CODE SPEED CALL TABLE CLEARING FORM

CTX-10 FORM
(EF-1)

THIS FORM IS USED ONLY TO CLEAR A THIRTY-CODE
SPEED CALL LIST FOR RETURN TO SPARE.

FORM CHIPS ADDRESS RANGE=() - ()

CENTREX GROUP _____
THIRTYCODE LIST NUMBER _____

WORD col 1	ADDRESS INCREMENT WITH RESPECT TO POINTER ADDRESS col 2	ADDRESS col 3	INITIAL CONTENTS col 4	ZERO col 5
0	+ 50 OCT	()	()	(0)
1	+ 51 OCT	()	()	(0)
2	+ 52 OCT	()	()	(0)
3	+ 53 OCT	()	()	(0)
4	+ 54 OCT	()	()	(0)
5	+ 55 OCT	()	()	(0)
6	+ 56 OCT	()	()	(0)
7	+ 57 OCT	()	()	(0)
8	+ 60 OCT	()	()	(0)
9	+ 61 OCT	()	()	(0)
10	+ 62 OCT	()	()	(0)
11	+ 63 OCT	()	()	(0)
12	+ 64 OCT	()	()	(0)
13	+ 65 OCT	()	()	(0)
14	+ 66 OCT	()	()	(0)
15	+ 67 OCT	()	()	(0)
16	+ 70 OCT	()	()	(0)
17	+ 71 OCT	()	()	(0)
18	+ 72 OCT	()	()	(0)
19	+ 73 OCT	()	()	(0)
20	+ 74 OCT	()	()	(0)
21	+ 75 OCT	()	()	(0)
22	+ 76 OCT	()	()	(0)
23	+ 77 OCT	()	()	(0)
24	+100 OCT	()	()	(0)
25	+101 OCT	()	()	(0)
26	+102 OCT	()	()	(0)
27	+103 OCT	()	()	(0)
28	+104 OCT	()	()	(0)
29	+105 OCT	()	()	(0)
30	+106 OCT	()	()	(0)
31	+107 OCT	()	()	(0)
32	+110 OCT	()	()	(0)
33	+111 OCT	()	()	(0)
34	+112 OCT	()	()	(0)
35	+113 OCT	()	()	(0)
36	+114 OCT	()	()	(0)
37	+115 OCT	()	()	(0)
38	+116 OCT	()	()	(0)
39	+117 OCT	()	()	(0)
40	+120 OCT	()	()	(0)
41	+121 OCT	()	()	(0)
42	+122 OCT	()	()	(0)
43	+123 OCT	()	()	(0)
44	+124 OCT	()	()	(0)
45	+125 OCT	()	()	(0)
46	+126 OCT	()	()	(0)
47	+127 OCT	()	()	(0)
48	+130 OCT	()	()	(0)
49	+131 OCT	()	()	(0)
50	+132 OCT	()	()	(0)
51	+133 OCT	()	()	(0)
52	+134 OCT	()	()	(0)
53	+135 OCT	()	()	(0)
54	+136 OCT	()	()	(0)
55	+137 OCT	()	()	(0)
56	+140 OCT	()	()	(0)
57	+141 OCT	()	()	(0)
58	+142 OCT	()	()	(0)
59	+143 OCT	()	()	(0)

NO. 2 OR NO. 2B ESS SPARE TRANSLATION STORE MEMORY

OFFICE _____ TRANSLATOR CHANGE FORM CSM-1 FORM
 DATE _____ FORM CHIPS ADDRESS RANGE (_____) - (_____)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2	LD-1	0	241224	-----	-----
		1	241225	-----	-----
		2	241226	-----	-----
		3	241227	-----	-----
		4	241230	-----	-----
		5	241231	-----	-----
		6	241232	-----	-----
		7	241233	-----	-----
		8	241234	-----	-----
		9	241235	-----	-----
2	EF-1	0	342035	-----	-----
		1	342036	-----	-----
		2	342037	-----	-----
		3	342040	-----	-----
		4	342041	-----	-----
		5	342042	-----	-----
		6	342043	-----	-----
		7	342044	-----	-----
		8	342045	-----	-----
		9	342046	-----	-----
2B	EF-1	0	642142	-----	-----
		1	642143	-----	-----
		2	642144	-----	-----
		3	642145	-----	-----
		4	642146	-----	-----
		5	642147	-----	-----
		6	642150	-----	-----
		7	642151	-----	-----
		8	642152	-----	-----
		9	642153	-----	-----

APPENDIX 3

OFFICE _____

NO. 2 ESS SPARE CALL STORE MEMORY SUBTRANSLTOR CHANGE FORM

CSM-2 FORM

DATE _____

SUBTRANSLATOR TABLE NUMBER _____

FORM CHIPS ADDRESS RANGE= () - ()

THIS form represents one of a possible ten call store subtranslators. The form has been designed to show the address of the initial contents of and sequential changes to every word in the subtranslator between CHIPS updates. This form should be re-initialized from scratch each time changes on the form are CHIPED into memory and then additional memory allocation or return is needed.

ADDRESS	INITIAL SUBTRANSLATOR CONTENTS	CHANGE 1	CHANGE 2	CHANGE 3	CHANGE 4	CHANGE 5
TABLE HEAD	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 1=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 2=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 3=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 4=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 5=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 6=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 7=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 10=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 11=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 12=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 13=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 14=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 15=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 16=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 17=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 20=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 21=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 22=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 23=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 24=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 25=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 26=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 27=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 30=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 31=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 32=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 33=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 34=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 35=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 36=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 37=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 40=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 41=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 42=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 43=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 44=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 45=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 46=	SIZE () ADDRESS ()	()	()	()	()	()
TABLE HEAD+OCTAI 47=	SIZE () ADDRESS ()	()	()	()	()	()

NO. 2 OR NO. 2B ESS SPARE TRANSLATION STORE MEMORY
 TRANSLATOR CHANGE FORM

TSM-1 FORM

OFFICE _____
 DATE _____

FORM CHIPS ADDRESS RANGE (_____) - (_____) - (_____)

ESS #	GENERIC	FOR SUBTRANSLATOR TABLE #	STORED AT MTI ADDRESS	TRANSLATOR INITIAL CONTENTS	CHANGES
2	LO-1	0	241236	-----	-----
		1	241237	-----	-----
		2	241240	-----	-----
		3	241241	-----	-----
		4	241242	-----	-----
		5	241243	-----	-----
		6	241244	-----	-----
		7	241245	-----	-----
		8	241246	-----	-----
		9	241247	-----	-----
2	EF-1	0	342023	-----	-----
		1	342024	-----	-----
		2	342025	-----	-----
		3	342026	-----	-----
		4	342027	-----	-----
		5	342030	-----	-----
		6	342031	-----	-----
		7	342032	-----	-----
		8	342033	-----	-----
		9	342034	-----	-----
2B	EF-1	0	642154	-----	-----
		1	642155	-----	-----
		2	642156	-----	-----
		3	642157	-----	-----
		4	642160	-----	-----
		5	642161	-----	-----
		6	642162	-----	-----
		7	642163	-----	-----
		8	642164	-----	-----
		9	642165	-----	-----

APPENDIX 4

OFFICE _____
DATE _____

NO. 2 ESS SPARE TRANSLATION STORE MEMORY SUBTRANSLATOR CHANGE FORM

TSM-2 FORM

SUBTRANSLATOR TABLE NUMBER _____ FORM CHIPS ADDRESS RANGE= () - ()

THIS form represents one of a possible ten translation store subtranslators. The form has been designed to show the address of the initial contents of and sequential changes to every word in the subtranslator between CHIPS updates. This form should be re-initialized from scratch each time changes on the form are CHIPED into memory and then additional memory allocation or return is needed.

	ADDRESS	INITIAL SUBTRANSLATOR CONTENTS		CHANGE 1	CHANGE 2	CHANGE 3	CHANGE 4	CHANGE 5
TABLE HEAD	()	SIZE ()	<-BLOCK 0	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 1=	()	SIZE ()	<-BLOCK 1	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 2=	()	SIZE ()	<-BLOCK 2	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 3=	()	SIZE ()	<-BLOCK 3	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 4=	()	SIZE ()	<-BLOCK 4	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 5=	()	SIZE ()	<-BLOCK 5	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 6=	()	SIZE ()	<-BLOCK 6	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 7=	()	SIZE ()	<-BLOCK 7	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 10=	()	SIZE ()	<-BLOCK 8	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 11=	()	SIZE ()	<-BLOCK 9	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 12=	()	SIZE ()	<-BLOCK 10	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 13=	()	SIZE ()	<-BLOCK 11	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 14=	()	SIZE ()	<-BLOCK 12	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 15=	()	SIZE ()	<-BLOCK 13	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 16=	()	SIZE ()	<-BLOCK 14	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 17=	()	SIZE ()	<-BLOCK 15	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 20=	()	SIZE ()	<-BLOCK 16	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 21=	()	SIZE ()	<-BLOCK 17	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 22=	()	SIZE ()	<-BLOCK 18	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 23=	()	SIZE ()	<-BLOCK 19	()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 24=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 25=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 26=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 27=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 30=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 31=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 32=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 33=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 34=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 35=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 36=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 37=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 40=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 41=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 42=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 43=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 44=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 45=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 46=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						
TABLE HEAD+OCTAL 47=	()	SIZE ()		()	()	()	()	()
		ADDRESS ()						

DECIMAL TO OCTAL CONVERSION TABLE

0 ₁₀ = 0 ₈	51 ₁₀ = 63 ₈	102 ₁₀ = 146 ₈	153 ₁₀ = 231 ₈	204 ₁₀ = 314 ₈
1 ₁₀ = 1 ₈	52 ₁₀ = 64 ₈	103 ₁₀ = 147 ₈	154 ₁₀ = 232 ₈	205 ₁₀ = 315 ₈
2 ₁₀ = 2 ₈	53 ₁₀ = 65 ₈	104 ₁₀ = 150 ₈	155 ₁₀ = 233 ₈	206 ₁₀ = 316 ₈
3 ₁₀ = 3 ₈	54 ₁₀ = 66 ₈	105 ₁₀ = 151 ₈	156 ₁₀ = 234 ₈	207 ₁₀ = 317 ₈
4 ₁₀ = 4 ₈	55 ₁₀ = 67 ₈	106 ₁₀ = 152 ₈	157 ₁₀ = 235 ₈	208 ₁₀ = 320 ₈
5 ₁₀ = 5 ₈	56 ₁₀ = 70 ₈	107 ₁₀ = 153 ₈	158 ₁₀ = 236 ₈	209 ₁₀ = 321 ₈
6 ₁₀ = 6 ₈	57 ₁₀ = 71 ₈	108 ₁₀ = 154 ₈	159 ₁₀ = 237 ₈	210 ₁₀ = 322 ₈
7 ₁₀ = 7 ₈	58 ₁₀ = 72 ₈	109 ₁₀ = 155 ₈	160 ₁₀ = 240 ₈	211 ₁₀ = 323 ₈
8 ₁₀ = 10 ₈	59 ₁₀ = 73 ₈	110 ₁₀ = 156 ₈	161 ₁₀ = 241 ₈	212 ₁₀ = 324 ₈
9 ₁₀ = 11 ₈	60 ₁₀ = 74 ₈	111 ₁₀ = 157 ₈	162 ₁₀ = 242 ₈	213 ₁₀ = 325 ₈
10 ₁₀ = 12 ₈	61 ₁₀ = 75 ₈	112 ₁₀ = 160 ₈	163 ₁₀ = 243 ₈	214 ₁₀ = 326 ₈
11 ₁₀ = 13 ₈	62 ₁₀ = 76 ₈	113 ₁₀ = 161 ₈	164 ₁₀ = 244 ₈	215 ₁₀ = 327 ₈
12 ₁₀ = 14 ₈	63 ₁₀ = 77 ₈	114 ₁₀ = 162 ₈	165 ₁₀ = 245 ₈	216 ₁₀ = 330 ₈
13 ₁₀ = 15 ₈	64 ₁₀ = 100 ₈	115 ₁₀ = 163 ₈	166 ₁₀ = 246 ₈	217 ₁₀ = 331 ₈
14 ₁₀ = 16 ₈	65 ₁₀ = 101 ₈	116 ₁₀ = 164 ₈	167 ₁₀ = 247 ₈	218 ₁₀ = 332 ₈
15 ₁₀ = 17 ₈	66 ₁₀ = 102 ₈	117 ₁₀ = 165 ₈	168 ₁₀ = 250 ₈	219 ₁₀ = 333 ₈
16 ₁₀ = 20 ₈	67 ₁₀ = 103 ₈	118 ₁₀ = 166 ₈	169 ₁₀ = 251 ₈	220 ₁₀ = 334 ₈
17 ₁₀ = 21 ₈	68 ₁₀ = 104 ₈	119 ₁₀ = 167 ₈	170 ₁₀ = 252 ₈	221 ₁₀ = 335 ₈
18 ₁₀ = 22 ₈	69 ₁₀ = 105 ₈	120 ₁₀ = 170 ₈	171 ₁₀ = 253 ₈	222 ₁₀ = 336 ₈
19 ₁₀ = 23 ₈	70 ₁₀ = 106 ₈	121 ₁₀ = 171 ₈	172 ₁₀ = 254 ₈	223 ₁₀ = 337 ₈
20 ₁₀ = 24 ₈	71 ₁₀ = 107 ₈	122 ₁₀ = 172 ₈	173 ₁₀ = 255 ₈	224 ₁₀ = 340 ₈
21 ₁₀ = 25 ₈	72 ₁₀ = 110 ₈	123 ₁₀ = 173 ₈	174 ₁₀ = 256 ₈	225 ₁₀ = 341 ₈
22 ₁₀ = 26 ₈	73 ₁₀ = 111 ₈	124 ₁₀ = 174 ₈	175 ₁₀ = 257 ₈	226 ₁₀ = 342 ₈
23 ₁₀ = 27 ₈	74 ₁₀ = 112 ₈	125 ₁₀ = 175 ₈	176 ₁₀ = 260 ₈	227 ₁₀ = 343 ₈
24 ₁₀ = 30 ₈	75 ₁₀ = 113 ₈	126 ₁₀ = 176 ₈	177 ₁₀ = 261 ₈	228 ₁₀ = 344 ₈
25 ₁₀ = 31 ₈	76 ₁₀ = 114 ₈	127 ₁₀ = 177 ₈	178 ₁₀ = 262 ₈	229 ₁₀ = 345 ₈
26 ₁₀ = 32 ₈	77 ₁₀ = 115 ₈	128 ₁₀ = 200 ₈	179 ₁₀ = 263 ₈	230 ₁₀ = 346 ₈
27 ₁₀ = 33 ₈	78 ₁₀ = 116 ₈	129 ₁₀ = 201 ₈	180 ₁₀ = 264 ₈	231 ₁₀ = 347 ₈
28 ₁₀ = 34 ₈	79 ₁₀ = 117 ₈	130 ₁₀ = 202 ₈	181 ₁₀ = 265 ₈	232 ₁₀ = 350 ₈
29 ₁₀ = 35 ₈	80 ₁₀ = 120 ₈	131 ₁₀ = 203 ₈	182 ₁₀ = 266 ₈	233 ₁₀ = 351 ₈
30 ₁₀ = 36 ₈	81 ₁₀ = 121 ₈	132 ₁₀ = 204 ₈	183 ₁₀ = 267 ₈	234 ₁₀ = 352 ₈
31 ₁₀ = 37 ₈	82 ₁₀ = 122 ₈	133 ₁₀ = 205 ₈	184 ₁₀ = 270 ₈	235 ₁₀ = 353 ₈
32 ₁₀ = 40 ₈	83 ₁₀ = 123 ₈	134 ₁₀ = 206 ₈	185 ₁₀ = 271 ₈	236 ₁₀ = 354 ₈
33 ₁₀ = 41 ₈	84 ₁₀ = 124 ₈	135 ₁₀ = 207 ₈	186 ₁₀ = 272 ₈	237 ₁₀ = 355 ₈
34 ₁₀ = 42 ₈	85 ₁₀ = 125 ₈	136 ₁₀ = 210 ₈	187 ₁₀ = 273 ₈	238 ₁₀ = 356 ₈
35 ₁₀ = 43 ₈	86 ₁₀ = 126 ₈	137 ₁₀ = 211 ₈	188 ₁₀ = 274 ₈	239 ₁₀ = 357 ₈
36 ₁₀ = 44 ₈	87 ₁₀ = 127 ₈	138 ₁₀ = 212 ₈	189 ₁₀ = 275 ₈	240 ₁₀ = 360 ₈
37 ₁₀ = 45 ₈	88 ₁₀ = 130 ₈	139 ₁₀ = 213 ₈	190 ₁₀ = 276 ₈	241 ₁₀ = 361 ₈
38 ₁₀ = 46 ₈	89 ₁₀ = 131 ₈	140 ₁₀ = 214 ₈	191 ₁₀ = 277 ₈	242 ₁₀ = 362 ₈
39 ₁₀ = 47 ₈	90 ₁₀ = 132 ₈	141 ₁₀ = 215 ₈	192 ₁₀ = 300 ₈	243 ₁₀ = 363 ₈
40 ₁₀ = 50 ₈	91 ₁₀ = 133 ₈	142 ₁₀ = 216 ₈	193 ₁₀ = 301 ₈	244 ₁₀ = 364 ₈
41 ₁₀ = 51 ₈	92 ₁₀ = 134 ₈	143 ₁₀ = 217 ₈	194 ₁₀ = 302 ₈	245 ₁₀ = 365 ₈
42 ₁₀ = 52 ₈	93 ₁₀ = 135 ₈	144 ₁₀ = 220 ₈	195 ₁₀ = 303 ₈	246 ₁₀ = 366 ₈
43 ₁₀ = 53 ₈	94 ₁₀ = 136 ₈	145 ₁₀ = 221 ₈	196 ₁₀ = 304 ₈	247 ₁₀ = 367 ₈
44 ₁₀ = 54 ₈	95 ₁₀ = 137 ₈	146 ₁₀ = 222 ₈	197 ₁₀ = 305 ₈	248 ₁₀ = 370 ₈
45 ₁₀ = 55 ₈	96 ₁₀ = 140 ₈	147 ₁₀ = 223 ₈	198 ₁₀ = 306 ₈	249 ₁₀ = 371 ₈
46 ₁₀ = 56 ₈	97 ₁₀ = 141 ₈	148 ₁₀ = 224 ₈	199 ₁₀ = 307 ₈	250 ₁₀ = 372 ₈
47 ₁₀ = 57 ₈	98 ₁₀ = 142 ₈	149 ₁₀ = 225 ₈	200 ₁₀ = 310 ₈	251 ₁₀ = 373 ₈
48 ₁₀ = 60 ₈	99 ₁₀ = 143 ₈	150 ₁₀ = 226 ₈	201 ₁₀ = 311 ₈	252 ₁₀ = 374 ₈
49 ₁₀ = 61 ₈	100 ₁₀ = 144 ₈	151 ₁₀ = 227 ₈	202 ₁₀ = 312 ₈	253 ₁₀ = 375 ₈
50 ₁₀ = 62 ₈	101 ₁₀ = 145 ₈	152 ₁₀ = 230 ₈	203 ₁₀ = 313 ₈	254 ₁₀ = 376 ₈

DECIMAL TO OCTAL CONVERSION TABLE

255 10 = 377 8	306 10 = 462 8	357 10 = 545 8	408 10 = 630 8	459 10 = 713 8
256 10 = 400 8	307 10 = 463 8	358 10 = 546 8	409 10 = 631 8	460 10 = 714 8
257 10 = 401 8	308 10 = 464 8	359 10 = 547 8	410 10 = 632 8	461 10 = 715 8
258 10 = 402 8	309 10 = 465 8	360 10 = 550 8	411 10 = 633 8	462 10 = 716 8
259 10 = 403 8	310 10 = 466 8	361 10 = 551 8	412 10 = 634 8	463 10 = 717 8
260 10 = 404 8	311 10 = 467 8	362 10 = 552 8	413 10 = 635 8	464 10 = 720 8
261 10 = 405 8	312 10 = 470 8	363 10 = 553 8	414 10 = 636 8	465 10 = 721 8
262 10 = 406 8	313 10 = 471 8	364 10 = 554 8	415 10 = 637 8	466 10 = 722 8
263 10 = 407 8	314 10 = 472 8	365 10 = 555 8	416 10 = 640 8	467 10 = 723 8
264 10 = 410 8	315 10 = 473 8	366 10 = 556 8	417 10 = 641 8	468 10 = 724 8
265 10 = 411 8	316 10 = 474 8	367 10 = 557 8	418 10 = 642 8	469 10 = 725 8
266 10 = 412 8	317 10 = 475 8	368 10 = 560 8	419 10 = 643 8	470 10 = 726 8
267 10 = 413 8	318 10 = 476 8	369 10 = 561 8	420 10 = 644 8	471 10 = 727 8
268 10 = 414 8	319 10 = 477 8	370 10 = 562 8	421 10 = 645 8	472 10 = 730 8
269 10 = 415 8	320 10 = 500 8	371 10 = 563 8	422 10 = 646 8	473 10 = 731 8
270 10 = 416 8	321 10 = 501 8	372 10 = 564 8	423 10 = 647 8	474 10 = 732 8
271 10 = 417 8	322 10 = 502 8	373 10 = 565 8	424 10 = 650 8	475 10 = 733 8
272 10 = 420 8	323 10 = 503 8	374 10 = 566 8	425 10 = 651 8	476 10 = 734 8
273 10 = 421 8	324 10 = 504 8	375 10 = 567 8	426 10 = 652 8	477 10 = 735 8
274 10 = 422 8	325 10 = 505 8	376 10 = 570 8	427 10 = 653 8	478 10 = 736 8
275 10 = 423 8	326 10 = 506 8	377 10 = 571 8	428 10 = 654 8	479 10 = 737 8
276 10 = 424 8	327 10 = 507 8	378 10 = 572 8	429 10 = 655 8	480 10 = 740 8
277 10 = 425 8	328 10 = 510 8	379 10 = 573 8	430 10 = 656 8	481 10 = 741 8
278 10 = 426 8	329 10 = 511 8	380 10 = 574 8	431 10 = 657 8	482 10 = 742 8
279 10 = 427 8	330 10 = 512 8	381 10 = 575 8	432 10 = 660 8	483 10 = 743 8
280 10 = 430 8	331 10 = 513 8	382 10 = 576 8	433 10 = 661 8	484 10 = 744 8
281 10 = 431 8	332 10 = 514 8	383 10 = 577 8	434 10 = 662 8	485 10 = 745 8
282 10 = 432 8	333 10 = 515 8	384 10 = 600 8	435 10 = 663 8	486 10 = 746 8
283 10 = 433 8	334 10 = 516 8	385 10 = 601 8	436 10 = 664 8	487 10 = 747 8
284 10 = 434 8	335 10 = 517 8	386 10 = 602 8	437 10 = 665 8	488 10 = 750 8
285 10 = 435 8	336 10 = 520 8	387 10 = 603 8	438 10 = 666 8	489 10 = 751 8
286 10 = 436 8	337 10 = 521 8	388 10 = 604 8	439 10 = 667 8	490 10 = 752 8
287 10 = 437 8	338 10 = 522 8	389 10 = 605 8	440 10 = 670 8	491 10 = 753 8
288 10 = 440 8	339 10 = 523 8	390 10 = 606 8	441 10 = 671 8	492 10 = 754 8
289 10 = 441 8	340 10 = 524 8	391 10 = 607 8	442 10 = 672 8	493 10 = 755 8
290 10 = 442 8	341 10 = 525 8	392 10 = 610 8	443 10 = 673 8	494 10 = 756 8
291 10 = 443 8	342 10 = 526 8	393 10 = 611 8	444 10 = 674 8	495 10 = 757 8
292 10 = 444 8	343 10 = 527 8	394 10 = 612 8	445 10 = 675 8	496 10 = 760 8
293 10 = 445 8	344 10 = 530 8	395 10 = 613 8	446 10 = 676 8	497 10 = 761 8
294 10 = 446 8	345 10 = 531 8	396 10 = 614 8	447 10 = 677 8	498 10 = 762 8
295 10 = 447 8	346 10 = 532 8	397 10 = 615 8	448 10 = 700 8	499 10 = 763 8
296 10 = 450 8	347 10 = 533 8	398 10 = 616 8	449 10 = 701 8	500 10 = 764 8
297 10 = 451 8	348 10 = 534 8	399 10 = 617 8	450 10 = 702 8	501 10 = 765 8
298 10 = 452 8	349 10 = 535 8	400 10 = 620 8	451 10 = 703 8	502 10 = 766 8
299 10 = 453 8	350 10 = 536 8	401 10 = 621 8	452 10 = 704 8	503 10 = 767 8
300 10 = 454 8	351 10 = 537 8	402 10 = 622 8	453 10 = 705 8	504 10 = 770 8
301 10 = 455 8	352 10 = 540 8	403 10 = 623 8	454 10 = 706 8	505 10 = 771 8
302 10 = 456 8	353 10 = 541 8	404 10 = 624 8	455 10 = 707 8	506 10 = 772 8
303 10 = 457 8	354 10 = 542 8	405 10 = 625 8	456 10 = 710 8	507 10 = 773 8
304 10 = 460 8	355 10 = 543 8	406 10 = 626 8	457 10 = 711 8	508 10 = 774 8
305 10 = 461 8	356 10 = 544 8	407 10 = 627 8	458 10 = 712 8	509 10 = 775 8

DECIMAL TO OCTAL CONVERSION TABLE

510 10 = 776 8	561 10 = 1061 8	612 10 = 1144 8	663 10 = 1227 8	714 10 = 1312 8
511 10 = 777 8	562 10 = 1062 8	613 10 = 1145 8	664 10 = 1230 8	715 10 = 1313 8
512 10 = 1000 8	563 10 = 1063 8	614 10 = 1146 8	665 10 = 1231 8	716 10 = 1314 8
513 10 = 1001 8	564 10 = 1064 8	615 10 = 1147 8	666 10 = 1232 8	717 10 = 1315 8
514 10 = 1002 8	565 10 = 1065 8	616 10 = 1150 8	667 10 = 1233 8	718 10 = 1316 8
515 10 = 1003 8	566 10 = 1066 8	617 10 = 1151 8	668 10 = 1234 8	719 10 = 1317 8
516 10 = 1004 8	567 10 = 1067 8	618 10 = 1152 8	669 10 = 1235 8	720 10 = 1320 8
517 10 = 1005 8	568 10 = 1070 8	619 10 = 1153 8	670 10 = 1236 8	721 10 = 1321 8
518 10 = 1006 8	569 10 = 1071 8	620 10 = 1154 8	671 10 = 1237 8	722 10 = 1322 8
519 10 = 1007 8	570 10 = 1072 8	621 10 = 1155 8	672 10 = 1240 8	723 10 = 1323 8
520 10 = 1010 8	571 10 = 1073 8	622 10 = 1156 8	673 10 = 1241 8	724 10 = 1324 8
521 10 = 1011 8	572 10 = 1074 8	623 10 = 1157 8	674 10 = 1242 8	725 10 = 1325 8
522 10 = 1012 8	573 10 = 1075 8	624 10 = 1160 8	675 10 = 1243 8	726 10 = 1326 8
523 10 = 1013 8	574 10 = 1076 8	625 10 = 1161 8	676 10 = 1244 8	727 10 = 1327 8
524 10 = 1014 8	575 10 = 1077 8	626 10 = 1162 8	677 10 = 1245 8	728 10 = 1330 8
525 10 = 1015 8	576 10 = 1100 8	627 10 = 1163 8	678 10 = 1246 8	729 10 = 1331 8
526 10 = 1016 8	577 10 = 1101 8	628 10 = 1164 8	679 10 = 1247 8	730 10 = 1332 8
527 10 = 1017 8	578 10 = 1102 8	629 10 = 1165 8	680 10 = 1250 8	731 10 = 1333 8
528 10 = 1020 8	579 10 = 1103 8	630 10 = 1166 8	681 10 = 1251 8	732 10 = 1334 8
529 10 = 1021 8	580 10 = 1104 8	631 10 = 1167 8	682 10 = 1252 8	733 10 = 1335 8
530 10 = 1022 8	581 10 = 1105 8	632 10 = 1170 8	683 10 = 1253 8	734 10 = 1336 8
531 10 = 1023 8	582 10 = 1106 8	633 10 = 1171 8	684 10 = 1254 8	735 10 = 1337 8
532 10 = 1024 8	583 10 = 1107 8	634 10 = 1172 8	685 10 = 1255 8	736 10 = 1340 8
533 10 = 1025 8	584 10 = 1110 8	635 10 = 1173 8	686 10 = 1256 8	737 10 = 1341 8
534 10 = 1026 8	585 10 = 1111 8	636 10 = 1174 8	687 10 = 1257 8	738 10 = 1342 8
535 10 = 1027 8	586 10 = 1112 8	637 10 = 1175 8	688 10 = 1260 8	739 10 = 1343 8
536 10 = 1030 8	587 10 = 1113 8	638 10 = 1176 8	689 10 = 1261 8	740 10 = 1344 8
537 10 = 1031 8	588 10 = 1114 8	639 10 = 1177 8	690 10 = 1262 8	741 10 = 1345 8
538 10 = 1032 8	589 10 = 1115 8	640 10 = 1200 8	691 10 = 1263 8	742 10 = 1346 8
539 10 = 1033 8	590 10 = 1116 8	641 10 = 1201 8	692 10 = 1264 8	743 10 = 1347 8
540 10 = 1034 8	591 10 = 1117 8	642 10 = 1202 8	693 10 = 1265 8	744 10 = 1350 8
541 10 = 1035 8	592 10 = 1120 8	643 10 = 1203 8	694 10 = 1266 8	745 10 = 1351 8
542 10 = 1036 8	593 10 = 1121 8	644 10 = 1204 8	695 10 = 1267 8	746 10 = 1352 8
543 10 = 1037 8	594 10 = 1122 8	645 10 = 1205 8	696 10 = 1270 8	747 10 = 1353 8
544 10 = 1040 8	595 10 = 1123 8	646 10 = 1206 8	697 10 = 1271 8	748 10 = 1354 8
545 10 = 1041 8	596 10 = 1124 8	647 10 = 1207 8	698 10 = 1272 8	749 10 = 1355 8
546 10 = 1042 8	597 10 = 1125 8	648 10 = 1210 8	699 10 = 1273 8	750 10 = 1356 8
547 10 = 1043 8	598 10 = 1126 8	649 10 = 1211 8	700 10 = 1274 8	751 10 = 1357 8
548 10 = 1044 8	599 10 = 1127 8	650 10 = 1212 8	701 10 = 1275 8	752 10 = 1360 8
549 10 = 1045 8	600 10 = 1130 8	651 10 = 1213 8	702 10 = 1276 8	753 10 = 1361 8
550 10 = 1046 8	601 10 = 1131 8	652 10 = 1214 8	703 10 = 1277 8	754 10 = 1362 8
551 10 = 1047 8	602 10 = 1132 8	653 10 = 1215 8	704 10 = 1300 8	755 10 = 1363 8
552 10 = 1050 8	603 10 = 1133 8	654 10 = 1216 8	705 10 = 1301 8	756 10 = 1364 8
553 10 = 1051 8	604 10 = 1134 8	655 10 = 1217 8	706 10 = 1302 8	757 10 = 1365 8
554 10 = 1052 8	605 10 = 1135 8	656 10 = 1220 8	707 10 = 1303 8	758 10 = 1366 8
555 10 = 1053 8	606 10 = 1136 8	657 10 = 1221 8	708 10 = 1304 8	759 10 = 1367 8
556 10 = 1054 8	607 10 = 1137 8	658 10 = 1222 8	709 10 = 1305 8	760 10 = 1370 8
557 10 = 1055 8	608 10 = 1140 8	659 10 = 1223 8	710 10 = 1306 8	761 10 = 1371 8
558 10 = 1056 8	609 10 = 1141 8	660 10 = 1224 8	711 10 = 1307 8	762 10 = 1372 8
559 10 = 1057 8	610 10 = 1142 8	661 10 = 1225 8	712 10 = 1310 8	763 10 = 1373 8
560 10 = 1060 8	611 10 = 1143 8	662 10 = 1226 8	713 10 = 1311 8	764 10 = 1374 8

DECIMAL TO OCTAL CONVERSION TABLE

765 ₁₀ = 1375 ₈	816 ₁₀ = 1460 ₈	867 ₁₀ = 1543 ₈	918 ₁₀ = 1626 ₈	969 ₁₀ = 1711 ₈
766 ₁₀ = 1376 ₈	817 ₁₀ = 1461 ₈	868 ₁₀ = 1544 ₈	919 ₁₀ = 1627 ₈	970 ₁₀ = 1712 ₈
767 ₁₀ = 1377 ₈	818 ₁₀ = 1462 ₈	869 ₁₀ = 1545 ₈	920 ₁₀ = 1630 ₈	971 ₁₀ = 1713 ₈
768 ₁₀ = 1400 ₈	819 ₁₀ = 1463 ₈	870 ₁₀ = 1546 ₈	921 ₁₀ = 1631 ₈	972 ₁₀ = 1714 ₈
769 ₁₀ = 1401 ₈	820 ₁₀ = 1464 ₈	871 ₁₀ = 1547 ₈	922 ₁₀ = 1632 ₈	973 ₁₀ = 1715 ₈
770 ₁₀ = 1402 ₈	821 ₁₀ = 1465 ₈	872 ₁₀ = 1550 ₈	923 ₁₀ = 1633 ₈	974 ₁₀ = 1716 ₈
771 ₁₀ = 1403 ₈	822 ₁₀ = 1466 ₈	873 ₁₀ = 1551 ₈	924 ₁₀ = 1634 ₈	975 ₁₀ = 1717 ₈
772 ₁₀ = 1404 ₈	823 ₁₀ = 1467 ₈	874 ₁₀ = 1552 ₈	925 ₁₀ = 1635 ₈	976 ₁₀ = 1720 ₈
773 ₁₀ = 1405 ₈	824 ₁₀ = 1470 ₈	875 ₁₀ = 1553 ₈	926 ₁₀ = 1636 ₈	977 ₁₀ = 1721 ₈
774 ₁₀ = 1406 ₈	825 ₁₀ = 1471 ₈	876 ₁₀ = 1554 ₈	927 ₁₀ = 1637 ₈	978 ₁₀ = 1722 ₈
775 ₁₀ = 1407 ₈	826 ₁₀ = 1472 ₈	877 ₁₀ = 1555 ₈	928 ₁₀ = 1640 ₈	979 ₁₀ = 1723 ₈
776 ₁₀ = 1410 ₈	827 ₁₀ = 1473 ₈	878 ₁₀ = 1556 ₈	929 ₁₀ = 1641 ₈	980 ₁₀ = 1724 ₈
777 ₁₀ = 1411 ₈	828 ₁₀ = 1474 ₈	879 ₁₀ = 1557 ₈	930 ₁₀ = 1642 ₈	981 ₁₀ = 1725 ₈
778 ₁₀ = 1412 ₈	829 ₁₀ = 1475 ₈	880 ₁₀ = 1560 ₈	931 ₁₀ = 1643 ₈	982 ₁₀ = 1726 ₈
779 ₁₀ = 1413 ₈	830 ₁₀ = 1476 ₈	881 ₁₀ = 1561 ₈	932 ₁₀ = 1644 ₈	983 ₁₀ = 1727 ₈
780 ₁₀ = 1414 ₈	831 ₁₀ = 1477 ₈	882 ₁₀ = 1562 ₈	933 ₁₀ = 1645 ₈	984 ₁₀ = 1730 ₈
781 ₁₀ = 1415 ₈	832 ₁₀ = 1500 ₈	883 ₁₀ = 1563 ₈	934 ₁₀ = 1646 ₈	985 ₁₀ = 1731 ₈
782 ₁₀ = 1416 ₈	833 ₁₀ = 1501 ₈	884 ₁₀ = 1564 ₈	935 ₁₀ = 1647 ₈	986 ₁₀ = 1732 ₈
783 ₁₀ = 1417 ₈	834 ₁₀ = 1502 ₈	885 ₁₀ = 1565 ₈	936 ₁₀ = 1650 ₈	987 ₁₀ = 1733 ₈
784 ₁₀ = 1420 ₈	835 ₁₀ = 1503 ₈	886 ₁₀ = 1566 ₈	937 ₁₀ = 1651 ₈	988 ₁₀ = 1734 ₈
785 ₁₀ = 1421 ₈	836 ₁₀ = 1504 ₈	887 ₁₀ = 1567 ₈	938 ₁₀ = 1652 ₈	989 ₁₀ = 1735 ₈
786 ₁₀ = 1422 ₈	837 ₁₀ = 1505 ₈	888 ₁₀ = 1570 ₈	939 ₁₀ = 1653 ₈	990 ₁₀ = 1736 ₈
787 ₁₀ = 1423 ₈	838 ₁₀ = 1506 ₈	889 ₁₀ = 1571 ₈	940 ₁₀ = 1654 ₈	991 ₁₀ = 1737 ₈
788 ₁₀ = 1424 ₈	839 ₁₀ = 1507 ₈	890 ₁₀ = 1572 ₈	941 ₁₀ = 1655 ₈	992 ₁₀ = 1740 ₈
789 ₁₀ = 1425 ₈	840 ₁₀ = 1510 ₈	891 ₁₀ = 1573 ₈	942 ₁₀ = 1656 ₈	993 ₁₀ = 1741 ₈
790 ₁₀ = 1426 ₈	841 ₁₀ = 1511 ₈	892 ₁₀ = 1574 ₈	943 ₁₀ = 1657 ₈	994 ₁₀ = 1742 ₈
791 ₁₀ = 1427 ₈	842 ₁₀ = 1512 ₈	893 ₁₀ = 1575 ₈	944 ₁₀ = 1660 ₈	995 ₁₀ = 1743 ₈
792 ₁₀ = 1430 ₈	843 ₁₀ = 1513 ₈	894 ₁₀ = 1576 ₈	945 ₁₀ = 1661 ₈	996 ₁₀ = 1744 ₈
793 ₁₀ = 1431 ₈	844 ₁₀ = 1514 ₈	895 ₁₀ = 1577 ₈	946 ₁₀ = 1662 ₈	997 ₁₀ = 1745 ₈
794 ₁₀ = 1432 ₈	845 ₁₀ = 1515 ₈	896 ₁₀ = 1600 ₈	947 ₁₀ = 1663 ₈	998 ₁₀ = 1746 ₈
795 ₁₀ = 1433 ₈	846 ₁₀ = 1516 ₈	897 ₁₀ = 1601 ₈	948 ₁₀ = 1664 ₈	999 ₁₀ = 1747 ₈
796 ₁₀ = 1434 ₈	847 ₁₀ = 1517 ₈	898 ₁₀ = 1602 ₈	949 ₁₀ = 1665 ₈	1000 ₁₀ = 1750 ₈
797 ₁₀ = 1435 ₈	848 ₁₀ = 1520 ₈	899 ₁₀ = 1603 ₈	950 ₁₀ = 1666 ₈	1001 ₁₀ = 1751 ₈
798 ₁₀ = 1436 ₈	849 ₁₀ = 1521 ₈	900 ₁₀ = 1604 ₈	951 ₁₀ = 1667 ₈	1002 ₁₀ = 1752 ₈
799 ₁₀ = 1437 ₈	850 ₁₀ = 1522 ₈	901 ₁₀ = 1605 ₈	952 ₁₀ = 1670 ₈	1003 ₁₀ = 1753 ₈
800 ₁₀ = 1440 ₈	851 ₁₀ = 1523 ₈	902 ₁₀ = 1606 ₈	953 ₁₀ = 1671 ₈	1004 ₁₀ = 1754 ₈
801 ₁₀ = 1441 ₈	852 ₁₀ = 1524 ₈	903 ₁₀ = 1607 ₈	954 ₁₀ = 1672 ₈	1005 ₁₀ = 1755 ₈
802 ₁₀ = 1442 ₈	853 ₁₀ = 1525 ₈	904 ₁₀ = 1610 ₈	955 ₁₀ = 1673 ₈	1006 ₁₀ = 1756 ₈
803 ₁₀ = 1443 ₈	854 ₁₀ = 1526 ₈	905 ₁₀ = 1611 ₈	956 ₁₀ = 1674 ₈	1007 ₁₀ = 1757 ₈
804 ₁₀ = 1444 ₈	855 ₁₀ = 1527 ₈	906 ₁₀ = 1612 ₈	957 ₁₀ = 1675 ₈	1008 ₁₀ = 1760 ₈
805 ₁₀ = 1445 ₈	856 ₁₀ = 1530 ₈	907 ₁₀ = 1613 ₈	958 ₁₀ = 1676 ₈	1009 ₁₀ = 1761 ₈
806 ₁₀ = 1446 ₈	857 ₁₀ = 1531 ₈	908 ₁₀ = 1614 ₈	959 ₁₀ = 1677 ₈	1010 ₁₀ = 1762 ₈
807 ₁₀ = 1447 ₈	858 ₁₀ = 1532 ₈	909 ₁₀ = 1615 ₈	960 ₁₀ = 1700 ₈	1011 ₁₀ = 1763 ₈
808 ₁₀ = 1450 ₈	859 ₁₀ = 1533 ₈	910 ₁₀ = 1616 ₈	961 ₁₀ = 1701 ₈	1012 ₁₀ = 1764 ₈
809 ₁₀ = 1451 ₈	860 ₁₀ = 1534 ₈	911 ₁₀ = 1617 ₈	962 ₁₀ = 1702 ₈	1013 ₁₀ = 1765 ₈
810 ₁₀ = 1452 ₈	861 ₁₀ = 1535 ₈	912 ₁₀ = 1620 ₈	963 ₁₀ = 1703 ₈	1014 ₁₀ = 1766 ₈
811 ₁₀ = 1453 ₈	862 ₁₀ = 1536 ₈	913 ₁₀ = 1621 ₈	964 ₁₀ = 1704 ₈	1015 ₁₀ = 1767 ₈
812 ₁₀ = 1454 ₈	863 ₁₀ = 1537 ₈	914 ₁₀ = 1622 ₈	965 ₁₀ = 1705 ₈	1016 ₁₀ = 1770 ₈
813 ₁₀ = 1455 ₈	864 ₁₀ = 1540 ₈	915 ₁₀ = 1623 ₈	966 ₁₀ = 1706 ₈	1017 ₁₀ = 1771 ₈
814 ₁₀ = 1456 ₈	865 ₁₀ = 1541 ₈	916 ₁₀ = 1624 ₈	967 ₁₀ = 1707 ₈	1018 ₁₀ = 1772 ₈
815 ₁₀ = 1457 ₈	866 ₁₀ = 1542 ₈	917 ₁₀ = 1625 ₈	968 ₁₀ = 1710 ₈	1019 ₁₀ = 1773 ₈