ELECTRONIC SWITCHING SYSTEM NO. 3
OFFICE DATA TABLES LAYOUT SPECIFICATION
FOR OFFICES EQUIPPED WITH THE 3E3
GENERIC PROGRAM

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SPCS

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1. When changes are made in this document, the sections affected will be reissued in their entirety. Only those sections affected will be reissued.

2. The cover sheet and section index will be reissued and brought up to date each time any section of this document is reissued or a new section is added.

3. The issue number assigned to a changed or new section will be the same issue number as that of this section.

4. Sections that are not changed will retain their existing issue number.

5. The issue number of this section (000) is to be considered as the issue number of this document as a whole.

WESTERN ELECTRIC COMPANY, INCORPORATED

ISSUE NOTES

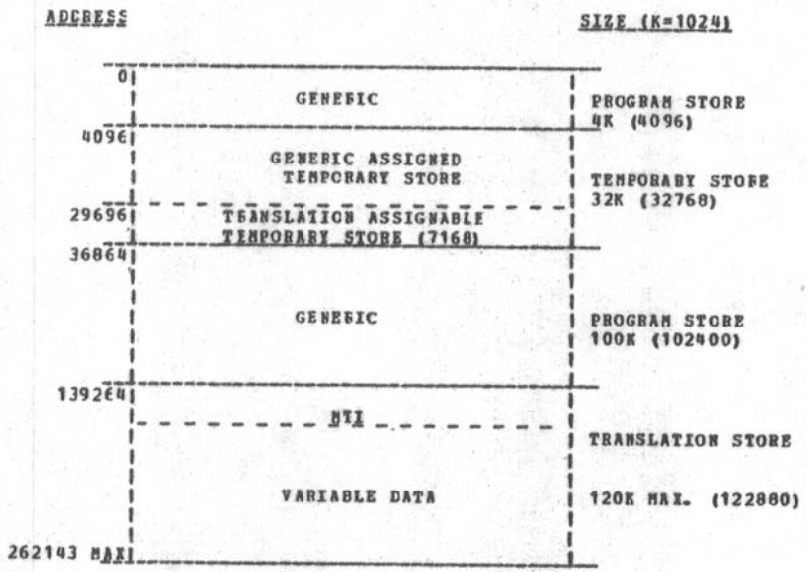
ISSUE	CHANGE CLASS	APPROVAL ENGR	APPROVAL DATE	DESCRIPTION OF CHANGE
1	-	DSA (7127)	11-1-79	Original Issue (including LDIs 1 to 5)
2	A	JRW(7414)	2-1-80	Additional changes per LDI 5 (on pg. 200-10, valid expansion entries for 2-pty lines added; on pg. 600-6, note for CCTBL corrected; on pg. 800-9, TLUID layout corrected). Other miscellaneous changes.
3	A	JRW(7414)	8-1-80	Additional changes per LDI 6. Editorial corrections to (sections 100, 200, 300, 500, 600, 700 & 800). Design change to section 700. Add AMATID new identifier for AMARC. Add bit NW_ANA to OFF_DATA.

SECTION INDEX

SECTION INDEX

GENERAL NOTES

1. MAIN STORE LAYOUT - The following figure shows the layout of MAIN STORE in a No. 3 ESS office equipped with the 3F3 Generic.



GENERAL NOTES (continued)

2. TAPE LAYOUTS - Tape layouts describing the "TRANSLATION" file and REMARKS" file are controlled by J3H001T-1. The ODA must produce these two files.

3. SIZE OF 3B3 TRANSLATIONS - The maximum size of translations is 122,880-1 words, which is a tape limit. The number of spare words in the "SPARES" MTI plus the number of words used in translations cannot exceed the 122,800 -1 limit (120K = 122880). See also Figure 1, Note 10 and Figure 31D, Note 3.

4. ORDER OF ODA PROCESSING - The use of the ICS bit in OFF_DATA (Fig. 23A) to determine the default condition in Speed Call change (Fig. 2C, Note 4, bits CHL & CHF, and Fig. 2C, Note 9) requires that OFF_DATA be established by the ODA before line data is processed; e.g., ESS 3500 forms must be processed before ESS form 3100, 3105 or 3107 forms.

5. In this document, all numbers are given in decimal, unless otherwise qualified. The suffix K equals 1024 (as in 136K = 139,264).

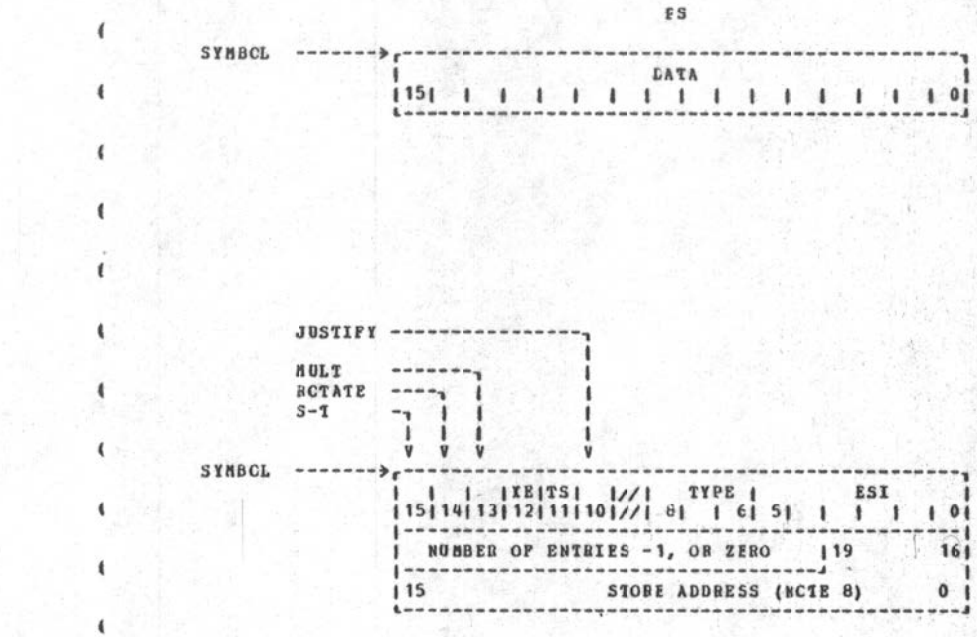
6. In this document, whenever a BCD 0 is to be stored, it is stored as a binary 1010.

MASTER TABLE INDEX

INDEX OF FIGURES

FIG. 1 MASTER TABLE INDEX (MTI)

TYPES OF MTI ENTRIES:



ESI = Entry Size Indicator (see MULT below).

JUSTIFY Used when ROTATE = 1.
= 0 Do not right justify the entry.
= 1 Right justify the entry.

MULT = 0 If ROTATE = 0, then ESI = $\log_2$ (no. of words per entry).
If ROTATE = 1, then ESI = $\log_2$ (no. of entries per word).
= 1 MULTIPLY - ESI = no. of words per table entry - 2.

ROTATE See MULT above.

S-T = 0 Translation Table - ESI = (see MULT above).
= 1 Search Table - ESI = no. of words per table entry.

TYPE = Type of translation table. If there is only one type, TYPE = 1.

TS = 0 Address points to program store.
= 1 Address points to temporary store.

XE = 0 Translator is not defined.
= 1 Translator exists.

"NO. OF ENTRIES" = Number of entries -1, if XE=1
= zero, if XE=0

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

ALPHABETICAL LIST OF THE MTI:

TRANSLATOR NAME	SIZE (WORDS)	STARTING LOCATION	SECT-FIG	NOTE
ALITWRD	1	420075	700-25	
AMA_EOF	3	421124	700-24	
AMATID	2	421100	700-23D	
ARIEXP	3	421402	600-18A	
BOSCAN	1	420101	800-35A	
CALLBACK	3	421344	700-28B	
CCTBL	3	421333	600-16B	
CDIEXP	3	421371	600-16A	
CFLST	3	421322	300-8B	
CFTBL	3	421127	300-8A	
CHARGETB	16	420102	600-19	
CKTSCAN	258	420122	800-34	3
CLSRV	8	420524	800-33A	
CODLST	3	421325	400-11B	
CCINSTAT	3	421135	300-9B	
COINTRIP	3	421405	300-9A	
CP_FEM	1	420534	800-35F	
CUTSTAT	3	421341	700-27	
DSYBLK	7	420535	800-33C	
DIDACTA	1	420544	700-23J	11
EQIOCHAN	3	420000	800-29B	2,11
EQMISMCD	1	420074	800-29C	
EQPT_PE	32	420545	800-35E	
EXPTBL	3	421440	400-11A	
FATTBL	12	421355	600-16	
FETL	2	421073	700-23H	
GRPSTAT	12	421140	500-13	
GRPTBL	12	421410	500-12A	
IBLK	3	420605	800-33B	
INTCHG	1	420610	600-19A	
LNPATBL	4	420611	700-22B	
JCT_RATE	1	420076	700-26A	
LCCTBL	3	421336	700-21	
LOG_SCAN	1	420615	800-35B	
LSTTSWRD	2	420011	800-31A	2

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

ALPHABETICAL LIST OF THE MTI:

TRANSLATOR NAME	SIZE (WORDS)	STARTING LOCATION	SECT-FIG.	NOTE
MEMLST	12	421424	500-15	
MASTYPE (SPARE)	1	420616	800-35H	
MRTBL	3	421132	300-7	
MSGCL	46	420617	700-28A	
MT_FEM	1	420677	800-35G	
NETWEQPT	1	420700	800-35C	
NETWMT	1	420701	800-35D	
NOCBCD	8	420702	700-22A	
NOCD	24	421451	400-10A	
NCTEST	4	421066	700-23G	
NPAPAT	4	420712	700-22C	12
OFFICE	8	420721	700-23B	
OFF_DATA	3	420716	700-23A	
OIEXP	16	420731	200-2E	
RIEXP	3	421377	600-18	
SBILTBL	3	421330	200-2D	
SCHEDINH	16	420751	700-26D	11
SCRSIZE	1	420771	700-23E	
SC1LST	3	421314	300-5	
SC2LST	3	421317	300-6	
SCTBLS	3	421374	600-17	
SKEDBLK	15	420772	800-33E	
SPABES	3	421633	800-31D	7
SPDATA	16	421102	---	6
SPTBL	3	421443	200-2	
SPTNPMTI	90	421157	---	6
SPXLAMTI	90	421501	---	6
SIRLIM	(2)	421637	800-31B	5
SIRLMT	3	421636	800-31B	5
SVC_RATE	1	420077	700-26B	
SVCTBL	3	421446	200-4	4
SV_TBL	(2)	421447	200-4	4
TAPEOPTS	1	420003	800-30A	

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

ALPHABETICAL LIST OF THE MTI:

TRANSLATOR NAME	SIZE (WORDS)	STARTING LOCATION	SECT-FIG	NOTE
TAPEQUE	1	420004	800-30B	2
TAPEQUC	1	420005	800-30C	2
TAPETBL	3	420006	800-30D	2
TLTPL	2	421064	700-23F	
TLUID	16	421044	800-33D	
TOTANTBL	3	421347	500-12E	
TRAFD	27	421011	800-33F	
TRK_RATE	1	420100	700-26C	
TRKSCAN	(192)	420224	800-34	3
TSFABE	3	421311	800-31C	7
TUTTL	1	421072	700-23I	
T1CPBS	33	420033	800-29A	
WEECN	3	421075	700-23C	
WPTBL	16	420013	800-32	
1DGTBL	3	421352	600-20	2
3PCSTAT	3	421154	500-14	

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

SEQUENTIAL MEMORY LAYOUT OF THE MTI: (NOTE 11)

STARTING LOCATION	TRANSLATOR NAME	SIZE (WORDS)	NOTE	
420000	EQIOCHAN	3	2,11	
420003	TAPECETS	1	2	
420004	TAPEQUE	1	2	
420005	TAPEQUC	1	2	
420006	TAPETEI	3	2	
420011	LSTTSWRD	2	2	
420013	WPTBL	16	2	
420033	TTCPES	33		
420074	EQMISPCD	1		
420075	ALITWRD	1		
420076	JCT_RATE	1		
420077	SYC_RATE	1		
420100	TBK_RATE	1		
420101	BCSCAN	1		
420102	CHARGETE	16		
420122	CKTSCAN	258	3	CONTAINS
420224	TRKSCAN	(192)	3	DATA
420524	CISBV	8		
420534	CP_PER	1		
420535	DSYBLK	7		
420544	DIDADIA	1	11	
420545	EQET_EC	32		
420605	IELK	3		
420610	INTCHG	1		
420611	LNPATEI	4		
420615	LCG_SCAN	1		
420616	MASTYPE (SPARE)	1		
420617	MSGCI	48		
420677	MT_PER	1		
420700	NETWEQPT	1		
420701	NETWMT	1		
420702	NCCBCI	8		

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

SEQUENTIAL MEMORY LAYOUT OF THE MTI:

STARTING LOCATION	TRANSLATOR NAME	SIZE (WORDS)	NOTE	
420712	MEAFAT	4	12	
420716	OFF_DATA	3		
420721	CEFICE	8		
420731	CIEXP	16		
420751	SCHECINB	16	11	
420771	SCBSIZE	1		
420772	SMECBLK	15		
421011	TBAFE	27		CONTAINS
421044	TLGID	16		DATA
421064	TITPL	2		
421066	NCTEST	4		
421072	TGTTI	1		
421073	FFIL	2		
421075	WEPCN	3		
421100	AMATIE	2		
421102	SPDATA	18	6	
421124	AMA_BUF	3		
421127	CFIBI	3		
421132	MBIBL	3		
421135	CCINSTAT	3		CONTAINS
421140	GPESTAT	12		TEMPORARY STORE
				ADDRESSES
421154	3PCSTAT	3		
421157	SPIMPBTI	90	6	
421311	TSPARE	3	7	
421314	SC1LST	3		
421317	SC2LST	3		
421322	CFLST	3		
421325	CCELST	3		
421330	SPILTBL	3		
421333	CCIBL	3		CONTAINS
421336	LCCTBL	3		PROGRAM STORE
421341	CUISTAT	3		ADDRESSES
421344	CALLBACK	3		
421347	TCIANIBL	3		
421352	TLGTBL	3		
421355	FATTBL	12		
421371	CDIEXE	3		
421374	SCIBLS	3		

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

SEQUENTIAL MEMORY LAYOUT OF THE MTI:

STARTING LOCATION	TRANSLATOR NAME	SIZE (WORDS)	NOTE	
421377	SIEXP	3		
421402	ABIEXP	3		
421405	CCINTRIP	3		
421410	GRPTEL	12		
421424	REMLST	12		
421440	EXPTEL	3		CONTAINS
421443	SETBL	3		PROGRAM STORE
421446	SVCTBL	3	4	ADDRESSES
421447	SV_TEL	(2)	4	
421451	ACCD	24		
421501	SPXLATI	90	6	
421633	SPARES	3	7	
421636	STBLET	3	5	
421637	STBLIM	(2)	5	

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

NOTES:

1. The Master Table Index (MTI) is a fixed area of program store which contains or provides linkage to the various parameters and translation data for the generic program. This area is used for the MTI entries listed or reserved for future MTI entries. This area may not be used for any other purpose.

2. These data words are generic defined and are not changeable through the recent change programs.

3. CKTSCAN includes the 192 words for TBKSCAN.

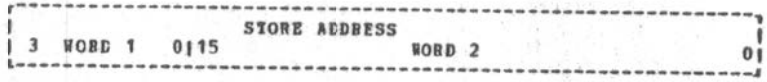
4. The 3 words for SVCTBL includes the 2 words for SV_TBL.

5. The 3 words for SIBLMT includes the 2 words for SIBLIM.

6. There are 20 spare words of data, 30 spare 3 word MTI entries for temporary store and 30 spare 3 word MTI entries for translation store.

7. There are two 3 word MTI entries, (one for temporary store and one for translation store) giving the number of spare words in each store in the first word.

8. Twenty bits are required to address a word in Program store (PS) or Temporary Store (TS). Bits 0-3 of word 1 in the MTI entry are concatenated in front of word 2 to form the 20 bits of the store address. The address may not be 0. If the translator does not exist (XE=0), the address must point to where it would have pointed if the translator did exist (i.e., it points to the same location as the next existing MTI entry).



9. To satisfy "REALLOCATION" requirements, see Figure 1A.

10. The MTI must start on a 4K boundary. For 3E3, the MTI starts at 136K (octal 420,000). The last word of TRANSLATION store is the last word of PHYSICAL store, or 256K-1 (octal 777777), whichever is less. See also Figure 31D and Section 000, Note 3.

(continued)

FIG. 1 (continued) - MASTER TABLE INDEX (MTI)

NOTES: (continued)

11. Data words are not Recent Changeable for 3E3. The data is inputted or changed by a translation overwrite.

12. Data used by Office Records only. Inputted by ODA or Recent Change.

FIGURE 1A - STORE ORGANIZATION

1. Translation Store Organization

A. General

Translation store consists of the Master Table Index (MTI), followed by variable length data tables pointed to by the MTI. The MTI is at a fixed location, and is of fixed length, for all offices of a given generic. The variable data tables (both quantity and size) depend on the data required by an individual office. Several different data structures can exist in No. 3 ESS. These are shown in Figure 1B.

The MTI contains either data (as in A and B), address pointers to Temporary Store (TS) (as in C), or address pointers to Program Store (PS) translators (as in D, E, F, and G). A PS translator may be either:

1. Data (as in H).
2. Vacant (as in E).
3. A head table containing PS increments to subtranslator(s) which contain the data (as in I, J, and K).
4. A head table containing PS increments pointing to subtranslator(s) which contain PS increments to sub-subtranslator(s). I is a head table with increments pointing to subtranslator M (with sub-subtranslators N and O) and to subtranslator P (with sub-subtranslators Q and R).

The lowest level subtranslator at any point always contains only data while higher level subtranslators contain PS increments and possibly some minor amounts of data.

B. Allocation Rules

To allow for proper reallocation, the rules for allocation of translators are as follows:

1. The MTI is organized with all data entries first, followed by all TS pointer entries, followed by all PS (translator) pointer entries.

FIGURE 1A (continued)

2. Complete translators (as defined above) must be allocated in store in the same order as the MTI entries, beginning after the last MTI entry. All use of PS translation store must be contiguous.

3. Once allocation of a translator is started, it must be completed before another translator may be started. For example, H must precede I and all its subtranslators. Refer to Figures 1E and 1C.

4. All PS address pointers in the MTI must be nonzero. If the translator does not exist, (i.e., XE=0 in the MTI format), the address pointer must point to the location where the next existing (i.e., XE=1) translator resides (as in E).

5. Within a translator consisting of a head table and subtranslator(s), the PS increments in the head table must occur in increasing order, i.e., within a head table the second PS increment encountered must be larger than the first PS increment encountered, etc. This says that subtranslators must occur in the order in which they are referenced in the head table. For example, for translator G, the order must be L, M, N, O, F, G, and B.

6. Logically extending rule 5 to the case of sub-subtranslators pointed to by subtranslators yields the case that all sub-subtranslators of a subtranslator be allocated before the next subtranslator is allocated.

The above rules yield the following general rule:

As you progress through the MTI, all PS addresses encountered must be nonzero and be larger than the previous address encountered; and as you progress through the remaining translators, once a head table, subtranslator, or sub-subtranslator is started, all other translators at a lower level must be finished before moving on to to another translator at that same level (see Figure 1C).

C. <u>NOCD Translator</u>

The only specific case of rule 6 above is the NOCD (4-digit) translator. A specific rule covering this translator follows:

> Each Number Group Table (NGT) is followed by the first assigned Thousands Group Table (TGT). Each TGT is followed by the Hundreds Group Tables (HGT), maximum of 10 tables, associated with that TGT. After the HGT, the next assigned TGT follows with its associated (HGT). After the TG tables for the NGT, the next NGT follows with its TG and HG table.

FIGURE 1A (continued)

D. Member List Indexes

The member list indexes must be in increasing order with respect to increasing group number for each group MTI. For unassigned groups the member list index must point to where the member list would start if the group existed, i.e., it points to the same PS location as the next assigned group.

2. Temporary Store Organization

A. General

The TS pointed to by the MTI is all ODA assignable based on input data from ESS 3XXX forms. To allow proper reallocation, the rules for allocation of TS are as follows:

1. All MTI pointers to temporary store must point to increasing TS address in the same order as the MTI entries are ordered. All use of TS translation store must be contiguous.

2. All TS address pointers in the MTI must be nonzero. If the TS area does not exist (i.e., XE=0 in the MTI format), the address pointer must point to the TS location where the next existing CDA assignable TS resides.

B. Selection Status Block Indexes

The selection status block indexes must be in increasing order with respect to increasing group number for each group MTI. For unassigned groups the selection status block index must point to where the selection status block would start if the group existed, i.e., it points to the same TS location as the next assigned group.

FIGURE 1B - TRANSLATION STRUCTURE TYPES

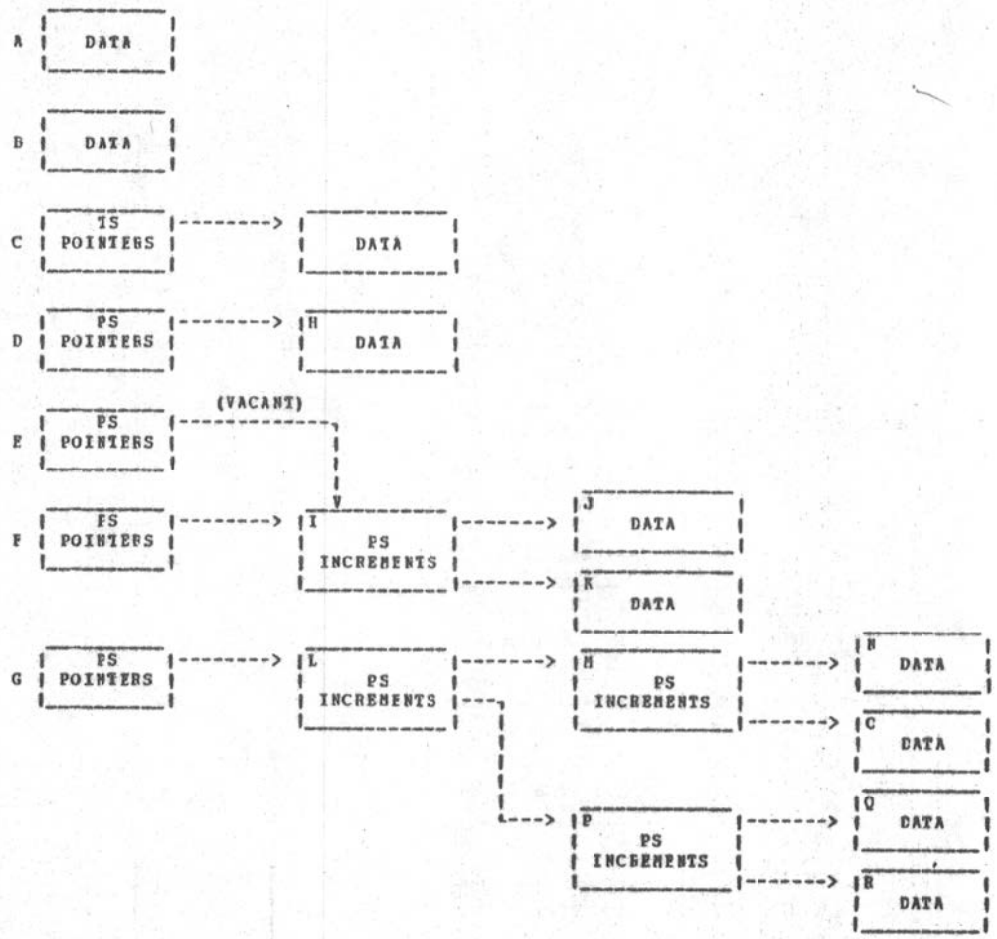
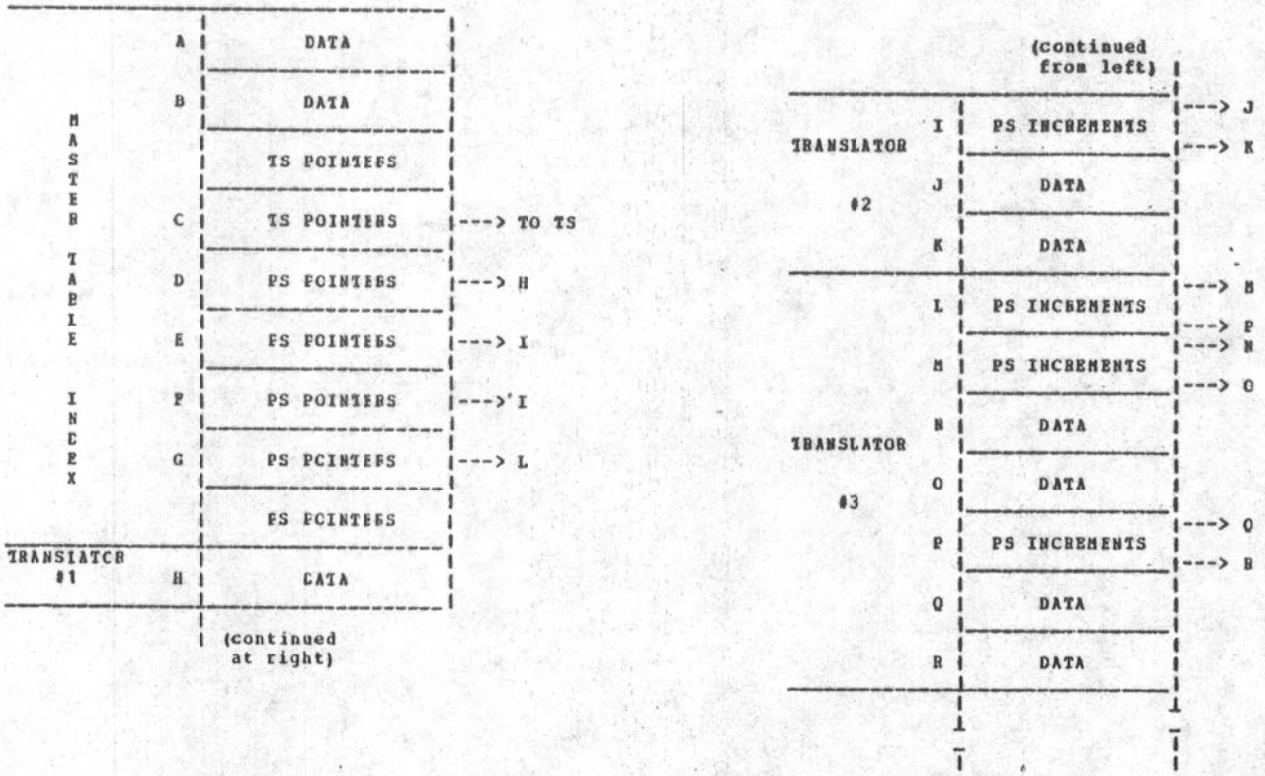


FIGURE 1C - TRANSLATION ORGANIZATION



SCAN POINT TRANSLATIONS

INDEX OF FIGURES

FIG. 2 SCAN POINT NUMBER TRANSLATION

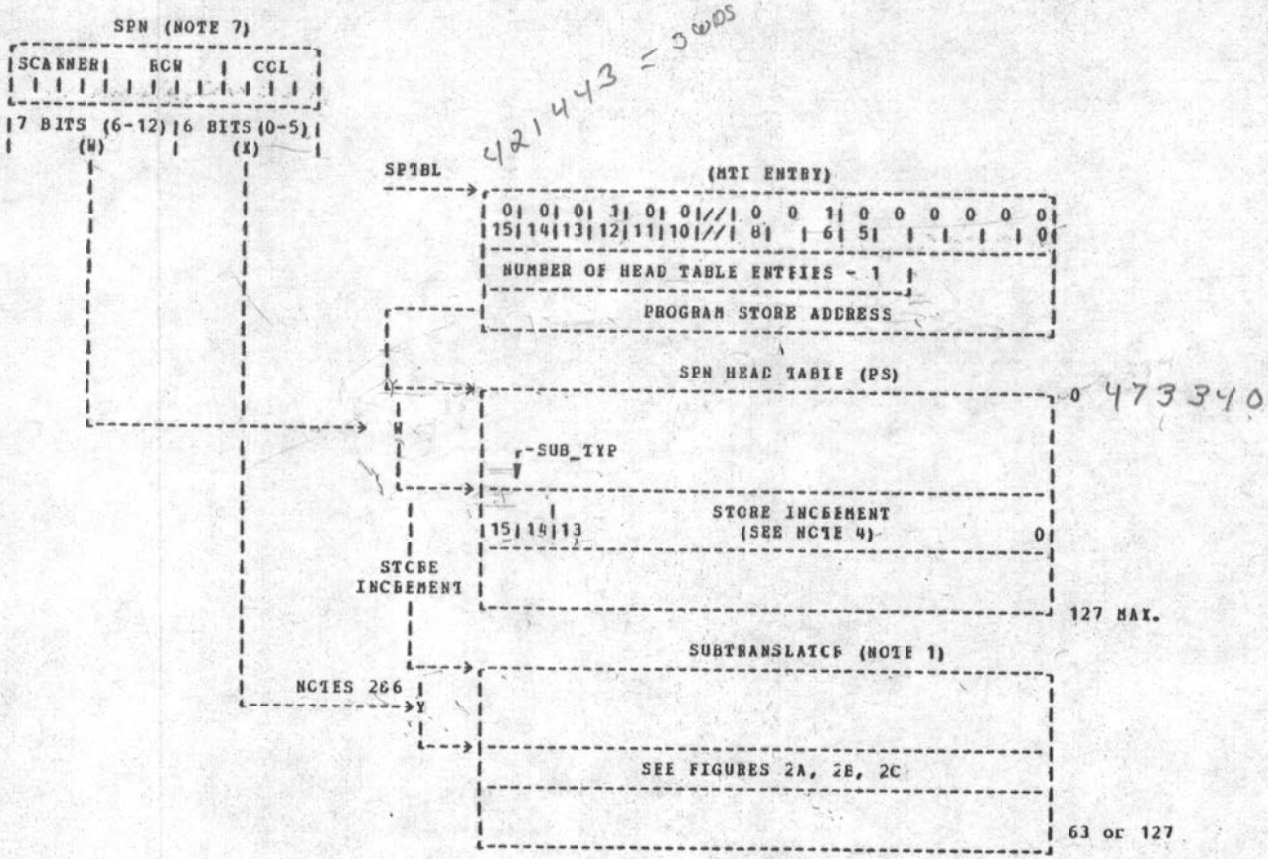


FIG. 2 (continued) - SCAN POINT NUMBER TRANSLATION

NOTES:

1. The LINE and UNIVERSAL Subtranslators consist of 2-word entries. The MISC Subtranslator consists of 1-word entries.

2. Y=X for MISC Subtranslator.
   Y=2*X for LINE and UNIVERSAL Subtranslators.

3. SUB_TYP (Subtranslator Type) identifies the type of subtranslator which is being addressed.
   SUB_TYP = 0 Unassigned subtranslator
   = 1 Miscellaneous subtranslator
   = 2 Universal subtranslator
   = 3 Line subtranslator

4. Words 4-6 in the SPN HEAD Table point only to MISC Subtranslator. Words 14,22,30,38,....in the SPN HEAD Table are associated with junctors which are not translated in this table and therefore are unassigned if they are allocated. All other words in the SPN Head Table point to either a LINE or UNIVERSAL Subtranslator.

5. There may be a maximum of 128 words in the SPN HEAD Table.

6. Address of subtranslator equals store address + W + store increment.

7. SCAN Point Number = Terminal Equipment Number for Networks 1 to 15. There are no TEN'S for scanner 0.

	SCANNER																
SPN							BCB						COLUMN				
TEN		CG					SW	C		SWT			LVL				---Always stored in Translations
	12				9	8	7	6	5			3	2			0	
OE		CG				C		SW		SWT			LVL				---Used on Recent Change and Input forms

   LVL = Level (0-7)
   SWT = Switch (0-7)
   SW = Switch Group (0-2)
   C = Concentrator (0,1)
   CG = Concentrator Group (1-15) [Network]

8. Multiport rules for terminal equipment number. (See also Figure 12C, Notes 3 and 4)
   Port 0, 1 and 2 TENs are identical except that:

   PORT 0 must have C = 0
   PORT 1 must have C = 1
   PORT 2 must have C = 0 & SWT = (SWT of PORT 0 +1)

FIG. 2A SCAN POINT NUMBER TRANSLATION - MISCELLANEOUS SUBTRANSLATOR

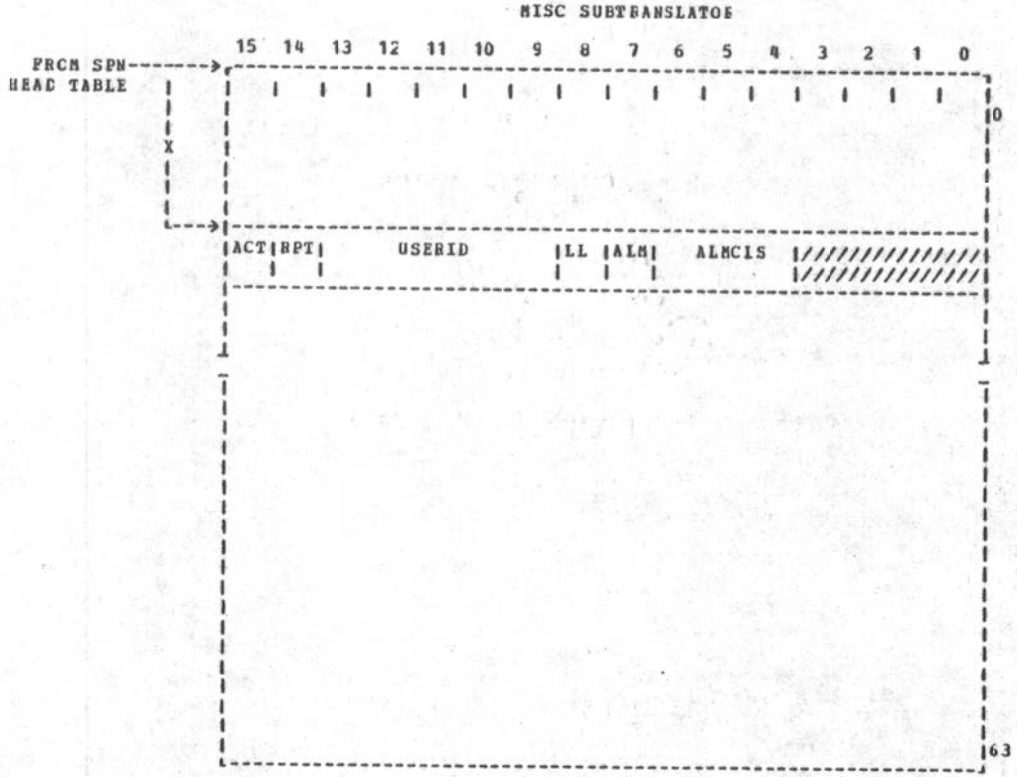


FIG. 2A (continued) - SCAN POINT NUMBER TRANSLATION - MISCELLANEOUS SUBTRANSLATOR.

NOTES:

1. LIST OF ACRONYMS

ACRONYM	RC PROG	ESS PCBM NO.	ITEM	COLUMN(S)	DESCRIPTION
ACT	RC:SP	3506	-	38	Active: ACT = 1 SPN is active
ALM	RC:SP	3506	-	26-33	Alarm indicator: ALM = 0 No alarm. Alarm class code not used. = 1 Alarm. Alarm class code is used.
ALMCLS	RC:SP	3506	-	26-33	ALM class (Type): ALMCLS = 0 Alarm circuit = 1 Major = 2 Minor = 3 Major power = 4 Minor power = 5 Major fuse = 6 Minor fuse = 7 Critical
LL	RC:SP	3506	-	34-35	Last Look indicator: LL = 0 Normal state open = 1 Normal state closed
RPT	RC:SP	3506	-	36	Report: RPT = 1 Report SPN state change. This bit is the highest bit of the USERID. It will be set for USERIDs greater than 31.
USERID	RC:SP	3506		36-37	USER Identification number. 00-32 Type of fixed system scanpoint 42-44 Type of fixed system scanpoint 45-47 Assignable scanpoint 48-58 Type of fixed scanpoint 59 Assignable scanpoint 60-63 Type of fixed system scanpoint

2. A Miscellaneous Subtranslator contains data for 64 miscellaneous scan points in 4 consecutive rows. Each group of rows 16-19, 20-23 and 24-27 in MS00 require a Miscellaneous Subtranslator. Therefore, there can be a maximum of 3 Miscellaneous Subtranslators.

Each word in a Miscellaneous Subtranslator contains data associated with one miscellaneous scan point in MS00.

FIG. 2B SCAN POINT NUMBER TRANSLATION - UNIVERSAL SUBTRANSLATOR

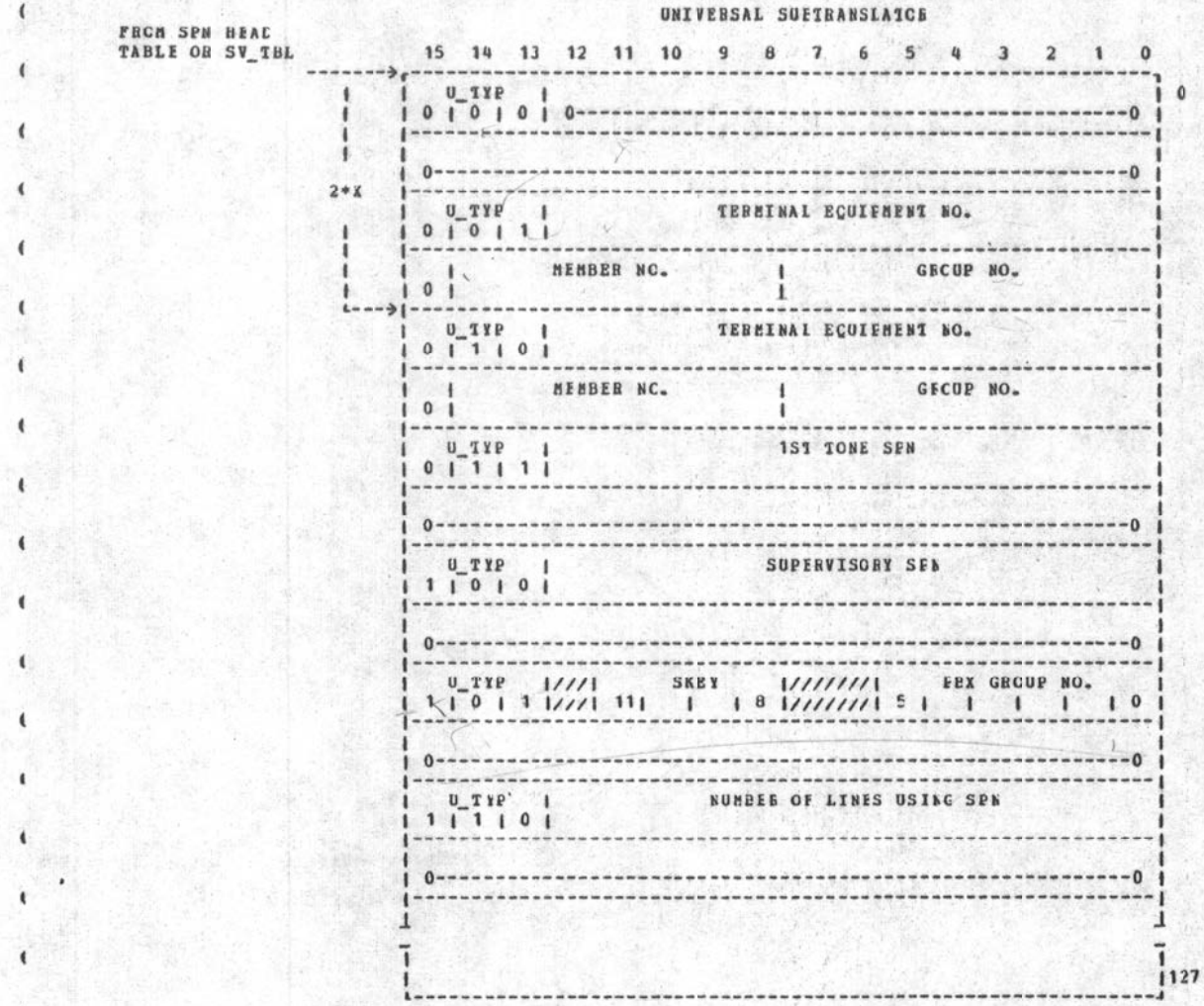


FIG. 2B (continued) - SCAN POINT NUMBER TRANSLATION - UNIVERSAL SUBTRANSLATOR.

NOTES:

1. LIST OF ACRONYMS

ACRONYM	RC PROG	ESS PCEM NO.	ITEM	COLUMN(S)	DESCRIPTION
U_TYP			-		Universal Subtranslator Type U_TYP = 0 Unassigned = 1 Supervisory SPN entry for trunks and service circuits with a single terminal equipment no. (See Note 3) (See Figure 12C, Notes 3 and 4 for Milliwatt and Transmission Test Ckt.) = 2 Supervisory SPN entry for service circuits with 2 terminal equipment numbers. (See Note 3) = 3 Tone present SPN entry. = 4 Directed SPN entry. = 5 PBX Key SPN entry. = 6 Key SPN entry.
TERMINAL EQUIPMENT NO.	RC:CKT	3201	-	22-27	Office equipment number.
MEMBER NO.	RC:CKT	3201	-	40-42	Trunk group member number.
GROUP NO.	RC:CKT	3201	-	37-39	Trunk group number.
1ST TONE SPN	RC:CKT	3201	-	51-56	The SPN of the first directed scan point.
SUPERVISORY SPN	RC:CKT	3201	-	45-50	Supervisory SPN.
NUMBER OF LINES USING SPN	RC:LINE	3107	-	55-60	Indicates the number of lines associated with the same SPN.
PBX GROUP NO.	RC:MLHG	3576	-	28-30	PBX Group Number.
SKEY	RC:MLHG	3576	-	27	SPN Status Key Index. SKEY = 1 thru 7 Remote Make Busy Keys = 8 Night Stop Key = 9 Stop Hunt Key

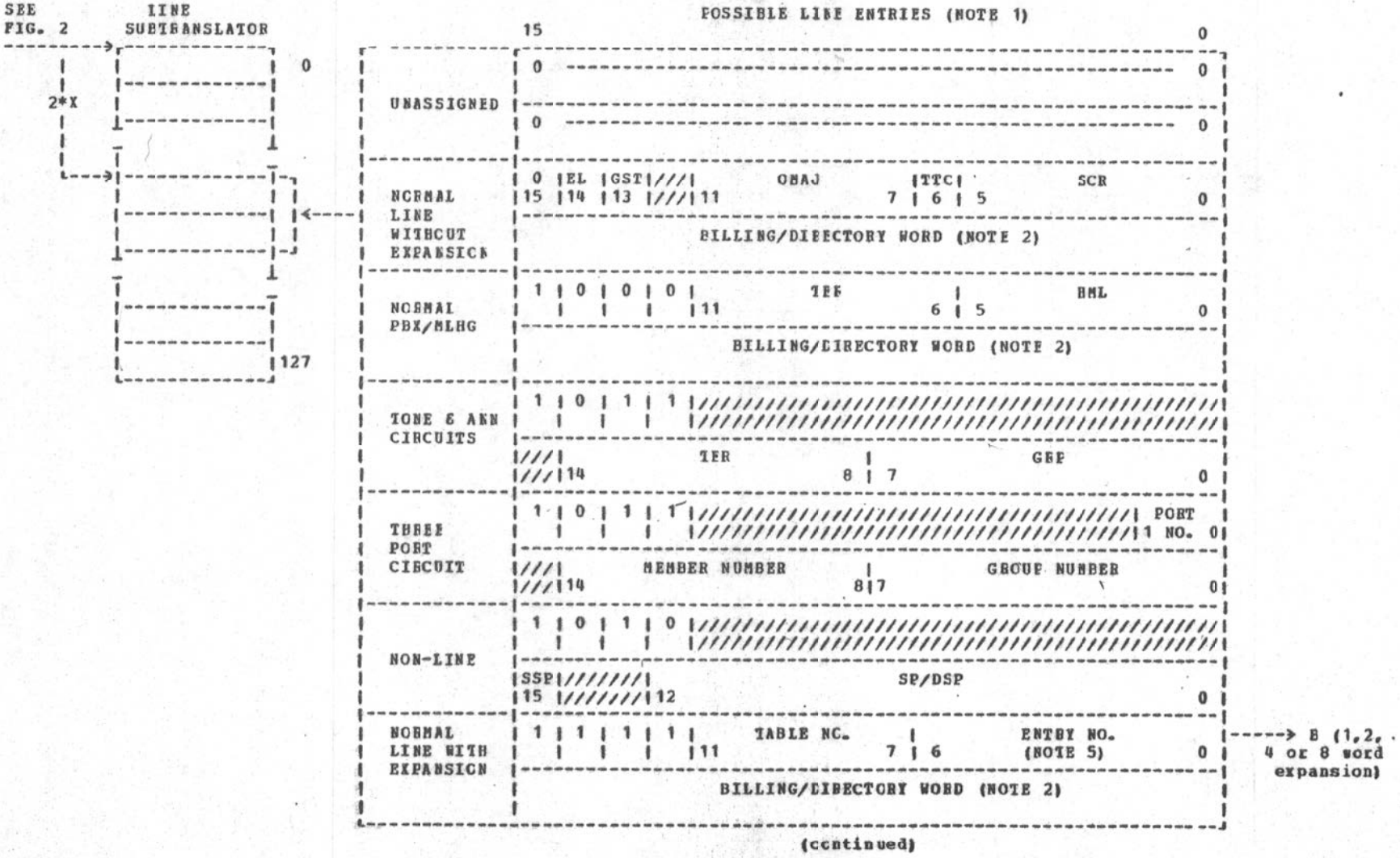
FIG. 2B (continued) - SCAN POINT NUMBER TRANSLATION - UNIVERSAL SUBTRANSLATOR.

NOTES:

2. A Universal Subtranslator contains data associated with 64 scan points in 4 consecutive rows. Each scan point requires two words.

3. Tones, announcements and conference circuits are translated in Figure 2C.

FIG. 2C SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR



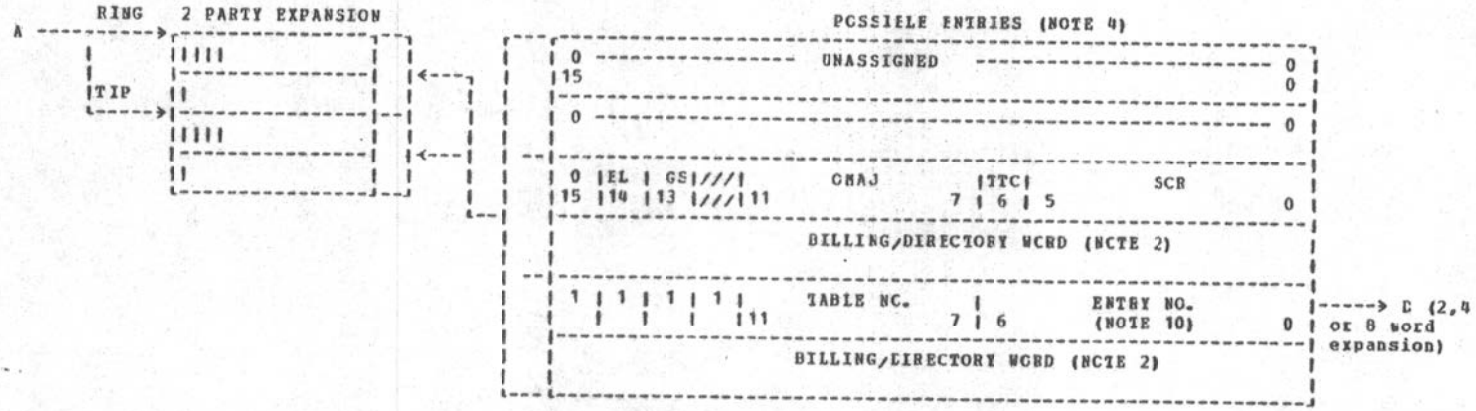
(continued)

FIG. 2C (continued) SCAN POINT TRANSLATION - LINE SUBTRANSLATOR

POSSIBLE LINE ENTRIES (continued)

2 PARTY LINE	1 | 1 | 0 | 1 | TABLE NO. (11–7) | ENTRY NO. (NOTE 10) (6–0)	----> A (4 word expansion)
	0 | ////////// | TT2 (3) | TT1 (2) | CDPR (1–0)	
4 PARTY LINE WITHOUT EXPANSION	0 | EL (14) | GS1 (13) | /// | OMAJ (11–7) | TTC (6–5) | SCR (0)	
	1 | /// | SS | SOB | TABLE NO. | ENTRY NO. (NOTE 10)	----> F (4 word expansion)
8 PARTY LINE WITHOUT EXPANSION	0 | EL | GS1 | /// | CMAJ | TTC | SCR	
	1 | /// | SS | SCB | TABLE NO. | ENTRY NO. (NOTE 10)	----> G (2 word expansion)
PBX/MLHG MEMBER WITH DIFFERENT DATA FROM GROUP DATA	1 | 1 | 1 | 0 | TABLE NO. | ENTRY NO.	----> C (1,2,4 or 8 word expansion)
	BILLING/DIRECTORY WORD (NOTE 2)	
NORMAL LINE AUTO CONNECT	0 | EL | GS1 | /// | CMAJ (11–7) | TTC (6–5) | SCR (0)	
	1 | ////////// | TABLE NO. | ENTRY NO. (NOTE 5)	----> J (4 word expansion)
LINE EXPANSION AUTO CONNECT	1 | 1 | 1 | 1 | TABLE NO. (15–12) | ENTRY NO. (NOTE 10)	----> H (2 word expansion)
	1 | ////////// | TABLE NO. | ENTRY NO. (NOTE 5)	----> J (4 word expansion)
4 PARTY LINE WITH EXPANSION	1 | 1 | 1 | 1 | TABLE NO. | ENTRY NO. (NOTE 10)	----> D (2 or 4 word expansion)
	1 | /// | SS | SOB | TABLE NO. | ENTRY NO. (NOTE 10)	----> F (4 word expansion)
8 PARTY LINE WITH EXPANSION	1 | 1 | 1 | 1 | TABLE NO. | ENTRY NO. (NOTE 10)	----> D (2 or 4 word expansion)
	1 | /// | SS | SOB | TABLE NO. | ENTRY NO. (NOTE 10)	----> G (2 word expansion)

FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR



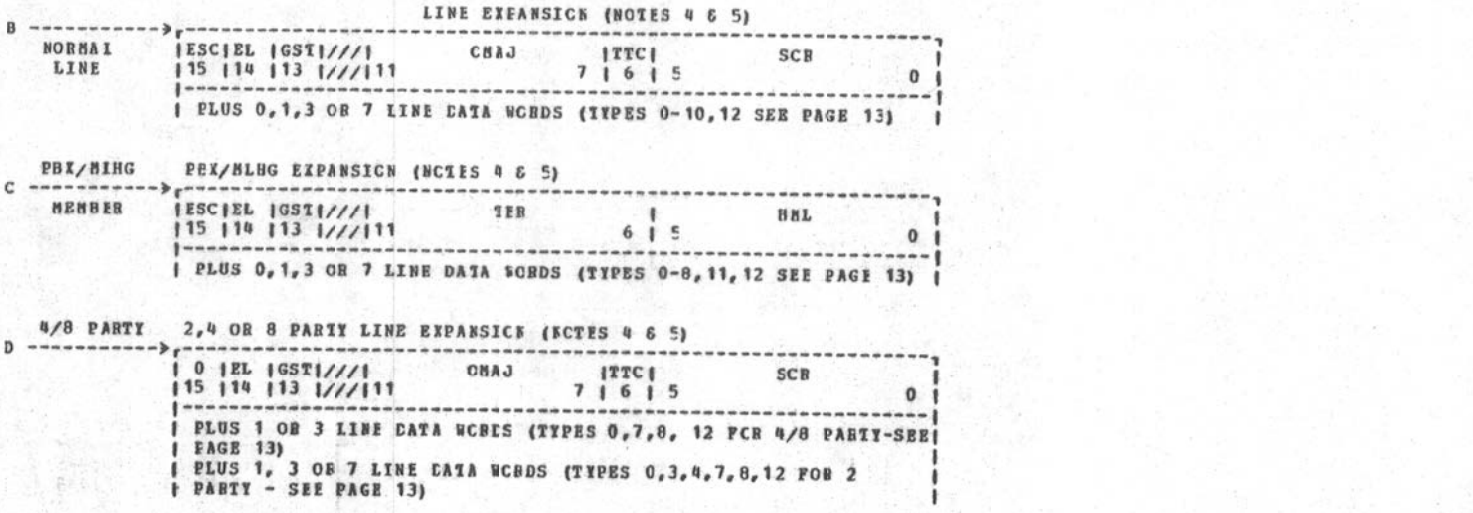
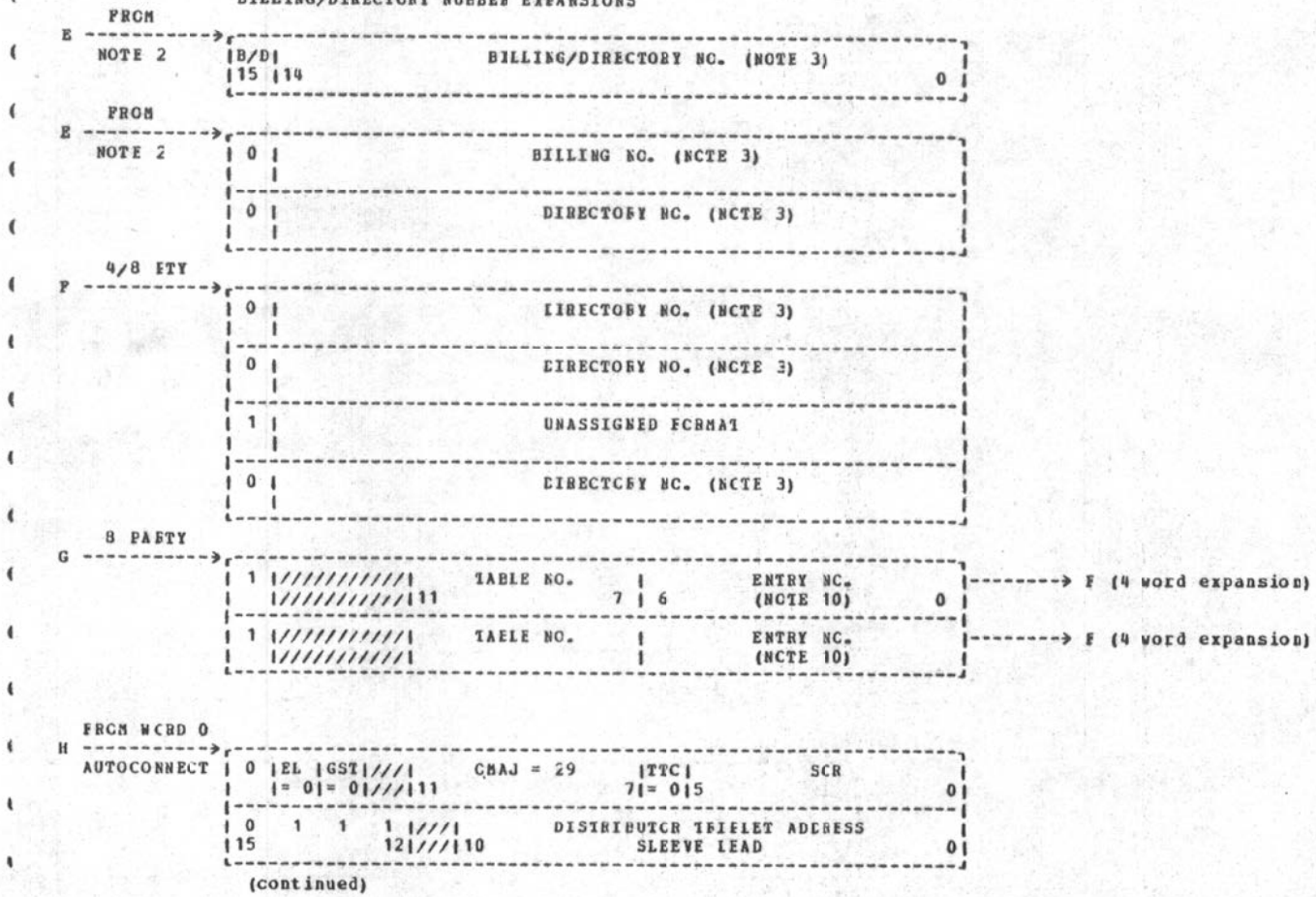


FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR



(continued)

FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

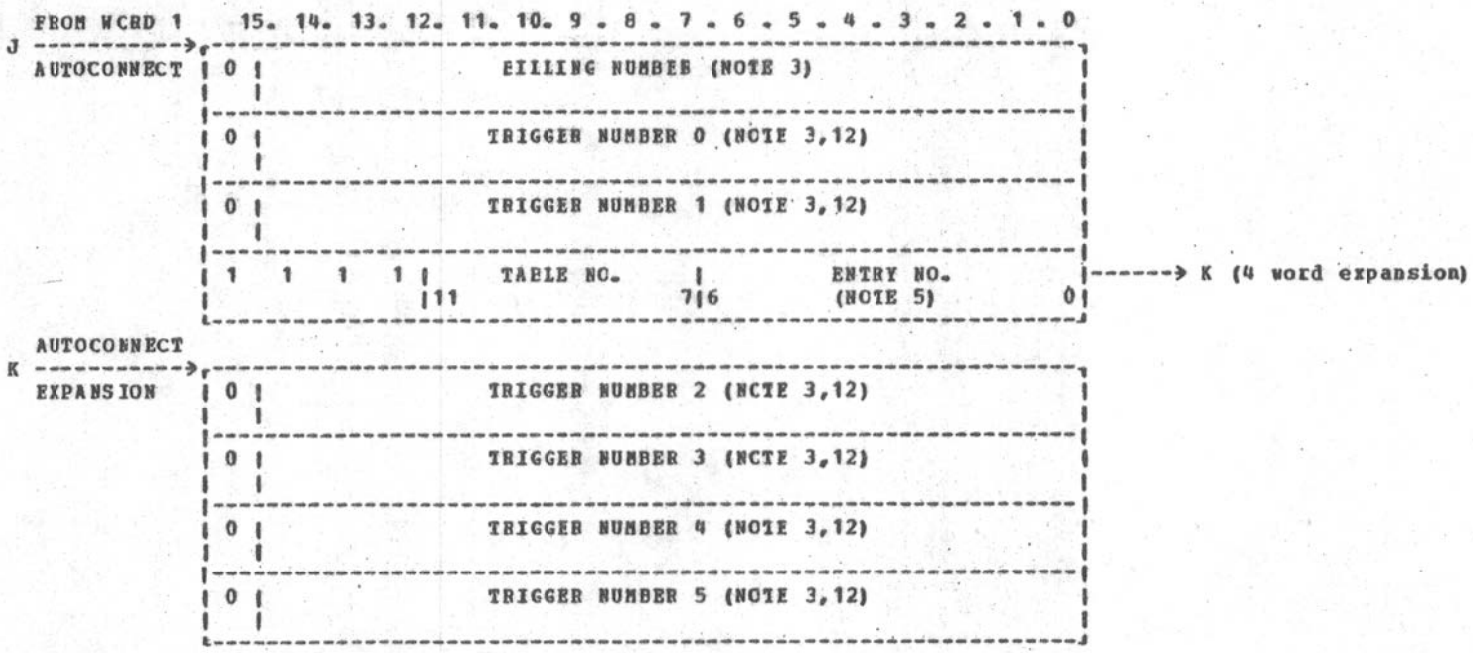


FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

LINE DATA WORDS (NOTES 4 & 5)

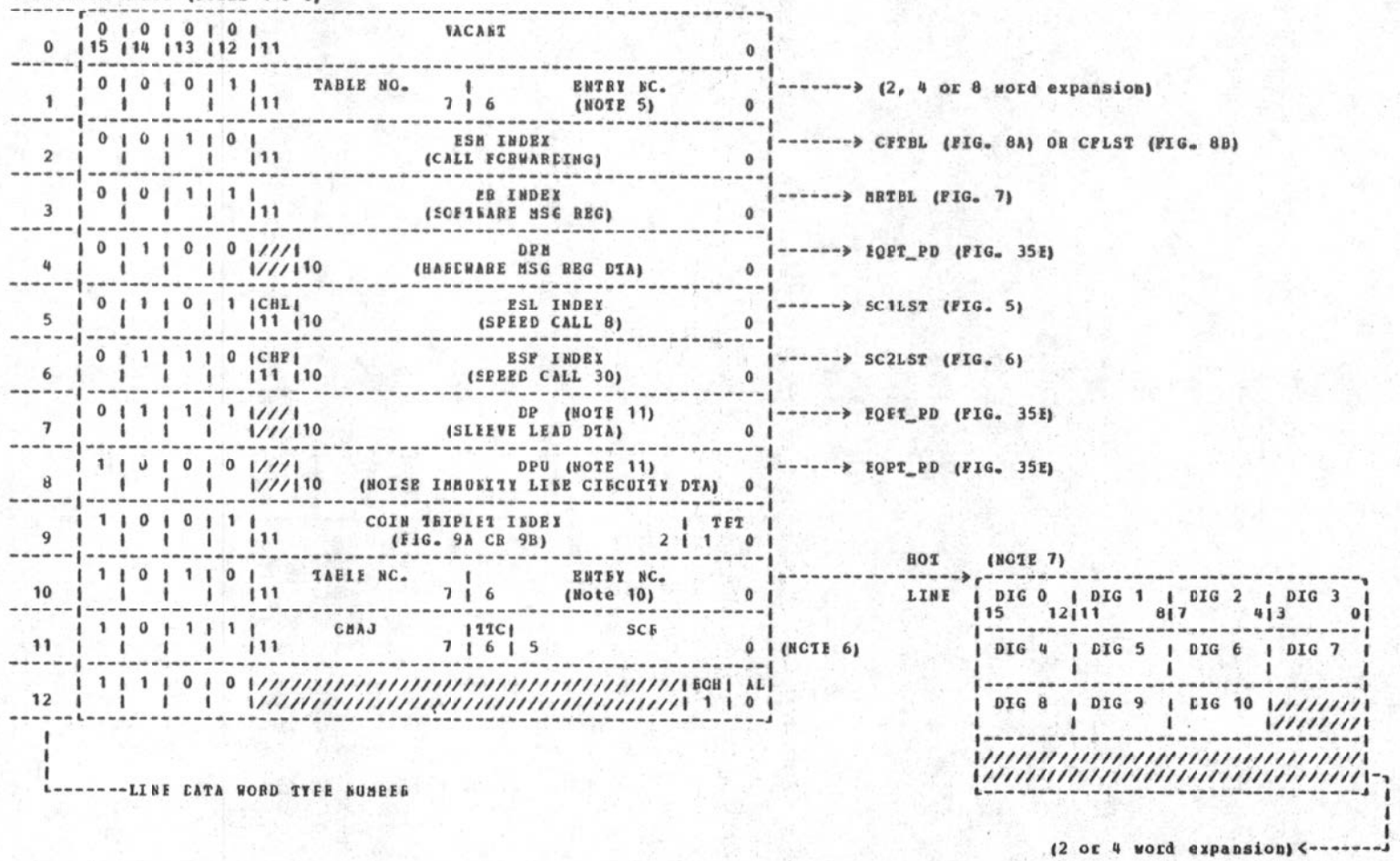


FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

NOTES:

1. KEYWORD CROSS-REFERENCE & DESCRIPTION FOR LINE SUBTRANSLATOR ENTRIES

ENTRY	DATA NAME	INPUT MESSAGE	ESS PCEM			DESCRIPTION
			KEY&CRD	NO.	ITEM	COLUMN	
NORMAL LINE	EL	RC:LINE	EL	3100-1	--	36	Essential line (Class A service).
	GST	RC:LINE	GST	3100-1	--	35	Ground Start Line.
	OMAJ	RC:LINE	LCC	3306-1	--	25-26	Originating Major Class Code. See Note 13.
	TTC	RC:LINE	TTC	3100-1	--	37	Touch Tone Calling.
	SCR	RC:LINE	LCC	3306-1	--	29-30	Screening Class.
	TN	RC:LINE	TN	3100-1	--	17-23	Telephone number (NOTE 2).
NORMAL	TER	RC:MTL	TER	3100-1	--	48-49	Multi-Line hunt group terminal number.
PBX/MLHG	MHL	RC:MTL	MHL	3100-1	--	46-47	Multi-line hunt group number.
	TN	RC:MTL	TN	3100-1	--	17-23	Telephone number (NOTE 2).
TONE &ANN	TER	RC:CKT	TER	3201-1	--	40-42	Trunk group terminal (member) number.
CIRCUITS	GRP	RC:CKT	GRP	3201-1	--	37-39	Trunk group number.
THREE PORT	TER	RC:CKT	TER	3201-1	--	40-42	Trunk group terminal (member) number.
CIRCUIT	GRP	RC:CKT	GRP	3201-1	--	37-39	Trunk group number.
	PCET NO.	RC:CKT	PCET NO	3201-1	--	36	Port Number (0-2).
NON-LINE	SSP		SSP				Supervisory scan point flag. SSP = 1 2nd word contains the circuit's Supervisory scan point number. SSP = 0 2nd word contains the circuit's directed scan pcint number.
	SP	RC:CKT	SP	3201-1	--	45-50	Supervisory scan point number (SSP=1).
	DSP	RC:CKT	DSP	3201-1	--	51-56	Directed scan point number (SSP=0).
LINE EXPANSION INCLUDING 4 & 8 PARTY LINES)	BLN	RC:LINE RC:MLHG RC:MTL	BLN	3100-1	--	45	Special Toll Billing (QZ billing).
	SOB	RC:LINE RC:MLHG RC:MPTY RC:MTL RC:TWOPTY	SOB	---	--	-----	Service Observing feature. This bit is recent changeable only. It is not set by the CDA.
	SS	RC:LINE RC:MPTY RC:MTL RC:TWOPTY RC:MLHG	SS	----	--	-----	Special studies feature. Recent changeable only.

FIG. 2C (continued) SCAN POINT TRANSLATION - LINE SUBTRANSLATOR

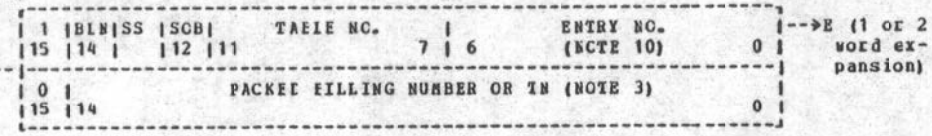
NOTES (continued):

1. KEYWORD CROSS-REFERENCE & DESCRIPTION FOR LINE SUBTRANSLATOR ENTRIES (continued)

ENTRY	DATA NAME	INPUT MESSAGE KEYWORD	ESS POSN NO.	ITEM	COLUMN	DESCRIPTION
2 PARTY LINE	CDPR	CDPR				Exit code that indicates the type of customer dial pulse receiver to connect to the two party line. 00 = Error 01 = Attach a Touch Tone receiver denied or one is unassigned and the other is denied.
	TTC	RC:TWOPTY	TTC	3100-1	--	37	Touch Tone service.
PBX/MLHG MEMBER WITH DIFFERENT DATA FROM GROUP DATA	TN	RC:MTL	TN	3100-1 3107	-- --	17-23 17-23	Directory number (NOTE 2)

2. For lines with expanded billing information entry contains table and entry number. The high bit (bit 15) indicates if the word contains the TN or a table and entry.

HIGH BIT = 0 word contains TN.
= 1 word contains table and entry.



3. Packed billing or directory number. Office index = 0 is not used.

Packed special billing number. Office index = 31 is not expanded but indicates a special billing number (ie, for WATS).

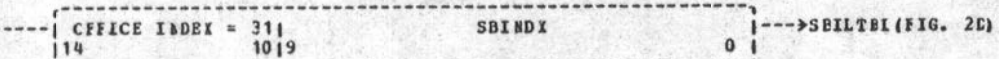


FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

NOTES (continued):

4. KEYWORD CROSS-REFERENCE & DESCRIPTION FOR LINE SUBTRANSLATOR EXPANSIONS

EXPANSION	DATA NAME	INPUT MESSAGE	ESS PCFM				DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN	
2 PARTY EXPANSION	EL	RC:TWOPTY	EL	3100-1	--	36	Essential line (Class A service) (EL=1).
	OMAJ	RC:LINE	LCC	3306-1	--	25-26	Originating Major Class Code. See Note 13.
	TTC	RC:TWCPTY	TTC	3100-1	--	37	Touch Tone Calling feature (TTC=1).
	SCR	RC:LINE	LCC	3306-1	--	29-30	Screening Class.
	TN	RC:TWOPTY	TN	3100-1	--	17-23	Telephone Number (NOTES 2 & 3).
LINE EXPANSION (NOTE 5)	ESC	RC:LINE	ESC	3100-1	--	44	Three Way calling feature (ESC=1)
	EL	RC:LINE	EL	3100-1	--	36	Essential line (Class A service) (EL=1).
		RC:MPTY					
		RC:TWCPTY					
	GST	RC:LINE	GST	3100-1	--	35	Ground Start line.
	OMAJ	RC:LINE	LCC	3306-1	--	25-26	Originating Major Class Code. See Note 13.
	TTC	RC:LINE	TTC	3100-1	--	37	Touch Tone Calling feature.
		RC:MPTY					
		RC:TWCPTY					
	SCR	RC:LINE	LCC	3306-1	--	29-30	Screening Class.
PBX/MLHG EXPANSION (NOTE 5)	ESC	RC:MLHG	ESC	3105-1	--	37	Three Way calling feature.
		RC:MIL		3100-1	--	44	
	EL	RC:MLHG	EL	3105-1	--	31	Essential line (Class A service).
		RC:MIL		3100-1	--	36	
	GST	RC:MLHG	GST	3105-1	--	30	Ground Start line.
		RC:MIL		3100-1	--	35	
	TER	RC:MIL	TER	3100-1	--	48-49	Multi-line hunt Group terminal (member number assigned to the telephone (directory) number).
	HML	RC:MLHG	HML	3105-1	--	20-21	Multi-line Hunt group number.
		RC:MTI		3100-1	--	46-47	
LINE DATA NCRES (NOTE 5)	ESM INDEX	RC:LINE	ESM	3100-1	--	39	Call forwarding Index.
		RC:MIL					
	MR INDEX	RC:LINE	MR	3107	--	72-75	Software message Register Index.
		RC:MIL					
		RC:TWCPTY					
	DPM	RC:LINE	DPM	3107	--	48-53	Peripheral Decoder Triplet for hardware register.
		RC:MTI					
		RC:TWOPTY					

FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

NOTE (continued):

4. KEYWORD CROSS-REFERENCE & DESCRIPTION FOR LINE SUBTRANSLATOR EXPANSIONS (continued)

EXPANSION	DATA NAME	INPUT MESSAGE	ESS POSE			DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN	
LINE DATA WORDS (continued)	CHI	RC:MLHG	CSL1	3105-1	-	35	Multi-line hunt group and lines are allowed to change speed call 8 list (CHI=1). See Note 8.
		RC:LINE	-	-	-	-	
		RC:MTL	-	-	-	-	
	ESL INDEX	RC:LINE	ESL	3100-1	-	43	Speed Calling - 1 digit service (8 nbr. list).
		RC:MTL					Speed Call Index - SC8 Head Table (Program assigned).
	CHF	RC:MLHG	CSL2	3105-1	-	33	Multi-line hunt group and lines are allowed to change speed call 30 list (CHF=1). See Note 9.
		RC:LINE	-	-	-	-	
		RC:MTL	-	-	-	-	
	ESF	RC:LINE	ESF	3100-1	-	41	Speed Calling - 2 digit service (30 list)
		RC:MTL					Speed Call Index - SC30 Head Table (Program assigned).
	ESF INDEX		ESF INDEX				
	CP	RC:LINE	CP	3107-1	-	42-47	Peripheral decoder triplet to provide a sleeve lead.
		RC:MPTY					
		RC:MTL					
		RC:TWOPTY					
	DPU	RC:LINE	DPU	3107-1	-	42-47	Periph Decoder triplet for Noise Immunity line Circuit.
	CCIN TRIPLET INDEX		CCIN TRIPLET INDEX				Coin triplet index - Coin Triplet Address Table & Coin Triplet Status Table.
	TPT	RC:LINE	TPT	3107-1	-	53	Peripheral decoder point assigned to coin line.
	OMAJ	RC:LINE	LCC	3306-1	-	25-26	Originating major Class Code. See Note 13.
	TTC	RC:MLHG	TTC	3105-1	-	32	Touch Tone Calling feature (TTC=1).
	SCR	RC:LINE	LCC	3306-1	-	29-30	Screening Class.
	B/D	RC:MTL	BTN	3107-1	-	35-41	Billing/Directory - For multi-line:
							= 0 if BTN not typed. Use MIHG group BTN.
							= 1 if BTN of member typed and same as TN of member.
							For non-multi-line:
		RC:LINE	-	-	-	-	= 0 invalid state
		RC:TWOPTY	-	-	-	-	= 1 the directory number is used as the BTN.
	RCH	RC:LINE	RCH	3107-2	-	54	Inhibit RCE Tone on the line
		RC:TWCPTY					= 0 if not inhibited.
		RC:MPTY					= 1 if inhibited.
		RC:MTL					
	AL	RC:LINE	PLIT	3107-2	-	55	Prohibit Automatic Line Insulation Test
		RC:TWOPTY					= 0 if not prohibited.
		RC:MPTY					= 1 if prohibited.
		RC:MTL					

FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

NOTES (continued):

5. Expansion entries contain 1, 2, 4 or 8 line data words as indicated, via EXPTBL, Figure 11A. If several expansion entries are provided, they are linked by means of table and entry numbers. A table and entry number word, when provided, must be the last word of the 2, 4 or 8 word expansion.

6. This word can only be part of a PBX/ELHG expansion.

7. Telephone number is stored in BCD for hot line service, 1-8 digits require a 2-word expansion; 9-11 digits require a 4-word expansion.

8. If the ESL keyword is specified on a BC and the CSL1 keyword is not, CEI is determined by the ICS bit in OFF_DATA (Fig. 23A).

9. If the ESF keyword is specified on a BC and the CSL2 keyword is not, CEF is determined by the ICS bit in OFF_DATA (Fig. 23A).

10. Expansion entries contain 1, 2 or 4 words as indicated, via EXPTBL, Figure 11A.

11. DP & DPU are mutually exclusive on a line.

12. If any trigger number entry does not contain a trigger number, then the entry follows the "UNASSIGNED FORMAT" (see "P", page 11) for directory number expansions.

(continued on next page)

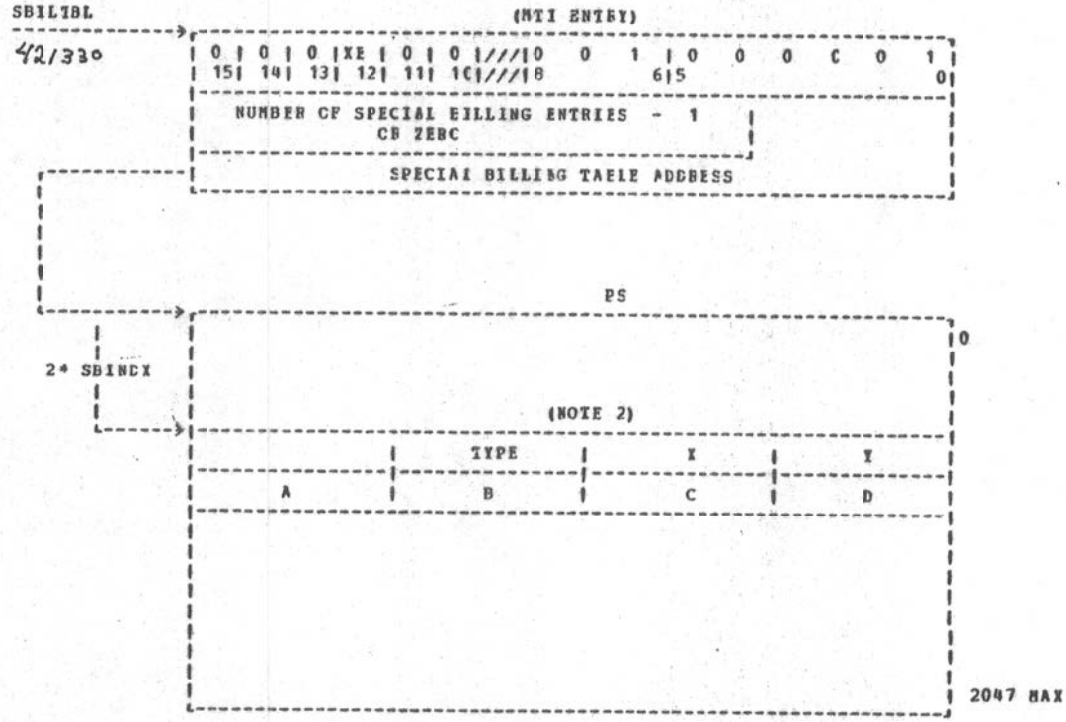
FIG. 2C (continued) SCAN POINT NUMBER TRANSLATION - LINE SUBTRANSLATOR

NOTES (continued):

13. ORIGINATING AND TERMINATING MAJOR CLASSES

MAJOR CLASS	ASSIGNMENT	ORIGINATING	TERMINATING
0	UNASSIGNED	X	X
1			
2			
3			
4	TWO-PARTY RING	X	X
5	TWO-PARTY TIP	X	X
6	INDIVIDUAL - TRAFFIC	X	X
7	INDIVIDUAL - FREE		X
8	INDIVIDUAL	X	X
9	HOTEL-MOTEL	X	
10	MANUAL	X	
11	TSPS SELECTIVE CALL SCREENING	X	
12			
13			
14			
15			
16	MULTIPARTY PARTY 1	X	X
17	MULTIPARTY PARTY 2		X
18	MULTIPARTY PARTY 3		X
19	MULTIPARTY PARTY 4		X
20	MULTIPARTY PARTY 5		X
21	MULTIPARTY PARTY 6		X
22	MULTIPARTY PARTY 7		X
23	MULTIPARTY PARTY 8		X
24	COIN FIRST - CCIN	X	X
25	DIAL TONE FIRST - CCIN	X	X
26			
27			
28	INTERCEPT		X
29	AUTOCONNECT	X	X
30	DENIED SERVICE	X	X
31	SPECIAL ROUTING		X

FIGURE 2D SPECIAL BILLING TABLE FOR WATS

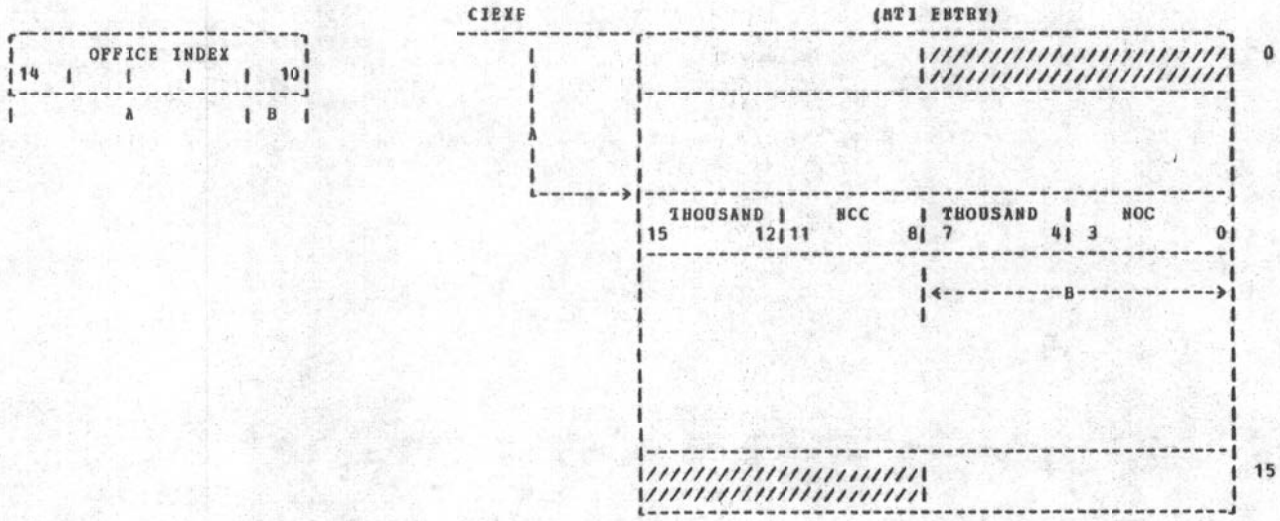


NOTES:

1. SBINDX = Special Billing Index obtained from the packed directory number for WATS lines.

2. TYPE: 0 = Full business day WATS.
   1 = Measured time WATS.
   X = Reserved for assignment by individual companies (ex:identify states).
   Y = Service area or band subscribed to.
   A,B,C,D = 4 digit customer I.D.

FIGURE 2E OFFICE INDEX EXPANSION



NOTES:

1. OFFICE INDEX = 0 is not used. Valid office indices range from 1 to 30. Office index is a combination of NOC and thousands digit.

2. CROSS REFERENCE & DESCRIPTION FOR OFFICE INDEX EXPANSION

EXPANSION	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NO.	ITEM	COLUMN	
OFFICE INDEX	RC:BTN	CODE	3501-1	-	22-24	Office Code
					25	Thousands digit

FIGURE 3 (UNUSED)

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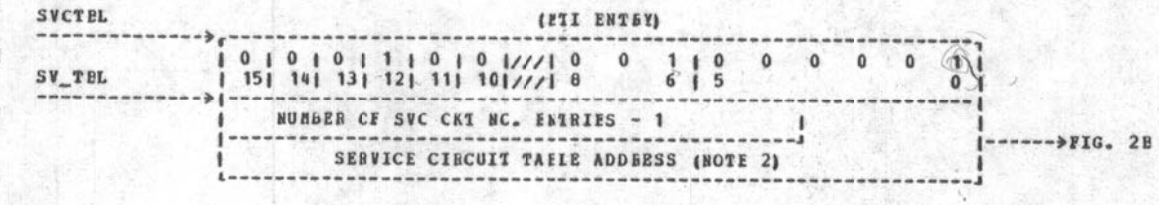
FIG. 4 SCAN POINT NUMBER TRANSLATION - SERVICE CIRCUIT TABLE



NOTES:

1. The Service Circuit Table is a Universal Subtranslator which contains the data for the 256 scan points in the first 16 rows (0-3) of MS00.

2. The Service Circuit Table address is the address for the SPN 0 entry.
   Service Circuit Table Address = Address of word 0 in the SPN HEAD Table + store Increment.

ORIGINATING LINE TRANSLATICNS

INDEX CF FIGURES

FIGURE 5 SPEED CALLING LIST - 1 DIGIT

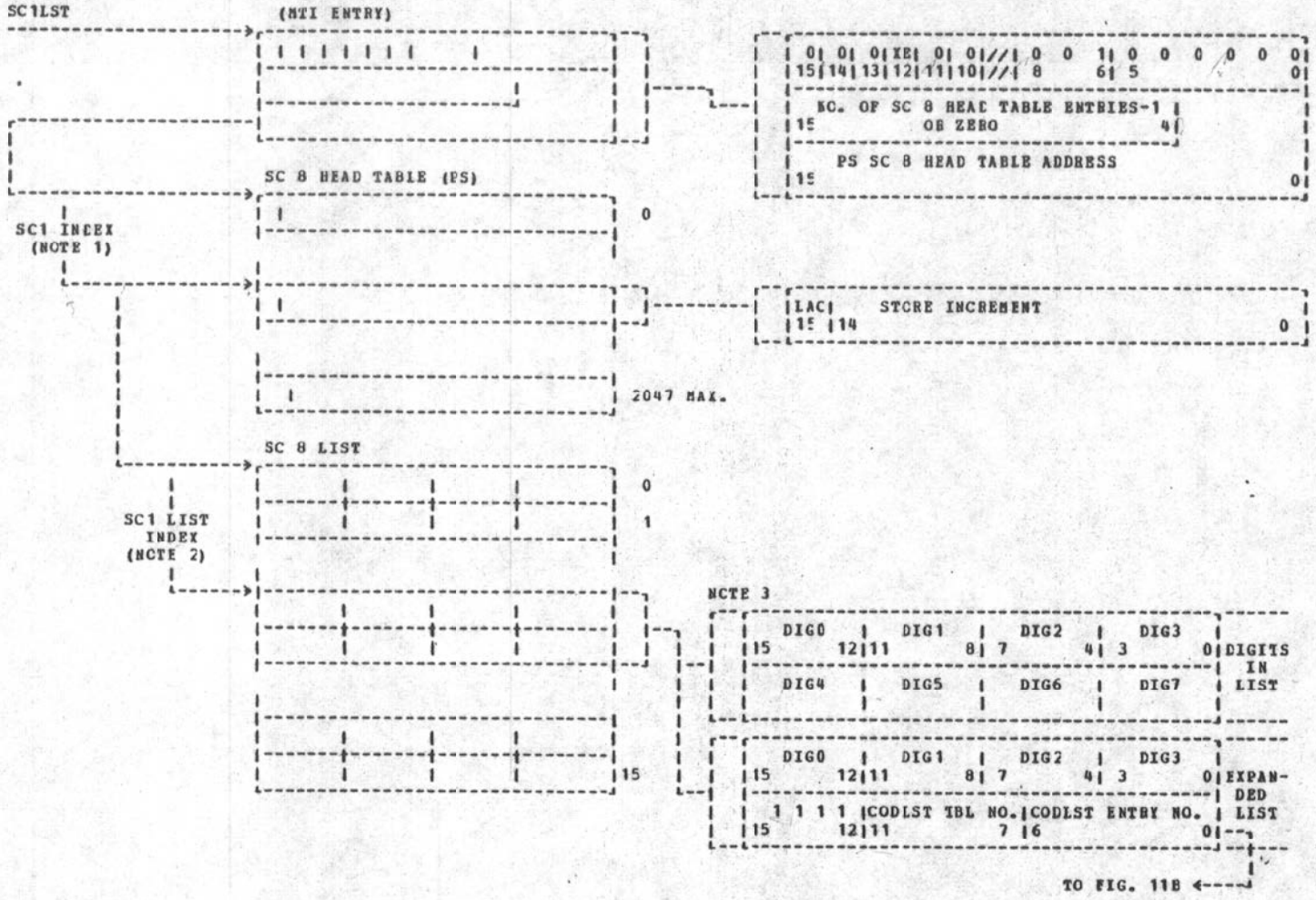


FIGURE 5 (continued) SPEED CALLING LIST - 1 DIGIT

NOTES:

1. THE SC1 INDEX is stored in bits 0-10 of the LINE DATA WORD, Figure 2C, or the PBX/MLHG group table, Fig. 12B.
2. The index for the SC 8 List is a function of the dialed code; SC1 LIST INDEX = 2 * CODE - 4.
3. The number of digits in the two word entry is eight. If more digits are needed, the second word of the entry contains a table and entry number needed to obtain an entry in the COELST translator for the rest of the digits. The digits are stored in BCD.
4. List Availability Code (LAC): LAC = 0 Vacant
   = 1 Assigned

FIGURE 6 SPEED CALLING LIST - 2 DIGIT

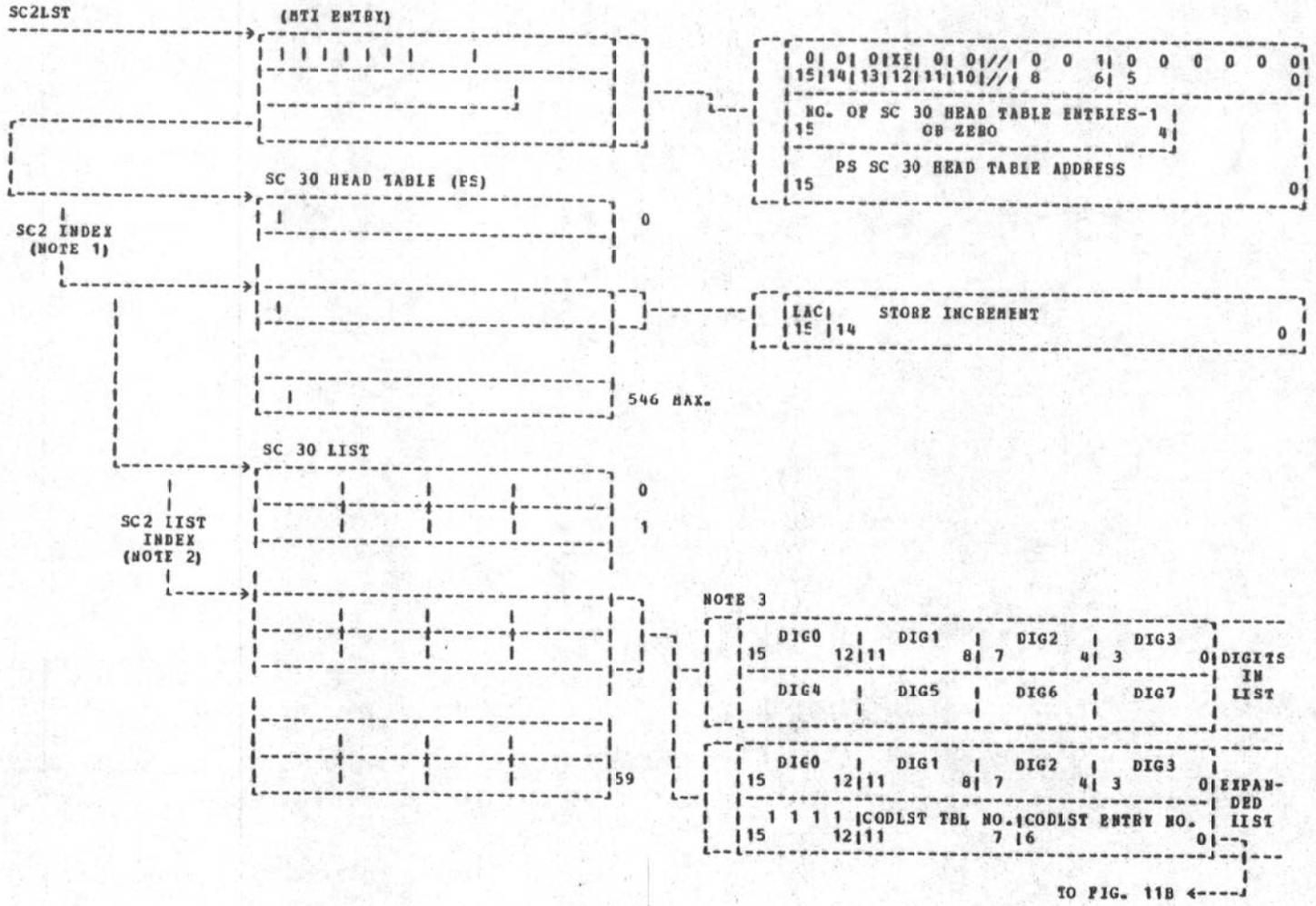


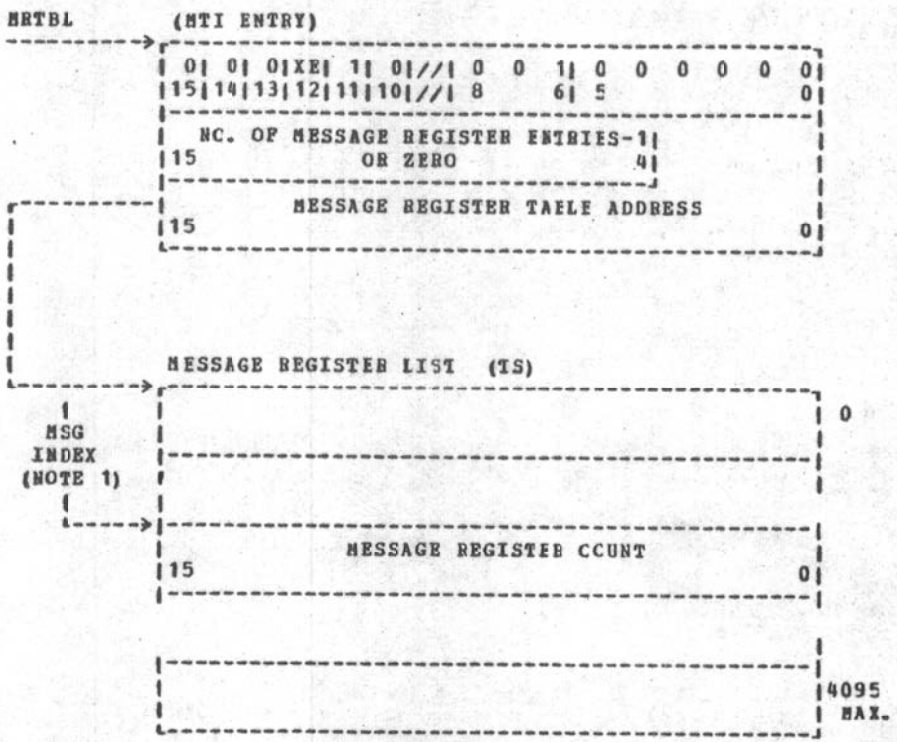
FIGURE 6 (Continued) SPEED CALLING LIST - 2 DIGIT

NOTES:

1. The SC2 INDEX is stored in bits 0-10 of the LINE DATA WORD, Figure 2C, or the PBX/MLHG group table, Fig. 12B.
2. The index for the SC 30 LIST is a function of the dialed code; SC2 LIST INDEX = 2 * CODE - 40.
3. The number of digits in the two word entry is eight. If more digits are needed, the second word of the entry contains a table and entry number needed to obtain an entry in the CODLST translator for the rest of the digits. The digits are stored in BCD.
4. List Availability Code (LAC): LAC = 0 Vacant
   = 1 Assigned

6 5 4 3 2 1 0
1 1 1 1 1 1 1

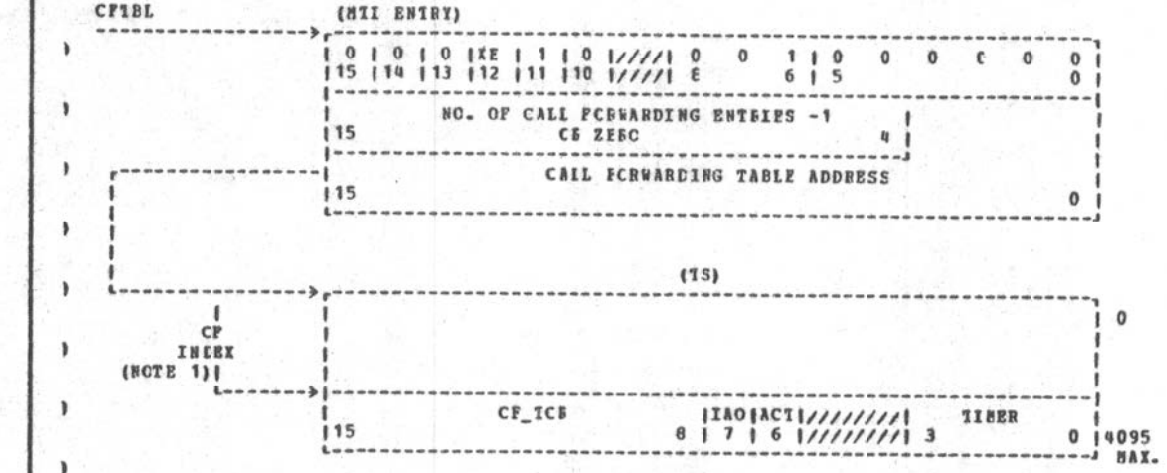
FIGURE 7 MESSAGE REGISTER LIST



NOTES:

1. MSG INDEX is stored in bits 0-11 in a LINE DATA WORD. See Figure 2C.

FIGURE 8A CALL FORWARDING TABLE



NOTES:

1. CF INDEX is stored in bits 0-11 of a LINE DATA WORD. See Figure 2C.
2. ACT = Active entry
3. TIMER = 1 = 10 sec.
4. CF_TCB = TCB number for CF activation.
5. IAO = 1 -IAO Activation in Progress.

FIGURE 8B CALL FORWARDING DIGIT LIST

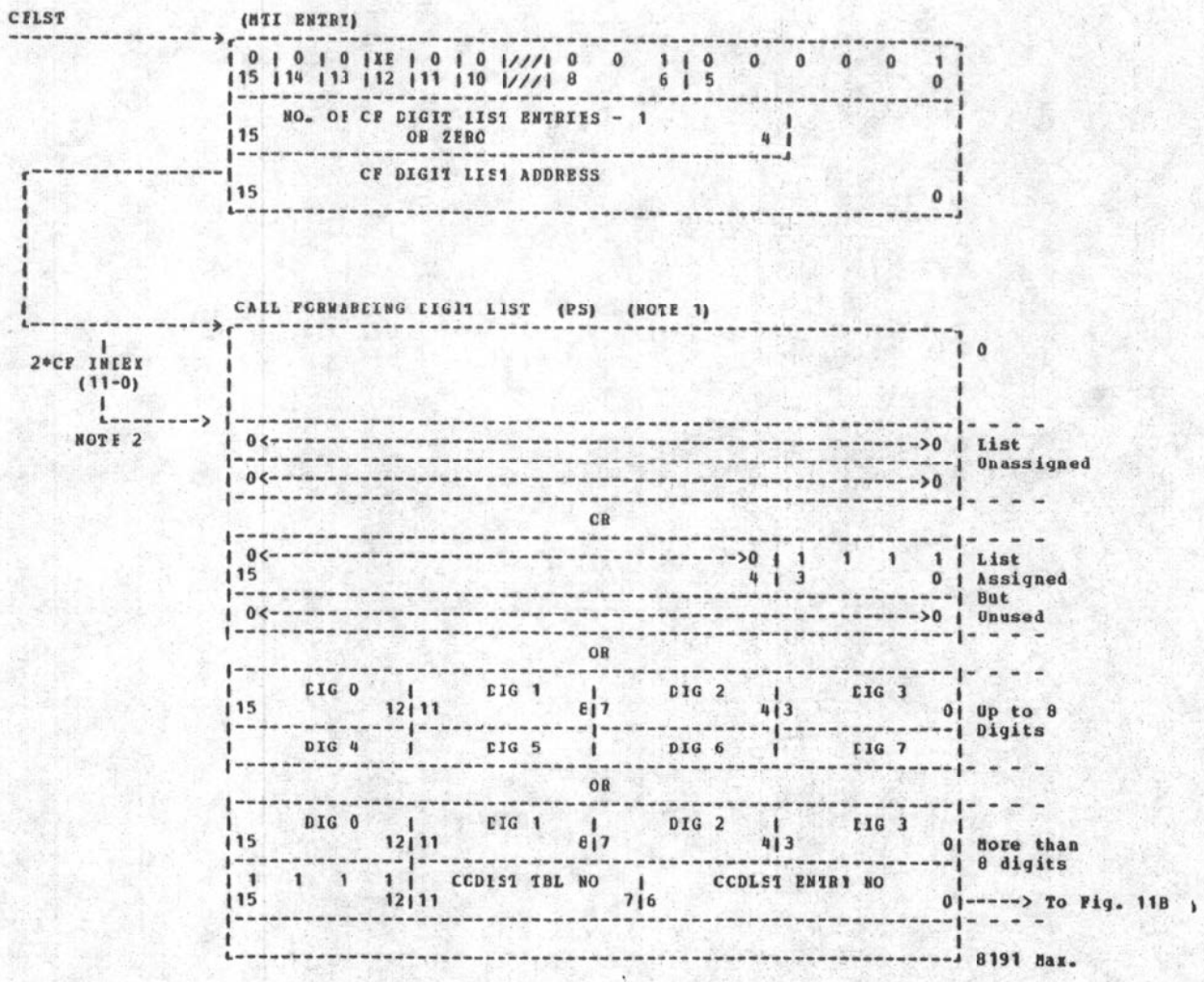


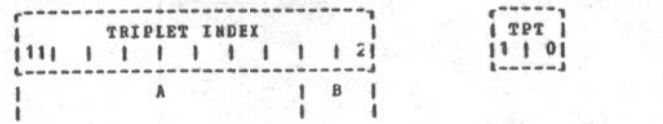
FIGURE 8B (continued) CALL FORWARDING DIGIT LIST

NOTES:

1. DIGn (n=0-7). BCD digits are the call forwarding number. If digit position 3 = 1111, the entry is assigned but unused. If digit position 4 = 1111, the rest of word 1 is a table and entry to a digit expansion area. (Fig. 11B).

2. CF index is stored in bits 0-11 of a line data word. See Figure 2C.

FIGURE 9 COIN TRIPLET INDEX INFORMATION



NOTES:

1. The coin line circuit's TRIPLET INDEX and TRIPLET POINT is stored in a LINE DATA WORD. See Figure 2C.

FIGURE 9A COIN TRIPLET INDEX INFORMATION - COIN TRIPLET ADDRESS TABLE

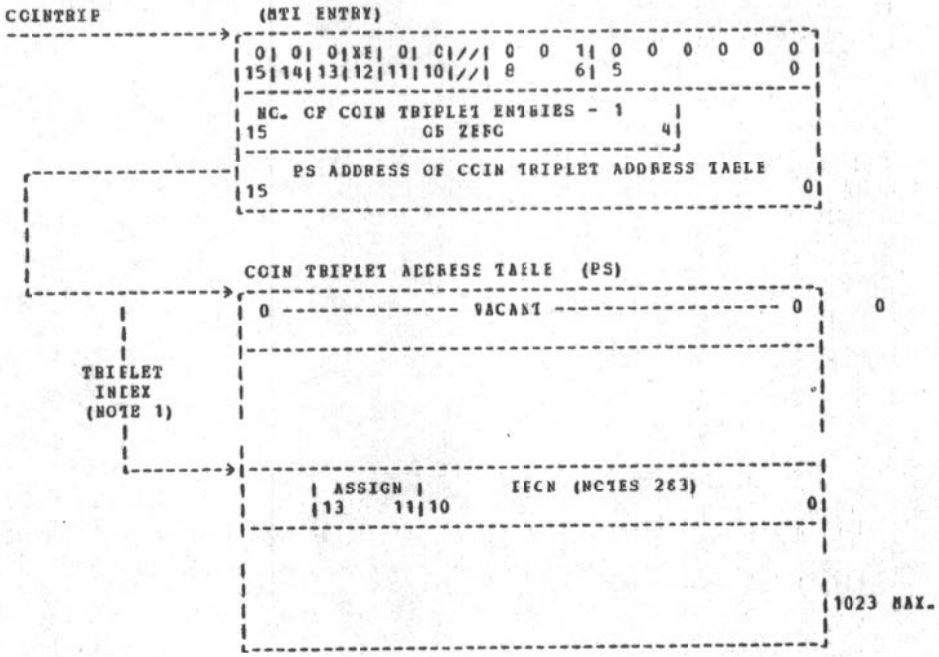


FIGURE 9A (Continued) COIN TRIPLET INDEX INFORMATION - COIN TRIPLET ADDRESS TABLE

NOTES:

1. The coin line circuit's TRIPLET INDEX is stored in a LINE DATA WORD. See Figure 2C.

2. KEYWORD CROSS-REFERENCE & DESCRIPTION FOR COIN TRIPLET ADDRESS TABLE

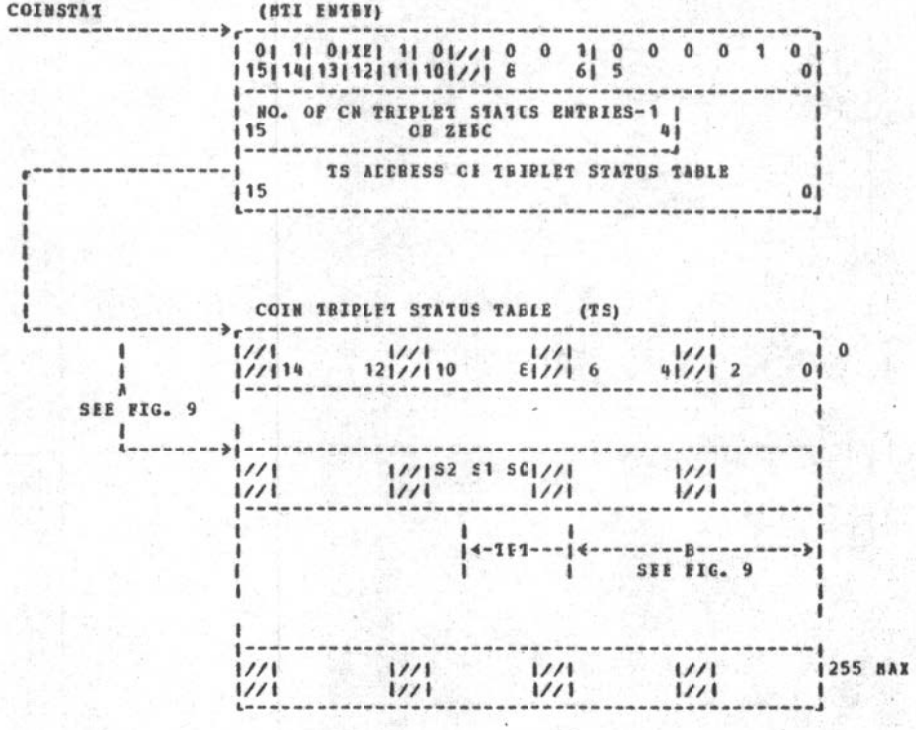
KEYWORD	INPUT MESSAGE	ESS FORM NO.	ESS FORM ITEM	ESS FORM COLUMN(S)	DESCRIPTION
ASSIGN	-------	----	--	--------	Individual assigned points.
DPCN	RC:LINE	3107-1	--	48-52	Coin Triplet address (NOTE 3).

3. COIN TRIPLET ADDRESS:

TRIPLET	PED	PD NO.
10 9	8	7 0

PPD - Peripheral Pulse Distributor.
PE - Peripheral Decoder.

FIGURE 9B COIN TRIPLET INDEX INFORMATION - COIN TRIPLET STATUS TABLE



NOTES:

1. S2S1S0 - Status bits for the 3 peripheral decoder points in the triplet.

INDEX OF FIGURES

FIGURE 10 FOUR DIGIT TRANSLATION

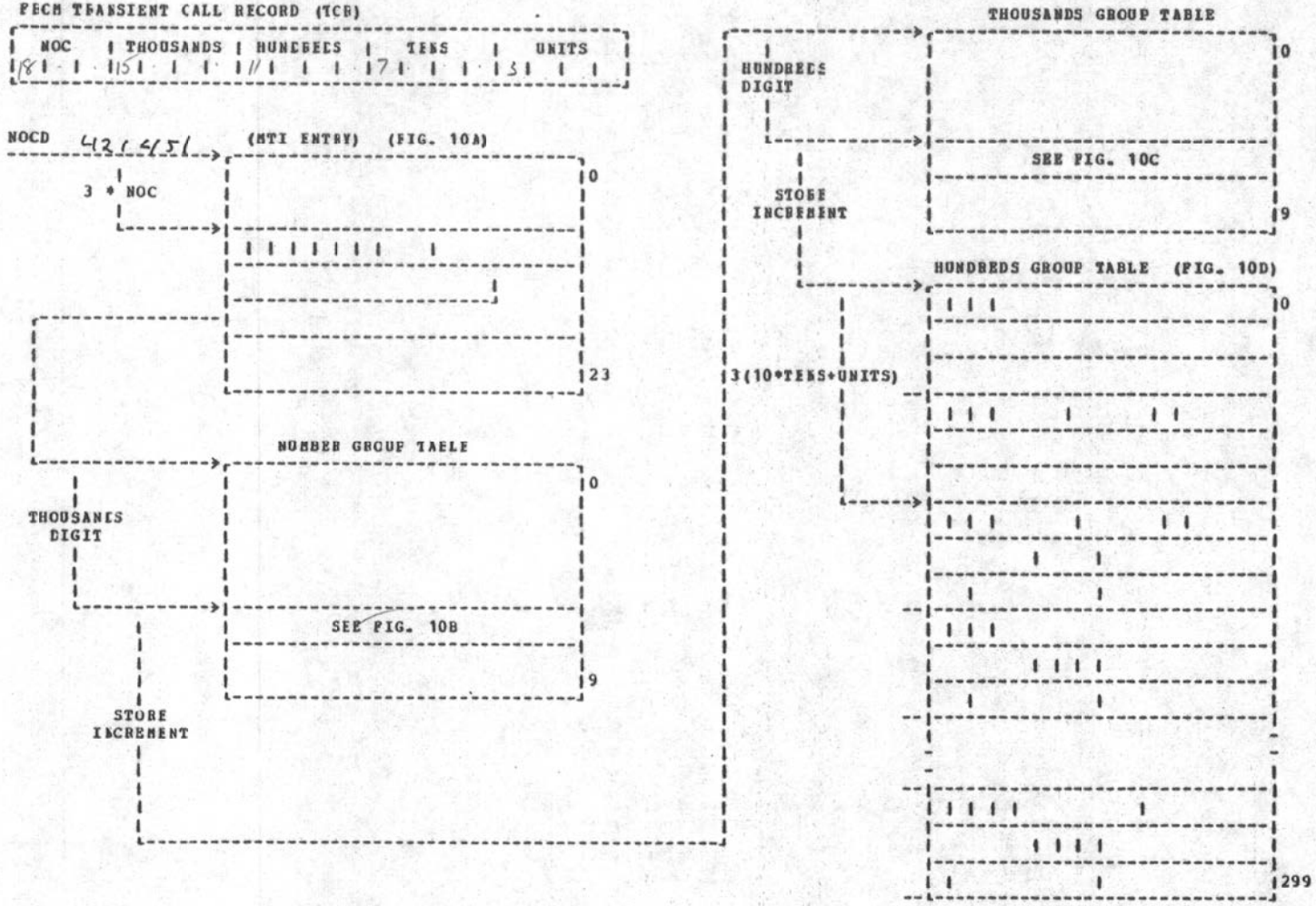
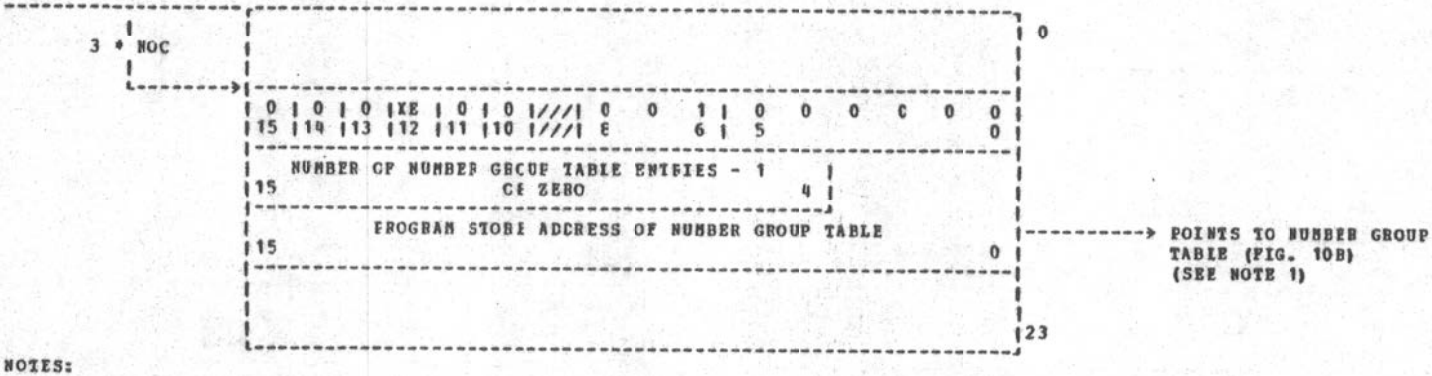


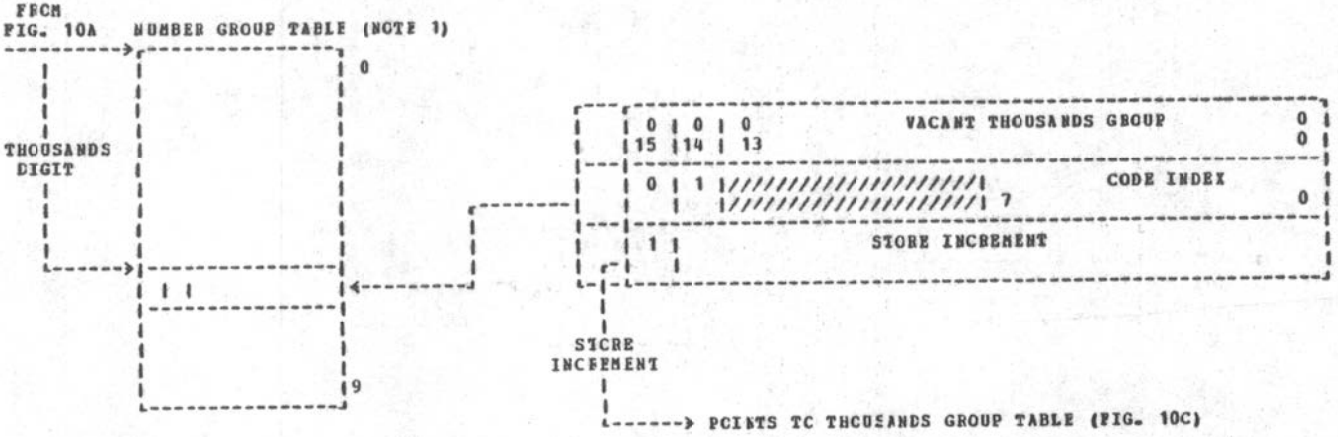
FIGURE 10A FOUR DIGIT TRANSLATION - MTI ENTRY



NOTES:

1. To satisfy "Reallocation" requirements the following table arrangement is necessary. Each Number Group Table (NGT) is followed by the first assigned Thousands Group Table (TGT). Each TGT is followed by the Hundreds Group Tables (HGT), maximum of 10 tables, associated with that TGT. After the HGT, the next assigned TGT follows with its associated (HGT). After the TG tables for the NGT, the next NGT follows with its TG and HG table.

FIGURE 10E FOUR DIGIT TRANSLATION - NUMBER GROUP TABLE OPTIONS

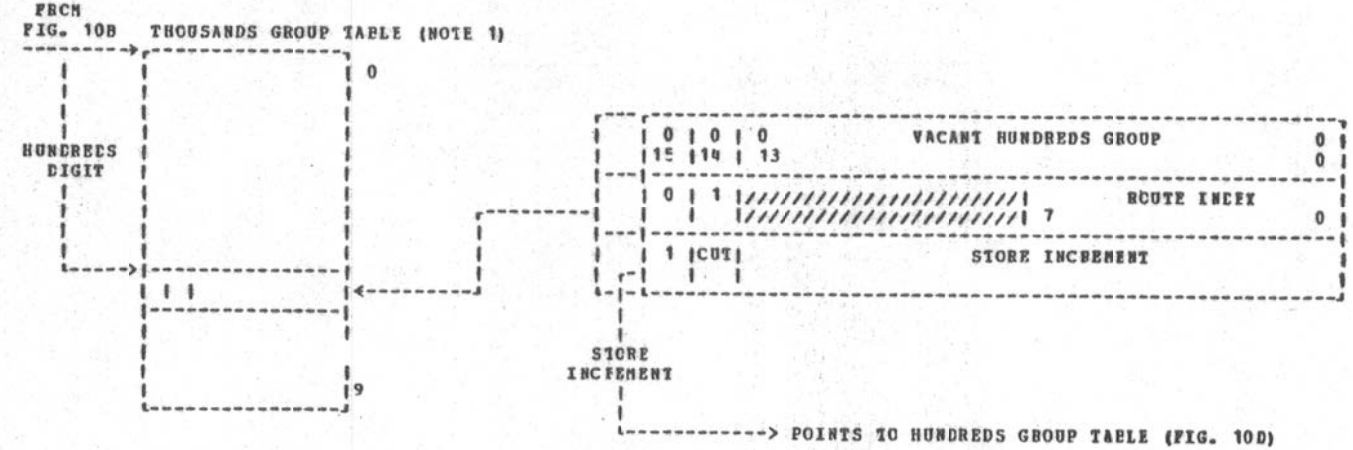


NOTES:

1. There are 3 possible one-word entries in the Number Group Table.
2. DATA NAME CROSS-REFERENCE AND DESCRIPTION

DATA NAME	INPUT MESSAGE	ESS FORM				DESCRIPTION
		KEYWORD	NO.	ITEM	COLUMNS(S)	
CODE INDEX	RC:NG	CDI	3501-1	-	28-30	Code index used to route call to another office on a per thousands group basis.

FIGURE 10C FOUR DIGIT TRANSLATION - THOUSANDS GROUP TABLE



1. There are 3 possible one-word entries in the Thousands Group Table.

2. DATA NAME CROSS-REFERENCE AND DESCRIPTION

DATA NAME	INPUT MESSAGE KEYWORD	ESS FORM NO.	ITEM	COLUMN(S)	DESCRIPTION
CUT	RC:NG	CUT	3501-1	-	27	If CUT = 1, the hundreds group is in the pre-cut state.
ROUTE INDEX	RC:NG	RTI	3501-1	-	31-33	Route Index used to route calls on per ~~hundreds~~ THOUSAND group.

FIGURE 10E FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

POINTED TO BY THOUSANDS GROUP TABLE (FIG. 10C)

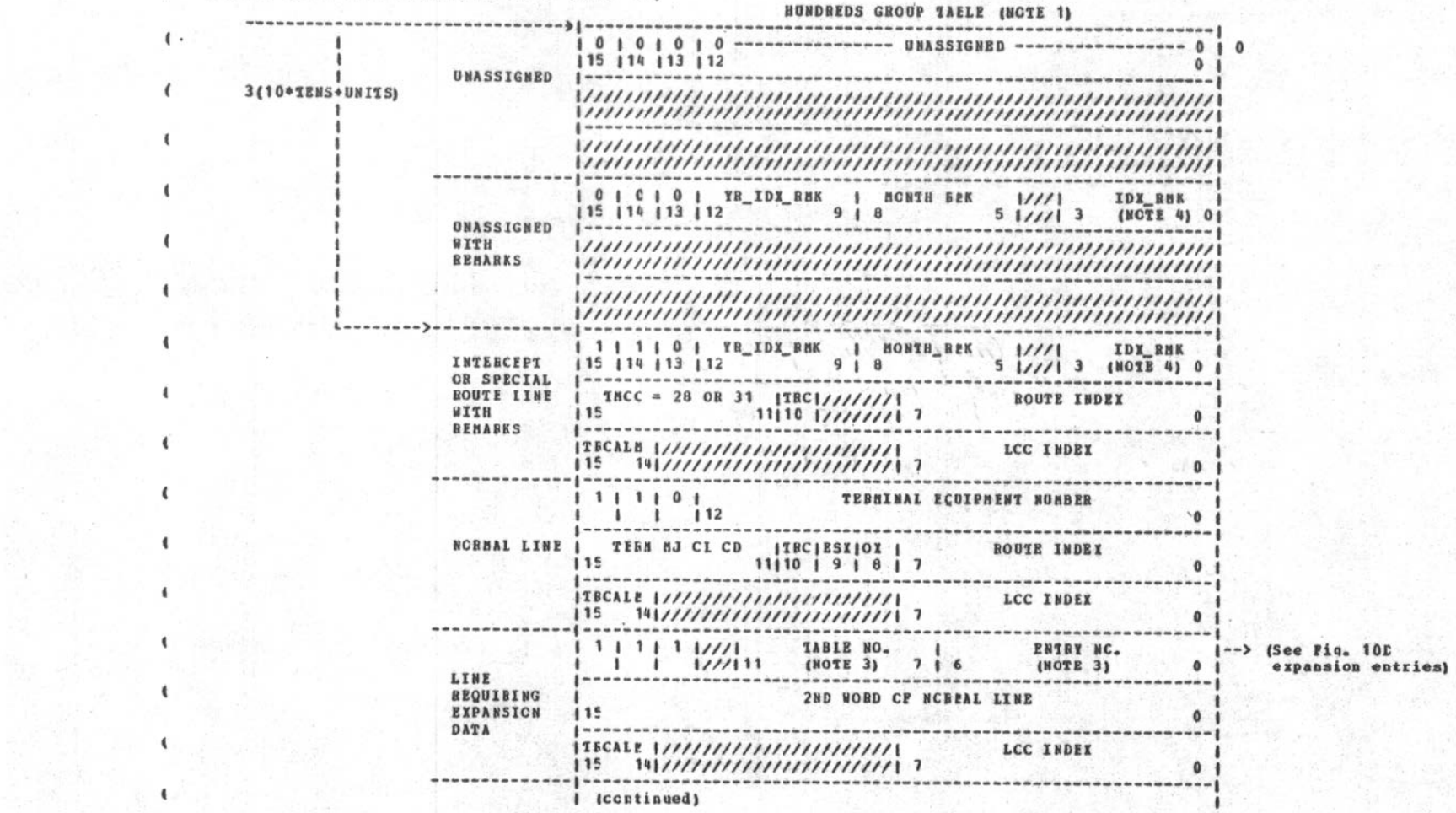


FIGURE 10E FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE (CONTINUED)

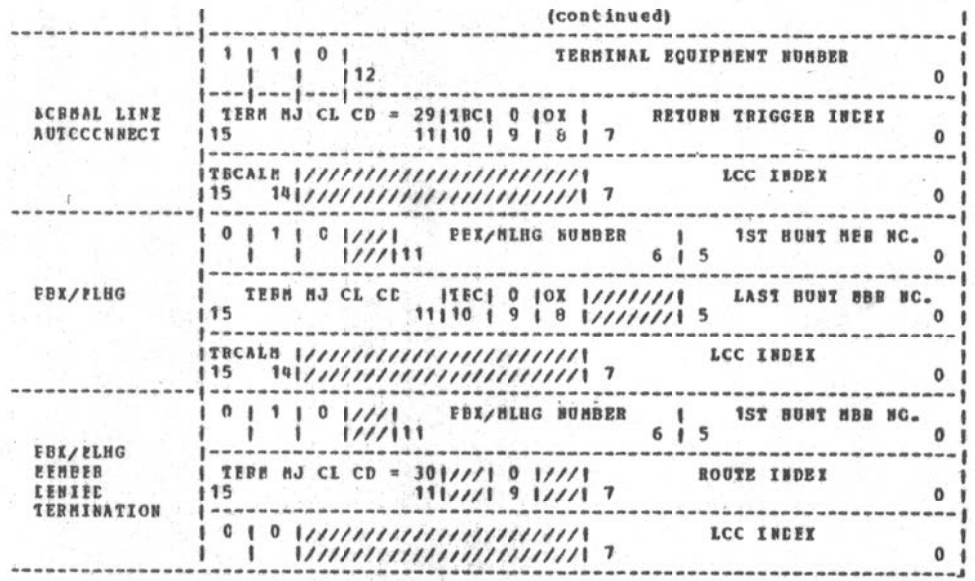
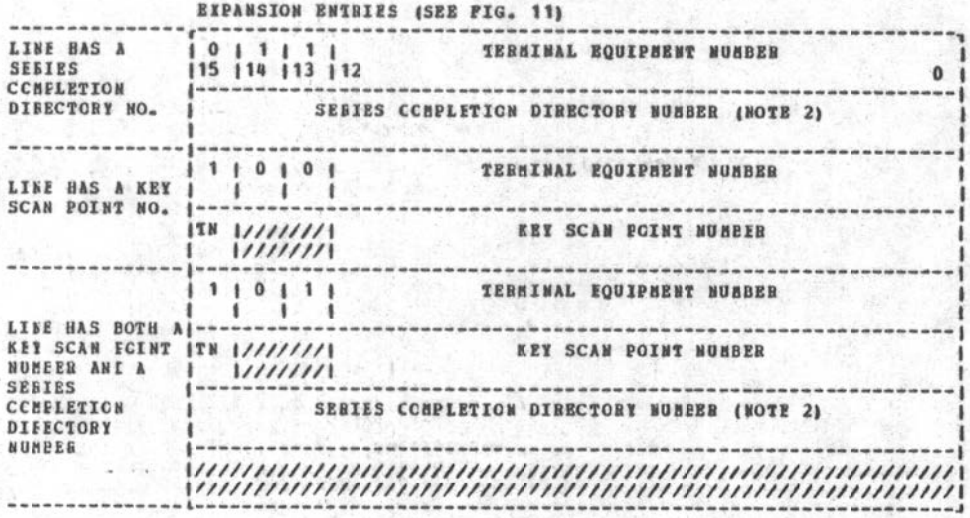


FIGURE 10E (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE



NOTES:

1. There are 8 possible 3-word entries in the Hundreds Group Table.
2. Series completion number entry contains the 7 digit telephone number in packed format. The Office Code is any NOC in the office. See Note 3 of Fig. 2C for format.
3. Word points to a 2 or 4 word expansion via EXPTBL, Fig. 11A.
4. IDX_BRK (Expanded)

= 0 - Vacant	= 8 - Non-published
= 1 - Resident disconnect	= 9 - Manual line
= 2 - Business disconnect	= 10 - Intercept
= 3 - Resident change	= 11 - Dial long lines
= 4 - Business change	= 12 - Public coin
= 5 - Do not assign	= 13 - Semi-public coin
= 6 - Plant assignment	= 14 - Reserve
= 7 - Remark on tape	= 15 - (Spare)

FIGURE 10E (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

NOTES (CONTINUED):

5. DATA CROSS-REFERENCE AND DESCRIPTION

TABLE ENTRY	DATA NAME	INPUT MESSAGE	ESS FORM				DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN(S)	
UNASSIGNED WITH REMARKS	IDX_RMK	RC:LINE	RMK	3100-1	-	63-75	See Note 4
	MONTH_RMK	-	-	-	-	-	1-12 = Month of year
	YR_IDX_RMK	-	-	-	-	-	0-9 = Last digit of year 10-14 = Not used 15 = Entry older than 3 years
INTERCEPT OR SPECIAL ROUTING WITH REMARKS	IDX_RMK	RC:LINE	RMK	3100-1	-	63-75	See Note 4
	MONTH_RMK						1-12 = Month of year
	YR_IDX_RMK						0-9 = Last digit of year 10-14 = Not used 15 = Entry older than 3 years
	ROUTE INDEX	RC:LINE	RTI	3100-1	-	53-55	Special routing Route Index
	TMCC	RC:LCC	TMAJ	3306-1	-	27-28	Terminating Major Class Code. See Fig 2C, Note 8 26 = Intercept 31 = Special routing
	LCC INDEX	RC:LCC	-	-	-	-	Line Class Code Index (Program assigned)
	TRCALM	RC:LINE RC:MTL	TRC	3107-2	-	56-58	Trace & Alarm 0 = No trace 1 = Major alarm on trace 2 = Minor alarm on trace 3 = No alarm on trace
NORMAL LINE	TERMINAL EQUIPMENT NUMBER	RC:LINE	CE	3100-1	-	24-29	Office equipment number.
	TER MJ CL CD	RC:LCC	TMAJ	3306-1	-	27-28	Terminating major class code. See Fig 2C, Note 8
	TRC	RC:LINE	TRC	---	-	--------	Call trace feature.

(continued)

FIGURE 10E (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

NOTES (CONTINUED):

5. DATA CROSS-REFERENCE AND DESCRIPTION

TABLE ENTRY	DATA NAME	INPUT MESSAGE		ESS FORM			DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN(S)	
NORMAL LINE (continued)	OX						If OX = 1, the Line Subtranslator has terminating translation data.
		BC:LINE	GST	3100-1	-	35	1. Ground start.
		BC:LINE	ESM	3100-1	-	39	2. Call forwarding index.
		BC:LINE	DF	3107-1	-	42-47	3. Sleeve lead distributor triplet address.
		BC:LINE	DPD	3107-1	-	42-47	4. Noisy line circuit distributor triplet address.
	ROUTE INDEX	BC:LINE	RTI	3100-1	-	53-55	Route Index.
	ESX	BC:LINE	ESX	3100-1	-	38	Call waiting feature.
	LCC INDEX	BC:LCC	-	-	-	-	Line Class Code Index (Program assigned).
	TRCALM	BC:LINE BC:MTL	TRC	3107-2	-	56-58	Trace & Alarm. 0 = No trace 1 = Major alarm on trace 2 = Minor alarm on trace 3 = No alarm on trace
LINE REQUIRING EXPANSION DATA	TER MJ CL CD	BC:LCC	TMAJ	3306-1	-	27-28	Terminating major class code. See Fig.2C, Note 8
	TRC	BC:LINE	TRC	----	-	--------	Call trace feature.
	ESX	BC:LINE	ESX	3100-1	-	38	Call waiting feature.
	LCC INDEX	BC:LCC	-	-	-	-	Line Class Code Index (program assigned).
	TRCALM	BC:LINE BC:MTL	TRC	3107-2	-	56-58	Trace & Alarm. 0 = No trace 1 = Major alarm on trace 2 = Minor alarm on trace 3 = No alarm on trace

(continued)

FIGURE 101 (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

NOTES (CONTINUED):

5. DATA CROSS-REFERENCE AND DESCRIPTION

TABLE ENTRY	DATA NAME	INPUT MESSAGE	ESS FORM				DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN(S)	
LINE REQUIRING EXPANSION DATA	ROUTE INDEX	RC:LINE	RTI	3100-1	-	53-55	Route Index. If OX = 1, the Line Subtranslator has terminating translation data.
	OX						
(continued)		RC:LINE	GST	3100-1	-	35	1. Ground start
		RC:LINE	ESP	3100-1	-	39	2. Call forwarding index
		RC:LINE	DP	3107-1	-	42-47	3. Sleeve lead distributor triplet address
		RC:LINE	DPU	3107-1	-	42-47	4. Noisy line circuit distributor triplet address
NORMAL LINE AUTOCONNECT	TERMINAL EQUIPMENT NUMBER	RC:LINE	OE	3100-1	-	24-29	Office equipment number.
	TER MJ CL CD	RC:LCC	TMAJ	3306-1	-	27-28	Terminating Major Class Code. See Fig.2C, Note 8 29 = Autoconnect
	RETURN TRIGGER INDEX	-	-	-	-	-	Return Trigger Index into the Callback Number Translator.
	LCC INDEX	RC:LCC	-	-	-	-	Line Class Code Index (Program assigned).
	TRCALM	RC:LINE RC:MTI	TRC	3107-2	-	56-58	Trace & Alarm. 0 = No trace 1 = Major alarm on trace 2 = Minor alarm on trace 3 = No alarm on trace
PBX/MLHG	PBX/MLHG NUMBER	RC:MTL	MHI	3100-1	-	46-47	Multi-line group number.
	1ST HUNT MEB NO.	RC:MTL	TE6	3100-1	-	48-49	First hunt multi-line hunt group terminal (member) number. First hunt number is the member number for this TN.
(continued)							

FIGURE 10E (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

NOTES (CONTINUED):

5. DATA CROSS-REFERENCE AND DESCRIPTION

TABLE ENTRY	DATA NAME	INPUT MESSAGE	ESS PCBS				DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN(S)	
PBX/MLHG (continued)	TER MJ CL CD	RC:LCC	TMAJ	3306-1	-	27-28	Terminating major class code. See Fig.2C,Note 8
	TRC	RC:MTL	TRC	---	-	--------	Call trace feature.
	OI						If OI = 1, the Line Subtranslator has terminating translation data.
		RC:MTL	GST	3100-1	-	35	1. Ground start
		RC:MLHG	GST	3105-1	-	30	
		RC:MTL	ESF	3100-1	-	39	2. Call forwarding index
		RC:MTL	DP	3107	-	42-47	3. Sleeve lead distributor triplet address
		RC:MTL	DPC	3107	-	42-47	4. Noisy line circuit distributor triplet address
	LAST HUNT MBR NO.	RC:MTL	LHT	3100-1	-	50-51	Last hunt multi-line hunt group terminal (member) number.
	LCC INDEX	RC:LCC	-	-	-	-	Line Class Code Index (Program assigned).
	TRCALM	RC:LINE RC:MTL	TRC	3107-2	-	56-58	Trace & Alarm. 0 = No trace 1 = Major alarm on trace 2 = Minor alarm on trace 3 = No alarm on trace
PBX/MLHG MEMBER DENIED TERMINATION	PBX/MLHG NUMBER	RC:MTL	HPI	3100-1	-	46-47	Multi-line hunt group number.
	1ST HUNT MBR NO.	RC:MTL	TEF	3100-1	-	48-49	First hunt multi-line hunt group terminal (member) number.
	TER MJ CL CD	RC:LCC	TMAJ	3306-1	-	27-28	Terminating major class code. See Fig.2C,Note 8 30 = Denied

(continued)

FIGURE 101 (CONTINUED) FOUR DIGIT TRANSLATION - HUNDREDS GROUP TABLE

NOTES (CONTINUED):

5. DATA CROSS-REFERENCE AND DESCRIPTION

TABLE ENTRY	DATA NAME	INPUT MESSAGE		ESS POINT			DESCRIPTION
			KEYWORD	NO.	ITEM	COLUMN(S)	
PBX/FLHG MEMBER DENIED TERMINATION (continued)	ROUTE INDEX	RC:NTI	RTI	3100-1	-	53-55	Route Index.
	LCC INDEX	RC:LCC	-	-	-	-	Line Class Code Index (Program assigned).
EXPANSION ENTRIES	TERMINAL EQUIPMENT NUMBER	RC:LINE	OE	3100-1	-	24-29	Office equipment number.
	SERIES COMPLETION NUMBER	RC:LINE	SEE	3100-1	-	56-59	The series completion number entry contains the 4-digit station number in BCD. The NCC is the same as the entry NCC.
	KEY SCAN POINT NUMBER	RC:LINE	SP	3107-1		56-60	A scan point entry is required for the following type of lines: 1. Individual lines requiring the remote make busy feature. 2. Mobile radio lines. 3. 1A Concentrator lines. 4. Group alerting lines. 5. Subscriber loop multiplexer lines.
	TONE (TN)	RC:LINE	BSY	3107-1	-	55	Tone 0 = Reorder 1 = Busy

FIGURE 11 EXPANSION TABLES

FIGURE 11A GENERAL PURPOSE EXPANSION TABLES

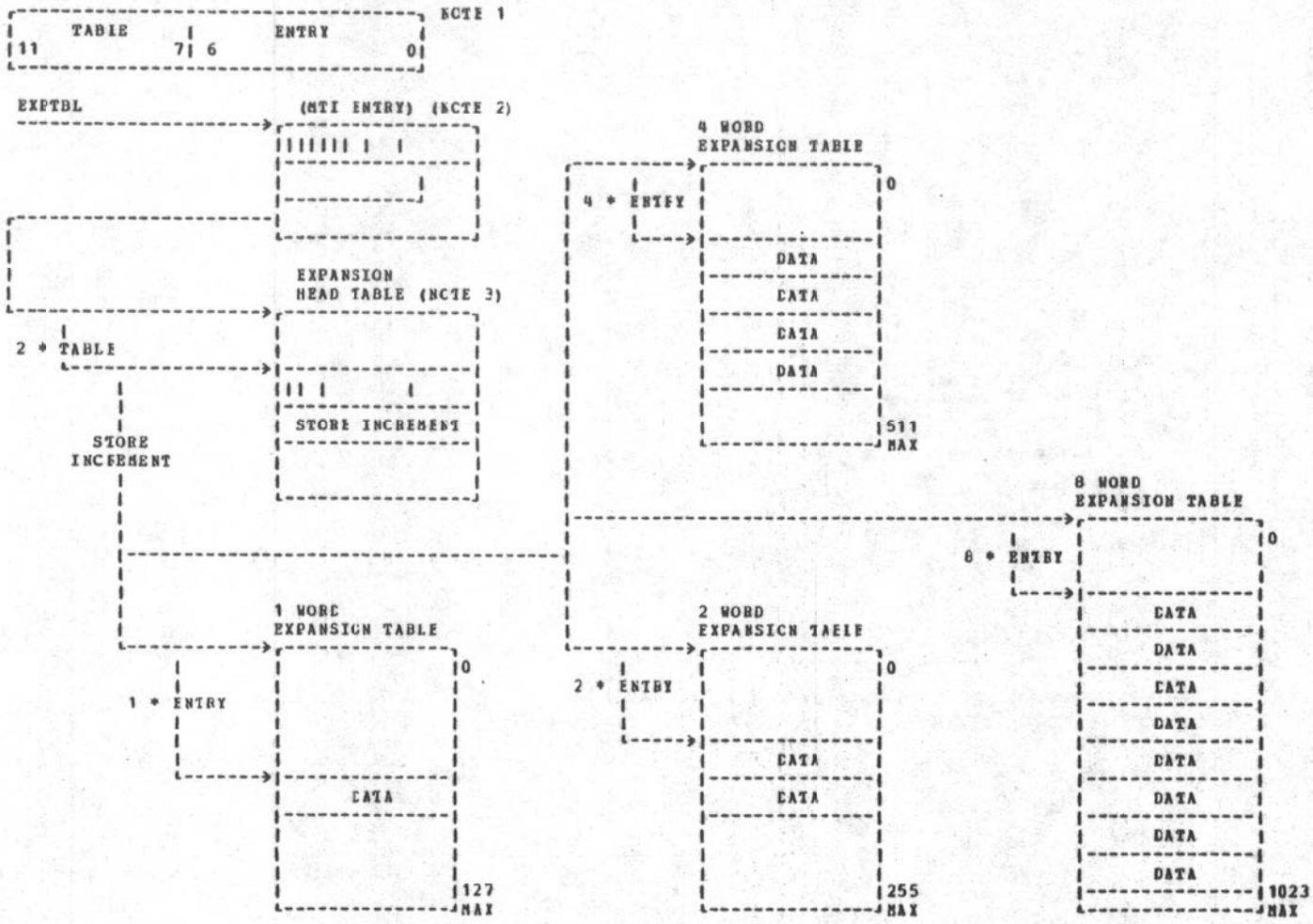
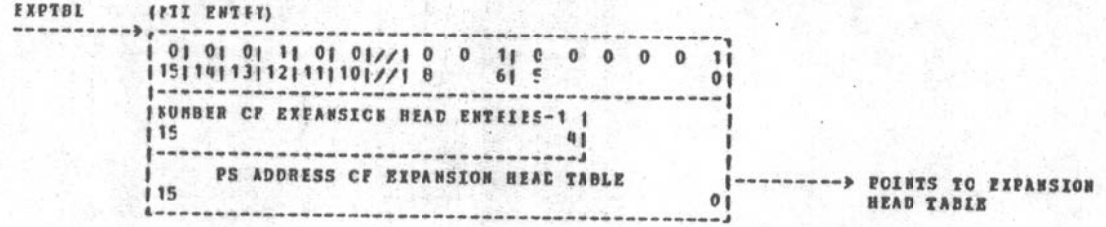


FIGURE 11A (CONTINUED) GENERAL PURPOSE EXPANSION TABLES

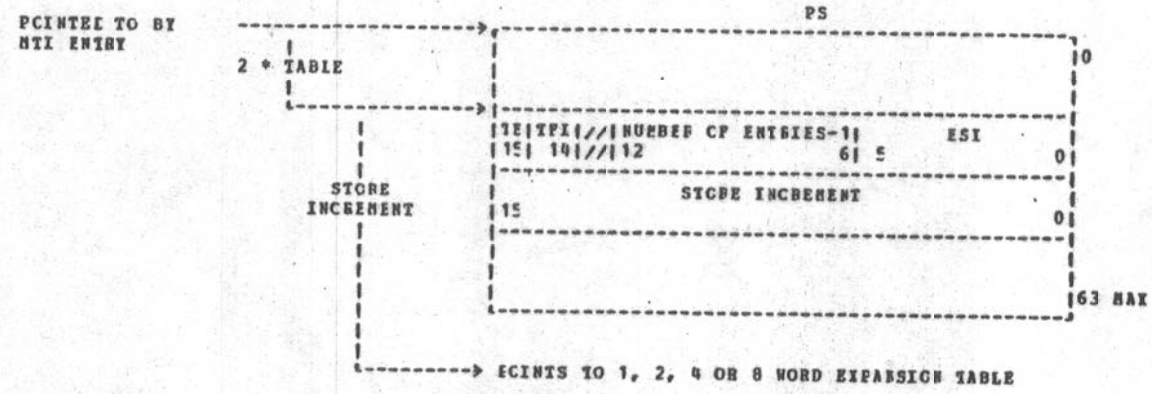
NOTES:

1. The following tables require General Purpose Expansion Tables:
   a) Line Subtranslator,
   b) Hundreds Group Table, and
   c) Route Index Expansion Table.

2. Master Table Index Entry



3. EXPANSION HEAD TABLE



ENTRY SIZE INDICATOR (ESI) = $\log_2$ (NO. OF WORDS IN ENTRY). The valid values for ESI are 0, 1, 2 & 3 for 1, 2, 4 & 8 word entries, resp.

If TE = 1, then the Table Exists.

If TFI = 1, then the Table is full (all entries are used).

FIGURE 11B CODE LIST EXPANSION TABLES

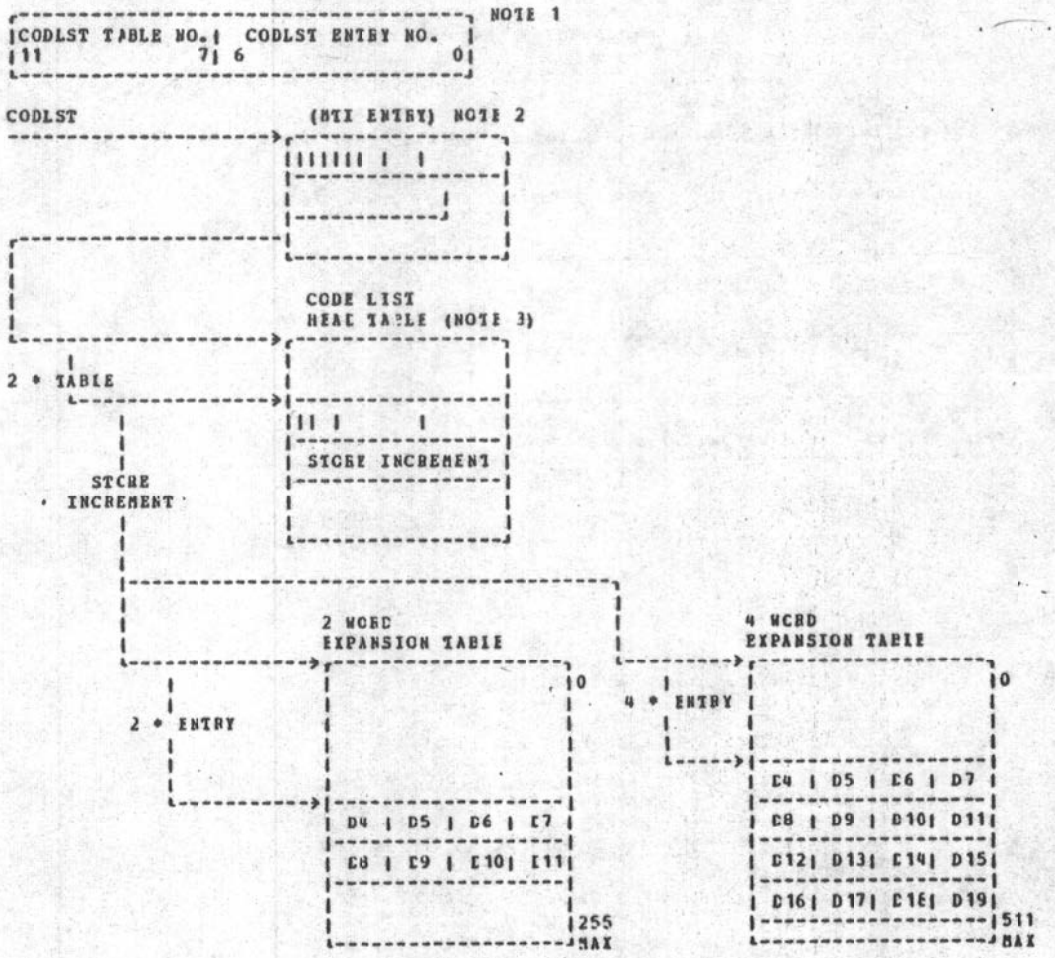
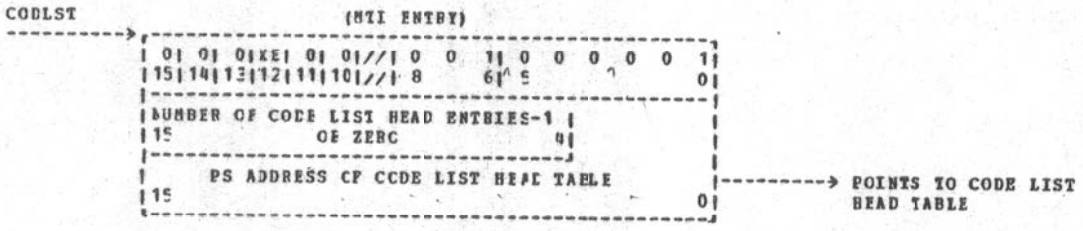


FIGURE 118 (CONTINUED) CODE LIST EXPANSION TABLES

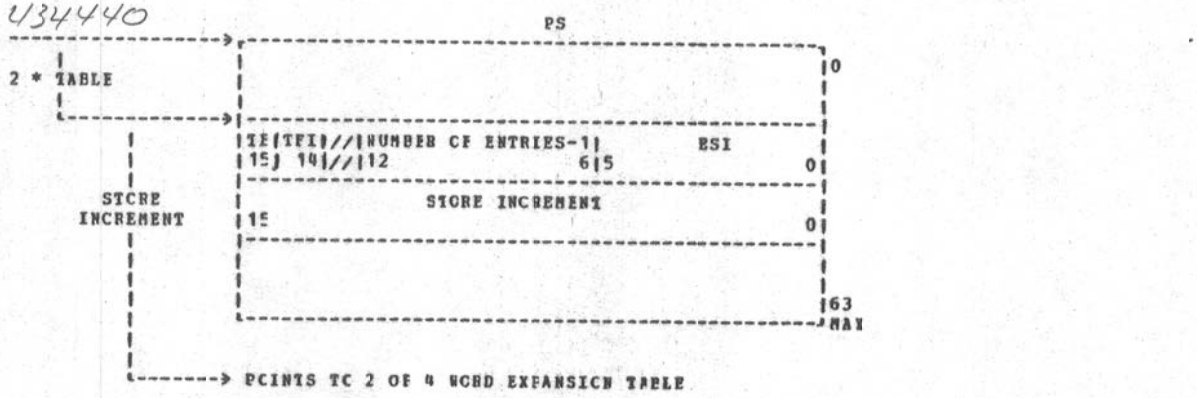
NOTES:

1. The following tables require Code List Expansion Tables for additional digit storage:
   a) Speed Call 8 List,
   b) Speed Call 30 List, and
   c) Call Forwarding Variable.

2. Master Table Index Entry



3. CODE LIST HEAD TABLE



ENTRY SIZE INDICATOR (ESI) = $\log_2$ (NO. OF WORDS IN ENTRY). The valid entries for ESI are 1 & 2 for 2 & 4 word entries.

If TE = 1, then the Table Exists.

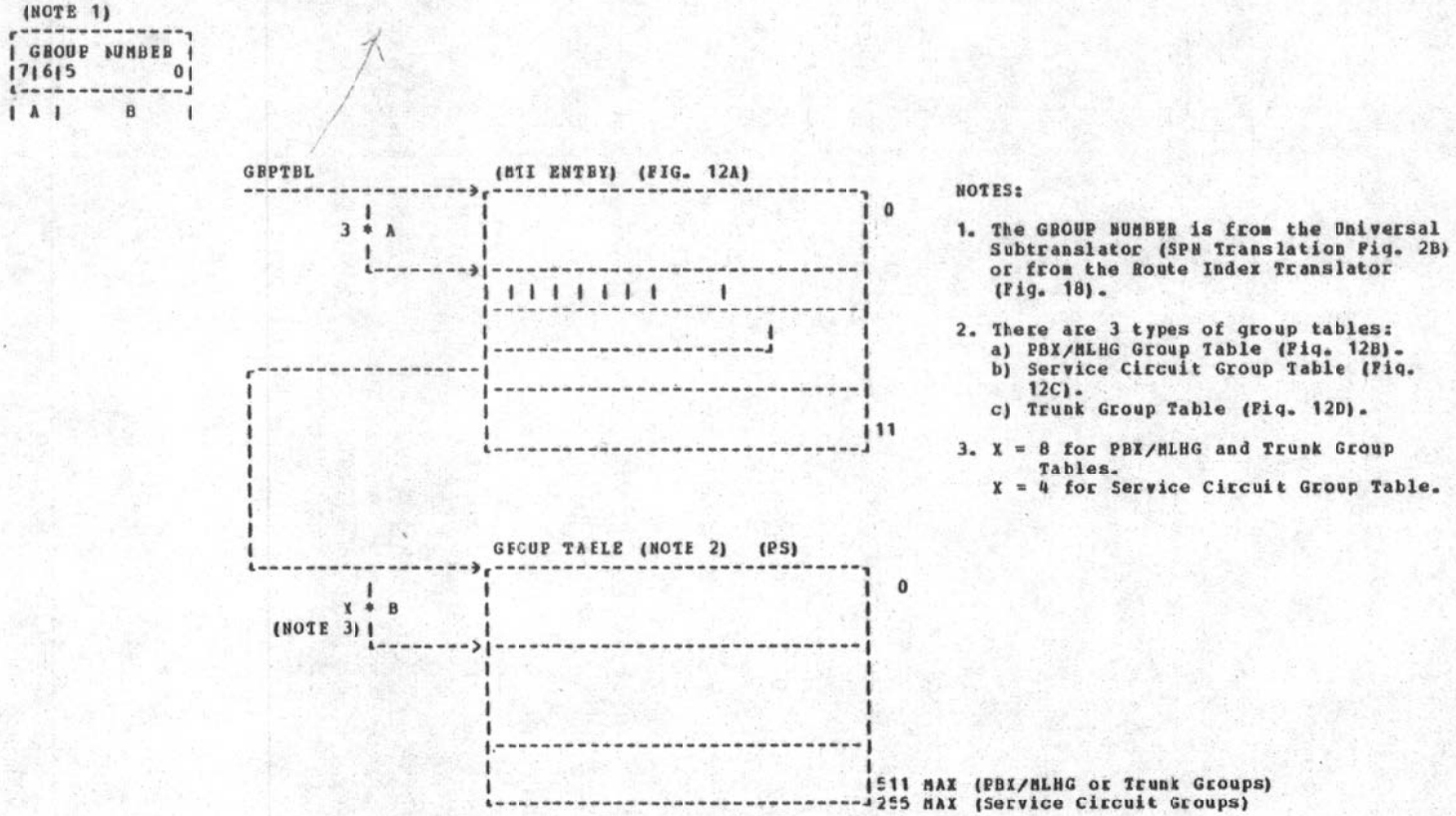
If TFI = 1, then the Table is full (all entries are used).

4. Dn - n = 4 to 19 BCD digits.

GROUP TRANSLATIONS

INDEX OF FIGURES

FIGURE 12 GROUP TRANSLATION 421410



NOTES:

1. The GROUP NUMBER is from the Universal Subtranslator (SPN Translation Fig. 2B) or from the Route Index Translator (Fig. 18).

2. There are 3 types of group tables:
   a) PBX/MLHG Group Table (Fig. 12B).
   b) Service Circuit Group Table (Fig. 12C).
   c) Trunk Group Table (Fig. 12D).

3. X = 8 for PBX/MLHG and Trunk Group Tables.
   X = 4 for Service Circuit Group Table.

FIGURE 12A GROUP TRANSLATION - MTI ENTRY

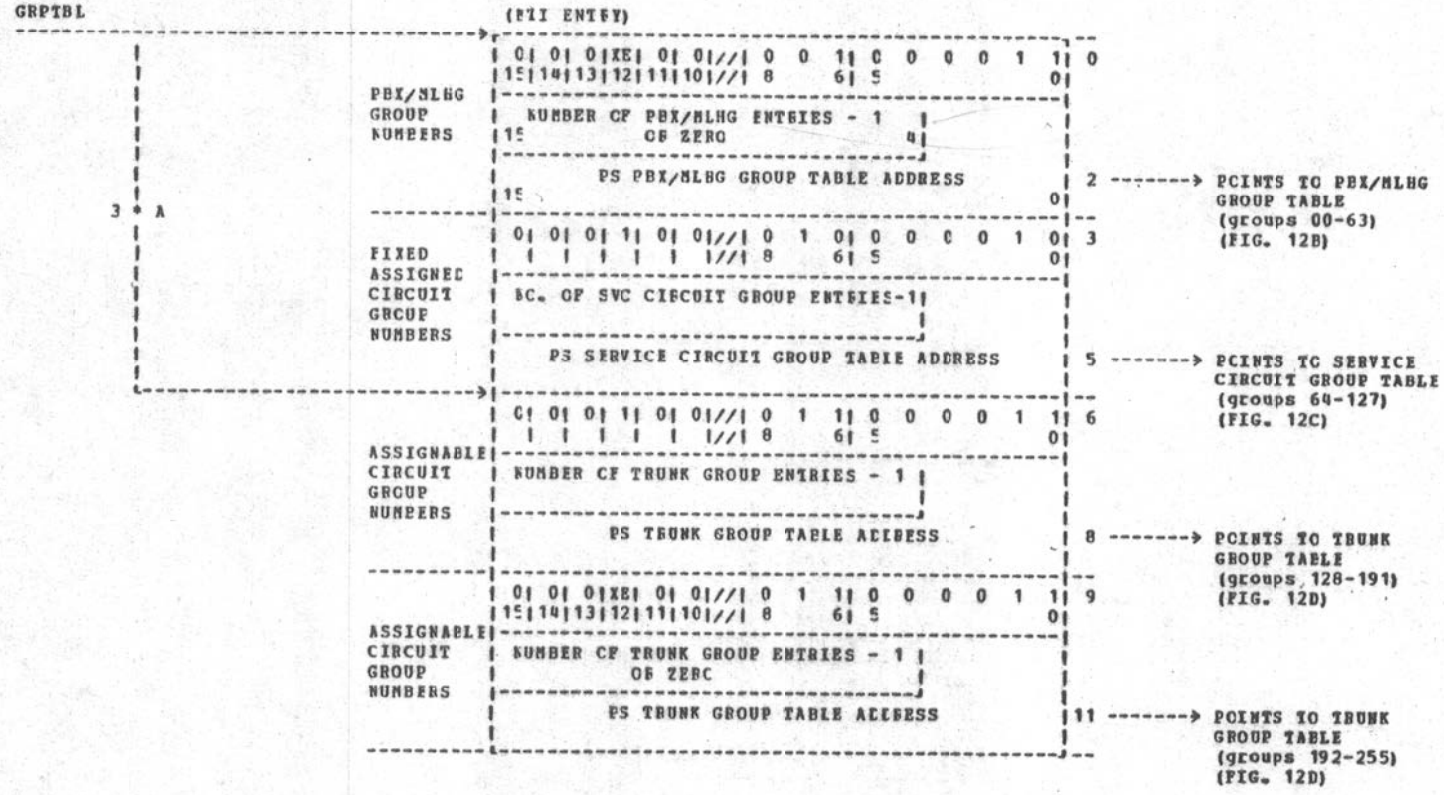
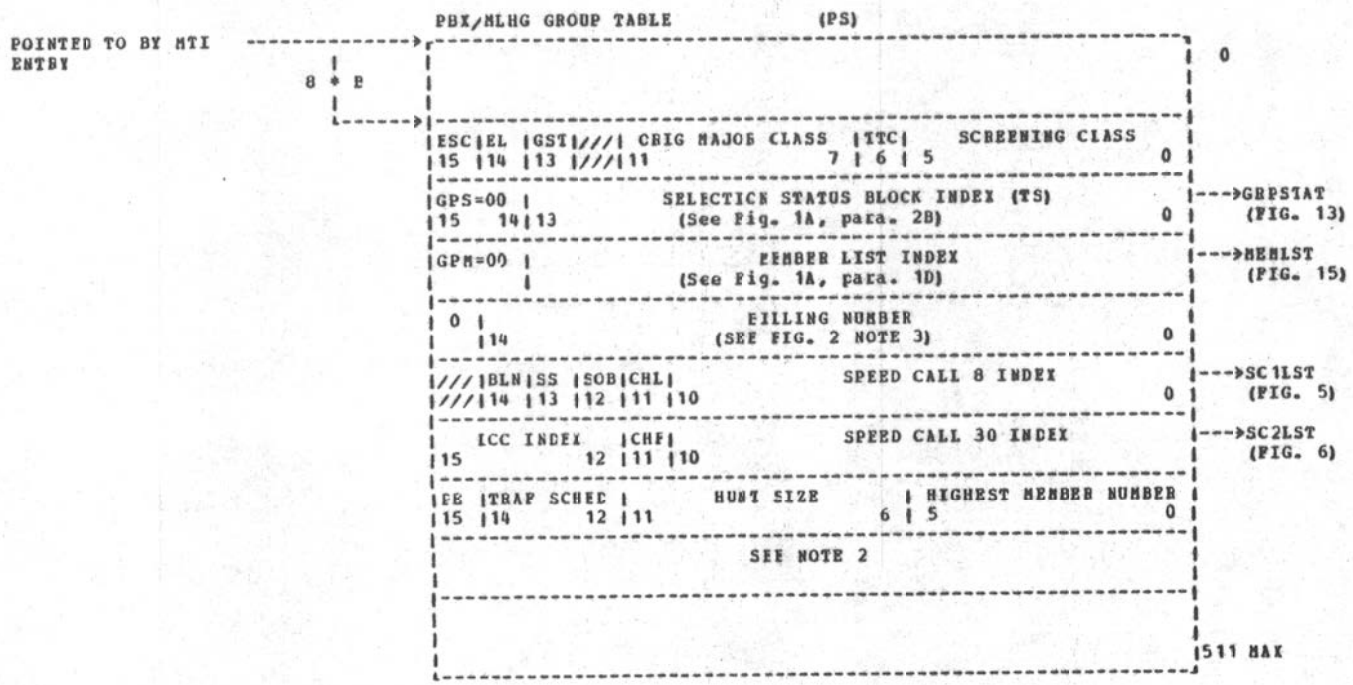


FIGURE 12B GROUP TRANSLATION - PBX/MLHG GROUP TABLE



(continued)

FIGURE 12E (CONTINUED) GROUP TRANSLATION - PBX/NLBG GROUP TABLE

EXPANSION ENTRIES (NOTE 3)

2, 4 or 8 WORD EXPANSIONS

//////////////// NIGHT STOP MEMBER NO. (11–6) / STOP HUNT MEMBER NO. (5–0)		0
////////// KEY SPN (12–0)		1
////////// KEY SPN		
////////// KEY SPN		3
////////// KEY SPN		
////////// KEY SPN		
////////// KEY SPN		
SEE NOTE 4		1, 3 or 7

2, 4 or 8 WORD EXPANSIONS

////////// KEY SPN (12–0)		0
////////// KEY SPN		1
////////// KEY SPN		
////////// KEY SPN		1, 3 or 7

FIGURE 12B (CONTINUED) GROUP TRANSLATION - PBX/MLHG GROUP TABLE

NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
ESC	RC:MLHG	ESC	3105-1	37	Threeway calling feature
EL	RC:MLHG	EL	3105-1	31	Essential line (Class A line)
GST	RC:MLHG	GST	3105-1	30	Ground start.
ORIG MAJOR CLASS	RC:MLHG	LCC	3105-1	27-29	Originating major class code. See Fig. 2C, Note 8.
TTC	RC:MLHG	TTC	3105-1	32	Touch-Tone calling feature.
SCREENING CLASS	RC:MLHG	LCC	3105-1	27-29	Screening class.
GPS	RC:MLHG	HML	3105-1	20-21	High 2 bits of group number (GPS = 00)
GPM	RC:MLHG	HML	3105-1	20-21	High 2 bits of group number (GPM = 00)
BLN	RC:MLHG	BLN	3105-1	38	Special toll billing (QZ billing, CNI).
SOE	RC:MLHG	SOB	----	-------	Service observing feature.
CHL	RC:MLHG	CHL	3105-1	35	If CHL = 1, the MLHG lines are allowed to dial in direct changes to the group's speed call 1-digit list.
CHF	RC:MLHG	CHF	3105-1	33	If CHF = 1, the MLHG lines are allowed to dial in direct changes to the group's speed call 2-digit list.
SPEED CALL 8 INDEX	RC:MLHG	ESL	3105-1	36	Used to index the SC 8 HEAD TABLE (FIG. 5). The index is program assigned when speed call 1-digit service is given. The index must be ≥ 1, if assigned.
SPEED CALL 30 INDEX	RC:MLHG	ESF	3105-1	34	Used to index the SC 30 HEAD TABLE (FIG. 6). The index is program assigned when speed call 2-digit service is given. The index must be ≥ 1, if assigned.

FIGURE 128 (CONTINUED) GROUP TRANSLATION - PBX/MLHG GROUP TABLE

NOTES:

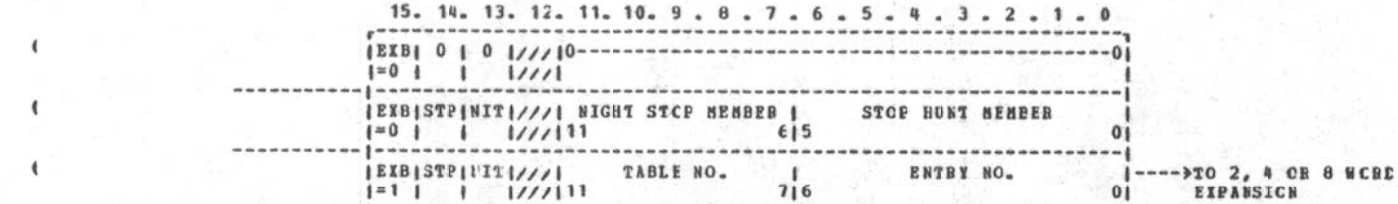
1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	CCLUDE(S)	
PE	-------	-----	----	-------	If PE = 1, the PBX/MLHG exists.
TRAF SCHED	RC:MLHG	SCHED	3105-1	50	Traffic schedule: If TRAF SCHED = 000, no schedule (reserved). = 001, no schedule (reserved). = 010, h schedule. = 011, c schedule. = 100, d schedule.
HUNT SIZE	RC:MLHG	HSZ	3105-1	24-25	Last huntable terminal for the group.
HIGHEST MEMBER NUMBER	DIST:GRP	-	3105-1	22-23	Highest member number in group, including spares.
STP	RC:MLHG	EHT	3105-1	48-49	If STP = 1, the PBX/MLHG has a stop hunt feature.
NIT	RC:MLHG	NST	3105-1	46-47	If NIT = 1, the PBX/MLHG has the night stop feature.
NIGHT STOP MEMBER NO.	RC:MLHG	NST	3105-1	46-47	Last terminal to be hunted when the night stop feature exists (NIT = 1).
STOP HUNT MEMBER NO.	RC:MLHG	EHT	3105-1	48-49	Last terminal to be hunted when the stop hunt feature exists (STP = 1).
SS	RC:MLHG	SS	--	--	Special studies feature. Recent changeable only.
EXB	-------	-	--	--	If EXB = 1, the PBX/MLHG has SPNs assigned for remote make busy, stop hunt and/or night stop and the SPNs are in an expansion entry. SEE NOTE 2.
EE	-------	-	--	--	If EE = 1, the PBX/MLHG has another expansion entry. SEE NOTE 4.
KEY SPN	RC:MLHG		3576	20-25	Key Scan Point Number used for night stop key, stop hunt key, and the 7 remote make busy keys. SEE NOTE 3.
LCC INDEX	RC:LCC	-	--	--	Line Class Code Index (program assigned).

FIGURE 12E (CONTINUED) GROUP TRANSLATION - PBX/MLHG GROUP TABLE

NOTES: (CONTINUED)

2. Word 7 of the PBX/MLHG group data can take on either of 3 formats. The second format is used when the PBX/MLHG has night stop and/or stop hunt members, but not SPN keys. The third format is used when the PBX/MLHG has SPN keys.



3. The SPNs in the expansion entries are stored sequentially as they are inputted. The size of the expansion needed is dictated by the quantity of scan point keys.

4. The last word of the 2, 4 or 8-word expansion entry can take on either of 2 formats. The second format is used when the key SPN data needs more than a 2-word entry (more than 1 PBX key), or a 4-word entry (more than 3 PBX keys), or an 8-word entry (more than 7 PBX keys). The maximum number of KEY SPNs is 5.

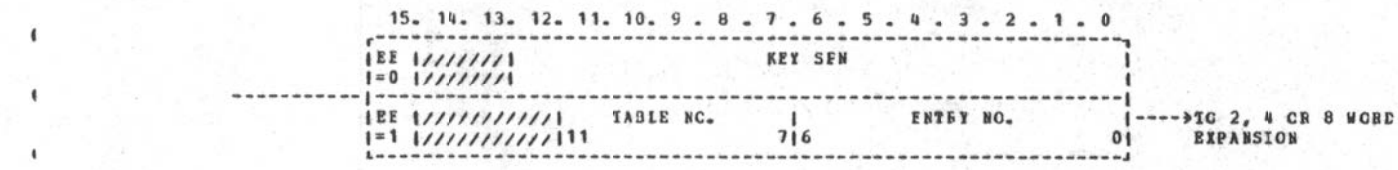
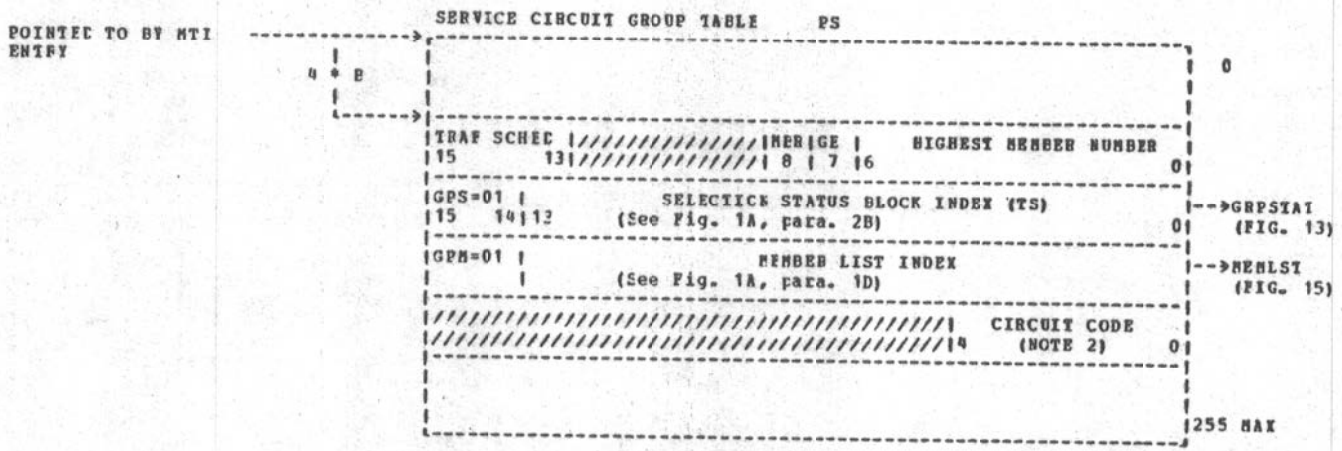


FIGURE 12C SERVICE CIRCUIT GROUP TABLE



NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
TRAF SCHED	RC:GRP	SCHED	3202-1	25	Traffic schedule: If TRAF SCHED = 000, no schedule (reserved). 001, no schedule (reserved). 010, B schedule 011, C schedule 100, D schedule
MBR	RC:CKT	TER	3201-1	40-42	If MBR = 1, the group has at least one member.
GE	DIST:GRP	GBP	3202-1	22-24	Group exists flag.
HIGHEST MEMBER NUMBER	DIST:GRP	-	3202-1	26-28	Highest member number in group, including spares.

FIGURE 12C (continued) SERVICE CIRCUIT GROUP TABLE

NOTES (continued):

1. DATA CROSS-REFERENCE AND DESCRIPTION (continued)

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
GPS	RC:GRP	GRP	3202-1	22-24	High 2 bits of group number (GPS = 01).
GPM	RC:GRP	GRP	3202-1	22-24	High 2 bits of group number (GPM = 01).
CIRCUIT CODE	RC:GRP	CKT	3202-1	43-44	Circuit code (NOTE 2).

2. CIRCUIT CODE DESCRIPTION AND SERVICE CIRCUIT GROUP CROSS-REFERENCE (See Note 5)

CIRCUIT CODE	GROUP NO.	DESCRIPTION	SD	CPS-PB
0	77	Local Overtime Coin and/or Stuck Coin Announcement	3H411	383
	78	Dial Tone First Coin Announcement		
	79	Permanent Signal Announcement		
	80	Partial Dial Announcement		
	81	No "1+" dialing error announcement		
	82	Extra "1+" dialing error announcement		
	83	Vacant code and no such number announcement		
	84	Custom calling error announcement		
	85	Remote recording announcement		
	91	Test group for tone and announcement circuits		
	92	Receiver off-hook tone		
	93	Busy tone		
	94	High tone		
	95	Low tone		
	96	Call waiting tone		
	97	Loop Check Generator tone		
	103	ROTL Control Circuit	99392	--
8	65	Customer Dial Pulse Receiver	3H410	367
9	64	Touch-Tone Receiver - includes: Customer Dial Pulse Receiver and Touch-Tone Calling Detector	3H410 3H401	367
10	66	Multifrequency Receiver	3H402	
11	67	Multifrequency Transmitter	3H404	

(continued)

FIGURE 12C (continued) SERVICE CIRCUIT GROUP TABLE

NOTES (continued):

2. CIRCUIT CODE DESCRIPTION AND SERVICE CIRCUIT GROUP CROSS-REFERENCE

CIRCUIT CODE	GROUP NO.	DESCRIPTION	SD	CPS-PB
12	68	Dial Pulse Transmitter	3H403	403
13	69	Regular Ringing (See Figure 34, Note 8 for Scan Rate)	3H410	358
14	70	Superimposed Ringing (See Figure 34, Note 8 for Scan Rate)	3H406	375,376
15	71	Coin Control	3H411	423
16	104	Conference Circuit	3H230	427
18	110	Station Ringer Test	3H520	521,522
19	111	Other test circuits (NOTE 3).		

3. Other test circuits are included in one service circuit group with fixed member number assignments. (See Note)

CIRCUIT CODE	GROUP NO.	MBR NO.	ASSIGNED MEMBERS FOR GROUP 111	SD	CPS-PB
		0	Tone Presence Detector		516,517
		1	Milliwatt and Transmission Environment Test - Port 0 (Note 4)		505-509
		2	Continuity and Polarity Test		500
		3	Loop Environment Test		510
19	111	4	Milliwatt and Transmission Environment Test - Port 1 (Note 4)	3H520	505-509
		5	Dial Pulse Receiver Test		501,502
		6	Transmission Test Termination		504
		7	Line Insulation Test		669
		8	Touch-Tone Receiver Test		526-529

4. This test circuit does not follow the multiport rules given in Section 200, Note 8. Each port has its own SEN, TEN and follows the universal subtranslator type 1.

FIGURE 12C (continued) SERVICE CIRCUIT GROUP TABLE

NOTES (continued):

5. SERVICE CIRCUIT CODE DEFINITION TABLE.

CKT CODE	DESCRIPTION	# OF PORTS	# OF S SPN	# OF D SPN	# OF TP SPN	# OF DTA
0	TONE & ANNOUNCEMENT CKTS	1	1	0	0	0
8	CUSTOMER DIAL PULSE RECEIVER CKT	1	1	0	0	1
9	TOUCH-TONE RECEIVER - INCLUDES:					
	CUSTOMER DIAL PULSE RECEIVER CKT	1	1	0	0	1
	TOUCH-TONE CALLING DETECTOR CKT	0	0	8	1	0
10	MULTIFREQUENCY RECEIVER CKT	1	1	6	1	1
11	MULTIFREQUENCY TRANSMITTER CKT	1	1	2	0	3
12	DIAL PULSE TRANSMITTER CKT	1	1	1	0	1
13	REGULAR RINGING CKT	1	1	1	0	1
14	SUPERIMPOSED RINGING CKT	1	1	1	0	2
15	CCIN CONTROL CKT	1	1	0	0	2
16	CONFERENCE CKT	3	0	0	0	0
18	STATION RINGER TEST CKT	2	1	8	1	1
19	OTHER TEST CIRCUITS:					
	CONTINUITY & POLARITY TEST	1	1	0	0	1
	DIAL PULSE RECEIVER TEST	1	1	0	0	2
	TRANSMISSION TEST TERMINATION	1	1	0	0	1
	MW & TRANSMISSION ENVIRONMENT TEST	2	2	0	0	2
	LOOP ENVIRONMENT TEST	1	1	1	0	2
	TONE PRESENCE DETECTOR	1	1	0	0	1
	LINE INSULATION TEST	1	1	2	0	4
	TOUCH-TONE RECEIVER TEST	1	1	0	0	5

FIGURE 120 TRUNK GROUP TABLE

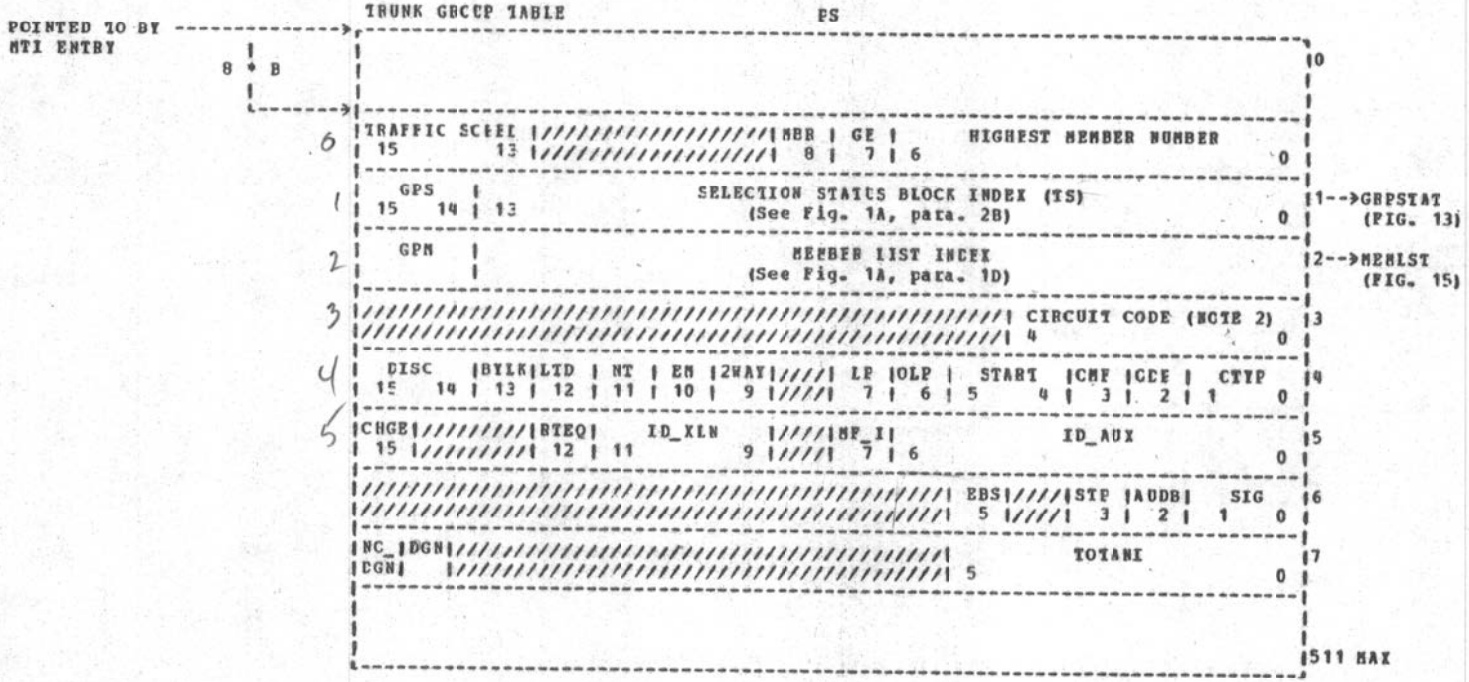


FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
TRAFFIC SCHED	RC:GRP	SCHED	3202-3	25	Traffic schedule: If TRAFFIC SCHED = 000, no schedule (reserved) 001, no schedule (reserved) 010, H schedule 011, C schedule 100, D schedule
MBR	RC:CKT	TEP	3201-1	40-42	IF MBR = 1, the group has at least one member.
GE	DIST:GRP	GRP	3202-3	22-24	IF GE = 1, the group exists.
HIGHEST MEMBER NUMBER	DIST:GRP	-	3202-3	26-28	Highest member number in group, including spares.
GPS	RC:GRP	GRP	3202-3	22-24	High 2 bits of group number (GPS > 01).
GPM	RC:GRP	GRP	3202-3	22-24	High 2 bits of group number (GPM > 01).
CIRCUIT CODE	RC:GRP	CKT	3202-3	22-24	Circuit code (NOTE 2).
DISC	RC:GRP	DISC	3204-1	30-33	Type of disconnect supervision required. DISC = 00, regular hold - standard disconnect procedures are used. = 01, joint hold - both parties must go on-hook (trunks to recording completing operator). = 10, service hold - disconnect when distant party goes on-hook (Toll Switch, TSPS, or No-Test). = 11, customer hold - disconnect when calling party goes on-hook. If this disconnect supervision is specified, AUDB is not allowed (CAMA and non-operator intercept trunks; i.e., answer supervision is not expected).
BYLK	RC:GRP	BYLK	3204-1	53	Bylink trunk from SIS office. (See Figure 34, Note 8 for Scan Rate)
LTD	RC:GRP	CKT	3202-3	22-24	If LTD = 1, the trunk is from or to a local test desk for circuit code = 17 (See Figure 34, Note 8 for Scan Rate)
NT	RC:GRP	NT	3204-1	56	If NT = 1, the trunk is a No Test Trunk.

FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

1. DATA CROSS-REFERENCE AND DESCRIPTICH (continued)

DATA	INPUT MESSAGE	ESS PORE		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
EM	PC:GRP	EM	3204-1	29	Type of trunk supervisicn: If EM = 0, loop supervision is used. EM = 1, E & M supervision is used.
2WAY	RC:GRP	DR	3202-3	40-42	If 2WAY = 0, the traffic on the trunk is in one direction only.
			3204-1	25-27	= 1, the traffic on the trunk is in both directicns.
LP	RC:GRP	LP	3204-1	42	If LP = 1, long loop pulsing is required.
OLP	RC:GRP	OLP	3204-1	41	If CLP = 1, overlap outpulsing is permitted.
START	RC:GRP	ST			Start dial, specifies when to begin outpulsing on the outgoing trunk.
			3204-1	49	START = 00: Immediate start (by-link) - specifies that outpulsing is to begin after the trunk is seized, or nc outpulsing is required.
			3204-1	48	= 01: Delay dial - specifies that outpulsing is to be delayed until the signal which is received from the distant office at seizure time, changes to on-hook.
					= 10: Wink start - wait 350 msec for end of wink. If a two-way trunk, a wink duration cf greater than 350 msec assumes a glare situation and to let the other office win.
			3204-1	51	= 11: Wink start (2-way only) - wait 1000 msec for end of wink.
OMF	RC:GRP	OMF	3204-1	39	If OMF = 1, MF outpulsing is required and ODP must be zero, except for trunks to SXS CAMA, in which case both OMF & OPI must = 1. For this case, OTYP must = 01.
ODP	RC:GRP	ODP	3204-1	40	If ODP = 1, DP outpulsing is required and OMF must be zero, except for trunks to SXS CAMA, in which case both OMF & OPI must = 1. For this case, OTYP must = 01.
OTYP	RC:GRP	OTYP			Outgoing trunk type.
			3204-1	34	CTYP = 00: Regular trunk group.
			3204-1	35	= 01: CAMA trunk group.
			3204-1	36	= 10: TSP trunk group or DAC on TSPS trunk group.
			3204-1	37	= 11: TSPS trunk group.

FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

1. DATA CROSS-REFERENCE AND DESCRIPTION (continued)

DATA	INPUT MESSAGE		ESS POSN		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
CHGE	RC:GRP	CHGE	3204-1	56	Charge: specifies that calls to a free termination line from this trunk are to be given answer supervision. This allows charging on incoming calls even if it is to a free termination, and also for proper opreation of operator cord lamps. This bit should be set for all incoming operator and toll completing trunks. CHGE = 0 if free terminating line should not return answer supervision.
RTEQ	RC:GRP	RTEQ	3204-1	57	Remote Test Equipment Facilities: If RTEQ = 0, dedicated facilities are provided for local test desk. If RTEQ = 1, remote test equipment facilities (SD-99311-01) are provided for local test desk. Autoconnect procedures are used.
ID_XLN	RC:GRP				Incoming digit translation code which directs the initial translation as follows:
		LR	3202-3	40	ID_XLN = 000; trunk is 1 way outgoing.
			3204-1	25	
		NDE	3202-3	38	= 01; NDE = 4, the 4 digits of the station number are expected. These digits are used in the four-digit translator specified in ID_AUX area.
		CODE	3202-3	35-37	
		NDE	3203-3	38	= 010; NDE = 5, five digits are expected. Ignore the first digit and use the last four in the 4-digit translator specified in the ID_AUX area.
		CODE	3203-3	35-37	
		TBL	3203-3	31-32	= 011; use one-digit translation on first digit received.
		SCR	3203-3	33-34	= 100; Use 3-digit translation of first 3 digits received.
		NDE	3203-3	38	= 101; the last 3 digits of the station number are expected. Form a 4-digit number from most significant (1000's) digit provided by ID_AUX and 3 received digits, then use 4-digit translation.
		CODE	3203-3	35-37	
		THDIG	3203-3	39	

FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

1. DATA CROSS-REFERENCE AND DESCRIPTION (continued)

DATA	INPUT MESSAGE	ISS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
MF_I	RC:GRP	IMF	3204-1	55	Multifrequency Inpulsing: IMF = 0; dial pulse inpulsing expected from far office (default case). = 1; multifrequency inpulsing expected from far office. If CIRCUIT CODE = 4, then MF inpulsing is required.
			3204-1	54	
ID_AUX	RC:GRP				Auxiliary information required for initial digit translation on incoming calls. Interpretation is based on ID_XLN: ID_XLN = 1 or 2 ID_AUX B(2-0) = NOC = 3 B(5-0) = Table Selector number (One Digit Translator). = 4 B(4-0) = Screening class = 5 B(6-3) = Thousands Digit B(2-0) = NOC
		CODE	3202-3	35-37	
		TBL	3202-3	31-32	
		SCR	3202-3	33-34	
		THDIG	3202-3	39	
		CODE	3202-3	35-37	
EBS	RC:GRP	EBS	3204-1	61	EBS = 0: Not a 911 trunk (use inband and multi-wink signalling) = 1: Emergency Bureau Service E911 trunk. (See Figure 34, Note 8 for Scan Rate)
STP	RC:GRP	STP	3204-1	46	Stop-go: STP = 0; interruption of pulsing is ot premitted on outgoing trunk (default case). = 1; interruption of pulsing is permitted on outgoing trunk. Required for outgoing trunks to SXS Toll and SXS Tandem offices. Dial pulse outpulsing is required.
AUDB	RC:GRP	AUDB	3204-1	47	Audible: AUDB = 0; do not return audible (default case). = 1; return audible on the outgoing trunk (outgoing to 23 intercept system, recording completing operator, etc.). Disconnect supervision cannot be customer hold (DISC ≠ 3). Note: Answer supervision is expected.

FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

1. DATA CROSS-REFERENCE AND DESCRIPTION (continued)

DATA	INPUT MESSAGE		ESS FORM		DESCRIPTION
		KEYWORD	NUMBER	COLUMN(S)	
SIG	RC:GRP	SIG	3204-1	44,45	Type of signalling - for toll switch, recording completing operator, 2-way operator-office, TSPS, and Verification (No-test) trunk groups: 00 = MF Inband or Multiwink signalling are not used. 01 = MF Inband signalling. 10 = Multiwink signalling used for TSP or TSPS. 11 = Expanded MF Inband signalling used for TSPS. Codes 10 & 11 provide for use of the "operator attached" and "detached" signals from TSP(S) with DTF coin, as well as the "ring-back", "coin collect", and "coin return" functions normally provided by code 01. (See Figure 34, Note 8 for Scan Rate)
TOTANI	RC:GRP	TOTANI	3207-3	29-30	Terminal Office Test Access Number Index. A one or 2 digit test access number index. Range 1 through whatever the maximum defined index is for this office (maximum of 31). See TOTANIBL (MTI). The access number index must be an assigned number. A TOTANI can not be specified for TSP, TSPS, or operator trunks.
NO_DGN	RC:GRP	IDGN	3204-1	63	NO_DGN = 0, run diagnostics via daisy chain. = 1, do not run diagnostics via daisy chain.
DGN	RC:GRP	OTC	3204-1	62	Type of diagnostics during daisy chain. DGN = 0, continuity test only. = 1, run diagnostics per the TOTANI index (office to office test)

FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

2. CIRCUIT CODE DESCRIPTION AND TRUNK GROUP CROSS-REFERENCE (See Note 3)

CIRCUIT CODE	TRUNK GROUP NO.	DESCRIPTION	SE	CPS-PB
1		Two-way E&M Lead Trunk with Type 2 Interface	3B220	382
1		Two-way E&M lead Trunk with Type 3 Interface		391
1		D4 Direct interface circuit	3C304	3C328
2		Spare		
3		Incoming Reverse Battery Trunk (wink or immediate)/911 Trunk		371
4	129-255	Incoming Reverse Battery Trunk (delay dial)	3B220	370
5		Outgoing Reverse Battery High-Low Trunk		399
6		Spare		
7		Office to Office Test Trunk		429
17		Incoming Local Test Desk (No. 14 & 16)	3B520	519
--	128	Holding group for spare trunks of indicated types	3B220	370,371, 382,391, 399,429,

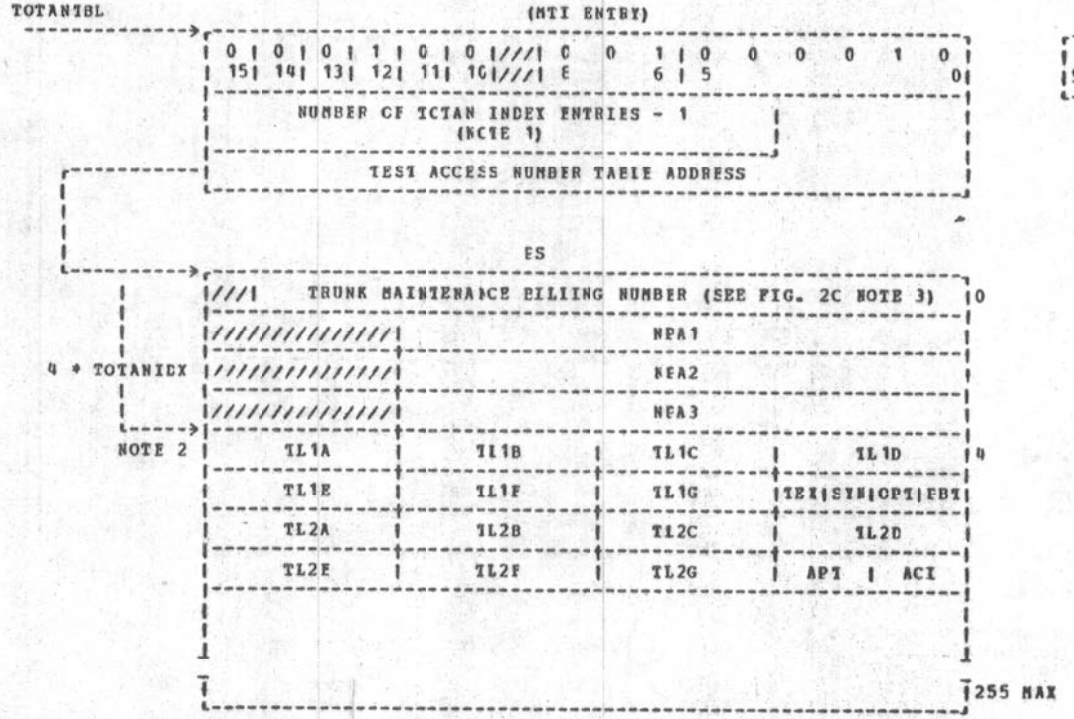
FIGURE 12D (continued) TRUNK GROUP TABLE

NOTES (continued):

3. TRUNK CIRCUIT CODE DEFINITION TABLE

CKT CODE	DESCRIPTION	# OF PORTS	# OF S SPN	# OF D SPN	# OF IP SPN	# OF DTA
1	TWO-WAY E&M LEAD TRUNK	1	1	0	0	1
1	TWO-WAY E&M TRUNK WITH TYPE 2 INTERFACE	1	1	0	0	1
1	TWO-WAY E&M TRUNK WITH TYPE 3 INTERFACE	1	1	0	0	1
2	SPARE					
3	INCOMING REVERSE BATTERY TRUNK (WINK OR IMMEDIATE)	1	1	0	0	1
4	INCOMING REVERSE BATTERY TRUNK (DELAY DIAL)	1	1	0	0	1
5	OUTGOING REVERSE BATTERY HIGH-LOW TRUNK	1	1	0	0	1
6	SPARE					
7	OFFICE TO OFFICE TEST TRUNK	1	1	0	0	1
17	INCOMING LOCAL TEST DESK (NO. 14 & 16)	1	1	4	0	1

FIGURE 12E TERMINAL OFFICE TEST ACCESS NUMBER TRANSLATOR



NOTES:

1. Include entry 0.
2. Entries 1-63.

(CONTINUED)

FIGURE 12E (continued) TERMINAL OFFICE TEST ACCESS NUMBER TRANSLATOR

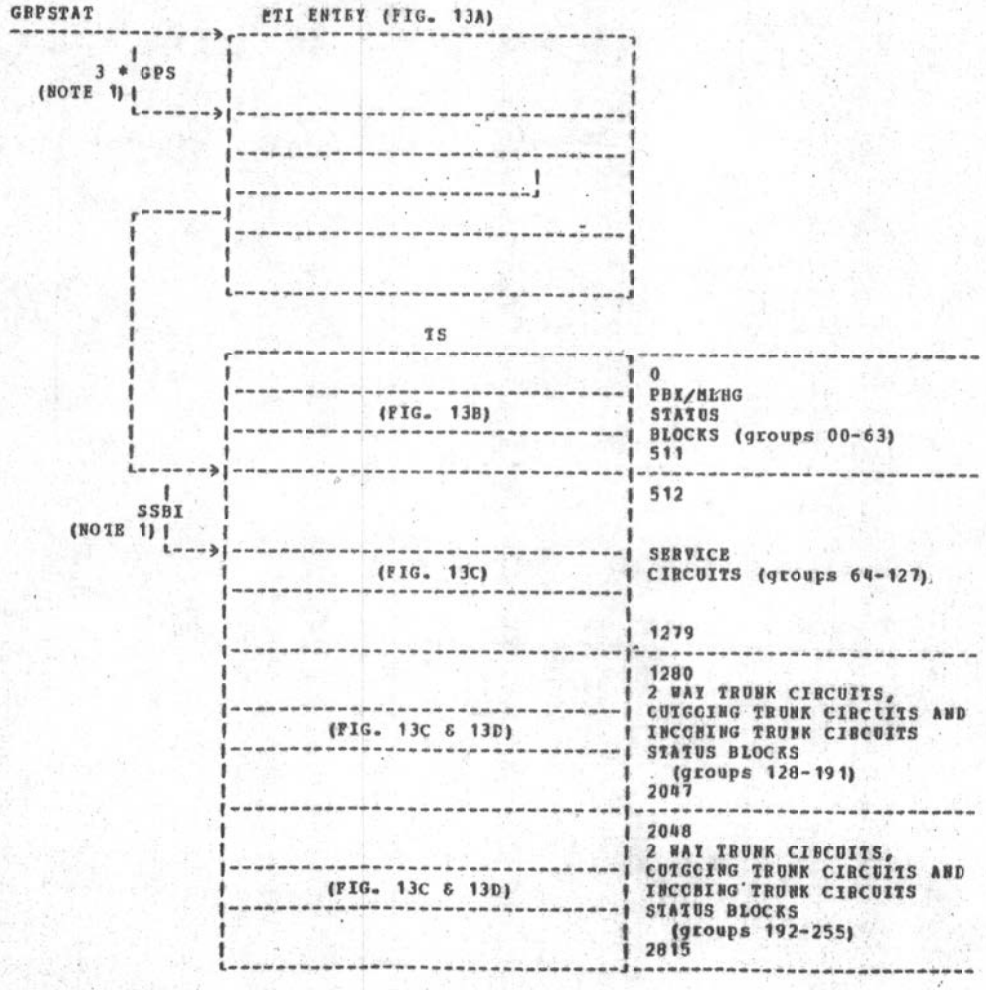
NOTES (continued)

3. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
TL1A-G	-	-	-	-	-	Permanent busy test line number. Digits are stored in BCD.
TL2A-G	-	-	-	-	-	Operational test line number. Digits are stored in BCD.
TEX	-	-	-	-	-	= 1 Entry exists.
SYN	TOTANI	SYNC	3505-1	-	42	= 0 Non-synchronous operational test. = 1 Synchronous operational test.
OPT	TOTANI	OPTN	3505-1	-	35-41	= 1 Operational test provided.
PBT	TOTANI	PBTN	3505-1	-	28-34	= 1 Permanent busy test provided.
APT	TOTANI	APT	3505-1	-	24	Automatic progression test code. = 0 No test is to be performed. = 1 Permanent busy test. = 2 Operational, synchronous test. = 3 Operational, non-synchronous test.
ACI	-	-	-	-	-	Area code index for NPA's. Addresses words 1-3 of this table.

4. TOTANIDX is from trunk group data table (See Figure 12D).

FIGURE 13 SELECTION STATUS BLOCKS



NOTES:

1. The Selection Status Block Index (SSBI) & GPS are from the Group Table (Fig. 12). See also Fig. 1A, para. 2B

2. The maximum number of words is determined as follows:
   a) There may be a maximum of 8 words in each PBX/MLHG status block depending upon the number of members in each group. One PBX/MLHG status block is required for each PBX/MLHG. There may be a maximum of 64 PBX/MLHG. Therefore, there may be a maximum of 512 words in the PBX/MLHG status blocks.

   b) There may be a maximum of 12 words in each trunk and service circuit status block depending upon the number of members in each group. One status block is required for each trunk or service circuit group. There may be a maximum of 192 trunk and service circuit groups. Therefore there may be a maximum of 2304 words in the trunk and service circuit status blocks.

FIGURE 13A SELECTION STATUS BLOCKS - MII ENTRY

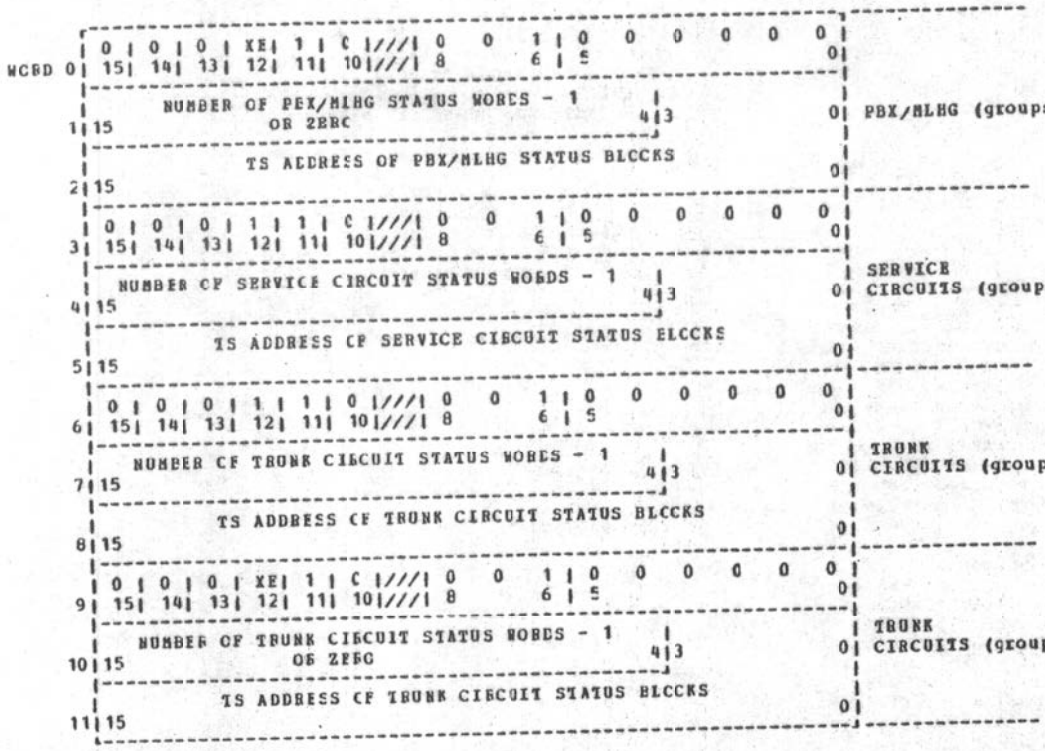


FIGURE 13E SELECTION STATUS BLOCKS - PEI/MIBG STATUS BLOCK

		15														0
WORD 0	ACB	//////////							SH	NMB	RMB STATUS				////	
1	GROUP BEG COUNT															
2	GROUP USAGE COUNT															
3	OVERFLOW COUNT															
4	SELECTION STATUS BITS (MEMBERS 0 TO 15)															
5	SELECTION STATUS BITS (MEMBERS 16 TO 31)															
6	SELECTION STATUS BITS (MEMBERS 32 TO 47)															
7	SELECTION STATUS BITS (MEMBERS 48 TO 63)															

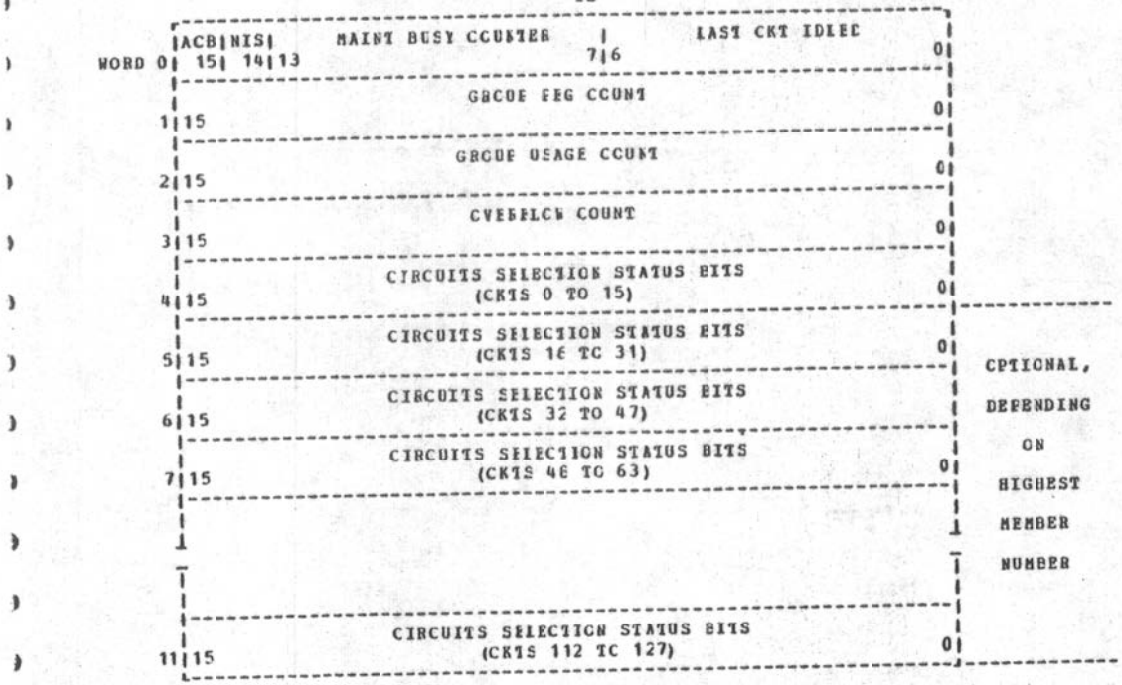
OPTIONAL, DEPENDING ON HIGHEST MEMBER NO.

NOTES:

1. DATA DESCRIPTION

WORD	DATA	DESCRIPTION
0	ACB	ALL Circuits Busy. If ACB = 1, then all circuits are busy.
	NMB	Status of Night Make Busy key.
	RMB	Remote Make Busy keys.
	SH	Status of Stop Hunt key.

FIGURE 13 C SELECTION STATUS BLOCKS - SERVICE CIRCUITS, 2 WAY AND OUTGOING TRUNK CIRCUITS TS



NOTES:

1. DATA DESCRIPTION

WORD	DATA	DESCRIPTION
0	ACB	All Circuits Busy. If ACB = 1, then all circuits are busy.
	NIS	Not In Service. If NIS = 1, then group is not in service.

FIGURE 131 SELECTION STATUS BLOCKS - INCOMING TRUNK CIRCUITS

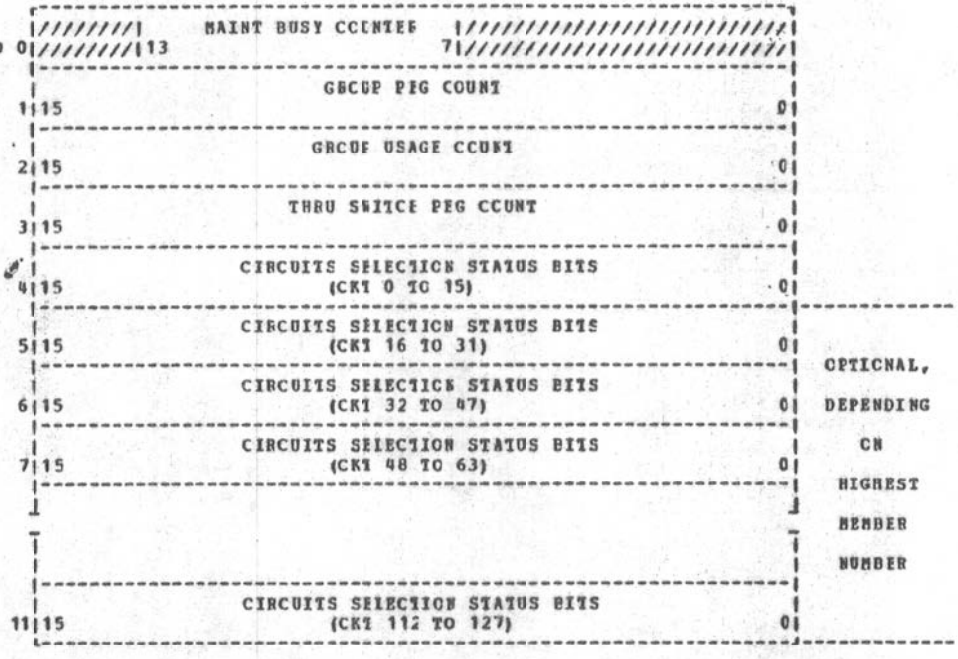
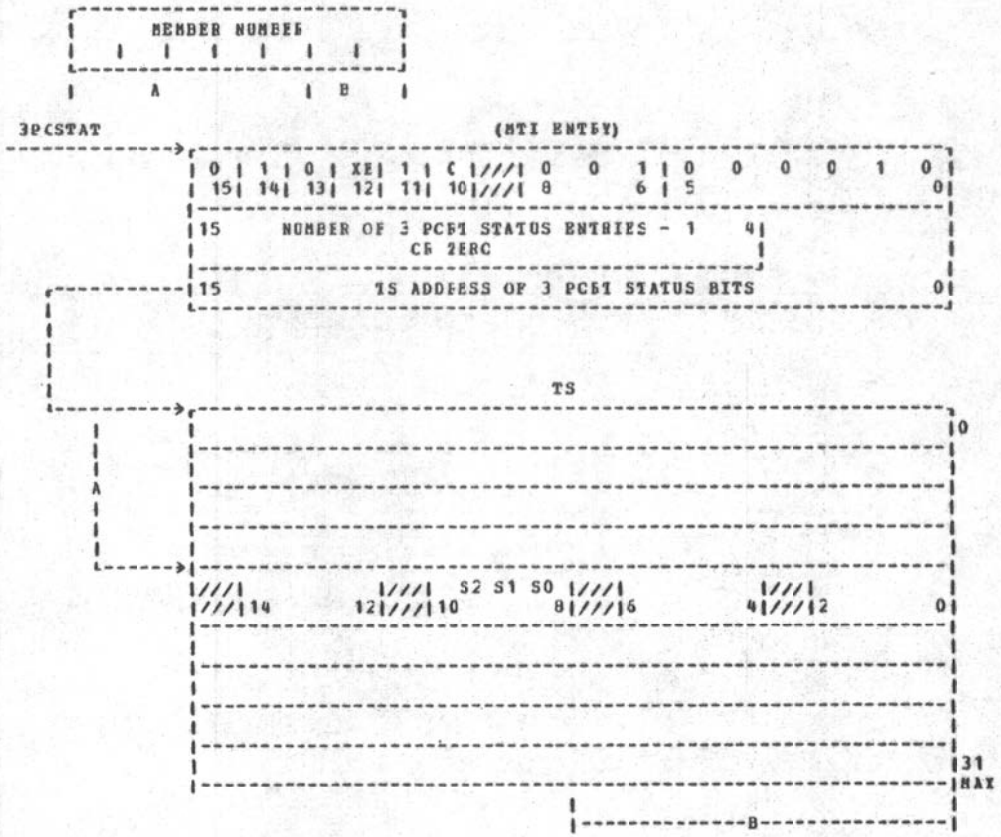


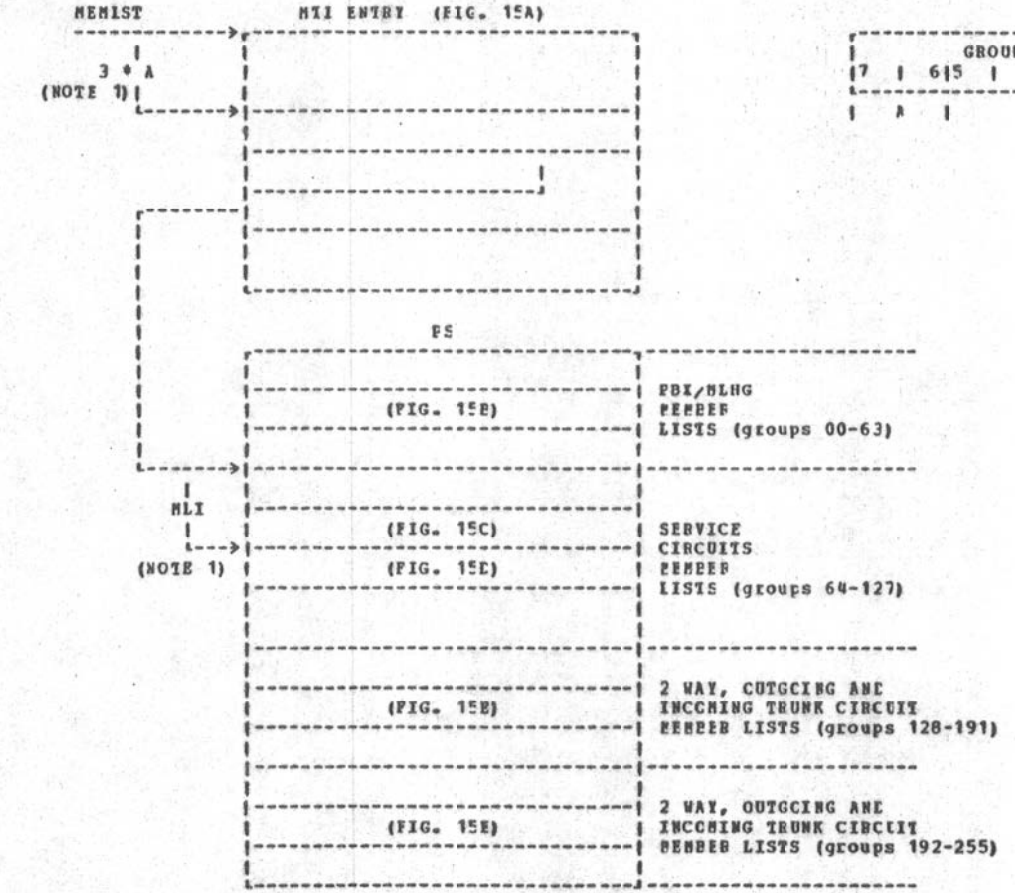
FIGURE 14 THREE PORT STATUS BITS

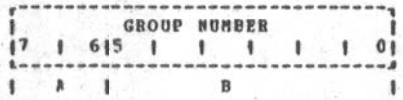


NOTES:

1. S2 S1 S0 - Status bits for the 3 ports of each Conference Circuit.

FIGURE 15 MEMBER LISTS





NOTES:

1. The Member List Index (MLI) is from the Group Table (FIG. 12). See also Fig. 1A, para. 1E.

FIGURE 15A MEMBER LISTS - MTI ENTRY

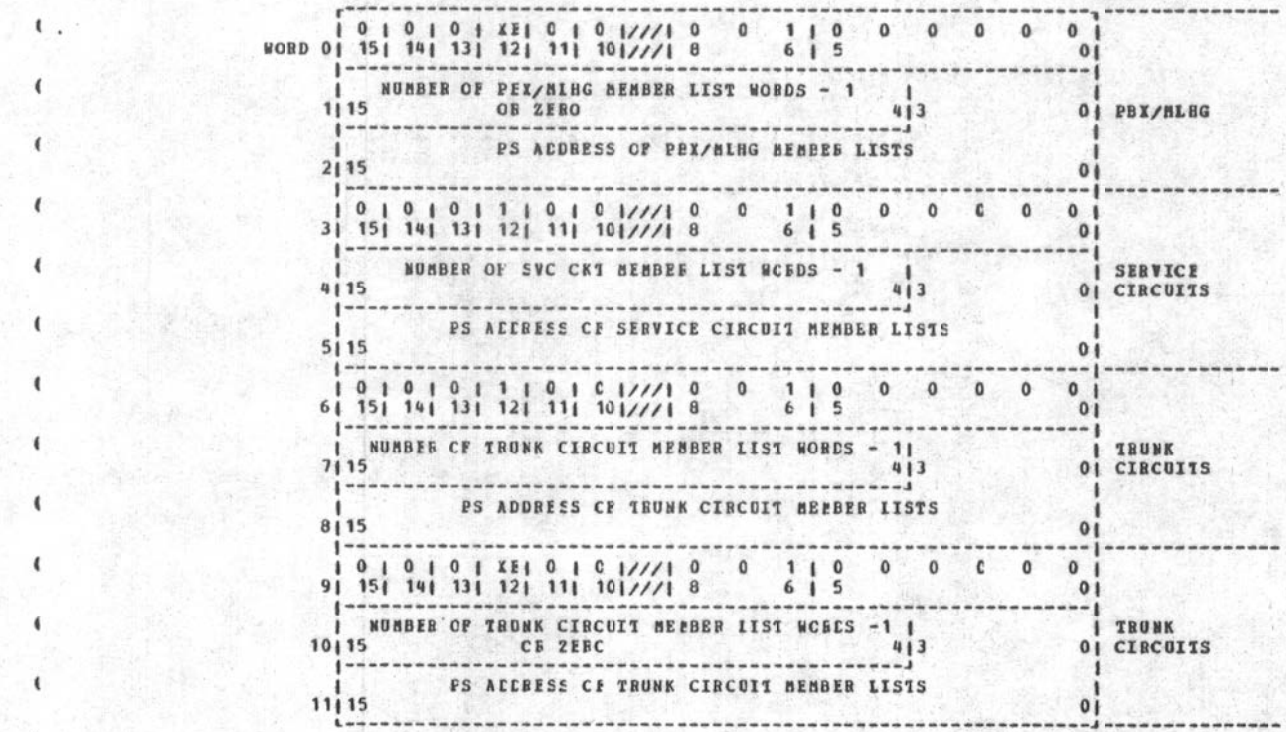
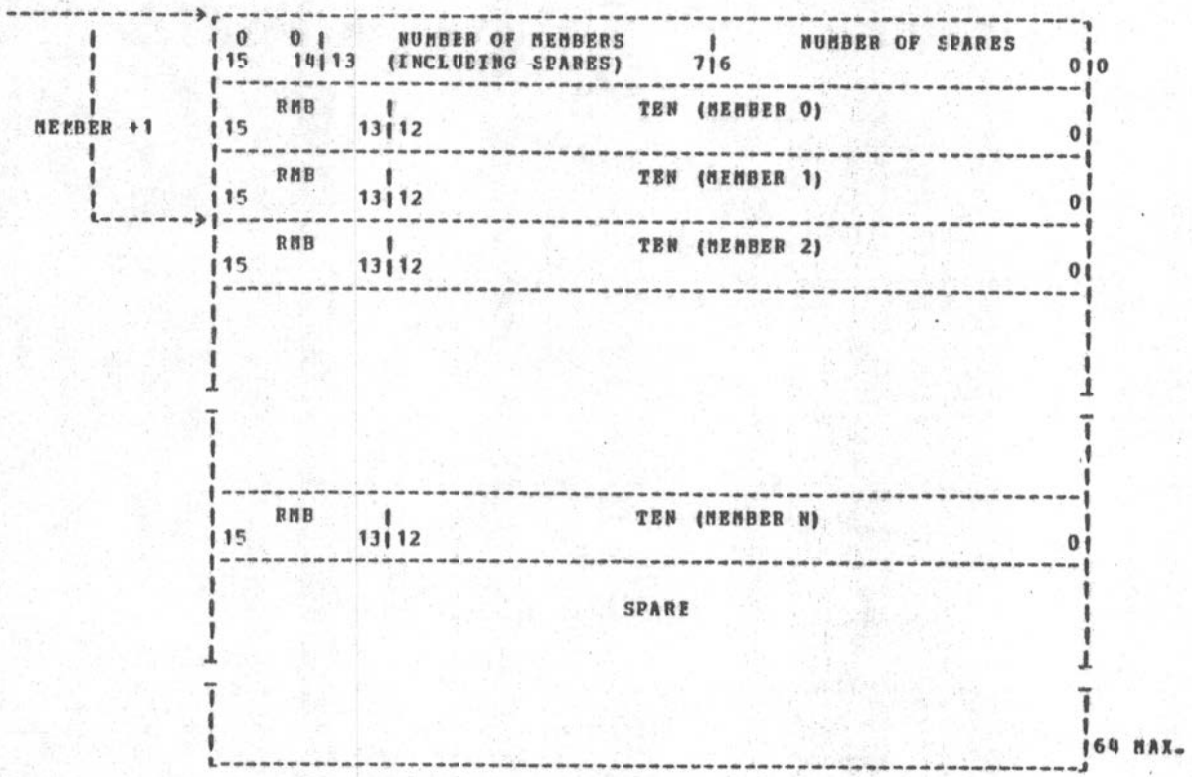
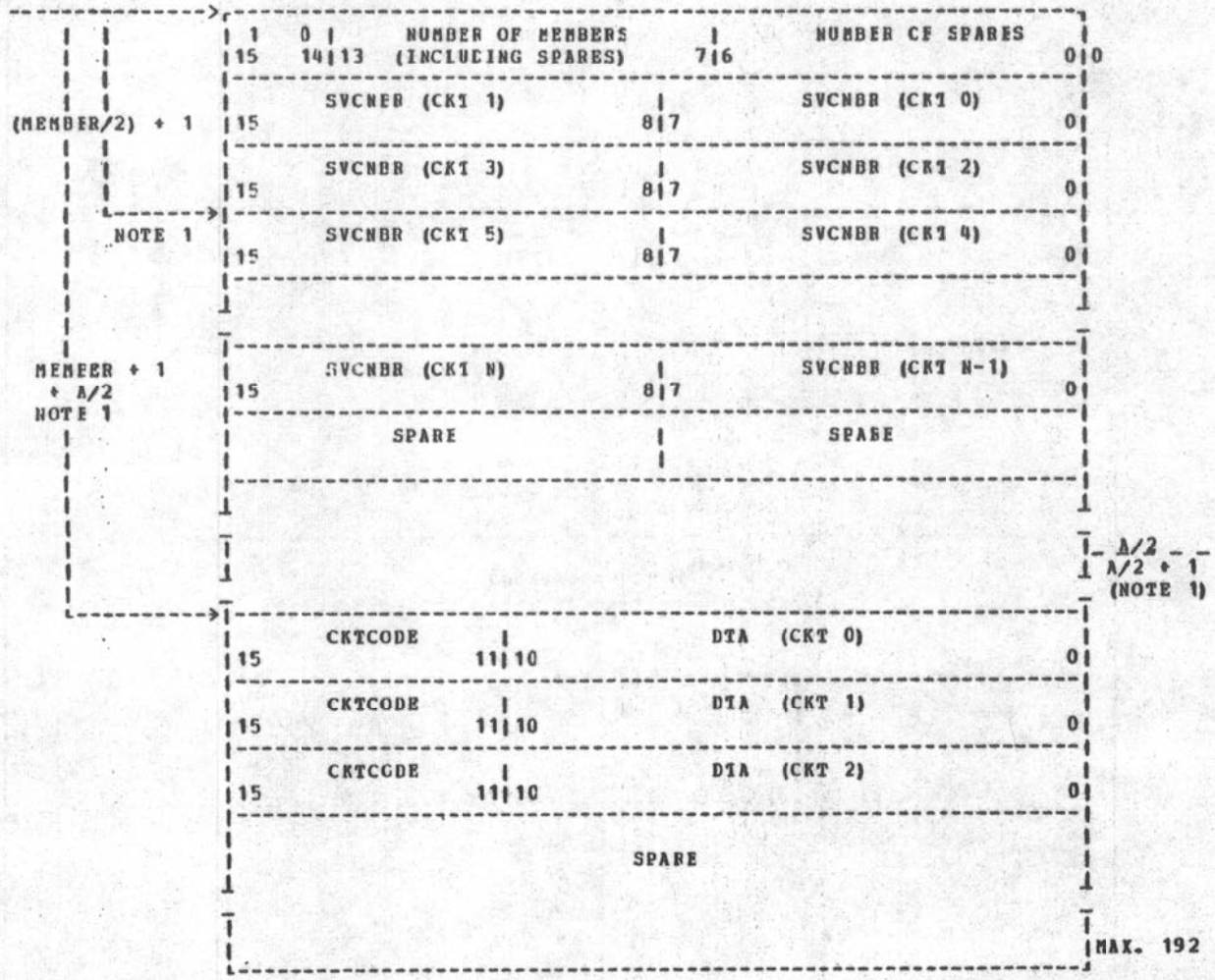


FIGURE 15B PBX/MLHG MEMBER LISTS (FORMAT "00")



(See NOTES following Figure 15E)

FIGURE 15C SERVICE CIRCUIT MEMBER LIST (FORMAT "10") REGULAR SERVICE CIRCUIT

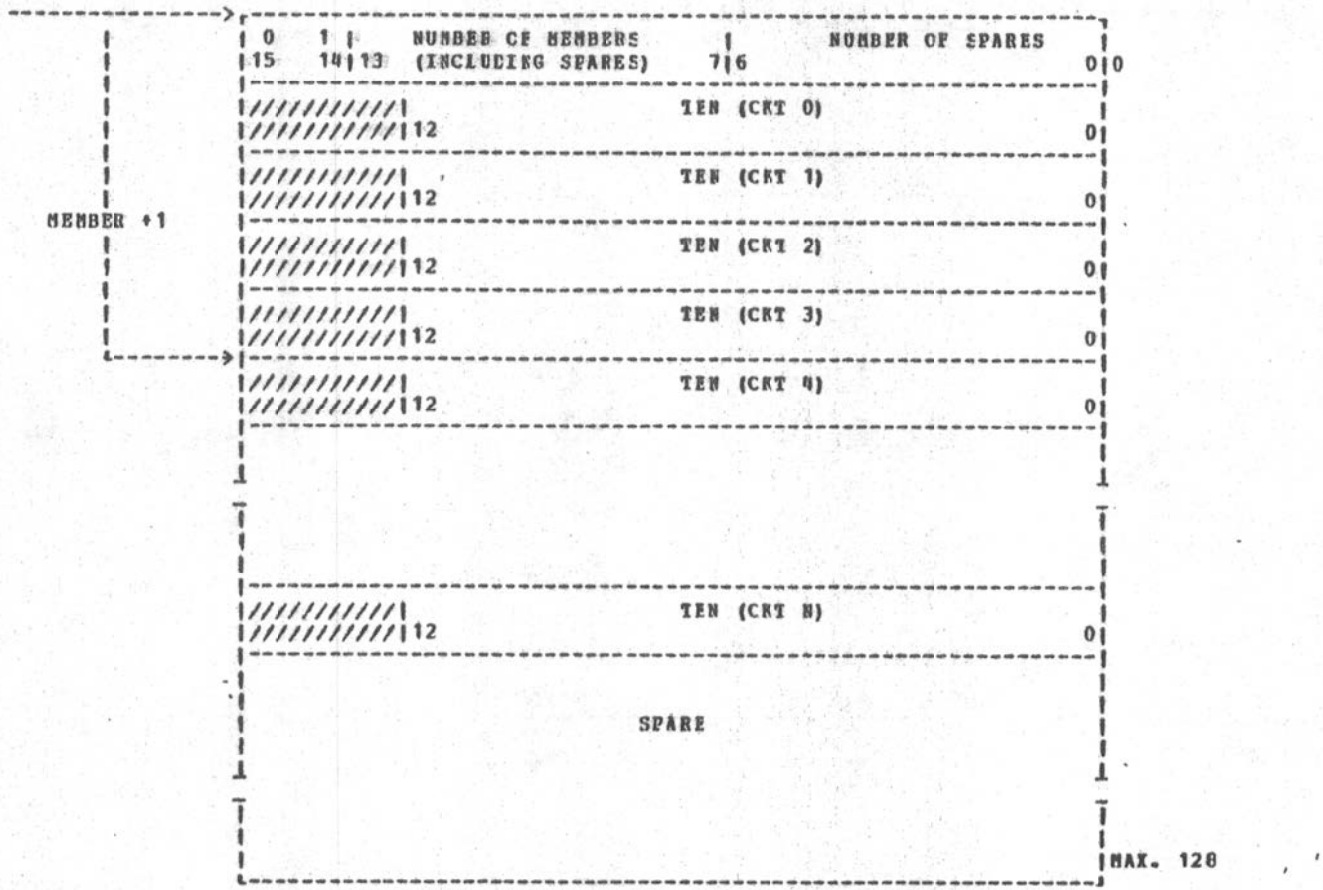


NOTES:

1. A = Highest Member Number + 1 (Number of Members) from the Group Table (FIG. 12C).

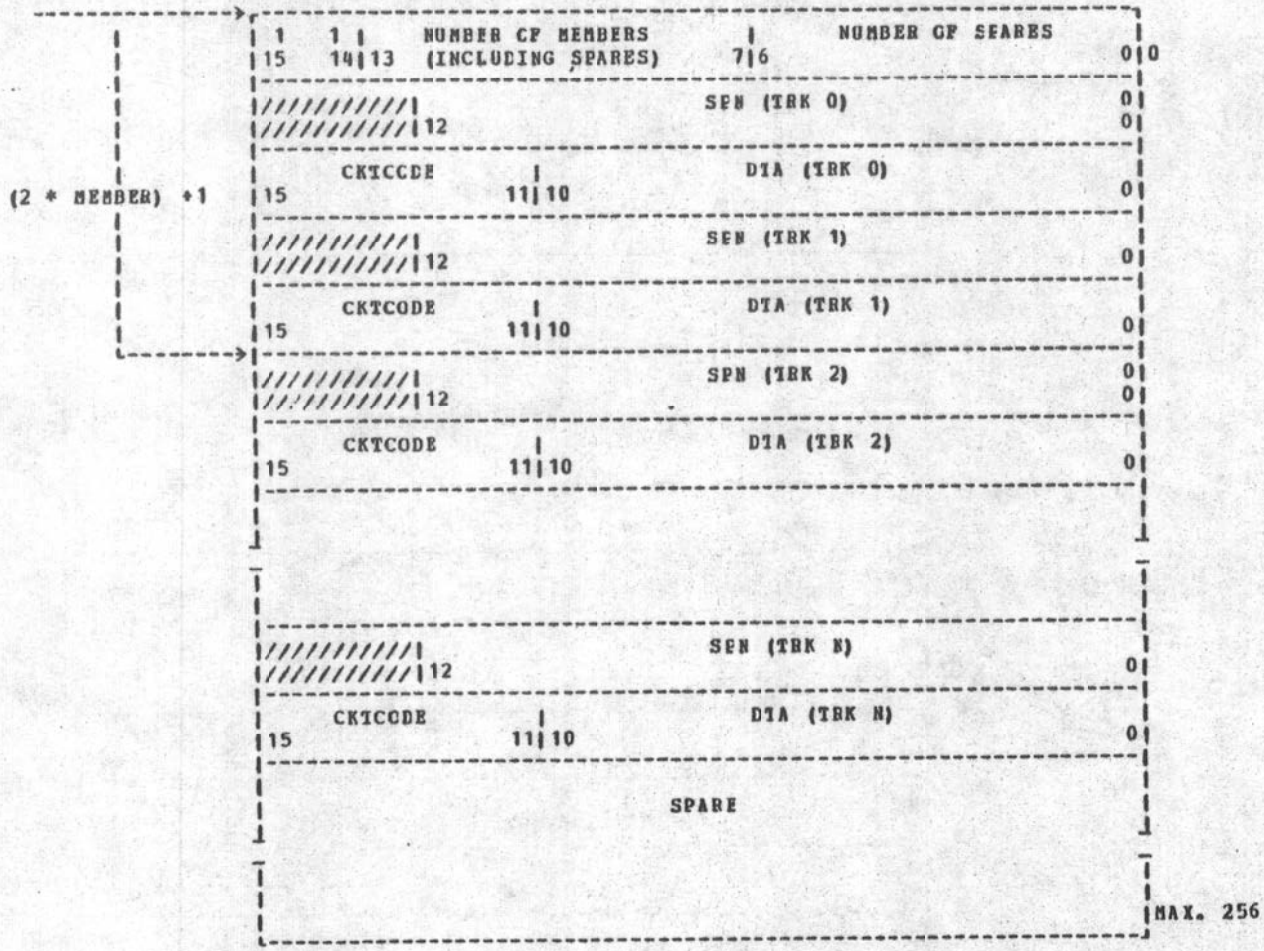
2. See NOTES following Figure 15E.

FIGURE 15D SERVICE CIRCUIT MEMBER LIST (FORMAT "01") TONE AND ANNOUNCEMENT CIRCUIT AND CONFERENCE CALLING CIRCUIT



(See NOTES following Figure 15E)

FIGURE 15E TRUNK CIRCUIT MEMBER LIST (FORMAT "11")



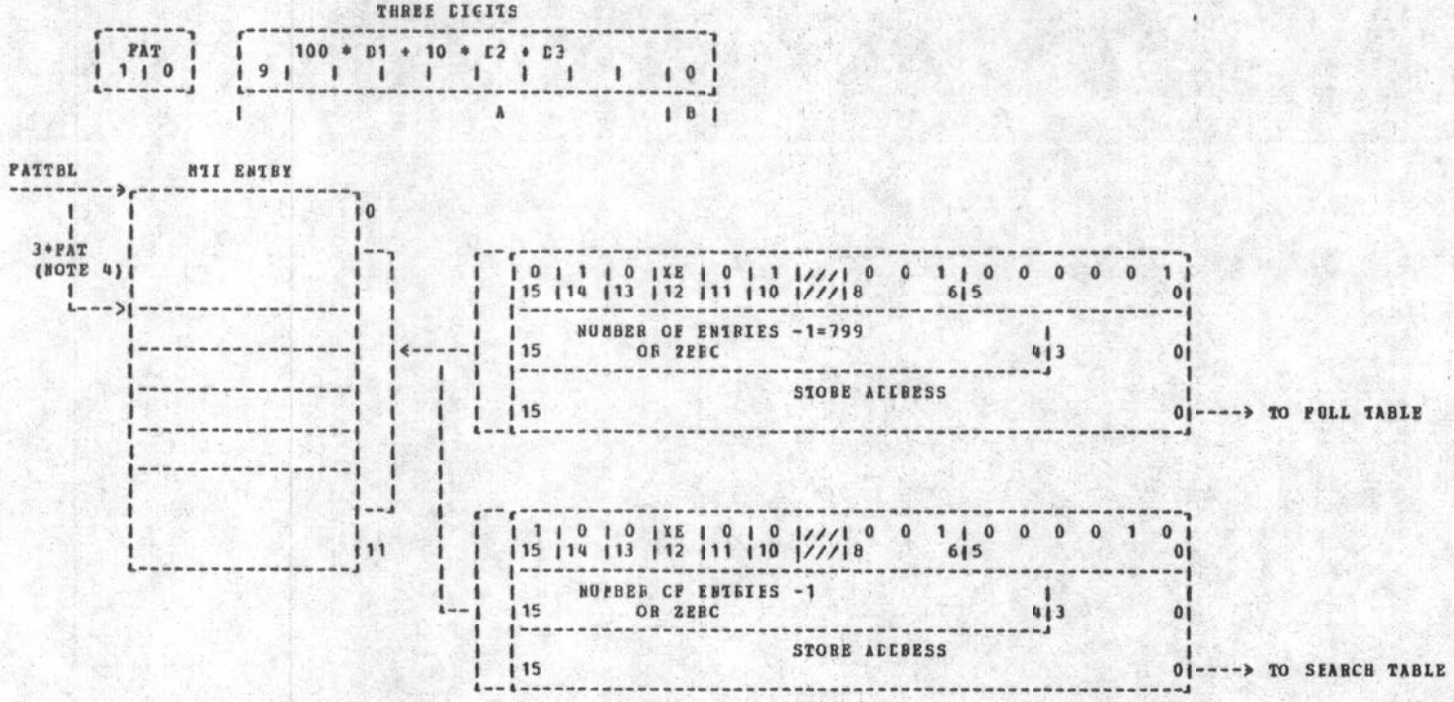
NOTES:

1. DATA DESCRIPTION

DATA	DESCRIPTION
RMB	Remote Make Busy key affecting this member (Max. of 7 RMB keys per group)
TEN	Terminal Equipment Number
DTA	Distributor Triplet Address
SPN	Scan Point Number
SVCNBR	Service Circuit Number SPN for Service Circuits: SPN bits (7-0) = SVCNBR SEN bits (12-8) = 0
CKTCODE	Circuit Code (See Fig. 12C, Note 2 & 12D, Note 2 for numbers)

INDEX OF FIGURES

FIGURE 16 THREE DIGIT TRANSLATION



(CONTINUED)

FIGURE 16 THREE DIGIT TRANSLATION (continued)

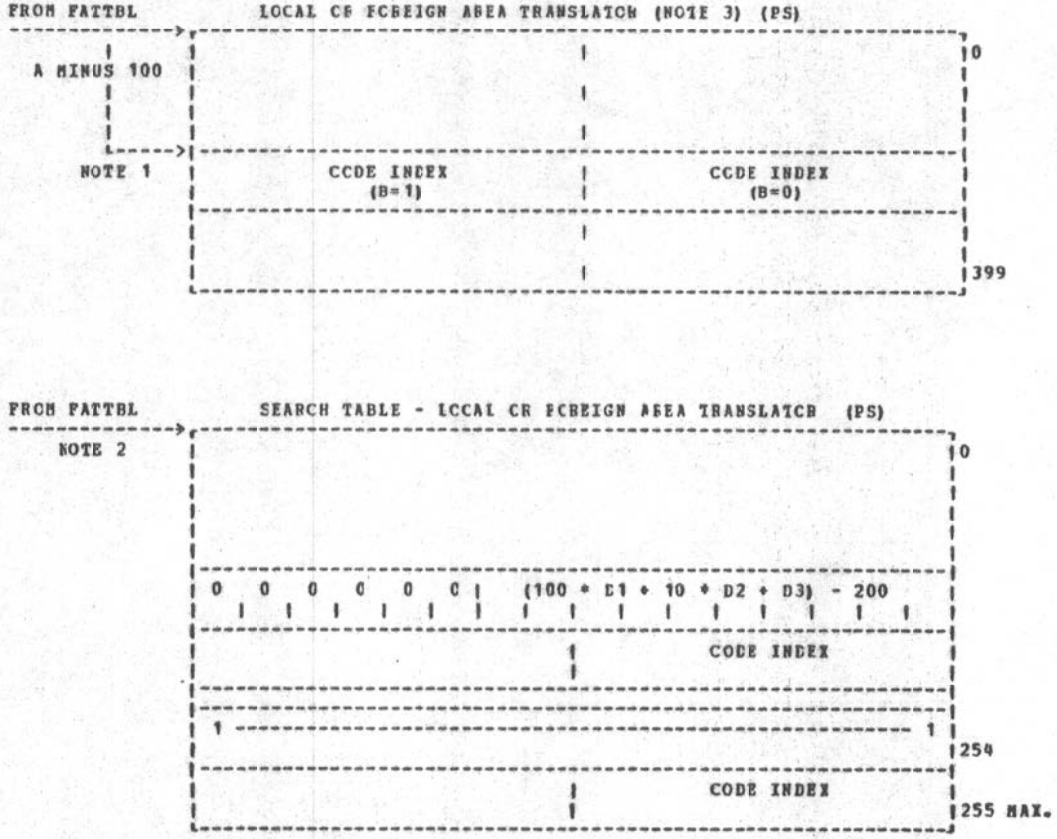


FIGURE 16 THREE DIGIT TRANSLATION (continued)

NOTES:

1. Dialed 11X Codes are converted to X11.
2. If a 3 digit match is not found, then the code index located in the last entry is used.
3. The local area translator is usually a full translator and not a search table.
4. FAT 0 is always required.
5. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
CODE INDEX	RC:DIG	CCI	3300-1	-	24-26	Code Index
			3300-2	-	27-29	

FIGURE 16A THREE DIGIT TRANSLATION - CODE INDEX EXPANSION

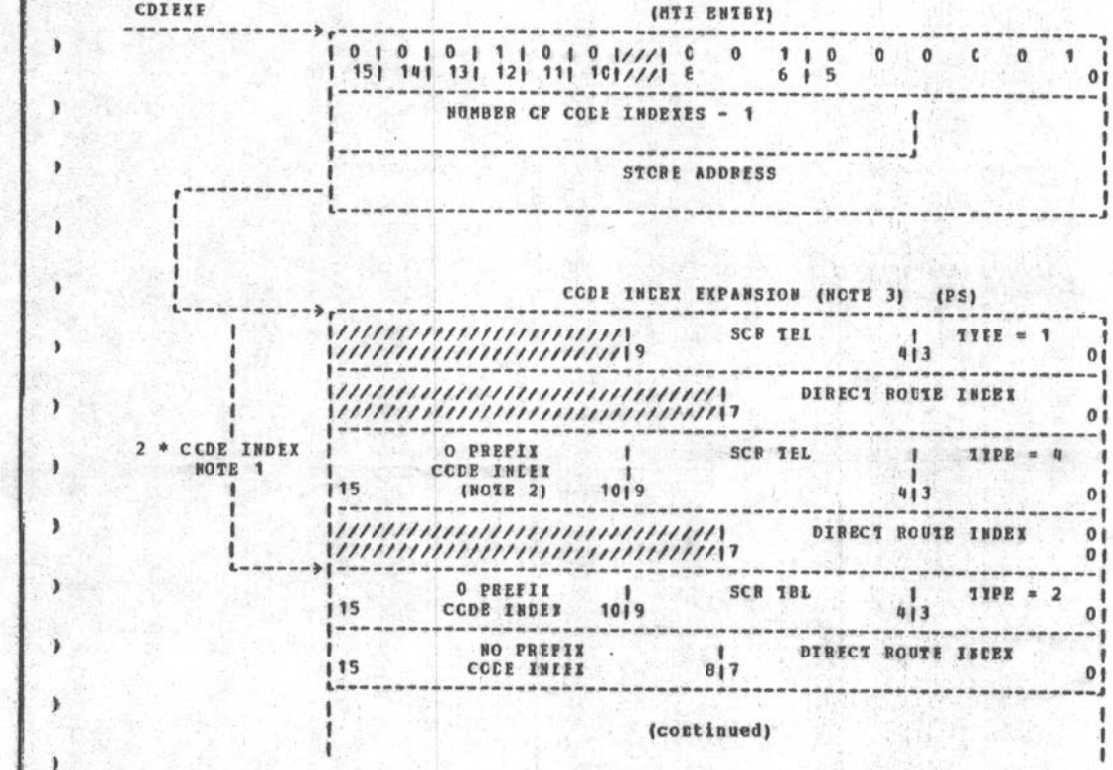
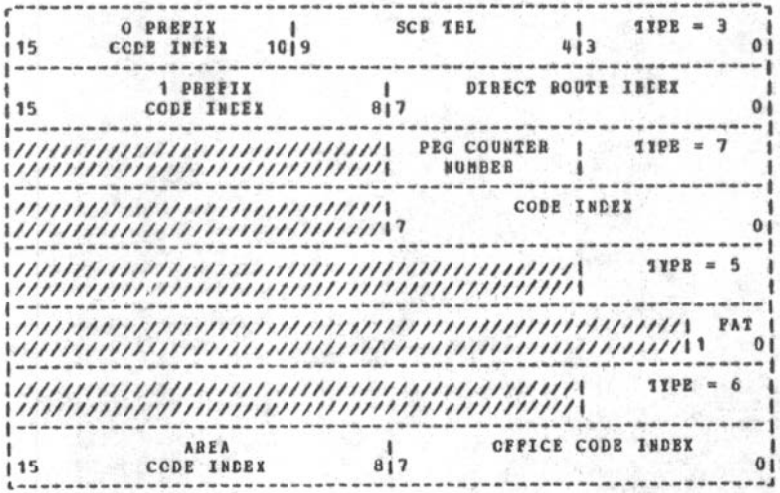


FIGURE 16A (continued)

CODE INDEX EXPANSION (continued)



NOTES:

1. Entries pointed to by "0" prefix code indexes must be defined in the first 64 entries. The following code indexes must be defined in each office:

   0 - Vacant Code treatment
   1 - "Dial 0" Operator treatment

2. "0" Prefix Code Indexes need not be defined if "0+" is not allowed for this office.

(continued)

FIGURE 16A (continued)

NOTES (continued):

3. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS POSE			DESCRIPTION
	KEYWORD	NUMBER	ITEM	COLUMN	
SCR TBL	RC:CDI	SCRIDI	3304-1	-	36-37	Screening table number
TYPE	RC:CDI	ETYP	3304-1	-	20	Identifies Code Index Entry: 0 - Vacant entry 1 - Ignore any prefixing 2 - "1" prefix normally received. Code indexes are provided to allow or to deny a "0" prefix or a "nc" prefix. 3 - Normally no prefix is received. Code indexes are provided to allow or to deny a "0" prefix or a "1" prefix. 4 - Ignore a "1" prefix. A code index is provided to allow or to deny a "0" prefix. 5 - Foreign Area Translation required on next 3 digits. 6 - Conflict between Area code and office code. 7 - Preroute peg count desired.
DIRECT ROUTE INDEX	RC:CDI	RTI	3304-1	-	39-41	Direct route index
0 PREFIX CODE INDEX	RC:CDI	P0CI	3304-1	-	27-29	0 Prefix code index (normal)
NO PREFIX CODE INDEX	RC:CDI	NPCI	3304-1	-	21-23	No prefix code index (normal)
1 PREFIX CODE INDEX	RC:CDI	P1CI	3304-1	-	24-26	1 Prefix code index (normal)
PEG COUNTER NUMBER	RC:CDI	PRC	3304-1	-	42	Preroute peg counter
CODE INDEX	RC:CDI	CDI	3304-1	-	17-19	Code index
FAT	RC:CDI	FAT	3304-1	-	38	Foreign area translator (0 = local; 1-3 = foreign)
AREA CODE INDEX	RC:CDI	ACDI	3304-1	-	30-32	Area code index (conflict)
OFFICE CODE INDEX	RC:CDI	OCDI	3304-1	-	33-35	Office code index (conflict)

FIGURE 16E COUNTRY CODE TABLE

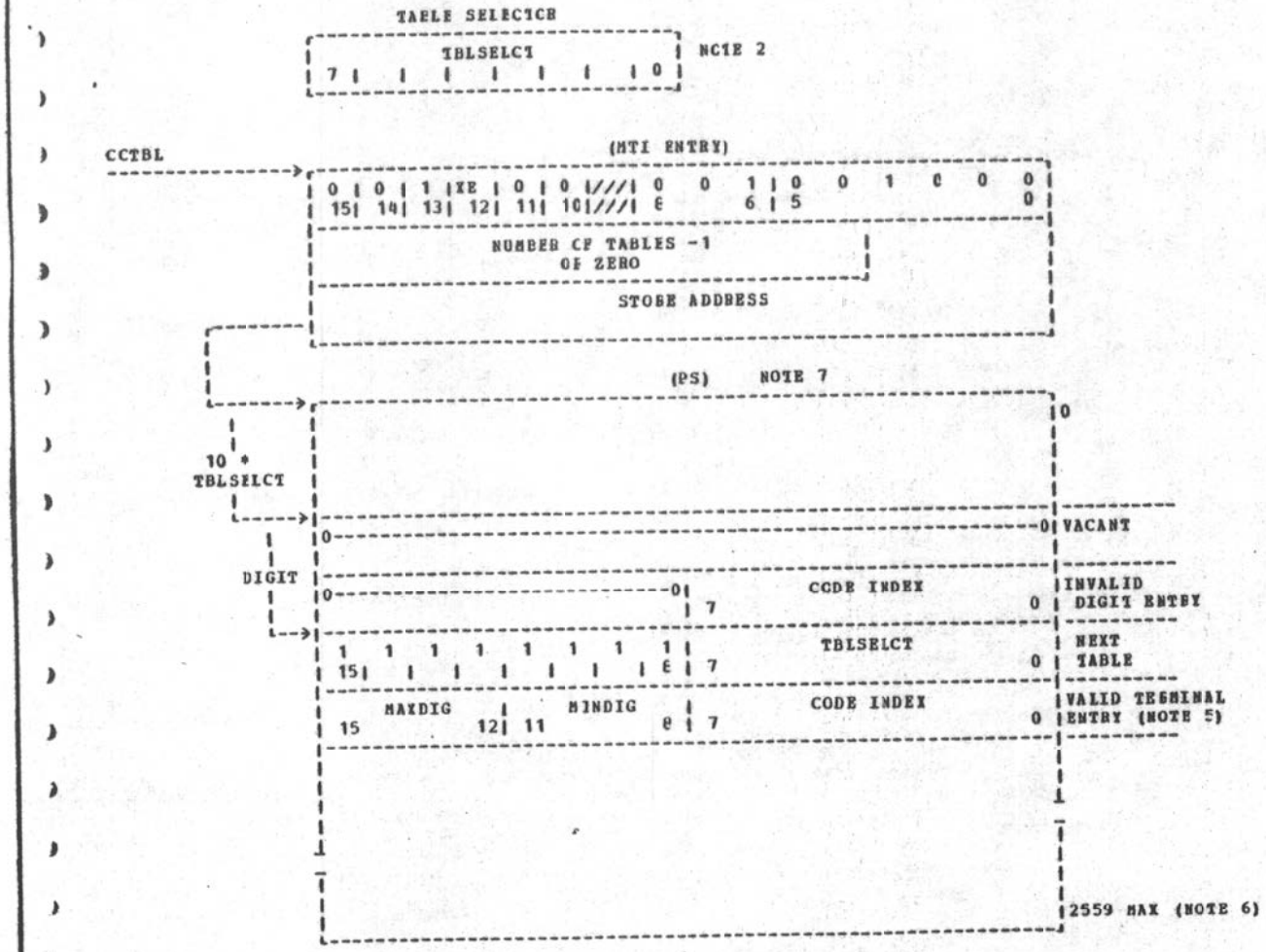


FIGURE 16E (continued) COUNTRY CODE TABLE

NOTES:

1. TBLSELCT - TaBle number to SELeCT the next table.
2. The first digit of the Country Access Codes (CAC) is used with TBLSELCT = 1. After that, TBLSELCT comes from previous digit. (See Note 6)
3. MAXDIG - MAXimum number of DIGits dialed for country code.
4. MINDIG - MINimum number of DIGits dialed for country code.
5. If the number of digits are exact for a country code, then MAXDIG equals MINDIG.
6. Current assignments require approx. 28 tables, 280 words.
7. The translator exists regardless of whether IDDD screening is done or not. Without IDDD screening, only one table of 10 words is in the translator. With IDDD screening the translator is at its full size. Table zero contains different data in each case.
   The Table 0 Digit 0 entry is used in routing to the error return when IDDD screening is not done. With IDDD, Table 0 Digit 0 entry is used in routing operator calls (010), and Table 0 Digit 1 entry is used to access Table 1 (TBLSELCT = 1).

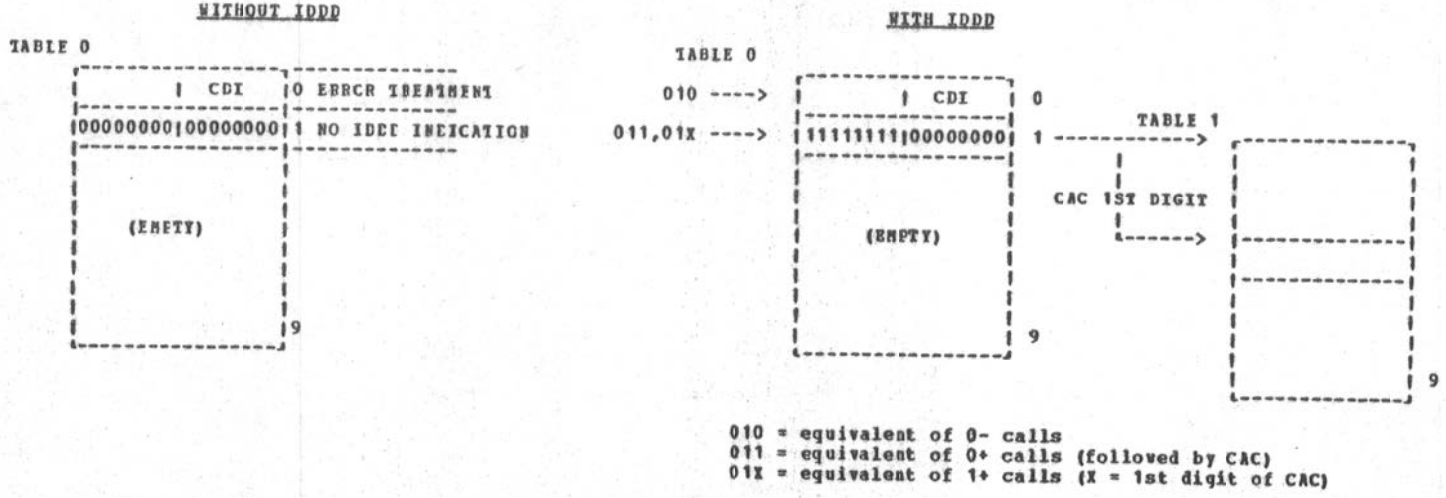


FIGURE 17 SCREENING TABLES

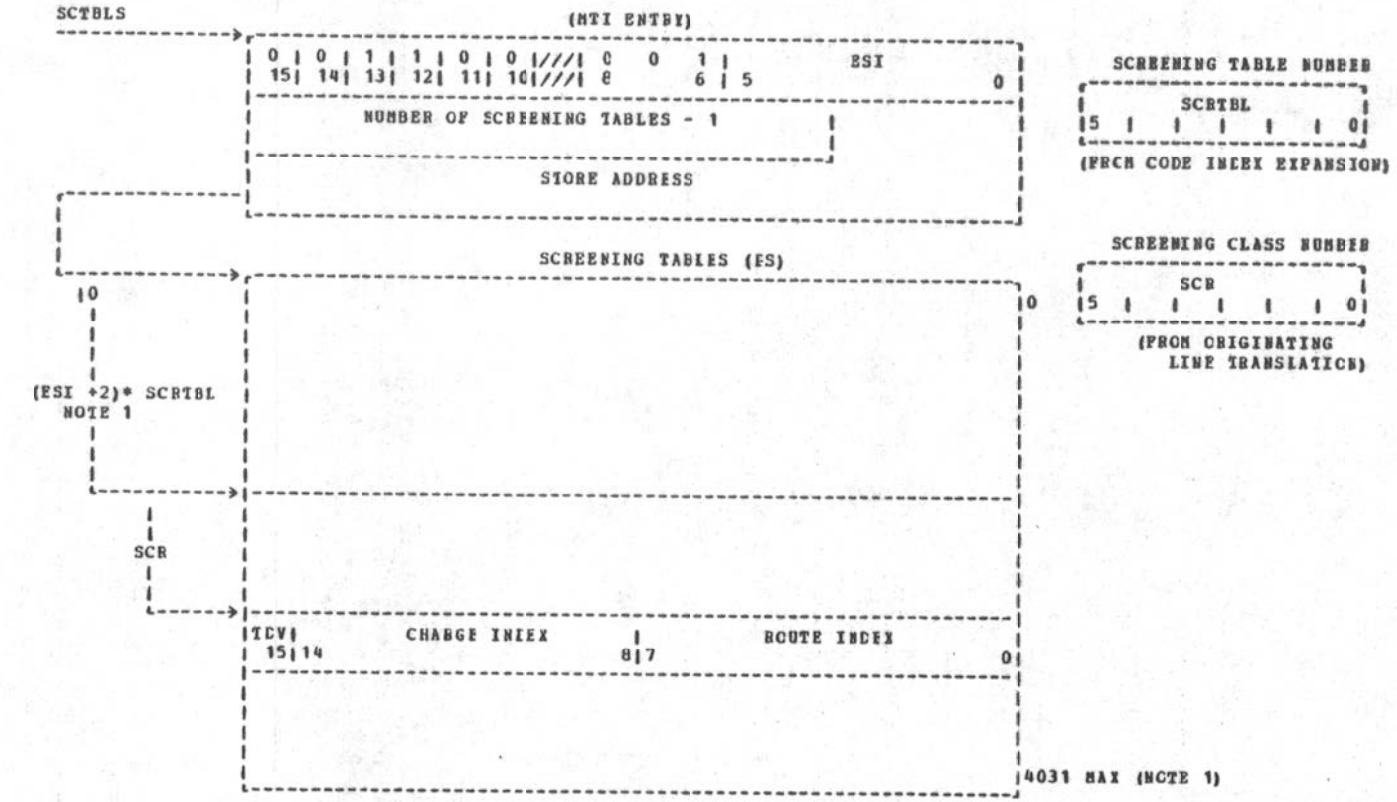


FIGURE 17 SCREENING TABLES (continued)

NOTES:

1. Maximum screening table size is 63. All screening tables must be the same size. A screening class of 63 indicates that no screening is to te performed, and is not entered in the screening table. Maximum size is therefore 64 tables * 63 entries = 4032.

2. ESI = Entry size indicator (frcm word 0 of ETI entry). See Fig. 1 for details.

3. DATA CRCSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS FORM			DESCRIPTION
	KEYWORD	NUMBER	ITEM	COLUMN	
TLV	RC:SCR	TD	3301-1	-	20,etc	Tell diversicn (MIHG only)
CHARGE INDEX	RC:SCR	CBI	3301-1	-	23-24	Charge index
RCUTE INDEX	RC:SCR	RTI	3301-1	-	25-27	Route index

FIGURE 18 ROUTE INDEX EXPANSION

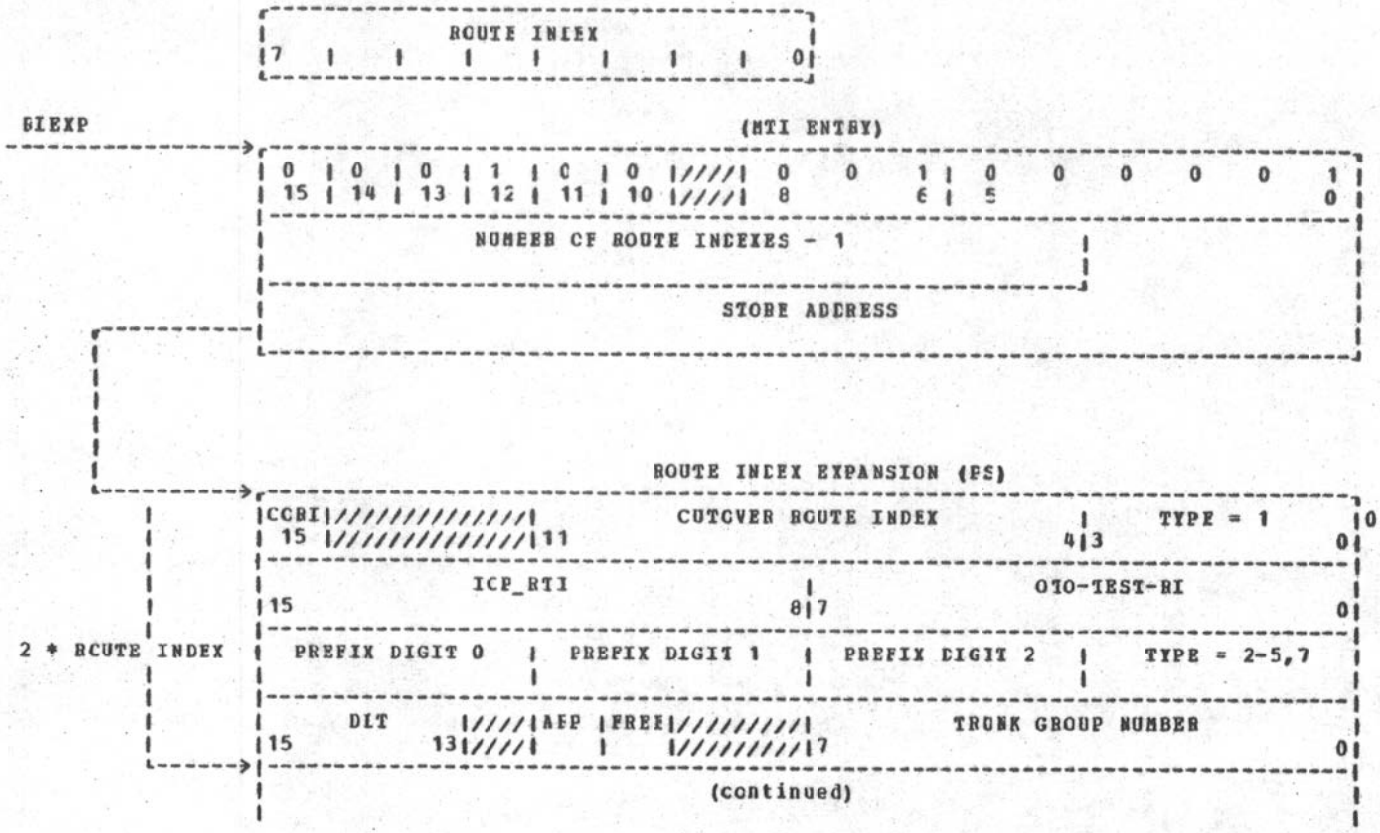
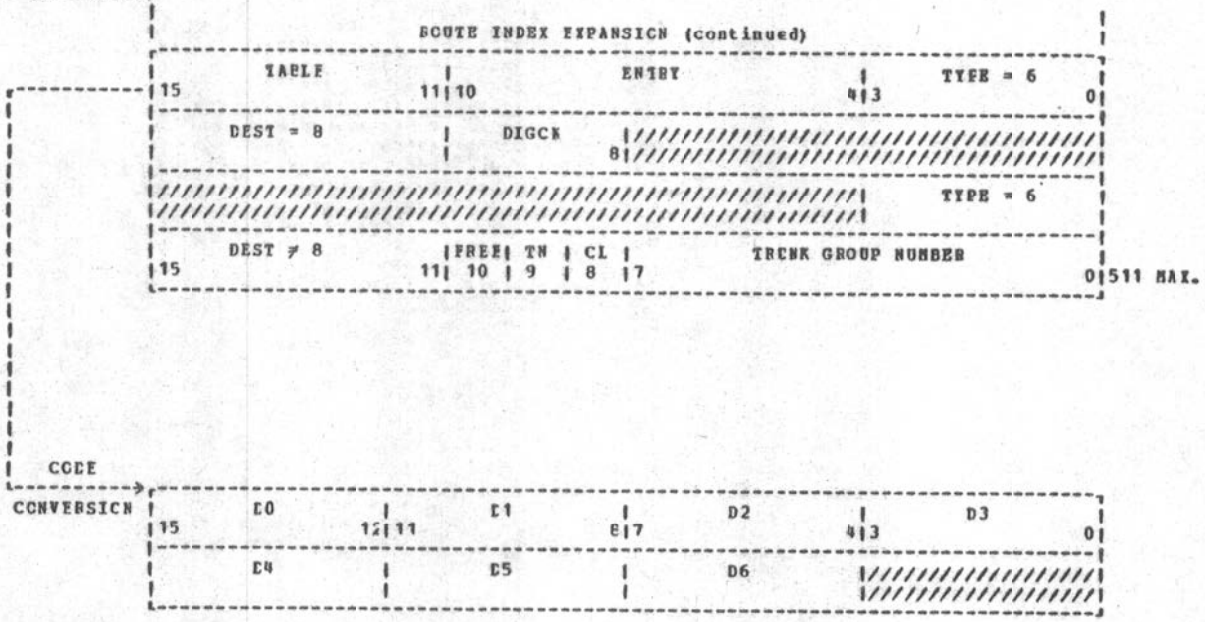


FIGURE 18 (continued)



NOTES:

1. ABP = 1 - Alternate Route Index provided.

2. CCRI = 1 - Cutover route index present.

3. TYPE = 0 Unassigned
   = 1 Intraoffice (ROUTE INDEX = NOC)
   = 2 10 digit interoffice (no overlap outpulsing)
   = 3 10 digit interoffice (overlap outpulsing permitted)
   = 4 7 digit interoffice (no overlap outpulsing)
   = 5 7 digit interoffice (overlap outpulsing permitted)
   = 6 Destination determined by the "DEST" code in the route index expansion entry.
   = 7 Interoffice (outpulse received digits)

(continued)

FIGURE 18 (continued) ROUTE INDEX EXPANSION

NOTES (continued)

4. CL = 1 - Class of service tone to recording completing operator.

5. DEST - Destination code:

0 - Vacant circuit group
1 - Vacant code operator - no outpulsing trunk group (connect trunk after timeout on received digits) cut thru based on FREE bit or answer supervision received
2 - Recording completing operator - No outpulsing trunk group - (connect trunk immediately) cut thru based on FREE bit or answer supervision received.
3 - Tones which timeout
4 - Tones with no timeout
5 - Announcement local
6 - Route to reorder
7 - Station ringer test
8 - Convert dialed digits to a 4, 5, 6 or 7 digit number
9 - Balance test line
10 - Interrupted milliwatt test line
11 - Synchronous test line
12 - Loop around test line 0
13 - Loop around test line 1
14 - Short circuit test line
15 - Open circuit test line
16 - Charge test line
17 - Continuous milliwatt test line
18 - AC/DC open circuit test line
19 - Spare
20 - Autoconnect
21 - RCTL input terminal

6. Assigned Route Indexes

Route Index	Description
8	Discontinued or changed number
9	Trouble intercept
10	Blank 4-digit number & unassigned number
11	Manual line
12	Denying custom calling services
13	Permanent signal announcement
14	Permanent signal tone
15	Permanent signal operator (non-coin)
16	Permanent signal operator (coin)
17	Partial dial announcement
18	Invalid 1-digit translation error
19	Auto-connect busy tone
20	Auto-connect high tone
21-31	Reserved

(continued)

FIGURE 18 (continued) ROUTE INDEX EXPANSION

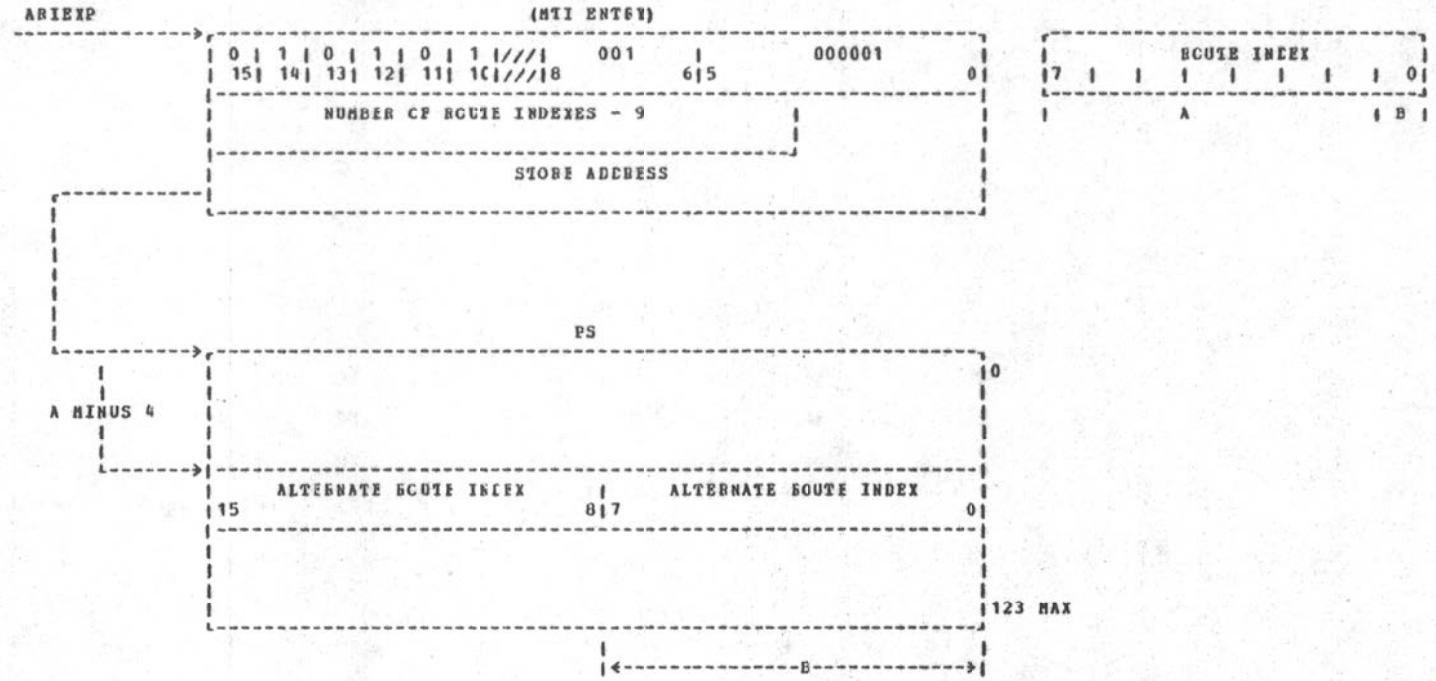
NOTES (continued):

7. ICP_RTI = The Route Index to be used when a line is assigned to intercept by Recent Change. If not specified (i.e., ICP_RTI = 0), RI = 8 will be assumed by the program.

8. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS FORM				DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
CUTOVER ROUTE INDEX	RC:RTI	CRTI	3303-1	-	23-25	Cutover route index
OTO-TEST-RI	RC:RTI	ORTI	3303-1	-	26-28	Office to office test route index
PREFIX DIGIT	RC:RTI	PPX	3303-2	-	26-28	Prefix digit
DLT	RC:RTI	DLT	3303-2	-	25	Number of digits to delete (1-7, but not all)
FREE	RC:RTI	FREE	3303-2	-	36	Free calls; no charge over this route
DC-D6	RC:RTI	DIGIT	3303-2		29-32	Conversion digits - stored in BCD
DIGCN	RC:RTI	DIG	3303-2		29-32	Conversion digits count
TN	RC:RTI	TONE	3303-2		37	Tone (when CI = 1) TN = 0 - use Low Tone TN = 1 - Use High Tone

FIGURE 18A ALTERNATE ROUTE INDEX EXPANSION

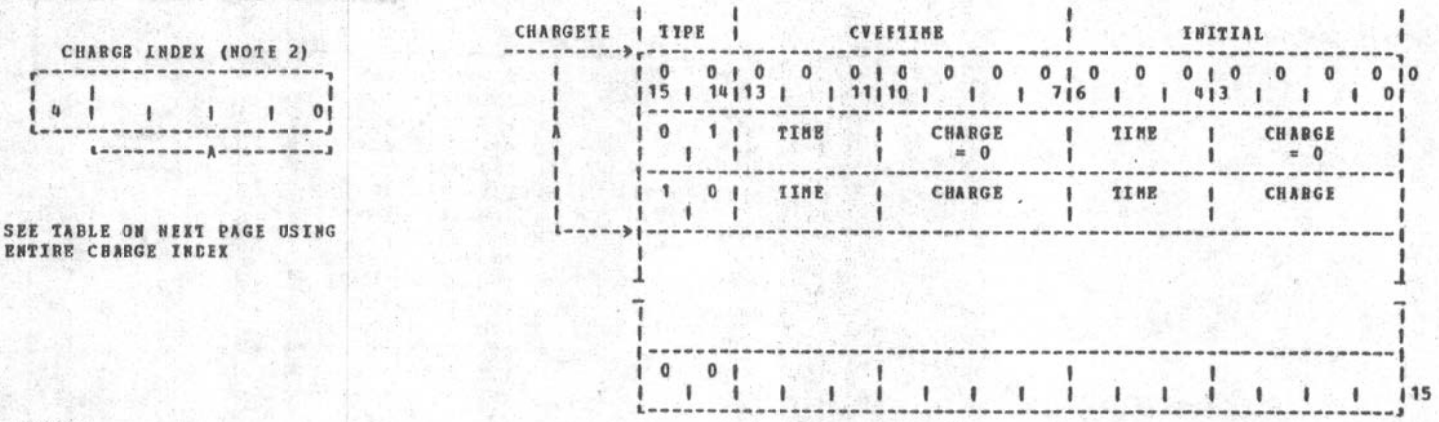


NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
ALTERNATE ROUTE INDEX	RC:RTI	ARTI	3303-2	-	33-35	Alternate route index

FIGURE 19 CHARGE INDEX INFORMATION



SEE TABLE ON NEXT PAGE USING ENTIRE CHARGE INDEX

NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS FORM				DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
TYPE	RC:CHI	ETYP	3302	-	19-20	Charge index entry number = 00 vacant entry = 01 coin entry (CN) = 10 message rate entry (MR)
INITIAL TIME	RC:CHI	ITM	3302	-	21	Initial time = 0 local untimed call = 1 to 7 minutes - local timed coin or timed MR call
INITIAL CHARGE	RC:CHI	ICU	3302	-	22-23	Initial charge units = 0 - fixed initial charge determined by coin phone (5-45¢) = 1 to 15 message units - timed or untimed MR
OVERTIME TIME	RC:CHI	OTM	3302	-	24	Overtime = 1 to 7 minutes - local timed coin or timed MR call
OVERTIME CHARGE	RC:CHI	OCU	3302	-	25-26	Overtime charge units = 0 - coin overtime charge is 5¢ = 1 to 15 message units - MR

CHARGE INDEX INFORMATION FOR FIGURE 19
(SEE NOTE 2)

CHARGE INDEX	BILLING TYPE	
0	Illegal	
1	Free	
2	AMA - WATS Band 0	Special
3	AMA - WATS Band 1	Interstate
4	AMA - WATS Band 2	Interstate
5	AMA - WATS Band 3	Interstate
6	AMA - WATS Band 4	Interstate
7	AMA - WATS Band 5	Interstate
8	AMA - WATS Band 6	Special
9	AMA - WATS Band 7	Interstate
10	AMA - WATS Band 8	Intrastate
11	AMA - WATS Band 9	Intrastate
12	AMA - USRP	
13	AMA - Reserved	
14	AMA - Unused	
15	AMA - Toll call	

CHARGE INDEX	AMA IN OFFICE AND NOT A COIN CALL	1) CCIN CALL 2) SOFTWARE M.R. 3) HARDWARE M.R.
16	AMA WITH MBI 0	
17	AMA WITH MBI 1	
18	AMA WITH MBI 2	USE
19	AMA WITH MBI 3	
20	AMA WITH MBI 4	CHARGETB
21	AMA WITH MBI 5	
22	AMA WITH MBI 6	FOR CCIN
23	AMA WITH MBI 7	
24	AMA WITH MBI 8	CHARGES AND
25	AMA WITH MBI 9	
26	AMA WITH MBI 10	MESSAGE RATE
27	AMA WITH MBI 11	
28	AMA WITH MBI 12	PEGGING
29	AMA WITH MBI 13	
30	AMA WITH MBI 14	
31	AMA WITH MBI 15	

NOTES: (continued)

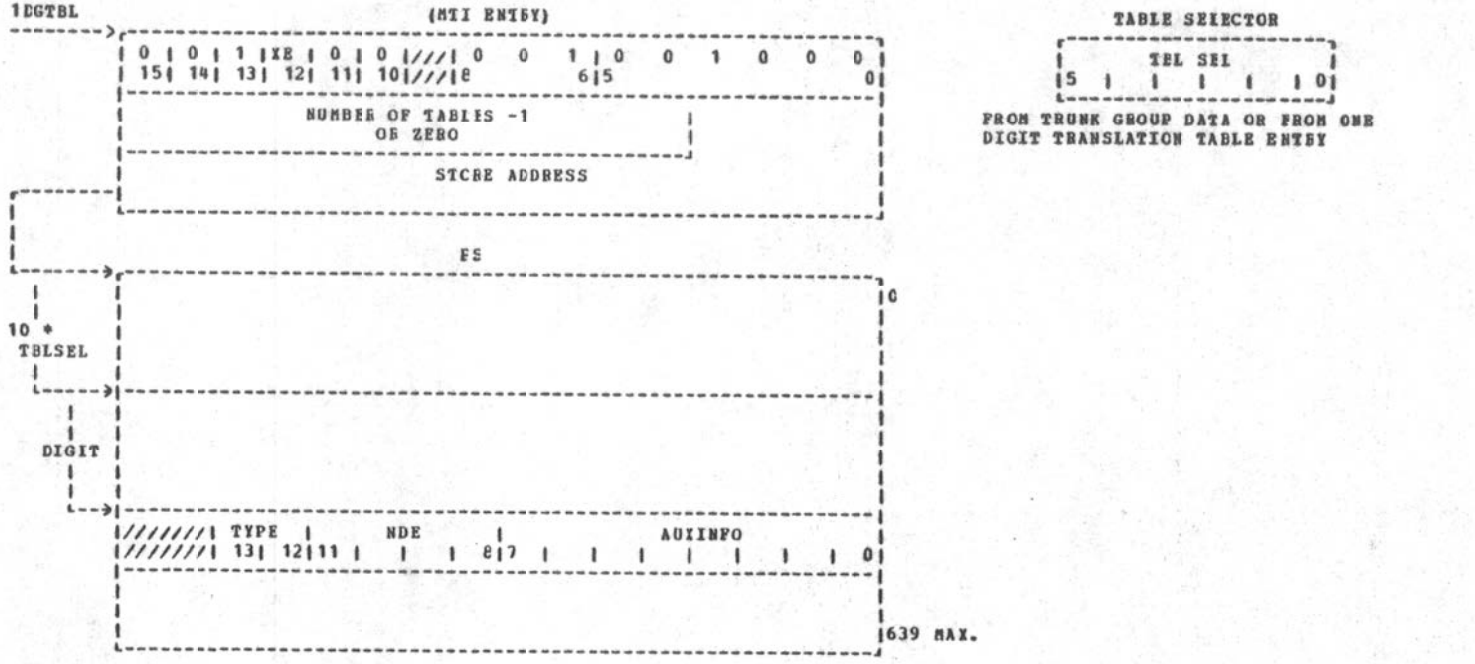
2. When an office has AMA for message rate calls, an MBI (Message Billing Index) is used and the CHARGETB is used if there is also a hardware message register to be pegged.

FIGURE 19A INITIAL CHARGE

NOTES:

1. ITLCHG = Increment on initial charge for Hotel-Motel hardware message registers.

FIGURE 20 ONE DIGIT TRANSLATION (INCOMING TRUNKS)



NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS FORM			DESCRIPTION
	KEYWORD	NUMBER	ITEM	COLUMN	
NDE	RC:ODIG	NDE	3209-1	-	24	Number of digits expected over this trunk (type 2 & 3)

(continued)

FIGURE 20 (continued) ONE DIGIT TRANSLATION

NOTES (continued)

2. TYPE = 0 Error, Invalid digit
Auxinfo = 0 (in program, route index of 18 is supplied).

= 1 Inconclusive:
Auxinfo = Table selector number for another table to be used in translating the next digit.
NDE = 0

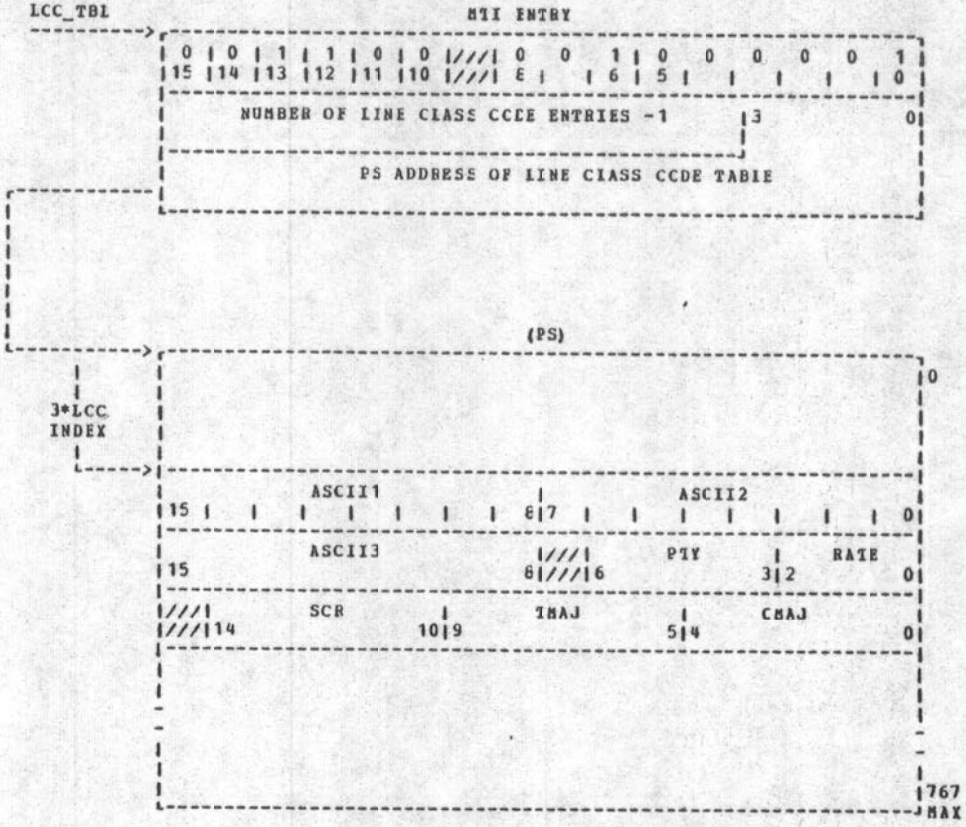
= 2 Locally terminating call
Auxinfo = Normalize office code (NOC).

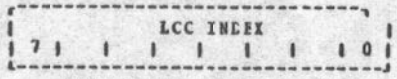
= 3 Tandem call
Auxinfo = Route index

MISCELLANEOUS AND DIAGNOSTIC INFORMATION

INDEX OF FIGURES

FIGURE 21 LINE CLASS CODE TRANSLATION





NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

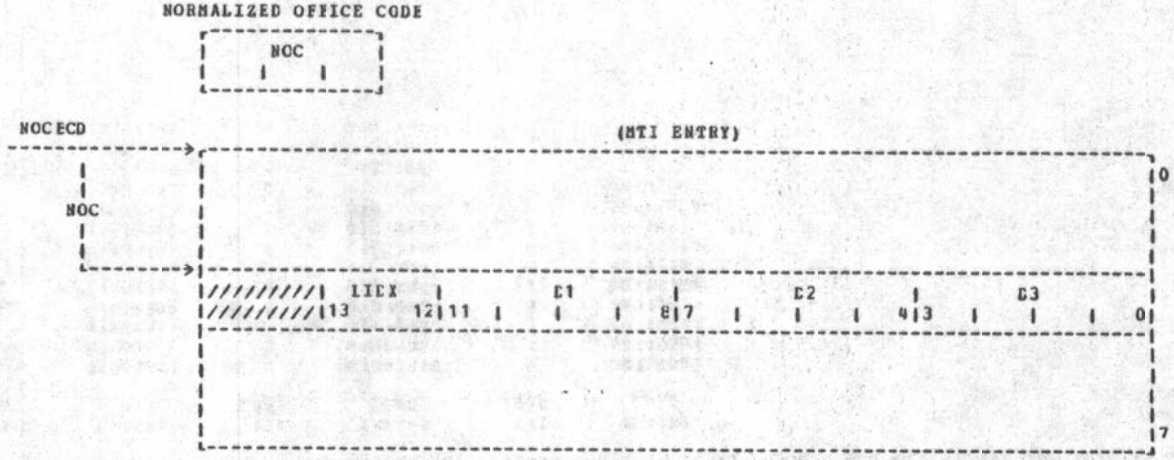
DATA	INPUT MESSAGE	ESS FORM			DESCRIPTION
	KEYWORD	NUMBER	ITEM	COLUMN	
ICC INDEX	RC:LCC	LCI	3306-1	-	17-19	Line class code index
ASCII1 to 3	RC:LCC	LCC	3306-1	-	20-22	3 character line class code used by TELCC's (see Note 2)
PTY	RC:LCC	PTY	3306-1	-	23	Party number
RATE	RC:LCC	RAX	3306-1	-	24	Rate class for charging
SCR	RC:LCC	SCR	3306-1	-	29-30	Screening class number
TMAJ	RC:LCC	TMAJ	3306-1	-	27-28	Terminating major class (See Figure 2C, Note 8)
OMAJ	RC:LCC	OMAJ	3306-1	-	25-26	Originating major class (See Figure 2C, Note 8)

2. The following table is used for coding or decoding 8-bit ASCII TTY codes; the eighth bit (parity) is always zero:

TTY CHAR	BINARY CODE	TTY CHAR	BINARY CODE	TTY CHAR	BINARY CODE
A	01000001	N	01001110	0	00110000
B	01000010	O	01001111	1	00110001
C	01000011	P	01010000	2	00110010
D	01000100	Q	01010001	3	00110011
E	01000101	R	01010010	4	00110100
F	01000110	S	01010011	5	00110101
G	01000111	T	01010100	6	00110110
H	01001000	U	01010101	7	00110111
I	01001001	V	01010110	8	00111000
J	01001010	W	01010111	9	00111001
K	01001011	X	01011000		
L	01001100	Y	01011001		
M	01001101	Z	01011010		

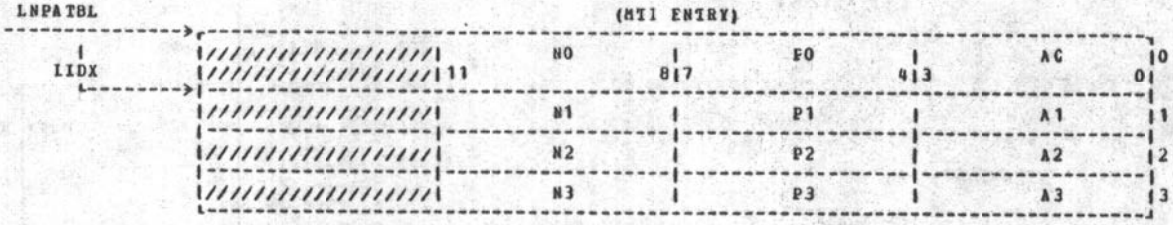
FIGURE 22 NOC & NPA CONVERSION TABLES

FIGURE 22A NOC TO OFFICE CODE CONVERSION TABLE



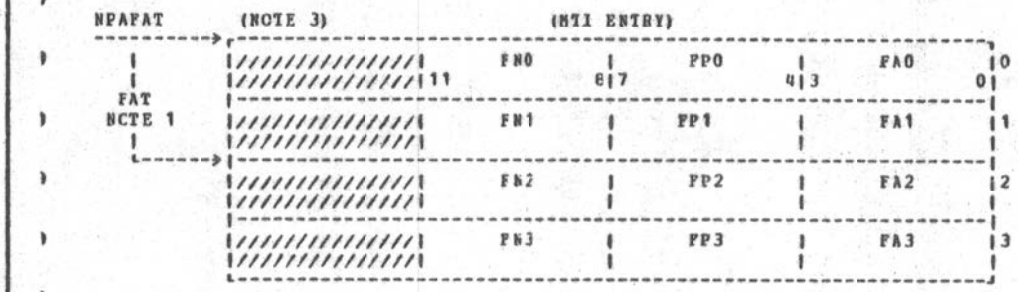
NOTES:
1. LIDX = Local NPA index.
2. D1,D2,D3 = NXX in BCD corresponding to NCC.

FIGURE 22B LOCAL NPA TABLE



NOTES:
1. N,P,A = NPA in BCD.

FIGURE 22C NPA FOREIGN AREA TABLE



NOTES:

1. See Figure 16
2. FNn, FPn, FAn = NEA in ECD
3. NPAFAT is only accessed by office records to output NPA on 3300 Form

FIGURE 23 MISCELLANEOUS OFFICE PARAMETERS (INCLUDING ASSIGNED DIA"S AND SEN"s)

FIGURE 23A OFFICE OPTION WORD

OFF_DATA (H11 ENTRY)

FIGURE 23B OFFICE IDENTIFICATION

OFFICE (H11 ENTRY)

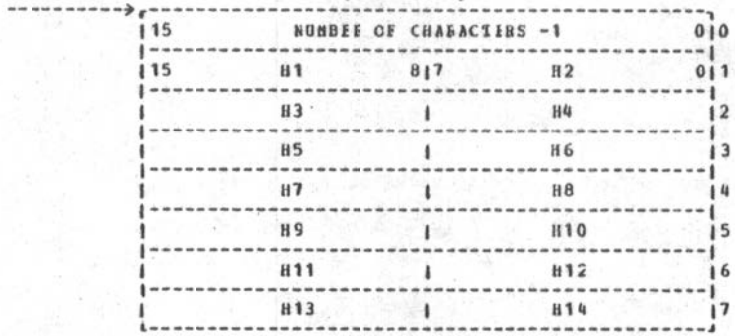
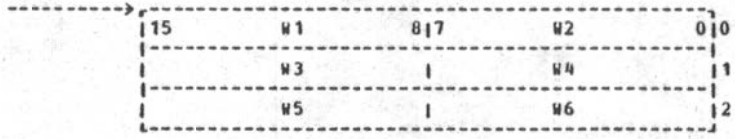


FIGURE 23C W.E. CO. BASE AND CONTROL NUMBER

WEBCN (H11 ENTRY)



(See NOTES following Figure 23J)

421100

FIGURE 23E ANA TERMINAL IDENTIFIER

ANATID

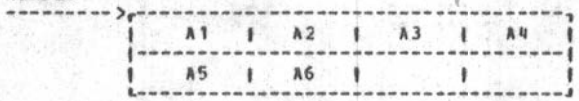


FIGURE 23E NUMBER OF SCREENING CLASSES

SCRSIZE (NTI ENTRY)

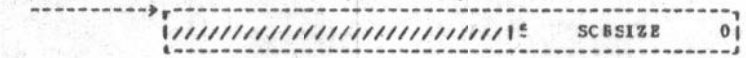


FIGURE 23F TEST PANEL ASSIGNMENTS

TLTPL (NTI ENTRY)

FIGURE 23G NO TEST TENS

NOTEST (NTI ENTRY)

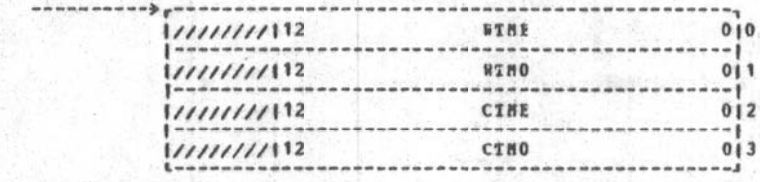


FIGURE 23H FAR END TEST LINES (RCTI)

FETL (NTI ENTRY)

FIGURE 23I TRUNK UNDER TEST TERMINAL (RCTI)

TUTTL (NTI ENTRY)

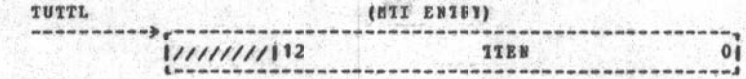
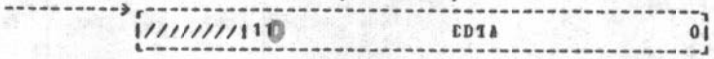


FIGURE 23J DIAL TONE DETECTOR ALARM DTA

DTDADTA (MTI ENTRY)



NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS PORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
DPG	RC:OFFICE	DPG	3500-1	20	21-22	Dial Pulse receiver Group 0 = Dial pulse receivers are not provided 1 = Dial pulse receivers are provided
NOT	RC:OFFICE	NOT	3500-1	23	21-22	Negative 130 volts (-130V) 0 = Use +130V for coin collect; use -130V for coin return 1 = Use -130V for coin collect; use +130V for coin return
ZPLUS	RC:OFFICE	ZPLUS	3500-1	21	21-22	ZERO+ dialing 0 = 0+ calls not allowed 1 = 0+ calls allowed
SUP	RC:OFFICE	SUP	3500-1	22	21-22	Superimposed ringing 0 = Office has AC-DC ringing 1 = Office has superimposed ringing
ICF	RC:OFFICE	-	-	-	-	Print CFV Changes 0 = Printing of customer dialed CFV changes not inhibited 1 = Printing of customer dialed CFV changes inhibited
PC	RC:OFFICE	PRECUT	-	-	-	Precut state 1 = Office is in precut state
RV	RC:OFFICE	RVS911	3500-1	40	21-22	Reverse tip & ring for 911 service 1 = Reverse tip & ring
AMA	RC:OFFICE	AMA	3500-1	36	21-22	Automatic Message Accounting 0 = Office does not have LAMA - software message registers may be used 1 = Office has LAMA - software message registers are not used.
NW_ANA	RC:OFFICE	SET RESET	- -	- -	- -	Network Analysis 1 = Perform network analysis 0 = DO NOT perform network analysis

(continued)

NOTES: (continued)

1. DATA CROSS-REFERENCE AND DESCRIPTION (continued)

DATA	INPUT MESSAGE	ESS POSN			DESCRIPTION	
		KEYWORD	NUMBER	ITEM	COLUMN	
SLU	RC:OFFICE	SLU	-	-	-	Subscriber Line Utilization 0 = Pre-USBE study is not invoked 1 = Pre-USBE study is invoked	Special Studies
TS	RC:OFFICE	TRF	-	-	-	Traffic sampling 0 = Traffic sampling is not invoked 1 = Traffic sampling is invoked	
CO	RC:OFFICE	CMPOBS	-	-	-	Complaint Observing 0 = Complaint observing is not invoked 1 = Complaint observing is invoked	
B1 to H14	RC:OFFICE	OID	3500-2	00	19-32	1 to 14 alpha-numeric office identifier (ASCII code See Figure 21 Note 2)	
TEN1	RC:LINE	ETYP	3500-2	-	19	= 32, 1st TEN assigned to TLP1 (access Trk 0)	
TEN2	RC:LINE	ETYP	3500-2	-	19	= 33, 2nd TEN assigned to TLP1 (access TRK 1)	
WTME	RC:OE	ETYP	3500-2	-	19	= 2, Notest wire test multiple - even TEN	
WTMO	RC:OE	ETYP	3500-2	-	19	= 3, Notest wire test multiple - odd TEN	
CTME	RC:OE	ETYP	3500-2	-	19	= 4, Notest circuit test multiple - even TEN	
CTMO	RC:OE	ETYP	3500-2	-	19	= 5, Notest circuit test multiple - odd TEN	
A1 to A6	RC:OFFICE	AMAID	3500-2	05	19-26	Eight character identification number (BCD code)	

NOTES: (continued)

2. DATA DESCRIPTION

DATA	DESCRIPTION
HIT	0 = HIT timing not active (Note 4) 1 = Do HIT timing on FP incoming trunks
ICS	(0,1) = Set the default for the CSL1 & CSL2 keyboards on RC:LINE & RC:MTL to (yes,no) (Note 4)
%1 10 M6	Six character identification number (ASCII Code - see Fig. 21, Note 2)
SCRSIZE	Number of screening classes provided

NOTES: (continued)

2. DATA DESCRIPTION

DATA	DESCRIPTION
FTEN1	1st terminal equipment number assigned to FOTL 105 test lines
FTEN2	2nd terminal equipment number assigned to FCTL 105 test lines
TTEN	Terminal equipment number assigned to FCTL trunk under test terminal
EDTA	Distributor triplet address for dial tone detector alarm

3. ASSIGNED SCAN POINT NUMBERS

SCAN POINT NUMBER	SFN FCR
(0,19,14)	False cross and ground circuit 0
(0,20,14)	Power cross circuit 0
(0,21,12)	False cross and ground wire 0
(0,22,12)	Power cross wire 0
(0,23,10)	False cross and ground circuit 1
(0,24,10)	Power cross circuit 1
(0,25,08)	False cross and ground Wire 1
(0,27,07)	Power cross Wire 1
(0,21,14)	Ringing & tone plant interrupter test 0
(0,27,11)	Ringing & tone plant interrupter test 1

4. Bit may be set or reset by using "SET" or "RESET" keyword in EC:CFFICE.

(continued)

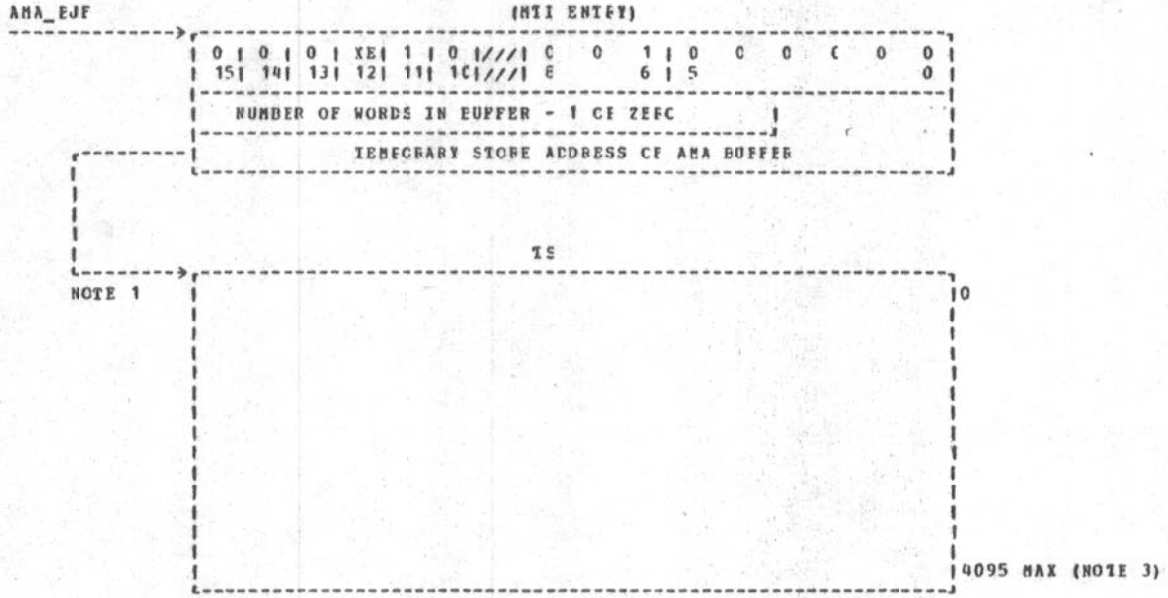
NOTES: (continued)

5. ASSIGNED DISTRIBUTOR TRIPLET ADDRESSES

DIST TRIPLET ADDRESS	DISTRIBUTOR TRIPLET ADDRESS FOR:
(3,0,254)	Circuit test vertical points
(3,1,254)	Circuit test vertical points
(3,0,252)	Wire test vertical points
(3,1,252)	Wire test vertical points
(0,0,255)	Circuit test multiple even/odd select
(0,0,253)	Wire test multiple even/odd select
(1,0,255)	Circuit test multiple test circuit point
(1,0,253)	Wire test multiple test circuit point
(0,0,250)	Interrupter circuit for R10
(0,0,248)	Interrupter circuit for R11
(1,0,250)	GDT tree for RT
(2,0,250)	Marginal check circuits for RT
(1,0,248)	Activate RT
(2,0,248)	Overload announcement circuit for RT
(3,0,248)	+24 volt power alarm test
(3,0,255)	+3 volt power alarm test for CF0
(3,0,253)	OOS lamps for CF0
(3,0,250)	Ringing & tone plant CCS lamps
(3,1,255)	+3 volt power alarm test for CF1
(3,1,253)	OOS lamps for CF1

DIST TRIPLET ADDRESS	DISTRIBUTOR TRIPLET ADDRESS FOR:
(0,0,006)	Trunk & line test panel triplet address No. 0
(1,0,006)	Trunk & line test panel triplet address No. 1
(2,0,006)	Trunk & line test panel triplet address No. 2
(3,0,006)	Trunk & line test panel triplet address No. 3
(0,0,007)	Trunk & line test panel triplet address No. 4
(0,0,224)	Remote recording announcement circuit
(1,0,031)	Battery boost DTA for Network Frame 1
(1,0,047)	Battery boost DTA for Network Frame 2
(1,0,063)	Battery boost DTA for Network Frame 3
(1,0,079)	Battery boost DTA for Network Frame 4
(1,0,095)	Battery boost DTA for Network Frame 5
(1,0,111)	Battery boost DTA for Network Frame 6
(1,0,127)	Battery boost DTA for Network Frame 7
(1,1,015)	Battery boost DTA for Network Frame 8
(1,1,031)	Battery boost DTA for Network Frame 9
(1,1,047)	Battery boost DTA for Network Frame 10
(1,1,063)	Battery boost DTA for Network Frame 11
(1,1,079)	Battery boost DTA for Network Frame 12
(1,1,095)	Battery boost DTA for Network Frame 13
(1,1,111)	Battery boost DTA for Network Frame 14
(1,1,127)	Battery boost DTA for Network Frame 15

FIGURE 24 AMA BUFFER TABLE

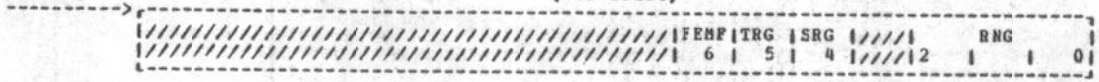


NOTES:

1. The AMA buffer has 3 basic entries - Initial, Answer and Disconnect - With a number of other entries. The entries are byte oriented and need not start on a word boundary. The buffer is only accessed for data by the AMA programs.
2. XE = 1 if AMA in OFF_DATA = 1
3. The size is fixed at 2800 words based on current fixed engineering rules, except when initially testing AMA capability in an existing office with Software Message Registers, in which case the size may be smaller (typically 100 words).
4. On the initial run of an office either the office will have the AMA buffer allocated or the Software Message Registers allocated, but not both.

FIGURE 25 AUTOMATIC LINE INSULATION TEST

ALITWRD (MTI ENTRY)



NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
	KEYWORD		NUMBER	ITEM	COLUMN	
FEMF	RC:OFFICE	MODE	3500-1	30	22	Foreign EMF test in ALIT (Mode = 4)
TRG	RC:OFFICE	MODE	3500-1	30	22	Tip & ring to ground test in ALIT (Mode = 2)
SRG	RC:OFFICE	MODE	3500-1	30	22	Short or ring to ground test in ALIT (Mode = 1)
RNG	RC:OFFICE	RANGE	3500-1	29	22	Range for leakage resistance between lines 1 = 80k ohms 2 = 320k ohms 4 = 2.56 megohms

FIGURE 26 MAINTENANCE INFORMATION

FIGURE 26A JUNCTOR CIRCUITS

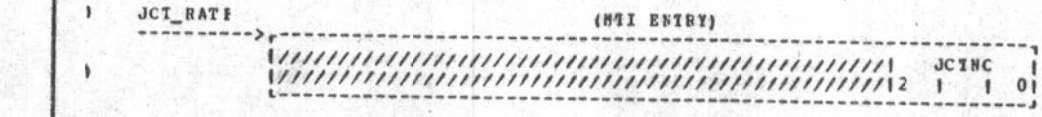


FIGURE 26B SERVICE CIRCUITS

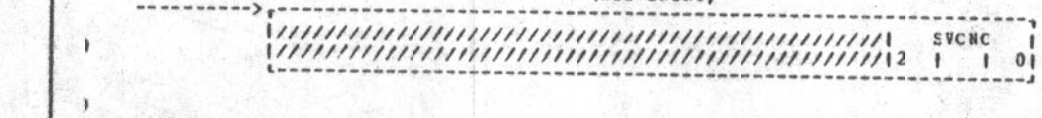


FIGURE 26C TRUNK CIRCUITS

NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

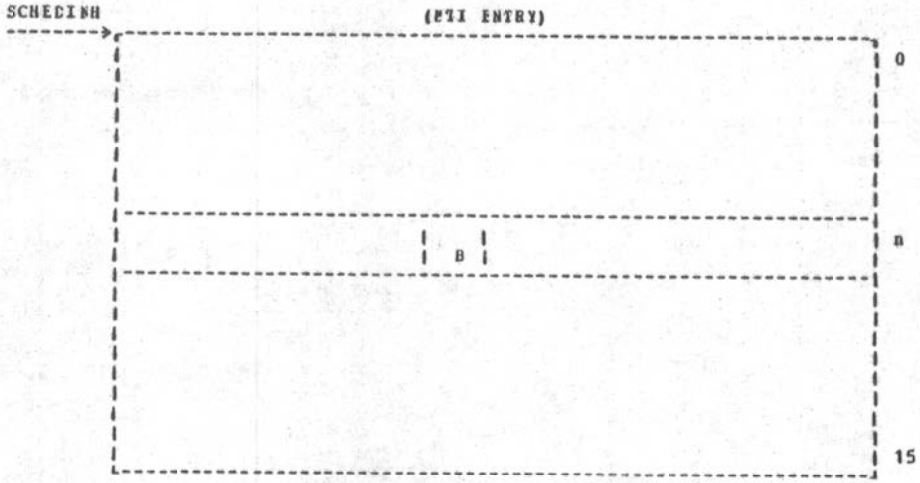
DATA	INPUT MESSAGE	ESS FORM				DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
JCTNO	RC:OFFICE	JC	3500-1	26	22	Diagnostic rate for junctor circuits
SVCNO	RC:OFFICE	SVC	3500-1	27	22	Diagnostic rate for service circuits
TRKNO	RC:OFFICE	TRK	3500-1	28	22	Diagnostic rate for trunk circuits

2. Values for JCTNO, SVCNO & TRKNC

000 = Invalid (can't do all)
001 = One-half of circuits diagnosed each day
010 = One-quarter of circuits diagnosed each day
011 = One-eighth of circuits diagnosed each day
100 = One-sixteenth of circuits diagnosed each day
101 = One thirty-second of circuits diagnosed each day

FIGURE 2E MAINTENANCE INFORMATION (continued)

FIGURE 2ED GENERAL SCHEDULER MAJOR SEQUENCE TABLE INHIBITS

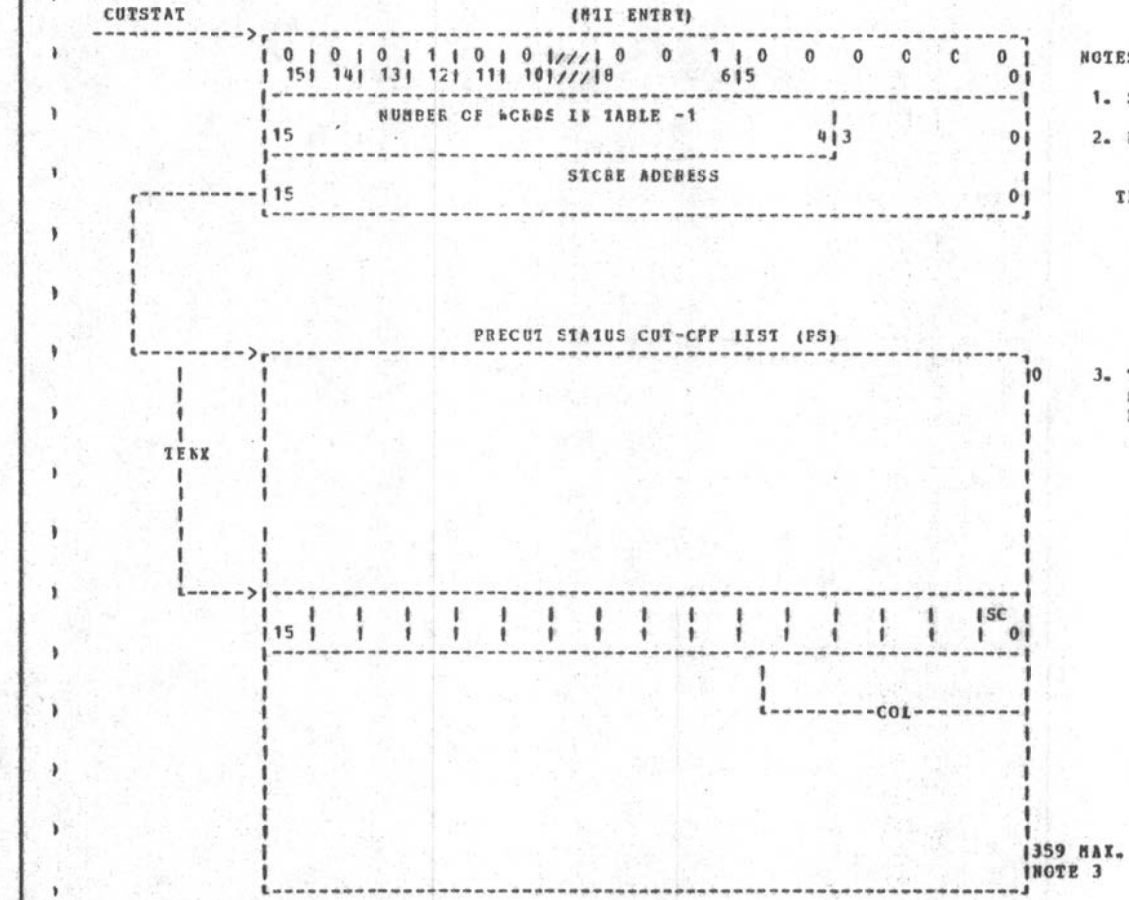


NOTES:

1. A "1" in any bit position B of word n inhibits the general scheduler from executing that function. A "0" allows that function.

2. This table is loaded by the CIA to all zeros. It is not Recent Changeable. Bits may be set in this table only upon explicit instructions from Bell Labs or from Western Electric EECC.

FIGURE 27 PRECUT TRANSLATION TABLE



NOTES:

1. SC - Status of the line cut-off.
2. Relationship of TENI and TEN

(Also, see FIG. 2, NOTE 7)

TENX = (CG-1) * 24 + RCW

3. Table size is a function of the number of logical scanners. Size = LOGSCAN (Fig. 35B) Number * 24.

FIGURE 28 AUTOCONNECT TRANSLATION TABLES

FIGURE 28A MESSAGE CLASS TABLE

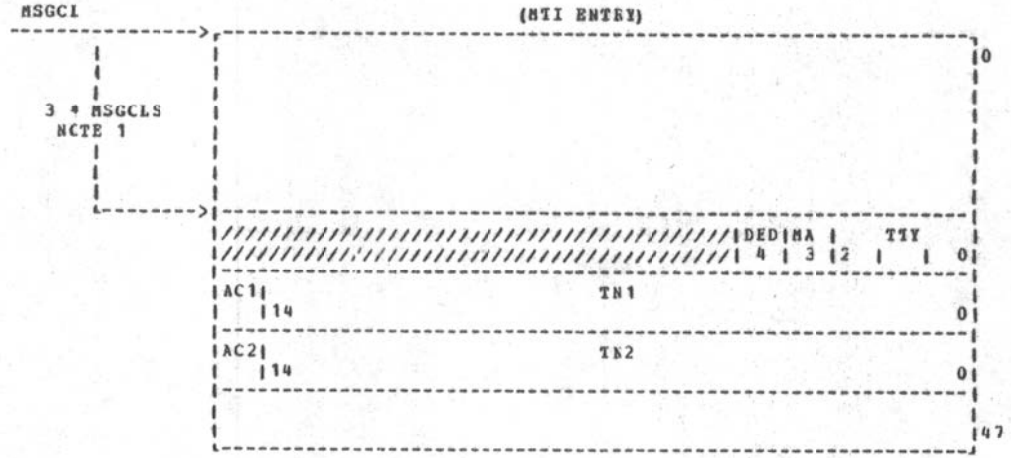


FIGURE 28B CALL BACK NUMBER TRANSLATOR

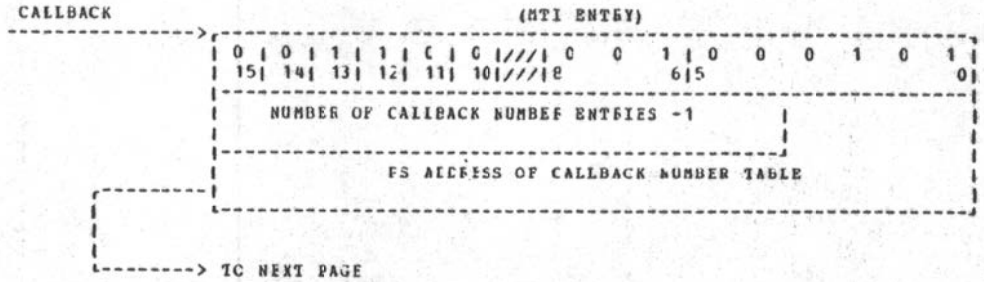
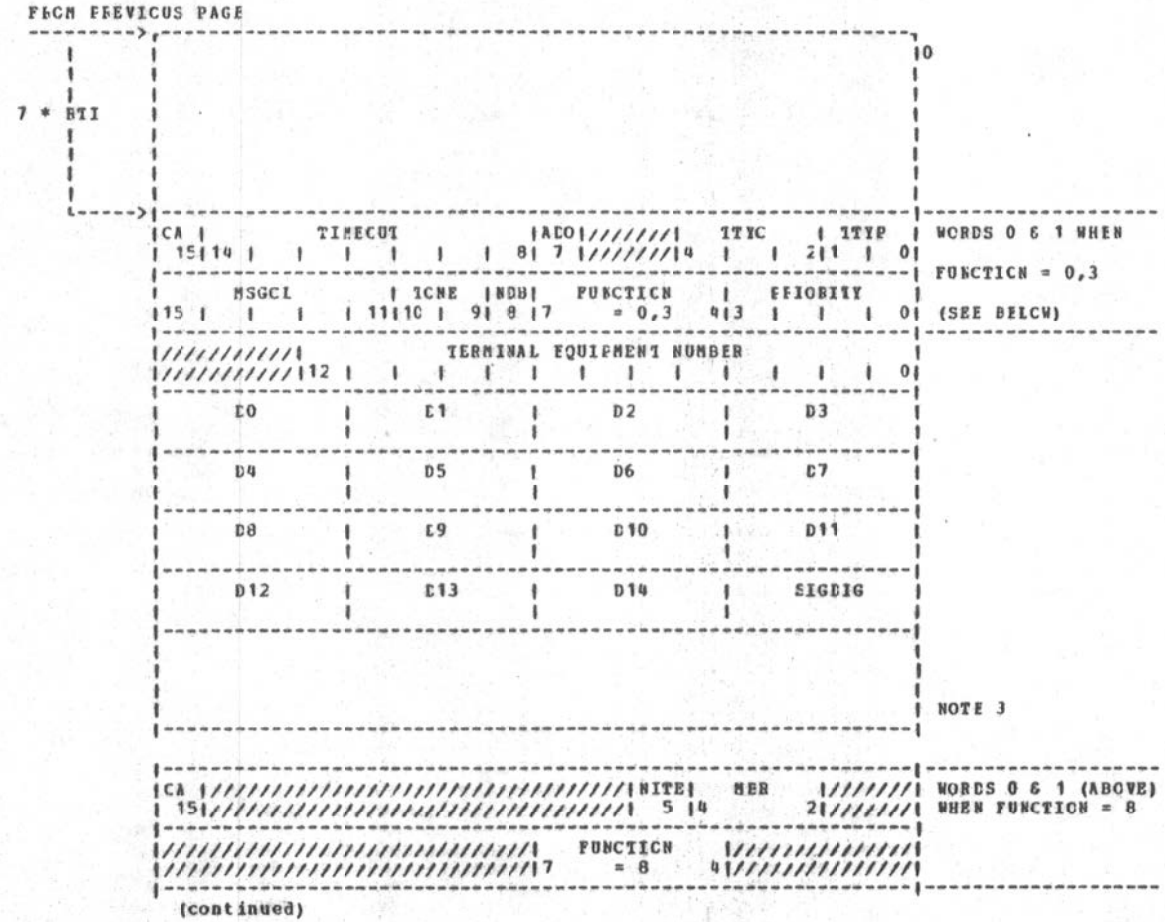
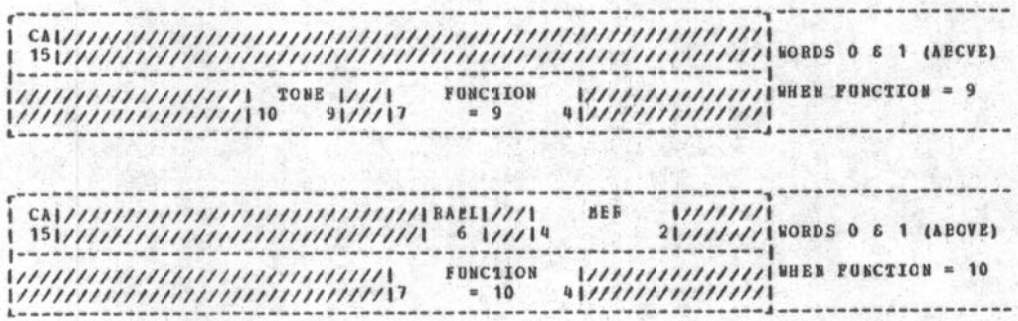


FIGURE 28B CALLBACK NUMBER TRANSLATOR (continued)



(continued)

FIGURE 28B (continued) CALLBACK NUMBER TRANSLATION



NOTES:

1. MSGCIS is a number inputted via a TTY message. It is the same number as found in the CALLBACK table. (see Note 4)

2. The DED bit in Entry 0 is always set for the maintenance TTY. (see Note 5).

3. The number of entries in the CALLBACK table are autoconnect user limited. The standard autoconnect users are: Remote maintenance, traffic, service riders and repair service bureau. There may be other users such as: BTL monitor & Western Electric Co.

4. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FCBS			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
AC1, AC2	RC:LINE	AC	-	-	-	Automatic autoconnect trigger number 0 = not automatic 1 = automatic
TN1, TN2	RC:LINE	TN	3100-1	-	17-23	Autoconnect trigger number (see Fig. 2C, Note 3)
TTY	RC:TTY	TTYC	3500-3	-	19	TTY controller number
TIMEOUT	RC:LINE	TC	-	-	-	Number of seconds that TTY channel can remain idle waiting for input before automatic disconnect. The timecut time is TIMECUT * 3 seconds

(continued)

NOTES: (continued)

4. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS PCBM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
MSGCLS	RC:LINE	CLS	-	-	-	Message class number 0 = maintenance 1 = backup maintenance 2 = service orders 3 = traffic 4 = repair service bureau 5 = office records 6 = regional accounting office 7 = spare 8 = AMA primary 9 = AMA backup 10 = SCTI data 11-15 = spare
TTYC	RC:LINE	TTYC	-	-	-	TTY physical controller number
TTYP	RC:LINE	PORT	-	-	-	TTY physical port number
TONE	RC:LINE	TONE	-	-	-	Defines the carrier tone of the data set 00 = high tone (no timing) 01 = 2025 hz (time 30 sec) 10 = 2225 hz (time 30 sec)
NDB	RC:LINE	NDB	-	-	-	No dial back 0 = call return number 1 = use dedicated
ADO	RC:LINE	AUTO	-	-	-	Automatic dialup option 0 = feature not desired 1 = feature desired
PRIORITY	RC:LINE	PRIOR	-	-	-	To be used in the event that an incoming trigger number needs any of the existing autoconnect facilities that are in service.
NITE	RC:LINE	NIGHT	-	-	-	Night desk 0 = day LTD 1 = night LTD

(continued)

NOTES: (continued)

4. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE	ESS FORM			DESCRIPTION
	KEYWORD	NUMBER	ITEM	COLUMN	
FUNCTION	RC:LINE	ETYP	-	-	-	User function 0 = TTY 1 = reserved 2 = reserved 3 = BOTL data 4-7 = spare 8 = local test desk trunk 9 = remote record overload announcement 10 = BOTL security 11-15 = spare
TEN	RC:LINE	CE	-	-	-	Terminal equipment number.
D0 TO D14	RC:LINE	&IN	-	-	-	Callback number in BCD (zero = 1010)
MBR	RC:LINE	TER	-	-	-	Member number in the trunk group for FUNCTION = 8 BCTL user identity digit for FUNCTION = 10

5. DATA DESCRIPTION

DATA	DESCRIPTION
MA	Miscellaneous AC controller 0 = TTYC is not a miscellaneous AC controller 1 = TTYC is a miscellaneous AC controller
DED	Dedicated AC controller (See Note 2) 0 = TTYC is not a dedicated AC controller 1 = TTYC is a dedicated AC controller
CA	1 = callback number entry active
SIGDIG	Number of digits in entry
RAML	&CTL Automatic maintenance limit 0 = can remove up to the out of service limit of trunks in a group 1 = can remove more than the out of service limit of trunks in a group

INDEX OF FIGURES

FIGURE 29 OFFICE DEFINITION DATA

FIGURE 29A TTY CONTROLLER PARAMETER BLOCK TABLE

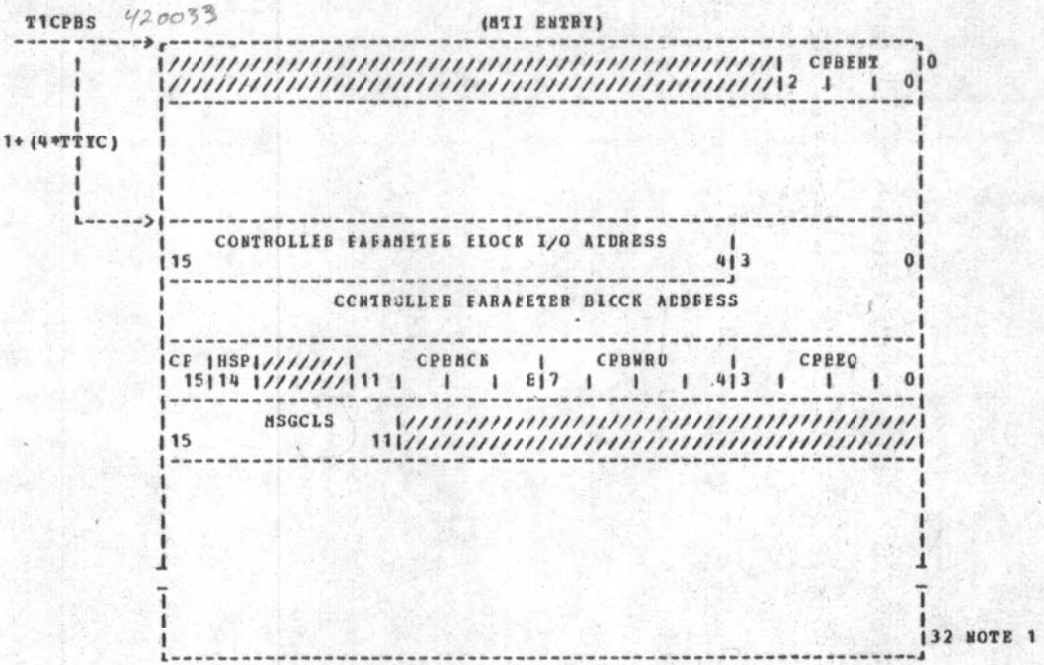


FIGURE 29B EQUIPPED I/C CHANNEL

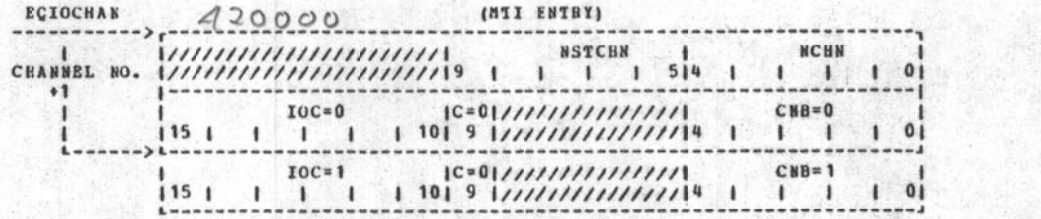
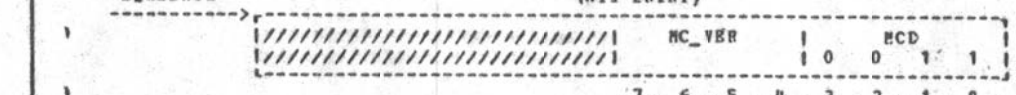


FIGURE 29C EQUIPPED MICROSTORE

EQMISMOI (MTI ENTRY)



NOTES:

1. There are six possible TTY controllers and 2 spare entries.

2. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
HSP	MC:TTY	HS	3500-3	-	28	1 = TTY controller is arranged for a high speed printer
CP	MC:TTY	PAR	3500-3	-	25	Parity check 0 = no 1 = yes
CPMON	MC:TTY	MO	-	-	-	Monitor flags for ports 0-3. Port is used as a monitor port.
CPWRU	MC:TTY	WRU	3500-3	-	26	WRU test flags for ports 0-3. 1 = do WRU test on port.
MC_VER	MC:OFFICE	MICRO	3500-1A	45	22	The type of EC circuit packs the microstore is equipped with:

	LDIs to SD-1C9 10-02	Type of EC Packs
0 =	none	4C062 to 65,68,69(S)
1 =	none	4C156 to 159(D)
2 =	8A,8B	4C200 to 203(D)
3 =	8A	4C068,69(S) & 4C200,201(D)
4 =	8A	4C158,159,200,201(D)
5-15 (Future)		

NOTES: (continued)

3. DATA DESCRIPTION

DATA	DESCRIPTION
CPEENT	Number of TTY controller parameter block entries -1
MSGCLS	Message for autoconnect on this TTY controller. See definition in Figure 28, Note 4.
CPEEQ	Equipped flags for ports 0-3. 1 = port equipped.
NSTCHN	Total number of standard equipped main I/C channels (1 or 2)
NCHN	Total number of equipped main I/C channels (1 or 2)
C	Channel 0 = standard channel 1 = special channel
CNE	Channel number
IOC	Address of main channel (3 out of 6 code) (See FIG. 30 Note 5)
MOD	Each bit is an equipped module of microstore. Each mod is 1024 words.

FIGURE 30 TAPE DEFINITION DATA

FIGURE 30A TAPE OPTIONS

TAPEOPTS (MTI ENTRY)

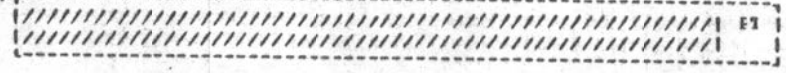


FIGURE 30B EVEN TDCS

TAPEQUE (MTI ENTRY)

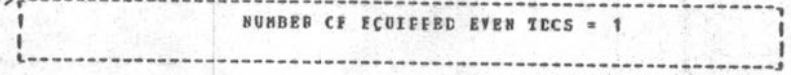


FIGURE 30C ODD TDCS

TAPEQUO (MTI ENTRY)

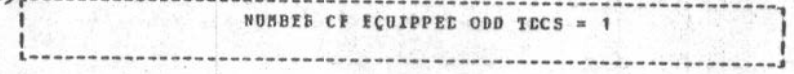
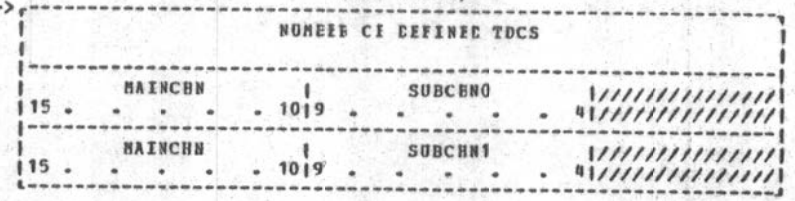


FIGURE 30D I/O ADDRESS DEFINITION FOR ALL TDCS

TAPETBL (MTI ENTRY)



NOTES:

1. PT = Preferred tape data controller.
2. MAINCHN = Main channel address = 0. (3 out of 6 code) (see note 5)
3. SUBCHNO & 1 = Subchannel address for:
   TDC0 = 2
   TDC1 = 3
   (3 out of 6 code) (see note 5)
4. TDCS = Tape data controllers.
5. 3 out of 6 code table.

NUMBER	BINARY CODE	NUMBER	BINARY CODE
0	000111	10	100011
1	001011	11	100101
2	001101	12	100110
3	001110	13	101001
4	010011	14	101010
5	010101	15	101100
6	010110	16	110001
7	011001	17	110010
8	011010	18	110100
9	011100	19	111000

FIGURE 31 STORE ADDRESS

FIGURE 31A

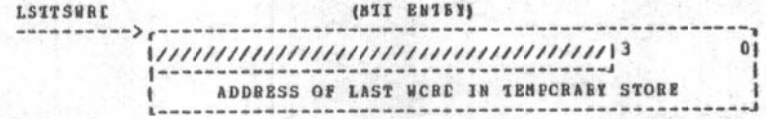


FIGURE 31B

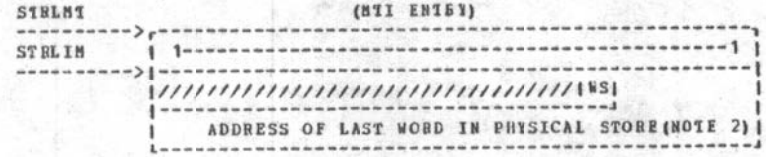


FIGURE 31C

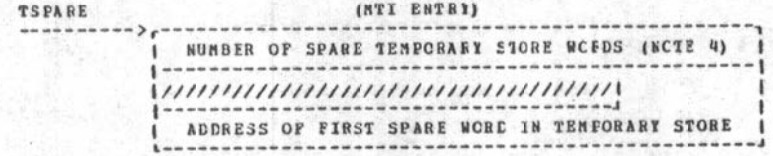
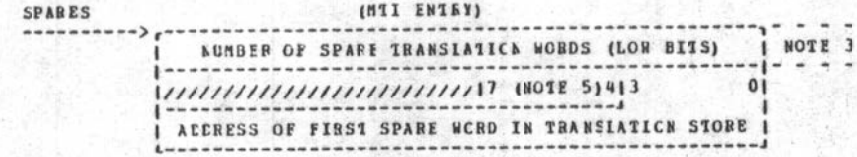


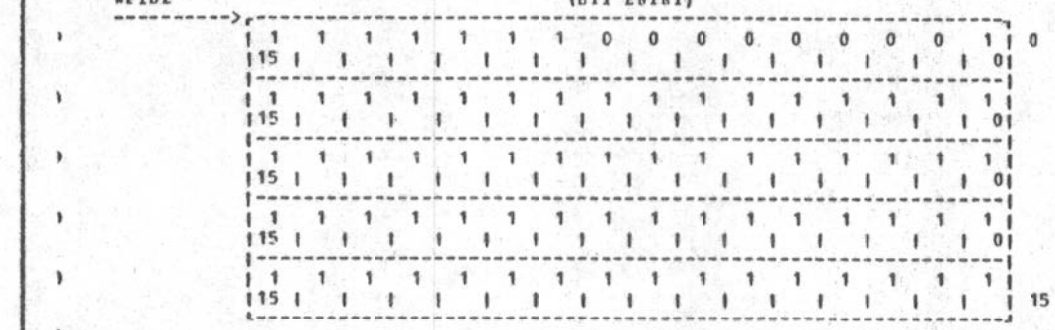
FIGURE 31D



NOTES:

1. WS = Wide Store
   = 0 For No. 3 ESS
2. This address is the address of the last word in physical store. It may be equal to or larger than the last word of translation store. (See Figure 1, Note 10)
3. The number of spare translation words is: the address of the last word in translation store (see Figure 1, Note 10) minus the address of the first spare word in in translation store (see SPARES). This implies that the last word in translation store can never be used.
4. Means spare "translation assignable" temporary store words.
5. Bits 4 to 7 of word 2 (Fig. 31D) are for the number of spare translation words (HIGH BITS). See NOTE 3.

FIGURE 32 WRITE PROTECT TABLE



NOTES:

1. Map of which 4K store blocks are write protected (16 words allowing 1024K).

   0 = Writeable store
   1 = Write protected

   If 4K is not provided, then bit is set

FIGURE 33 TRAFFIC DATA

FIGURE 33A CLASS OF SERVICE

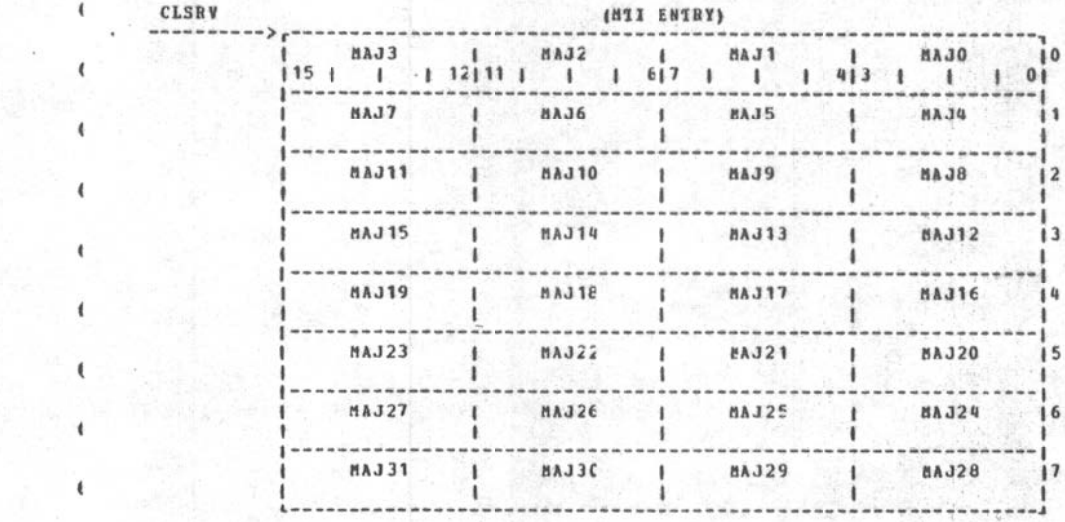
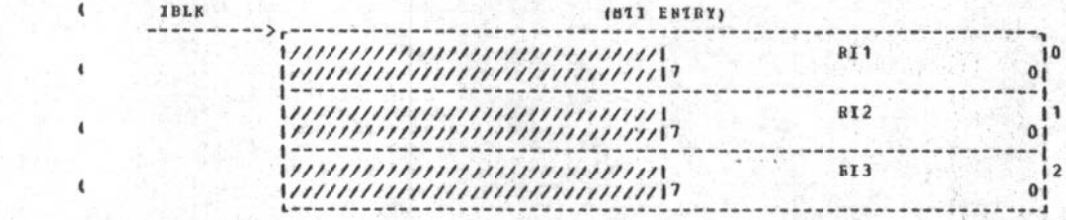


FIGURE 33B INCOMING & INTRAOFFICE INTERCEPT BLOCK



(See NOTES following Figure 33F)

FIGURE 33C NIGHTLY ROUTINE SCHEDULING EIGCB

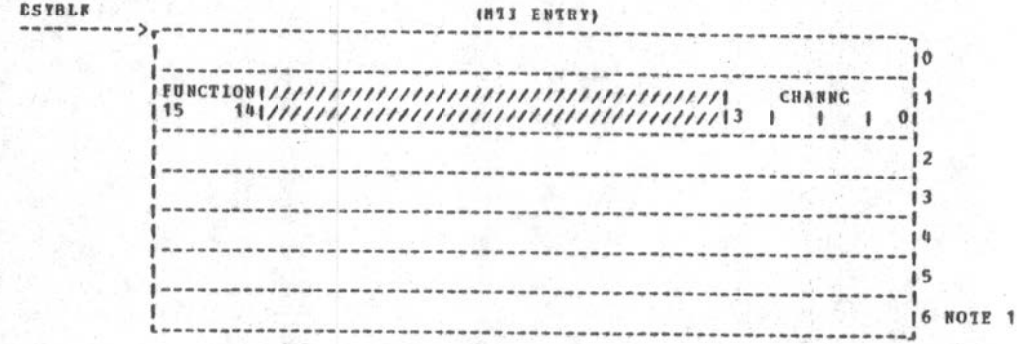
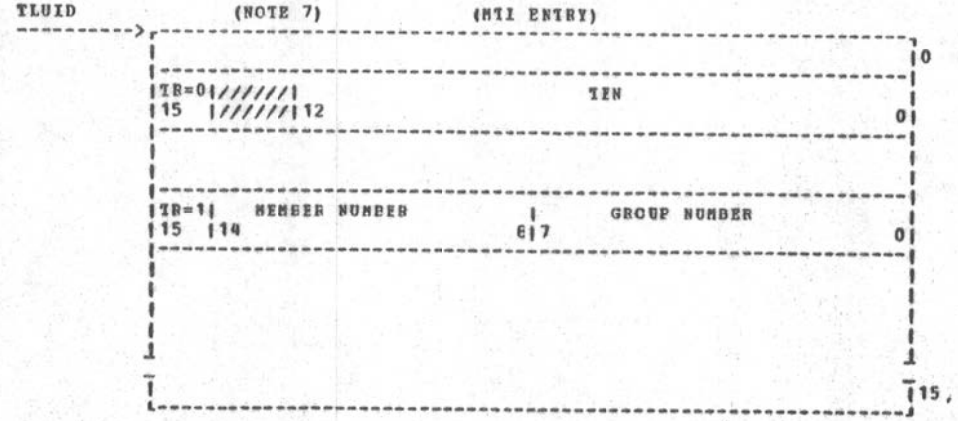
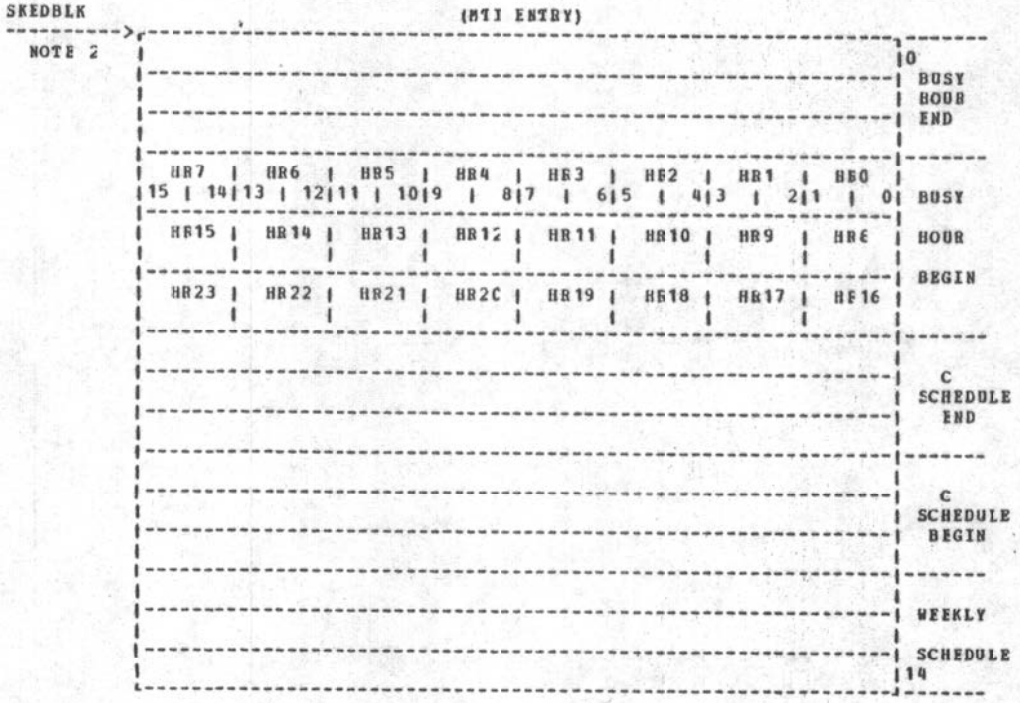


FIGURE 33D TERMINAL USAGE IDENTIFIER



(See NOTES following Figure 33F)

FIGURE 33E SCHEDULE BLOCK



(See NOTES following Figure 33F)

FIGURE 33F TRAFFIC DATA HEADER WORDS

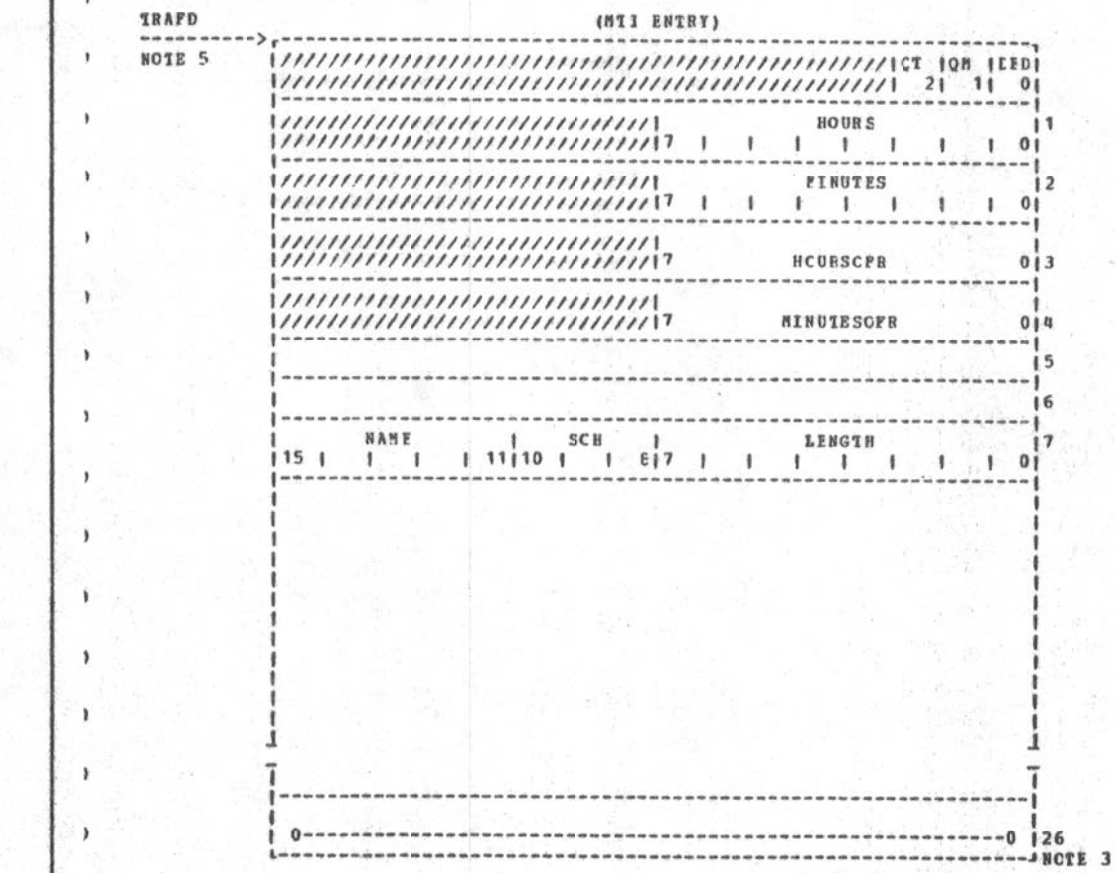


FIGURE 33 TRAFFIC DATA (continued)

NOTES:

1. In Figure 33C,

word references are:	value of FUNCTION set by ODA are:	value of CHANNO set by ODA are:
0 = Daily	01	0011
1 = Traffic busy hours	01	0011
2 = Message registers	01	0000 (note 6)
3 = Out of service report	01	0000
4 = Set selection status bits	01	0000
5 = Unused	00	0000
6 = Unused	00	0000

2. In Figure 33E, all 5 schedules have the same layout. The weekly schedule shows the beginning time. It ends one half hour later.

3. In Figure 33F, words 7-26 are header words which control the printing of the traffic counts. Of the three fields, NAME and LENGTH are given predefined values by CDA and SCH is given predefined and default values by CDA. The default values are recent changeable by the RC:SCHED message for the header words marked with *. Following are the values set up by CDA.

WORD	NAME	SCH	LENGTH	TYPE OF COUNTS
7	16**	0	0	Starts table
8	14	0	16	Quarter hour 45 min. ago
9	14	0	16	Quarter hour 30 min. ago
10	14	1	16	Quarter hour 15 min. ago
11	14	0	16	Present Quarter hour
12	1	2	1	Cycle count for busy hour
13	1	3	1	Cycle count for non-busy hour
14	1	4	1	Cycle count for daily
15	1	5	1	Cycle count for weekly
16	2	2*	8	Office totals
17	3	4	4	Division of revenue
18	4	0	0	Starts the groups' (MLH,SVC,TRK) counts
19	5	0*	4	Freroute
20	6	0*	5	Class of service
21	7	5*	31	A-Link usage
22	8	5*	3	B-Link usage
23	9	0*	16	Terminal line usage
24	15	6	63	Plant
25	16	0	6	AMA
26	0	0	0	Ends table

** indicates start of table, not AMA.

4. This table is searched by the program. (Figure 33F)

(continued)

FIGURE 33 NOTES (continued)

5. Nightly routine is a schedule of sequential events. The events are:

   1. Office record printout (2 hours and 15 minutes before the HOURS and MINUTES)
   2. Daily printout of D, W & F schedules.
   3. Busy-hour printout from tape of E schedule.
   4. Message register printout.
   5. Set spare selection status bits.
   6. Nightly schedule (includes update of translation file on tape and diagnostics).

6. The value of CHANNO for word 2 (Message Register) is Recent Changeable by the RC:REPT message.

7. This table (Figure 33D) is loaded by Recent Change only, and not by the ODA.

8. Set by the RC program, which subtracts 2 hours and 15 minutes from HOURS and MINUTES.

9. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
MAJ0 to 31	RC:CLS	CLS	-	-	-	The 32 major classes of service all assignable to the class of service registers. 0000 = class not assigned to a register 0001 = class assigned to originating CLS Register 1 0010 = class assigned to originating CLS Register 2 0100 = class assigned to originating CLS Register 3 1000 = class assigned to originating CLS Register 4 1111 = class assigned to terminating CLS register and to originating CLS Register 4
RI1 to 3	RC:INCP	RTI	-	-	-	Route index (Max 3) counts are taken on the route indexes stored in IEIK only when accessed thru the 4-digit translator
HR0 to 23	RC:REPT	SCHED	-	-	-	Hour of day to control collection of traffic data 01 = on the hour 10 = on the half hour 11 = on the hour & half hour (for weekly schedule only)
DED	RC:QH	DED	3400-1	-	33-34	= 1 - dedicated traffic channel
QM	RC:QH	MAINT	3400-1	-	37-38	= 1 - print Q schedule on maintenance TTY
QT	RC:QH	TRF	3400-1	-	35-36	= 1 - print Q schedule on traffic TTY

(continued)

FIGURE 33 NOTES (continued)

10. DATA DESCRIPTION

DATA	DESCRIPTION
FUNCTION	00 = not done at all 01 = nightly routine function
CHANNO	Channel number data is printed out on
TEN	Terminal equipment number being counted for usage
HOURS	Hour of begin of nightly routine in BCD (See Note 5)
HOURSOFR	Hour of begin of office record in BCD (See Note 5,8)
MINUTES	Minutes of begin of nightly routine in BCD (See Note 5)
MINUTESOFR	Minutes of begin of office record in BCD (See Note 5,8)
NAME	5 bit code identifying the traffic measurement (See Note 3) 0 = Reserved (ends search) 1 = Cycle Counts 2 = Office Totals 3 = Division of Revenue 4 = Groups 5 = Preroute 6 = Class of Service 7 = A Link 8 = B Link 9 = Terminal usage 10 = Reserved 11 = Reserved 12 = Reserved 13 = Reserved 14 = Quarter hour 15 = Plant 16 = AMA
SCH	Schedule the traffic measurement prints on (See Note 3) = 0 not scheduled = 1 quarter hour = 2 busy hour = 3 non-busy hour = 4 daily = 5 weekly = 6 plant

FIGURE 33 NOTES (continued)

10. DATA DESCRIPTION

DATA	DESCRIPTION
LENGTH	Number of registers (words) associated with traffic measurement
TR	Trunk or line indicator 0 = line 1 = trunk or service circuit
GROUP NUMBER	Trunk or service circtit group number being ccunted for usage.
MEMBER NUMBER	Trunk or service circuit member number being counted for usage.

FIGURE 34 SCAN LIST (NOTE 1)

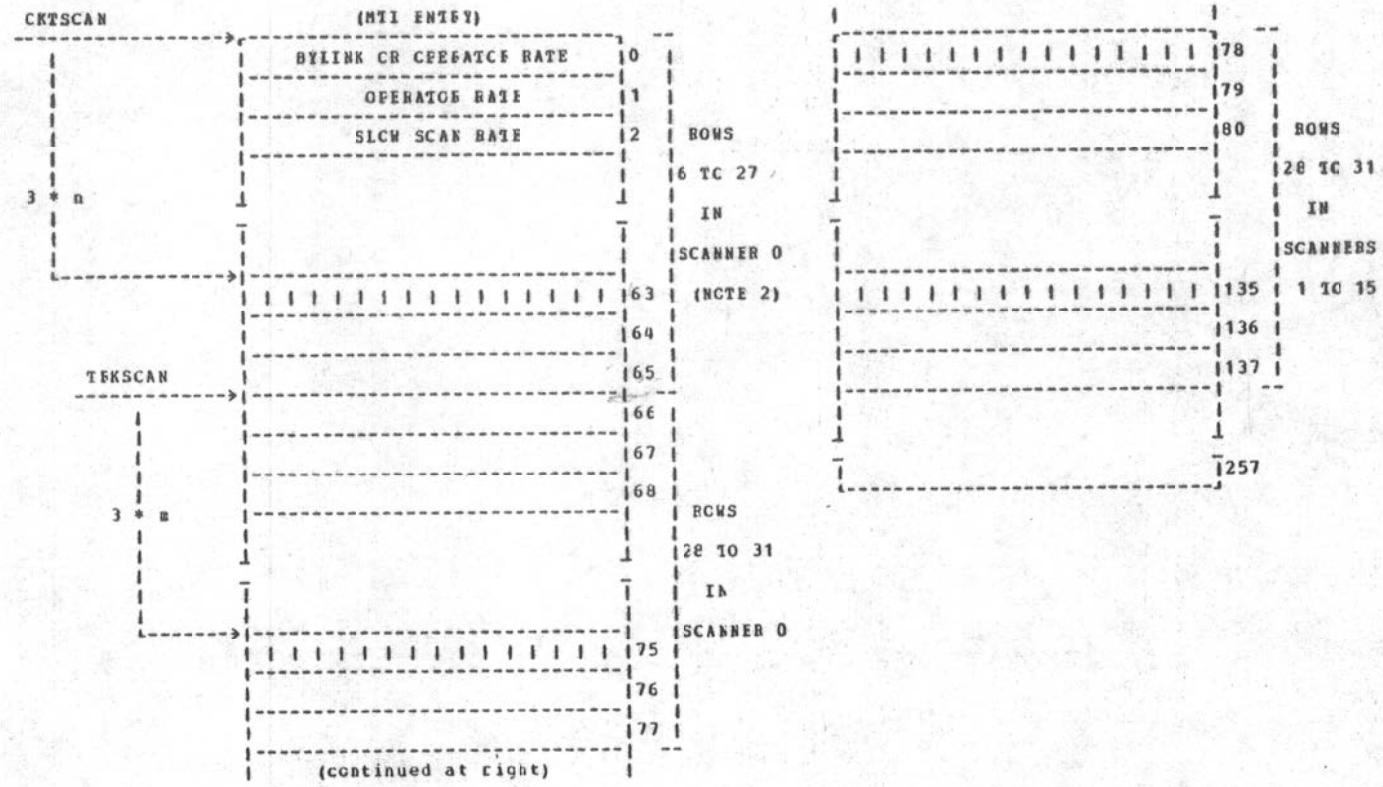


FIGURE 34 (CONTINUED)

NOTES:

1. This scan list is three scan lists in one: a by-link trunk scan list for by-link trunks; an operator trunk scan list for operator trunks; and a slow scan list for other trunks and service circuits. Scan points in the by-link or operator scan list are scanned every fourth interrupt. The slow scan list is scanned every cycle of the base level.

2. Three words per scan row - one bit per word per scan point. Bit = 1 scan points at rates specified.

3. n = Row - 6 for service circuits and LTI trunk (rows 6-27).

4. m = 4 times scanner number + (row-28) for trunk circuits (rows 28-31, scanners 0-15).

5. Bylink or operator = Bylink or operator scan points.

6. Operator = Operator scan points.

7. Slow scan = Slow scan points.

8. Scan Rate Table for Trunks and Service Circuits

TRUNK OR SERVICE CKT	WORD 0 BYLINK OR OPERATOR SCAN	WORD 1 OPERATOR SCAN	WORD 2 SLOW SCAN	NO WORD NO SCAN
Service Ckts by Ckt Code:				
13,14			X	
0-12				X
15,16,18,19				X
Trunk Ckts by Group data:				
BYLK	X			
LTD			X	
RBS			X	
SIG = 1	X	X		
= 2	X	X		
= 3			X	
If none of the above conditions match			X	

FIGURE 35 GROWTH PARAMETERS

FIGURE 35A BY-LINK/OFFRATCE TRUNK SCAN

BOSCAN (MTI ENTRY)

FIGURE 35B LOGICAL SCAN

LOG_SCAN (MTI ENTRY)

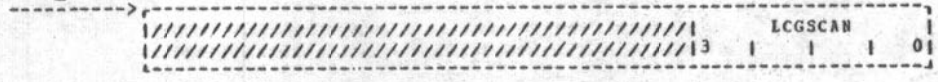


FIGURE 35C NETWORK CONTROLLER

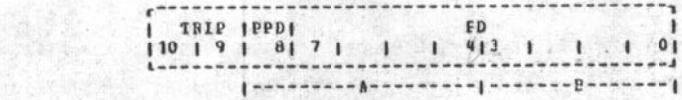
NETWEQET 42700 (MTI ENTRY)

FIGURE 35D NETWORK CONTROLLER FOR MAINTENANCE

NETWMT 42701 (MTI ENTRY)

FIGURE 35E EQUIPPED PERIPHERAL DECODER

DISTRIBUTOR TRIPLET ADDRESS



(continued)

(See NOTES following Figure 35E)

FIGURE 35E EQUIPPED PERIPHERAL DECODER (continued)

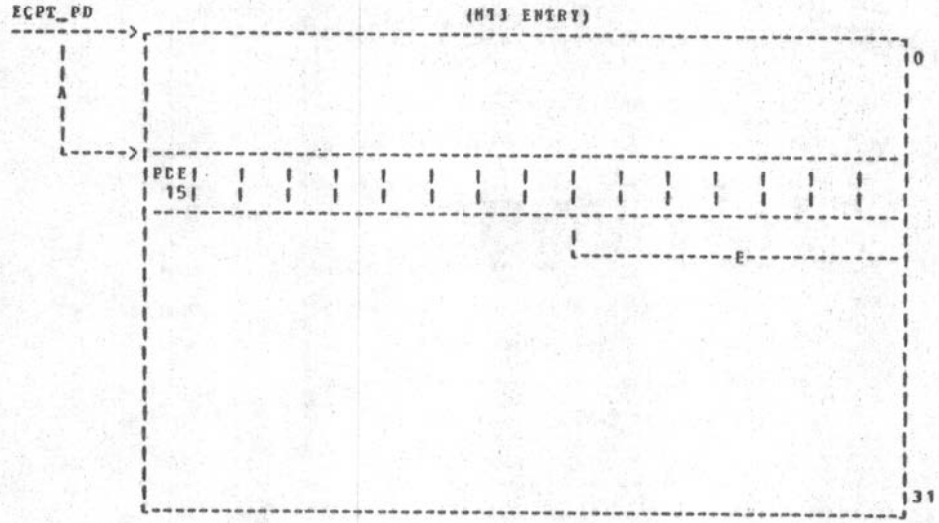


FIGURE 35F FRAMES EQUIPPED MASK - CALL PROCESSING

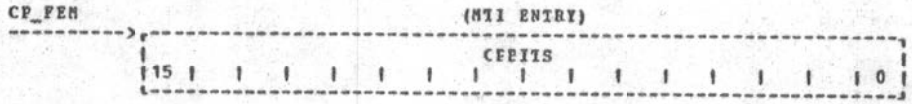


FIGURE 35G FRAMES EQUIPPED MASK - MAINTENANCE

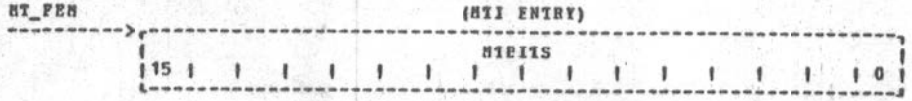
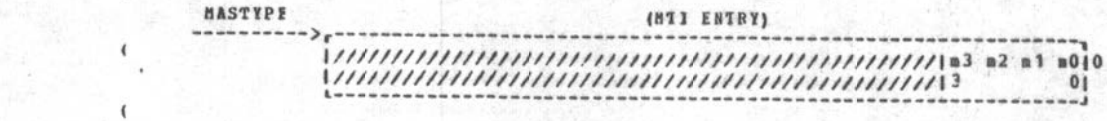


FIGURE 35H MAIN STORE TYPE



NOTES:

1. DATA CROSS-REFERENCE AND DESCRIPTION

DATA	INPUT MESSAGE		ESS FORM			DESCRIPTION
		KEYWORD	NUMBER	ITEM	COLUMN	
NETS	RC:OFFICE	NETS	-	-	-	Defines the number of network control frames 0 = Control frame 0 - network frames 1-7 1 = Control frame 1 - network frames 8-15

2. DATA DESCRIPTION

DATA	DESCRIPTION
BOSCAN	Number of last logical scanner that contains scan points assigned to by-link and/or operator trunks
LCGSCAN	Last equipped logical scanner number
NETN	Highest equipped network controller number
PE	Peripheral decoder of ETA
PDE	Peripheral decoder board is equipped
CPBITS	Each bit indicates which networks are equipped for access by call processing. Bit 0 is always set and indicates the presence of Master Scanner.
MTBITS	Each bit indicates which networks are equipped for access by maintenance. Bit 0 is always set and indicates the presence of Master Scanner.
TRIE	Triplet of Distributor triplet Address (DTA) (Not used in EQPT_FD table)
PPD	Peripheral pulse distributor of ETA.
m(n)	0 = Main store (n) is equipped with JI-2 packs (4K DIP memory devices) 1 = Main store (n) is equipped with JI-16 packs (16K DIP memory devices) Each main store is 256K.