

**ALLOCATING MULTILINE HUNT GROUP (MLHG)  
MANUAL TRANSLATION MODIFICATION PROCEDURE  
NO. 2/2B ELECTRONIC SWITCHING SYSTEM**

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**No. 2 ESS, if the parity is not even when the word is addressed by the ESS program, a system initialization will occur.**

**1.05** A letter a, b, c, etc, added to a step number in the procedures in this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step, or a series of lettered steps, should be made is given in the procedure, and all steps governed by the same condition are designated by the same letter within a procedure. When a condition does not apply, all steps designated by that letter should be omitted.

**1.06** Before starting an MLHG manual translation modification (MTM) procedure, obtain the appropriate MLHG forms. If blank forms are not available, reproducible forms are provided in Fig. 6, 7, and 8.

**1.07** A preprinted number in any blank on a form is to be treated as part of the information contained in that item.

**1.08** The ability to add and subtract in octal and to add in binary is essential in performing the procedures in this section. The size and address of each block will be read out of the No. 2/2B ESS program store in octal in response to a TTY input message. The standard change in Program Store (CHIPS) procedure required to change the program store cards requires an octal input. All address calculation and indexing is done by octal addition and subtraction. Refer to Section 232-127-101, Manual Translation Modification Procedure—General Description, for methods of addition and subtraction in octal, binary-to-octal conversions, and tables for decimal-to-octal conversion.

**1.09** Specified information gathered on the MLHG worksheet will be entered as CHIPS information. ♦This CHIPS information will be used in performing the formatting procedures in Section 232-127-303 for LO-1, EF-1, and EF-2 generic programs or Section 232-327-303 for 2B-EF-1 and later generic programs. This section must be completed before performing one of the following CHIPS procedures:

- 232-090-023 (LO-1, EF-1, and EF-2 generic)
- 232-090-022 (2B-EF-1 and later generic).♦

**1.10** The information needed to define an MLHG or define an expanded table not included in the

CHIPS information sheet must be handled through recent change messages. ♦Refer to Section 232-118-105 for further information concerning recent change messages.♦

## 2. TRANSLATOR DESCRIPTION

**2.01** ♦The multiline hunt group (MLHG) feature is assignable to the LO-1, EF-1, 2B-EF-1 generic programs; and to all noncentrex members of the EF-2, 2B-EF-2, and 2BE3 generic programs.♦ This feature provides that incoming calls be sequentially distributed to available lines belonging to a particular MLHG. This feature is defined by the following MLHG translation tables:

- (a) **PBX/MLHG Head Translator**
- (b) **Group Subtranslator**
- (c) **Call Store Table**
- (d) **Terminal List Table.**

Expanding the MLHG translation tables will often include expanding the **automatic identification outward dial (AIOD) translation table** for PBX centrex-CU customers. For this reason, a procedure for expanding the AIOD is included in this section.

**2.02** The MLHG translation tables are shown in Fig. 1 of this section. A more detailed translation layout is provided in PA-2H2XX. The master table index (MTI) within the PA contains the starting address of the PBX/MLHG head translator table. The head translator table will always be assigned in the generic program. However, the remaining tables may or may not be assigned. Consequently, the MLHG add/change options can be implemented by the following manual translation modification (MTM) procedures:

- (a) **Allocating Initial MLHG Capabilities**
- (b) **Allocating Additional MLHG Capabilities**
- (c) **Expanding Existing Call Store Tables**
- (d) **Expanding Existing Terminal List Tables (No PBX Capability)**
- (e) **Expanding Existing AIOD Tables (PBX Customer Only)**
- (f) **Expanding General Translation Tables.**

**2.03** The MLHG subtranslator is accessed through a combination of the octal MTI PBXEXP address and the binary PBX/MLHG number. Bits 4 through 7 of the MLHG number, when added to the PBXEXP start address, will determine a head translator address. This head translator will contain the starting address of a block of 16 group subtranslators. Bits 3 through 0 of the MLHG number, when multiplied by 8 and added to the PS group subtranslator block start address, will determine the specific group subtranslator address.

**2.04** The MLHG head translator contains 16 words allocated by the generic group. Each word may contain the starting address of a block of 16 group subtranslators. Therefore, a maximum of 255 (range 1 through 255; 0 is unused) multiline hunt groups may be allocated.

**2.05** Each group subtranslator contains eight (0 through 7) words. **Word 3** may address a 2-

word entry within the optional AIOD table. The AIOD table is a block of transient cleared call store, with a length of two times the member list size. The AIOD capability is available to PBX customers with EF-1 and later generic programs.

**2.06** **Word 5** addresses the call store table which contains the status of each member of the MLHG. The call store table can be a maximum of 21 words long depending on the number of status bits required. **Word 6** addresses a 2-word entry within the MLHG terminal list table. A maximum of 255 (1 through 255) of the 2-word entries can be assigned to each MLHG subtranslator.

### 3. PROCEDURE FOR ALLOCATING MLHG CAPABILITY (Use MLH-1 Form)

**3.01** The following procedure details the method for allocating MLHG capabilities. A reproducible copy of the MLH-1 form is contained in Fig. 6. Figure 2 is an example of a completed MLH-1 form.

STEP	PROCEDURE
1	Provide a complete description of the additional MLHG capability to be added to an office by filling out TG form 2105.
2	Enter decimal MLH group number to be added in item 1 of MLH-1 form.
3	Use item 1 to obtain the HEAD TABLE address from Table A. Enter this address in item 2(A).
4	At the maintenance TTY, perform a program store read at address given in item 2.
	<b>For No. 2 ESS Offices</b>
	Type in:
	UB PS:RP:aaaaaa 0 1!
	aaaaaa = item 2.
	System Response:
	UR PS RP aaaaaa bbbbbbbb
	aaaaaa = item 2

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STEP	PROCEDURE
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bbbbbbbb = octal contents.

***For No. 2B ESS Offices***

Type in:

DMP:PS aaaaaa!

aaaaaa = item 2.

System Response:

DMP PS aaaaaa

dd dd dd dd dd dd dd

aaaaaa = item 2

dd = octal contents.

5 Enter the least significant seven digits of octal contents from first word in Step 4 in item 2(B).

6a If item 2(B) is all zero, allocate a new group subtranslator block.

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

Allocate a 128-word block of program store using Section 232-127-302.

***◆For EF-2, 2B-EF-2, and 2BE3 Generic Programs◆***

At maintenance TTY—

Type in:

A RC:PST:0128 00!

System Response:

AR RC PST 0128 00

ADR aaaaaa bbbbbbbb

aaaaaa = octal start address of spare program store

bbbbbbbb = octal stop address of spare program store.

7a Enter octal start address from Step 6a in item 3 and in item 2(C).

STEP	PROCEDURE
<b><i>For LO-1 and EF-1 Generics</i></b>	
8b	If item 14(B) is <i>not</i> all zero, enter the six least significant digits from item 2(B) in item 3. No allocation of program store is necessary.
<b>◆For EF-2, 2B-EF-1, 2B-EF-2 or 2BE3 Generics◆</b>	
9	Use item 1 to obtain the decimal value of N from Table A. Enter this value in item 4.
10	Subtract item 4 from item 1 and enter in item 5.
11	Convert item 5 to octal and enter in item 6. If item 2(B) is not all zero, subtract octal 4000000 from item 2(B) and enter in item 3.
12	Add item 3 to item 6 and enter in item 7(A), word 3.
13	Calculate and enter remaining three addresses in item 7(A) by adding octal 1 to each address preceding the address being calculated.
14	At the maintenance TTY, read eight words of program store starting at address in item 7(A), word 3.
<b><i>For No. 2 ESS Offices</i></b>	
Type in:	
UB PS:RP:aaaaaa ddddddd 2!	
aaaaaa = item 7(A), word 3	
ddddddd = item 7(A), word 5.	
System Response:	
UR PS RP aaaaaa bbbbbbbb ccccccc	
UR PS RP ddddddd eeeeeeee ffffffff	
aaaaaa = item 7(A), word 3	
bbbbbbbb = octal contents of first word	
ccccccc = octal contents of second word	
ddddddd = item 7(A), word 5	
eeeeeee = octal contents of third word	

STEP

PROCEDURE

ffffff = octal contents of fourth word.

***For No. 2B ESS Offices***

Type in:

DMP:PS aaaaaa!

aaaaaa = item 7(A), word 3.

System Response:

DMP PS aaaaaa

dd dd dd dd dd dd dd dd

aaaaaa = item 7(A), word 3

dd = octal contents (must be all zero) starting at address aaaaaa.

- 15 Enter the all zero contents read from Step 14 in item 7(B), words 3 through 6. If contents are not all zero, ensure that MLH group has not been allocated. Do not proceed until all zeros are obtained.
- 16 Determine the number of huntable members required (including spares) and enter in item 8.
- 17 Determine the number of outdial only members required (including spares) and enter in item 9.
- 18 Add item 8 to item 9 and enter in item 10.

**Note:** Item 10 cannot exceed 256.

- 19 Allocate a block of spare program store words for the terminal list table.

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

Allocate the number (ssss) of program store words wanted using Section 232-127-302. The number (ssss) must be equal to  $2 \times \text{item 10} \leq 514$ .

***For EF-2, 2B-EF-2, and 2BE3 Generic Programs***

At maintenance TTY—

Type in:

A RC:PST:ssss 00!

ssss =  $2 \times \text{item 10} + 2 \leq 514$ .

**STEP****PROCEDURE**

System Response:

AR RC PST ssss 00

ADR aaaaaa bbbbbbbb

sss = decimal word size of program store

aaaaaa = octal start address of program store

bbbbbbbb = octal stop address of program store.

- 20 Enter octal start address of terminal list table in item 11.
- 21 Add octal 2 to item 11 and enter in item 7(C), word 6.
- 22 At the maintenance TTY, perform a program store read at address in item 11.

***For No. 2 ESS Offices***

Type in:

UB PS:RP:aaaaaa 0 2!

aaaaaa = item 11.

System Response:

UR PS RP aaaaaa bbbbbbbb ccccccc

aaaaaa = item 11

bbbbbbbb = octal contents of first word

ccccccc = octal contents of second word.

***For No. 2B ESS Offices***

Type in:

DMP:PS aaaaaa!

aaaaaa = item 11.

System Response:

DMP PS aaaaaa

## STEP

## PROCEDURE

dd dd dd dd dd dd dd dd

aaaaaa = item 11

dd = octal contents starting at address aaaaaa.

- 23 Enter octal contents of second word read from Step 22 in item 12.
- 24 Enter in item 13 the decimal total number of 2-word member entries allocated (including spare 2-word entries).
- 25 Subtract item 13 from decimal 257 and enter results in item 14.
- 26 Convert item 14 to octal and enter in item 15.
- 27 Enter item 15 where shown in item 16.
- 28 If AIOD table is *not* required, enter octal 00000000 in item 7(C), word 3.
- 29 If multiline hunt is part of PBX group and AIOD table is required, allocate two call store words less for AIOD than you allocate program store words for the terminal list table ( $2 \times$  item 10).

***For EF-1 and 2B-EF-1 Generic Programs***

Allocate the number of call store words wanted ( $2 \times$  item 10) using Section 232-127-301.

**◆*For EF-2, 2B-EF-2, and 2BE3 Generic Programs*◆**

At maintenance TTY—

Type in:

A RC:CST:ssss 00!

ssss = decimal word size of call store wanted ( $2 \times$  item 10)  $\leq$  512.

System Response:

AR RC CST ssss 00

ADR aaaaaa bbbbbbbb

ssss = decimal word size of call store wanted ( $2 \times$  item 10)  $<$  512.

aaaaaa = octal start address of spare call store

bbbbbbbb = octal stop address of spare call store.

- 30 Enter octal AIOD table start address in item 7(C), word 3.

STEP	PROCEDURE
31	<p>Allocate a spare block of call store words for the call store status table.</p> <p><b><i>For LO-1, EF-1, and 2B-EF-1 Generic Programs</i></b></p> <p>Allocate the number (ssss) of call store words wanted using Section 232-127-301.</p> <p>ssss = decimal value obtained from Table B using number of members in a MLH/PBX group including spares for the range of groups defined.</p> <p><b><i>For EF-2, 2B-EF-2, and 2BE3 Generic Programs</i></b></p> <p>At maintenance TTY—</p> <p>Type in:</p> <p>A RC:CST:ssss 00!</p> <p>ssss = decimal word size of call store wanted <math>\leq 20</math>. Word size is obtained from Table B using number of members in a group as the range of members defined.</p> <p>System Response:</p> <p>AR RC CST ssss 00</p> <p>ADR aaaaaa bbbbbbbb</p> <p>ssss = decimal word size of call store wanted</p> <p>aaaaaa = octal start address of spare call store</p> <p>bbbbbbbb = octal end address of spare call store.</p> <p>32 Enter octal start address of call store in item 7(C), word 5.</p> <p>33 Enter CHIPS information as shown in item 16.</p> <p>34 ♦Transfer CHIPS information from item 26 to appropriate forms of Section 232-127-303 (for LO-1, EF-1, and EF-2 generics) or Section 232-327-303 (for 2B-EF-1 and later generics).♦</p>

**4. PROCEDURE FOR EXPANDING EXISTING TERMINAL LIST TABLE (Use MLH-2 Form)**

**4.01** The following procedure details the means of expanding an existing terminal list table. A

reproducible copy of the MLH-2 form is contained in Fig. 7. An example of a completed MLH-2 form is shown in Fig. 3.

STEP	PROCEDURE
1	Provide a description of call store table by filling out TG form 2105.
2	Enter decimal PBX/MLH group in item 1 of MLH-2 form. (Example shown in Fig. 3.)
3	Use item 1 to obtain the octal HEAD TABLE address from Table A. Enter this address in item 2(A).
4	At the maintenance TTY, enter a program store read message using the address in item 2(A) and enter octal contents in item 2(B).
	<b><i>For No. 2 ESS Offices</i></b>
	Type in:
	UB PS:RP:aaaaaa 0 1!
	aaaaaa = item 2(A).
	System Response:
	UR PS RP aaaaaa bbbbbbbb
	aaaaaa = item 2(A)
	bbbbbbbb = item 2(B).
	<b><i>For No. 2B ESS Offices</i></b>
	Type in:
	DMP:PS aaaaaa!
	aaaaaa = item 2(A).
	System Response:
	DMP PS aaaaaa
	dd dd dd dd dd dd dd dd
	aaaaaa = item 2(A)
	dd = item 2(B).
	<b><i>For LO-1 and EF-1 Generics</i></b>
5	Enter the least significant six digits of item 2(B) in item 5.
	<b><i>For EF-2, 2B-EF-1, and 2B-EF-2 Generics</i></b>
	Subtract octal 4000000 from item 2(B) and enter the seven least significant digits in item 3.

STEP	PROCEDURE
6	Use item 1 to obtain the decimal value of N from Table A. Enter this value in item 4.
7	Subtract item 4 from item 1 and enter in item 5.
8	Convert item 5 to octal and enter item 6.
9	Add item 6 to item 3 and enter in item 7(A), word 3.
10	Calculate and enter remaining three addresses in item 7(A) by adding octal 1 to the address preceding the address being calculated.
11	At the maintenance TTY, enter a program store read message using address in item 7(A), word 3.

***For No. 2 ESS Offices***

Type in:

UB PS:RP:aaaaaa ddddddd 2!

aaaaaa = item 7(A), word 3

ddddddd = item 7(A), word 5.

System Response:

UR PS RP aaaaaa bbbbbbbb ccccccc

UR PS RP ddddddd eeeeeeee ffffffff

aaaaaa = item 7(A), word 3

bbbbbbb = octal contents of item 7(B), word 3

ccccccc = octal contents of item 7(B), word 4

ddddddd = item 7(A), word 5

eeeeeee = octal contents of item 7(B), word 5

fffffff = octal contents of item 7(B), word 6.

***For No. 2B ESS Offices***

Type in:

DMP:PS aaaaaa

aaaaaa = item 7(A), word 3.

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STEP

PROCEDURE

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System Response:

DMP PS aaaaaa

dd dd dd dd dd dd dd dd

aaaaaa = item 7(A), word 3

dd = octal contents beginning at address aaaaaa.

- 12 Enter least significant seven digits of the first four words of octal contents from Step 11 in item 7(B).
- 13 Subtract octal 2 from item 7(B), word 6 and enter results in item 8.
- 14 At the maintenance TTY, perform a program store read at address in item 8.

***For No. 2 ESS Offices***

Type in:

UB PS:RP:aaaaaa 0 2!

aaaaaa = item 8.

System Response:

UR PS RP aaaaaa bbbbbbbb cccccccc

aaaaaa = item 8

bbbbbbbb = octal contents of first word

ccccccc = octal contents of second word.

***For No. 2B ESS Offices***

Type in:

DMP:PS aaaaaa!

aaaaaa = item 8.

System Response:

DMP PS aaaaaa

dd dd dd dd dd dd dd dd

---

STEP	PROCEDURE
	aaaaaa = item 8
	dd = octal contents starting at address aaaaaa.
15	Convert the contents of the second word to binary and enter in item 9.
16	Convert bits 7 through 0 of item 9 to octal and enter in item 10.
17	Convert item 10 to decimal and enter in item 11.
18	Subtract item 11 from decimal 257 and enter in item 12.
19	Multiply item 12 by 2 and enter results in item 13.
	<b>Note:</b> The terminal list table cannot be expanded beyond 514 words.
20	Convert item 13 to octal and enter in item 14.
21	Add item 14 to item 7(B), word 6 and enter in item 15.
22	Enter the decimal number of additional terminal entries to be allocated in item 16.
23	Add item 12 to item 16 and enter in item 17.
24	Multiply item 17 by 2, then add decimal 2 and enter results in item 18.
25	Subtract item 17 from decimal 256 and enter in item 19.
26	Convert item 19 to octal and enter in item 20.
27	Convert item 20 to binary and enter as shown in item 21. Transfer bits 20 through 13 directly from item 9 and enter in item 21.
28	Convert resulting 22-bit word into octal and enter in item 22.
29	Perform general translation table expansion procedure in Part 5 using item 18 as decimal word size of program store to be allocated. Do not exceed 514 words.
30	Enter item 2(A) of GNX-1 <b>NEW</b> form in item 23 of MLH-2 form.
31	Add octal 2 to item 23 and enter in item 24.
	<b>Note:</b> Expanding the terminal list table may require expanding the call store status block. Perform Steps 32 through 34 to determine if call store expansion is necessary.

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STEP	PROCEDURE
32	Obtain K, the decimal length of existing call store table from Table B using total number of existing MLH groups as the range of members defined. Enter K in item 25.
33	Obtain L, the decimal length of new call store table from Table B using total number of existing MLH groups plus new MLH groups allocated as the range of members defined. Enter L in item 26.
34	If $L = K$ , enter item 7(B), word 5 in item 7(C), word 5 and go to Step 37. <b>Note:</b> If $L = 20$ words, the call store table cannot be expanded.
35	Allocate a new block of spare call store using the calculated value in item 26 as word size. <b>For LO-1, EF-1, and 2B-EF-1 Generic Programs</b> Allocate the number of call store words wanted using Section 232-127-301.
	<b>◆For EF-2, 2B-EF-2, and 2BE3 Generic Programs</b>
	Type in:
	A RC:CST:ssss 00!
	ssss = decimal word size of call store wanted (item 26).
	System Response:
	AR RC CST ssss 00
	ADR aaaaaa bbbbbbbb
	ssss = decimal word size of call store wanted (item 26)
	aaaaaa = octal first address of spare call store
	bbbbbbbb = octal last address of spare call store.
36	Enter aaaaaa from Step 35 in item 7(C), word 5.
37	If PBX did not have AIOD capability, enter all zeros in item 7(C), word 3 and proceed to Step 42. Otherwise, enter the decimal number of additional AIOD member 2-word entries to be allocated in item 27.
38	Add item 11 to item 27 and enter in item 28.
39	Multiply item 28 by 2 and enter results in item 29.
	<b>Note:</b> The AIOD table cannot be expanded beyond 512 words. The total number of allocated AIOD members should be equal to the total number of allocated terminal members.

STEP	PROCEDURE
40	Allocate a spare block of call store words for the new AIOD table using decimal word size given in item 29.
	<b><i>For EF-1 and 2B-EF-1 Generic Programs</i></b>
	Allocate the number of call store words wanted using Section 232-127-301.
	<b>◆For EF-2, 2B-EF-2, and 2BE3 Generic Programs◆</b>
	At maintenance TTY—
	Type in:
	A RC:CST:ssss zz!
	ssss = decimal word size of call store wanted (item 29)
	zz = decimal number of low zeros wanted.
	System Response:
	AR RC CST ssss zz
	ADR aaaaaa bbbbbbbb
	ssss = decimal word size of call store wanted (item 29)
	aaaaaa = octal start address of spare call store
	bbbbbbbb = octal stop address of spare call store.
41	Enter the octal start address of spare call store from Step 40 in item 7(C), word 3.
42	Using information in item 7, build CHIPS information sheet as shown in item 31.
43	<b>◆Transfer CHIPS information on appropriate forms of Section 232-127-303 (for EF-1 and EF-2 generics) or 232-327-303 (for 2B-EF-1 and later generics).◆</b>

**5. PROCEDURE FOR EXPANDING GENERAL TRANSLATION TABLES USING PROGRAM STORE MEMORY (Use GNX-1 Form)**

expanding general translation tables using program store memory. A reproducible copy of the GNX-1 form can be obtained from Fig. 8.

**5.01** The following procedure details the means for

STEP	PROCEDURE
1	Obtain a copy of the GNX-1 form and circle <i>OLD</i> in item 1. (Example shown in Fig. 4).
2	Enter octal start address of table to be returned to spare in the top row of item 2(A).
3	Fill in subsequent addresses in item 2(A) by adding the given octal increments until the stop address of the table to be returned to spare is reached.
4	Repeat the following message until the contents of all listed addresses are read.  At maintenance TTY—  <i>For No. 2 ESS Offices</i>  Type in:  UB PS:RP:aaaaaa bbbbbbbb c!  aaaaaa = octal starting location of first group to be read  bbbbbbbb = octal starting location of second group to be read  c = number of words to be read (1-2)  Blank is synonymous with 2.  System Response:  UR PS RP aaaaaa bbbbbbbb ccccccc  aaaaaa = octal first address of program store read  bbbbbbbb = octal contents of first word  ccccccc = octal contents of second word.  <i>Note:</i> If two address blocks are requested, two of these messages will print.  <i>For No. 2B ESS Offices</i>  Type in:  DMP:PS aaaaaa, LENGTH nn!  aaaaaa = octal start address  nn = decimal number of words to be read.  System Response:  DMP PS aaaaaa

STEP	PROCEDURE
	<p>dd dd dd dd dd dd dd dd</p> <p>aaaaaa = octal start address</p> <p>dd = octal contents beginning at address aaaaaa.</p>
5	Enter the octal contents in item 2(B) of all addresses listed in item 2(A).
6	Enter all zeros in item 2(C) for all addresses listed in item 2(A).
7	Fill in the CHIPS Address Range information listed in the heading.
8	Obtain a second copy of the GNX-1 form and circle <b>NEW</b> in item 1. (Example shown in Fig. 5).
9	Using the following message, allocate new block of program store.
	<p><b><i>For LO-1, EF-1, and 2B-EF-1 Generic Programs</i></b></p> <p>Allocate number of program store words wanted using Section 232-127-302.</p> <p><b><i>For EF-2, 2B-EF-2, and 2BE3 Generic Programs</i></b></p> <p>At maintenance TTY—</p> <p>Type in:</p> <p>A RC:PST ssss zz!</p> <p>ssss = decimal block size of program store wanted</p> <p>zz = 00.</p> <p>System Response:</p> <p>AR RC PST ssss zz</p> <p>ADR aaaaaa bbbbbbbb</p> <p>END</p> <p>ssss = decimal block size of program store wanted</p> <p>zz = 00</p> <p>aaaaaa = octal start address of spare program store</p>

STEP	PROCEDURE
	bbbbbbbb = octal stop address of spare program store.
10	Enter the octal start address of table to be added in the top row of item 2(A).
11	Fill in subsequent addresses in item 2(A) by adding the given octal increments until the step address of the table to be added is reached.
12	Fill in the CHIPS Address Range information located in the heading.
13	Repeat the following message until the contents of all listed addresses are read.  At maintenance TTY—  <b><i>For No. 2 ESS Offices</i></b>  Type in:  UB PS:RP:aaaaaa bbbbbbbb c!  aaaaaa = octal starting location of first group to be read  bbbbbbbb = octal starting location of second group to be read  c = number of words to be read (1-2)  Blank is synonymous with 2.  System Response:  UR PS RP aaaaaa 00000000 00000000  aaaaaa = octal first address of program store read.  <b><i>Note:</i></b> If two address blocks are requested, two of these messages will print.  <b><i>For No. 2B ESS Offices</i></b>  Type in:  DMP:PS aaaaaa, LENGTH nn!  aaaaaa = octal start address  nn = decimal number of words to be read.  System Response:  DMP PS aaaaaa

STEP	PROCEDURE
	00 00 00 00 00 00 00 00
	aaaaaa = octal start address.
	<b>Caution:</b> <i>If the contents at any address read nonzero, an error condition is possible. Do not proceed until all zeros are obtained at each address.</i>
14	Enter all zeros in item 2(B) for all addresses listed in item 2(A).
15	Starting with the top row, transfer the contents of item 2(B) <b>initial contents</b> located in the <b>OLD</b> form to item 2(C) <b>new contents</b> shown in the <b>NEW</b> form.

♦TABLE A♦

PBXEXP ADDRESS TABLE

RANGE	LO-1 GENERIC ADDRESS	EF-1 GENERIC ADDRESS	EF-2 GENERIC ADDRESS	2B-EF-1 GENERIC ADDRESS	2B-EF-2 GENERIC ADDRESS	2BE3 GENERIC ADDRESS	N
0 to 15	240423	340423	440423	640423	740423	1240423	0
16 to 31	240424	340424	440424	640424	740424	1240424	16
32 to 47	240425	340425	440425	640425	740425	1240425	32
48 to 63	240426	340426	440426	640426	740426	1240426	48
64 to 79	240427	340427	440427	640427	740427	1240427	64
80 to 95	240430	340430	440430	640430	740430	1240430	80
96 to 111	240431	340431	440431	640431	740431	1240431	96
112 to 127	240432	340432	440432	640432	740432	1240432	112
128 to 143	240433	340433	440433	640433	740433	1240433	128
144 to 159	240434	340434	440434	640434	740434	1240434	144
160 to 175	240435	340435	440435	640435	740435	1240435	160
176 to 191	240436	340436	440436	640436	740436	1240436	176
192 to 207	240437	340437	440437	640437	740437	1240437	192
208 to 223	240440	340440	440440	640440	740440	1240440	208
224 to 239	240441	340441	440441	640441	740441	1240441	224
240 to 255	240442	340442	440442	640442	740442	1240442	240

**TABLE B**  
**TRUNK SERVICE CIRCUIT GROUP CALL STORE STATUS**  
**BLOCK SIZE INDEX TABLE**

MEMBERS DEFINED	INDEX FOR NUMBER OF CS STATUS BLOCK WORDS	
	DECIMAL	OCTAL
1 to 16	4	4
17 to 32	5	5
33 to 48	6	6
49 to 64	7	7
65 to 80	8	10
81 to 96	9	11
97 to 112	10	12
113 to 128	11	13
129 to 144	12	14
145 to 160	13	15
161 to 176	14	16
177 to 192	15	17
193 to 208	16	20
209 to 224	17	21
225 to 240	18	22
241 to 256	19	23
257 to 272	20	24
273 to 288	21	25
289 to 304	22	26
305 to 320	23	27
321 to 336	24	30
337 to 352	25	31
353 to 368	26	32
369 to 384	27	33
385 to 400	28	34
401 to 416	29	35
417 to 432	30	36
433 to 448	31	37
449 to 464	32	40
465 to 480	33	41
481 to 496	34	42
497 to 512	35	43

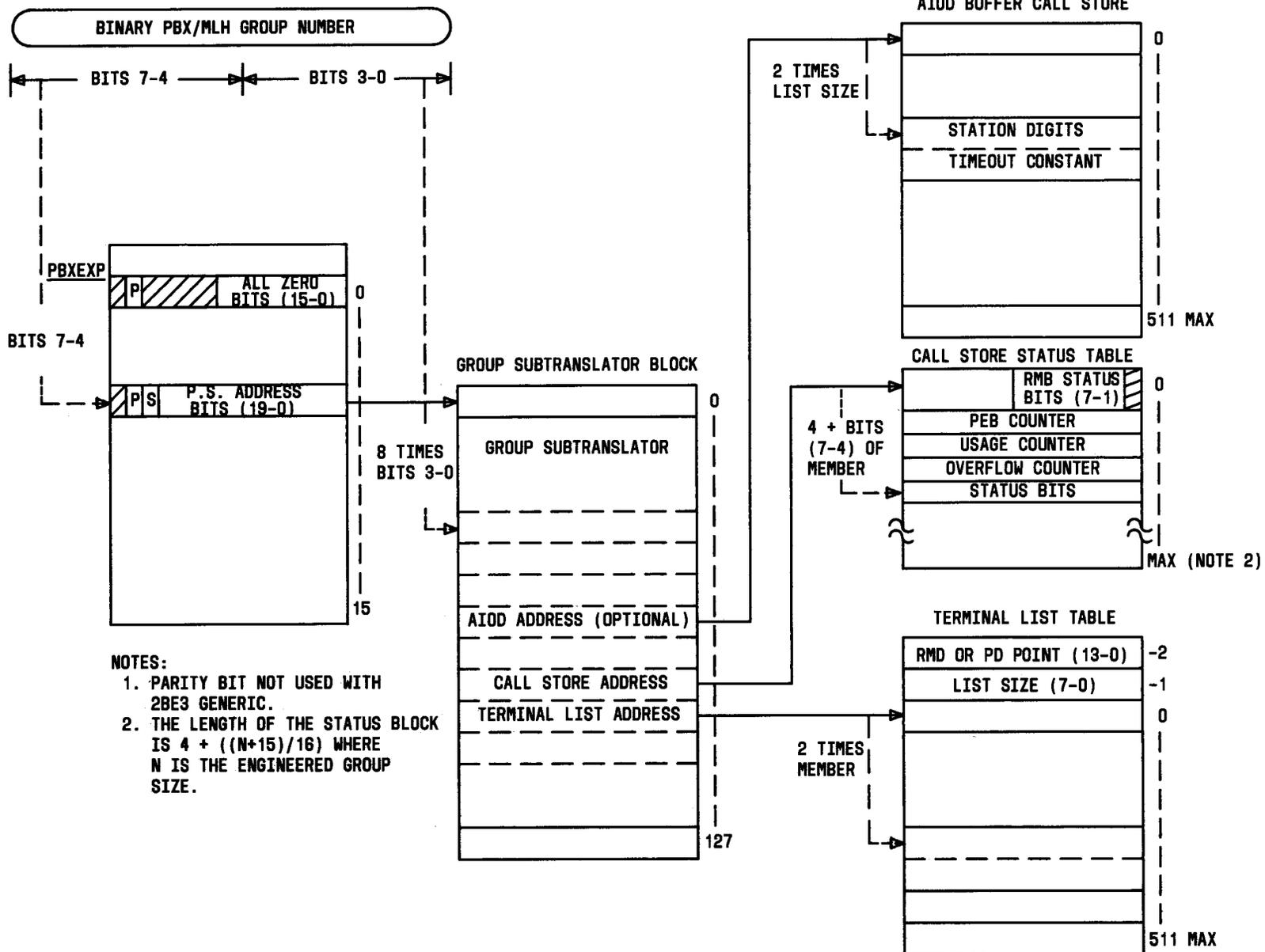


Fig. 1—Multiline Hunt Group Translations

SECTION 232-127-313

OFFICE \_\_\_\_\_  
 DATE \_\_\_\_\_

MULTILINE HUNT  
 ALLOCATION WORKSHEET

MLH-1 FORM

CHIPS ADDRESS RANGE ( \_\_\_\_\_ ) ( \_\_\_\_\_ )

Note: When completing forms enter data from right to left starting with the least significant digit.

1. DECIMAL MLH GRP NO. =   5

2. HEAD TRANSLATOR TABLE (OCTAL)

(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
<u>  740423</u>	<u>  5322551</u>	_____

3. OCTAL GROUP SUBTRANSLATOR BLOCK START ADDRESS =  1322551

4. DECIMAL N =   0

5. DECIMAL Z =   5

6. ITEM 5 MULTIPLIED BY 8 PLUS 3 AND CONVERTED TO OCTAL =  53

7. GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	<u> 1322624</u>	<u> 00000000</u>	<u> 00000000</u>
WORD 4	<u> 1322625</u>	<u> 00000000</u>	<u> X X X X X X X</u>
WORD 5	<u> 1322626</u>	<u> 00000000</u>	<u> 00135214</u>
WORD 6	<u> 1322627</u>	<u> 00000000</u>	<u> 01327102</u>

8. HUNTABLE MEMBERS REQUIRED (INCLUDING SPARES) =   2

9. OUTDIAL ONLY MEMBERS (INCLUDING SPARES) =   3

10. SUM OF ITEM (8) AND ITEM (9) =   5

11. OCTAL TERMINAL LIST ADDRESS =  1327100

12. OCTAL CONTENTS =  00011603

13. DECIMAL MEMBER ENTRIES =  20

14. DECIMAL 257 MINUS ITEM 13 =  237

15. NEW OCTAL CONTENTS =  0000355

Fig. 2—Example of Completed MLH-1 Form (Sheet 1 of 2)

MLH-1 FORM

16. CHIPS INFORMATION

HEAD TRANSLATOR TABLE (NOT REQUIRED IF ITEM 2(C) IS BLANK)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
	<u>ITEM 2(A)</u>	<u>ITEM 2(B)</u>	<u>ITEM 2(C)</u>

GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	<u>1322624</u> ITEM 7(A)	<u>00000000</u> ITEM 7(B)	<u>00000000</u> ITEM 7(C)
WORD 5	<u>1322626</u> ITEM 7(A)	<u>00000000</u> ITEM 7(B)	<u>00135214</u> ITEM 7(C)
WORD 6	<u>1322627</u> ITEM 7(A)	<u>00000000</u> ITEM 7(B)	<u>01327102</u> ITEM 7(C)

TERMINAL LIST TABLE

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
	<u>1327101</u> ITEM 9 + OCTAL 1	<u>00011603</u> ITEM 12	<u>00000355</u> ITEM 15

Fig. 2—Example of Completed MLH-1 Form (Sheet 2 of 2)

**SECTION 232-127-313**

OFFICE \_\_\_\_\_  
 DATE \_\_\_\_\_

**MLH TERMINAL LIST TABLE  
 EXPANSION WORKSHEET**

MLH-2 FORM

CHIPS ADDRESS RANGE ( \_\_\_\_\_ ) ( \_\_\_\_\_ )

**Note: When completing forms enter data from right to left starting with the least significant digit.**

1. DECIMAL MLH GRP NO. = 28
2. HEAD TRANSLATOR TABLE (OCTAL)
  - (A) ADDRESS                      (B) INITIAL CONTENTS
  - 740424                      5222571
3. OCTAL GROUP SUBTRANSLATOR BLOCK START ADDRESS = 1222571
4. DECIMAL N = 16
5. DECIMAL Z = 12
6. ITEM 5 MULTIPLIED BY 8 PLUS 3 AND CONVERTED TO OCTAL = 143
7. GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	<u>1222734</u>	<u>00000000</u>	<u>00000000</u>
WORD 4	<u>1222735</u>	<u>00000000</u>	<u>XXXXXXXX</u>
WORD 5	<u>1222736</u>	<u>10134400</u>	<u>10134400</u>
WORD 6	<u>1222737</u>	<u>11466430</u>	<u>11512223</u>

8. TERMINAL LIST OCTAL START ADDRESS = \_\_\_\_\_
9. SECOND WORD CONVERTED TO BINARY
  - BITS 20-13                      BITS 12-8                      BITS 7-0
  - 00000000                      00000                      11101011
10. BITS 7-0 OF SECOND WORD CONVERTED TO OCTAL = 353
11. ITEM 10 CONVERTED TO DECIMAL = 245
12. DECIMAL TERMINAL LIST SIZE PLUS 1 = 12
13. TWO TIMES ITEM 12 = 24
14. ITEM 13 CONVERTED TO OCTAL = 30
15. TERMINAL LIST OCTAL END ADDRESS = 11466460
16. ADDITIONAL ENTRIES WANTED = 5
17. TOTAL 2 WORD ENTRIES WANTED = 17

**Fig. 3—Example of Completed MLH-2 Form (Sheet 1 of 2)**

18. 2 TIMES ITEM 17 PLUS 2 = 36
19. DECIMAL 256 MINUS ITEM 17 = 239
20. ITEM 19 CONVERTED TO OCTAL = 357
21.           BITS 20-13                      BITS 12-8                      BITS 7-0  
           00000000                      00000                      11101111
22. CONVERTED TO OCTAL = 0000357
23. NEW OCTAL START ADDRESS = 1001221
24. NEW OCTAL POINTER ADDRESS = 1001223
25. DECIMAL K = 5
26. DECIMAL L = 5
27. ADDITIONAL DECIMAL AIOD MEMBERS REQUIRED =
28. NEW DECIMAL AIOD TABLE ENTRY SIZE =
29. NEW DECIMAL AIOD TABLE WORD SIZE =
30. NEW OCTAL AIOD START ADDRESS =
31. CHIPS INFORMATION

GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	<u>1222734</u> ITEM 7(A)	<u>00000000</u> ITEM 7(B)	<u>00000000</u> ITEM 7(C)
WORD 5	<u>1222736</u> ITEM 7(A)	<u>10134400</u> ITEM 7(B)	<u>10134400</u> ITEM 7(C)
WORD 6	<u>1222737</u> ITEM 7(A)	<u>11466430</u> ITEM 7(B)	<u>1512223</u> ITEM 7(C)

Fig. 3—Example of Completed MLH-2 Form (Sheet 2 of 2)

OFFICE E. Glendale  
 DATE 5-20-79

GENERAL TRANSLATION  
 TABLE EXPANSION WORKSHEET

GNX-1 FORM

CHIPS Address Range (174531) (175061)  
 START STOP

1. Circle *NEW* or **OLD**

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

2.	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START	<u>174531</u>	<u>14326100</u>	<u>00000000</u>
START + 1 OCT	<u>174532</u>	<u>17211101</u>	-----
START + 2 OCT	<u>174533</u>	<u>12710443</u>	-----
START + 3 OCT	<u>174534</u>	<u>03772151</u>	-----
START + 4 OCT	<u>174535</u>	<u>01112231</u>	-----
START + 5 OCT	<u>174536</u>	<u>11114121</u>	-----
START + 6 OCT	<u>174537</u>	<u>02311532</u>	-----
START + 7 OCT	<u>174540</u>	<u>14322671</u>	-----
START +10 OCT	<u>174541</u>	<u>03211433</u>	<u>00000000</u>

START +322 OCT	<u>175053</u>	<u>11032110</u>	<u>00000000</u>
START +323 OCT	<u>175054</u>	<u>02221101</u>	-----
START +324 OCT	<u>175055</u>	<u>16632211</u>	-----
START +325 OCT	<u>175056</u>	<u>06531100</u>	-----
START +326 OCT	<u>175057</u>	<u>01225543</u>	-----
START +327 OCT	<u>175060</u>	<u>11021106</u>	-----
START +330 OCT	<u>175061</u>	<u>05100210</u>	<u>00000000</u>

Fig. 4—Example of Completed GNX-1 Form (With OLD Circled)

OFFICE E. Glendale  
 DATE 5-20-79

GENERAL TRANSLATION  
 TABLE EXPANSION WORKSHEET

GNX-1 FORM

CHIPS Address Range (1001221) (1001551)  
 START STOP

1. Circle **NEW** or OLD

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

2.	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START	<u>1001221</u>	<u>00000000</u>	<u>01124101</u>
START + 1 OCT	<u>1001222</u>	-----	<u>10001211</u>
START + 2 OCT	<u>1001223</u>	-----	<u>11132233</u>
START + 3 OCT	<u>1001224</u>	-----	<u>12113421</u>
START + 4 OCT	<u>1001225</u>	-----	<u>14320001</u>
START + 5 OCT	<u>1001226</u>	-----	<u>10326711</u>
START + 6 OCT	<u>1001227</u>	-----	<u>00010222</u>
START + 7 OCT	<u>1001230</u>	-----	<u>01234551</u>
START +10 OCT	<u>1001231</u>	<u>00000000</u>	<u>00102112</u>

START +322 OCT	<u>1001543</u>	<u>00000000</u>	<u>00213211</u>
START +323 OCT	<u>1001544</u>	-----	<u>10125200</u>
START +324 OCT	<u>1001545</u>	-----	<u>11232600</u>
START +325 OCT	<u>1001546</u>	-----	<u>11132521</u>
START +326 OCT	<u>1001547</u>	-----	<u>10121152</u>
START +327 OCT	<u>1001550</u>	-----	<u>00024102</u>
START +330 OCT	<u>1001551</u>	<u>00000000</u>	<u>00010100</u>

Fig. 5—Example of Completed GNX-1 Form (With NEW Circled)

**SECTION 232-127-313**

OFFICE \_\_\_\_\_  
 DATE \_\_\_\_\_

**MULTILINE HUNT  
 ALLOCATION WORKSHEET**

MLH-1 FORM

CHIPS ADDRESS RANGE ( \_\_\_\_\_ ) ( \_\_\_\_\_ )

**Note: When completing forms enter data from right to left starting with the least significant digit.**

1. DECIMAL MLH GRP NO. = \_ \_ \_

2. HEAD TRANSLATOR TABLE (OCTAL)

(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
-------------	----------------------	------------------

_ _ _ _ _	_ _ _ _ _	_ _ _ _ _
-----------	-----------	-----------

3. OCTAL GROUP SUBTRANSLATOR BLOCK START ADDRESS = \_ \_ \_ \_ \_

4. DECIMAL N = \_ \_ \_

5. DECIMAL Z = \_ \_

6. ITEM 5 MULTIPLIED BY 8 PLUS 3 AND CONVERTED TO OCTAL = \_ \_ 3

7. GROUP SUBTRANSLATOR (OCTAL)

(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
-------------	----------------------	------------------

WORD 3	_ _ _ _ _	_ _ _ _ _	_ _ _ _ _
WORD 4	_ _ _ _ _	_ _ _ _ _	<u>X X X X X X X X</u>
WORD 5	_ _ _ _ _	_ _ _ _ _	_ _ _ _ _
WORD 6	_ _ _ _ _	_ _ _ _ _	_ _ _ _ _

8. HUNTABLE MEMBERS REQUIRED (INCLUDING SPARES) = \_ \_ \_

9. OUTDIAL ONLY MEMBERS (INCLUDING SPARES) = \_ \_ \_

10. SUM OF ITEM (8) AND ITEM (9) = \_ \_ \_

11. OCTAL TERMINAL LIST ADDRESS = \_ \_ \_ \_ \_

12. OCTAL CONTENTS = \_ \_ \_ \_ \_

13. DECIMAL MEMBER ENTRIES = \_ \_ \_

14. DECIMAL 257 MINUS ITEM 13 = \_ \_ \_

15. NEW OCTAL CONTENTS = 0 0 0 0 \_ \_ \_

**Fig. 6—MLH-1 Form (Sheet 1 of 2)**

MLH-1 FORM

## 16. CHIPS INFORMATION

## HEAD TRANSLATOR TABLE (NOT REQUIRED IF ITEM 2(C) IS BLANK)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
	ITEM 2(A)	ITEM 2(B)	ITEM 2(C)

## GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	ITEM 7(A)	ITEM 7(B)	ITEM 7(C)
WORD 5	ITEM 7(A)	ITEM 7(B)	ITEM 7(C)
WORD 6	ITEM 7(A)	ITEM 7(B)	ITEM 7(C)

## TERMINAL LIST TABLE

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
	ITEM 9 + OCTAL 1	ITEM 12	ITEM 15

Fig. 6—MLH-1 Form (Sheet 2 of 2)

**SECTION 232-127-313**

OFFICE \_\_\_\_\_  
 DATE \_\_\_\_\_

**MLH TERMINAL LIST TABLE  
 EXPANSION WORKSHEET**

MLH-2 FORM

CHIPS ADDRESS RANGE ( \_\_\_\_\_ ) ( \_\_\_\_\_ )

**Note: When completing forms enter data from right to left starting with the least significant digit.**

1. DECIMAL MLH GRP NO. = \_\_\_\_\_
2. HEAD TRANSLATOR TABLE (OCTAL)
  - (A) ADDRESS
  - (B) INITIAL CONTENTS
3. OCTAL GROUP SUBTRANSLATOR BLOCK START ADDRESS = \_\_\_\_\_
4. DECIMAL N = \_\_\_\_\_
5. DECIMAL Z = \_\_\_\_\_
6. ITEM 5 MULTIPLIED BY 8 PLUS 3 AND CONVERTED TO OCTAL = \_\_\_\_\_
7. GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	_____	_____	_____
WORD 4	_____	_____	_____
WORD 5	_____	_____	_____
WORD 6	_____	_____	_____

8. TERMINAL LIST OCTAL START ADDRESS = \_\_\_\_\_
9. SECOND WORD CONVERTED TO BINARY
  - BITS 20-13
  - BITS 12-8
  - BITS 7-0
10. BITS 7-0 OF SECOND WORD CONVERTED TO OCTAL = \_\_\_\_\_
11. ITEM 10 CONVERTED TO DECIMAL = \_\_\_\_\_
12. DECIMAL TERMINAL LIST SIZE PLUS 1 = \_\_\_\_\_
13. TWO TIMES ITEM 12 = \_\_\_\_\_
14. ITEM 13 CONVERTED TO OCTAL = \_\_\_\_\_
15. TERMINAL LIST OCTAL END ADDRESS = \_\_\_\_\_
16. ADDITIONAL ENTRIES WANTED = \_\_\_\_\_
17. TOTAL 2 WORD ENTRIES WANTED = \_\_\_\_\_

**Fig. 7—MLH-2 Form (Sheet 1 of 2)**

- 18. 2 TIMES ITEM 17 PLUS 2 = \_ \_ \_
- 19. DECIMAL 256 MINUS ITEM 17 = \_ \_ \_
- 20. ITEM 19 CONVERTED TO OCTAL = \_ \_ \_
- 21.       BITS 20-13               BITS 12-8               BITS 7-0  
       \_ \_ \_ \_ \_               \_ \_ \_ \_ \_               \_ \_ \_ \_ \_
- 22. CONVERTED TO OCTAL = \_ \_ \_ \_ \_
- 23. NEW OCTAL START ADDRESS = \_ \_ \_ \_ \_
- 24. NEW OCTAL POINTER ADDRESS = \_ \_ \_ \_ \_
- 25. DECIMAL K = \_ \_ \_
- 26. DECIMAL L = \_ \_ \_
- 27. ADDITIONAL DECIMAL AIOD MEMBERS REQUIRED = \_ \_ \_
- 28. NEW DECIMAL AIOD TABLE ENTRY SIZE = \_ \_ \_
- 29. NEW DECIMAL AIOD TABLE WORD SIZE = \_ \_ \_
- 30. NEW OCTAL AIOD START ADDRESS = \_ \_ \_ \_ \_
- 31. CHIPS INFORMATION

GROUP SUBTRANSLATOR (OCTAL)

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
WORD 3	— ITEM 7(A) —	— ITEM 7(B) —	— ITEM 7(C) —
WORD 5	— ITEM 7(A) —	— ITEM 7(B) —	— ITEM 7(C) —
WORD 6	— ITEM 7(A) —	— ITEM 7(B) —	— ITEM 7(C) —

Fig. 7—MLH-2 Form (Sheet 2 of 2)



Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +32 OCT	-----	-----	-----
START +33 OCT	-----	-----	-----
START +34 OCT	-----	-----	-----
START +35 OCT	-----	-----	-----
START +36 OCT	-----	-----	-----
START +37 OCT	-----	-----	-----
START +40 OCT	-----	-----	-----
START +41 OCT	-----	-----	-----
START +42 OCT	-----	-----	-----
START +43 OCT	-----	-----	-----
START +44 OCT	-----	-----	-----
START +45 OCT	-----	-----	-----
START +46 OCT	-----	-----	-----
START +47 OCT	-----	-----	-----
START +50 OCT	-----	-----	-----
START +51 OCT	-----	-----	-----
START +52 OCT	-----	-----	-----
START +53 OCT	-----	-----	-----
START +54 OCT	-----	-----	-----
START +55 OCT	-----	-----	-----
START +56 OCT	-----	-----	-----
START +57 OCT	-----	-----	-----
START +60 OCT	-----	-----	-----
START +61 OCT	-----	-----	-----
START +62 OCT	-----	-----	-----
START +63 OCT	-----	-----	-----
START +64 OCT	-----	-----	-----
START +65 OCT	-----	-----	-----
START +66 OCT	-----	-----	-----
START +67 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 2 of 9)

Circle *NEW* or *OLD*

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START + 70 OCT	-----	-----	-----
START + 71 OCT	-----	-----	-----
START + 72 OCT	-----	-----	-----
START + 73 OCT	-----	-----	-----
START + 74 OCT	-----	-----	-----
START + 75 OCT	-----	-----	-----
START + 76 OCT	-----	-----	-----
START + 77 OCT	-----	-----	-----
START +100 OCT	-----	-----	-----
START +101 OCT	-----	-----	-----
START +102 OCT	-----	-----	-----
START +103 OCT	-----	-----	-----
START +104 OCT	-----	-----	-----
START +105 OCT	-----	-----	-----
START +106 OCT	-----	-----	-----
START +107 OCT	-----	-----	-----
START +110 OCT	-----	-----	-----
START +111 OCT	-----	-----	-----
START +112 OCT	-----	-----	-----
START +113 OCT	-----	-----	-----
START +114 OCT	-----	-----	-----
START +115 OCT	-----	-----	-----
START +116 OCT	-----	-----	-----
START +117 OCT	-----	-----	-----
START +120 OCT	-----	-----	-----
START +121 OCT	-----	-----	-----
START +122 OCT	-----	-----	-----
START +123 OCT	-----	-----	-----
START +124 OCT	-----	-----	-----
START +125 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 3 of 9)

Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +126 OCT	-----	-----	-----
START +127 OCT	-----	-----	-----
START +130 OCT	-----	-----	-----
START +131 OCT	-----	-----	-----
START +132 OCT	-----	-----	-----
START +133 OCT	-----	-----	-----
START +134 OCT	-----	-----	-----
START +135 OCT	-----	-----	-----
START +136 OCT	-----	-----	-----
START +137 OCT	-----	-----	-----
START +140 OCT	-----	-----	-----
START +141 OCT	-----	-----	-----
START +142 OCT	-----	-----	-----
START +143 OCT	-----	-----	-----
START +144 OCT	-----	-----	-----
START +145 OCT	-----	-----	-----
START +146 OCT	-----	-----	-----
START +147 OCT	-----	-----	-----
START +150 OCT	-----	-----	-----
START +151 OCT	-----	-----	-----
START +152 OCT	-----	-----	-----
START +153 OCT	-----	-----	-----
START +154 OCT	-----	-----	-----
START +155 OCT	-----	-----	-----
START +156 OCT	-----	-----	-----
START +157 OCT	-----	-----	-----
START +160 OCT	-----	-----	-----
START +161 OCT	-----	-----	-----
START +162 OCT	-----	-----	-----
START +163 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 4 of 9)

Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +164 OCT	-----	-----	-----
START +165 OCT	-----	-----	-----
START +166 OCT	-----	-----	-----
START +167 OCT	-----	-----	-----
START +170 OCT	-----	-----	-----
START +171 OCT	-----	-----	-----
START +172 OCT	-----	-----	-----
START +173 OCT	-----	-----	-----
START +174 OCT	-----	-----	-----
START +175 OCT	-----	-----	-----
START +176 OCT	-----	-----	-----
START +177 OCT	-----	-----	-----
START +200 OCT	-----	-----	-----
START +201 OCT	-----	-----	-----
START +202 OCT	-----	-----	-----
START +203 OCT	-----	-----	-----
START +204 OCT	-----	-----	-----
START +205 OCT	-----	-----	-----
START +206 OCT	-----	-----	-----
START +207 OCT	-----	-----	-----
START +210 OCT	-----	-----	-----
START +211 OCT	-----	-----	-----
START +212 OCT	-----	-----	-----
START +213 OCT	-----	-----	-----
START +214 OCT	-----	-----	-----
START +215 OCT	-----	-----	-----
START +216 OCT	-----	-----	-----
START +217 OCT	-----	-----	-----
START +220 OCT	-----	-----	-----
START +221 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 5 of 9)

Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +222 OCT	-----	-----	-----
START +223 OCT	-----	-----	-----
START +224 OCT	-----	-----	-----
START +225 OCT	-----	-----	-----
START +226 OCT	-----	-----	-----
START +227 OCT	-----	-----	-----
START +230 OCT	-----	-----	-----
START +231 OCT	-----	-----	-----
START +232 OCT	-----	-----	-----
START +233 OCT	-----	-----	-----
START +234 OCT	-----	-----	-----
START +235 OCT	-----	-----	-----
START +236 OCT	-----	-----	-----
START +237 OCT	-----	-----	-----
START +240 OCT	-----	-----	-----
START +241 OCT	-----	-----	-----
START +242 OCT	-----	-----	-----
START +243 OCT	-----	-----	-----
START +244 OCT	-----	-----	-----
START +245 OCT	-----	-----	-----
START +246 OCT	-----	-----	-----
START +247 OCT	-----	-----	-----
START +250 OCT	-----	-----	-----
START +251 OCT	-----	-----	-----
START +252 OCT	-----	-----	-----
START +253 OCT	-----	-----	-----
START +254 OCT	-----	-----	-----
START +255 OCT	-----	-----	-----
START +256 OCT	-----	-----	-----
START +257 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 6 of 9)

**SECTION 232-127-313**

Circle *NEW* or *OLD*

**GNX-1 FORM**

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +260 OCT	-----	-----	-----
START +261 OCT	-----	-----	-----
START +262 OCT	-----	-----	-----
START +263 OCT	-----	-----	-----
START +264 OCT	-----	-----	-----
START +265 OCT	-----	-----	-----
START +266 OCT	-----	-----	-----
START +267 OCT	-----	-----	-----
START +270 OCT	-----	-----	-----
START +271 OCT	-----	-----	-----
START +272 OCT	-----	-----	-----
START +273 OCT	-----	-----	-----
START +274 OCT	-----	-----	-----
START +275 OCT	-----	-----	-----
START +276 OCT	-----	-----	-----
START +277 OCT	-----	-----	-----
START +300 OCT	-----	-----	-----
START +301 OCT	-----	-----	-----
START +302 OCT	-----	-----	-----
START +303 OCT	-----	-----	-----
START +304 OCT	-----	-----	-----
START +305 OCT	-----	-----	-----
START +306 OCT	-----	-----	-----
START +307 OCT	-----	-----	-----
START +310 OCT	-----	-----	-----
START +311 OCT	-----	-----	-----
START +312 OCT	-----	-----	-----
START +313 OCT	-----	-----	-----
START +314 OCT	-----	-----	-----
START +315 OCT	-----	-----	-----

**Fig. 8—GNX-1 Form (Sheet 7 of 9)**

Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +316 OCT	-----	-----	-----
START +317 OCT	-----	-----	-----
START +320 OCT	-----	-----	-----
START +321 OCT	-----	-----	-----
START +322 OCT	-----	-----	-----
START +323 OCT	-----	-----	-----
START +324 OCT	-----	-----	-----
START +325 OCT	-----	-----	-----
START +326 OCT	-----	-----	-----
START +327 OCT	-----	-----	-----
START +330 OCT	-----	-----	-----
START +331 OCT	-----	-----	-----
START +332 OCT	-----	-----	-----
START +333 OCT	-----	-----	-----
START +334 OCT	-----	-----	-----
START +335 OCT	-----	-----	-----
START +336 OCT	-----	-----	-----
START +337 OCT	-----	-----	-----
START +340 OCT	-----	-----	-----
START +341 OCT	-----	-----	-----
START +342 OCT	-----	-----	-----
START +343 OCT	-----	-----	-----
START +344 OCT	-----	-----	-----
START +345 OCT	-----	-----	-----
START +346 OCT	-----	-----	-----
START +347 OCT	-----	-----	-----
START +350 OCT	-----	-----	-----
START +351 OCT	-----	-----	-----
START +352 OCT	-----	-----	-----
START +353 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 8 of 9)

Circle *NEW* or *OLD*

GNX-1 FORM

	(A) ADDRESS	(B) INITIAL CONTENTS	(C) NEW CONTENTS
START +354 OCT	-----	-----	-----
START +355 OCT	-----	-----	-----
START +356 OCT	-----	-----	-----
START +357 OCT	-----	-----	-----
START +360 OCT	-----	-----	-----
START +361 OCT	-----	-----	-----
START +362 OCT	-----	-----	-----
START +363 OCT	-----	-----	-----
START +364 OCT	-----	-----	-----
START +365 OCT	-----	-----	-----
START +366 OCT	-----	-----	-----
START +367 OCT	-----	-----	-----
START +370 OCT	-----	-----	-----
START +371 OCT	-----	-----	-----
START +372 OCT	-----	-----	-----
START +373 OCT	-----	-----	-----
START +374 OCT	-----	-----	-----
START +375 OCT	-----	-----	-----
START +376 OCT	-----	-----	-----
START +377 OCT	-----	-----	-----
START +400 OCT	-----	-----	-----

Fig. 8—GNX-1 Form (Sheet 9 of 9)