RC PROCEDURES
FOR DALNK, DAMBI, DAMSK, AND DATER
(CTX-8, ISSUE 2 THROUGH 1E4, GENERIC PROGRAMS)
2-WIRE NO. 1 ELECTRONIC SWITCHING SYSTEM

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1. GENERAL

1.01 This section presents procedures for miscellaneous RC messages used in the CTX-8 and 1E4, generic program for the 2-Wire No. 1 *Electronic Switching System (ESS).*

Note: Effective with what would have been CTX-8 Issue 4 of No. 1 ESS, the equivalent generic program designation is 1E4.

1.02 This section is reissued to:

- Remove the RC:SIMFAC message which is now located in Section 231-118-337.
- Include generic 1E4 information.
- Expand glossary.
- Make minor changes.

1.03 The following applies to all RC messages in this section.

- Refer to Section 231-118-321 for detailed information concerning RC message formats and interpretation of message flowcharts.
- Refer to the information accompanying the message flowcharts for definitions of the keywords.
- Refer to Translation Guide TG-1A for documentation data and associated ESS forms.
- Refer to Translation Output Configuration PA-591003 for information concerning the ESS translators and associated ESS forms.
- An order number may be entered as an option with any RC message as follows:

  ØRD #n#####n

  #n = An optional alphabetical character

  #####n = A decimal number up to six digits without leading zeros.

As examples:

ØRD B123456
ØRD F6
ØRD 23

2. VERIFICATION OF DAG TRANSLATOR AND MASK BLOCK TRANSLATOR INFORMATION (V-DAGMB)

2.01 The contents of the DAG and mask block translators can be determined by reading each FG and RG of the DAG with

V-DAGMB- aa b c dd.

aa = data group number (1-63)

b = L for load compensating package (LCP)

= R for reporting group package (RGP)

c = LCP or RGP number (0-7)

dd = functional group (FG) or reporting group (RG) number (1-31)

Note: The slash (/) cannot be used with the V-DAGMB- for multiple input messages.

Following an ØK TACK is an output message:

TR41 aa b c dd eeee ffff ggg gggg hhh

iii iii iii iii iii iii iii iii iii

. . . . . .

iii iii

eeee = multiline hunt group (MLHG) number

ffff = mask block index (MBI) number

ggg gggg = supervisor TN

hhh = queue number (QN)

iii = MLHG terminal (TERS) number contents of the mask block auxiliary block

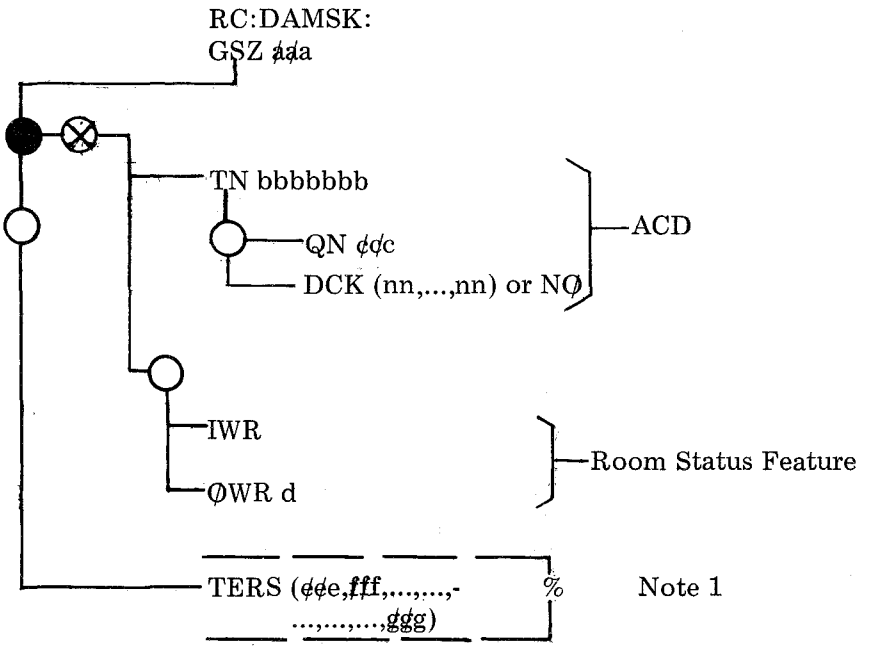
Note: The output message will terminate if the information to be printed is not contained in translations.

3. BUILDING AND LINKING A MASK BLOCK AUXILIARY BLOCK TO THE MASK BLOCK HEAD TABLE RC:DAMSK (PR-1A375)

3.01 The mask block translator provides program store backup of the call store MLHG activity block for the functional groups (FG) and reporting groups (RG). This permits rapid reconfiguration of a group by the customer. A mask block auxiliary block is required for each FG and RG. Refer to Section 231-118-340 for a complete description of the mask block translator and its operation with the data group (DAG) translator.

INITIAL CONDITIONS: The mask block head table exists, is linked to the master head table annex, and contains a vacant (all zero) word to permit assignment of a mask block index (MBI) number (Fig. 1).

RESULTS OF MESSAGE: A mask block auxiliary block is seized and linked to the mask block head table. The MBI assignment is then specified in an RC18 INFO output message. The auxiliary block is built with the TN, QN, and TERS information included in the input message. Each terminal specified in the input message has a 1 entered in its bit location indicating it is assigned to the group for which the auxiliary block is built.



Note 1: If no terminals in a 16 terminal group (1-15, 16-31, 32-47, etc) are to be assigned, no TERS segment is entered for that grouping. Only those terminals to be assigned are entered.

Note 2: All terminal assignments for a mask block auxiliary block should be entered in one input message and entered in ascending order in the message.

Verifying and Hunting Information for a Mask Block Translator

Refer to 2. for information to verify change or deletion messages.

The RC:DAMSK messages are immediately effective in call processing.

KEYWORD UNIT	DEFINITION	ESS FORM
DCK (nn,...,nn)	Direct call key assignments to 2-digit speed call list (maximum 4 keys). (20-49)	
GSZ ddda	Total expected maximum quantity of terminals in the MLHG (sufficient room for growth should be included due to complexity of expansion). (1-999)	ESS 1114 Cols. 31-34
IWR	Controlled Inward Restriction	ESS 1114 Col. 50
ØWR d	Controlled Outward Restriction for Room Status Feature d = 1 for dial 8 and 9 to be routed to reorder = 2 for all originations to be routed to attendant = 3 for all originations to be denied	ESS 1114 Col. 49
QN ccc	Queue number — Use only with MBIs related to words 1-8 of the DAG subtranslator [functional group (FG)]. (1 — parameter limit)	ESS 1114 Cols. 39-41
TERS (ddde,fff,...,...,-...,...,...,gggg)	Terminal number to be assigned to the MBI (FG or RG). Terminals specified in TERS unit must be within a 16-word group (ie, 1-15, 16-31, 32-47, etc) of an MLHG. If the terminal is a display station, refer to Section 231-118-340. (1-999)	ESS 1114 Cols. 25-32
TN bbbbbbb	Supervisor's telephone number	ESS 1114 Cols. 42-48

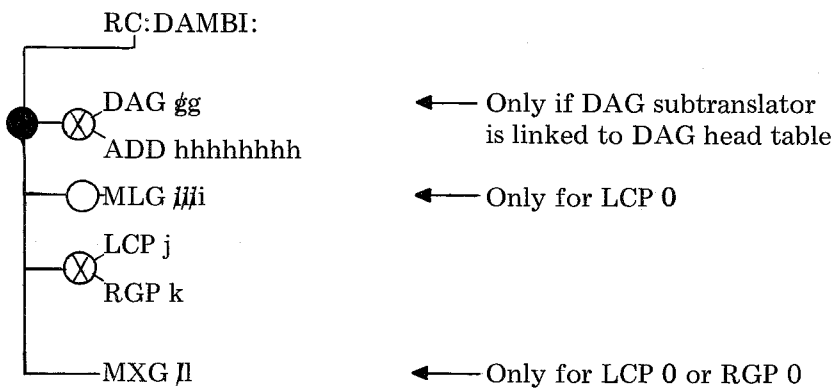
4. ADDING, BUILDING, CHANGING, OR DELETING A DATA GROUP AUXILIARY BLOCK RC:DAMBI (PR-1A377)

4.01 The data group (DAG) auxiliary block contains a listing of the mask block index (MBI) for the functional groups (FG) and the reporting groups (RG) in each load compensating package (LCP) or reporting group package (RGP). The MBI points ultimately to the mask block auxiliary block. Refer to Section 231-118-340 for a complete description of the DAG translator.

Adding a DAG Auxiliary Block

INITIAL CONDITIONS: The DAG subtranslator must exist and contain a vacant (all zero) word at the position for the DAG auxiliary block address (LCP+1 or RGP+9) to permit linking (Fig. 2).

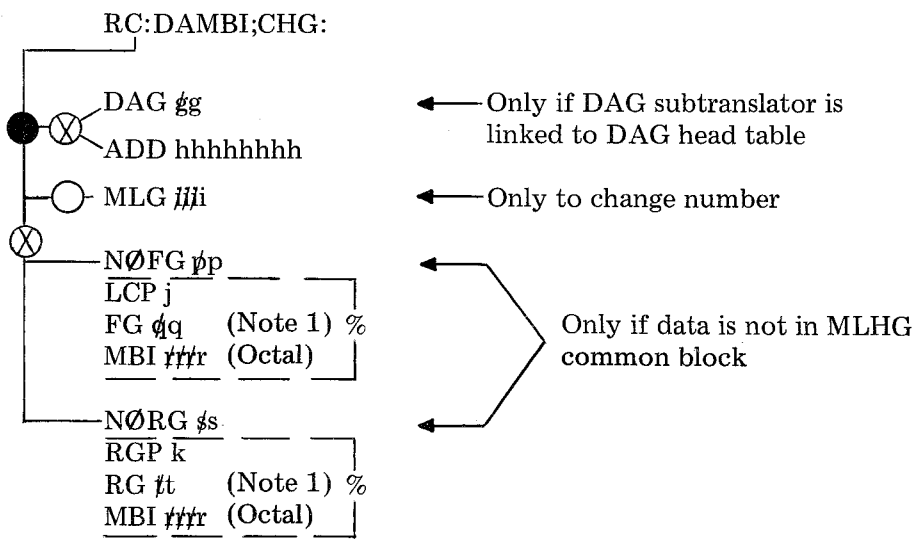
RESULTS OF MESSAGE: A DAG auxiliary block is seized and all MBI words are made zero. The auxiliary block is linked to the DAG subtranslator; however, a temporary RC voids the link until the block is built.



Building a DAG Auxiliary Block

INITIAL CONDITIONS: The DAG subtranslator exists and each MBI to be specified has a DAG auxiliary block seized and linked by RC:DAMBI. A mask block auxiliary block for each MBI exists which is linked to the mask block head table and has no assigned terminals (all zeros). The MLHG common block contains all related data.

RESULTS OF MESSAGE: For each segment (NØFG or NØRG), the specified MBI is entered into the half-word of the DAG auxiliary block, indexed by the specified FG or RG which links the existing mask block auxiliary block to the DAG translator.



Note 1: The FG and RG numbers *must* be entered sequentially in ascending order beginning with the least number.

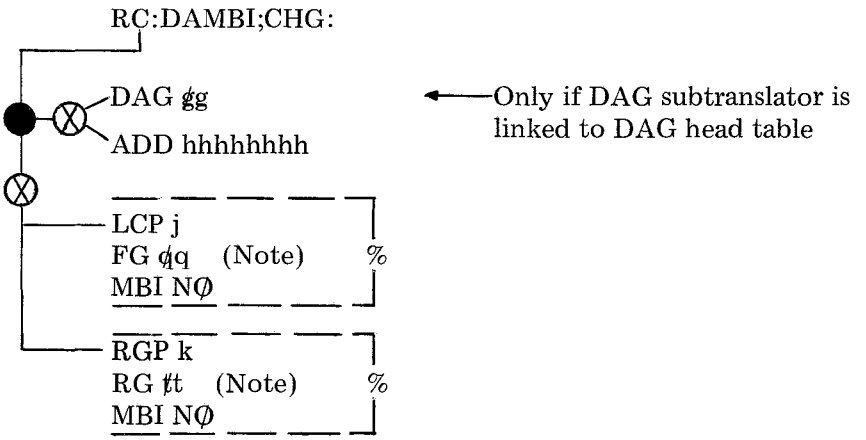
Note 2: To assign the mask blocks for all functional groups to a new LCP or to assign the mask blocks for all reporting groups to a new RGP, this message must specify the same LCP or RGP in all segments.

Note 3: To assign the mask block for a new functional group to all LCPs or to assign a new reporting group to all RGPs, this message must specify the same FG or RG, respectively, in all segments.

Deleting a MBI From a Data Group Auxiliary Block (Deleting a Mask Block Auxiliary Block)

INITIAL CONDITIONS: The DAG subtranslator exists, the MBI for the specified FG or RG is assigned in the DAG subtranslator, and the mask block auxiliary block must have *no* assigned terminals (all zeros) (terminals are reassigned with the RC:DATER message).

RESULTS OF MESSAGE: The MBI for the specified FG or RG is zeroed in the DAG auxiliary block. The mask block auxiliary block address (pointer) in the mask block head table is zeroed and the auxiliary block is returned to the idle link list.

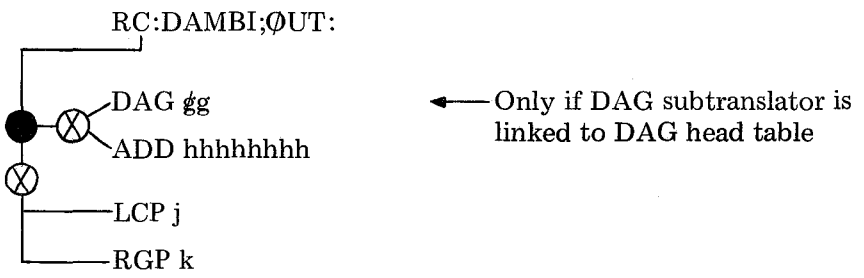


Note: The FG and RG numbers *must* be entered in a sequential descending order (reverse to building block) beginning with the greatest assigned number.

Deleting a DAG Auxiliary Block

INITIAL CONDITIONS: The DAG subtranslator exists and the DAG auxiliary block is linked to it.

RESULTS OF MESSAGE: The DAG auxiliary block address (pointer) in the DAG subtranslator at the LCP or RGP specified is zeroed, and all associated DAG mask block auxiliary block addresses in the mask block head table are zeroed. The DAG auxiliary block and all associated mask block auxiliary blocks are returned to the idle link list.



KEYWORD UNIT	DEFINITION	ESS FORM
ADD hhhhhhhh	Octal address of the DAG subtranslator	
DAG ¢g	Data group number (1-63)	ESS 1114 Cols. 25 and 26
FG ¢q	Functional group number (1-31)	ESS 1114 Cols. 37 and 38
LCP j	Load compensating package number (0-7)	ESS 1114 Cols. 35 and 36
MBI ¢¢¢r	Mask block index number (octal) assigned in DAG auxiliary block (1-2047)	ESS 1114 Cols. 16-19
MLG ¢¢¢i	Multiline hunt group number	ESS 1114 Cols. 27-30
MXG ¢l	Maximum size of LCP or RGP (build to *expected maximum* size, use only for LCP0 or RGP0) (1-31)	
NØFG ¢p	Total quantity of functional groups in DAG (use only if data is *not* contained in the MLHG common block) (1-31)	
NØRG ¢s	Total quantity of reporting groups in DAG (use only if data is *not* contained in the MLHG common block) (1-31)	
RG ¢t	Reporting group number (1-31)	ESS 1114 Cols. 37 and 38
RGP k	Reporting group package number (0-7)	ESS 1114 Cols. 35 and 36

Verifying and Hunting Information For a DAG Auxiliary Block

Refer to 2. for information to verify new, change, or deletion messages.

The RC:DAMBI messages are immediately effective in call processing.

5. LINKING OR UNLINKING A DATA GROUP SUBTRANSLATOR TO THE DATA GROUP HEAD TABLE RC:DALNK (PR-1A374)

Linking a DAG Subtranslator to the DAG Head Table

INITIAL CONDITIONS: The final step in building the DAG translator and mask block translator is to link the DAG subtranslator to the DAG head table. The following conditions must be met (Fig. 1 and 2):

- The DAG head table exists and contains a vacant (all zero) word at the DAG number index to be linked.
- The DAG subtranslator to be linked exists and contains one or more DAG auxiliary block addresses [load compensating package (LCP) and/or reporting group package (RGP)].
- Each DAG auxiliary block address (LCP and RGP) contained in the DAG subtranslator has an auxiliary block built.
- All DAG auxiliary blocks built for words 1-8 (LCPs) of a DAG subtranslator contain the same quantity of MBIs (FG) and all DAG auxiliary blocks built for words 9-16 (RGP) contain the same quantity of MBIs (RG).
- Each MBI (FG and RG) has a unique mask block auxiliary block built.
- All mask block auxiliary blocks are of the same length for those MBIs (FG) which are related to the DAG subtranslator words 1-8 and all auxiliary blocks are the same length for those MBIs (RG) which are related to the DAG subtranslator words 9-16.
- Each terminal is assigned to one and only one MBI (FG) of each DAG auxiliary block (LCP) for words 1-8 of the DAG subtranslator.

RESULTS OF MESSAGE: The octal address of the DAG subtranslator, specified in the message, is entered in the DAG head table at the specified DAG index which completes the DAG translator.

RC:DALNK:
DAG ǵg
ADD hhhhhhhh

Unlinking a DAG Subtranslator From the DAG Head Table

INITIAL CONDITIONS:

- The address of the DAG subtranslator to be unlinked (removed) is contained in the DAG head table.
- The information for the DAG subtranslator has been removed from the MLHG common block.
- All DAG auxiliary block (LCP and RGP) addresses have been removed from the DAG subtranslator (RC:DAMBI;ØUT) leaving all words zero except for the first word.

RESULTS OF MESSAGE: The address of the DAG subtranslator (pointer) is zeroed in the DAG head table and the subtranslator is returned to the idle link list.

RC:DALNK;ØUT:
DAG ǵg

KEYWORD UNIT	DEFINITION	ESS FORM
ADD hhhhhhhh	Octal address of the DAG subtranslator	
DAG gg	Data group number (1-63)	ESS 1114 Cols. 25 and 26

Verifying and Hunting Information for the DAG Translator

Refer to 2. for information to verify change or deletion messages.

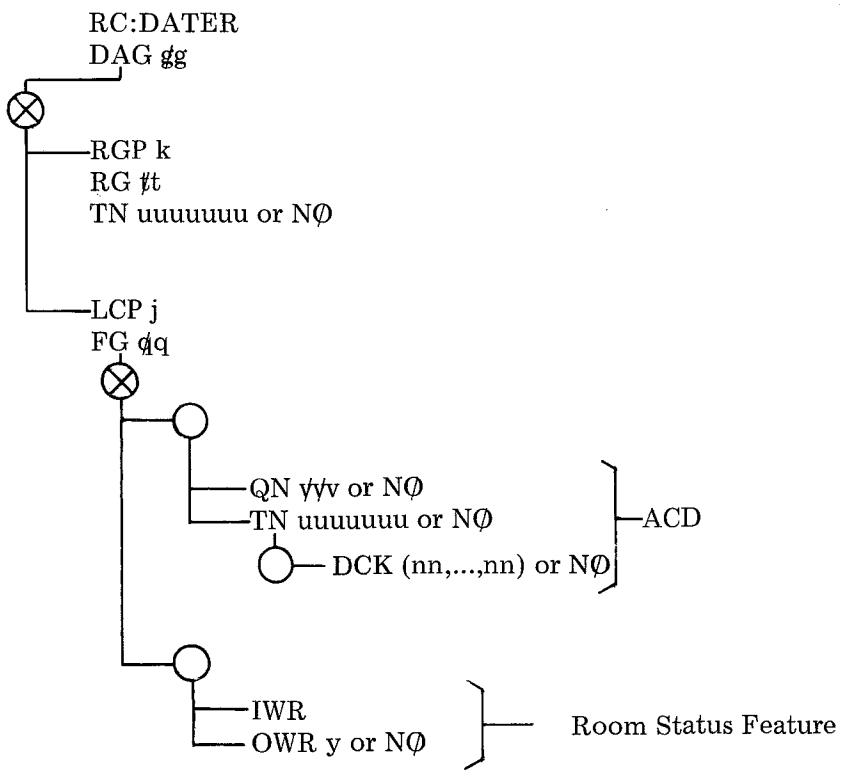
The RC:DALNK messages are immediately effective in call processing.

6. ADDING OR CHANGING MASK BLOCK AUXILIARY BLOCK INFORMATION RC:DATER (PR-1A376)

Adding or Changing Mask Block Auxiliary Block Header Information

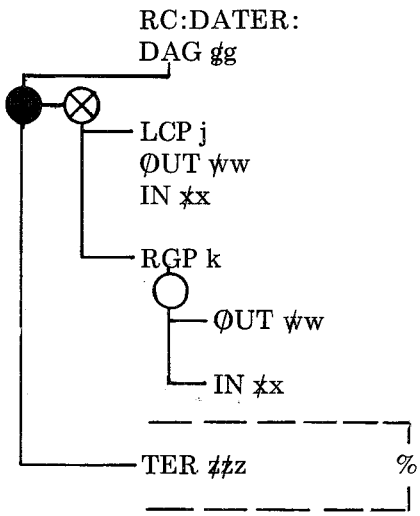
INITIAL CONDITIONS: A complete DAG translator and mask block translator exist which are linked from the DAG head table to the mask block auxiliary blocks. Refer to Section 231-118-340 for detailed information.

RESULTS OF MESSAGE: The new TN and/or QN are entered into the specified mask block auxiliary block (LCP, FG or RGP, RG).



Moving a Terminal From One Mask Block Auxiliary Block (FG or RG) to Another (FG or RG respectively) or Adding or Deleting a Terminal(s) to an RG.

INITIAL CONDITIONS: The complete DAG translator and mask block translator exist and, if adding a mask block auxiliary block, a vacant (all zero) MBI is available in the mask block head table.



(Note)

Note: Use repeatable segment (%) only with RGP when more than one terminal is to be added or removed.

KEYWORD UNIT	DESCRIPTION	ESS FORM
DAG ǵg	Data group number (1-63)	ESS 1114 Cols. 25 and 26
DCK (nn,...,nn)	Direct call key assignments to 2-digit speed call list (maximum 4 keys). (20-49)	
FG ǵq	Functional group number (1-31)	ESS 1114 Cols. 37 and 38
IN ǵx	The number of the FG or RG *to* which the terminal (TER) is to be moved (or added for RG) (1-31)	ESS 1114 Cols. 37 and 38
IWR	Controlled inward restriction for room status feature	
LCP j	Load compensating package number (0-7)	ESS 1114 Cols. 35 and 36
ØUT ǵw	The number of the FG or RG *from* which the terminal (TER) is to be moved (or deleted for RG) (1-31)	
ØWR y	Controlled outward restriction type for room status feature y = 1 All dial 8 and dial 9 calls are routed to reorder. = 2 All originations are routed to attendant. = 3 All originations are to be denied.	ESS 1114 Col. 49
QN ǵǵv	Queue number (1 — parameter limit)	ESS 1114 Cols. 39-41
RG ǵt	Reporting group number (1-31)	ESS 1114 Cols. 37 and 38
RGP k	Reporting group package number (0-7)	ESS 1114 Cols. 35 and 36
TER ǵǵz	DAG terminal number	ESS 1114 Cols. 25-32
TN uuuuuuu	Supervisor's telephone number	ESS 1114 Cols. 42-48

Verifying and Hunting Information for the Mask Block Translator

Refer to 2. for information to verify new, change, or deletion messages.

The RC:DATER messages are immediately effective in call processing.

7. GLOSSARY

ADD — Octal address of translator in program store.

DAG — Data Accumulation Group: A DAG is assigned to a centrex or private branch exchange CO multiline hunt group to permit the customer to control the configuration of the group and to receive performance and billing data for the group.

FG — Functional Group: An FG is a predetermined grouping of terminals by the customer to serve a specific purpose.

GSZ — Group Size of MLHG: Total quantity of terminals in a specific multiline hunt group.

IN — The FG or RG *to* which a terminal is to be reassigned.

IWR — Controlled inward restriction.

LCP — Load Compensating Package: An LCP is a predetermined grouping of FGs by the customer to serve a specific purpose.

MBI — Mask Block Index: The MBI is used to access the mask block translator to obtain the composition of a specific FG or RG.

MLG — Multiline Hunt Group.

MXG — Maximum Group (LCP or RGP) size.

NØFG — Number of Functional Groups in DAG.

NØRG — Number of Reporting Groups in DAG.

ØUT — The FG Or RG *from* which a terminal is to be reassigned.

ØWR — Controlled Outward Restriction.

QN — Queue Number.

RG — Reporting Group: An RG is a predetermined grouping of terminals by the customer for the purpose of obtaining specified data.

RGP — Reporting Group Package: An RGP is a predetermined grouping of RGs by the customer for data reporting.

TER — Terminal Number of Group.

TERS — Terminals to be assigned to a mask block.

TN — Telephone Number.

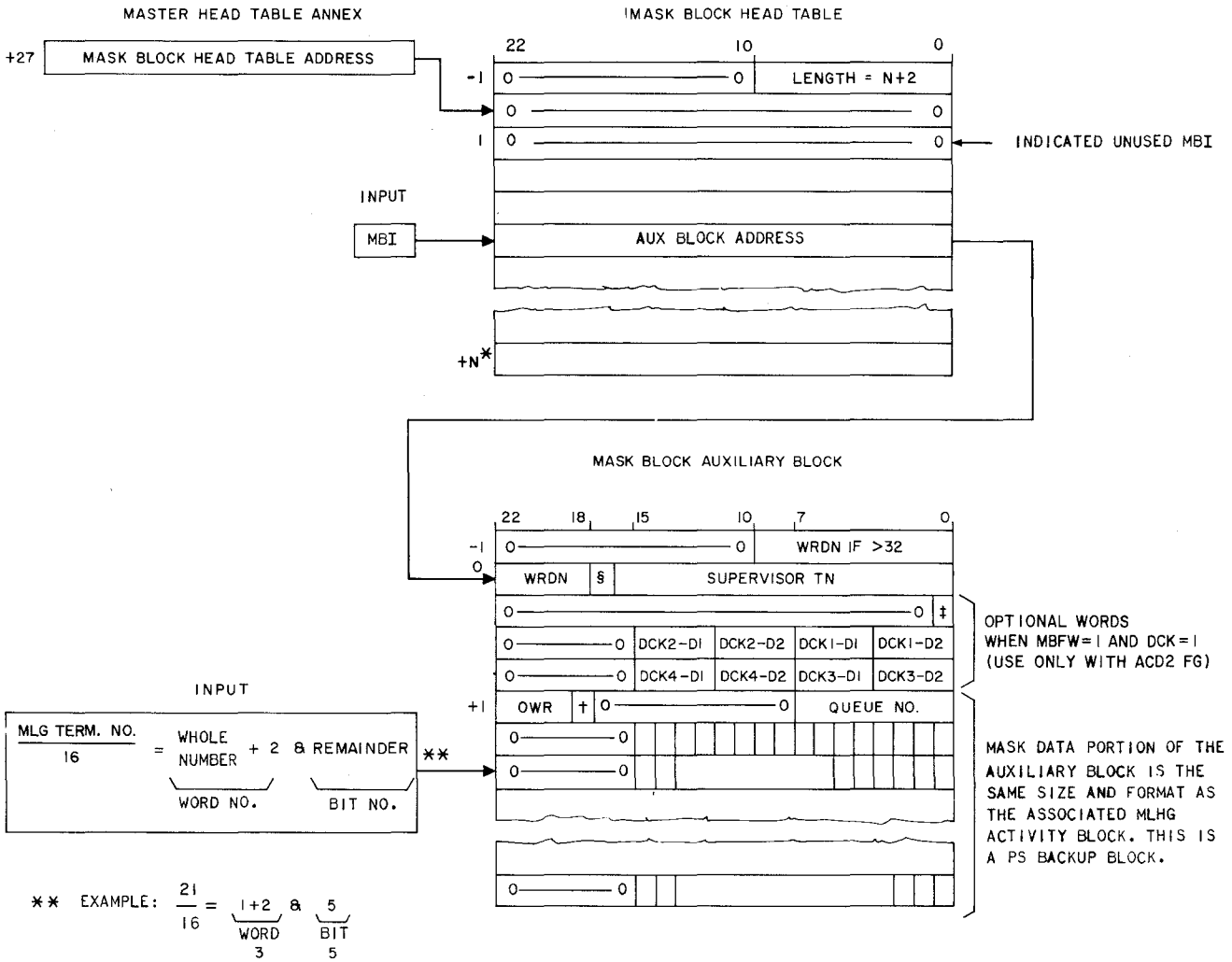
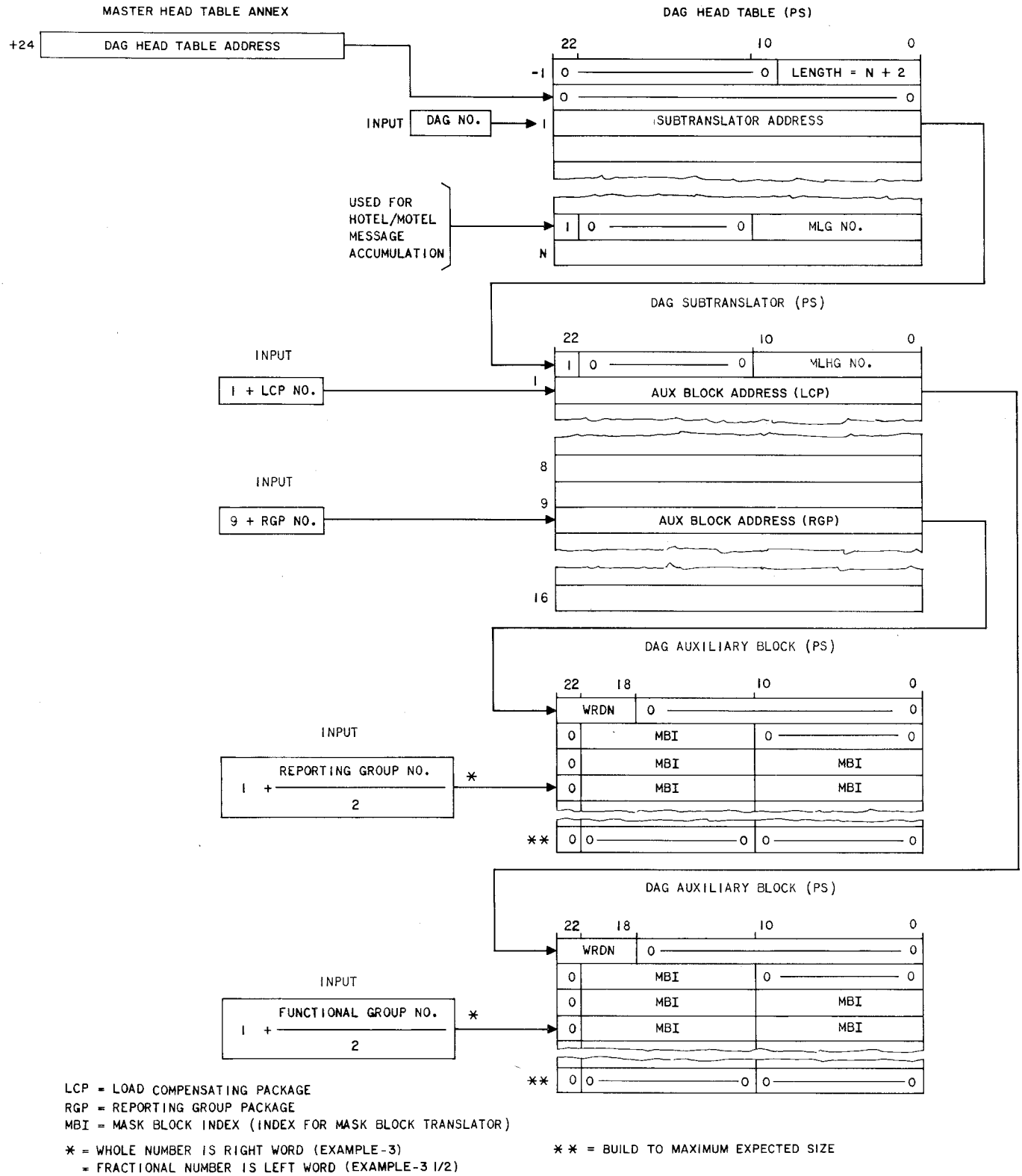


Fig. 1 — Mask Block Translator



LCP = LOAD COMPENSATING PACKAGE
RGP = REPORTING GROUP PACKAGE
MBI = MASK BLOCK INDEX (INDEX FOR MASK BLOCK TRANSLATOR)

* = WHOLE NUMBER IS RIGHT WORD (EXAMPLE-3)
= FRACTIONAL NUMBER IS LEFT WORD (EXAMPLE-3 1/2)

** = BUILD TO MAXIMUM EXPECTED SIZE

Fig. 2 — Data Group Translator