

## NUMBER GROUPS

### NOTES

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#### 1. GENERAL

1.1 This section contains notes relative to number group transition. The items covered by these notes should be checked for application to a particular job when regrouping numbers in a working office.

#### 2. SPLIT HUNDREDS

2.1 When the twenty-block relays of a split hundred-block fall into more than one number group due to regrouping, some of the numbers will have to be re-assigned so that the split hundreds HB relay and its associated TB relays will be in the same number group.

#### 3. EXTRA HUNDREDS

3.1 If extra hundreds are associated with an existing number group, and the group is split so that the directory numbers requiring extra numbers fall into more than one number group, additional extra number HB and TB relays shall be provided as required so that one extra number hundred-block will be available for each number group requiring such numbers.

#### 4. P.B.X. ALLOTTER

4.1 If numbers which are allotted into two number groups fall into the same number group after regrouping, some of these numbers shall be reassigned into another group if allotting is still required. However, with the reduced size of the new number groups, it might be satisfactory to leave all the numbers in one number group and discontinue the use of the allotter.

4.11 Problems of this type will have to be analyzed and decided upon by the operating company.

#### 5. NUMBER CHECKING

5.1 When numbers are being transferred from one number group to another, care should be taken that each number group, containing a P.B.X. served by one-way trunks, is equipped with XG relays per SD-25276-01, Figures 3 and 9, which are required for number checking.

5.2 These relays are mounted on the block relay frame and may be transferred from one number group to another by connecting 8T of relay XGA to terminal 4L on the right hand terminal strip of the MCC relay of the new number group connector.

5.3 When XG relays are transferred from one number group to another, the leads from these relays to the XF, HF and RF terminal strips shall be checked to insure that they connect to terminals associated with the new number group.

#### 6. PHYSICAL AND THEORETICAL NUMBERS

6.1 When numbers are to be regrouped in an office containing theoretical numbers, the strapping and cross-connections at the PT punchings on the block relay frames shall be changed, as required, so that during the transition period the punchings associated with the HB relays to be transferred from one group to another shall be temporarily cross-connected to both the existing and the new number group connectors.

6.2 After all markers have been modified so that the HB relays are operated through the new number group connectors, the straps and cross-connections at the PT punchings shall be removed, as required, so that these punchings will be connected to only one number group connector.

#### 7. TEST

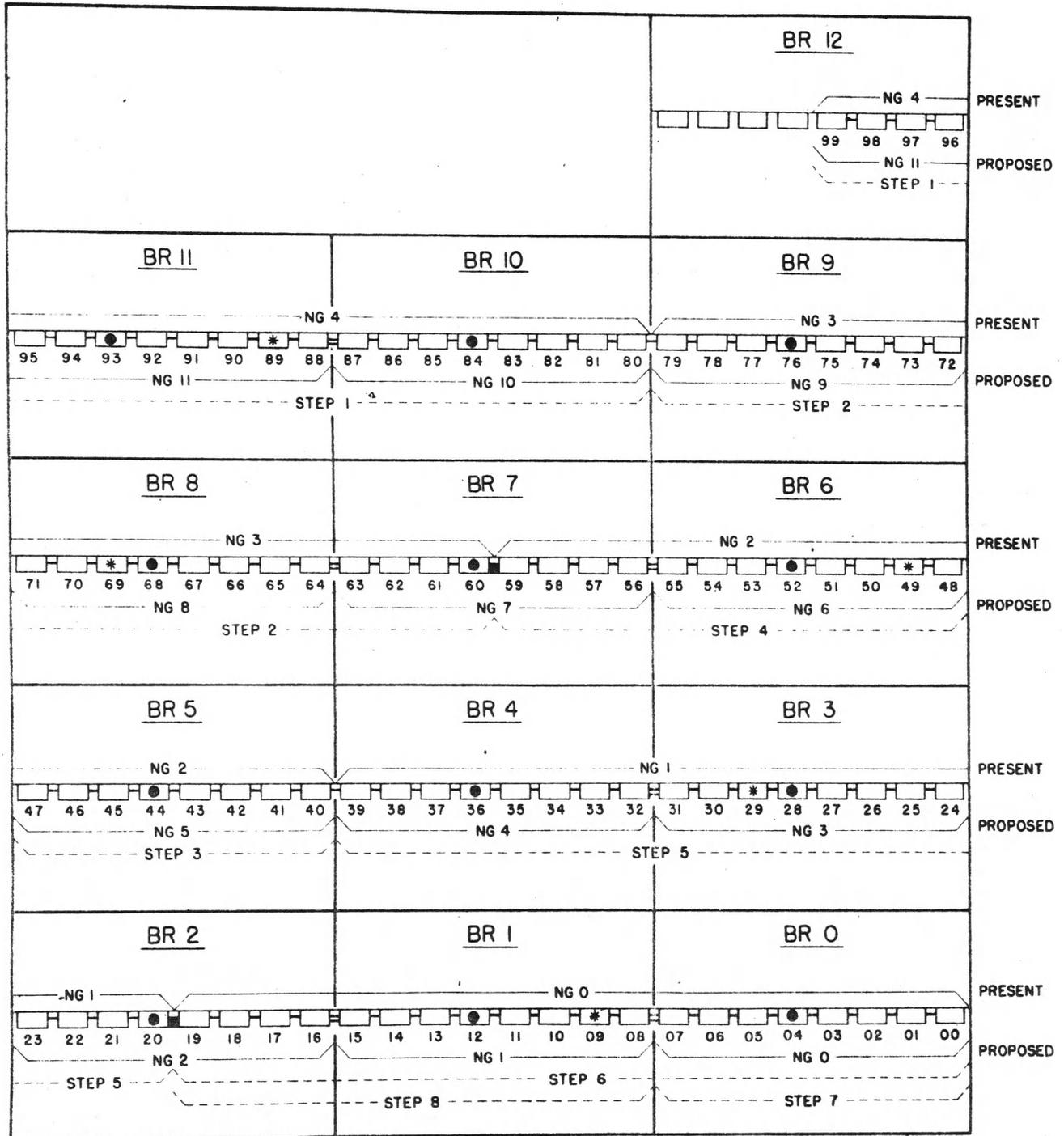
7.1 During the period that work is being performed on a number group, test calls should be routed through the associated number group connector from the TTL. This is to detect crosses or false grounds that may accidentally be introduced.

7.2 After the first marker has been modified to reach transferred numbers through their new number group connector, a terminating load test set, ITE-4072, shall be used to simulate heavy load conditions in the newly established number groups.

7.3 If serious trouble develops, and it appears that all trouble cannot be cleared before the next busy hour period, the marker cross-connections should be restored to their original condition.

When this equipment is added	Check these items for transition														
	Number Group Conn Frame	Block Relay Frame	Terminating Marker												
New numbers added to existing group.	None	Add HB relays & X Conn. Add TB relays & Mult.	Add HB X Conn.												
		Add New BR Frame as required	Add FH Relays.												
New numbers added in newly formed number groups.	Install new number group connectors	Add New HB Relays & X Conn. Add TB Relays	Add HB & ST X Conn.												
	Extend Mkr. Mult & Start Leads.	Add New BR Frames as required.	Add FH Relays												
Numbers transferred from an existing number group to another existing number group.	Connect lockout ckts. in Tandem SD-25515-01.	Strap like punchings of the affected number groups together viz:-	Modify HB & ST X Conn.												
	Restore lockout ckts. to normal SD-25276-01.	<table border="0"> <tr> <td>TB</td> <td>NF</td> <td>TF</td> <td>HG</td> </tr> <tr> <td>TBA</td> <td>HF</td> <td>XF</td> <td>JC</td> </tr> <tr> <td>NC</td> <td>RF</td> <td>NS</td> <td>JF</td> </tr> </table>		TB	NF	TF	HG	TBA	HF	XF	JC	NC	RF	NS	JF
	TB	NF		TF	HG										
	TBA	HF		XF	JC										
NC	RF	NS	JF												
	Modify HB X Conn so that:- HB relays containing numbers to be transferred will be connected to both number groups (Use Mult Pchgs.)														
	Remove straps to separate numbers into proper number groups.														
Numbers transferred from existing number groups to newly formed number groups.	Install new number group connectors	Add HB Relays & X Conn. ) As TB Relays & X Conn. )Req. New BR Frames	Modify & Add HB & ST X Conn.												
	Extend Mkr. Mult & Start Leads.														
	Connect lockout ckts. in tandem SD-25515-01.	Strap like punchings of the affected number groups together viz:-													
	Restore lockout ckts. to normal SD-25276-01.	<table border="0"> <tr> <td>TB</td> <td>NF</td> <td>RF</td> <td>HG</td> </tr> <tr> <td>TBA</td> <td>NS</td> <td>TF</td> <td>JC</td> </tr> <tr> <td>NC</td> <td>HF</td> <td>XF</td> <td>JF</td> </tr> </table>		TB	NF	RF	HG	TBA	NS	TF	JC	NC	HF	XF	JF
	TB	NF		RF	HG										
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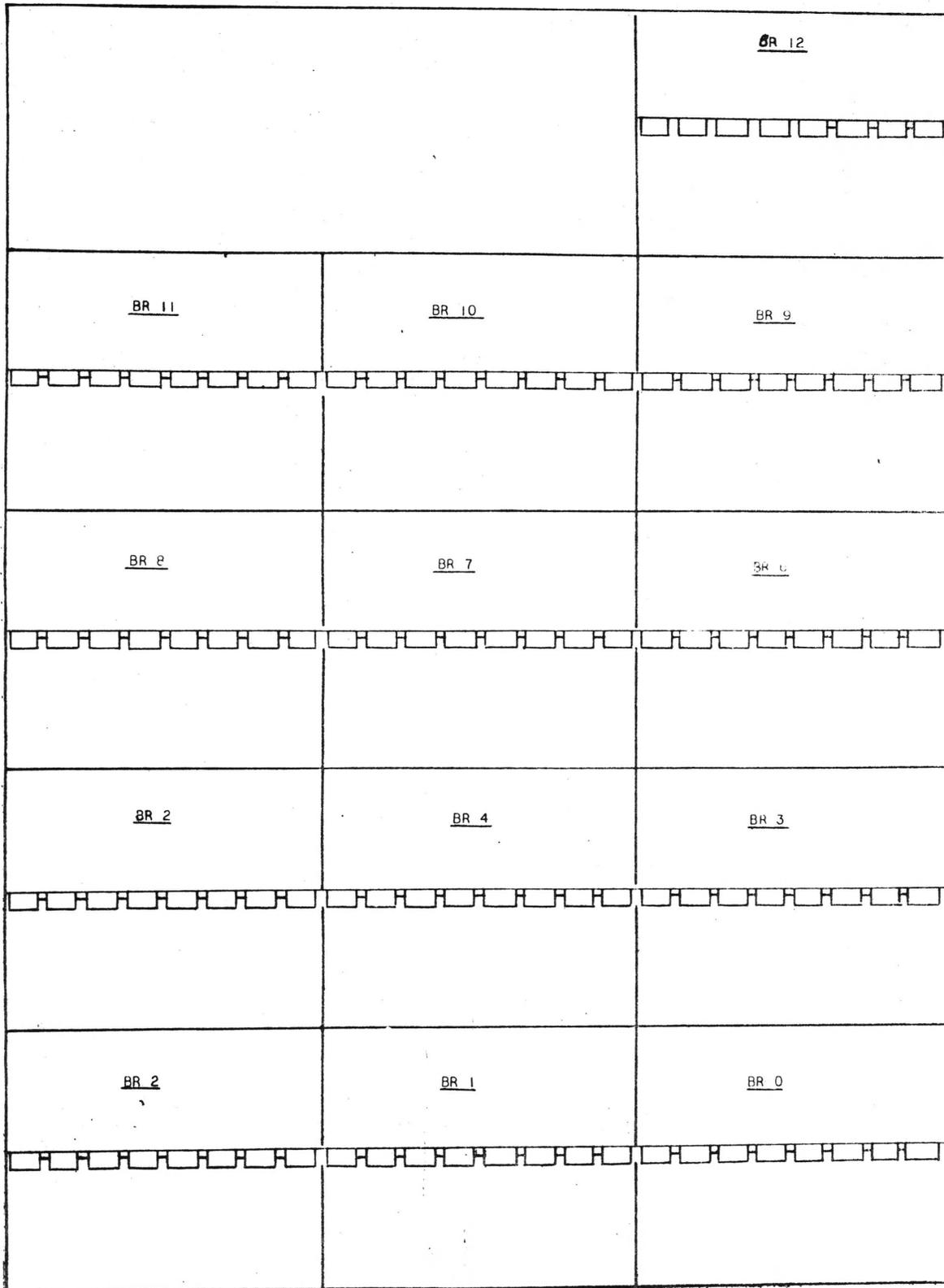
FIG. 1 SUMMARY OF NG TRANSITION (PARAGRAPH 9.1)



- DISCONNECT
- CONNECT
- \* EXISTING CABLE TERMINATION
- NEW CABLE TERMINATION

FIG. 2 TYPICAL NG TRANSITION COMPOSITE ARRANGEMENT  
(Par. 10.2)

ID-489 (7-54)



WORK SHEET-NUMBER GROUP REARRANGEMENT

FIG. 3 WORK SHEET FOR FIG. 2  
(Par. 10.1)

ID-490

BR.

PRESENT

PROPOSED

		BEFORE MKRS MODIFIED												AFTER MKRS. MODIFIED													
25515 01 NE Frame	T25276-23 (36) T25276-27 (5) NG Term. Strip	Mod. Lockout Ckt. of NG Fig.54-55						Tand. Lockout Ckt. of NG Fig.51-52-53						Modify Lockout Ckts. to original wiring per SD-25276-01.													
		Strap & Mult. HB Pchgs.												Remove Strap & Mult. HB Pchgs.													
		HD NO	FR HB	NG HB	HD NO	FR HB	NG HB	To other Frame	HD NO	FR HB	NG HB	HD NO	FR HB	NG HB	To other Frame												
T25276-23 (35) T25276-27 (5) HB Term. Strip	T25276-24 (6)(20) TB Term. Strip	Strap & Mult. Pchgs.												Remove Straps & Mult.													
		Term. Strip	0 - 1			2 - 3			4 - 5			6 - 7			0 - 1			2 - 3			4 - 5			6 - 7			
		TB	0			0			0			0			0			0			0			0			
		TBA	0			0			0			0			0			0			0			0			
		XSH	0			0			0			0			0			0			0			0			
		G	0			0			0			0			0			0			0			0			
Other Frame																											
T25276-28 (22 to 27) X-Conn Fields	T25276-28 (27) Upper NF Term. Strip	Strap or Mult.												Remove Straps or Mult.													
		Field	Seg.		Seg.		Other Frames						Seg.		Seg.		Other Frames										
		HF																									
		TF																									
		XF																									
T25283-14 Cross Conn. as Directed by Tel. Co. X Conn. IS "B" - "C" - "D"	T25276-28 (42) Upper NF Term. Strip	Mult. Leads												Remove Leads													
		From Br. Fr.													From Br. Fr.												
		PTN	1			1			1			1			PTN	1			1			1			1		
		TN	1			1			1			1			TN	1			1			1			1		
		PN	1			1			1			1			PN	1			1			1			1		
		PN	1			1			1			1			PN	1			1			1			1		
		OFT	1			1			1			1			OFT	1			1			1			1		
		Terminating Markers																									
		Remove												Add													
		HB Lead						Hd No.						HB Lead						Hd No.							
St Lead						Hd No.						St. Lead						Hd No.									
St Straps Between Hds												St Straps Between Hds															

FIG. 4 WORK SHEET - TRANSITION DETAILS (Par. 10.3)

## 8. REUSE OF CABLES

8.1 When numbers are regrouped into new number groups, the existing cables between the number group connectors and the block relay frames, should be carefully checked for possible reuse in their new location.

8.2 If the floor plan arrangement is such that existing number group connector to block relay frame cables may be pulled back to reach their new location at the block relay frame, a saving of forming and connecting at the number group connector will result.

## 9. NUMBER GROUP TRANSITION ITEMS

9.1 Figure 1, is a summary of the items involved in a number group transition. A survey of this figure will enable the installer to quickly determine, where the transition work is to be performed, and what the work will consist of.

## → 10. NUMBER GROUP WORK SHEETS

10.1 Figure 3 is a sample ID-489, work sheet and is filled in by the installer in accordance with information contained in the job wiring list for the block relay frames.

→ Arrowed lines indicate new or changed information.

→ 10.2 Figure 2 is a completed ID-489 work sheet. It is a composite picture of the existing and proposed grouping of directory numbers into number groups.

10.21 In addition, Figure 2 illustrates the following:

(a) The number of steps the transition divided into, and the sequence.

(b) The termination of both the existing and proposed number group cables, which, is the deciding factor in establishing a step sequence.

10.3 Figure 4, is a ID-490, work sheet that shows the details of all the number group transition.

10.31 This figure will be more fully discussed in the sections where in it applies.

10.4 Blank copies of work sheets exhibited in these sections may be obtained upon requisition as specified in Section 1, Paragraph 10 of this handbook.

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Engineer of Installation