

## COMMON SYSTEMS MAIN INTERCONNECTING (COSMIC) FRAME CONNECTING BLOCKS—78C-TYPE

### DESCRIPTION

#### 1. GENERAL

**1.01** This section describes the various 78C-type connecting blocks and their applications on the COSMIC frame.

**1.02** When this section is reissued, the reason for reissue will be listed in this paragraph.

**1.03** Procedures for cross-connecting and repairing the connecting blocks are contained in Sections 201-222-301 and 201-222-801, respectively.

#### 2. GENERAL DESCRIPTION

**2.01** The 78C-connecting block is made of molded plastic with bifurcated, slicing type, quick-connect terminals for cross-connections on the front and solderless wire-wrap terminals for hard-wired cable terminations on the rear. Two termination slots for each cross-connection wire are provided in each terminal on the front of the block. One slot is for normal cross-connection terminations and the other for bridge tapping during cable throws or line equipment transfers.

**2.02** The front face of the block has a red and white checkerboard pattern to designate cable or switching equipment increments. This pattern also delineates rows of paired (tip and ring) terminals. The rear face of the block has a black grid pattern to designate terminals in the same manner as the front pattern.

**2.03** Slotted plastic fanning strips, which hold the cross-connections in place, are provided on the top and bottom of the block. The fanning strips are color coded to indicate the type of equipment terminated on the block. Terminal identification is provided by factory stamped characters located on the face and upper and lower facets of the fanning strip.

**2.04** The COSMIC frame uses two means of identifying cross-connection terminals. The Location Oriented Identification System (LOIS) identifies the assigned terminal by the module, shelf, block, row, and column numbers which direct the frame attendant to the correct terminal. The column number is hot stamped, in black, on the front surface of the fanning strips. The row number (1 to 4) is highlighted by the hot stamped checkerboard pattern on the body of the blocks.

**2.05** Equipment or cable pair (ECAP) identification is hot stamped on the top and bottom of the fanning strip. Figure 1 is an example of the features of the 78C1A-64 connecting block used for ESS. Figure 2 shows the stamping format for all types of 78C connecting blocks used on a COSMIC frame.

**2.06** The capacity of the block is 50, 64, or 100 pairs, depending on its function. The function of each 78C-type connecting block is described in the following paragraphs.

#### 3. FUNCTIONAL DESCRIPTION

##### 78C1A-50 (Fig. 3)

**3.01** This connecting block terminates 50 tie pairs. The pairs are stamped 01 to 50 and up to ten blocks may be installed on each of shelves 1 and 11. The fanning strip is white.

##### 78C1A-64 (Fig. 4)

**3.02** No. 1 ESS offices with a 4:1 line concentration ratio are terminated on these blocks. Sixteen blocks each with a capacity of 64 pairs, may be mounted on each of shelves 2 through 9. The fanning strip is yellow.

#### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

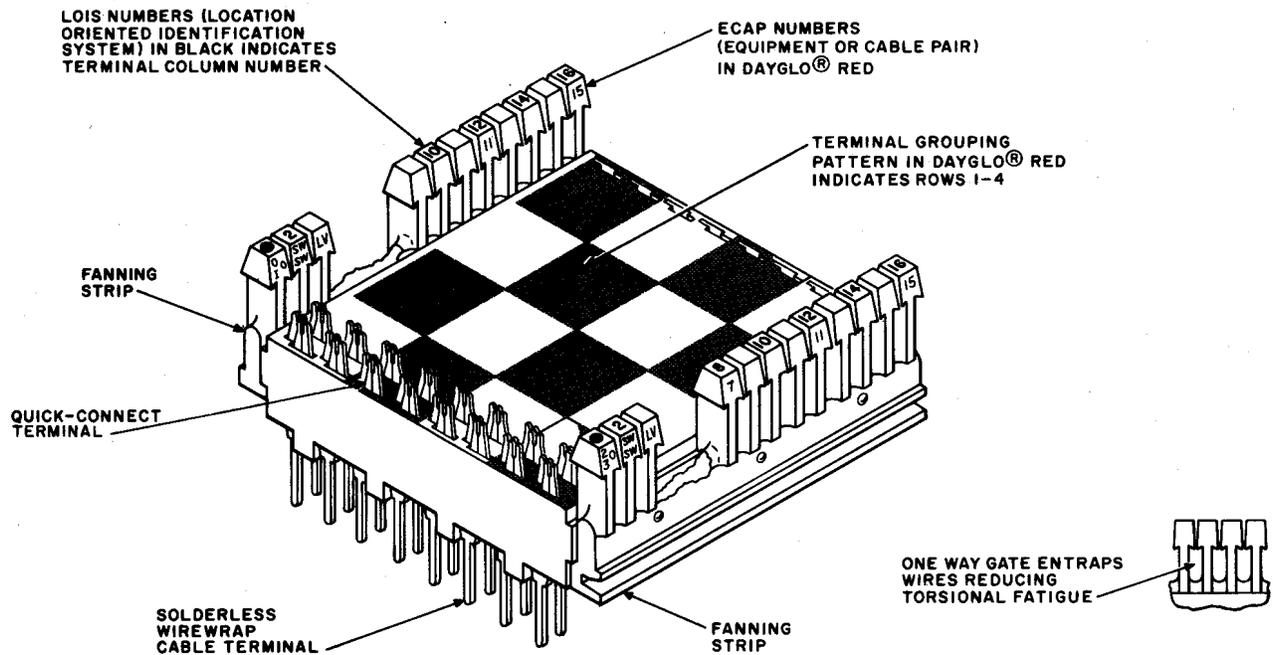


Fig. 1—Connecting Block Features

**78C1A-100 (Fig. 5)**

3.03 One hundred tie pairs are terminated on this block. The pairs are stamped 01 to 00 and up to 10 blocks may be mounted on each of shelves 2 through 10. The fanning strip is white.

**78C1B-50**

3.04 This block is similar to the 78C1A-50 connecting block (Fig. 3 and paragraph 3.01) except the fanning strip is blue which indicates loop cable pairs are terminated on this block.

**78C1B-100**

3.05 This block is similar to the 78C1A-100 connecting block (Fig. 5 and paragraph 3.03) except the fanning strip is blue which indicates loop cable pairs are terminated on this block.

**78C1C-100 (Fig. 6)**

3.06 One hundred pairs of step-by-step line equipment are terminated on this block. The pairs are stamped 01 to 00 and up to 10 blocks

may be mounted on each of shelves 2 through 10. The fanning strip is orange.

**78C2A-50**

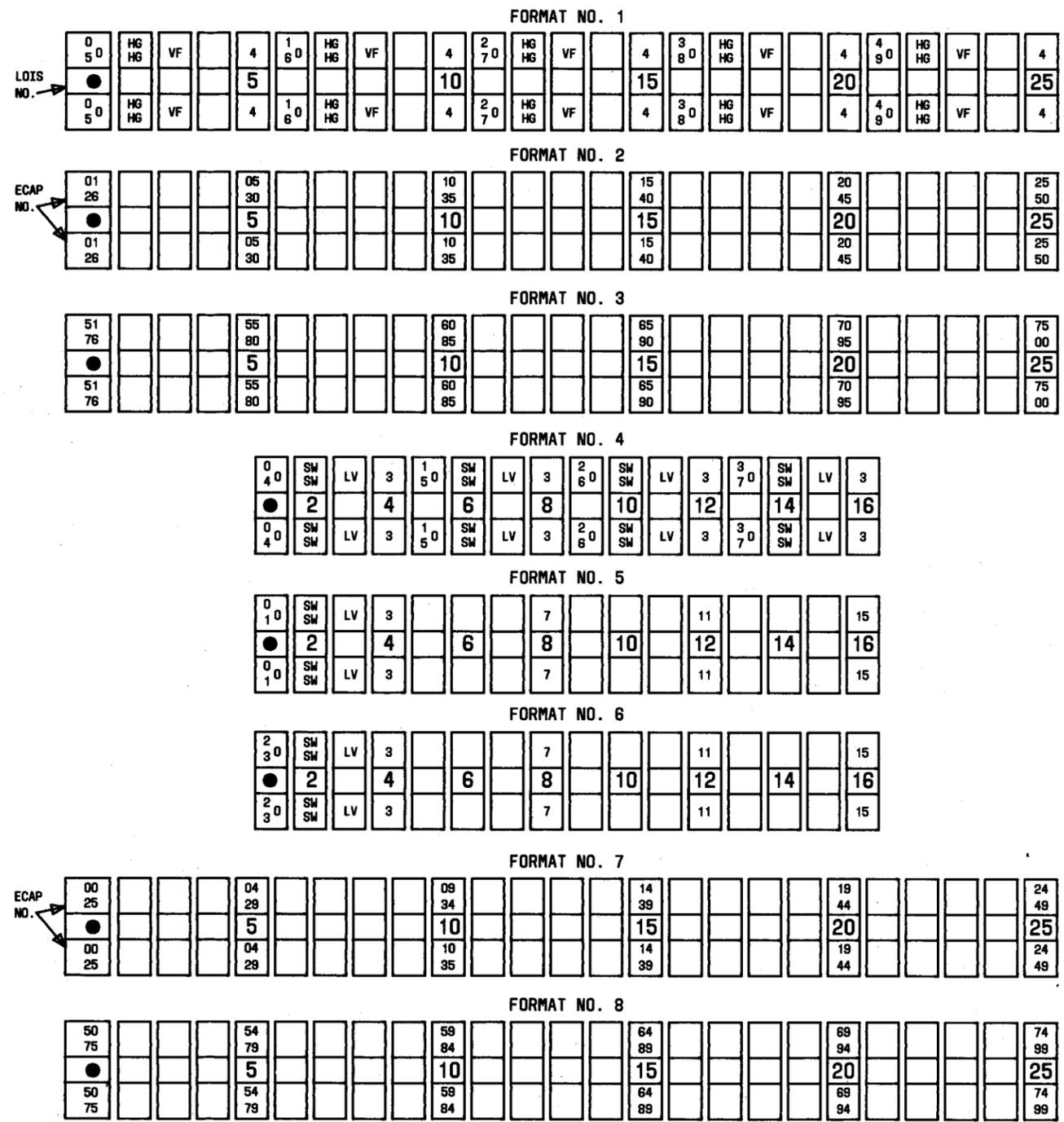
3.07 This block is similar to the 78C1A-50 connecting block (Fig. 3 and paragraph 3.01) except the pairs are stamped 51 to 00. It may be mounted adjacent to a 78C1A-50 connecting block, so that both blocks together represent one 100-pair sequence.

**78C2A-64 (Fig. 7)**

3.08 No. 1 ESS offices with a 2:1 line concentration ratio are terminated on these blocks. Sixteen blocks, each with a capacity of 64 pairs may be mounted on each of shelves 2 through 9. The fanning strip is yellow.

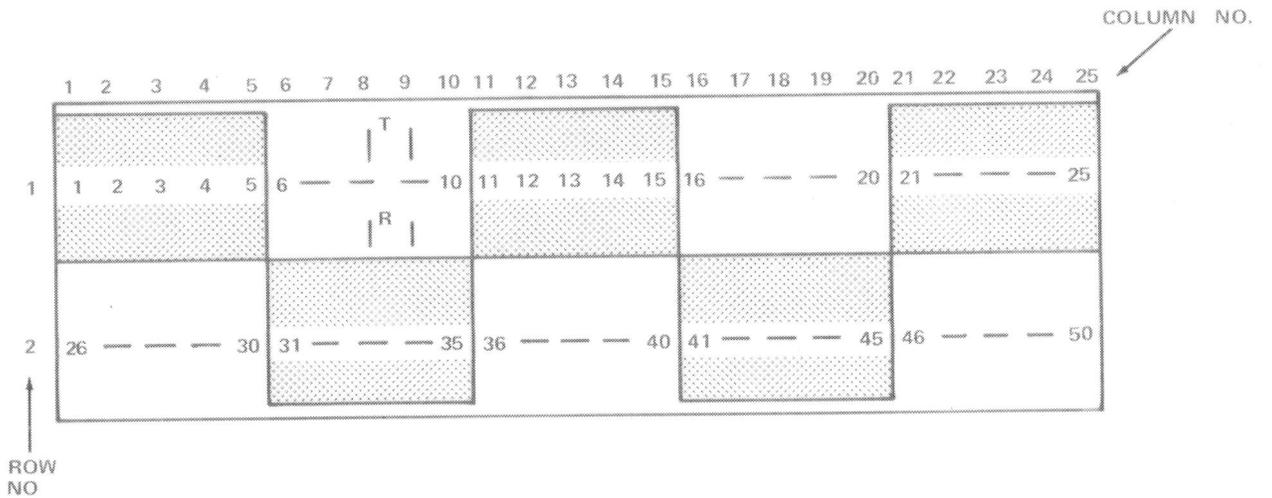
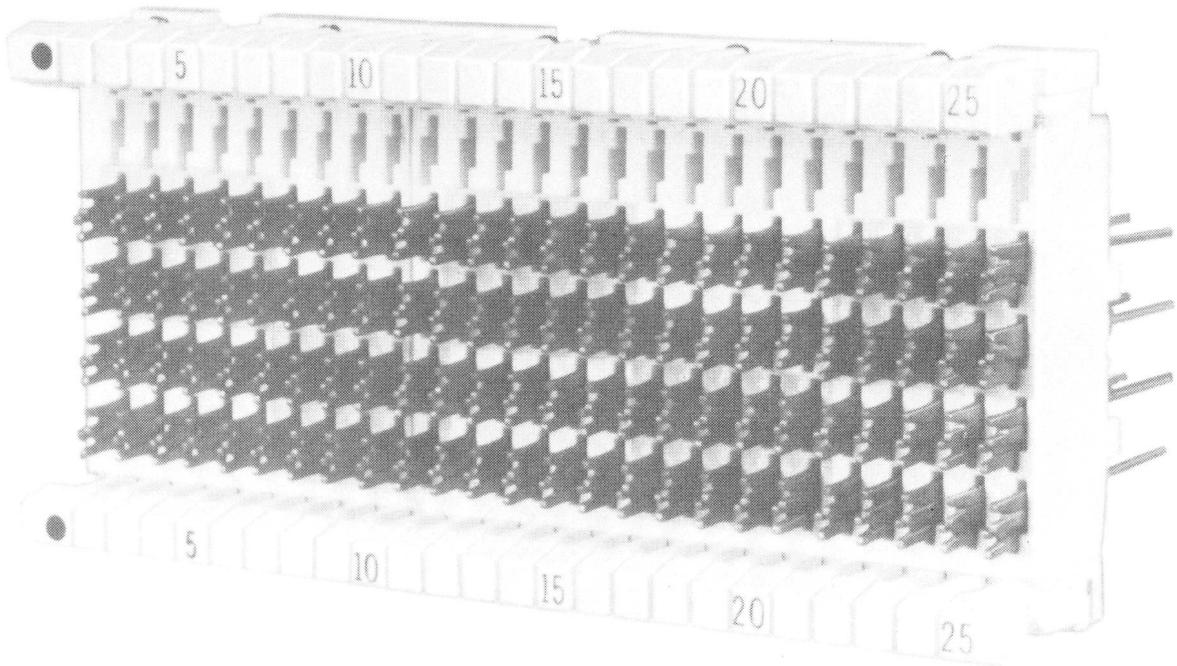
**78C2A-100 (Fig. 8)**

3.09 One hundred pairs of No. 5 crossbar equipment are terminated on these blocks. Ten blocks may be mounted on each of shelves 2 through 10. Figure 8 shows the stamping format. The fanning strip is green.



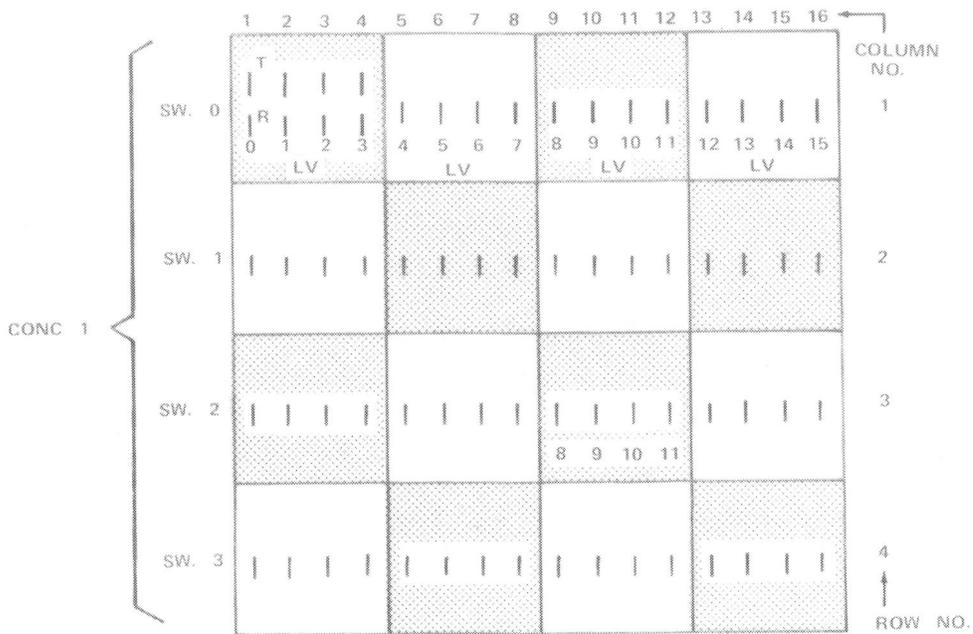
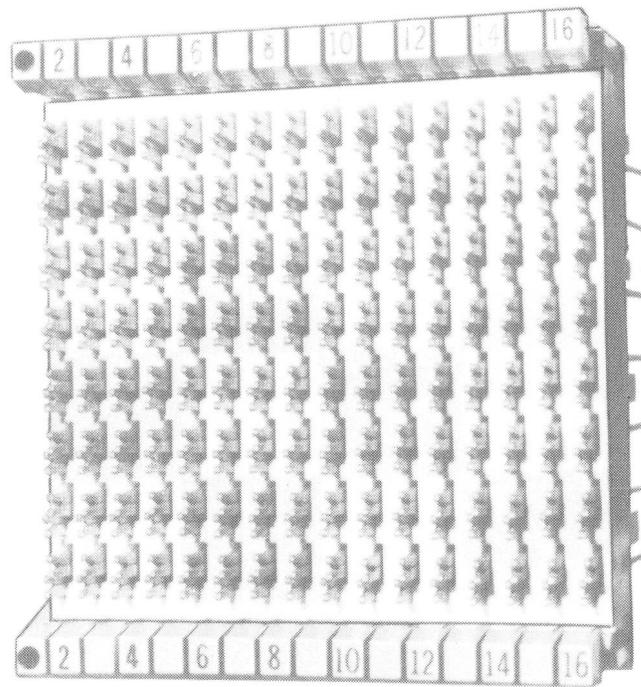
CODE	CAPACITY	APPLICATION	FANNING STRIP COLOR	FORMAT NO.	
				TOP	BOTTOM
78C1A-50	50 PR.	TIE PAIRS	WHITE	2	2
78C1A-64	64 PR.	ESS (4:1)	YELLOW	5	6
78C1A-100	100 PR.	TIE PAIRS	WHITE	2	3
78C1B-50	50 PR.	LOOP DISTRIBUTION	BLUE	2	2
78C1B-100	100 PR.	LOOP DISTRIBUTION	BLUE	2	3
78C1C-100	100 PR.	STEP-BY-STEP	ORANGE	2	3
78C2A-50	50 PR.	TIE PAIRS	WHITE	3	3
78C2A-64	64 PR.	ESS (2:1)	YELLOW	4	4
78C2A-100	100 PR.	NO. 5 CROSSBAR	GREEN	1	1
78C2B-50	50 PR.	LOOP DISTRIBUTION	BLUE	3	3
78C3A-100	100 PR.	NO. 1 CROSSBAR	GREEN	7	8

Fig. 2—Fanning Strip Formats



EXAMPLE: TIE PAIRS NUMBERED 301-350 ARE LOCATED AS SHOWN ABOVE. PAIRS NUMBERED 351 TO 400 ARE ARRANGED IN THE ADJACENT BLOCK IN THE SEQUENCE SHOWN ABOVE. THUS PAIR 362 WILL HAVE THE SAME RELATIVE POSITION IN THE 78C2A-50 BLOCK AS PAIR 312, OR COLUMN 12 AND ROW 1.

Fig. 3—78C1A-50 Connecting Block



NO. 1 ESS EQUIPMENT IS DESIGNATED BY CONCENTRATORS (CONC), SWITCHES (SW) AND LEVELS (LV).

EXAMPLE: CONCENTRATOR 1, SWITCH 2, LEVEL 9 WOULD BE LOCATED IN COLUMN 10 AND ROW 3.

Fig. 4—78C1A-64 Connecting Block

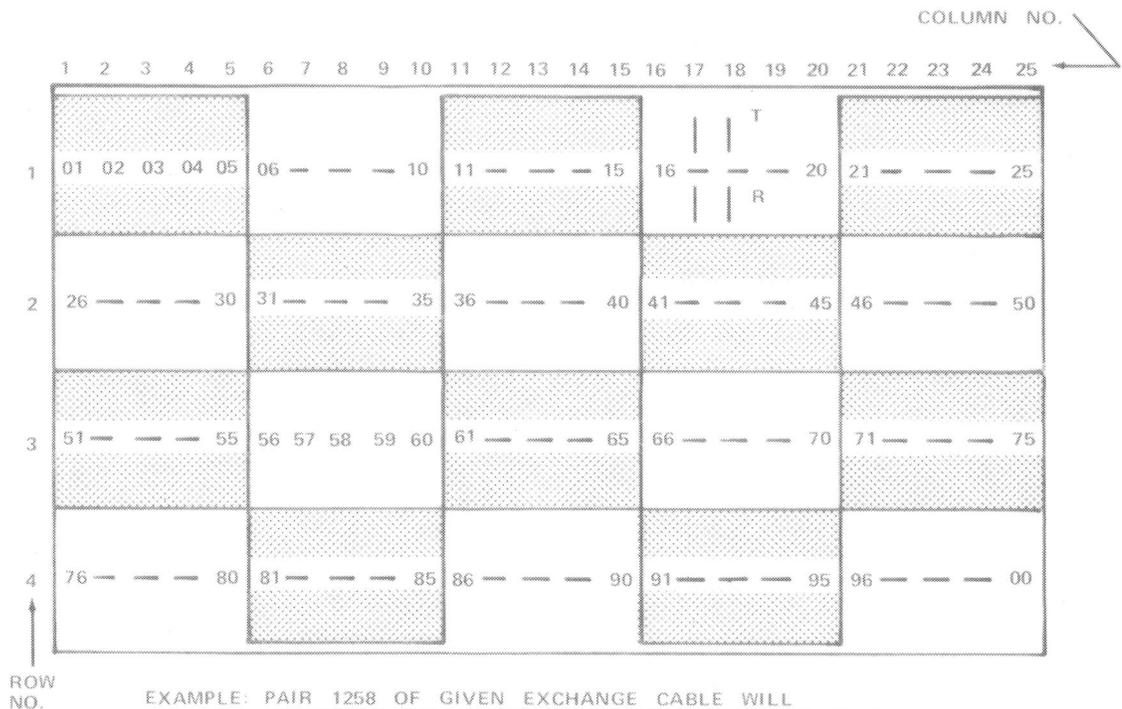
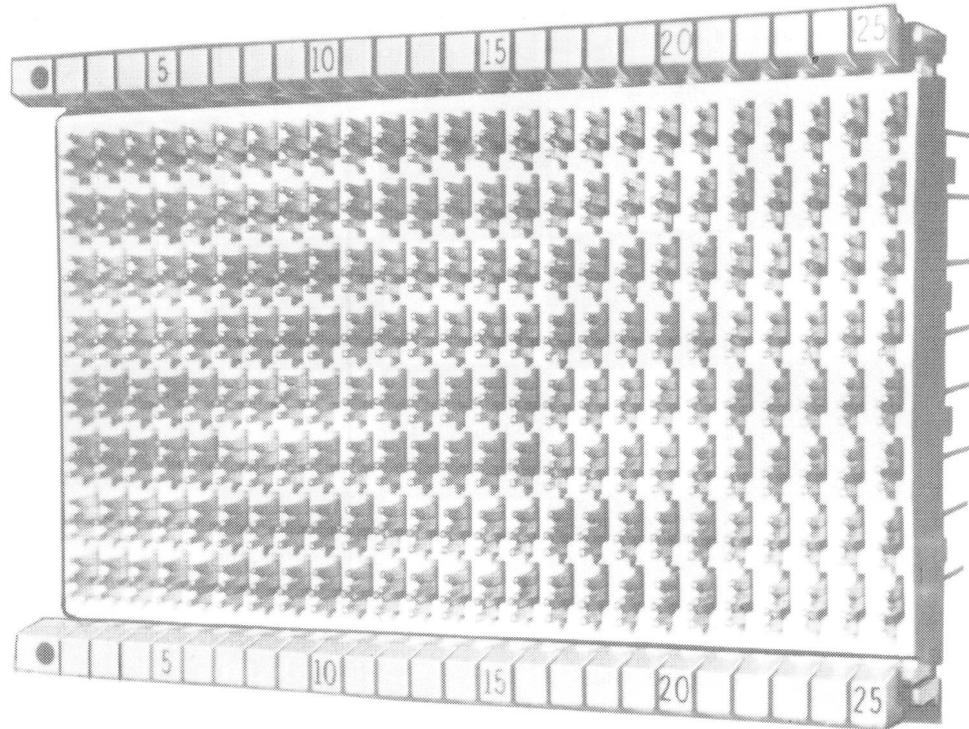
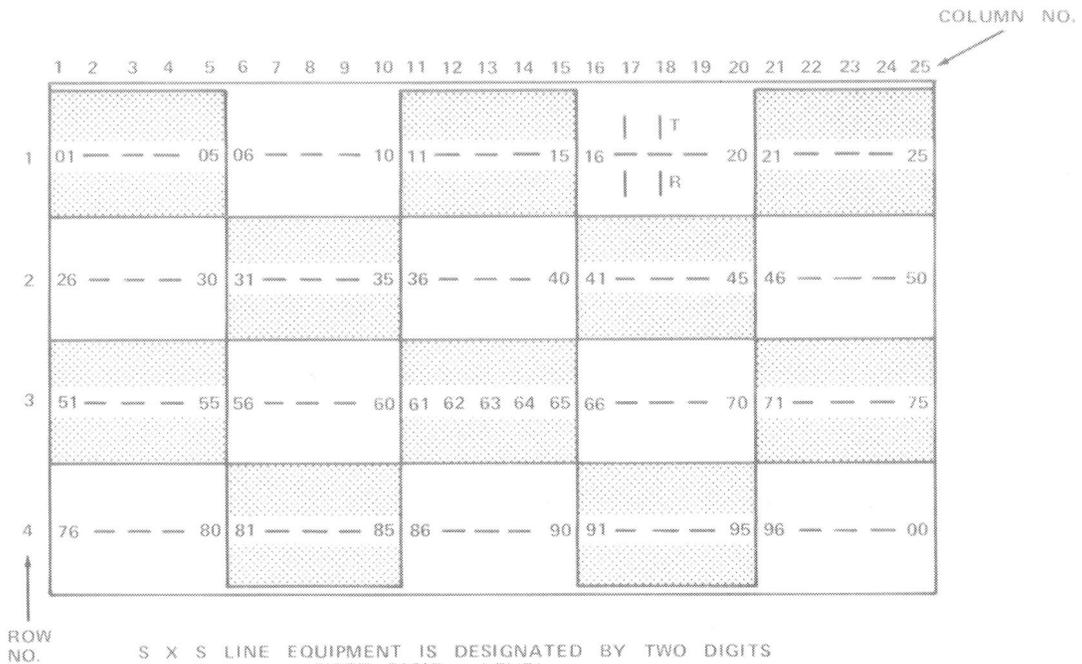
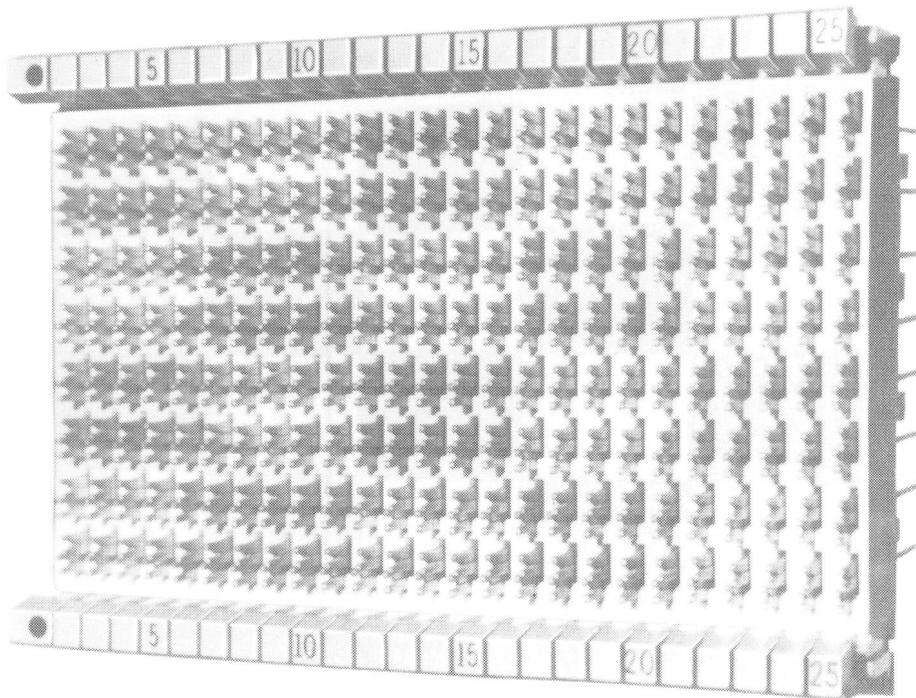


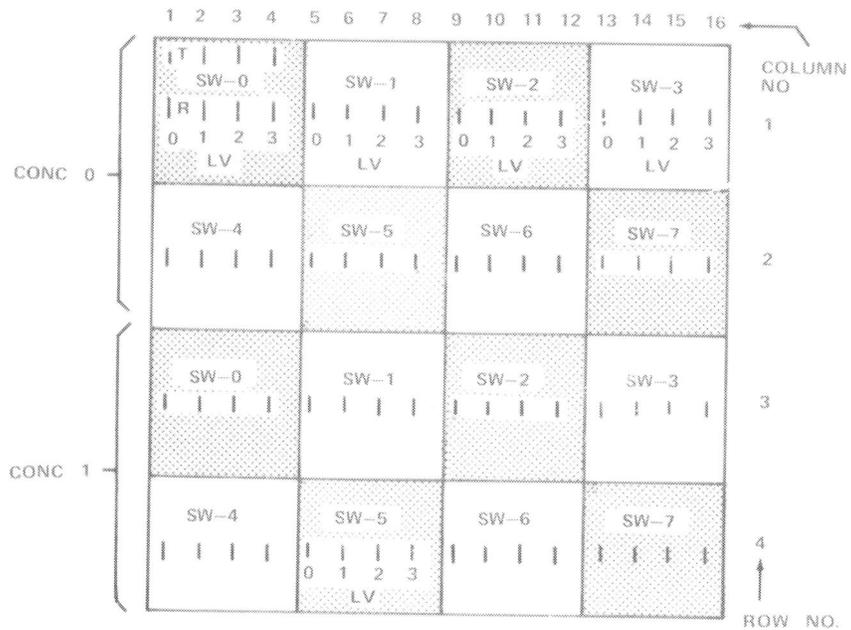
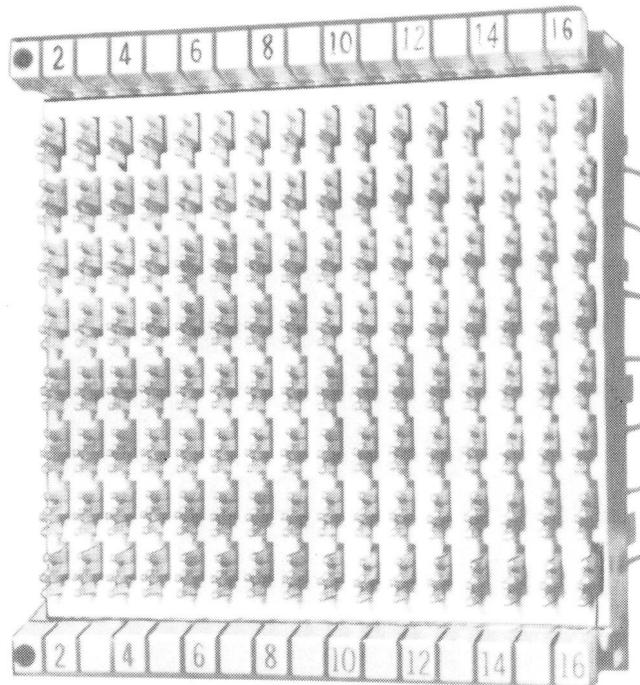
Fig. 5—78C1A-100 Connecting Block



S X S LINE EQUIPMENT IS DESIGNATED BY TWO DIGITS  
 FIRST DIGIT - LEVEL  
 SECOND DIGIT - TERMINAL

EXAMPLE: LEVEL 6, TERMINAL 4, LINE EQPT. DESIGNATION: 64  
 LOCATED IN COLUMN 14 AND ROW 3

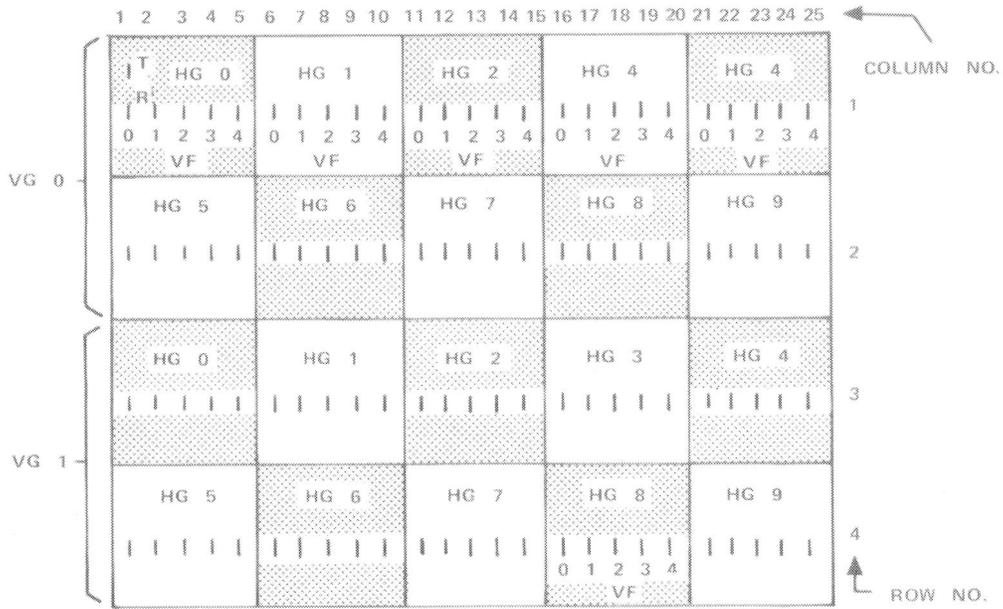
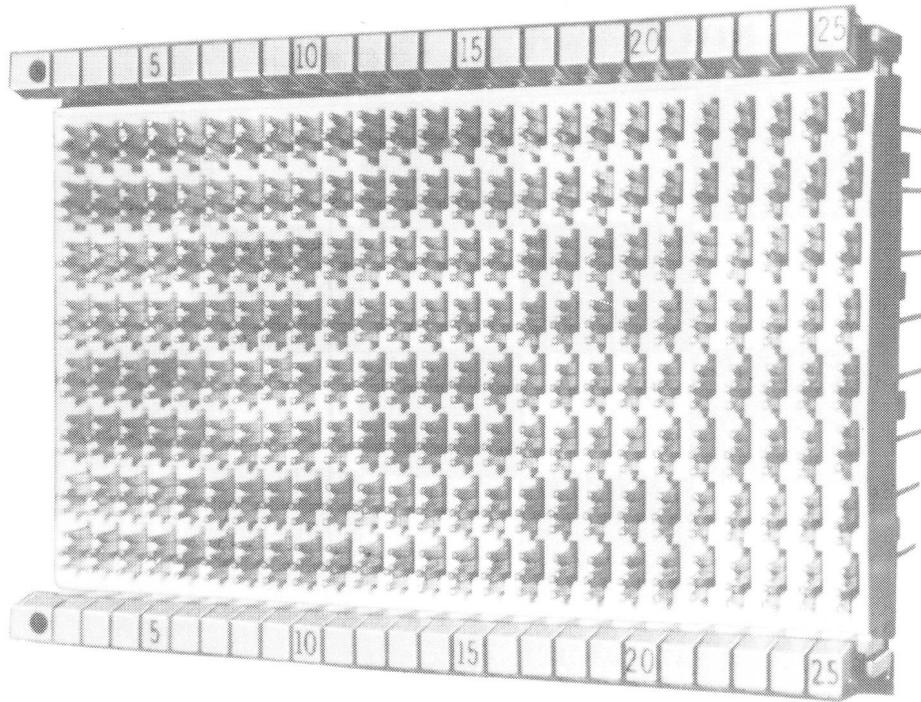
**Fig. 6—78C10-100 Connecting Block**



NO. 1 ESS EQUIPMENT IS DESIGNATED BY CONCENTRATORS ( CONC), SWITCHES (SW) AND LEVELS (LV).

EXAMPLE: CONCENTRATOR 1, SWITCH 5, LEVEL 3 WOULD BE LOCATED IN COLUMN 8 AND ROW 4.

Fig. 7—78C2A-64 Connecting Block



NO. 5 X BAR LINE EQUIPMENT IS DESIGNATED BY VERTICAL GROUPS (VG), HORIZONTAL GROUPS (HG) AND VERTICAL FILES (VF).

EXAMPLE VERTICAL GROUP 1, HORIZONTAL GROUP 8, VERTICAL FILE 3 WOULD BE LOCATED IN COLUMN 19 AND ROW 4

Fig. 8—78C2A-100 Connecting Block

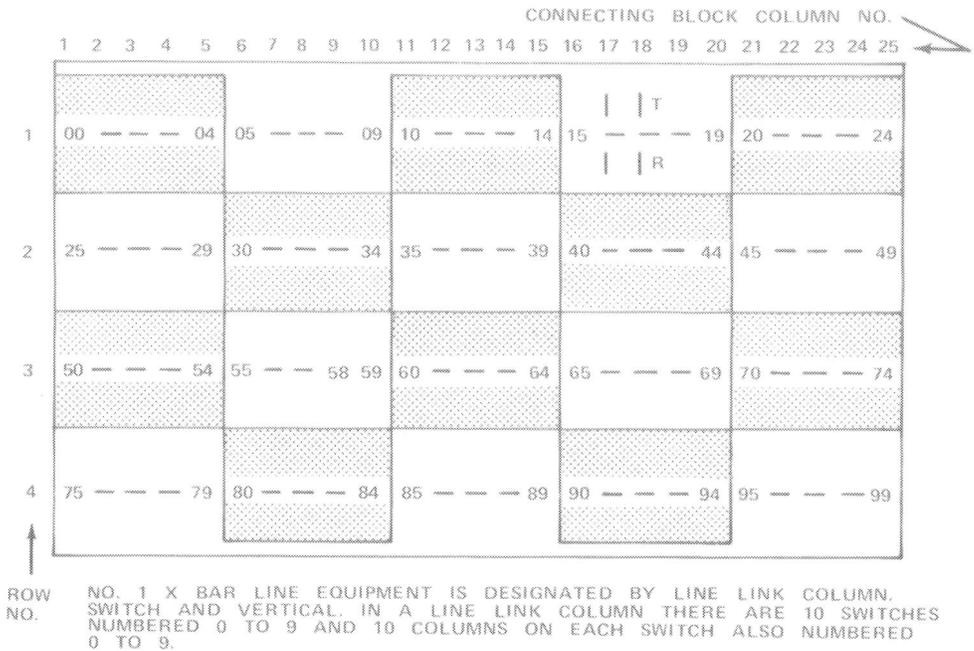
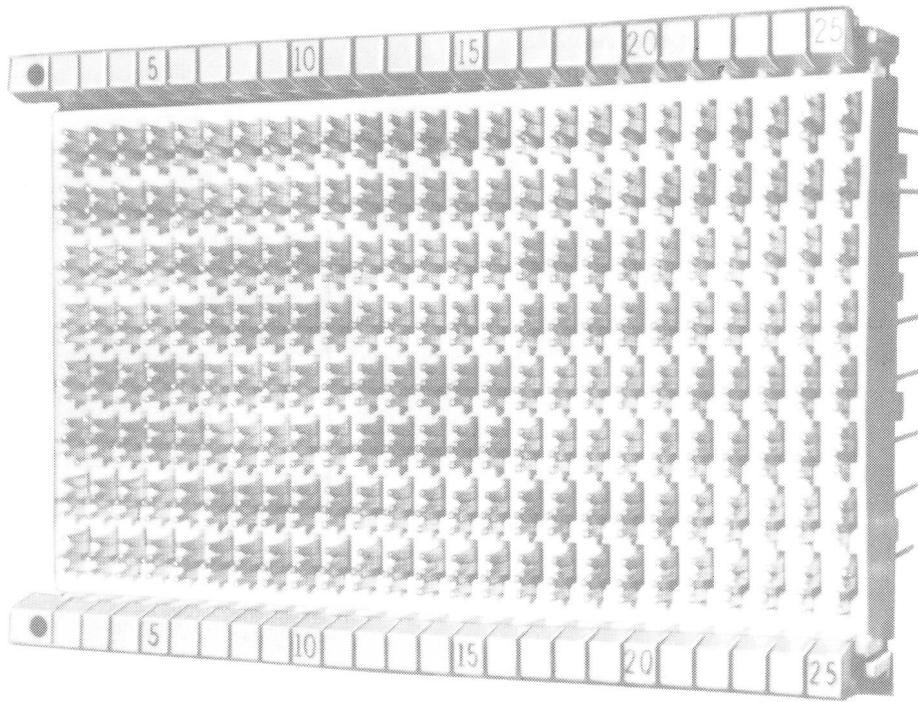
**78C2B-50**

**3.10** This block is similar to the 78C1A-50 connecting block (Fig. 3 and paragraph 3.01) except the pairs are stamped 51 to 00 and the fanning strip is blue indicating loop cable pairs are terminated on this block. It may be mounted adjacent to a 78C1B-50 connecting block, so that both blocks together represent one 100-pair sequence.

**78C3A-100 (Fig. 9)**

**3.11** No. 1 crossbar line equipment is terminated on this connecting block. It has a capacity

of 100 line equipments. Ten blocks may be mounted on each of shelves 2 through 10. The fanning strip is green. The line equipment is designated as column, switch, and vertical. The column number shown in Fig. 9 refers to the column of block terminals **not** the column of line equipment. Each connecting block is cabled to one column of 100 line equipments.



EXAMPLE: IF THIS CONNECTING BLOCK IS CABLED TO COLUMN 65 AND THE LINE ASSIGNMENT IS DESIGNATED AS 65-58 IT WOULD BE LOCATED IN ROW 3, CONNECTING BLOCK COLUMN 9.

Fig. 9—78C3A-100 Connecting Block