

CONNECTING BLOCK
REPAIR AND REPLACEMENT PROCEDURES
"COSMIC*" I MAIN DISTRIBUTING FRAME SYSTEM

CONTENTS	PAGE
1. GENERAL	1
2. TOOLS	1
3. MATERIAL	2
4. PREPARATION	4
5. REPAIR AND REPLACEMENT PROCEDURES	5
A. Terminal	5
B. Fanning Strip	7
C. Connecting Block	7

Figures

1. Connecting Block	5
2. 724A Wire Removal Tool	6
3. 756C Wire Insertion Tool	6
4. 872A Wire Insertion Tool	7
5. Connecting Block Removal Tool	8

Tables

A. Comcodes	3
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1. GENERAL

1.01 This section describes the procedures for repairing and replacing 78C- and 112C-type connecting blocks and their associated fanning strips and terminals used on the COSMIC I main distributing frame.

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

1.03 Both the part number and the name of the part must be listed when ordering replacement parts. Information enclosed in parenthesis in Parts 2 and 3 is *not* ordering information.

1.04 No replacement procedures are given for screws where the procedure is obvious and consists of a simple operation.

1.05 Before making repairs, craft personnel should be familiar with the contents of the following sections:

- 069-132-811—Punched- or Wire-Type Terminals (Not Having Notches or Perforations) Method of Making and Removing Wrapped Connections
- 201-222-301—COSMIC I Main Distributing Frame System—Method of Making Connections

2. TOOLS

CODE OR SPEC. NO.	DESCRIPTION
AT 7860	B-long nose pliers
AT 7858	V-notch diagonal pliers
AT 7825	4-inch E screwdriver
R 4473	Combination skinning tool
DETAIL 18	(For 26-gauge wire—blue dot on blade)

NOTICE

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

SECTION 201-222-801

SPEC	DESCRIPTION	SPEC	DESCRIPTION
DETAIL 19	(For 24-gauge wire—orange dot on blade)	KS-20962 L1, L2	Connecting bag
KS-16363, L3	Wire-wrapping tool	KS-22035	Plastic spudger
KS-16734, L1	Wire-wrapping bit (red—for 24-gauge wire)	756C	Wire insertion tool (for 78-type block)
KS-16903, L1	Wire-wrapping bit (yellow—for 26-gauge wire)	756C-2	Wire insertion tool (for 112-type block)
KS-20963, L2	Wire-wrapping sleeve (red—for 24-gauge wire)	872A	Wire insertion tool (for 78-type block)
KS-20963, L3	Wire-wrapping sleeve (yellow—for 26-gauge wire)	724A	Wire removal tool
KS-20827, L1	Wire-unwrapping tool	R2916	Twine
KS-21345	Connecting block removal tool		

3. MATERIAL

3.01 The connecting block code is stamped on the rear of the block. Table A lists the comcodes associated with each connecting block code.

TABLE A
COMCODES

CONNECTING BLOCK CODE	CONNECTING BLOCK COMCODE	FANNING STRIP COMCODE	
		BOTTOM	TOP
78C1A-50	102371770	841639909	841087901
78C2A-50	102995198	841639917	842358830
78C1B-50	102463486	841639925	841087919
78C2B-50	102995206	841639933	842358848
78C1A-64	102371788	841639974	841088081
78C2A-64	102371838	841639982	841088099
78C1A-100	102371796	841639917	841087901
78C2A-100	102415882	841639941	841087927
78C31-100	102730462	841640014	841634777
78C1B-100	102371804	841639933	841087919
78C1C-100	102371812	841639966	841087943
112C1A-50	103288197	841639909	841087901
112C2A-50	103288254	841639917	842358830
112C1B-50	103288221	841639925	841087919
112C2B-50	103288270	841639933	842358848
112C1A-64	103288205	841639974	841088081
112C2A-64	103288262	841639982	841088099
112C1A-100	103288189	841639982	841087901
112C1B-100	103288213	841639933	841087919

3.02 This paragraph contains the information necessary for ordering replacement parts. However the information within parenthesis is for reference only and is not to be used as ordering information.

COMCODE	DESCRIPTION	COMCODE	DESCRIPTION
		102371770	Connecting block assembly (78C1A-50)
		102995198	Connecting block assembly (78C2A-50)
824733109	Clip, connector assembly (78C-type connecting block P47L310 terminal)	102463486	Connecting block assembly (78C1B-50)
842367823	Connector, 3-beam (112-type connecting block terminal)	102995206	Connecting block assembly (78C2B-50)

SECTION 201-222-801

COMCODE	DESCRIPTION	COMCODE	DESCRIPTION
102371788	Connecting block assembly (78C1A-64)	842358830	Fanning strip (78C2A-50, 112C2A-50 top)
102371838	Connecting block assembly (78C2A-64)	841639925	Fanning strip (78C1B-50, 112C1B-50 bottom)
102371796	Connecting block assembly (78C1A-100)	841087919	Fanning strip (78C1B-50, 78C1B-100, 112C1B-50, 112C1B-100 top)
102415882	Connecting block assembly (78C2A-100)	841639933	Fanning strip (78C2B-50, 78C1B-100, 112C2B-50, 112C1B-100 bottom)
102730462	Connecting block assembly (78C3A-100)	842358848	Fanning strip (78C2B-50, 112C2B-50 top)
102371804	Connecting block assembly (78C1B-100)	841639974	Fanning strip (78C1A-64, 112C1A-64 bottom)
102371812	Connecting block assembly (78C1C-100)	841088081	Fanning strip (78C1A-64, 112C1A-64 top)
103288197	Connecting block assembly (112C1A-50)	841639982	Fanning strip (78C2A-64, 112C2A-64 bottom)
103288254	Connecting block assembly (112C2A-50)	841088099	Fanning strip (78C2A-64, 112C2A-64 top)
103288221	Connecting block assembly (112C1B-50)	841639941	Fanning strip (78C2A-100 bottom)
103288270	Connecting block assembly (112C2B-50)	841087927	Fanning strip (78C2A-100 top)
103288205	Connecting block assembly (112C1A-64)	841640014	Fanning strip (78C3A-100 bottom)
103288262	Connecting block assembly (112C2A-64)	841634777	Fanning strip (78C3A-100 top)
103288189	Connecting block assembly (112C1A-100)	841639966	Fanning strip (78C1C-100 bottom)
103288213	Connecting block assembly (112C1B-100)	841087943	Fanning strip (78C1C-100 top)
841639909	Fanning strip (78C1A-50, 112C1A-50 bottom)	4. PREPARATION	
841087901	Fanning strip (78C1A-50, 78C1A-100, 112C1A-50, 112C1A-100 top)	4.01 Before beginning any replacement procedure, the circuit or circuits involved must be made busy according to local practices.	
841639917	Fanning strip (78C2A-50, 78C1A-100, 112C1A-50, 112C1A-100 bottom)	4.02 To replace a terminal or the entire connecting block, it is necessary to remove the cross-connections and the cable wiring. For a single terminal replacement, the wires do not have to be tagged for identification. However, to replace a connecting	

block, extreme care must be taken to identify and tag each lead or pair of leads as they are removed from the terminals.

4.03 Generally, there is enough slack in the cross-connection wires to allow for the replacement of the fanning strip without removing the wires from

the terminals. Each lead can be pulled through the fanning strip 1-way gate (Fig. 1), using the long nose pliers. The wires should remain seated in the quick-connect terminals. As an added precaution, the wires associated with each column should be tied or taped together to aid in placing the wires into the proper gate after the new fanning strip has been installed.

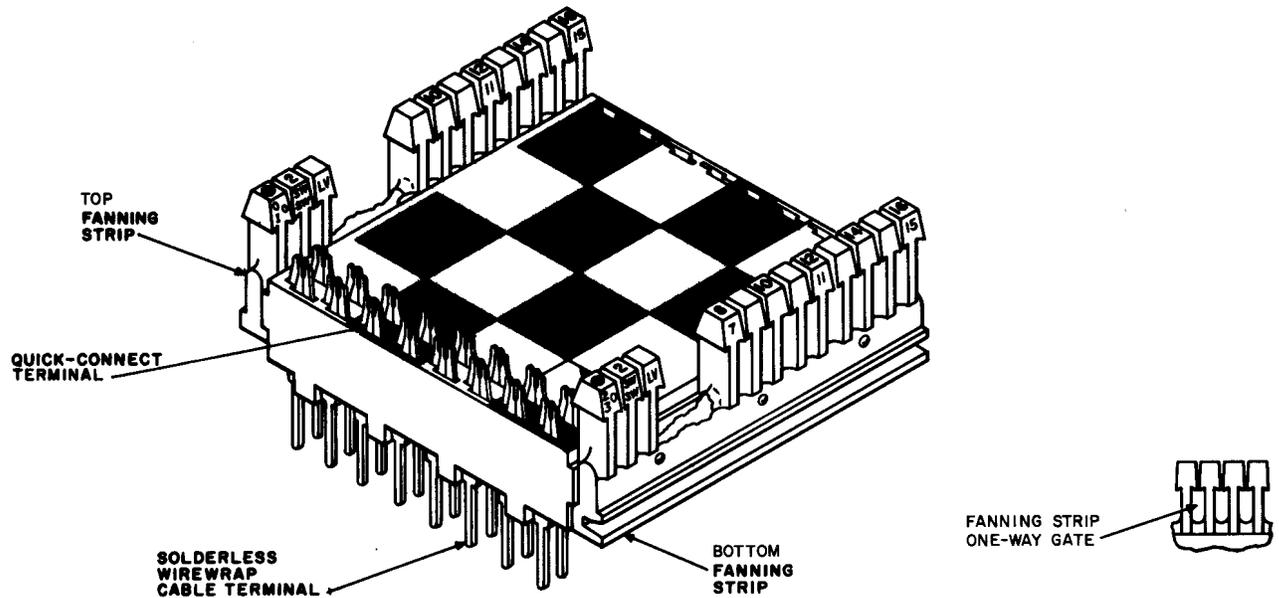


Fig. 1—Connecting Block

4.04 If any special service insulating clips are removed during the replacement procedure, the circuit(s) involved should be noted.

5. REPAIR AND REPLACEMENT PROCEDURES

A. Terminal

5.01 Remove the cross-connection wire from the defective terminal, using the 724A removal tool (Fig. 2). At the rear of the block, remove the cable wire, using the KS-20827 wire-unwrapping tool.

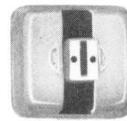


Fig. 2—724A Wire Removal Tool

5.02 After removing the cable wire, use the unwrapping tool to push the terminal out of the casting toward the front of the block. The terminal can then be easily pulled out from the front of the block, using the long nose pliers.

5.03 Place the new terminal into the block. Use the proper wire-insertion tool [Fig. 3 or 4 for 78C-type block and the 756C-2 tool (not shown) for 112-

type block] and insert it over the terminal and, using a slight pressure, push the terminal into the block until it is seated properly (indicated by a “click”).



END FOR 78AI-64



END FOR 78C SERIES

Fig. 3—756C Wire Insertion Tool

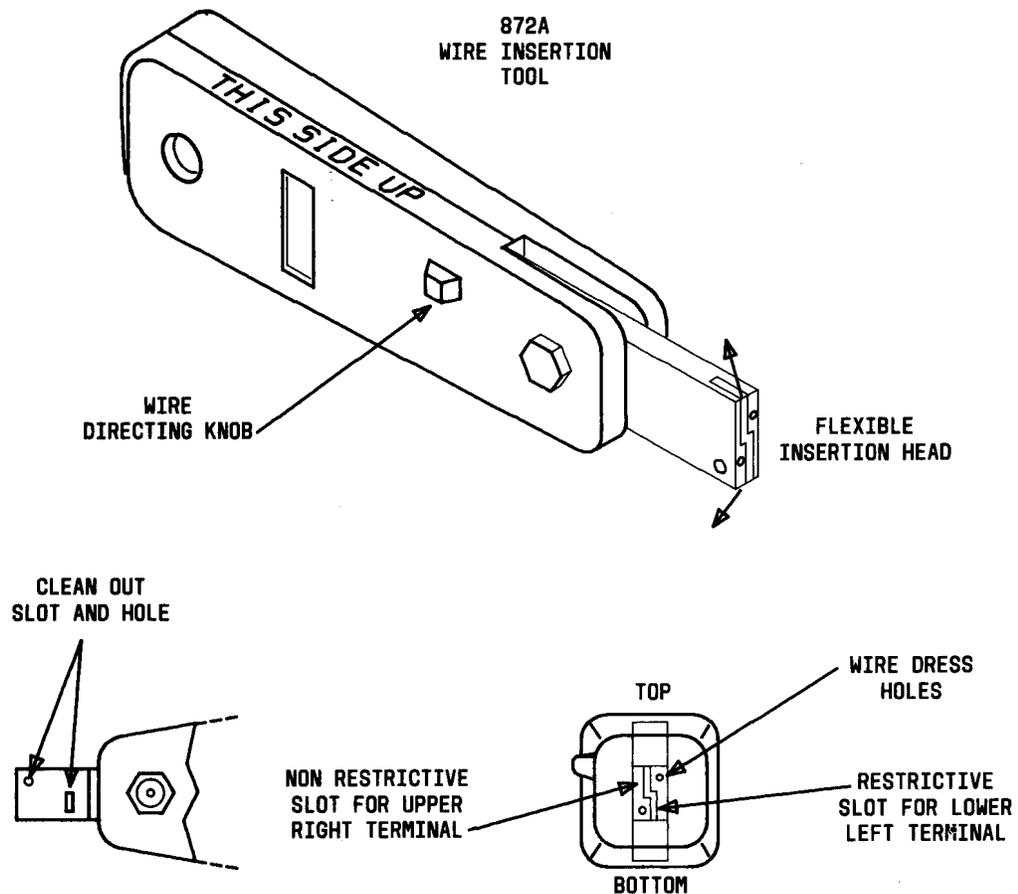


Fig. 4—872A Wire Insertion Tool

5.04 Reconnect the wires on the new terminal. Place all wire clippings into the KS-20962 connecting bag. Verify that the circuit is working properly.

B. Fanning Strip

5.05 After pulling all the cross-connection wires through the fanning strip gates (paragraph 4.03), remove the screws holding the fanning strip to the block.

5.06 Remove the defective fanning strip and install the new one, using the screws to fasten it to the block.

5.07 Reinsert the cross-connection wires into the proper fanning strip gates and dress the wires back on the frame.

5.08 Make a visual inspection to be sure that none of the wires have been removed from their quick-connect terminals. Use the KS-22035 plastic spudger to dress the wires along the front of the block.

C. Connecting Block

5.09 Use the 724A wire removal tool to remove each cross-connection wire. Tag each wire for identification, and tie or tape together all wires associ-

ated with the same connecting block column, after removing them from the fanning strips (both top and bottom).

5.10 Cut back the end of each wire approximately one-half inch and deposit the clippings into the connecting bag. The wires are now prepared for reconnecting to the new connecting block. Lay the wires back on the framework so they will not interfere with the removal of the connecting block.

5.11 The KS-21345 connecting block removal tool (Fig. 5) is used to remove the connecting block from the shelf. Align the inclines on the face of the tool with the snap-in tabs on the top rear of the block. Then press the connecting block toward the front of the frame. This action releases the top of the block allowing it to tip forward. The connecting block can then be lifted off the frame by disengaging the groove in the lower connecting-block fanning strip from the edge of the shelf.



Fig. 5—Connecting Block Removal Tool

5.12 With the cable wiring side of the block facing upward, place the block against the shelf so that the bottom of the bottom fanning strip is flush against the outside surface of the shelf. Use the roll of twine to lash the block to the shelf by making several wraps around the front part of the bottom fanning strip and the shelf. This should hold the block firmly in place. Remove, insulate, and identify (by tagging or other means) each cable wire.

5.13 After the cable leads have been removed and placed back out of the way, cut the twine holding the block to the frame. Place the new block against the shelf (cable side up) and follow the procedure outlined in paragraph 5.12 to lash it to the shelf.

5.14 Reconnect the cable wires, using the proper wire-wrapping bit. Dress the cable back on the framework. Replace any cable ties that may have been removed to gain slack when removing the cable wiring.

5.15 Cut the twine holding the block to the shelf. Place the block on the shelf so that the groove in the bottom fanning strip is seated over the edge of the shelf. With the thumbs placed on the front facets of the top fanning strip, push the block firmly toward the framework until the tabs “snap” into place on the framework.

5.16 Reconnect all the cross connections and dress the slack back onto the frame. Following local practices, verify that all circuits are working properly.