

PANELS

583- AND 584-TYPES

IDENTIFICATION AND INSTALLATION

1. GENERAL

1.01 Information in this section was formerly contained in Section 518-270-101 which is hereby canceled.

1.02 This section contains information on the 583A, 584A, 584B and the new 584C panel. Information is also included on the new A65A connector cable, which is used to extend the features of the panel to a distributing point.

1.03 This section is based on the following drawings:

SD-69502-01

SD-69552-01

SD-69591-01

1.04 The 583- and 584-type panels are designed for use at large centralized installations of 1A2 Key Telephone System arrangements.

1.05 The 583- and 584-type panels mount on any frame structure designed for 23-inch wide mounting plates. Each panel is 4 inches high.

1.06 These panels are equipped with 18-pin connectors and are primarily intended, by internal wiring, for use with the 400-type (CO or PBX line circuit), 401A (manual intercom circuit) or the 415A (automatic, dc signaling tie line circuit) KTUs. The 400-type, 401A, and 415A KTUs can be installed in any connector, with the exception of the 401A and 415A KTUs which cannot be installed in J13 of the 583A (MD) or 584A (MD) panel.

1.07 The KTUs are locked into place by a slide retainer bar furnished with the panels. A second retainer bar can be installed on the bottom

of the 584B panel. This P-40J594 bar and three P-210800 mounting screws must be ordered separately.

2. IDENTIFICATION

583A(MD) and 584A(MD) PANELS

2.01 The 583A and 584A panels are equipped with small wire-wrap terminal strips.

2.02 Common control leads such as LW, LF, etc, are interconnected by factory wiring between the receptacles and are terminated on individual 302A terminal strips serving two receptacles each. These common leads are separated into two groups and can be associated with separate common equipment, or included as part of other grouped lines served by another panel.

2.03 The 583A panel accepts up to fifteen 400-type, 401A, or 415A plug-in KTUs. Common leads (LF, LW, etc, are interconnected to comparable (KS-interrupter supply) terminal leads on the 584A, B, or C panel.

2.04 The 584A panel accepts thirteen 400-type, 401A, or 415A plug-in KTUs and is equipped with a plug-in KS-15900, List 1 interrupter. When it is necessary to use 24 volts dc to power the interrupter, substitute KS-19384, List 1 (MD) or KS-19384, List 2 interrupter.

2.05 The 583A and 584A panels are equipped with nine cartridge-type fuses for lamp, relay, and talk battery as shown in Table A.

2.06 Lamp supply and "B" battery fuses serve two groups of connectors per panel: J1 through J8, and J9 through J13 on the 584A panel; and J1 through J8, and J9 through J15 on the 583A panel.

2.07 Wiring from the connectors and the common leads are terminated on the wire-wrap 302A

TABLE A

FUSE DISTRIBUTION OF 583A (MD) AND 584A (MD) PANELS

FUZE			583A	584A
DESIGN	NO.	CAPACITY (NOTE)	CONN SERVED	
LF1	1	2A	1-8	1-8
LW1	2	2A	1-8	1-8
LS	3	2A	1-8	1-8
B Bat.	4	1A	1-8	1-8
A Bat.	5	1A	7&8	7&8
SPARE	6	—	—	*
LS	7	2A	9-15	9-13
B Bat.	8	1A	9-15	9-13
LF2	9	2A	9-15	9-13
LW2	10	2A	9-15	9-13

Note: Bussman AGX-2 or Littlefuse No. 361002 may be used for the 2-amp fuses and Bussman AGX-1 or Littlefuse No. 461001 may be used for the 1-amp fuses.

* Fuse 6 used when 584A panel is modified to accept 412A KTU.

terminal strips. The common KS-interrupter supply leads occupy a portion of terminal strip G on both panels.

584B(MD) AND C PANELS (Fig. 1 and 2)

2.08 These panels are similar in capacity and function to the 584A panel. The 400-series KTUs and the KS-interrupter must be ordered separately.

2.09 The 584B and C panels have identical front sides and accept thirteen 400-type, 401A, or 415A plug-in KTUs. The KTUs may be intermixed in any connector position. A single connector is provided for the use of KS-15900, List 1, KS-19384, List 1 (MD), KS-19384, List 2 interrupter or a 412A KTU.

2.10 All line and station wiring is factory wired from the connectors to three 50-contact KS-type plugs numbered 1, 2, and 3 (Fig. 1 and 2) on the rear of the panel; this permits use of A-type connector cables for line and station terminations.

2.11 One A65A connector cable is used to provide connections to a distribution terminal for each 584B or C panel. One A75A or three A25B connector cables may be used in place of the A65A connector cable. When the A75A or A25B connector cable is used, the last 10 pair (orange binder) of the A75A cable or the last 10 pair of the A25B cable, connected to plug 3, are spare pairs.

2.12 Power supply wiring, interpanel strapping, and miscellaneous circuits are field connected to the 44-screw terminal field of the 584C panel or 46-screw terminal field of the 584B panel.

2.13 The 584C panel features a combined fuse panel and screw terminal field while the 584B panel has a separate fuse panel and screw terminal field (Fig. 1). The panels are equipped with 24-type fuses grouped according to potential and rating. The 44-type indicator fuses may be substituted; bushings for 1/2, 1-1/3, or 2-amp fuse, and P-142332 bushing for a 5-amp fuse. There are no provisions for fuse alarm signals.

2.14 Factory wired options allow rearrangement of lamp distribution and fusing within and/or between one or more of the 584B and C panels.

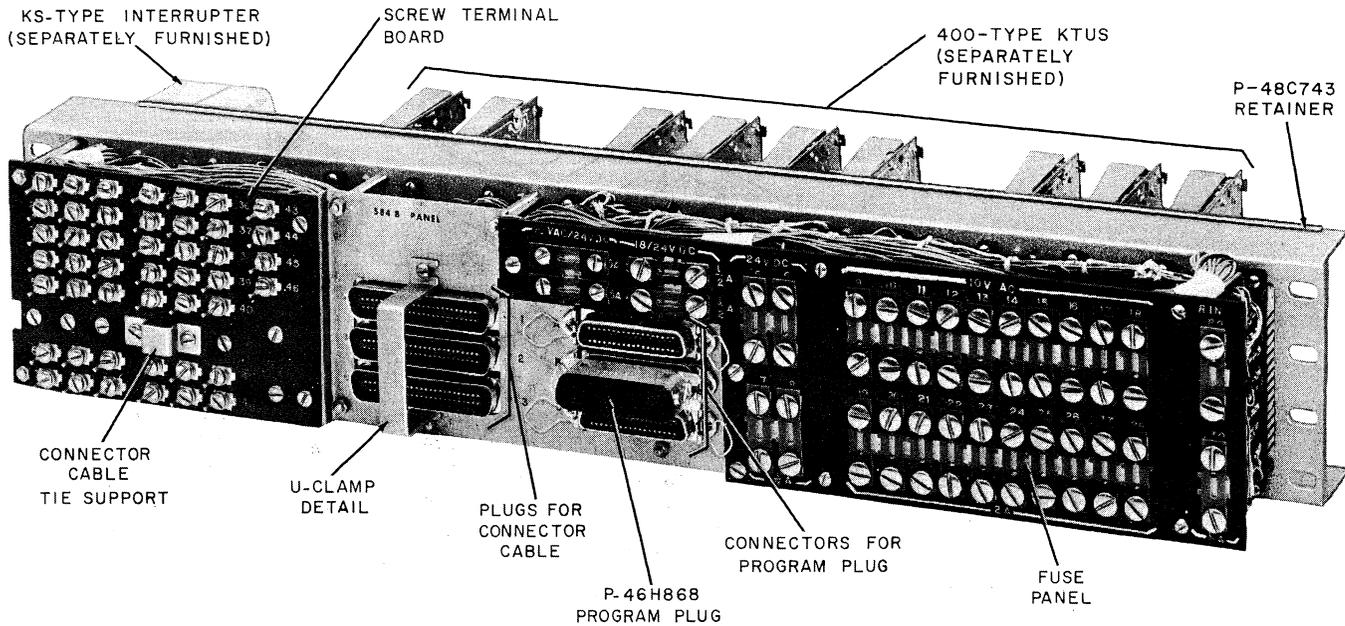


Fig. 1—584B Panel, Rear View

2.15 Lamp fusing for the 584B and C panels is divided into lamp flash (LF), lamp wink (LW), and lamp steady (LS). For lamp functions, the 584B or C panel is divided into three groups of three lines each and one group of four lines (Table B). No more than 50 lamps can be supplied from any group *or the capacity of the interrupter contacts will be exceeded.*

2.16 Fusing and terminal assignment of the 584C panel differs extensively from the 584B panel. Fuse assignments are shown in Table C.

2.17 The three 34-contact connectors on the 584B panel lettered A, B, and C (Fig. 1) serve as receptacles for the factory-wired lamp fusing and programming options. One 18-contact connector, J15, (Fig. 4) is used for the same purpose in the 584C panel. These permit distribution and fusing of lamp circuits, either within or external to the panel. One program option plug (P-46H868) is furnished with each 584B panel and one combined Program A/Program C plug (P-44Y295) is furnished with each 584C panel.

2.18 When the 584B panel is used alone, the program plug is placed in receptacle A. When the 584C panel is used alone, Program A is used by inserting the plug into receptacle J15 so

that *Program A* may be read from the plug top. The full output of KS-15900, List 1, KS-19384, List 1 (MD), or KS-19384, List 2 interrupter is associated within that specified panel. Under this arrangement, fusing for an average of 17 lamps per line circuit is provided not to exceed 50 lamps per interrupter contact.

2.19 *Before changing programs in the 584B or C panel, remove power cord from outlet to preclude any possibility of blowing fuses.*

2.20 With the program plug in receptacle B of the 584B panel and the 10-volt ac input to the interrupter changed to ground, the entire output of the interrupter is used to synchronously drive auxiliary (slave) relay equipment such as the 412A KTU. All lamp flash and lamp wink functions, including those of the master panel, are served from auxiliary relay contacts. The 584C panel is not arranged for Program B.

2.21 With the program plug in receptacle C of the 584B or C panel, half the output of the interrupter (LF1, LF2, LW1, and LW2 leads) is used to power an average of eight lamps per line within the panel. The remaining interrupter leads (LF3, LF4, LW3, and LW4) may be used to power up to 100 lamps in succeeding panels not equipped

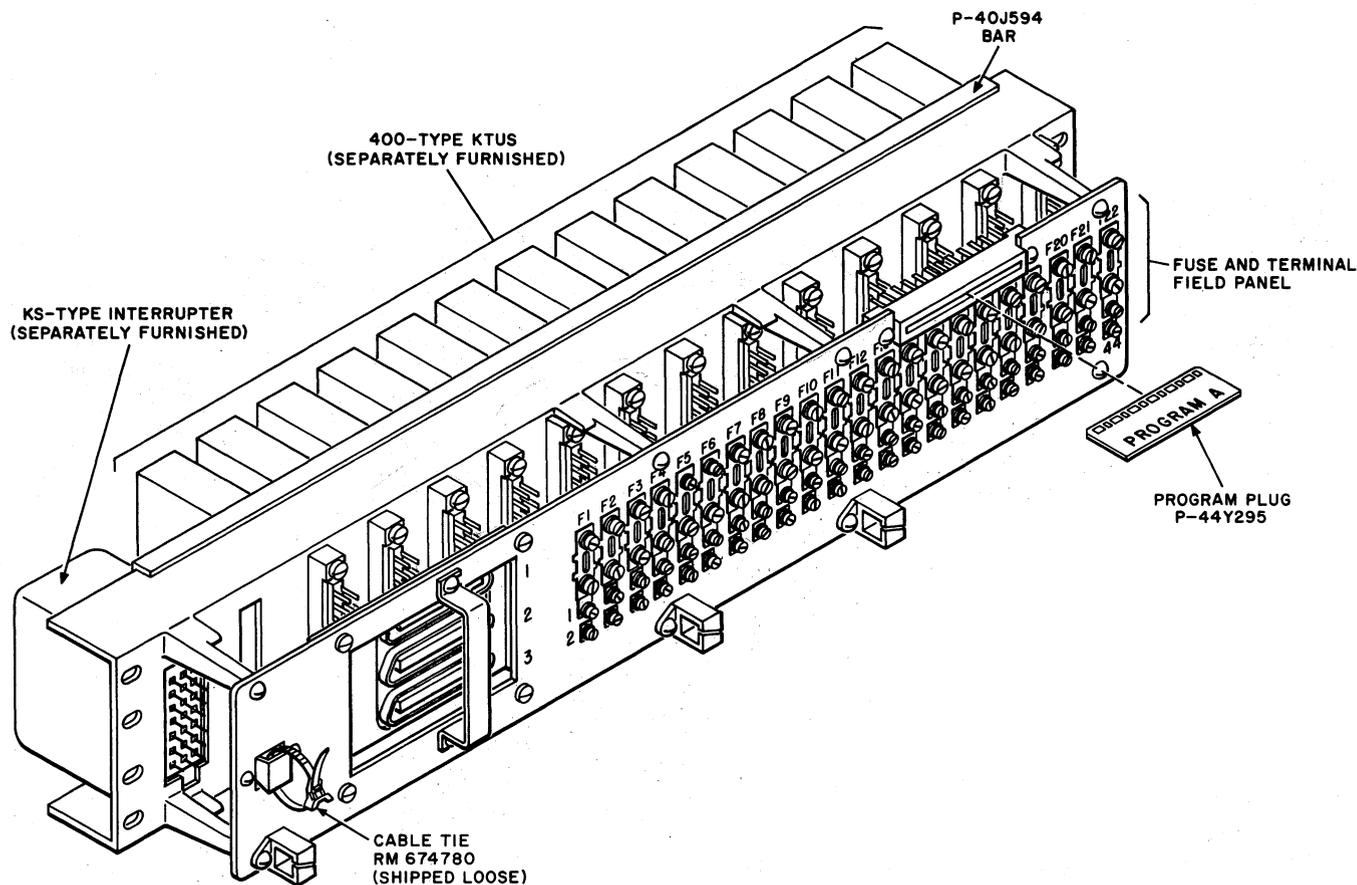


Fig. 2—584C Panel, Rear View

with an interrupter or these leads may be used to drive auxiliary relays requiring dc power. When driving auxiliary relays it is necessary to provide optional wiring at the interrupter to avoid conflict with lamp battery supply (ac power) connected to other interrupter contacts.

3. INSTALLATION

3.01 For information on apparatus mountings or relay racks on which the 583- and 584-type panels can be mounted, refer to Section 463-140-100.

3.02 Except for power wiring, all circuits served by a 583- or 584-type panel can be accommodated by one 75-pair inside wiring or A-type connector cable.

3.03 The number of station or key cables that can be connected directly to the panels is limited; accordingly, a master distribution point

at large key system installations is normally required. For further information on standardized key telephone system installations, refer to Section 518-300-100.

Note: To permit subgrouping of common audible signal controls, with or without separate relays or diode matrices, the line circuit leads may be cabled from the panels to a miscellaneous terminal block.

3.04 The 583A, 584A, B, and C panels may be intermixed in large installations. To assist in the distribution of visual signals within an installation, the 584A panel can be modified to accept a 412A KTU in place of the KS-interrupter.

3.05 Field cabling is dressed along the top rear of the 583A and 584A panels and fanned through the distributing rings to minimize congestion with factory wiring. Station and feeder cables are

TABLE B

FUSE DISTRIBUTION OF 584B AND 584C PANELS

GROUP	584B						584C			
	PROGRAM A		PROGRAM B		PROGRAM C		PROGRAM A		PROGRAM C	
	FUSE	CONN SERVED								
LF1	14	1-3	22	1-3	14	1-6	18	1-3	18	1-6
LF2	16	7-9	24	7-9	16	7-13	17	7-9	17	7-13
LF3	18	4-6	26	4-6	18		16	4-6	16	
LF4	20	10-13	28	10-13	20		15	10-13	15	
LW1	13	1-3	21	1-3	13	1-6	13	1-3	13	1-6
LW2	15	7-9	23	7-9	15	7-13	14	7-9	14	7-13
LW3	17	4-6	25	4-6	17		11	4-6	11	
LW4	19	10-13	27	10-13	19		12	10-13	12	
LS1	9	1-3	9	1-3	9	1-6	10	1-3	10	1-6
LS2	10	7-9	10	7-9	10	7-13	8	7-9	8	7-13
LS3	11	4-6	11	4-6	11		9	4-6	9	
LS4	12	10-13	12	10-13	12		7	10-13	7	

connected to the 302A terminal strips by means of an approved wire-wrapping tool. The terminal strips are designated A through H on the 583A panel, and A through G on the 584A panel.



Refer to Section 069-132-811 for method of making and removing wrapped connections.

3.06 The connector cable(s) must be brought in from the left rear of the 584B or C panel for connection to plugs 1, 2, and 3. A tie point and a U-shaped clamping detail are provided for support of the cable(s) and assures positive mating of plug and connector.

3.07 Power supply connections to the panels may be made by using separate 20-gauge conductor cables, such as No. 1450-CL (3-pair) or No. 1451-CL (6-pair) cables.

3.08 Power connections for the 583A and 584A panels are made to the 302A terminal strips or to a fuse. All power connections for the 584B and C panels are made to the screw terminal field.

3.09 Verify that each fuse in the panel is the correct rating specified for the circuit. Refer to Table A and/or C.

3.10 Do not exceed lamp limitations of the KS-interrupter in the 584-type panel or of external interrupters connected to panels. Installation of auxiliary relays may be required to provide sufficient current carrying capacity for:

- (a) Line lamp multiples above 20 appearances, or
- (b) Lamp flash or lamp wink features exceeding 2 amperes per interrupter contact.

3.11 Install the program plug into the 584B and/or C panel which provides the required arrangement.

3.12 Table D shows lamp capacities and average lamps per line for the 583- and 584-type panels.

3.13 When it is necessary to synchronize all visual and audible signals for a particular telephone set, all line circuits for lines appearing on that

TABLE C
FUSE ASSIGNMENT

FUSE	584B		584C	
	CAPACITY	CIRCUIT	CAPACITY	CIRCUIT
1	5A	10V ac or dc LW1, LW2 LF1, LF2	1-1/3 A	A Bat.
2	5A	10V ac or dc LW3, LW4 LF3, LF4	1-1/3 A	B Bat.
3	.5A	Busy Tone	1-1/3 A	B Bat.
4	.5A	Interrupter Motor Supply (ac or dc)	1-1/3 A	A Bat.
5	1-1/3 A	A Bat.	5A	10V ac or dc Lamp Wink 3&4 Lamp Flash 3&4
6	1-1/3 A	A Bat.	5A	10V ac or dc LW1, LW2 LF1, LF2
7	1-1/3 A	B Bat.	2A	10V ac or dc LS4
8	1-1/3 A	B Bat.	2A	LS2
9	2A	10V ac or dc LS1		LS3
10	↑	↑		LS1
11				LW3
12				LW4
13				LW1
14				LW2
15				LF4
16				LF3
17				LF2
18				10V ac or dc LF1
19			.5A	Interrupter Motor Supply (ac or dc)
20			.5A	Busy Tone
21			.5A	AT 105V ac (6A)
22			.5A	105V ac (RN)
23				
24				
25				
26				
27	↓	↓		
28	2A	10V ac or dc LF4		
29	.5A	AT, 105V ac (6A)		
30	.5A	105V ac (RN)		

TABLE D
LAMP DISTRIBUTION

CAPACITY	583A (MD) PANEL	584A (MD) PANEL	584B OR C PANEL				
			USED ALONE PROGRAM A	AS FIRST PANEL E/W KS-15900, L1, KS-19384, L1, OR KS-19384, L2, INTERRUPTER PROGRAM B (584B ONLY)	AS FIRST PANEL E/W KS-15900, L1, KS-19384, L1, OR KS-19384, L2, INTERRUPTER PROGRAM C	AS SECOND PANEL WITHOUT 412A KTU PROGRAM C	AS SECOND OR SUCCEEDING PANEL E/W 412A KTU PROGRAM A
Lamps	100	100	200	200*	100	100	200
Average Lamps Per Line	7	8	17	17*	8	8	17

* Entire output of interrupter used to drive auxiliary relays. Lamp flash and lamp wink functions are served from an external source.

telephone set should derive visual and audible signals from the same interrupter.

3.14 On the 583A and 584A panels, "A" Bat. and GRD for the 401A or 415A KTU is factory wired *only* to connectors J7 and J8 (Table A). If other connectors (except J13) are to be equipped with 401A or 415A KTU, "A" Bat. and GRD must be field strapped between terminal strip D (associated with J7 and J8) and other connectors to be equipped with the KTU. The 401A and 415A KTUs can be installed in any receptacle of the 584B or C panel without additional wiring.

3.15 A 10-volt ac KS-15900, List 1 interrupter is normally used with the panels. A 24-volt dc KS-19384, List 1 (MD) or KS-19384, List 2 interrupter can be used but requires a change in power supply to the interrupter motor.

3.16 Key telephones, CALL DIRECTOR® telephones and 400 and 1400 series key mountings *wired for A-lead control* can be used with the 400 series KTUs.