

ASSIGNMENTS AND CROSS-CONNECTION DATA
FOR RUNNING CABLES
SPECIAL INSTALLATIONS

1. GENERAL

- 1.01 This section provides instructions for making cable pair assignments and for preparing cross-connection data for running cables of systems having circuit and feature combinations generally not used.
- 1.02 There are a number of features available in 1A1 Key Telephone Systems which are not provided in the majority of installations. Such features include dial selective intercommunicating lines, push-button and buzzer circuits, exclusion, and manual and automatic cut-off. There are also two circuits which, although available, seldom are used: (1) the sixth line circuit and (2) the lamp resistance circuits from lamp resistance key telephone units mounted in the apparatus cabinet. The lamp resistance circuits are used in areas where alternating current is not available. In general, incoming line circuits and power feeders are brought from the central office through the incoming cable directly to the apparatus cabinet. However, in a few cases these circuits are brought through the incoming cable to the running cable cross-connecting terminal and then through the running cable into the apparatus cabinet.
- 1.03 Connection data and cross-connection data has been provided for all such features and circuits and is shown in the appropriate section of this group. Due to the infrequency of providing more than one of these features or circuits in any one installation and in order to effect an economy in the size of running cables required, the same running cables have been assigned to more than one feature and/or circuit. Running cable pairs assigned to these features and circuits are shown in Table 15.01, "Running Cable Assignments For Less Frequently Used Features and Circuits."
- 1.04 When two or more of these features or circuits are provided and Table 15.01 indicates that one or more of the same cable pairs are assigned to both features (or circuits), it will be necessary to prepare running cable assignments and cross-connection data locally.
- 1.05 Running cables for which assignments are made locally are designated as "tailored" running cables.

2. RUNNING CABLE ASSIGNMENTS

- 2.01 Assignments should be made only after due consideration has been given to the possibility of expansion of the customer's service. An adequate number of spare pairs should be reserved to meet future requirements.
- 2.02 Assignment of pairs in "tailored" running cables should be made in the sequence shown in Table 15.02.

3. CONNECTIONS BETWEEN KEY CABLES AND "TAILORED" RUNNING CABLES

- 3.01 Cross-connection data, covering connections between key cables and "tailored" running cables, should be prepared as shown in Table 15.02.

TABLE 15.01
 RUNNING CABLE ASSIGNMENTS
 FOR
 LESS FREQUENTLY USED FEATURES AND CIRCUITS

FEATURES OR CIRCUITS TO BE PROVIDED IN SYSTEM		DIAL SELECTIVE INTERCOM. LINES		CABLE PAIRS ASSIGNED
		STATION AUDIBLE SIGNAL CIRCUITS AMPLIFIED TALKING CIRCUITS TO BE USED IN SAME CABLE	LINE LAMP AND CONTROL CIRCUITS	
PUSH BUTTON AND BUZZER CIRCUITS	NO	BUZZERS 1 THROUGH 4		22
		BUZZERS 5 THROUGH 12		23
	YES	BUZZERS 1 THROUGH 2		24
		BUZZERS 3 THROUGH 12		25
SIXTH LINE IN SYSTEM	NO	BUZZERS 1 THROUGH 4		26
		BUZZERS 5 THROUGH 12		27
	YES	BUZZERS 1 THROUGH 2		28
		BUZZERS 3 THROUGH 12		29
AUTOMATIC CUT-OFF			30	
MANUAL CUT-OFF			31	
EXCLUSION			32	
LAMP RESISTANCE UNITS MOUNTED IN APPARATUS CABINET			33	
STATION 2 THROUGH 9			34	
STATION 2 THROUGH 6			35	
STATION 7 THROUGH 0			36	
AUTOMATIC CUT-OFF AND FLASHING LINE LAMPS NOT PROVIDED			37	
AUTOMATIC CUT-OFF PROVIDED FLASHING LINE LAMPS NOT PROVIDED			38	
FLASHING LINE LAMPS PROVIDED AUTOMATIC CUT-OFF NOT PROVIDED			39	
AUTOMATIC CUT-OFF AND FLASHING LINE LAMPS ARE PROVIDED			40	
INCOMING POWER CIRCUITS FROM CENTRAL OFFICE OR LOCAL SUPPLY			41	
INCOMING LINES FROM CENTRAL OFFICE OR DISTANT TERMINAL OF TIE AND/OR STATION LINES			42	
CABLE PAIRS ASSIGNED			43	
CABLE PAIRS ASSIGNED			44	
CABLE PAIRS ASSIGNED			45	
CABLE PAIRS ASSIGNED			46	
CABLE PAIRS ASSIGNED			47	
CABLE PAIRS ASSIGNED			48	
CABLE PAIRS ASSIGNED			49	
CABLE PAIRS ASSIGNED			50	
CABLE PAIRS ASSIGNED			51	
CABLE PAIRS ASSIGNED			52	
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CABLE PAIRS ASSIGNED			76	
CABLE PAIRS ASSIGNED			77	
CABLE PAIRS ASSIGNED			78	
CABLE PAIRS ASSIGNED			79	
CABLE PAIRS ASSIGNED			80	
CABLE PAIRS ASSIGNED			81	
CABLE PAIRS ASSIGNED			82	
CABLE PAIRS ASSIGNED			83	
CABLE PAIRS ASSIGNED			84	
CABLE PAIRS ASSIGNED			85	
CABLE PAIRS ASSIGNED			86	

RUNNING CABLE PAIRS IN THIS DISTRIBUTION NOT REQUIRED

NOTE: CABLE PAIRS ASSIGNED TO EACH FEATURE OR CIRCUIT ARE INDICATED BY HEAVY LINE DRAWN THROUGH PAIR LINES IN EACH RESPECTIVE COLUMN.

TABLE 15.02

INSTRUCTIONS FOR MAKING RUNNING CABLE ASSIGNMENTS FOR "TAILORED" RUNNING CABLES AND FOR PREPARING CROSS-CONNECTION DATA FOR CONNECTING KEY CABLES TO "TAILORED" RUNNING CABLES											
CIRCUITS TO STATIONS											
TYPE OF LINE	TYPE OF FEATURE	TYPE OF CIRCUIT				MAKE RUNNING CABLE ASSIGNMENTS IN THE SAME MANNER AS THE DATA SHOWN IN:			PREPARE CROSS-CONNECTION DATA IN THE SAME MANNER AS THE DATA SHOWN IN:		
		STATION AUDIBLE SIGNAL	LINE AND CONTROL LAMP	STATION AUDIBLE SIGNAL	LINE AND CONTROL LAMP	SECTION NO.	TABLE NO.	ASSIGN PAIRS IN FOLLOWING SEQUENCE	SECTION NO.	TABLE NO.	
DIAL SELECTIVE INTERCOM	WITHOUT AUTOMATIC CUT-OFF	AMPLIFIED TALKING CIRCUITS TO BE RUN THROUGH SAME CABLE	NO	YES	C66.208	8.13	1	C66.208	16.16		
	WITHOUT FLASHING LINE LAMPS	AMPLIFIED TALKING CIRCUITS TO BE RUN THROUGH SAME CABLE	NO	YES		8.15	1		16.17		
	WITH AUTOMATIC CUT-OFF	ALL KEY TELEPHONE SETS EXCEPT 565A	STATION 2	STATIONS 3 THROUGH 0	C66.209	NOT REQUIRED	NOT REQUIRED	C66.209	NOT REQUIRED		
	WITHOUT FLASHING LINE LAMPS	565A KEY TELEPHONE SETS ONLY	STATION 2	STATIONS 3 THROUGH 0		8.13	1		16.16		
	CO, PBX, INTERCOM, TIE AND/OR STATION	WITH FLASHING LINE LAMPS	AMPLIFIED TALKING CIRCUITS TO BE RUN THROUGH SAME CABLE	NO	YES	C66.208	8.13	1	C66.208	16.16	
		AUTOMATIC CUT-OFF MAY OR MAY NOT BE PROVIDED	ALL KEY TEL SETS EXCEPT 565A	STATION 2	STATIONS 3 THROUGH 0		8.15	1		16.17	
		AUTOMATIC CUT-OFF	LAMP	565A KEY TELEPHONE SETS ONLY	STATION 2	STATIONS 3 THROUGH 0	C66.211	9.16	2	C66.211	16.21
								9.18	2		16.24
		EXCLUSION	LINE AND CONTROL	EXCLUDING STATIONS	ALL KEY TELEPHONE SETS EXCEPT 565A	565A KEY TELEPHONE SETS ONLY	C66.212	9.17	2	C66.212	16.22
								9.18	2		16.23
		MANUAL CUT-OFF	LINE	CUTTING-OFF STATIONS	ALL KEY TELEPHONE SETS EXCEPT 565A	565A KEY TELEPHONE SETS ONLY	C66.214	11.08	4	C66.214	16.25
								12.08	5		16.26
PUSH BUTTONS AND BUZZERS		AMPLIFIED TALKING CIRCUITS TO BE RUN THROUGH SAME CABLE	BUZZER	LOCATED ALL KEY TELEPHONE IN KEY SETS EXCEPT 565A	EXTERNAL	C66.216	14.17	7	C66.216	16.18	
							14.18	7		16.19	
CODE OR SELECTIVE SIGNALING		AMPLIFIED TALKING CIRCUITS TO BE RUN THROUGH SAME CABLE	BUZZER	LOCATED ALL KEY TELEPHONE IN KEY SETS EXCEPT 565A	EXTERNAL	C66.213	14.19	7	C66.213	16.20	
							14.20	7		16.21	
ALL TYPES	PUSH BUTTONS AND BUZZERS	BUZZER	LOCATED IN KEY TEL SET	EXTERNAL	C66.214	13.09	8	C66.214	16.22		
						13.10	9		16.23		
ALL TYPES	CODE AND SELECTIVE SIGNALING	BUZZER	LOCATED IN KEY TEL SET	EXTERNAL	C66.215	16.39	7	C66.215	16.40		
						16.43	7		16.41		
ALL TYPES	ALL FEATURES UTILIZING LAMPS	LAMP RESISTANCE (KEY TELEPHONE UNITS MOUNTED IN APPARATUS CABINET)	ALL LINES EXCEPT DIAL SELECTIVE INTERCOM LINES WITH FLASHING LINE LAMPS	DIAL SELECTIVE INTERCOM LINES WITH FLASHING LINE LAMPS	C66.216	16.44	8	C66.216	16.42		
						16.49	9		16.43		

TABLE 15.02
(Continued)

TABLE 15.02
(Continued)

INCOMING POWER SUPPLY FROM LOCAL POWER PLANT, CO, PBX, OR BUILDING BATTERY		INCOMING POWER SUPPLY TO:		MAKE RUNNING CABLE ASSIGNMENTS IN THE SAME MANNER AS THE DATA SHOWN IN:				PREPARE CROSS-CONNECTION DATA IN THE SAME MANNER AS SHOWN IN:	
TYPE OF CIRCUIT	TYPE OF K.T.U. USED	SOURCE OF POWER	TYPE OF POWER	SECTION NO.	TABLE NO.	ASSIGN PAIRS IN FOLLOWING SEQUENCE	SECTION NO.	TABLE NO.	
FEEDER FUSE	201A	LOCAL POWER PLANT	ALL		2.05	10			
	201A	CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE AC OR DC		2.06				
CO OR PBX LINE ③	209A AND 202A	LOCAL POWER PLANT	ALL	C66.202	2.08	11			
	209A AND 202B	CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE DC		2.12				
		LOCAL POWER PLANT	ALL		2.13				
		CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE DC		3.07	12			
AUDIBLE SIGNAL CONTROL ④	212A (202A OR 202B MAY OR MAY NOT BE USED)	LOCAL POWER PLANT	ALL	C66.203	3.08				
	211A	CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE DC		5.08				
PUSH-BUTTON AND BUZZER ⑤	16A	LOCAL POWER PLANT	LOW VOLTAGE AC OR GENERATOR		5.09				
	BUZZER SYSTEM 201A	CO, PBX, OR BLDG. SUPPLY	LOW VOLTAGE DC		2.14		C66.216	16.02	
RINGDOWN TIE LINE OR STATION LINE ⑥	204A	LOCAL POWER PLANT	LOW VOLTAGE AC		2.16				
	205A	CO, PBX, OR BLDG. SUPPLY	LOW VOLTAGE DC		2.17	13			
DIAL SELECTIVE INTERCOM LINE		LOCAL POWER PLANT	LOW VOLTAGE AC		2.18				
	207A	CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE DC		14.05	14			
INCOMING LINES FROM CO, PBX, OR DISTANT TERMINAL		LOCAL POWER PLANT	GENERATOR	C66.210	10.15	15			
		LOCAL POWER PLANT	LOW VOLTAGE DC USED FOR RELAYS ⑦		10.15				
		CO, PBX, OR BUILDING SUPPLY	LOW VOLTAGE AC USED FOR BUZZER ⑧		8.10				
		LOCAL POWER PLANT	LOW VOLTAGE DC USED FOR RELAYS ⑨ BUZZERS ⑩		8.10	16			
TYPE OF LINE	TYPE OF CIRCUIT	TYPE OF KEY TELEPHONE UNIT USED		SECTION NO.	TABLE NO.	ASSIGN PAIRS IN FOLLOWING SEQUENCE	SECTION NO.	TABLE NO.	
CO OR PBX	INCOMING LINE FROM CO OR PBX TO APPARATUS CABINET	209A AND 202A		C66.202	2.22				
		209A AND 202B		C66.203	3.11	17		16.01	
		212A (WITH OR WITHOUT 202A)		C66.204	4.06				
		212A (WITH OR WITHOUT 202B)		C66.205	5.12			C66.216	
AUTOMATIC TIE	INCOMING LINE FROM DISTANT TERMINAL OF TIE AND/OR STATION LINE TO APPARATUS CABINET	203A							
RINGDOWN TIE STATION		204A		C66.210	10.16	18			
		205A							

- NOTES: ③ MAKE THESE ASSIGNMENTS ONLY IN THOSE CASES WHERE THE POWER IS NOT SUPPLIED THROUGH FUSES MOUNTED IN THE APPARATUS CABINET.
- ④ MAKE THESE ASSIGNMENTS ONLY IN THOSE CASES WHERE THE POWER IS NOT SUPPLIED THROUGH FUSES MOUNTED IN THE APPARATUS CABINET AND WHERE THE TYPE OF POWER OR VOLTAGE USED FOR AUDIBLE SIGNAL CONTROL CIRCUIT IS DIFFERENT FROM THAT USED FOR THE COMMON RINGER OPERATED DIRECTLY BY THE CO OR PBX LINE UNIT.
- ⑤ MAKE THESE ASSIGNMENTS ONLY IN THOSE CASES WHERE THE POWER IS NOT SUPPLIED THROUGH FUSES MOUNTED IN THE APPARATUS CABINET AND WHERE THE TYPE OF POWER OR VOLTAGE IS DIFFERENT FROM THAT USED FOR THE COMMON RINGER OR THE AUDIBLE SIGNAL CONTROL CIRCUIT.
- ⑥ MAKE THESE ASSIGNMENTS ONLY IN THOSE CASES WHERE THE POWER IS NOT SUPPLIED THROUGH FUSES MOUNTED IN THE APPARATUS CABINET AND WHERE THE GENERATOR (RINGING CURRENT) IS NOT USED FOR THE COMMON RINGER.