

21A COMMUNICATION SYSTEM (COM KEY* 2152)

1. GENERAL

1.001 This addendum supplements Section 518-450-110, Issue 1. Place these pink sheets ahead of Page 1 of this section.

1.002 This addendum is issued to:

- Add information on the 702B and 703B panels, 400H and 498A KTUs, and the 116A1 Circuit Module (CM)
- Clarify code assignment information when using a 6C1 selector console in a system having less than 18 stations
- Add precaution concerning proper discharging of C battery capacitors
- Add Note about adjustment of volume control on 683A transmitter
- Clarify components required, depending on size of system (Table D).

2. CHANGES TO SECTION

2.001 On Page 2, third drawing listed in paragraph 1.04, change issue number of SD-69930-01 from Issue 1 to Issue 2.

2.002 On Page 2, in paragraph 1.04, add the following to the list of drawings:

- SD-69921-01, Issue 2—Audio Features, 451-Type and 498A KTU
- SD-69942-01, Issue 1—400H KTU.

2.003 On Page 9, after paragraph 3.05, add the following bullet and text:

- Wired for use with 451A KTU and 400D or G when providing music-on-hold.

702B Panel

3.05.1 The 702B panel is the same as the 702A except:

- Wired for use with the 498A KTU equipped with a 116A1 CM, and 400D, G, or H when providing music-on-hold.
- The appearances of codes 0 and 18 are changed on the 474A KTUs (DSS diode matrix and preempt tone generator) so that only one 474A is required on small systems (up to 17 stations plus paging).

2.004 On Page 10, after paragraph 3.06, add the following bullet and text:

- Wired for use with 451A KTU and 400D or G when providing music-on-hold.

703B Panel

3.06.1 The 703B panel is the same as the 703A except the 703B is wired for use with the 498A KTU equipped with a 116A1 CM, and 400D, G, or H when providing music-on-hold.



If music-on-hold is not provided, any code of 400-type KTU can be used interchangeably in an A- or B-coded panel. If music-on-hold is provided in an A-coded panel, a 451-type KTU with a 400D or G must be used. If music-on-hold is provided in a B-coded panel, a 498A KTU with a 400D, G, or H must be used. The 451-type KTU will not work in a B-coded panel.

NOTICE

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

2.005 On Page 10, add the following Danger after paragraph 3.07:

Danger: Before working on the C battery capacitors, remove the power plug and wait at least 20 seconds to allow capacitors to discharge.

2.006 On Page 15, Table A is obsolete. A new Table A is shown in this addendum.

2.007 On Page 24, add the following Note after paragraph 5.01:

Note: When the 268A adapter is used to mount the 683A transmitter at a wall set installation, a 468B KTU must be used or a 468A must be replaced to reduce feedback from loudspeaker to transmitter. If the wall telephone set is adjusted for maximum volume, speech distortion may occur. The station volume should be reduced until the distortion disappears.

2.008 On Page 25, Table D is obsolete. A new Table D is shown in this addendum.

2.009 On Page 26, Table E, for USO Code K1A, revise text in the REMARKS column to read as follows:

Order 1 to power 702-type panel and 100A1 or 101A1 connecting unit. Capacity of 7 lines, up to two 14-line and sixteen 7-line sets with 100A1; capacity of 7 lines and eighteen 14-line sets with 101A1.

2.010 On Page 27, Table E (Cont), change the ninth entry in the EQUIPMENT CODE column to read as follows:

Unit, Key, 444B

2.011 On Page 40, revise paragraph 8.37 as follows; retain Caution.

8.37 Music-on-hold requires the use of 451-type KTUs in a 702A or 703A panel or 498A KTUs equipped with a 116A1 CM in 702B or 703B panels. Each 451-type will handle 7 CO/PBX lines; each 498A KTU will handle 4 CO/PBX lines. The capacity of each 498A KTU can be increased to 7 lines by the addition of a 116A1 circuit module piggy-backed on the 498A. In addition to the KTUs, one 33A voice coupler per system and a customer-provided music source are required. The customer-provided music source must have an output impedance low enough to drive an 8-ohm load without distortion. The music source must also be adjustable so the listening level of the music-on-hold may be adjusted.

2.012 On Page 46, add the following Note after paragraph 8.72:

Note: Due to the system wiring of the 424C selector and the 444A selector extender, in small systems of 18 stations or less using a 444A KTU and a 6C1 console, station codes 2 and 3 are actually 19 and 20 and should be labeled as such on the 6C1 console. In systems using a 444B and a 6C1 console, 19 and 20 can be converted to 2 and 3 by moving the two option straps on the 444B to the storage position. In addition, on block 2 of the 100A1 or 101A1 connecting unit, move the factory-provided straps on 24F-25F and 24G-25G to 23F-24F and 23G-24G, respectively.

TABLE A

KEY TELEPHONE UNITS

KTU	FUNCTION	QUANTITY	SD/CD
400D, 400G or 400H	CO/PBX pickup, hold, release, and related services. Refer to 3.06.1.	1 per CO/PBX line	69513-01 69651-01 69942-01
415A	Automatic private line circuit.	1 per private line	69559-01
424C	Dial intercom 19-code selector circuit; basic selector required in all dial intercom systems.	1 per intercom system	69567-01
440A or 478B	TOUCH-TONE® adapter circuit; required when TOUCH-TONE dialing is used in intercom.	1 per intercom system	69906-01 69931-01
444A/B	Selector extender circuit; required in addition to 424C KTU for dial codes 1 to 39.	1 per intercom system up to 34 stations; 2 per intercom with 35 to 52 stations	69636-01
451A/B	Music-on-hold circuit; used with externally mounted 33A voice coupler and customer-provided music source. Use in 702A or 703A panel only.	1 per 7 CO/PBX lines	69652-01
498A	Same as above. Use in 702B or 703B panel only.	1 per 4 CO/PBX lines; add 116A1 CM for 3 additional lines	69921-01
452A	Power failure transfer; transfers CO ringing to external, line-driven ringers; 7 circuits per unit.	1 per 7 CO/PBX lines	69652-01
453B	Lamp driver; supplements lamp driving capacity of 400D KTUs; operates up to 26 lamps; 7 circuits per unit.	1 per 7 lines in excess of 26 lamps per line	69653-01
454B	3-path intercom access; provides stations with talk battery and access to selector.	1 per 3-path intercom system	69653-01
455A	Tone-ringing signal generator; supplies CO/PBX incoming line tone ringing.	1 per installation	69652-01
457C	Paging amplifier; drives up to seven 45-ohm paging loudspeakers.	1 per paging zone (max. 3)	69652-01
460B	2-path intercom access; provides stations with talk battery and access to selector.	1 per 2-path intercom system	69652-01
468A	Voice and tone alerting on intercom; supplies ringing tone to calling party, tone alerting and voice signaling to called party, input to paging amplifier; also supplies do-not-disturb tone.	1 per installation	69652-01
471A	Battery reversal toll restriction.	1 per line to be restricted	69921-01
473A	Voice operated switch (VOX) for HFAI.	1 per intercom system equipped with HFAI	69930-01
474A	DSS diode matrix and preempt tone generator; allows attendant to preempt an HFAI call with a dedicated link call.	1 per 18 stations	69930-01
481A	Automatic signaling intercom; provides for direct intercom between two stations.	1 per pair of stations connected*	69930-01

* Can also be used between one station and a group of stations.

TABLE D

EXAMPLE OF SYSTEM COMPONENTS AS RELATED TO SIZE OF SYSTEM (SEE NOTE 5)

MAX. LINES		7	7	7	7	7	7	21	21	21	21
MAX. STATIONS		18 (NOTE 1)	18 (NOTE 1)	28 (NOTE 2)	34 (NOTE 2)	52 (NOTE 2)	52 (NOTE 2)	28 (NOTE 2)	34 (NOTE 2)	52 (NOTE 2)	52 (NOTE 2)
MAX. 20-BUTTON SETS		2	18	28	6	24	52	28	6	24	52
SYSTEM COMPONENTS	121 App Box or 34-Type Cabinet	1	1	1	1	2	2	1	1	2	2
	154A Cover	1	1	1	1	2	2	1	1	2	2
	Connecting Unit	100A1	101A1	101A	100A1	100A1 & 100B1	101A1 & 101B1	101A1	100A1	100A1 & 100B1	101A1 & 101B1
	Panel	702-Type	702-Type	702-Type	702-Type	702- and 703-Type					
	Power Panel	2A	2A	2B	2B	2C	2C	2C	2B	2C	2C & 2D
	455A KTU	1	1	1	1	1	1	1	1	1	1
	453B KTU	None	None	(Note 3)	(Note 3)	(Note 3)	(Note 3)	(Note 4)	(Note 4)	(Note 4)	(Note 4)

Notes:

1. Station capacity is reduced by 1 for each paging zone and preset conference group in excess of 1.
2. Station capacity is reduced by 1 for each paging zone and preset conference group in excess of 3.
3. One (1) required if system has more than 26 stations.
4. One (1) required if system has more than 26 stations; second 453B required if system has more than 7 square lines and more than 26 stations.
5. Exact system components required will be determined by the USOCs listed on the service order.