

## LINE CONCENTRATOR NO. 2A

### PROCEDURE FOR RELEASING PERMANENT SIGNALS FROM LINE CONCENTRATOR TRUNKS AND FOR TAKING LINE CONCENTRATOR TRUNKS OUT OF SERVICE

**1. GENERAL**

**1.01** This section covers the procedures to be followed to release permanent signals from No. 2A line concentrator trunks.

LINE NUMBER	SWITCH	VERTICAL
00-19	A	0-19
20-39	B	0-19
40-59	C	0-19
60-79	D	0-19

**1.02** This section is reissued to change the title and to incorporate procedures for taking the line concentrator trunks out of service.

**1.03** When a permanent signal condition on a customer's line is holding a concentrator trunk busy, it may be considered desirable to release the trunk to avoid an all trunks busy condition.

TRUNK NUMBER	SELECT LEVEL	STEERING LEVEL	
		EVEN NUMBER TRUNK	ODD NUMBER TRUNK
00-01	0	8	9
02-03	1	8	9
04-05	2	8	9
06-07	3	8	9
08-09	4	8	9
10-11	5	8	9
12-13	6	8	9
14-15	7	8	9

**1.04** From the office records determine the concentrator line terminal appearance number for the customer line associated with the trunk to be released.

**1.05** Determine which trunk is connected to the customer line that has the permanent signal condition, by checking the concentrator control unit for crosspoints closed on the line appearance.

**Example:** Customer line 43 connected to trunk number 12 would have crosspoints closed on switch C vertical 03 levels 6 and 8.

(a) Customer line terminal appearances 00 to 77 appear on verticals of the crossbar switches SW0A-D for group 0 and SW1A-D for group 1.

(b) Trunks 00 to 15 appear on the first 8 levels (0-7) of the crossbars switches, two trunks per level. Like numbered levels on each switch of the group are multiplied. The top two levels (8-9) are used to steer to one of the two trunks on each level (0-7).

(c) Knowing a line number and using the following tables, the trunk number used on the permanent signal can be determined.

**1.06 Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 5 of this section, indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

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**2. APPARATUS**

**2.01** Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and one or two 624B (terminal connector) tools (for making test connection on terminal strip).

**2.02** Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

**2.03** #349A (make-busy) plug.◀

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**3. RELEASING CUSTOMER LINE**

STEP	ACTION	VERIFICATION
	<i>Note:</i> In the following steps, a key and relays are numbered with a "0" or "1". These numbers refer to the group in which the lines appear.	
1	At terminal strip on control unit— Connect test terminal SD0/1 to sleeve terminal S- associated with line to be released.	
2	Block nonoperated TB- relay of trunk connected to line on permanent signal.	
3	Set TST0/1 switch to position of the trunk connected to line on permanent signal.	
4	Operate and hold PSD0/1 key.	
5	Operate TST0/1 key.	CC lamp lights.
6	Within 2.5 second after CC lamp lights— Release PSD0/1 and TST0/1 keys.	CC lamp extinguished. Hold magnet operated for line being released but no select finger engaged.
7	Remove test connection from terminals SD0/1 and S-.	
8	Remove blocking tool from TB- relay.	
9	Set TST0/1 switch to OFF.	
10	Notify responsible department that line is on permanent signal denied service.	

**Caution:** *The customer's line is now out of service. No calls may be completed to or from this line.*

**Note:** If it is necessary to set up a test call to the line—When the test is completed and if the line is still to be held out-of-service the method of releasing the line must be repeated, Steps 1 through 10.

STEP	ACTION	VERIFICATION
<b>4. RESTORING CUSTOMER LINE TO SERVICE</b>		
	When the condition causing the permanent signal has been cleared on the customer's line, the line should be restored to service immediately. The customer cannot receive dial tone until the concentrator line equipment is restored.	
1	At control unit— Connect test terminal RSD0/1 to sleeve terminal S- associated with line being restored to service. (Releasing service denial condition set up in 3.)	
2	Operate RSD0/1 key.	CC lamp lights.
3	Within 2.5 seconds after CC lamp lights— Release RSD0/1 key.	CC lamp extinguished.
4	Remove connection from terminals RSD0/1 and S-.	
	<i>Note:</i> To verify that the customer's line is restored to service, a terminating test call is made to the line as shown in Steps 5 through 9.	
5	Connect terminal TC0/1 to terminal S- associated with line restored to service.	
6	Operate and hold TC0/1 key.	
7	Operate TST0/1 key.	CC lamp lights.
8	Within 2.5 seconds after CC lamp lights— Release TST0/1, TC0/1 keys.	CC lamp extinguished. Hold magnet operated for line under test. Select magnet finger engaged for line under test.
9	Remove connection from terminals TC0/1 and S-. Notify responsible department that line is restored to service.	

**5. TAKING TRUNKS OUT OF SERVICE**

*Note:* In the following steps, a key and relays are numbered with a "0" or "1". These numbers refer to the group in which the lines appear.

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STEP	ACTION	VERIFICATION
1a	If TK-- relay is operated— Set TST switch to OFF.	
2a	Operate TST 0/1 key.	
3a	Insert make-busy plug in TB-- jack.	
4a	Release TST 0/1 key.	Trunk is now made busy.
5b	If TK-- relay is released and TB-- relay is operated— Wait until trunk is idle.	Trunk is busy.
6c	If TK--relay is released and TB-- relay is released— Determine what line is tied to the trunk. (See 1.04.)	
7c	At terminal strip on control unit— Connect test terminal SD 0/1 to sleeve terminal S--associated with line to be released.	
8c	Block nonoperated TB--relay of trunk connected to line on permanent signal.	
9c	Set TST 0/1 switch to position of the trunk connected to line on permanent signal.	
10c	Operate and hold PSD 0/1 key.	
11c	Operate TST 0/1 key.	CC lamp lighted.
12c	Within 3 seconds after CC lamp lights, release PSD 0/1 key.	TF lamp lighted.
13c	Within 8 seconds after TF lamp lights, insert make-busy plug in TB--jack.	Trunk is now made busy. CC lamp extinguished. TF lamp extinguished.
14	Make a release service denial call to the line to put it back in service.	
15	Remove make-busy plug from TB-- jack to restore trunk to service.♦	Trunk is now idle.