

## OVERALL SIGNALING ARRANGEMENTS AND TESTING

### DIAL PULSING TESTS ON FX AND WATS CIRCUITS

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#### 1. GENERAL

**1.01** This section covers dial pulsing tests on Foreign Exchange (FX) and Wide Area Telephone Service (WATS) or other circuits having identical signaling layouts.

**1.02** This section is made up of a family of pulsing requirements diagrams which are to be used in making circuit order tests and for trouble shooting on single and multi-link signaling layouts.

**1.03** Test set application and testing methods to be used with the pulsing requirements diagrams in this section are covered in Section 333-122-501. The test values specified in this practice are based on the use of the 2B or the 2B-1 Signaling Test Sets and the Pulse Repeating Adapter (SD-56134-02).

**1.04** The pulsing requirements diagrams specify pulsing test values to be used at the customer's premises, at serving test centers, and at intermediate offices.

**1.05** In some cases the test points shown on the pulsing requirements diagrams may not physically exist in the form of jack circuits. In this instance, a decision must be made by the Plant forces as to the best location to make the desired pulsing tests. (See Section 333-121-500).

#### 2. FX OR WATS CIRCUITS

**2.01** FX or WATS circuits are types of special service arrangements which provide a customer with telephone service in an exchange which is different from the one which normally serves the geographical area of his station.

**2.02** Signaling on FX and WATS circuits is characterized by dial pulsing in one direction and 20-cycle ringing in the other. Since the customer may specify any central office regardless of location, a large variety of signaling layouts is required to meet the situations which are actually encountered in the field.

**2.03** Table A is an index of those pulsing requirements diagrams for FX and WATS circuits covered in this section. Table B provides a legend of symbols used in the pulsing requirements diagrams. When special arrangements not covered on the attached diagrams are encountered, the proper testing values for the particular layout should be obtained from Engineering and the layout should be submitted to AT&TCo, using Form E-3973 in accordance with Section 000-010-010.

**TABLE A**  
**INDEX OF**  
**PULSING REQUIREMENTS DIAGRAMS**  
**FOR FX AND WATS CIRCUITS**

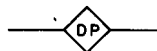
**Two Link Diagrams**

First Link	Second Link	Page
Loop	CX	4
Loop	DX	5
Loop	O/N CXR	6
Loop	SF (E&M in — E2L out)	7
Loop	SF (E&M in — E1P out)	8
Loop	SF (E2S in — E2L out)	9
Loop	SF (E2S in — E1P out)	10
Loop	SF (E1R in — E2L out)	11
Loop	SF (E1R in — E1P out)	12
Loop	T CXR (FX units)	13

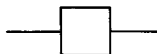
**Three Link Diagrams**

First Link	Second Link	Third Link	Page
Loop	CX	CX	14
Loop	CX	DX	15
Loop	CX	O/N CARR	16
Loop	CX	SF (E&M in — E2L out)	17
Loop	CX	SF (E&M in — E1P out)	18
Loop	CX	T CARR (E&M)	19
Loop	DX	CX	20
Loop	DX	DX	21
Loop	DX	O/N CARR	22
Loop	DX	SF (E&M in — E2L out)	23
Loop	DX	SF (E&M in — E1P out)	24
Loop	DX	T CARR (E&M)	25
Loop	O/N CARR	CX	26
Loop	O/N CARR	DX	27
Loop	O/N CARR	O/N CARR	28
Loop	O/N CARR	SF (E&M in — E2L out)	29
Loop	O/N CARR	SF (E&M in — E1P out)	30
Loop	O/N CARR	T CARR (E&M)	31
Loop	T CARR (E&M)	CX	32
Loop	T CARR (E&M)	DX	33
Loop	T CARR (E&M)	O/N CARR	34
Loop	T CARR (E&M)	SF (E&M in — E2L out)	35
Loop	T CARR (E&M)	SF (E&M in — E1P out)	36
Loop	T CARR (E&M)	T CARR (E&M)	37

**TABLE B**  
**LEGEND OF SYMBOLS**

 Subscriber's Dialing Equipment (subscriber's telephone or PBX attendant's dial).

 Dial Long Line Unit

 Signaling Unit — Type denoted in box as follows:

CX                      CX Signaling (long or short haul) or SX

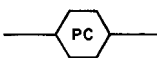
DX                      DX Signaling (DX-1 or DX-2 type units will be noted)


O/N                      Out of band signaling used for N1, ON and O type carrier systems.  
CARR

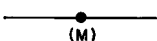
T                         T carrier PCM Signaling (Loop or E&M type will be noted)  
CARR

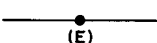
FX                      (type noted)  
SF                      "E" type single frequency signaling units, FX-type originating or  
terminating (E2L, E1P or E2S, E1R)

E&M                     "E" type single frequency signaling units. E&M type (E2B, E3B, E4B)  
SF

 M Lead Pulse Corrector

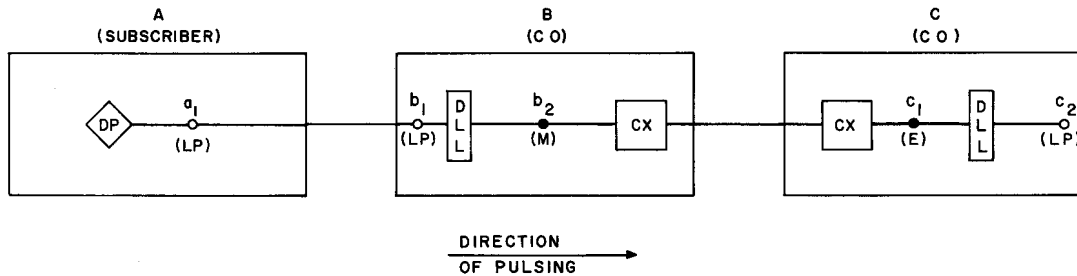
 Pulse Link Repeater (relay type)

 M Lead Testing Point  
(M)

 E Lead Testing Point  
(E)

 Loop Signaling Testing Point  
(LP)

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	70	70	72
TEST 2 (12 PPS)	63	66	56
TEST 3 (8 PPS)	57	57	59
TEST 4 (8 PPS)	52	54	47
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	72	76	78
MIN @ 12 PPS	56	54	47
MAX @ 8 PPS	59	62	64
MIN @ 8 PPS	47	45	40
SEE NOTE	4	4	3

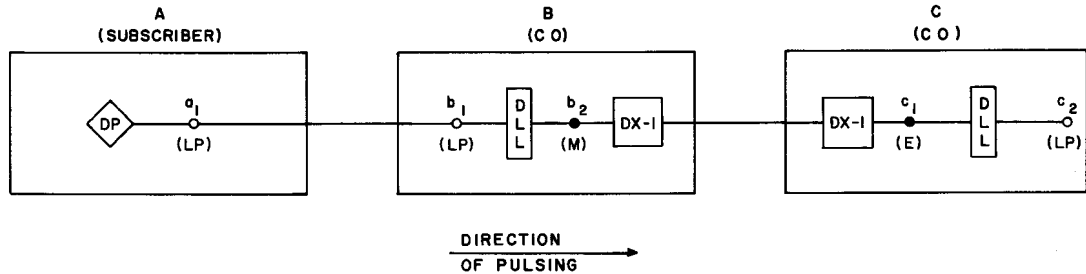
DIAL LONG LINE TYPE

SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE C

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	70	70	72
TEST 2 (12 PPS)	63	66	56
TEST 3 (8 PPS)	57	57	59
TEST 4 (8 PPS)	52	54	47
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	72	76	78
MIN @ 12 PPS	56	52	45
MAX @ 8 PPS	59	62	64
MIN @ 8 PPS	47	44	39
SEE NOTE	4	4	3

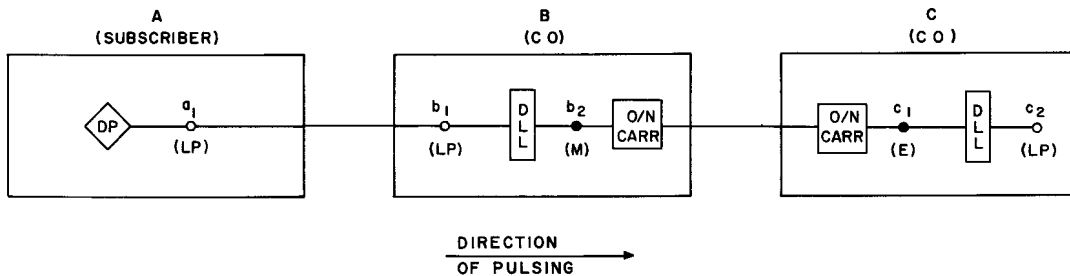
DIAL LONG LINE TYPE

SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE C

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	70	70	72
TEST 2 (12 PPS)	63	66	56
TEST 3 (8 PPS)	57	57	59
TEST 4 (8 PPS)	52	54	47
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	72	78	80
MIN @ 12 PPS	56	54	47
MAX @ 8 PPS	59	63	65
MIN @ 8 PPS	47	45	40
SEE NOTE	4	4	3

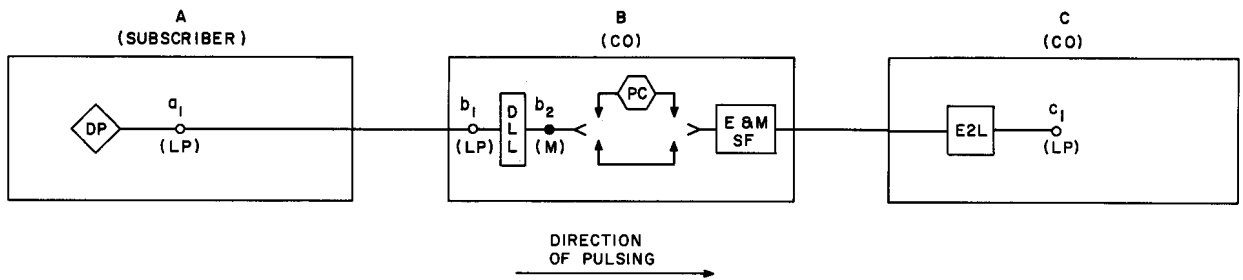
## DIAL LONG LINE TYPE

SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE C

**Notes**

- If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
- The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
- For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
- Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
- Use a 2B-1 signaling test set and pulse repeating adapter:
  - For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
- Use a 2B-1 signaling test set and a pulse repeating adapter:
  - For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



WITHOUT M LEAD PULSE CORRECTION

PERCENT BREAK SENDING VALUES			
SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	70	70	72
TEST 2 (12 PPS)	63	66	56
TEST 3 (8 PPS)	57	57	59
TEST 4 (8 PPS)	52	54	47
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)			
	b <sub>2</sub>	c <sub>1</sub>	-
MAX @ 12 PPS	72	87	-
MIN @ 12 PPS	56	56	-
MAX @ 8 PPS	59	88	-
MIN @ 8 PPS	47	35	-
SEE NOTE	4	3	-

WITH M LEAD PULSE CORRECTION

PERCENT BREAK SENDING VALUES			
SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	67	67	69
TEST 2 (12 PPS)	56	58	48
TEST 3 (8 PPS)	67	67	69
TEST 4 (8 PPS)	56	58	51
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES

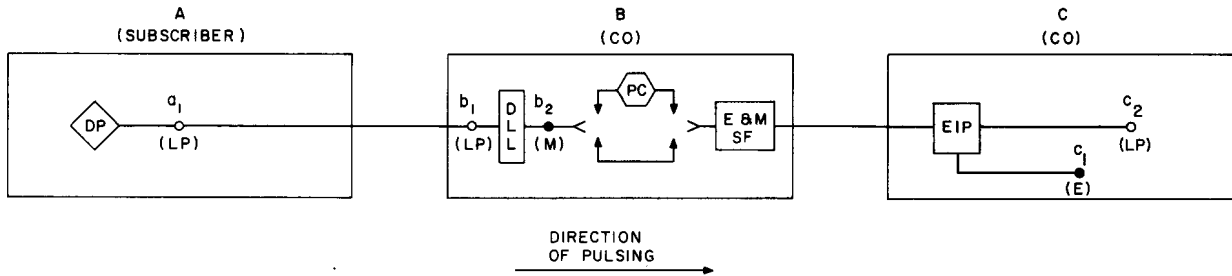
RCV POINT (NOTE 2)			
	b <sub>2</sub>	c <sub>1</sub>	-
MAX @ 12 PPS	69	87	-
MIN @ 12 PPS	48	56	-
MAX @ 8 PPS	69	88	-
MIN @ 8 PPS	51	35	-
SEE NOTE	4	3	-

DIAL LONG LINE TYPE  
SD-96252-01 IN OFFICE B

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



WITHOUT M LEAD PULSE CORRECTION

PERCENT BREAK SENDING VALUES			
SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	70	70	72
TEST 2 (12 PPS)	63	66	56
TEST 3 (8 PPS)	57	57	59
TEST 4 (8 PPS)	52	54	47
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES			
RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	72	55	
MIN @ 12 PPS	56	44	
MAX @ 8 PPS	59	57	
MIN @ 8 PPS	47	45	
SEE NOTE	4	4	3

WITH M LEAD PULSE CORRECTION

PERCENT BREAK SENDING VALUES			
SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	67	67	69
TEST 2 (12 PPS)	56	58	48
TEST 3 (8 PPS)	67	67	69
TEST 4 (8 PPS)	56	58	51
SEE NOTE	7	8	4

PERCENT BREAK RECEIVING VALUES			
RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	69	55	
MIN @ 12 PPS	48	44	
MAX @ 8 PPS	69	57	
MIN @ 8 PPS	51	45	
SEE NOTE	4	4	3

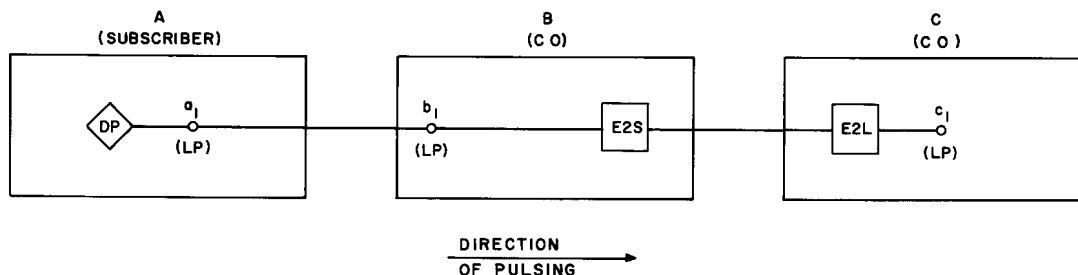
DIAL LONG LINE TYPE  
SD-96252-01 IN OFFICE B

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.



PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	-
TEST 1 (12 PPS)	67	67	-
TEST 2 (12 PPS)	56	58	-
TEST 3 (8 PPS)	67	67	-
TEST 4 (8 PPS)	56	58	-
SEE NOTE	7	10	-

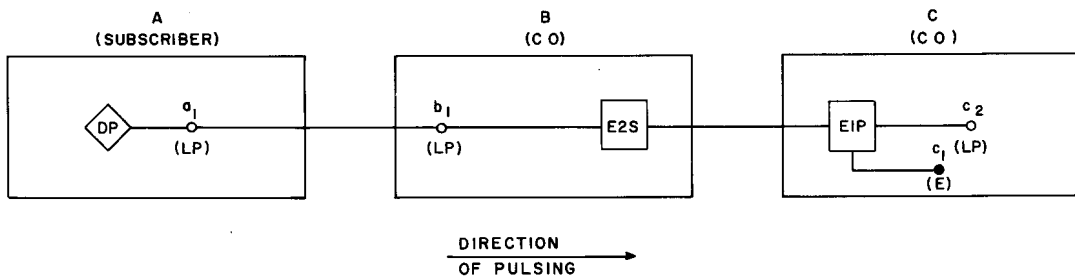
PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	c <sub>1</sub>	-	-
MAX @ 12 PPS	87	-	-
MIN @ 12 PPS	56	-	-
MAX @ 8 PPS	88	-	-
MIN @ 8 PPS	35	-	-
SEE NOTE	3	-	-

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	-
TEST 1 (12 PPS)	67	67	-
TEST 2 (12 PPS)	56	58	-
TEST 3 (8 PPS)	67	67	-
TEST 4 (8 PPS)	56	58	-
SEE NOTE	7	10	-

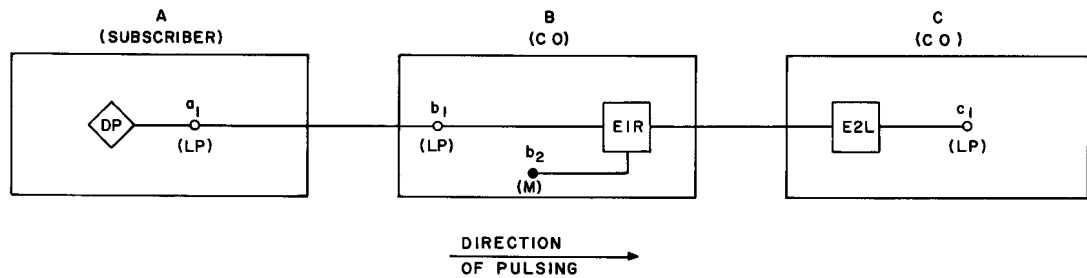
PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	c <sub>1</sub>	c <sub>2</sub>	-
MAX @ 12 PPS	55		-
MIN @ 12 PPS	44		-
MAX @ 8 PPS	57		-
MIN @ 8 PPS	45		-
SEE NOTE	4	3	-

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	67	67	
TEST 2 (12 PPS)	56	58	
TEST 3 (8 PPS)	67	67	
TEST 4 (8 PPS)	56	58	
SEE NOTE	7	10	4

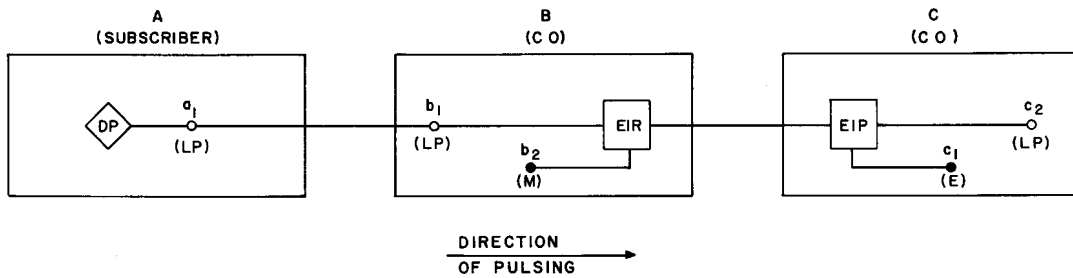
PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	c <sub>1</sub>	-	-
MAX @ 12 PPS	87	-	-
MIN @ 12 PPS	56	-	-
MAX @ 8 PPS	88	-	-
MIN @ 8 PPS	35	-	-
SEE NOTE	3	-	-

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>
TEST 1 (12 PPS)	67	67	
TEST 2 (12 PPS)	56	58	
TEST 3 (8 PPS)	67	67	
TEST 4 (8 PPS)	56	58	
SEE NOTE	7	10	4

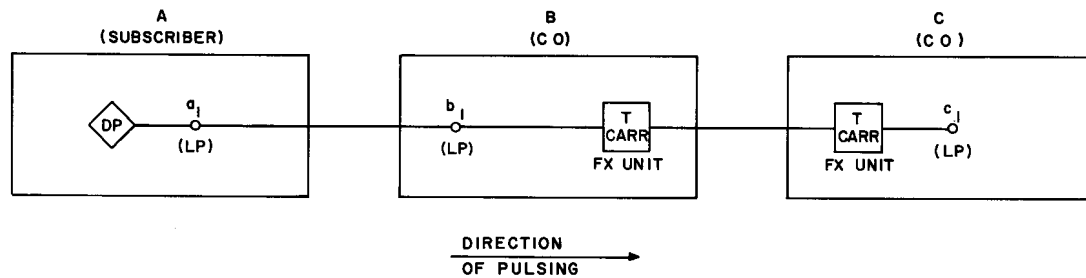
PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	c <sub>1</sub>	c <sub>2</sub>
MAX @ 12 PPS	55	
MIN @ 12 PPS	44	
MAX @ 8 PPS	57	
MIN @ 8 PPS	45	
SEE NOTE	4	3

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>i</sub>	b <sub>i</sub>	-
TEST 1 (12 PPS)	70	70	-
TEST 2 (12 PPS)	63	66	-
TEST 3 (8 PPS)	57	57	-
TEST 4 (8 PPS)	52	54	-
SEE NOTE	7	10	-

PERCENT BREAK RECEIVING VALUES

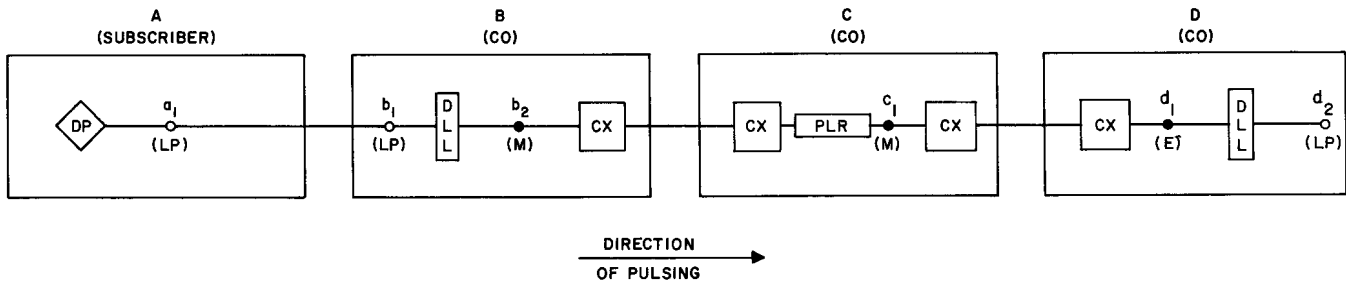
RCV POINT (NOTE 2)	c <sub>i</sub>	-	-
MAX @ 12 PPS	76	-	-
MIN @ 12 PPS	52	-	-
MAX @ 8 PPS	63	-	-
MIN @ 8 PPS	43	-	-
SEE NOTE	3	-	-

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	64
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	78	82	84
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	64	67	69
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

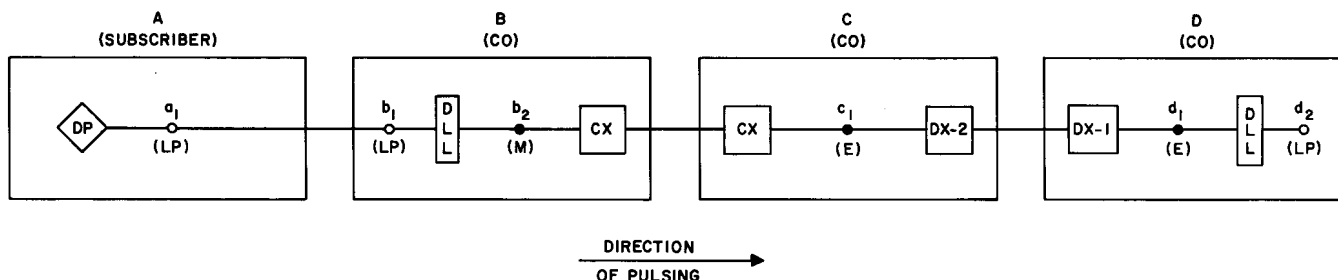
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



**PERCENT BREAK SENDING VALUES**

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	54
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	45
SEE NOTE	7	8	4	4

**PERCENT BREAK RECEIVING VALUES**

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	80	82
MIN @ 12 PPS	56	54	50	43
MAX @ 8 PPS	59	62	65	67
MIN @ 8 PPS	47	45	42	37
SEE NOTE	4	4	4	3

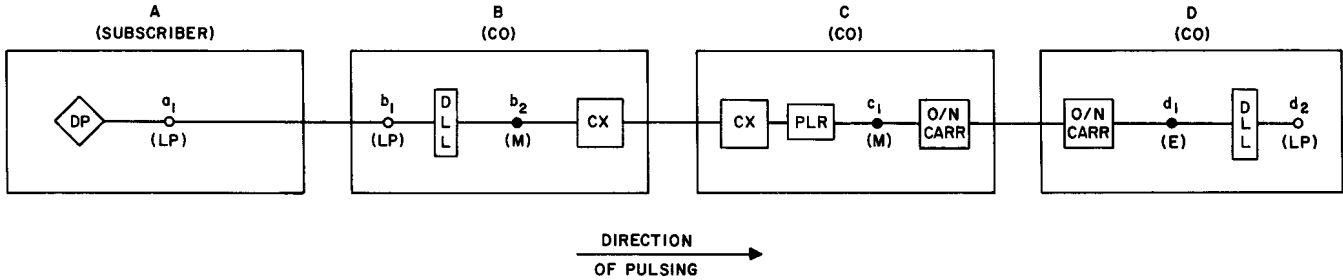
**DIAL LONG LINE TYPES**  
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	64
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	78	84	86
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	64	68	70
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

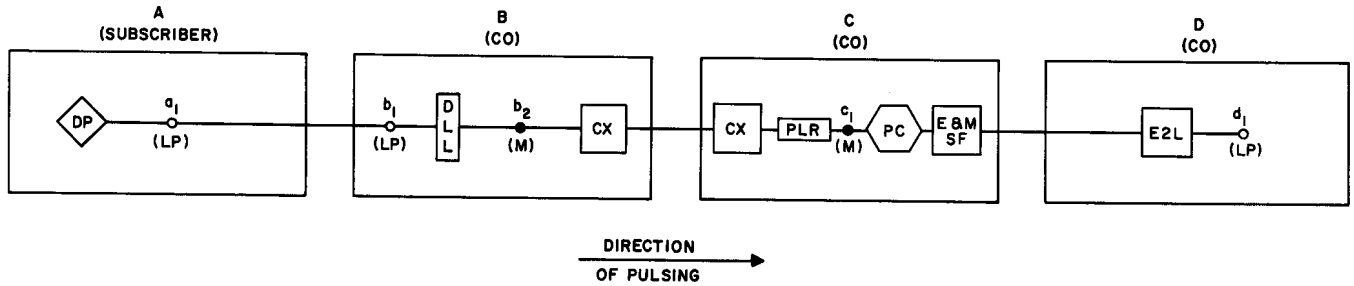
SD-96252-OI IN OFFICE B  
SD-96251-OI IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.



PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	64
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	-
MAX @ 12 PPS	72	78	87	-
MIN @ 12 PPS	56	52	56	-
MAX @ 8 PPS	59	64	88	-
MIN @ 8 PPS	47	43	35	-
SEE NOTE	4	4	3	-

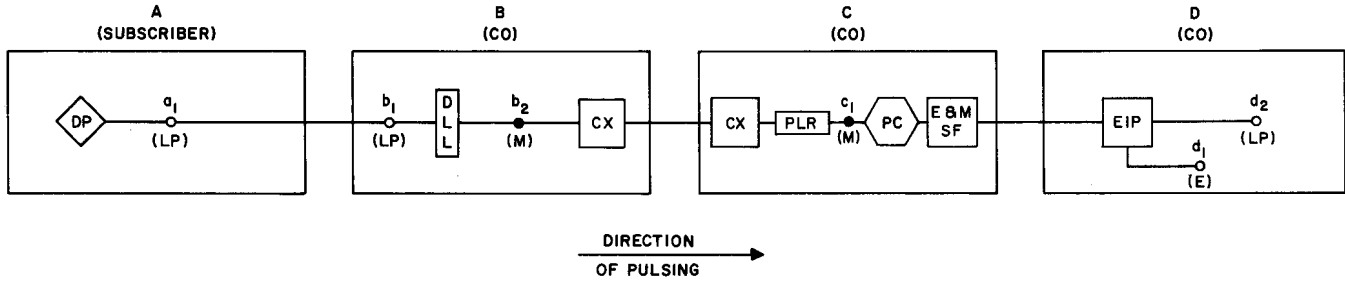
DIAL LONG LINE TYPES

OFC B SD-96252-01

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	64
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	78	55	
MIN @ 12 PPS	56	52	44	
MAX @ 8 PPS	59	64	57	
MIN @ 8 PPS	47	43	45	
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

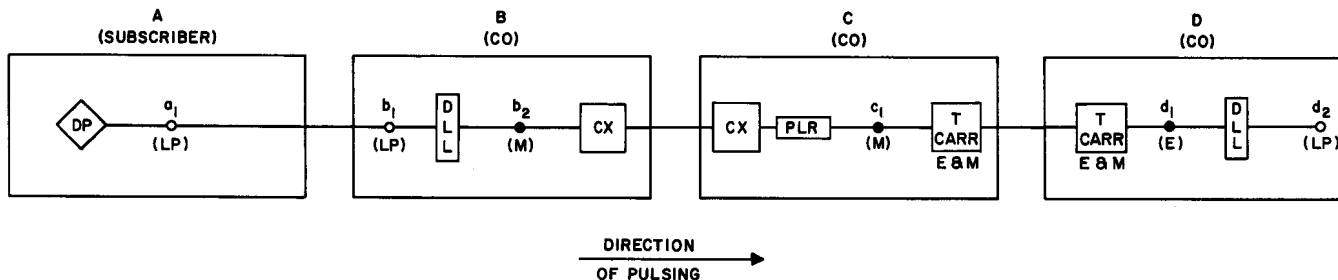
OFC B SD-96252-01

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	64
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	78	80	82
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	64	66	68
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

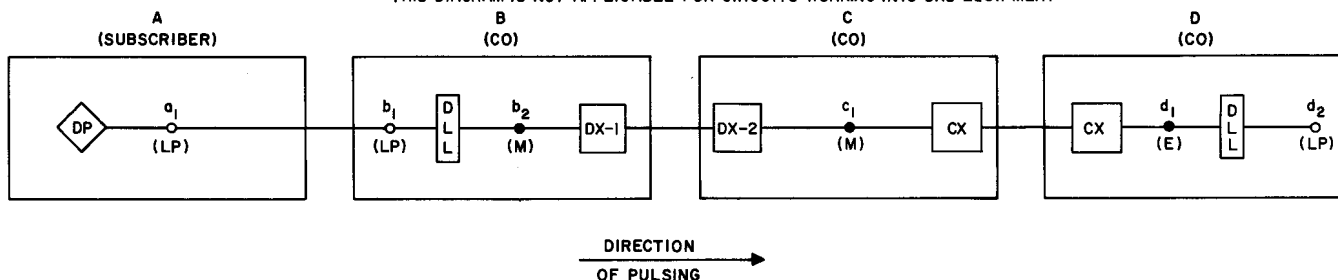
OFC B SD-96252-01  
OFC D SD-96251-01

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	80	82
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	62	65	67
MIN @ 8 PPS	47	44	42	37
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

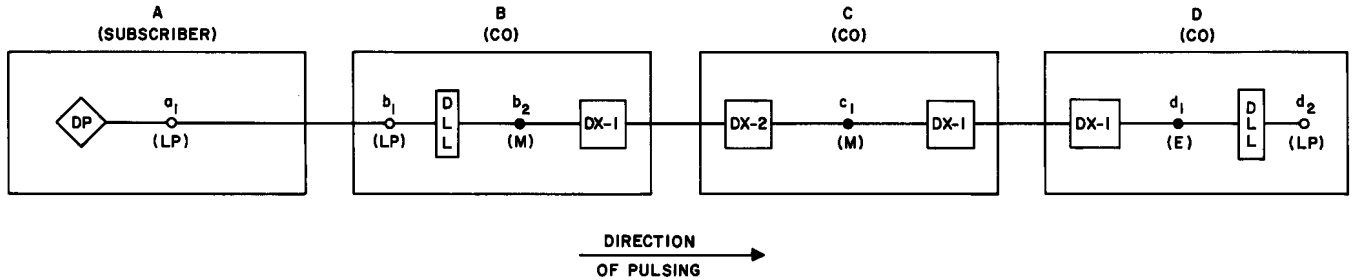
OFC B SD-96252-01  
OFC D SD-96251-01

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS**

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



**PERCENT BREAK SENDING VALUES**

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

**PERCENT BREAK RECEIVING VALUES**

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	80	82
MIN @ 12 PPS	56	52	48	41
MAX @ 8 PPS	59	62	65	67
MIN @ 8 PPS	47	44	41	36
SEE NOTE	4	4	4	3

**DIAL LONG LINE TYPES**

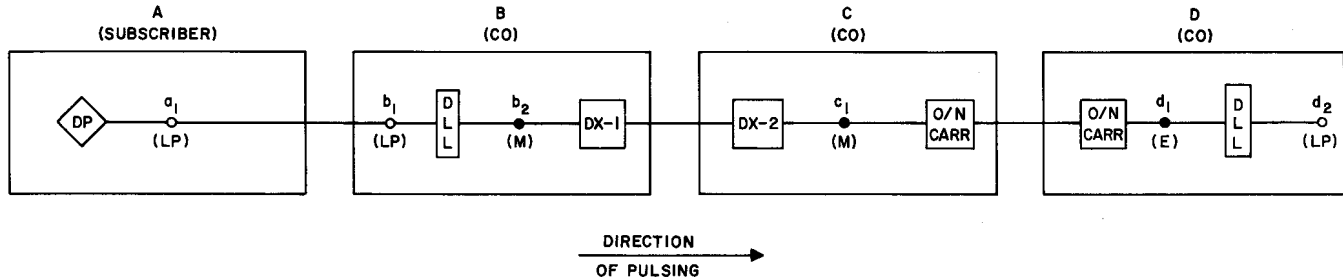
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	82	84
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	62	66	68
MIN @ 8 PPS	47	44	42	37
SEE NOTE	4	4	4	3

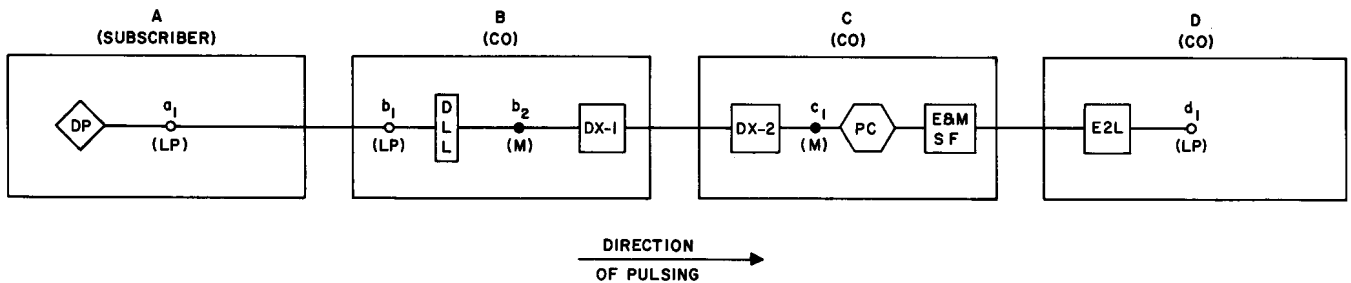
DIAL LONG LINE TYPES

SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

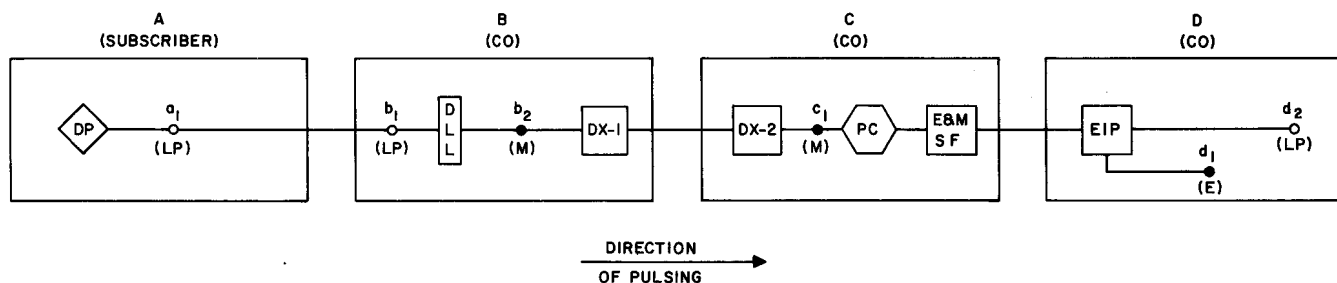
RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	-
MAX @ 12 PPS	72	76	87	-
MIN @ 12 PPS	56	52	56	-
MAX @ 8 PPS	59	62	88	-
MIN @ 8 PPS	47	44	35	-
SEE NOTE	4	4	3	-

DIAL LONG LINE TYPES  
SD-96252-01 IN OFFICE B

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70-	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	55	
MIN @ 12 PPS	56	52	44	
MAX @ 8 PPS	59	62	57	
MIN @ 8 PPS	47	44	45	
SEE NOTE	4	4	4	3

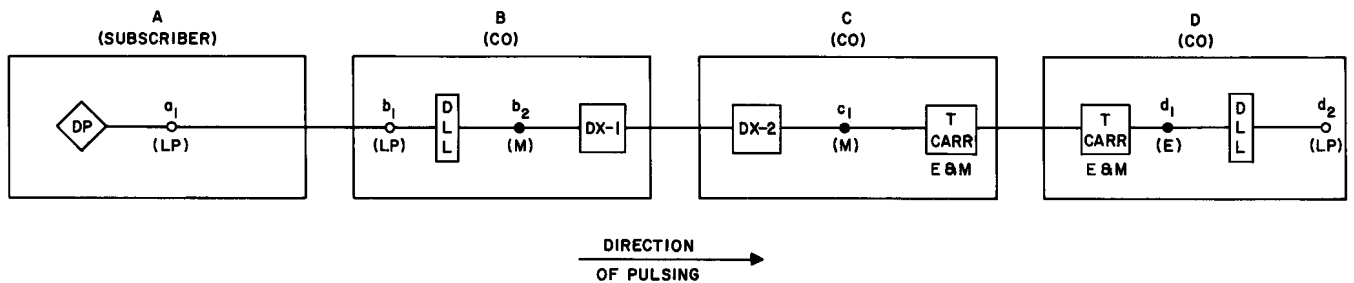
DIAL LONG LINE TYPES  
SD-96252-01 IN OFFICE B

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter :
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.



PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	62
TEST 4 (8 PPS)	52	54	47	44
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	78	
MIN @ 12 PPS	56	52	50	
MAX @ 8 PPS	59	62	64	
MIN @ 8 PPS	47	44	42	
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

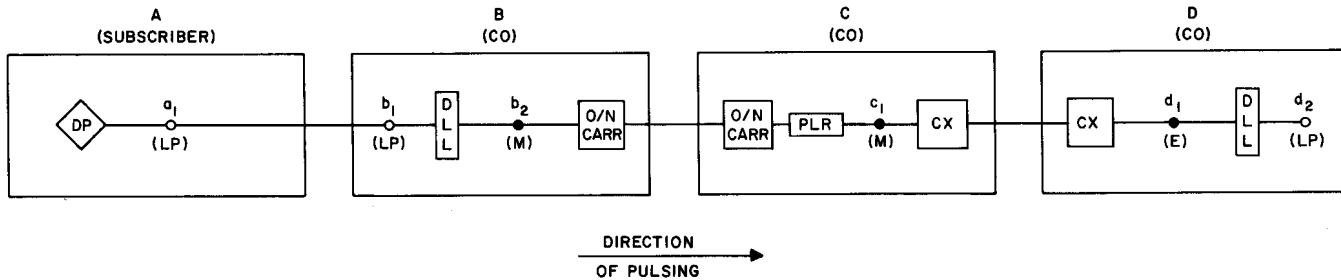
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
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8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	80
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	65
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	80	84	86
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	65	68	70
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

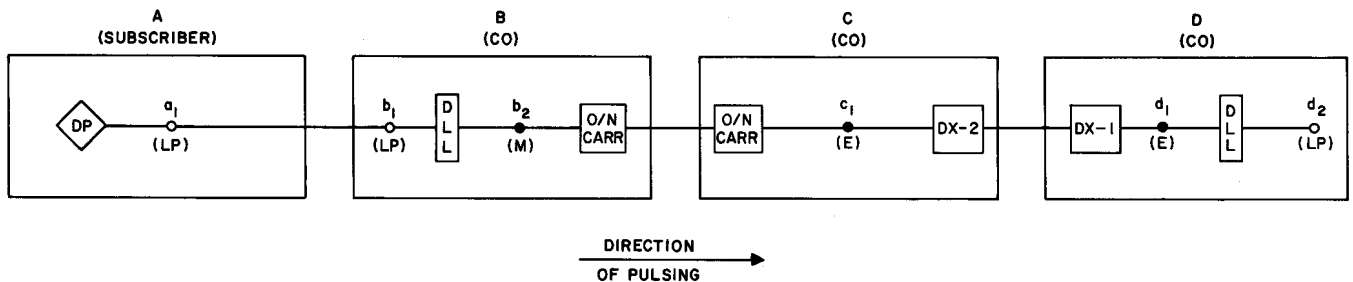
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS**

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



**PERCENT BREAK SENDING VALUES**

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	78
TEST 2 (12 PPS)	63	66	56	54
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	45
SEE NOTE	7	8	4	4

**PERCENT BREAK RECEIVING VALUES**

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	78	82	84
MIN @ 12 PPS	56	54	50	43
MAX @ 8 PPS	59	63	66	68
MIN @ 8 PPS	47	45	42	37
SEE NOTE	4	4	4	3

**DIAL LONG LINE TYPES**

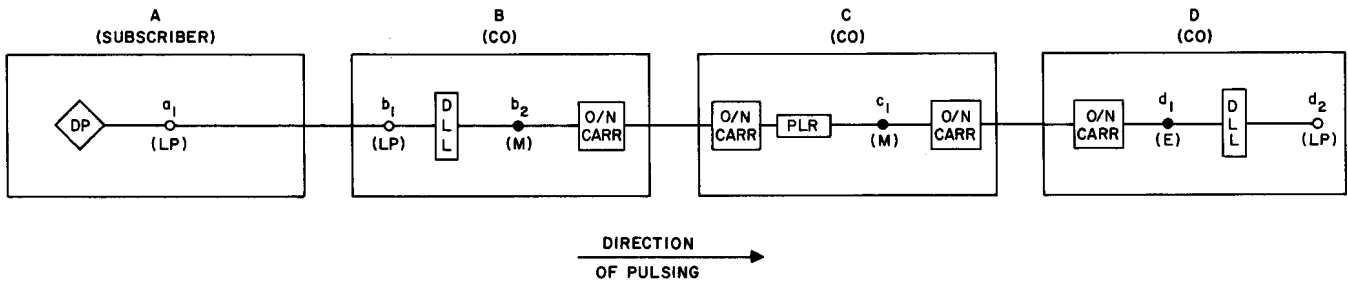
OFC B SD-96252-01  
OFC D SD-96251-01

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	80
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	65
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	80	86	88
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	65	69	71
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

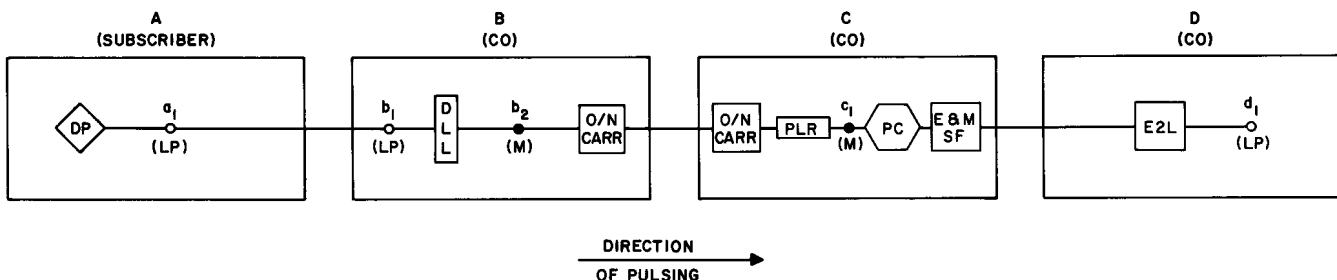
DIAL LONG LINE TYPES

OFC B SD-96252-01  
OFC D SD-96251-01

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	80
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	65
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

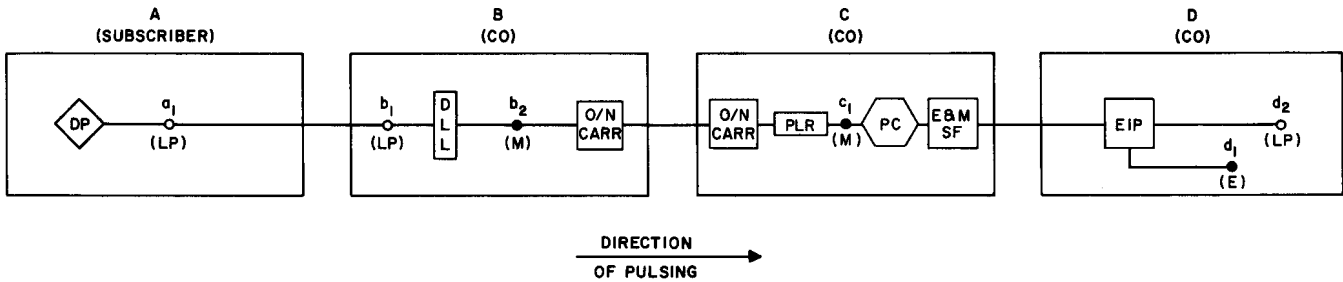
RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	—
MAX @ 12 PPS	72	80	87	—
MIN @ 12 PPS	56	52	56	—
MAX @ 8 PPS	59	65	88	—
MIN @ 8 PPS	47	43	35	—
SEE NOTE	4	4	3	—

DIAL LONG LINE TYPES  
OFC B SD-96252-01

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	80
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	65
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	80	55	
MIN @ 12 PPS	56	52	44	
MAX @ 8 PPS	59	65	57	
MIN @ 8 PPS	47	43	45	
SEE NOTE	4	4	4	3

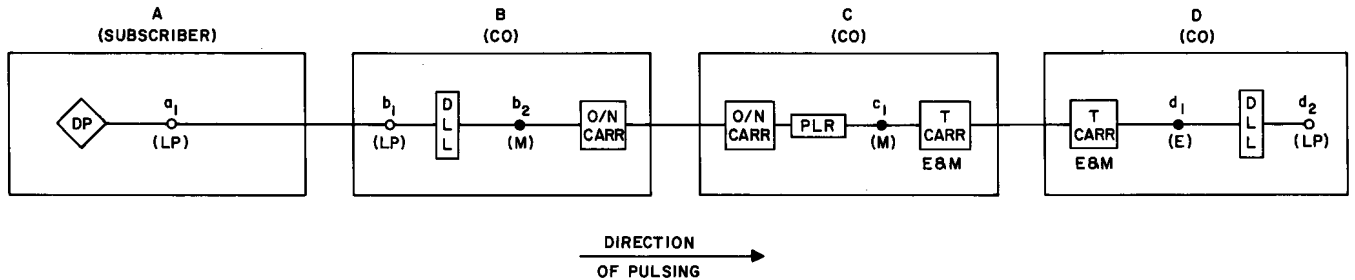
DIAL LONG LINE TYPES  
OFC B SD-96252-01

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
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**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	80
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	65
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	80	82	84
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	65	67	69
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

**DIAL LONG LINE TYPES**

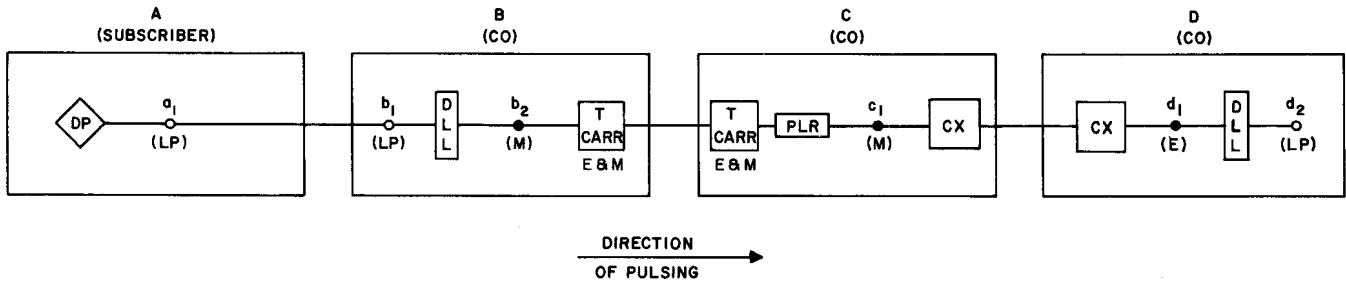
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	80	82
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	63	66	68
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

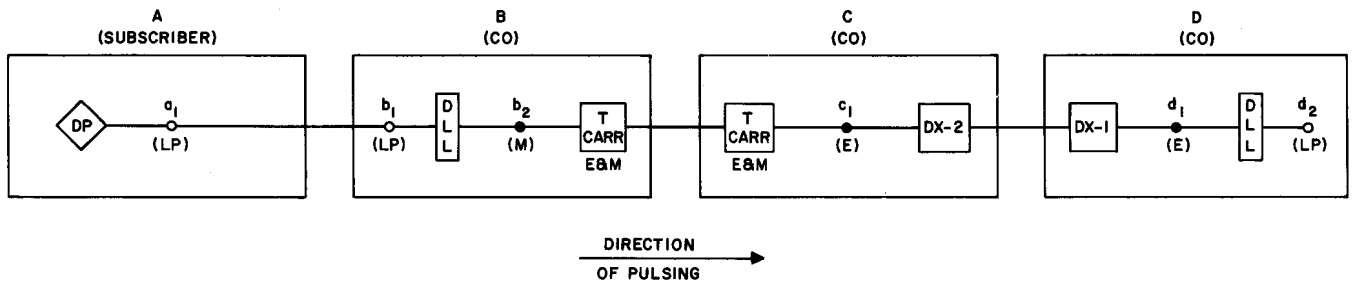
DIAL LONG LINE TYPES  
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.



PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	74
TEST 2 (12 PPS)	63	66	56	54
TEST 3 (8 PPS)	57	57	59	61
TEST 4 (8 PPS)	52	54	47	45
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	74	78	80
MIN @ 12 PPS	56	54	50	43
MAX @ 8 PPS	59	61	64	66
MIN @ 8 PPS	47	45	42	37
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

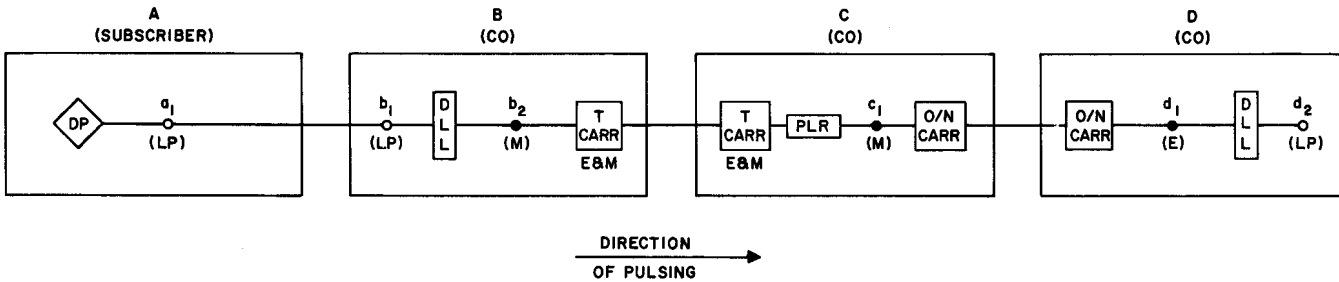
SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS

THIS DIAGRAM IS NOT APPLICABLE FOR CIRCUITS WORKING INTO SXS EQUIPMENT



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	82	84
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	63	67	69
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

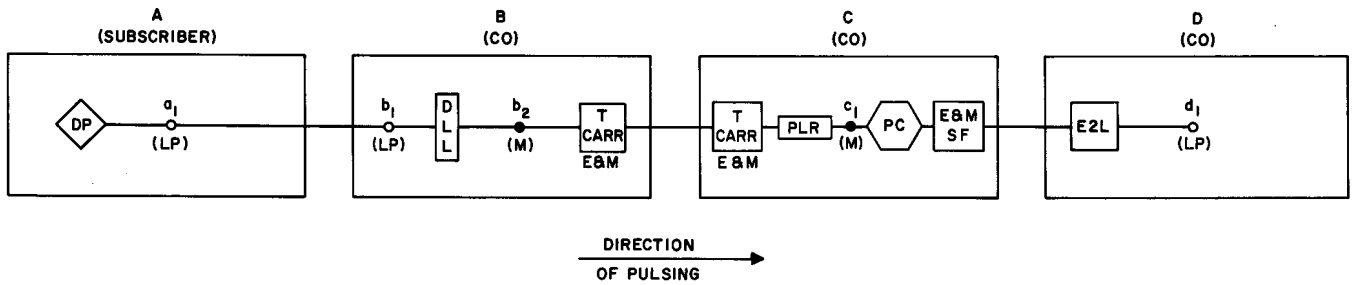
DIAL LONG LINE TYPES

SD-96252-01 IN OFFICE B  
SD-96251-01 IN OFFICE D

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	$a_1$	$b_1$	$b_2$	$c_1$
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

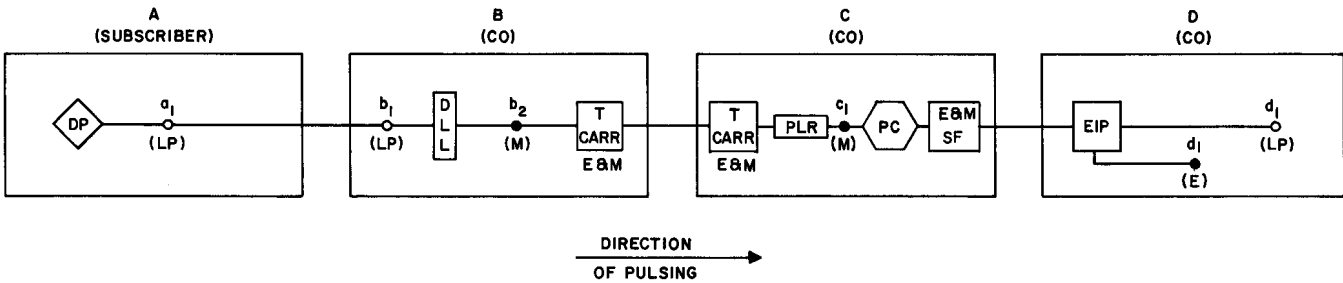
RCV POINT (NOTE 2)	$b_2$	$c_1$	$d_1$	-
MAX @ 12 PPS	72	76	87	-
MIN @ 12 PPS	56	52	56	-
MAX @ 8 PPS	59	63	88	-
MIN @ 8 PPS	47	43	35	-
SEE NOTE	4	4	3	-

DIAL LONG LINE TYPES  
SD-96252-01 IN OFFICE B

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
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4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
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  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800  $\Omega$ .
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

PULSING REQUIREMENTS DIAGRAM  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

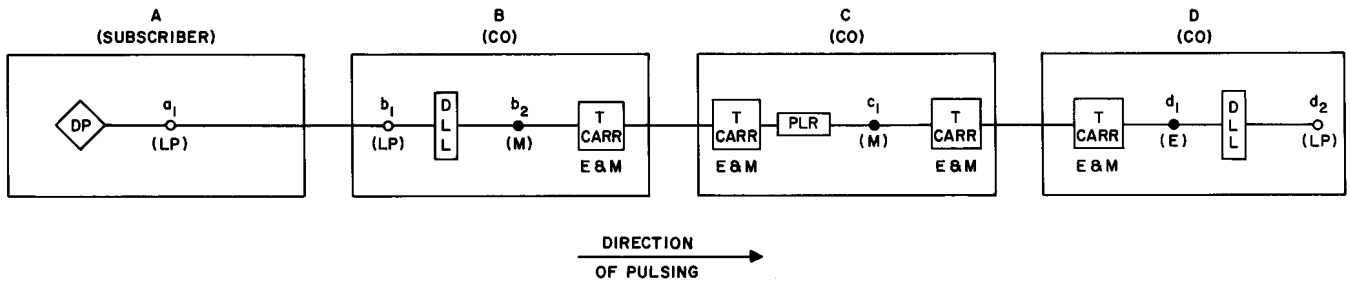
RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	55	
MIN @ 12 PPS	56	52	44	
MAX @ 8 PPS	59	63	57	
MIN @ 8 PPS	47	43	45	
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES  
SD-96252-01 IN OFFICE B

Notes

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SF1 and SEND LOOP to OUT.

**PULSING REQUIREMENTS DIAGRAM**  
FX AND WATS CIRCUITS



PERCENT BREAK SENDING VALUES

SEND POINT (NOTE 1)	a <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
TEST 1 (12 PPS)	70	70	72	76
TEST 2 (12 PPS)	63	66	56	52
TEST 3 (8 PPS)	57	57	59	63
TEST 4 (8 PPS)	52	54	47	43
SEE NOTE	7	8	4	4

PERCENT BREAK RECEIVING VALUES

RCV POINT (NOTE 2)	b <sub>2</sub>	c <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>
MAX @ 12 PPS	72	76	78	80
MIN @ 12 PPS	56	52	50	43
MAX @ 8 PPS	59	63	65	67
MIN @ 8 PPS	47	43	41	36
SEE NOTE	4	4	4	3

DIAL LONG LINE TYPES

OFC B SD-96252-01  
OFC D SD-96251-01

**Notes**

1. If the signaling mode at the first test point in office A is other than loop, send from the first (M) test point.
2. The percent break of received pulses shall not be greater than the values shown on the MAX lines and not less than the values shown on the MIN lines on TESTS 1 through 4.
3. For measuring received loop pulses use a 2B or 2B-1 signaling test set and pulse repeating adapter per Section 333-122-501.
4. Use either a 2B or 2B-1 signaling test set. (When sending pulses in excess of 75 percent break see Section 333-122-501.)
7. Use a 2B-1 signaling test set and pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT AND SEND LOOP to OUT.
  - B. For MIN TESTS 2 and 4 — Set LEAK to A and SEND LOOP to OUT.
8. Use a 2B-1 signaling test set and a pulse repeating adapter:
  - A. For MAX TESTS 1 and 3 — Set LEAK to OUT and SEND LOOP to 2800 Ω.
  - B. For MIN TESTS 2 and 4 — Set LEAK to SFI and SEND LOOP to OUT.