Installation Engineering Handbook 61
Western Electric Company, Incorporated
Columbus Works

8-11-72
Replaces: Section 172.5
Dated: 7-18-46

ORIGINATING MARKER TEST

CONTENTS

1. GENERAL INFORMATION

1.1 Refer to Originating Marker Tests per Section 172 for General Information, Test Procedure, Records and Requirements, Test Equipment and Test Setup.

2. ALL CHANNELS BUSY

2.1 General

2.11 This test is made by busying the channels between the district link frame and the even office link frame of the pair used for test. Verify that the marker tests the channels in all junctor subgroups between these frames in the proper sequence.

2.111 The marker, finding all channels busy, should release the selected trunk and choose another trunk on the odd office link frame and proceed to test the channels between this frame and the district link frame.

2.112 Any district link frame and trunk group may be used for this test. It is preferable to use a small trunk group (4 trunks in the group being the most convenient).

2.12 The available channels, as shown on the office junctor assignment charts, should be made busy at the district link secondary switch or office link primary switch verticals using 351C make busy plugs.

2.121 Where the trunk group used for these tests is located on split levels, busy the right channels only if the selected trunk is located on the right half and busy the left channels only if the trunk is located on the left half.

2.122 The marker SPL or SPR relay will busy the channels on the other half and pattern relays will busy the channels that are not available on the same half.

2.123 If the trunk selected is located on a non-split level, busy all available channels. Pattern relays will busy the channels not available.

2.13 The following instructions assume that the test calls are made from an even numbered district link frame and therefore, the first trunk to be selected is located on the even office link frame. If for any reason the first trunk in the order of selection should be located on the odd office frame, then the terms even and odd should be interchanged in the following instructions.

NOTE 1: On additions and transitions changed or added channels only require test.

NOTE 2: Test to be applied shall be determined by junctor pattern specified for the job.

NOTE 3: On modifications, such as marker speed-up, which only affects the channel selection functions of the marker and not the district and office link frames, perform the test outlined in Paragraph 2.7.

2.2 2 Districts - 2 Offices (100 Junctors Per District Per Office) (MFG DISC)

(a) Busy the junctors in the first subgroup to even office link frame.

(b) With the junctor subgroup walking circuit of the marker in position to test the first subgroup (A test choice) on the next call (CBA1 relay normal and CBB1 relay operated) make a test call. Observe that a junctor in the second subgroup (B test choice) is used, as indicated by the lighted JC lamp, given in the chart of Paragraph 3.2 of this section.

(c) Busy the junctors in the second subgroup to the even office link frame.

(d) With the walking circuit in position to test the A or B test choice on the next call, make a test call and observe that a junctor in the third subgroup (C test choice) is used.

(e) Busy the junctors in the third subgroup to even office link frame.

(f) With the walking circuit in position to test the A, B or C test choice on the next call, make a test call and observe that a junctor in the fourth subgroup (D test choice) is used.

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(g) Busy the junctors in the fourth subgroup to the even office link frame.

(h) With the walking circuit in position to test the A, B, C or D test choice on the next call, make a test call and observe that a junctor in the fifth subgroup (E test choice) is used.

(i) Busy the junctors in the fifth subgroup to the even office link frame.

(j) Make a test call and observe that the trunk selected is located on the odd office frame and that a junctor in the first subgroup (A test choice) is used on this call.

(k) Busy all trunks of the trunk group used for test located on the odd office frame.

(l) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light. Remove the busy condition from the trunks.

(m) Continuing as for the even office link frame, busy the junctor subgroups to the odd office link frame and make test calls. When the call is made with all the junctors in the fifth (E test choice) subgroup busy, observe that a trouble release signal is received. The TRL and CRL lamps light.

(n) Remove the busy condition from all junctors to the even office link frame. Busy the first trunk in the order of selection so that a trunk on the odd office link frame will be selected on the next call.

(o) Make a test call and observe that the third trunk in the order of selection located on the even office link frame and a junctor in the first subgroup (A test choice) is used on this call. The trunk on the odd office link frame was selected on this call but was released due to all channels to the odd office link frame being busy.

(p) Busy all trunks on the even office link frame.

(q) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(r) Remove the busy condition from all trunks and junctors.

2.3 <u>2 District - 2 Office (60 Junctors Per District Per Office) 4 District - 4 Office (50 Junctors Per District Per Office)</u>

(a) Busy the junctors in the first subgroup to the even office link frame.

(b) With the junctor subgroup walking circuit of the marker in position to test the A test choice on the next call, (CBA1 relay normal and CBB1 relay operated) make a test call. Observe that a junctor in the second subgroup is used as indicated by the lighted JC lamp, given in the chart of Paragraph 3.3 or 3.4 of this section.

(c) Busy the junctors in the second subgroup to the even office link frame.

(d) Make three test calls as follows: First, with the walking circuit in position to test the A or B test choice on the next call; Second, the C test choice on the next call; and Third, the D test choice on the next call. Observe that a junctor in the third subgroup (E test choice) is used on each call.

(e) Busy the junctors in the third subgroup to the even office link frame.

(f) Make a test call and observe that the trunk selected is located on the odd office link frame and that a junctor in the first subgroup is used on this call.

(g) Busy all trunks of the trunk group used for test located on the odd office link frame.

(h) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(i) Remove the busy condition from the trunks on the odd office link frame.

(j) Continuing as for the even office link frame, busy the junctors to the odd office link frame and make test calls. When the call is made with all junctors in the third subgroup (E test choice) busy, observe that a trouble release signal is received. The TRL and CRL lamps light.

(k) Remove the busy condition from all junctors to the even office link frame. Busy the first trunk in the order of selection so that a trunk located on the odd office link frame will be selected on the next call.

(l) Make a test call and observe that the third trunk in the order of selection located on the even office link frame and a junctor in the first subgroup, is used on this call. The trunk on the odd office link frame was selected on this call but was released due to all channels to the odd office link frame being busy.

(m) Busy all trunks on the even office link frame.

(n) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(o) Remove the busy conditions from all trunks and all junctors.

2.4 6 Districts - 6 Offices (33 or 34 Junctors Per District Per Office) (MFG DISC)

(a) Busy the junctors in the second subgroup (A test choice) to the even office link frame.

(b) With the junctor subgroup walking circuit of the marker in position to test the A test choice on the next call, (CBA1 relay normal and CBB1 relay operated) make a test call and observe that a junctor in the first subgroup is used, as indicated by the lighted JC lamp, given in the chart of Paragraph 3.7 of this section.

(c) Busy the junctors in the first subgroup to the even office link frame.

(d) Make three test calls as follows: First, with the walking circuit in position to test the A test choice on the next call; second, the B or C test choice on the next call; and third, the D test choice on the next call. Observe that a junctor in the third subgroup (E test choice) is used on all three calls.

(e) Busy the junctors in the third subgroup to the even office link frame.

(f) Make a test call and observe that the trunk selected is located on the odd office link frame and that a junctor in the second subgroup (test choice A) is used on this call.

(g) Busy all trunks of the trunk group used for test located on the odd office link frame.

(h) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(i) Remove the busy condition from the trunks on the odd office link frame.

(j) Continuing as for the even office link frame, busy the junctors to the odd office link frame and make test calls. When the call is made with all junctors in the third subgroup (E test choice) busy, observe that a trouble release signal is received. The TRL and CRL lamps light.

(k) Remove the busy condition from all junctors to the even office link frame. Busy the first trunk in the order of selection so that a trunk on the odd office link frame will be selected on the next call.

(l) Make a test call and observe that the third trunk in the order of selection located on the even office link frame and a junctor in the second subgroup (test choice A) is used on this call. The trunk on the odd office link frame was selected on this call but was released due to the odd office link frame being busy.

(m) Busy all trunks on the even office link frame.

(n) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(o) Remove the busy condition from all trunks and junctors.

2.5 4 Districts - 4 Offices (40 Junctors Per District Per Office) 4 Districts - 4 Offices (30 Junctors Per District Per Office) 6 Districts - 6 Offices (30 Junctors Per District Per Office) 6 Districts - 6 Offices (25 Junctors Per District Per Office) 8 Districts - 8 Offices (25 Junctors Per District Per Office)

(a) Busy the junctors in the first subgroup to the even office link frame.

(b) Make four test calls as follows: First, with the junctor subgroup walking circuit of the marker in position to use the A test choice on the next call; (CBA1 relay normal and CBB1 relay operated) Second, the B test choice on the next call; Third, the C test choice on the next call; and Fourth, the D test choice on the next call. Observe that a junctor in the second subgroup (E test choice) is used on all four calls, as indicated by the lighted JC lamp given in the chart of Paragraphs 3.5, 3.6 and 3.8 of this section.

(c) Busy the junctors in the second subgroup to the even office link frame.

(d) Make a test call and observe that the trunk selected is located on the odd office link frame and that a junctor in the first subgroup is used.

(e) Busy all trunks of the trunk group used for test located on the odd office link frame.

(f) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(g) Remove the busy condition from the trunks on the odd office link frame.

(h) Busy the junctors to the odd office link frame in the first subgroup.

(i) Make a test call and observe that a junctor in the second subgroup (E test choice) is used.

(j) Busy the junctors to the odd office link frame in the second subgroup.

(k) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(l) Remove the busy condition from all junctors to the even office link frame. Busy the first trunk in the order of selection so that a trunk on the odd office link frame will be selected on the next call.

(m) Make a test call and observe that the third trunk in the order of selection located on the even office link frame and a junctor in the first subgroup is used on this call. The trunk on the odd office link frame was selected on this call but was released due to all channels to the odd office link frame being busy.

(n) Busy all trunks on the even office link frame.

(o) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(p) Remove the busy condition from all trunks and junctors.

2.6 8 Districts - 8 Offices (20 Junctors Per District Per Office) 10 or More Districts (10 or More Offices)

(a) Busy the junctors to the even office link frame.

(b) Make a test call and observe that the trunk selected is located on the odd office link frame.

(c) Busy all trunks of the group used for test located on the odd office link frame.

(d) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(e) Remove the busy condition from the trunks on the odd office link frame.

(f) Busy the junctors to the odd office link frame.

(g) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(h) Remove the busy condition from all junctors to the even office link frame. Busy the first trunk in the order of selection so that a trunk on the odd office link frame will be selected on the next call.

(i) Make a test call and observe that the third trunk in the order of selection located on the even office link frame is selected on this call. The trunk on the odd office link frame was selected on this call but was released due to all channels to the odd office link frame being busy.

(j) Busy all trunks on the even office link frame.

(k) Make a test call and observe that a trouble release signal is received. The TRL and CRL lamps light.

(l) Remove the busy condition from all trunks and junctors.

2.7 Marker Speed-Up - All Channels Busy

2.71 At terminal strip (OFF) E-B of marker under test, obtain the following association.

ITE-9984 Leads	Terminal Strip (OFF) E-B Pchg.	Leads
(A) 0-9	20-29	(LS) 0L-9L
(b) 0-9	10-19	(LS) 0R-9R

2.72 Connect the receptacle plug of an ITE-9984 cord to connector A on the Link Frame Test Set, ITE-4033B. Connect plugs 0 to 9 of this cord to terminals 20-29 of the (OFF) E-B terminal strip

using ITE-4085 clips and insulated alligator clips. Connect the receptacle plug of another ITE-9984 cord to connector B on the ITE-4033B test set. Connect plugs 0 to 9 of this cord to terminals 10-19 of the (OFF) E-B terminal strip using ITE-4085 push on clips and insulated alligator clips. Connect 48V battery and ground to the A jack of the test set ITE-4033B using cord ITE-9598. Operate key AG and BG of the test set and leave them operated.

2.73 Operate keys A1-9 and BO-9 on ITE-4033B test set.

2.74 Set up OTI to make a test call as outlined in Section 172, Paragraph 4. Using an ITE-9627 remote cord at the marker F jack to control the test frame, originate a test call. Verify test call completes and channel CHLO was selected for test (relay CHLO operates during test call). Release test frame.

2.75 Operate key AO and release key BO. Originate a test call and verify call completes and channel CHRO was selected for test.

2.76 Continue in similar manner as described in preceding paragraphs until all twenty channels have been tested. The following chart shows, in sequence, the operated keys and channel selected by test.

OPERATED KEYS A	B	CHANNEL SELECTED
1-9	0-9	CHLO
0-9	1-9	CHRO
0, 2-9	0-9	CHL1
0-9	0, 2-9	CHR1
0-1, 3-9	0-9	CHL2
0-9	0-1, 3-9	CHR2
0-2, 4-9	0-9	CHL3
0-9	0-2, 4-9	CHR3
0-3, 5-9	0-9	CHL4
0-9	0-3, 5-9	CHR4
0-4, 6-9	0-9	CHL5
0-9	0-4, 6-9	CHR5
0-5, 7-9	0-9	CHL6
0-9	0-5, 7-9	CHR6
0-6, 8-9	0-9	CHL7
0-9	0-6, 8-9	CHR7
0-7, 9	0-9	CHL8
0-9	0-7, 9	CHR8
0-8	0-9	CHL9
0-9	0-8	CHR9

2.77 Operate key B-9 and start a test call. Verify marker will second trial and time out. Lamp CRL lights at test frame.

NOTE: Paragraph 2.8 describes a type of double connection test which should be associated with Section 172.6, Paragraph 7 but is described here because it makes use of the ITE-4033B test set.

2.8 Marker Speed-Up Double Connection Test

2.81 Operate the ITE-4033B keys AO-9 and BO-8 and ground 1T, relay CHR9 in marker under test. Originate a test call and verify lamps A, C and BBCK do not light at OTI Frame.

2.82 Remove ground from 1T, relay CHR9 and attach it to 4B, relay CHR9. Originate a test call and verify lamps A, C and CBCK do not light.

2.83 Remove ground from 4B, relay CHR9 and release the test frame. Disconnect the ITE-4033B test set and verify circuit restored to normal.

3. JUNCTOR TEST CHOICES AND PATTERNS

3.01 General

3.011 Make test calls from each district link frame to all office link frames using each test choice as provided and observe that the proper JC and P lamps light as given in the following charts. Test choices A, B, C, D where provided, are selected in this order on successive calls. Test choice E is selected by blocking operated relay CBB5 and nonoperated relay CBB1.

NOTE 1: On additions and transitions changed or added channels only require test.

NOTE 2: Test to be applied shall be determined by junctor pattern specified for the job.

3.012 Lamps (JC) 0-19 light to agree in number with the operated JC relay in the marker. The operated JC relays in the marker and the district link frame are dependent upon the office link frame and the junctor test choice used on the call. The operated JC relay in the district link frame may or may not agree in number with the lighted JC lamp depending upon the wiring connections to the JC relays in the district link frame. In the following charts the JC relays operated on the district link frames are given as a matter of information only. The OF and K lamps indicate the number of the office link frame used on a test call. The OF lamp indicates the office frame pair and the K lamp indicates the odd or even frame of the pair.

3.013 In order to select a trunk on an odd office link frame when the call is originated at an even district link frame or to select a trunk on an even office link frame when the call is originated at an odd district link frame, two methods may be used: (1) Use a code in ground supply 3 and originate the call with the AR key operated or, (2) busy the first choice trunk.

3.014 Lamps (P) 0-13 indicate the pattern relay operated in the marker. The pattern relay operated on a call is dependent upon the district and office link frames used.

3.015 Verify that the pattern relays busy the proper channels as follows: Block the STX relay in the operated position to connect battery to the windings of the C relays and then manually operate each pattern relay (P) 0-13 as provided and observe that only the proper channel test relays (C) L0-R9 operate. Refer to the cross-connections between the C and P relays as shown under the notes on the schematic drawing (Note 180 (c) and 120 (c)) for the marker to determine which C relays should operate on this test. Remove block from STX relay.

3.016 During these tests operate the BAT key and check that busy lamps (D) 0-19 and (O) 0-19 associated respectively with district link frames 0-19 light while these frames are connected to the marker. Check each lamp two or three times with each marker.

3.02 2 Frames (100 Junctors Per District Per Office) MFG DISC

		Junctor Test Choice & Subgroup (A) 1st		(B) 2nd		(C) 3rd		(D) 4th		(E) 5th	
Fr. No. D	O	JC Lp	JC Rel	JC Lp	JC Rel	JC Lp	JC Rel	JC Lp	JC Rel	JC Lp	JC Rel
0	0	0	0	2	2	4	4	6	6	8	8
1		0	1	2	3	4	5	6	7	8	9
0	1	1	1	3	3	5	5	7	7	9	9
1		1	0	3	2	5	4	7	6	9	8

3.03 2 Frames (60 Junctors Per District Per Office)

		Junctor Test Choice & Subgroup A+C 1st Subgroup		B+D 2nd Subgroup		E 3rd Subgroup	
Fr. No. D	O	JC Lp	JC Rel	JC Lp	JC Rel	JC Lp	JC Rel
0	0	0	0	6	6	4	4
1		0	1	6	7	4	5
0	1	1	1	7	7	5	5
1		1	0	7	6	5	4

3.04 4 Frames (50 Junctors Per District Per Office (MFG DISC)

		Junctor Test Choice & Subgroup (A or C) 1st		(B or D) 2nd	
Fr. No. D	O	JC Lamp	JC Relay	JC Lamp	JC Relay
0	0	0	0	4	4
1		0	1	4	5
2		0	0	4	6
3		0	1	4	7
0	1	1	1	5	5
1		1	0	5	4
2		1	1	5	7
3		1	0	5	6
0	2	2	2	6	6
1		2	3	6	7
2		2	2	6	4
3		2	3	6	5
0	3	3	3	7	7
1		3	2	7	6
2		3	3	7	5
3		3	2	7	4

Junctor Test Choice E (3rd Subgroup)

Frame No. Dist.	Off.	P Lamp	JC Lamp	JC Relay
0 or 2	0	0	8	8
1 or 3		1	8	9
0 or 2	1	1	9	9
1 or 3		0	9	8
0 or 2	2	1	8	8
1 or 3		0	8	9
0 or 2	3	0	9	9
1 or 3		1	9	8

3.05 4 Frames (40 Junctors Per District Per Office)

		Junctor Test Choice & Subgroup ABCD 1st Subgroup		E 2nd Subgroup	
Fr. No. D	O	JC Lp	JC Rel	JC Lp	JC Rel
0	0	0	0	6	6
1		0	1	6	7
2		0	0	6	8
3		0	1	6	9
0	1	1	1	7	7
1		1	0	7	6
2		1	1	7	9
3		1	0	7	8
0	2	2	2	8	8
1		2	3	8	9
2		2	2	8	6
3		2	3	8	7
0	3	3	3	9	9
1		3	2	9	8
2		3	3	9	7
3		3	2	9	6

3.06 4 Frames (30 Junctors Per District Per Office) 6 Frames (30 Junctors Per District Per Office)

Frame No. Dist.	Off.	Junctor Test Choice & Subgroup (A, B, C or D) 1st Subgroup JC Lamp	JC Relay
0,2,4	0	0	0
1,3,5		0	1
0,2,4	1	1	1
1,3,5		1	0
0,2,4	2	2	2
1,3,5		2	3
0,2,4	3	3	3
1,3,5		3	2
0,2,4	4	4	4
1,3,5		4	5
0,2,4	5	5	5
1,3,5		5	4

Frame No. Dist.	Off.	(E) 2nd Subgroup P Lp	JC Lp	JC Rel
0 or 4	0	0	6	6
1 or 5		1	6	7
2		0	6	8
3		1	6	9
0 or 4	1	1	7	7
1 or 5		0	7	6
2		1	7	9
3		0	7	8
0 or 4	2	0	8	8
1 or 5		1	8	9
2		0	8	6
3		1	8	7
0 or 4	3	1	9	9
1 or 5		0	9	8
2		1	9	7
3		0	9	6
0 or 4	4	0	9	9
1 or 5		1	9	8
2		0	7	9
3		1	7	8
0 or 4	5	1	8	8
1 or 5		0	8	9
2		1	6	8
3		0	6	9

3.07 6 Frames (33 or 34 Junctors Per District Per Office) (MFG DISC)

Frame No. Dist.	Off.	Junctor Test Choice & Subgroup (B, C or D) 1st JC Lp	JC Rel	(A)2nd P Lp	JC Lp	JC Rel
0 or 4	0	0	0	0	6	6
1 or 5		0	1	1	6	7
2		0	0	0	6	8
3		0	1	1	6	9
0 or 4	1	1	1	1	7	7
1 or 5		1	0	0	7	6
2		1	1	1	7	9
3		1	0	0	7	8
0 or 4	2	2	2	0	8	8
1 or 5		2	3	1	8	9
2		2	2	0	8	6
3		2	3	1	8	7
0 or 4	3	3	3	1	9	9
1 or 5		3	2	0	9	8
2		3	3	1	9	7
3		3	2	0	9	6
0 or 4	4	4	4	0	7	7
1 or 5		4	5	1	7	6
2		4	4	0	7	9
3		4	5	1	7	8
0 or 4	5	5	5	1	6	6
1 or 5		5	4	0	6	7
2		5	5	1	6	8
3		5	4	0	6	9

Junctor Test Choice E (3rd Subgroup)

Frame No. Dist.	Off.	P Lamp	JC Lamp	JC Relay
0	0	2,3	8	8
1		4,5	8	9
2		6,7	8	6
3		8,9	8	7
4		10,11	8	8
5		12,13	8	9
0	1	4,5	9	9
1		2,3	9	8
2		8,9	9	7
3		6,7	9	6
4		12,13	9	9
5		10,11	9	8
0	2	6,7	8	8
1		8,9	8	9
2		10,11	8	6
3		12,13	8	7
4		2,3	8	8
5		4,5	8	9
0	3	8,9	9	9
1		6,7	9	8
2		12,13	9	7
3		10,11	9	6
4		4,5	9	9
5		2,3	9	8
0	4	10,11	8	8
1		12,13	8	9
2		2,3	8	6
3		4,5	8	7
4		6,7	8	8
5		8,9	8	9

Junctor Test Choice E (3rd Subgroup)

Frame No. Dist.	Off.	P Lamp	JC Lamp	JC Relay
0	5	12,13	9	9
1		10,11	9	8
2		4,5	9	7
3		2,3	9	6
4		8,9	9	9
5		6,7	9	8

3.08 6 Frames (25 Junctors Per District Per Office) 8 Frames (25 Junctors Per District Per Office)

Junctor Test Choice & Subgroup

Frame No. Dist.	Off.	(A B C D 1st Subgroup) JC Lamp	JC Relay
0,2,4,6	0	0	0
1,3,5,7		0	1
0,2,4,6	1	1	1
1,3,5,7		1	0
0,2,4,6	2	2	2
1,3,5,7		2	3
0,2,4,6	3	3	3
1,3,5,7		3	2
0,2,4,6	4	4	4
1,3,5,7		4	5
0,2,4,6	5	5	5
1,3,5,7		5	4
0,2,4,6	6	6	6
1,3,5,7		6	7
0,2,4,6	7	7	7
1,3,5,7		7	6

Frame No. Dist.	Off.	(E) 2nd Subgroup P Lp	JC Lp	JC Rel
0,4	0	0,1	8	8
1,5		2,3	8	9
2,6		4,5	8	8
3,7		6,7	8	9
0,4	1	2,3	9	9
1,5		0,1	9	8
2,6		6,7	9	9
3,7		4,5	9	8
0,4	2	4,5	8	8
1,5		6,7	8	9
2,6		0,1	8	8
3,7		2,3	8	9
0,4	3	6,7	9	9
1,5		4,5	9	8
2,6		2,3	9	9
3,7		0,1	9	8

Frame No. Dist.	Off.	(E) 2nd Subgroup P Lp	JC Lp	JC Rel
0,4	4	0,1	9	9
1,5		2,3	9	8
2,6		4,5	9	9
3,7		6,7	9	8
0,4	5	2,3	8	8
1,5		0,1	8	9
2,6		6,7	8	8
3,7		4,5	8	9
0,4	6	4,5	9	9
1,5		6,7	9	8
2,6		0,1	9	9
3,7		2,3	9	8
0,4	7	6,7	8	8
1,5		4,3	8	9
2,6		2,3	8	8
3,7		0,1	8	9

3.09 8 Frames (25 Junctors Per District Per Office) (MFG DISC)

Junctor Test Choices

Frame No. Dist.	Off.	(A,B,C,D) 1st Subgroup JC Lamp	JC Relay
0,2,4,6	0	0	0
1,3,5,7		0	1
0,2,4,6	1	1	1
1,3,5,7		1	0
0,2,4,6	2	2	2
1,3,5,7		2	3
0,2,4,6	3	3	3
1,3,5,7		3	2
0,2,4,6	4	4	4
1,3,5,7		4	5
0,2,4,6	5	5	5
1,3,5,7		5	4
0,2,4,6	6	6	6
1,3,5,7		6	7
0,2,4,6	7	7	7
1,3,5,7		7	6

Frame No. Dist.	Off.	(E) 2nd Subgroup P Lp	JC Lp	JC Rel
0,4	0	0,1	8	8
1,5		2,3	8	9
2,6		4,5	8	8
3,7		6,7	8	9
0,4	1	2,3	9	9
1,5		4,5	9	8
2,6		6,7	9	9
3,7		0,1	9	8

Frame No. Dist.	Off.	(E) 2nd Subgroup P Lp	JC Lp	JC Rel
0,4	2	4,5	8	8
1,5		6,7	8	9
2,6		0,1	8	8
3,7		2,3	8	9
0,4	3	6,7	9	9
1,5		0,1	9	8
2,6		2,3	9	9
3,7		4,5	9	8
0,4	4	2,3	8	8
1,5		4,5	8	9
2,6		6,7	8	8
3,7		0,1	8	9
0,4	5	0,1	9	9
1,5		2,3	9	8
2,6		4,5	9	9
3,7		6,7	9	8
0,4	6	6,7	8	8
1,5		0,1	8	9
2,6		2,3	8	8
3,7		4,5	8	9
0,4	7	4,5	9	9
1,5		6,7	9	8
2,6		0,1	9	9
3,7		2,3	9	8

3.10 8 Frames (20 Junctors Per District Per Office) 10 Frames (20 Junctors Per District Per Office)

3.101 On every call made in accordance with the instructions under Paragraph 3.01 the lighted JC lamp agrees in number with the office link frame on which the selected trunk is located and with the operated JC relays on the marker and the district link frame. Pattern (P) relays are not required.

3.11 10 Frames (16 or 17 Junctors Per District Per Office) 12, 14, 16 or 18 Frames

3.111 On every call made per Paragraph 3.01 the lighted JC lamp agrees in number with the office link frame on which the selected trunk is located. When the call is from an even numbered district link frame the lighted JC lamp agrees in number with the operated JC relay on the district link frame but when the call is from an odd numbered district link frame the lighted JC lamp agrees in number with the mate office link frame of the pair instead of the office link frame on which the selected trunk is located. For example:

Dist. Fr. No.	Office Fr. No.	JC Lamp	JC Relay
4	7	7	7
5	7	7	6

Lamps (P) 0-9 light as follows:

Off. Fr. No.	District Frame No. 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7
1	1	0	3	2	5	4	7	6	9	8	1	0	3	2	5	4	7	6
2	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
3	3	2	5	4	7	6	9	8	1	0	3	2	5	4	7	6	9	8
4	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
5	5	4	7	6	9	8	1	0	3	2	5	4	7	6	9	8	1	0
6	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3
7	7	6	9	8	1	0	3	2	5	4	7	6	9	8	1	0	3	2
8	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
9	9	8	1	0	3	2	5	4	7	6	9	8	1	0	3	2	5	4
10	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7
11	1	0	3	2	5	4	7	6	9	8	1	0	3	2	5	4	7	6
12	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
13	3	2	5	4	7	6	9	8	1	0	3	2	5	4	7	6	9	8
14	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
15	5	4	7	6	9	8	1	0	3	2	5	4	7	6	9	8	1	0
16	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3
17	7	6	9	8	1	0	3	2	5	4	7	6	9	8	1	0	3	2

3.12 20 Frames

3.121 The lighted JC lamp and operated JC relay on the district link frame agree in number with the office link frame on which the selected trunk is located when the call is from an even numbered district frame. When the call is from an odd numbered district frame the lighted JC lamp agrees in number with the office link frame on which the selected trunk is located but the operated JC relay agrees in number with the mate office link frame of the pair instead of the office link frame on which the selected trunk is located. For example:

Dist. Fr. No.	Office Fr. No.	JC Lamp	JC Relay
4	7	7	7
5	7	7	6

Lamps (P) 0-1 light as follows:

	Even Office	Odd Office
Even District	0	1
Odd District	1	0

No Changes Indicated Due To Extensive Revision

Reason for Reissue:
1. Make corrections and clarifications.
2. Make a general revision to update to current engineering standards.

Manager, Crossbar Product Engineering Control Center