WORK UNITS
TRUNK TESTING—TELEPHONE
FORM E-4417

1. GENERAL

1.001 This addendum supplements Section 015-917-010, Issue 7.

1.002 This addendum is issued to make the following changes:

(a) To clarify the definition of "overall radio channel" and to better define "short-haul radio systems" for inventory purposes.

(b) To remove the prohibition for inventorying Toll Connecting Trunks as controlled when the terminating office is so designated.

(c) To clarify the inventory of L carrier (lines 42 and 43) and to make provision for the assignment of the receiving office as control. (See Section 682-000-015)

(d) To categorize data services included on line 27 according to current usage.

(e) To allow the inventory on lines 28 and 29 of all radio channels associated with Combined User Group (CUG) equipment on Air-to-Ground circuits as serving links.

(f) To include E-type alarm circuits under Radio-Control (line 36).

(g) To include on line 42 B-1 and E-type alarm circuits for coaxial systems.

(h) To correct some illustrations and to add additional illustrations for clarification of inventory.

1.003 This addendum includes the following illustrations: Fig. 2, 3, 4, 5, 7, 8A (replacing 8), 8B, 9, 10, 11, 12A (replacing 12), 12B, 13, 14, 15, 16, and 19.

1.05 Delete the following:

Fig. 8 and Fig. 12

Add the following:

Fig. 8A—Type L Carrier (Without Master Group Multiplex)

Fig. 8B—Type L Carrier (With Master Group Multiplex)

Fig. 12A—Overall Radio Channel (Message)—Short-Haul Systems, Example 1

Fig. 12B—Overall Radio Channel (Message)—Short-Haul Systems, Example 2

Revise the following:

Fig. 13—Overall Radio Channel (Television) Over TD or TH Systems Including Bridged Terminal and Bridged Channel

Fig. 14—Overall Radio Channel (Message) Over TD- or TH- Type Systems

Fig. 15—Overall Radio Channel (Plant Maintenance) Used for Alarm, Control, and Order Wires Exclusively

Fig. 16—Short-Haul Type Radio With Associated Channelizing Equipment

2.11 Replace with: An ***L section*** is defined in Section 682-000-015.

2.17 Replace with:

Overall Radio Channel varies with definition, depending upon the type of radio system and its service application as follows:

(a) ***Message:*** A message channel, as used here, is one used for general communications purposes other than Television or Plant Maintenance.

(1) ***On TD or TH radio systems*** the overall radio channel extends from the FM transmitter (IN) to the FM receiver (OUT).

(2) ***On Short-Haul type radio systems*** which come down to baseband at each intermediate repeater point, the overall radio channel extends from the Radio (IN) of one terminal, which connects to either a carrier multiplexer or a bridged radio channel, to the Radio (OUT) of the next terminal that connects to a carrier multiplexer or a bridged radio channel.

Note: Locations which only interconnect two radio channels back-to-back are considered intermediate points on an overall radio channel (line 37).

(b) ***Television***

(1) On TD or TH radio systems, the overall radio channel extends from the FM transmitter (IN) to all normally connected FM receivers (OUT). The overall radio channel includes all TF bridges, bridged channels, FM receivers, TF switches, and side-leg channels.

(2) On short-haul radio systems the overall radio channel extends from the radio (IN) at the point where video is applied from a TOC or a local channel, to all the radio (OUTs) where video service is connected to a TOC or to a local channel.

(c) ***Plant Maintenance***

(1) When a radio channel is a narrowband auxiliary channel or a short-haul radio channel and is used exclusively to derive alarm, control, and order wire circuits provided for plant maintenance, the overall radio channel extends from the radio terminals that terminate the alarm, control, and order wire circuits.

(2) When these plant maintenance circuits are derived from a radio channel used to provide message or television service, no additional overall radio channel inventory is allowed for those maintenance circuits.

3.07 Delete (b)

3.16 Replace the chart with the following:

TYPE OF CIRCUIT	OFFICE	COUNT PLANT ITEMS AS SHOWN BELOW
(a) Telephone Circuit	Control or Section Control	Each serving link on the controlled part of the circuit=1
	Control	Each section control office on the circuit=1
(b) Data Circuit – SAGE-Type	Control or Section Control	Each office on the controlled part of the circuit having start, data, and timing channels=5
	Control	Each section control office=5
(c) Data Circuit – Other than SAGE	Control or Section Control	Each serving link on the controlled part of the circuit=3
	Control	Each section control office on the circuit=3

TYPE OF CIRCUIT	OFFICE	COUNT PLANT ITEMS AS SHOWN BELOW
(d) Telephoto Circuit	Control or Section Control	Each serving link on the controlled part of the circuit=5
	Control	Each section control office on the circuit=5
(e) Telephoto Network	Network Control	Each circuit in network=5
(f) Network (Other than Telephoto)	Network Control	Each circuit in network=1

Note: 2-wire, 4-wire, and 6-wire serving links are each counted as ***one*** serving link. Enter on line 27 the sum of the plant items in (a) through (f).

3.19 ***Change Note to Read:***

Note: On lines 28 and 29 for SAGE Air-to-Ground circuits working through combined user group (CUG) equipment, the intent is to count one plant item for each authorized radio channel in the CUG, regardless of the number of trunks in the CUG.

3.24 ***Replace:***

Line 35: Radio Overall Channel Control:

A. ***Message***—Count plant items for controlled overall radio channels (exclude protection channels) as follows:

1. ***TD or TH radio:*** One plant item for each controlled channel.

2. ***Short-Haul radio:*** (such as TL, TM, TJ, Lenkurt, Motorola, Collins): one-half (0.5) plant item for each controlled channel.

B. ***Television***—Count plant items for the controlled overall radio channels (exclude protection channels) as follows:

1. One plant item for the controlled overall channel.

2. One plant item for each bridged terminal on the controlled overall channel.

3. One-half (0.5) plant item for each bridged channel on the overall radio channel.

4. One-half (0.5) plant item for each side-leg radio channel which is bridged to a backbone channel in the measured office.

C. ***Plant Maintenance:*** Count plant items for those overall radio channels used exclusively for alarm, control, or order wire circuits for plant maintenance as follows:

One plant item for each overall radio channel used to derive alarm and control circuits (C-1, E-type, or equivalent alarm receiving point). One plant item is for both directions of transmission. When more than one alarm center derives alarm, control, and order wire facilities from the same overall radio channel, only ***one*** office may inventory as control office.

Note: One channel of a diversity pair should be counted on this line. The second channel should be counted on line 36 as a protection channel.
It is not intended that MUAS, 100A, or diversity switching sections be considered an overall radio channel.

3.25 (b) Number: ***C-1 and Similar Scan Type Circuits as*** (1).

Add: (2) ***E-Type Alarm Systems***
Count eight plant items for each radio relay station which may transmit an alarm to the measured office.

Number: ***Nonscan-Type Circuits*** as (3)

3.26 ***Replace:***

Line 37: Radio—Add'l for Intermediate

Points: Covers additional credit for overall radio channel, for central offices, and for switching section control offices.

A. *Overall Control*

1. Count one plant item for each switching office on the overall radio channel, excluding the two terminals.

2. Count two plant items for each intermediate repeater on the controlled overall radio channel that is not part of a switching section.

B. *Switching Section Control*

1. Count one plant item for each intermediate repeater in a TD or in a TH switching section.

2. Count one-half (0.5) plant item for each intermediate repeater in a short-haul radio switching section.

3.27 ***Replace:***

Line 38: Radio—Noncontrol: Covers test points for noncontrol offices on overall radio channels and protection channels.

TD or TH Radio: Count one plant item for each terminal or bridged terminal of an overall radio channel in the measured office.

2. ***Short-Haul Type Radio—Message and Television:*** Count one-half (0.5) plant item for terminal of an overall radio channel in the measured office.

3. ***Short-Haul Type Radio—Plant Maintenance:*** Count one plant item for each noncontrol overall radio channel (2 way) which terminates in alarm, control, or order wire circuits in the measured office.

3.32 ***Replace:***

Lines 42 and 43—L Carrier: A test point, as used here, is usually an office or another equipment location on an L carrier high-frequency line having one or more amplifiers. In certain other cases, a test point is an L unit, L section, or MUR as covered by the specific rules for each line on the form. Test points on L carrier are counted separately for each direction of transmission. Do not count test points on coaxial entrance links from radio stations unless there is at least one intermediate repeater or amplifier.

3.33 ***Replace:***

Line 42: L Carrier: Control

SERVICE	COUNT PLANT ITEMS AS SHOWN
(a) L-1 Unit	1 plant item for each terminal and for each intermediate amplifier or repeater location.
(b) L-3 or L-4 Unit	2 plant items for each terminal and for each intermediate amplifier or repeater location.
(c) L-1 Carrier Section	1 plant item for each L unit in the section.
(d) L-3 or L-4 Carrier Section	2 plant items for each L unit in the section.
(e) Wire Line Entrance Line	1 plant item for each intermediate amplifier location (do not inventory the terminal office).
(f) MUR	1 plant item for each MUR.
(g) Mastergroup	1 plant item for each MUR and/or each L unit on which the mastergroup is assigned.

SERVICE	COUNT PLANT ITEMS AS SHOWN
(h) Supergroup	1 plant item for each mastergroup. When not equipped with mastergroup multiplex 1 plant item for each MUR and/or each L unit on which the supergroup is assigned.
(i) Group	1 plant item for each controlled group and for each supergroup connector on which the group is assigned.
(j) Channel Group	1/2 plant item for each controlled channel group and for each group connector on which the channel group is assigned.
(k) Satellite Supergroup	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for each satellite link (Domestic Station to Foreign Station). 2 plant items for each foreign link (Terminal to Ground Station).
(l) Satellite Group	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for each satellite link (Domestic Station to Foreign Station). 2 plant items for each foreign link (Terminal to Ground Station).
(m) Satellite Channel Group	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for each satellite line (Domestic Station to Foreign Station). 2 plant items for each foreign link (Terminal to Ground Station).
(n) B-1 Alarm Receiving Center and E-Type Alarm Receiving Center	8 plant items per each remote alarm sending station.

Enter on line 42 the sum of plant items (a) through (n).

3.34 Replace:
Line 43: L Carrier: Non-Control

SERVICE	COUNT PLANT ITEMS AS SHOWN
(a) L-1 Unit	1 plant item for each terminal and for each intermediate amplifier or repeater location.
(b) L-3 or L-4 Unit	2 plant items for each terminal and for each intermediate amplifier or repeater location.
(c) L-1 Carrier Section	1 plant item for each L unit in the section.
(d) L-3 or L-4 Carrier Section	2 plant items for each L unit in the section.
(e) Wire Line Entrance Link	1 plant item for each intermediate amplifier location (do not inventory terminal offices).
(f) MUR	1 plant item for each MUR.

SERVICE	COUNT PLANT ITEMS AS SHOWN
(g) Mastergroup	1 plant item for each MUR and/or each L unit on which the mastergroup is assigned.
(h) Supergroup	1 plant item for each mastergroup. When not equipped with mastergroup multiplex 1 plant item for each MUR and/or each L unit on which the supergroup is assigned.
(i) Group	1 plant item for each noncontrolled group and for each supergroup connector on which the group is assigned.
(j) Channel Group	1/2 plant item for each noncontrolled channel group and for each group connector on which the channel group is assigned.
(k) Satellite Supergroup	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for satellite link (Domestic Ground Station to Foreign Ground Station). 2 plant items for foreign link (Foreign Ground Station to Foreign Terminal).
(l) Satellite Group	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for satellite link (Domestic Ground Station to Foreign Ground Station). 2 plant items for foreign link (Foreign Ground Station to Foreign Terminal).
(m) Satellite Channel Group	2 plant items for each domestic link (Terminal to Satellite Ground Station). 2 plant items for satellite link (Domestic Ground Station to Foreign Ground Station). 2 plant items for foreign link (Foreign Ground Station to Foreign Terminal).
(n) Main Station or Equalizing Aux. Sta. Intermediate on L Unit Maintained by the Measured Office	1 plant item for each L unit having intermediate equipment in the office.
(o) Restoration Control Office	1 plant item for each switching section used in the reroute layout.

Enter on line 43 the sum of plant items in (a) through (o).

3.44 ***Replace:***

Line 51: Voice Channel Circuit Units, Non-Controlled: Count one plant item for each voice channel circuit unit on which the measured office is an intermediate repeater point or the noncontrol office at the unit terminal.

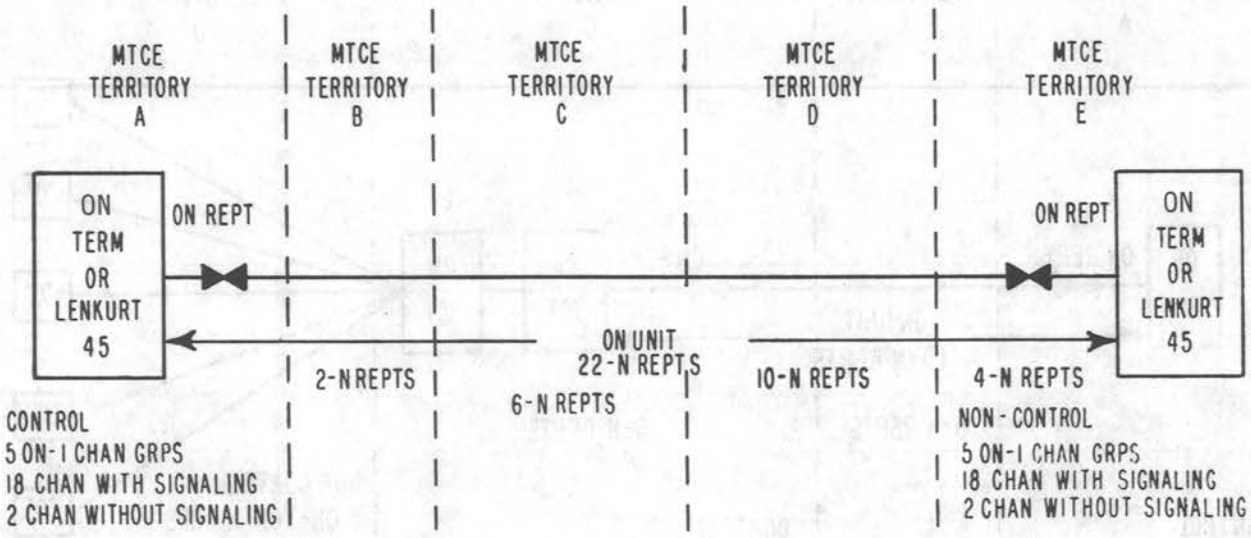
3.45 ***(d) Replace:***

Circuit Control Office on Overseas Circuit =2 Test Points

(e) Replace:

Noncontrol office at cable terminal on overseas circuit=1 Test Point. Count may not be taken under both (d) and (e).

TYPE ON CARRIER (ALL CABLE)

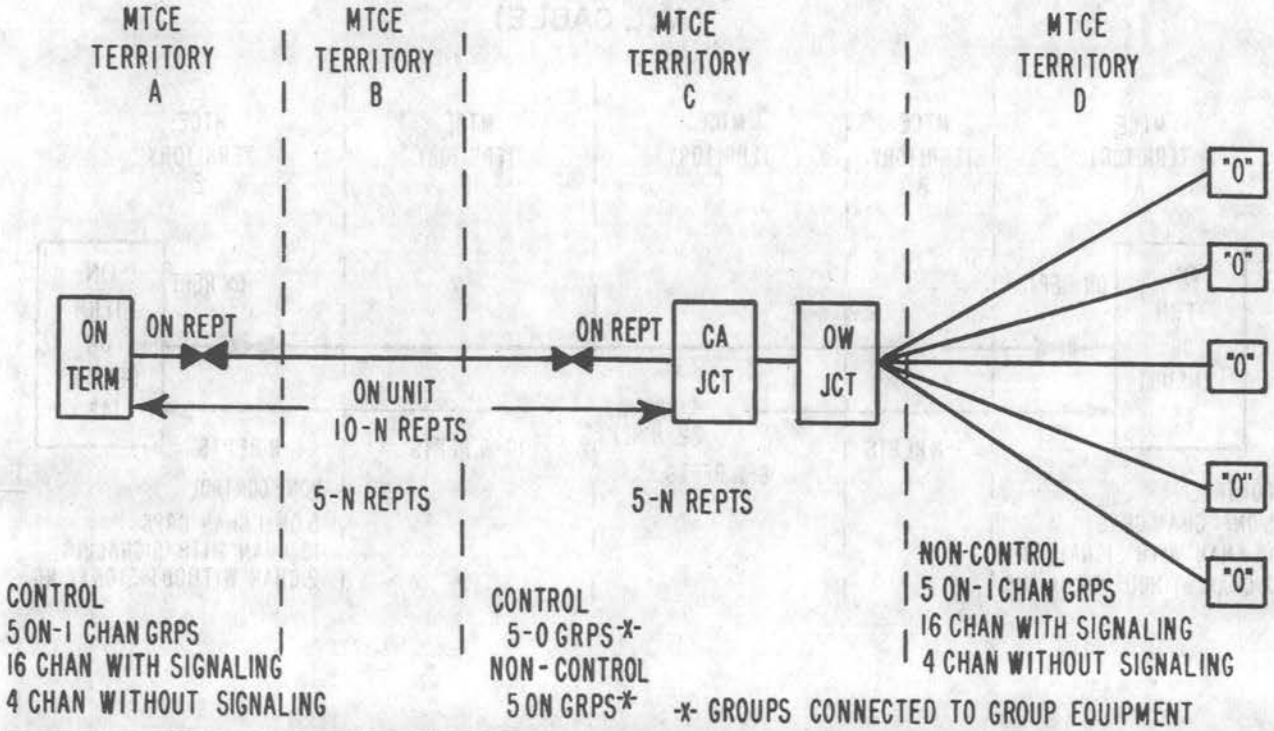


PLANT ITEMS (TEST POINTS) TO BE COUNTED									
	FORM E-4417			MAINTENANCE TERRITORY					
	LINE	PAR	ITEM	A	B	C	D	E
CONTROL	44	3.3(A)	CARRIER UNIT (1-ON UNIT 22 REPT, 2 TERM.)	24				
		(B)	CHANNEL GROUP (5 GRPS @ 2 TERMINALS EACH)	10				
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM					
		(D)	GROUP CONNECTOR					
	-	-	TOTAL LINE 44	34				
	45	3.37	CHANNEL WITH SIGNALING	18				
	46	3.38	CHANNEL WITHOUT SIGNALING	2				
NON-CONTROL	47	3.39(A)	CARRIER UNIT (1-ON UNIT 22 REPT, 2 TERM.)					24
		(B)	CHANNEL GROUP (5 GRPS @ 2 TERMINALS EACH)					10
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM					
		(D)	GROUP CONNECTOR					
		(E)	INTERMEDIATE OFFICE (* REPEATERS IN MTCE. TERRITORY)		2	6	10	4
	-	-	TOTAL LINE 47		2	6	10	38
	48	3.40	CHANNEL WITH SIGNALING					18
	49	3.41	CHANNEL WITHOUT SIGNALING					2

-X- EXCLUDING TERMINAL OFFICES.

FIG 2

TYPE ON CARRIER (CABLE AND OPEN WIRE)



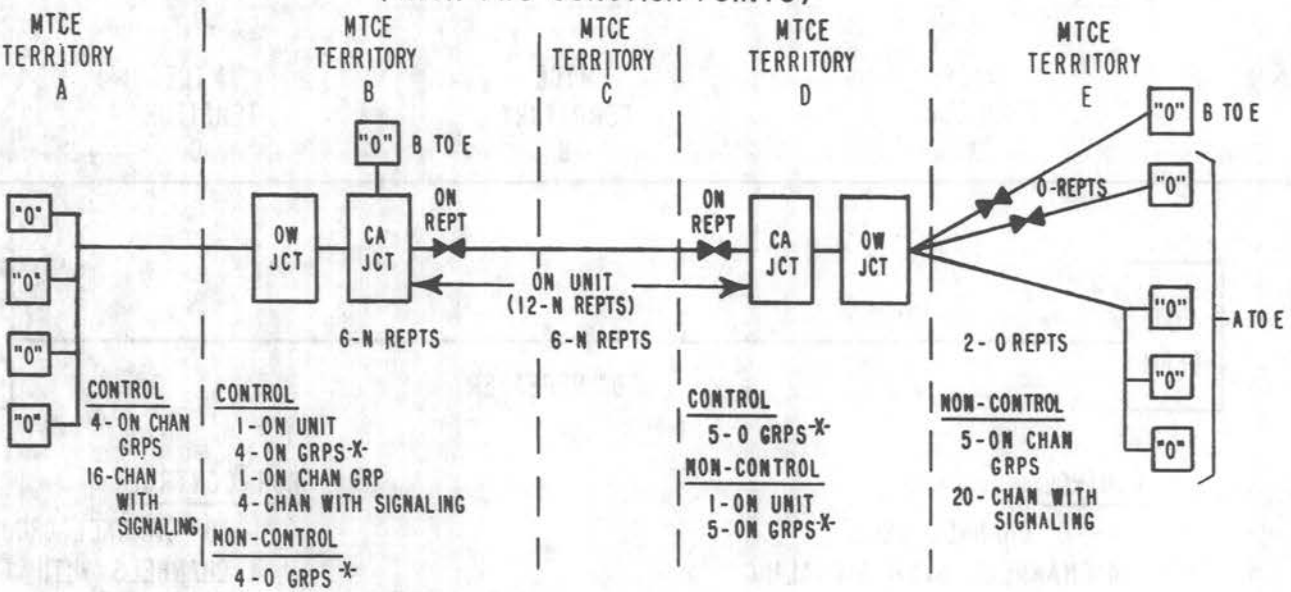
-*- GROUPS CONNECTED TO GROUP EQUIPMENT

PLANT ITEMS (TEST POINTS) TO BE COUNTED								
FORM E-4417				MAINTENANCE TERRITORY			
	LINE	PAR	ITEM	A	B	C	D
CONTROL	44	3.36(A)	CARRIER UNIT (10 INT. REPT, 0-N TERM, CA JCT)	12			
		(B)	CHANNEL GROUP (5 GROUPS @ 2 TERMS EACH)	10			
		(C)	CHAN GRP WITH UNITS OR GRPS IN TDM. (5 GRPS CONN AT C.)	5			
		(D)	GROUP CONNECTOR (5-0 GRPS @ 2 TERMS EACH)			10	
	-	-	TOTAL LINE 44	27		10	
	45	3.37	CHANNEL WITH SIGNALING	16			
	46	3.38	CHANNEL WITHOUT SIGNALING	4			
NON-CONTROL	47	3.39(A)	CARRIER UNIT (SEE ABOVE)			12	
		(B)	CHANNEL GROUP (SEE ABOVE)				10
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM (SEE ABOVE)				5
		(D)	GROUP CONNECTORS (5-ON GROUPS@ 2 TERM EACH)			10	
		(E)	INTERMEDIATE OFFICE (** REPTRS. IN MTCE. TERR.)		5	5	
	-	-	TOTAL. LINE 47		5	27	15
	48	3.40	CHANNEL WITH SIGNALING				16
	49	3.41	CHANNEL WITHOUT SIGNALING				4

**EXCLUDING TERMINAL OFFICES.

FIG.3

TYPE ON CARRIER
(WITH TWO JUNCTION POINTS)



-*- GROUPS CONNECTED TO GROUP EQUIPMENT

PLANT ITEMS (TEST POINTS) TO BE COUNTED								
FORM E-4417			MAINTENANCE TERRITORY					
LINE	PAR.	ITEM	A	B	C	D	E
44	3.36(A)	CARRIER UNIT (1 UNIT : 12 REPT, 2 TERMS. (B) & (D))		14			
	(B)	CHAN GRP. (4 GRPS 2 TERMS EACH; & "0" REP.)	9				
	(B)	CHAN GRP. (1 GRP 2 TERMS ; & "0" REP.)		3			
		CHAN GRP WITH UNITS OR GRPS IN TANDEM					
	(C)	(4 GRPS X 2 CONNECTORS AT B AND D)	8				
	(C)	(1 GRP X 1 CONNECTOR AT D)		1			
	(D)	GRP CONNECTOR (4 GRPS 2 TERMS EACH)		8			
	(D)	" " (5 GRPS 2 TERMS EACH PLUS 2 "0" REPT.)				12	
		TOTAL LINE 44	17	26		12	
45	3.37	CHANNEL WITH SIGNALLING	16	4			
46	3.38	CHANNEL WITHOUT SIGNALLING					
47	3.39(A)	CARRIER UNIT				14	
	(B)	CHANNEL GROUP					12
	(C)	CHAN. GRP. WITH UNITS OR GRPS IN TANDEM					9
	(D)	GROUP CONNECTORS		8		10	
	(E)	INTERMEDIATE OFFICE (**REPEATERS IN MTCE. TERRITORY)		6	6		2
		TOTAL LINE 47		14	6	24	23
48	3.40	CHANNEL WITH SIGNALLING					20
49	3.41	CHANNEL WITHOUT SIGNALLING					

** EXCLUDING TERMINAL OFFICES

FIG. 4

TYPE O CARRIER

CONTROL

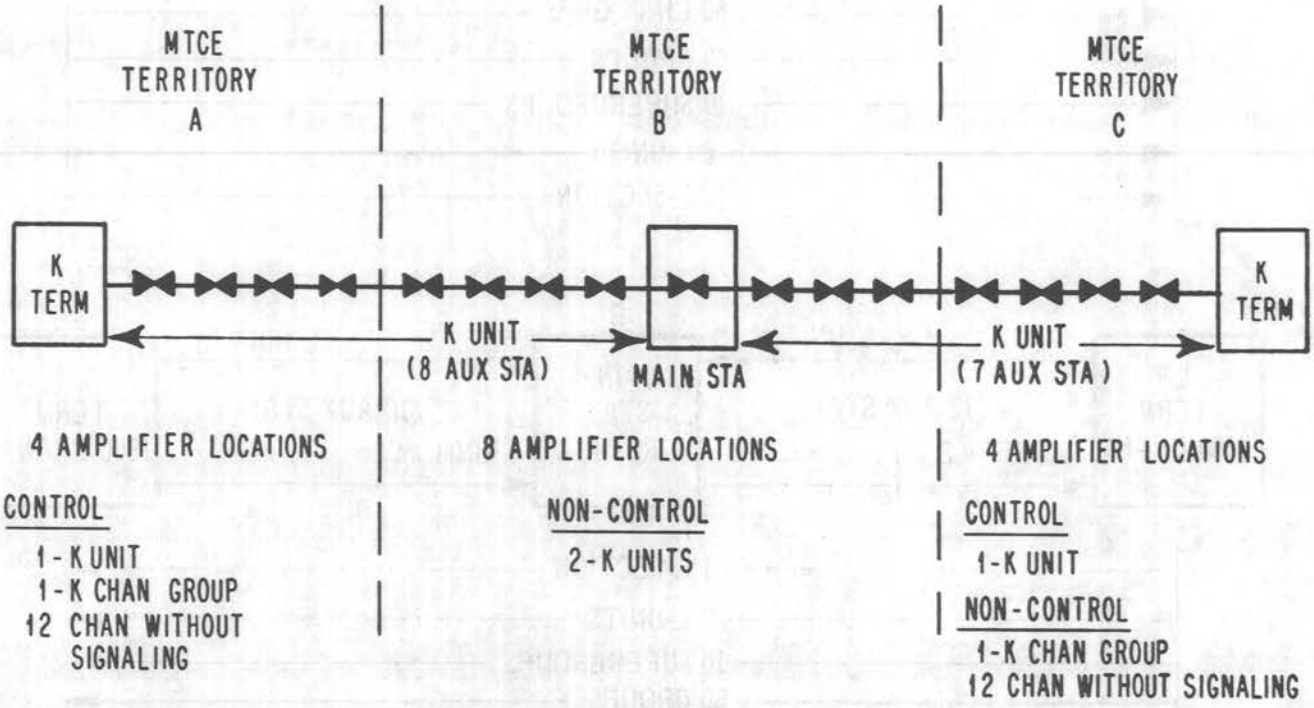
1 -"O" CHANNEL GROUP
4 CHANNELS WITH SIGNALING

NON-CONTROL

1- "O" CHANNEL GROUP
4 CHANNELS WITH SIGNALING

PLANT ITEMS (TEST POINTS) TO BE COUNTED						
	FORM E-4417			MAINTENANCE TERRITORY		
	LINE	PAR	ITEM	A	B	C
CONTROL	44	3.36(A)	CARRIER UNIT			
		(B)	CHANNEL GROUP (1 REP. + 2 TERMS)	3		
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM			
		(D)	GROUP CONNECTOR			
			TOTAL LINE 44	3		
	45	3.37	CHANNEL WITH SIGNALING	4		
	46	3.38	CHANNEL WITHOUT SIGNALING			
NON-CONTROL	47	3.39(A)	CARRIER UNIT			
		(B)	CHANNEL GROUP			3
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM			
		(D)	GROUP CONNECTORS			
		(E)	INTERMEDIATE OFFICE		1	
			TOTAL LINE 47		1	3
	48	3.40	CHANNEL WITH SIGNALING			4
	49	3.41	CHANNEL WITHOUT SIGNALING			

FIG. 5



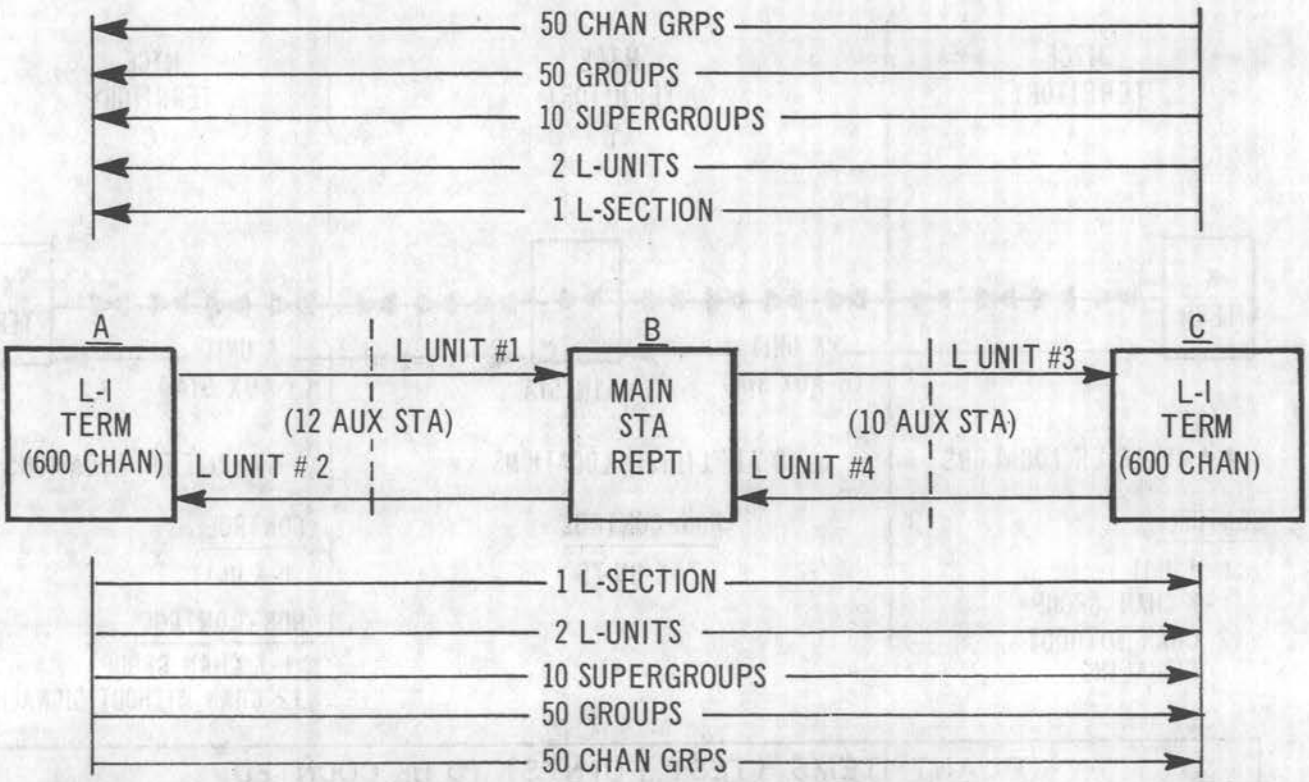
PLANT ITEMS (TEST POINTS) TO BE COUNTED						
FORM E-4417				MAINTENANCE TERRITORY		
	LINE	PAR	ITEM	A	B	C
CONTROL	44	3.36(A)	CARRIER UNIT (TERMS A & B, OR C & B, + INTERMEDIATE REPT.)	10		9
		(B)	CHANNEL GROUP (1 GRP. @ 2 TERMINALS)	2		
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM (2 ND UNIT)	1		
		(D)	GROUP CONNECTORS			
			TOTAL LINE 44	13		9
	45	3.37	CHANNEL WITH SIGNALING			
	46	3.38	CHANNEL WITHOUT SIGNALING	12		
NON-CONTROL	47	3.39(A)	CARRIER UNIT (2 UNITS X 2 TERMINALS, + 15 REPTRS.)		19	
		(B)	CHANNEL GROUP (1 GRP. @ 2 TERMINALS.)			2
		(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM (2 ND UNIT)			1
		(D)	GROUP CONNECTORS			
		(E)	INTERMEDIATE OFFICE (-X- REPEATERS IN MTCE. TERR.)	4	7	4
			TOTAL LINE 47	4	26	7
	48	3.40	CHANNEL WITH SIGNALING			
	49	3.41	CHANNEL WITHOUT SIGNALING			12

-X- EXCLUDING TERMINAL OFFICES

FIG 7

TYPE L CARRIER

(WITHOUT MASTER GROUP MULTIPLEX)



NOTES: ASSUMES 1. RECEIVING OFFICE CONTROLS IN EVERY CASE.

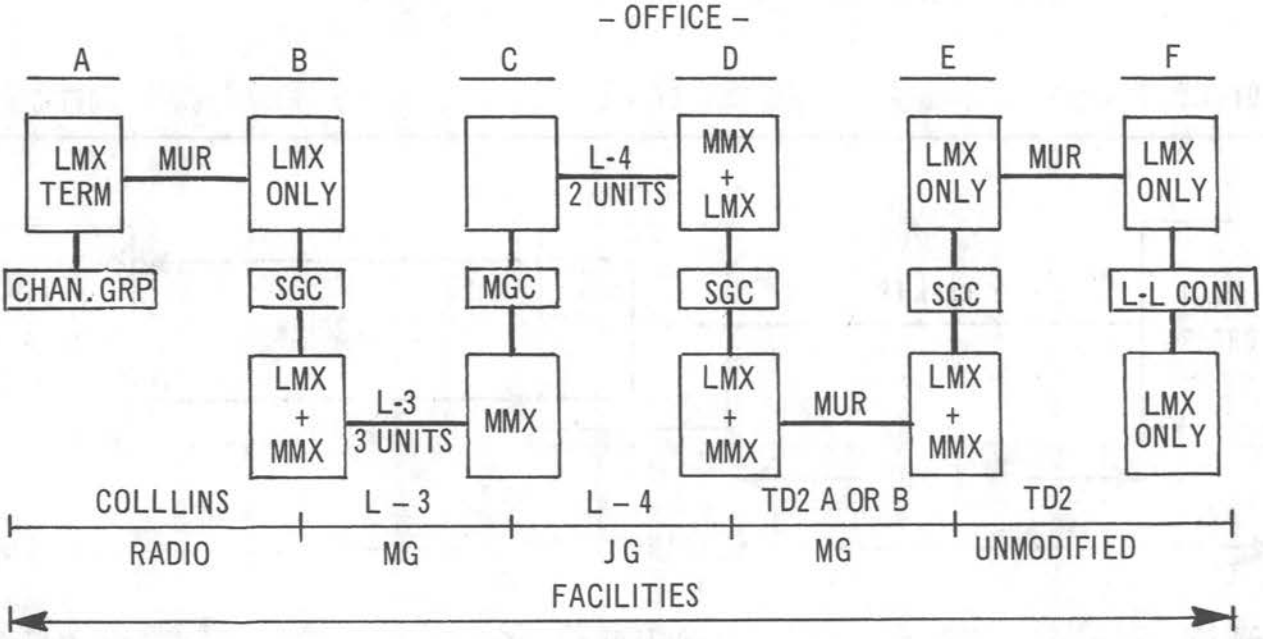
2. EQUALIZING AUX STATION IN MAINTENANCE TERRITORY OF OFC. A

PLANT ITEMS (TEST POINTS) TO BE COUNTED

			FORM E-4417	MAINTENANCE TERRITORY				
	LINE	PAR	ITEM	A	B	C		
CONTROL	42	3.33(A)	CARRIER UNIT (UNIT TERMINALS + AUX. STATIONS)	14	26	12		
		(C)	SECTION (UNITS IN SECTION)	2		2		
		(H)	L-SUPERGROUP (SUPERGROUP × NO. OF UNITS IN SUPERGROUP) 10 × 2	20		20		
		(I)	L-GROUP (50 GROUPS, NO SG CONN)	50		50		
		(J)	L-CHANNEL GRP. (50 CHAN GRPS, NO GP CONN, @ 0.5 PLT ITEM)	25		25		
			TOTAL LINE 42	111	26	109		
NON-CONTROL	43	3.34(A)	CARRIER UNIT (UNIT TERMINAL + AUX. STATIONS)	14	26	12		
		(C)	SECTION (UNITS IN SECTIONS)	2		2		
		(H)	L-SUPERGROUP (SUPERGROUP × NO. OF UNITS IN SUPERGROUP)	20		20		
		(I)	L-GROUP (50 GROUPS, NO SG CONN)	50		50		
		(J)	L-CHANNEL GRP. (50 CHAN GRPS, NO GP CONN, @ .5 PLT ITEM)	25		25		
		(N)	INTERMEDIATE OFFICE (EQUALIZING STA.) (PER UNIT)	2				
			TOTAL LINE 43	113	26	109		

FIG. 8A

TYPE L CARRIER
(WITH MASTERGROUP MULTIPLEX)
ONE CHANNEL GROUP - PARTIAL LAYOUT



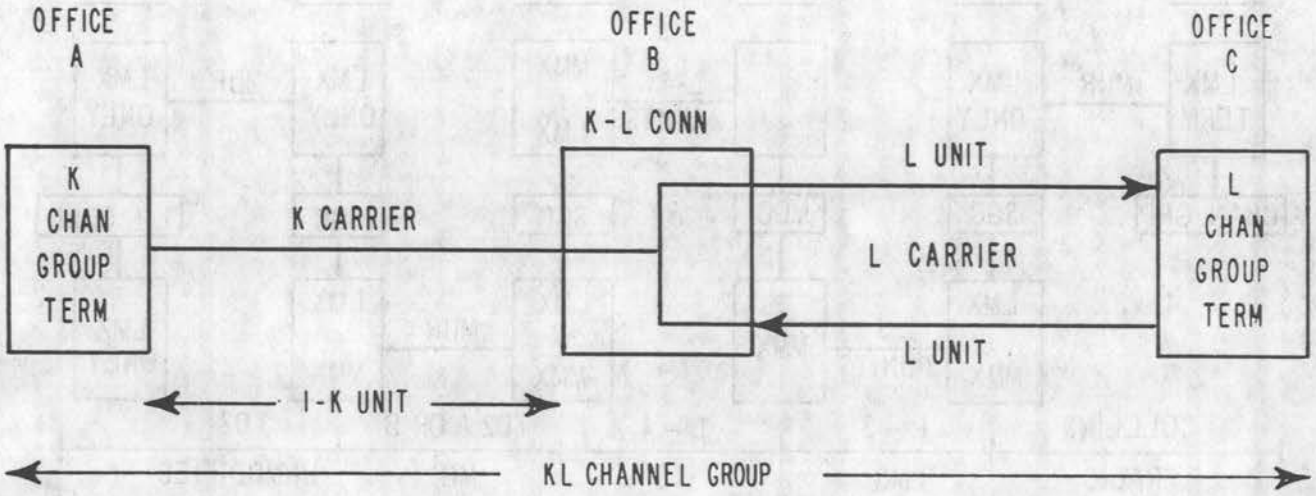
PLANT ITEMS (TEST POINTS) TO BE COUNTED

	LINE	PAR.	FORM E-4417 ITEM	MAINTENANCE TERRITORY A	B	C	D	E	F
CONTROL	42	3.33 (D, F)	SECTION (MURS & UNITS IN SECTION)	1	7	10	5	2	1
		(G)	L-MASTERGROUP (UNITS IN MG)	-	3	5	2	-	-
		(G)	" (MURS IN MG)	-	-	-	1	1	-
		(H)	L-SUPERGROUP (SG x NO. OF MG'S IN SG)	-	2	-	3	1	-
		(H)	" (SG x NO. OF UNITS IN SG) SEE TEXT	-	-	-	-	-	-
		(H)	" (SG x NO. OF MURS IN SG) SEE TEXT	1	1	-	-	1	1
		(I)	L-GROUP (1 CH GRP + NO. OF GP CONN IN GRP.)	4	-	-	-	-	4
		(J)	L-CHANNEL GRP. (1 CH GRP + NO. OF GP CONN @ 0.5 PLT. ITEMS PER GRP.) (1 + 1) × 0.5	1	-	-	-	-	-
			TOTAL LINE 42	7	13	15	11	5	6
NON-CONTROL	43	3.34 (D, F)	SECTION (MURS & UNITS IN SECTION)	1	7	10	6	2	1
		(G)	L-MASTERGROUP (UNITS IN MG)	-	3	5	2	-	-
		(G)	" (MURS IN MG)	-	-	-	1	1	-
		(H)	L-SUPERGROUP (SG x NO. OF MG'S IN SG)	-	2	-	3	1	-
		(H)	" (SG x NO. OF UNITS IN SG) SEE TEXT	-	-	-	-	-	-
		(H)	" (SG x NO. OF MUR'S IN SG) SEE TEXT	1	1	-	-	1	1
		(I)	L-GROUP (GRP + NO. OF SG CONN IN GRP) 1 + 3	4	-	-	-	-	4
		(J)	L-CHANNEL GRP. (1 CH GRP + NO. OF GP CONN IN GRP.) @ 0.5 PLT. ITEMS PER GRP.) (1 + 1) × 0.5	1	-	-	-	-	-
			TOTAL LINE 43	7	13	15	11	5	6

FIG. 8B

K-L CHANNEL GROUP

SHOWING ONLY CHANNEL GROUP AND GROUP ITEMS
SEE FIGURES 7 & 8 FOR ADDITIONAL ITEMS



CONTROL
1-KL CHAN GROUP
1-K GROUP

CONTROL
1-L GROUP

NON-CONTROL
1-K GROUP
1-L GROUP

NON-CONTROL
1-KL CHAN GROUPS (BOTH DIRECTIONS)
1-L GROUP

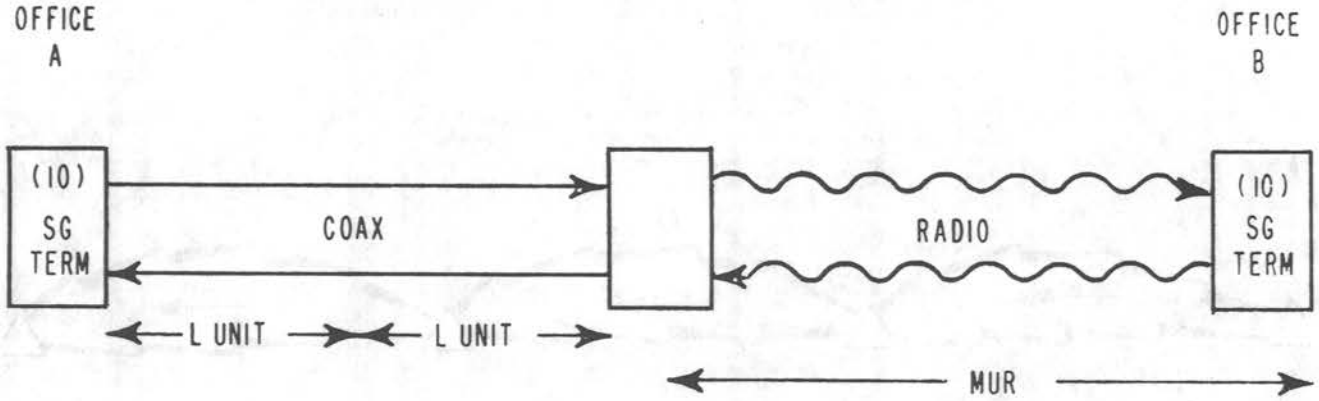
CONTROL
1-L GROUP

PLANT ITEMS (TEST POINTS) TO BE COUNTED							
FORM E-4417					OFFICE		
		LINE	PAR	ITEM	A	B	C
K CARRIER END	CONTROL	44	3.36(B)	CHANNEL GROUP (K END OF KL CHAN. GRP.)	2		
			(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM	4		
			(D)	GROUP CONNECTORS			
	NON-CONTROL	47	3.39(B)	CHANNEL GROUP (K END OF KL CHAN. GRP.)			
			(C)	CHAN. GRP. WITH UNITS OR GROUPS IN TANDEM			
			(D)	GROUP CONNECTORS		2	
L CARRIER END	CONTROL	42	3.33(I)	GROUP (NO SG CONN)		1	1
			(J)	CHANNEL GROUP (CONTROLLED BOTH DIRECTIONS AT K TERM)			
	NON-CONTROL	43	3.34(I)	GROUP		1	1
			(J)	CHANNEL GROUP (2 CH. GRP. + 2 GRP. CONNS.) × 0.5			2

FIG. 9

LR SUPERGROUP

SHOWING ONLY SUPERGROUP ITEMS.
LR GROUP AND CHANNEL GROUP
ARE COUNTED SAME AS L IN FIG. 8

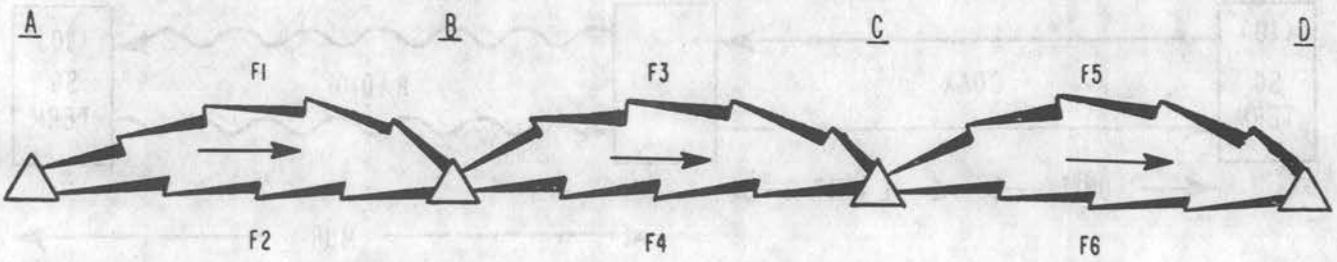


NOTE: RECEIVING OFFICE CONTROLS, WITHOUT LMX
EQUIPMENT AT JUNCTION OF COAX AND RADIO

PLANT ITEMS (TEST POINTS) TO BE COUNTED				
FORM E-4417			OFFICE	
LINE	PAR	ITEM	A	B
42	3.33(H)	CONTROLLED LR SUPERGROUP (2 UNITS+MUR) X 10 SUPERGROUPS.	30	30
43	3.34(H)	NON-CONTROL TERMINAL OF LR SUPERGROUP	30	30

FIG. 10

OVERALL RADIO CHANNEL WITH FREQUENCY DIVERSITY
(I WAY)



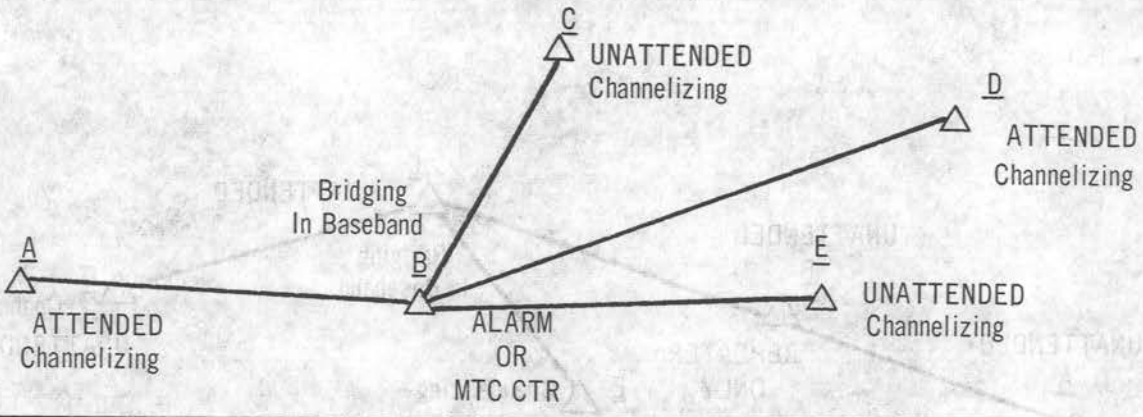
NOTES: 1. DIRECTION OF TRANSMISSION A TO D
2. CHANNELIZING EQUIPMENT AT A AND D

PLANT ITEMS (TEST POINTS) TO BE COUNTED.						
FORM E-4417			MAINTENANCE TERRITORY			
LINE	PAR	ITEM	A	B	C	D
35	3.24 A (2)	CONTROLLED OVERALL RADIO CHANNEL (F1, F3, F5)	-	-	-	0.5
36	3.25A	CONTROLLED PROTECTION CHANNEL (F2, F4, F6)	-	-	-	1.0
37	3.26 (A)	ADD'L FOR INTERMEDIATE POINTS	-	-	-	2.0
38	3.27(2)	NON-CONTROL (REG. & PROT. CHAN. OF DIV. PR)	1.0	-	-	-

FIG. 11

OVERALL RADIO CHANNEL (MESSAGE)
SHORT HAUL SYSTEMS

Example 1

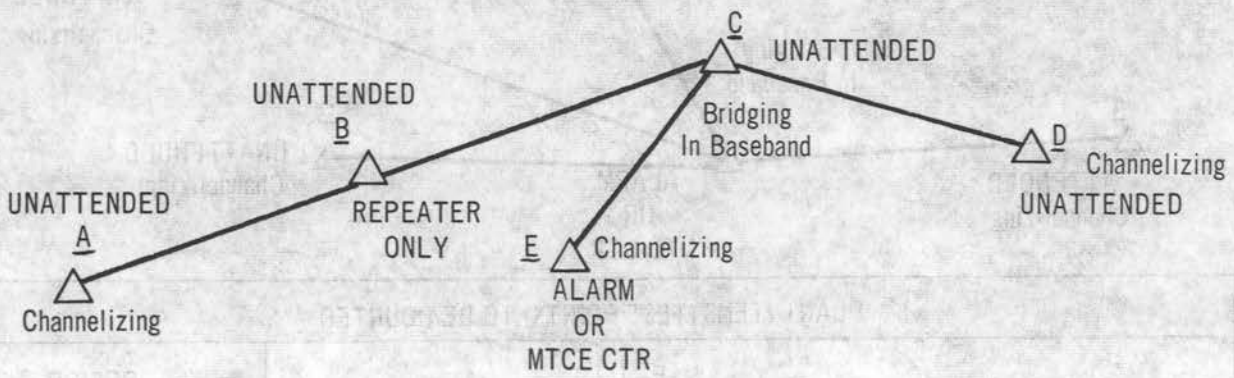


PLANT ITEMS (TEST POINTS) TO BE COUNTED							
		E-4417	OFFICE				
LINE	PAR	ITEM	A	B	C	D	E
35	3.24 A(2)	OVERALL CHANNEL CONTROL (Receiving From B)	0.5		0.5	0.5	0.5
		(Receiving from A, C, D and E)		2.0			
38	3.27(2)	NON-CONTROL (TRANS TO B)	0.5		0.5	0.5	0.5
		(TRANS TO A C, D, AND E)		2.0			

FIG 12 A

OVERALL RADIO CHANNEL (MESSAGE)
SHORT HAUL SYSTEMS

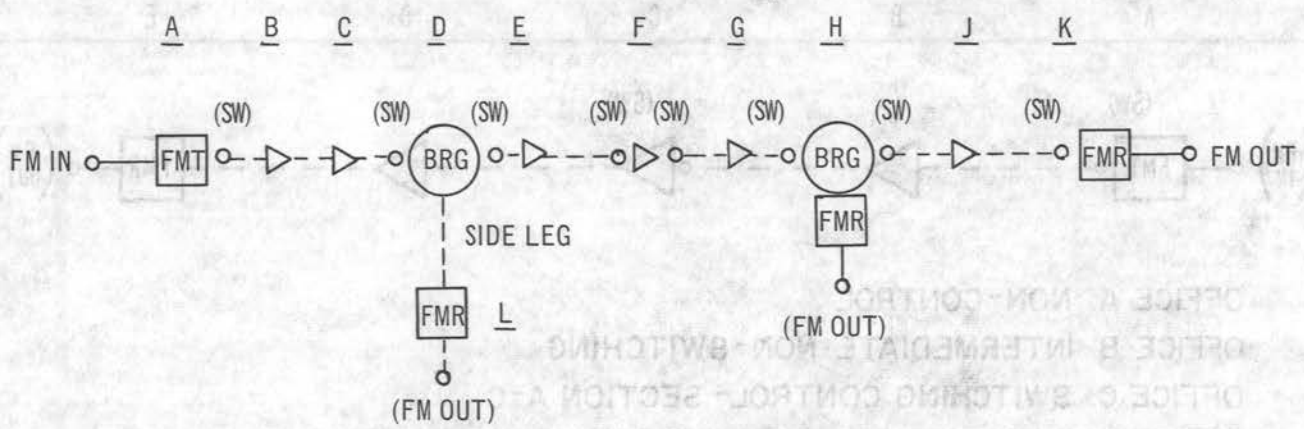
Example 2



PLANT ITEMS (TEST POINTS) TO BE COUNTED							
		E-4417	OFFICE				
LINE	PAR	ITEM	A	B	C	D	E
35	3.24A (2)	OVERALL CHANNEL CONTROL (Receiving from C)	0.5			0.5	0.5
		(Receiving from A, D and E)			1.5		
38	3.27 (2)	NON-CONTROL (TRANS TO C)	0.5			0.5	0.5
		(TRANS TO A, D, and E)			1.5		

FIG. 12B

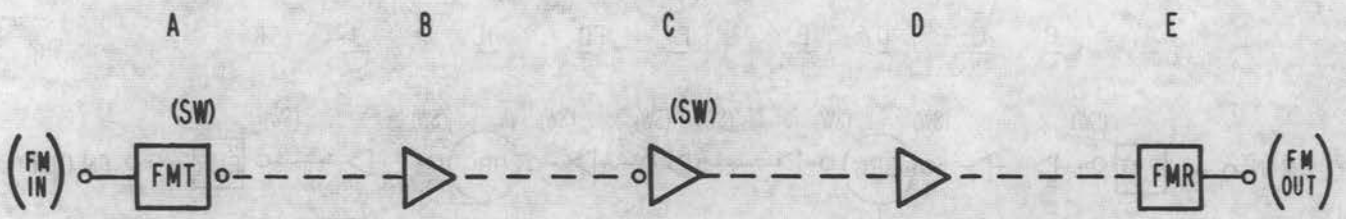
OVERALL RADIO CHANNEL (TELEVISION) OVER TD OR TH SYSTEMS. INCLUDING BRIDGED TERMINAL AND BRIDGED CHANNEL.



PLANT ITEMS (TEST POINTS) TO BE COUNTED									
E-4417			OFFICE						
LINE	PAR.	ITEM	A	D	F	H	K	L
35	3.24 B(1)	CONTROLLED OVERALL RADIO CHAN	1					
35	3.24 B(2)	ADD FOR BRIDGED TERMINAL H	1					
35	3.24 B (3)	ADD FOR BRIDGED CHANNEL D-L	0.5					
37	3.26 A(1)	SWITCHING POINTS AT D, F, H	3					
35	3.24 B(4)	SIDELEG D-L AT MEASURED OFC		0.5				
37	3.26 B	SWITCHING SECTION CONTROL A, B, C, D		4				
37	3.26 B	SWITCHING SECTION CONTROL D, E, F			3			
37	3.26 B	SWITCHING SECTION CONTROL F, G, H				3		
37	3.26 B	SWITCHING SECTION CONTROL H, J, K					3	
38	3.27	NON-CONTROL TERMINAL				1	1	1

FIG. 13

OVERALL RADIO CHANNEL (MESSAGE) OVER TD OR TH TYPE SYSTEMS.

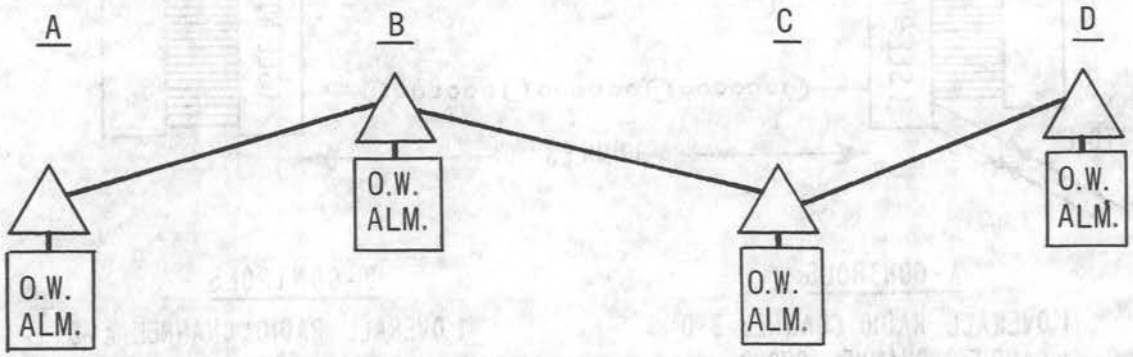


OFFICE A. NON-CONTROL
OFFICE B. INTERMEDIATE NON-SWITCHING
OFFICE C. SWITCHING CONTROL- SECTION A-C
OFFICE D. INTERMEDIATE: NON-SWITCHING IN SECTION C-E
OFFICE E. OVERALL RADIO CHANNEL CONTROL.

PLANT ITEMS (TEST POINTS) TO BE COUNTED							
E-4417			MAINTENANCE TERRITORY				
ITEM							
LINE	PAR		A	B	C	D	E
35	3.24 A	CONTROLLED OVERALL RADIO CHANNEL					1
37	3.26 A(1)	INTERMEDIATE POINTS (SWITCHING) C					1
37	3.26 A(2)	INTERMEDIATE POINTS (NON SWITCHING) D					2
37	3.26 B	SWITCHING SECTION CONTROL			3		
38	3.27	NON-CONTROL	1				

FIG. 14

OVERALL RADIO CHANNEL (PLANT MAINTENANCE) USED FOR ALARM, CONTROL, AND ORDER WIRES EXCLUSIVELY.



ALARM CTR.

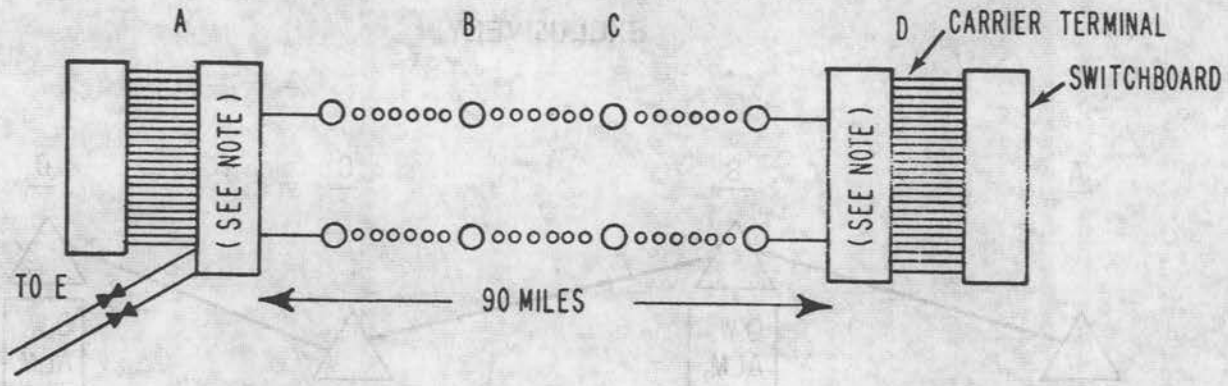
OFFICE A, CONTROLS OVERALL RADIO CHANNEL TO ALL POINTS.
OFFICE B, C, D, – NON-CONTROL OFFICES

PLANT ITEMS (TEST POINTS) TO BE COUNTED						
FORM E-4417			MAINTENANCE TERRITORY			
LINE	PAR.	ITEM	A	B	C	D
35	3.24 (C)	OVERALL CHANNEL CONTROL	1	–	–	–
38	3.27 (3)	NON-CONTROL	–	1	1	1

NOTE: ALL PLANT ITEMS FOR ABOVE LAYOUT, FOR ALL DIRECTIONS, ARE SHOWN.

FIG. 15

SHORT HAUL TYPE
RADIO WITH ASSOCIATED CHANNELIZING EQUIPMENT



A-CONTROLS

1 OVERALL RADIO CHANNEL B-D
1 CARRIER CHANNEL GROUP
24 CHANNELS WITH SIGNALING
22 TRUNKS

A-NON-CONTROL

1 OVERALL RADIO CHANNEL A-D
2 TRUNKS

D-CONTROLS

1 OVERALL RADIO CHANNEL A-D

D-NON-CONTROL

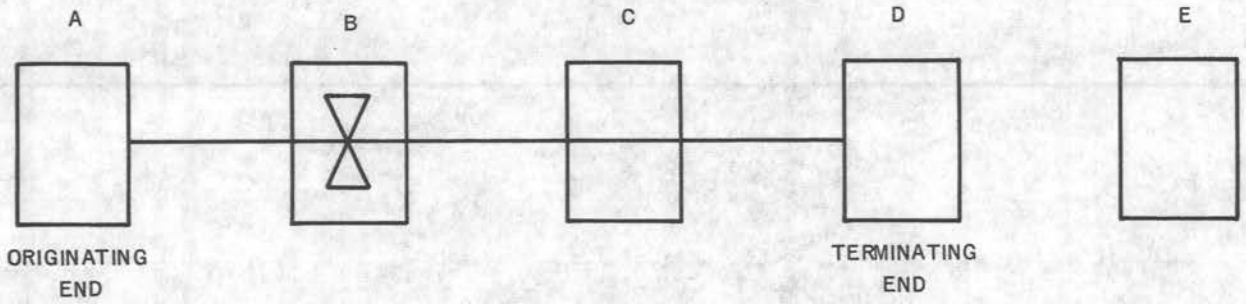
1 OVERALL RADIO CHANNEL D-A
1 CARRIER GROUP
24 CHANNELS WITH SIGNALING
24 TRUNKS

PLANT ITEMS TO BE COUNTED					
FORM E-4417		OFFICE			
LINE	ITEMS	A	B	C	D
3	CONTROLLED TRUNKS	22			
14	NON-CONTROLLED TRUNKS	2			24
35	CONTROLLED OVERALL RADIO CHANNELS (SEE TEXT)	0.5			0.5
37	ADDITIONAL FOR INTERMEDIATE POINTS (2+2)	4			4
39	NON-CONTROLLED OVERALL RADIO CHANNELS (SEE TEXT)	0.5			0.5
44	CONTROLLED CHANNEL GROUP (A TERM. + B TERM.)	2			
45	" CHANNELS WITH SIGNALING	24			
47	NON-CONTROLLED CHANNEL GROUP (A TERM. + B TERM.)				2
48	" " CHANNELS WITH SIGNALING				24

NOTE: RADIO TERMINAL AND CHANNELIZING EQUIPMENT ARE USUALLY COMBINED IN ONE PACKAGE FROM OUTSIDE SUPPLIERS SUCH AS LENKURT.

FIG. 16

REPEATERED TRUNKS



TYPICAL-OFFICE A CONTROLS

PLANT ITEMS TO BE COUNTED							
FORM E – 4417			OFFICE				
LINE	PAR	ITEM	A	B	C	D	E
7	3.08	CONTROL	1				
18	3.10	NON-CONTROL		1			

OFFICE D CONTROLS

PLANT ITEMS TO BE COUNTED							
FORM E-4417			OFFICE				
LINE	PAR	ITEM	A	B	C	D	E
7	3.08	CONTROL				1	
18	3.10	NON-CONTROL		1			

OFFICE E CONTROLS

PLANT ITEMS TO BE COUNTED							
FORM E-4417			OFFICE				
LINE	PAR	ITEM	A	B	C	D	E
18	3.07(a)	CONTROL (COUNT AS NON-CONTROL)					1
18	3.10	NON-CONTROL		1			

Fig. 19