

CHANGES

DETAIL CHANGE SHEETS (DCS)

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1. GENERAL

1.1 Scope of Section

1.11 This section explains the information contained in and the format of Standard and Job Detail Change Sheets (DCS).

1.111 The items on Standard and Job Detail Change Sheets are listed according to a standard arrangement which, under conditions usually encountered, is the sequence believed best adapted for performing the operations. However, if the sequence specified is not practicable, due to local conditions, the judgement of the installer should prevail. In some cases an ECP also may be issued as a supplement to the DCS.

2. PURPOSE AND APPLICATION OF DETAIL CHANGE SHEETS

2.1 Purpose

2.11 Detail Change Sheets provide the detailed instructions, to add, remove and reconnect wiring and apparatus to modify existing equipment to agree with a particular issue of a schematic drawing and any associated Class "A" type change.

2.111 One set of Detail Change Sheets, are furnished in the job specification.

2.2 Application

2.21 Standard Detail Change Sheets are originated to detail changes on wiring diagrams as a result of a change to a Bell Telephone Laboratories schematic. They may also be originated to provide a reference to Installation information including Engineering Change Procedure (ECP's) or Test Information.

2.211 Standard Detail Change Sheets will cover features and options affected by the schematic reissue and will be provided under the following conditions:

(a) Wiring diagram changes which result from Bell Telephone Laboratories Class "B", "D" or "AC" schematic changes when twelve or more connections and disconnections are involved or when two or more wiring diagrams are affected.

(b) For Class "A" or "AR" changes on nondial switching products if details cannot be covered on a change supplement.

2.212 Standard Detail Change Sheets are not provided when wiring diagram changes involve the following:

- (a) A straight addition of an entire figure or unit.
- (b) Trunks and miscellaneous units - relay rack mounted.

3. FORMAT OF STANDARD DETAIL CHANGE SHEETS

→ 3.01 The Index Sheet (SD-1-4250 and SD-1-4266 contains the title, detail change sheet type, sheet index and issue table, issue note column, and related installation information as follows: See Figure 1

(a) Title - The Title Information consists of the name of the system and circuit, the detail Change Sheet number, schematic number and issue(s), and "Class" upon which the detail change sheets were prepared. It will also show the principal wiring diagram(s) modified. The issue number and date is shown in the "Notes" column.

(b) Type - Standard Detail Sheets bear a "T" - Type designation as follows:

T-1 - Miscellaneous Information - Refer to Remarks for Further Information: Prior to January 1969 changes made per attached supplements or "T" drawings were incorporated in other Detail Change Sheets or were "Record Only" i.e., no Detail Change Sheets required because the "SD" issue did not warrant it. (Straight additions, circuit requirement changes, less than 12 leads, no wiring change, apparatus replaced only, etc.). After January 1969 the "T-1" category will be used only to convey Engineering Cross-reference information to other DCS's.

T-2 - Tabular - Marking Required Primarily For Per 1959 Type Detail Change Sheets: (Nonpictorial) - Features are not subitemized for optional conditions. Word descriptions of wire changes are controlled by optional conditions in remark columns. No new Standard Detail Change Sheets of this type will be originated.

T-3 - Pictorial - Marking Required - Early pictorial type detail change sheets, where optional conditions are not completely subitemized and covered by notes or restrictions in the pictorial section, are in this category.

T-4 - Pictorial - No Marking Required - These detail change sheets are subitemized by having all optional conditions of a feature covered by subfeatures.

T-5 - Tabular - No Marking Required - A type of detail change sheet which is completely subitemized in feature descriptions, appears in tabular form and is based on a computerized "T" drawing. These detail change sheets are classified as Circuit Revision Instructions (CRI's).

T-6 - Related Installation Information - No Marking Required - A type of detail change sheet, having an index sheet only, issued to convey a reference to related installation information including ECP information.

(c) Sheet Index and Issue Table - This table lists all sheet numbers of the detail change sheets and indicates the latest issue of each sheet adjacent to the sheet number. The Index sheet issue reflects the latest issue of the detail change sheets.

→ (d) Issue Note Column - On each issue changed, the issue note column specifies a brief description of the job engineering affected changes, the class of change, and the initials of the engineering personnel responsible for the change. If a change notice (CN) is issued, the CN number shall be included in the issue note. If prepared from an LDI the LDI issue number will be included in the issue note.

→ (e) Related Installation Information - Any required installation reference information such as Installation Handbook Sections, ECP's, etc., are entered in the space provided as directed by the PECC Installation Engineering. When a detail change sheet is required, but the PECC Installation Engineer indicates that no Installation Information or ECP Information is required the words "None Required" will be written in the related installation information box.

3.02 Application and Coordination Notes Sheet SD-1-4254

→ 3.021 This sheet lists prerequisites to the application of a detail change sheet. It also will be used to list Engineering Information not readily apparent from the Detail Change Sheet or any data that will improve the application of the Detail Change Sheets. See Figure 2. Notes will be numbered from 51 up.

3.03 Drawings and Issue Sheet SDI-4252

3.031 Wiring diagrams and their issue numbers from which the sheets are prepared will be listed. Also numbers and issue of equipment drawings, arbitrary numbering drawings, and "A" drawings, (layout of holes for mounting plates and panels) required by the installer will be listed. If features are shown, the appropriate feature will be shown adjacent to the associated drawings. When the change

has been divided into features and sub-features the main feature only is listed in the column headed "FEATURES". In the adjacent "Drawing or Sheet No. column all sheet numbers for that feature and its associated subfeature are listed. See Figure 3.

3.04 Description Sheet (SD-1-4253)

3.041 This sheet(s) provides a brief description of the feature and subfeature and the work to be performed. See Figure 4.

(a) Features - Based on Bell Laboratories Information a brief description of the basic circuit functions is provided by using narrative statements and schematic figures and options to enable the installer to make circuit arrangements or modifications. Descriptive information will be consistent by the use of the same terminology, when describing features, as that used on drawings. The schematic figures and options are listed in tabular form and cross referenced to the wiring figures and options.

(b) Subfeatures (Numbered and Lettered) - Subfeatures are designated to distinguish optional conditions, one or more of which may be required with a main feature. These are assigned the same letter as the main feature and a suffix one and up per subfeatures (e.g. A1, A2, A3, B1, B2 etc.). Lettered subfeatures are used to distinguish between optional conditions affecting a particular number subfeature only. These are the same letter and number as the subfeature and suffixed with an additional letter (e.g. A1A, A1B, A1C, A2A, A2B etc.)

3.05 Standard Supplementary Local Cable (SD-1-4255)

→ 3.051 A standard supplementary local cable may be considered by the engineer for all DCS modifications when the quantity of conductors and the equipment configurations warrants application. When a standard supplementary local cable is required it is specified on the "Material Changed" sheet under the "Material Added" heading. All figures and options will be identified in the application and coordination notes. See Figure 5.

3.06 Material Change Sheet (SD-1-4255)

3.061 Material Changes are listed in tabular form under the headings "Material Added", "Removed", "Relocated", "Replaced", etc. These headings are applied for standard supplementary local cables. Other headings will be devised for individual situations. All apparatus including pigtail components are designated by type in the code column (e.g., REL, CAP, RES, etc.). See Figure 5.

3.07 List of Wire Sheet (SD-1-4263)

3.071 This sheet lists by feature and subfeature all the bulk wire required for the changes covered by the DCS. If no bulk wire is furnished the notation "No Bulk Wire Required" is shown. See Figure 6.

→ 3.08 Installers Notes Sheets (SD-1-4256, SD-1-4257 and SD-1-4254)

3.081 All Statements which would be too long to add on the local cable running list are covered as installer's notes. Also included is an explanation on conventions used and any note which would be helpful to the installer such as insulation of leads, looping of leads, leads requiring special treatment etc. When a sequence of procedure is furnished by the Bell Telephone Laboratories this information is shown in term of DCS features. See Figure 7.

3.09 Local Cable Running List Sheet (SD-1-4259)

3.091 Lists all local cable wires which are added by the modification, except when a standard supplementary local cable is furnished, in which case the local cable drawing number is shown. The wires are listed per feature with the features listed in alphabetical order. If an explanation is required for an added wire, the lines directly below is used for this purpose. The leads are listed in color preference order per BSP AA612.015 starting with the lowest number gauge. See Figure 8.

(a) Loop leads and paired leads are shown by the color of the leads only at the starting point, with all other points of termination listed under the heading "To", one point of termination after another until the end is reached.

(b) If the action on a particular lead in the table differs from the other leads listed, the following line or lines are used for an explanation.

(c) Leads will be identified in the stitch or terminal column as follows:

(1) Leads terminating on relays and similar type apparatus are identified by stitches (L) Left, (R) Right, (M) Middle, (LM) Left Middle, (RM) Right Middle, etc.

(2) Leads terminating on terminal strips are identified by the actual terminal number.

(3) Single stitch wiring carries no identification.

(d) An installing note is added to each DCS to cover terminal designations for apparatus which have no designations on the wiring diagram. Reference to this note is made on the line following the affected apparatus.

(e) When a standard supplementary local cable is furnished, leads in the pictorial section using the dot notation, see paragraph 3.20(L) (2), will be shown in the running list labeled "Information Only."

3.10 Apparatus Location Table Sheet (SD-1-4258)

(a) This table contains information to locate all apparatus, including pigtail components, which are affected by the change. The table consists of four columns with the following headings: See Figure 9.

(1) Functional Designations - The functional designations are listed in numerical and alphabetical order. For apparatus having dual functional designations the affected function or functions are listed separately.

(2) Type of Apparatus

→ (3) DCS Sheet Number

(4) Equipment Location - The mounting plate position in the frame or bay is used as the source of reference for the equipment location, either in the form of letters or numbers. In those cases where more clarity is required to show the equipment location in terms of sketches or specification drawings this deviation is covered on the "Installers Note" sheet.

(b) When because of optional features on the schematic, it is necessary to show the same piece of apparatus on different wiring diagram drawings, it may also be necessary to show the same piece of apparatus on separate pictorial sheets. In these instances, the wiring diagram number are shown immediately below the functional designation.

3.11 Pictorial Sheets (SD-1-4260)

3.111 Each affected piece of apparatus and lead is shown in a pictorial view to show the connections of leads to specific terminals. Whenever both ends of a lead terminate on the same sheet of a DCS, a line connecting both points of termination is shown unless impractical. Where a wire (SW or LW) does not terminate on the same sheet, the sheet number of the other end is listed in addition to the termination and is underlined. Also shown is the apparatus location in a bracket

within the apparatus. Enough of the affected apparatus is shown so that all terminals which have a wire change can be identified starting from left to right (Rear view, Wiring Side). The exception to the above is where wire spring relays or apparatus use the coordinate system of BSP numbering. These will show only the BSP number to identify the affected terminals. If a majority of the wiring and apparatus shown on a sheet falls under one feature, that feature is covered by a note at the bottom of the sheet similar to "All Wiring And Apparatus Not Designated Is For Feature B." Other items are designated by their respective feature and typical note on form is lined out when not required.

(a) Apparatus is shown on the Pictorial Sheets in the following manner:

(1) Bay or unit viewed from the wiring side.

(2) On a two bay frame, starting with the left bay first, then the right bay.

(3) Starting with the upper most left hand piece of apparatus involved in the change on the bay or unit working from left to right down the bay. See Figures 10, 11, 12 and 13.

(b) Apparatus Added - When apparatus is added, the feature symbol is shown within the apparatus convention except where the feature designation at the bottom of the sheet is the same as the feature for the added apparatus.

(c) Apparatus Removed - When apparatus is removed without a replacement, the outline of the apparatus is shown with a note "All (Number of Leads) Leads Disconnected Or Cut Dead". The outline of the apparatus is designated "Removed".

(d) Apparatus Replaced - When apparatus is replaced, the apparatus itself is not shown. The replacing apparatus is shown and designated "Apparatus Replaced and Wire Reused". All reused wires, being reconnected to a different terminal will show former connection. The number of leads cut dead are shown. When replacing apparatus which has optional wiring not associated with any feature change the option is shown but not designated as a subfeature.

(e) Switchboard Cabling - Switchboard cabling in the connecting information is shown as follows:

(1) For the controlling end, the cable symbol on the leads, the lead designation, the cable code and the name of the connecting circuit is shown. For the terminating end, the lead designations, name of the connecting circuit and an arrow designating "Swbd Ca" is shown.

(2) The following is shown within the cable symbol: "A" for leads in added cable, "C" for leads to be connected from present cable and "D" for leads to be disconnected from present cables. Switchboard cables are shown in tabular format when the number of leads make this format more desirable.

(f) Leads To Be Cut Dead Or Disconnected - Removal of leads is accomplished by cutting dead except when maintenance of universal local cable is required in which case leads should be disconnected.

(g) Straps - All straps are designated as "ADD" or "CUT DEAD" leads.

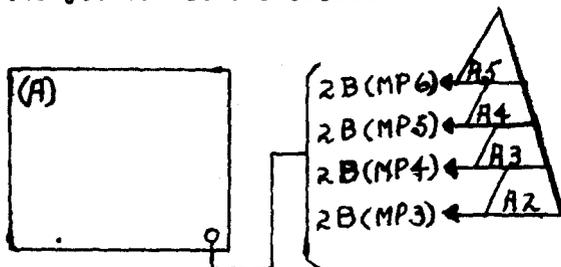
(h) Surface Wiring - All surface wiring operations are shown as "REMOVE" and "ADD".

(j) Pull Back Leads - Leads (other than PVC Wire) in the same local arm to be reconnected shall be pulled back when the new apparatus position is closer to the butt of the cable arm.

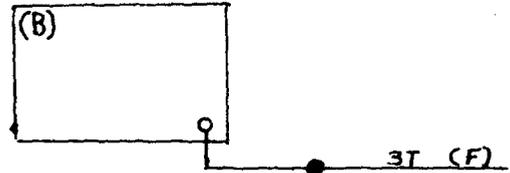
(k) Reused Leads - Local cable leads may be reused at other locations on the same mounting plate. Reused leads will show the former connection at the new connection and the new connection is shown at the disconnect position.

(l) Loop Lead

(1) Loop leads may require more than one point of termination due to unequipped apparatus. Under these conditions each point of termination in the same sequence as the lead is looped through the unequipped apparatus to meet all the job variations shown.



(2) When a loop lead is run through many pieces of apparatus, it may become impractical to list each point of termination as above. In this case the point of termination shown is the first piece of apparatus which is always equipped and connected. This enables a buzz test to be made. The convention for indicating this lead is a solid black dot. This method is not applied when any of the intermediate points loop through a make contact.



(m) Common Lead - Where common leads have been cut and skinned for connection to apparatus and the apparatus has been removed, the ends of the conductors are specified to be twisted together, soldered, and taped.

(n) Terminal Designations - Designations of terminals on all new Detail Change Sheets will agree with actual numbering as shown on the wiring diagrams (BSP Numbering).

(p) Change to Pictorial - When adding to Pictorial section the additional information is added to the end of the DCS.

3.12 Switchboard Cable Information Sheet (SD-1-4262)

3.121 Switchboard Cable Information is shown in tabular format when the number of switchboard cable leads makes the tabular technique more desirable. See Figure 14.

→ 4. COLLATION OF STANDARD DETAIL CHANGE SHEETS

NOTE: The sequence of collating the sheets which comprise the standard detail sheet document are as follows:

Index Sheet	SD-1-4250
Additional Index and Issue Table Sheet	SD-1-4266
Application and Coordination Sheet	SD-1-4254
Drawings and Issue Sheet	SD-1-4252
DCS Sheet Index and Feature Sheet	SD-1-4252
Description Sheet	SD-1-4253
Material Change Sheet	SD-1-4255
List of Wire Sheet	SD-1-4263
Installer Note Sheets	
Sheet 1	SD-1-4256
Sheet 2	SD-1-4257
Additional Notes Sheet	SD-1-4254

Local Cable Running List Sheet	SD-1-4259
Apparatus Location Table Sheet	SD-1-4258
Switchboard Cable Information Sheet	SD-1-4262
Pictorial Sheet	SD-1-4260

4.1 Numbering of Standard DCS Sheets

4.11 The numbering of the information sheets (Index, Drawing and Issue, Index to Features, etc.) is from 1 to 100 and the Pictorial Sheets from 101 up. If more than 100 information sheets are required, all information sheets are numbered with an alpha-prefix (i.e., A1, As-A99, B1, B2-B99, etc.).

5. JOB DETAIL CHANGE SHEETS

5.1 Purpose

5.11 Job detail change sheets provide the detail instructions to modify existing equipment in a particular central office or station in accordance with a job order.

5.111 A job detail change sheet will not be required when wiring diagram changes involve the straight addition of an entire figure or unit.

5.2 Related Installation Information

5.21 Any required installation reference information such as ECP's, installation handbook sections, test methods, etc. will be provided by the Regional Installation Engineer on Form SD-1-850 and forwarded to the installer via the Field Service Department.

6. FORMAT OF JOB DETAIL CHANGE SHEETS

→ 6.01 Index Sheet (SD-1-4251 and SD-1-4266) contains the title, sheet index and issue table and issue note column. See Figure 15.

(a) Title - The title information includes the name of the system and circuit, the DCS number and issue, office, city, state, order number and specification number.

(b) Sheet Index and Issue Table - This table lists all sheet numbers of the DCS and indicates the latest issue of each sheet adjacent to the sheet number. The index sheet issue reflects the latest issue of the DCS. See Figure 15.

(c) Issue Note Column - On the initial issue, the initials of the DCS originator, department, location and DDD telephone number is shown. On each issue change the issue notes column will contain a brief description of the changes and the initials of the person responsible.

6.02 Drawings and Issue Sheets

(SD-1-4252) - Wiring diagrams and their issue number from which the sheets are prepared are listed. Also numbers and issues of equipment drawing, arbitrary numbering drawings and "A" drawings (layout of holes for mounting plates and panels) required by the installer. If the change is divided into features, the appropriate features adjacent to the associated drawings are shown. See Figure 16.

6.021 Sheet Index to Features Sheet

(SD-1-4252) - Listed will be the main features in the column headed "FEATURES." In the adjacent "DRAWING OR SHEET NO." column all sheet numbers for that feature are entered. See Figure 16.

6.03 Description Sheet (SD-1-4253) -

The description sheet provides a brief description of the basic circuit functions and the work to be performed using narrative statements and wiring diagram figures and options to enable the installer to make circuit rearrangements or modifications. The features that have been determined are assigned letters A, B, C, etc., as required. See Figure 17.

6.04 Material Change Sheet (SD-1-4255) -

Material changes are listed in tabular form under the headings "MATERIAL ADDED," "REMOVE," "REPLACED," "RELOCATED," etc. Other headings are to be devised for individual situations. See Figure 18.

6.05 List of Wire Sheet (SD-1-4263) -

This sheet lists by feature all the bulk wire required for the changes covered by the Detail Change Sheet. If no bulk wire is to be furnished "NO BULK WIRE REQUIRED" is shown. See Figure 19.

→ 6.06 Installer's Notes Sheet (SD-1-4256, SD-1-4257 and SD-1-4264) - All

statements which would be too long to add on the local cable running list are listed. Also included is the explanation of conventions used in the Detail Change Sheet. Any note which would be helpful to the installer such as insulation of leads, looping of leads, leads requiring special treatment, etc., are shown. When a sequence of procedure is known, the information in terms of DCS features is included in an installers note. See Figure 20.

6.07 Local Cable Running List Sheet

(SD-1-4259) - The local cable running list lists all cable wires which are added by the modification, except when a standard supplementary or job local cable is furnished. The wires are listed per feature arranged in alphabetical order. If an explanation is required for an added wire, the lines directly below the wire shall be used for this purpose. The leads

are listed in color preference order per BSP AA612.015 starting with the lowest number gauge.

(a) Loop leads and paired leads are shown by the color of the lead only at the starting point with all other points of termination listed under the heading "To" to point of termination one after another until the end is reached. See Figure 21.

(b) If the action on a particular lead in a table differs from the other leads being listed, the following line or lines are used for an explanation.

(c) Leads are identified in the stitch or terminal column as follows:

(1) Leads terminating on relays and similar type apparatus are identified by stitches (L) Left, (R) Right, (M) Middle, (LM) Left Middle, (RM) Right Middle, etc.

(2) Leads terminating on terminal strips are identified by actual terminal numbers.

(3) Single stitch apparatus carries no identification.

(d) An installing note is added to each DCS to cover terminal designations for apparatus which have no designation on the wiring diagram. Reference to the note is made on the line following the affected apparatus.

(e) When a standard supplementary local cable is furnished, leads in the pictorial section using the dot notation (see par. 3.111 (L)(1)) are shown in the running list labeled "INFORMATION ONLY".

6.08 Apparatus Location Table Sheet (SD-1-4258)

(a) This table contains information to aid the installer in locating the apparatus which is affected by the change. The table consists of four columns which will have the following headings: See Figure 22.

(1) Functional designation - Listed in numerical and alphabetical order. For apparatus having dual functional designations the affected function or functions are listed separately.

(2) Type of apparatus.

→(3) DCS Sheet number.

→ Arrowed Lines Indicate New or Changed Information.

ATTACHMENT

Figures 1 to 25 on Pages 8 to 34.

Reason for Reissue:
Extensive changes.

(4) Equipment Location - The mounting plate position in the frame or bay is used as the source of reference for the equipment location either in the form of letters or numbers. In those cases where it is more desirable for clarity to show the equipment location in terms of sketches on specification drawings, this deviation is covered on the "INSTALLER'S NOTE" sheet.

(b) When, because of optional features on the schematic it is necessary to show the same piece of apparatus on different wiring diagram drawings, it may also be necessary to show the same piece of apparatus on separate pictorial sheets. In these instances, the wiring diagram drawing number is shown immediately below the functional designation.

6.09 Wiring Information (SD-1-4260 or SD-1-4261) - Wiring information is prepared in the pictorial or tabular format as required. When the pictorial format is used the method as outlined in paragraph 3.11 is followed. When the tabular format is more desirable, the wiring information sheet is used. See Figure 23.

6.10 Switchboard Cable Information (SD-1-4260 and SD-1-4262) - Switchboard cable information in tabular or pictorial format is shown as required. See Figures 24 and 25.

→ 7. COLLATION OF JOB DETAIL CHANGE SHEETS

NOTE: The sequence of collating the sheets which comprise the job Detail Change Sheet is as follows:

Index Sheet	SD-1-4251
Additional Index and Issue Sheet	SD-1-4266
Drawing and Issue	SD-1-4252
DCS Sheet Index to Features Description	SD-1-4252
Material Change	SD-1-4253
List of Wire	SD-1-4255
Installers Notes Sheet 1	SD-1-4263
Installers Notes Sheet 2	SD-1-4256
Additional Notes Sheet	SD-1-4257
Local Cable Running List	SD-1-4254
Apparatus Location Table	SD-1-4259
Wiring Information	SD-1-4258
Switchboard Cable Information	SD-1-4261
Pictorial	SD-1-4262

7.1 Numbering of Job DCS Sheets - The numbering of the job Detail Change Sheet, information sheets (Index, drawing and issues, index to features, etc.) is from 1 up and the wiring information and switchboard cable information sheets are from 101 and up.

Manager, Engineering Practices

		APPLICATION AND COORDINATION NOTES
1	NOTE	
2		
3	1.	Before applying FEATURE "A" of this DCS, DCS XXXXX-17 FEATURE "B" and DCS XXXXX-19
4		FEATURE "A" must be applied.
5		
6	2.	Standard Supplementary Local Cable LCJ-XXXXX-B is provided for FEATURE "A".
7		(See Material Change Sheet).
8		
9	3.	In applying FEATURE "C", if the office records do not specify T-XXXXX-19 Fig. G
10		(SD-XXXXX-01 Fig. G), Fig. G must be provided first. (See DCS XXXXX-5 FEATURE "B").
11		
12	4.	In applying FEATURE "D", replace the shorter MTG screw furnished with the (xy) AJ 83
13		Relay and use a P181255 .138-32 x 5 1/8 RHM screw to mount the 208A Terminal.
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
		DCS XXXXX-6 SHEET ISS 3 SHEET NO. 2

FIGURE 2

DRAWINGS & ISSUES				SHEET INDEX TO FEATURES			
LINE	FEATURE	DRAWING OR SHEET NO.	ISS	LINE	FEATURE	DRAWING OR SHEET NO.	ISS
1	A	101-105		26			
2	B	101-105		27			
3	C	101-105		28			
4	D	102		29			
5				30			
6				31			
7				32			
8				33			
9				34			
10	A	T XXXXX-12	15	35			
11	A	LCJ XXXXX-B	5	36			
12	A&B	T XXXXX-13	4	37			
13	C	T XXXXX-15	2	38			
14	A&C	ED XXXXX-10	10	39			
15	A	J XXXXXH-50	7	40			
16	A-C	J XXXXXL-51	6	41			
17	D	J XXXXXH-51	4	42			
18	D	T XXXXX-102	3	43			
19	A-D	H XXX-XXX	15	44			
20	D	A XXXXX	3	45			
21				46			
22				47			
23				48			
24				49			
25				50			
DCS XXXXX-6				SHEET ISS. 2		SHEET NO. 3	

FIGURE 3

SD-1-4253 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

DESCRIPTION																		
LINE	FEATURE DESCRIPTIONS			FEAT	MODIFY				TO (SEE OPERATION)				MODIFY		TO		NOTE	
					T - XXXXX				OPR	T - XXXXX				SD-XXXX-01		SD-XXXX-01		
					FIG	WRG	APP			FIG	WRG	APP	FIG	OPTION	FIG	OPTION		
1	Provides Facilities				-19	(G)		HG	AW	-24	H			G		H		See App
2	For Testing Markers			A														& Coord
3	Arranged for 21 Classes																	Notes
4	of Service																	Sheet
5																		
6	Provides Facilities								A	-15	(32)	XS		--	--	41	XS	
7	For Testing Markers In								A	-22	41, HA							
8	Offices Where																	
9	Translation of			B														
10	Thousands, Hundreds, &																	
11	Tens Digit is Required																	
12	to Complete Calls to																	
13	PBX Extensions																	
14																		
15	Office	This	No	B1					A	-22	(6)	HXU		--	--		XU	
16	is	Frame			-22	(4)	HXT		AW	-22	(4)	HXU		--	XT		XU	
17	Eqnd. No	Is Eqnd	Yes	B2														
18	with	with							A	-15	(32)	XU				K	XU	
19	PIC	Yes	Txxxx-31	No	B3				A	-25	K	XU						
20	Sdrs.	Fig. 33	Yes	B4	-21	J			AW	-21	K	HXV	J	XT or XV		K	XV	
21									R	-21	(33)	HXV						
22	In Addition	Is Furn		BLA	-22		XU		AW	-22		XT		XU			XT	
23	to Feat B1																	
24	When Fig. 5	Is not Fur		BLB	-22				R	-22		Y	1	--			Y	

DCS XXXXX-6

SHEET ISS. 2

SHEET NO. 4

FIGURE 4

DESCRIPTION															
LINE	FEATURE DESCRIPTIONS	FEAT	MODIFY				TO (SEE OPERATION)				MODIFY		TO		NOTE
			T-XXXXX-23				OPR	T-XXXXX			SD-XXXXX-01		SD-XXXXX-01		
			↓	FIG	WRG	APP		↓	FIG	WRG	APP	FIG	OPTION	FIG	
1*	Provides for Operation														
2	with Twelve Sender	C	HA			AW	-23	HB			4		5,6		
3	Groups					A	-24	6							
4															
5															
6															
7															
8															
9	When														
10	Provides a														
11	Mutual	D				A	-13	2					25		
12	Lockout					A	-16	2							
13	between the														
14	Master Test	E	28			AW	-23	39					US		
15	Control Ckt					A	-23	27	US						
16	and the														
17	line														
18	Verification														
19	Ckt.	F	28	TB		AW	-23	M	TC			TB	TC		
20	Fig. 25														
21	is Furn.														
22															
23															
24															

FIGURE 4 (Cont.)

SD-1-4255 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

LINE	MATERIAL CHANGES										
	FEATURE	DESIG	CODE	MTG PLT SK	POS	DRAWING	REMARKS	MTG PLT SK	POS	DRAWING	REMARKS
1	A	CC1	UB625 REL	D	115	JXXXXX6F-50	Drill Per AXXXXX				
2							Fig X if Reqd. Mt.				
3	A	---	208A Term	D	115RU	JXXXXX6F-50	Mt. on (XY) Rel				See App 4 Coord Note 4
4	B	---	JXXXX-XXX	-	-	JXXXXX6F-50	- - - - -				
5			Grp. XX								
6											
7											
8							<u>Material Removed</u>				
9	A	TRT	R662 Rel	E	89	JXXXXXA-1	TXXXXX-30				
10											
11							<u>Material Replaced</u>				
12	B	---	189A (XXX)	A	--	JXXXXXAR-1	Repl by 189A(XXX)	A1			
13			MTG PLT				MTG. PLT.				
14	B	B1	185A Net	D	115R	TXXXXX-48	Repl by 185B Net	D	115R	TXXXXX-48	
15											
16							<u>Material Relocated</u>				
17	A	T04	U597 Rel	B	144	JXXXXXW-1		A	60	JXXXXXW-1	TXXXXX-38
18											
19							<u>Material Relocated and Replaced</u>				
20	D	ST	19AE RES	A	22	JXXXXXB-4	Repl by 19AT RES	A	28	JXXXXXB-4	Pos Unit Only
21											
22							<u>Stamping Information</u>				
23	B	CE	224A I.S.	F	80	JXXXXXAR-1	Add "LIT" on			JXXXXXAR-1	Per Fig CE
24							Left Side				on JXXXXXA-51

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SHEET NO. 6

FIGURE 5

LIST OF WIRE SHEET

LINE	FEATURE	WIPE METHOD	TOTAL NO. OF FEET	NO OF FT. PER CKT	GAUGE AND TYPE	COLOR	LINE	FEATURE	WIPE METHOD	TOTAL NO. OF FEET	NO OF FT. PER CKT	GAUGE AND TYPE	COLOR
1	A	LC		10	26 BY	BL	25	A	SW		6	24 BW	R
2		LC		40		O	26	A	SW		8	24 BW	BK
3		LC		30		G	27	A	SW		32	26 BW	G
4		LC		20		BR	28						
5		LC		20		S	29	B	LC		10	26 BY	G1R
6		LC		30		W	30		LC		10		G2R
7		LC		10		BL1W	31		LC		20		R
8		LC		20		O1W	32		LC		20		G
9		LC		20		O2W	33		LC		10		GR1W
10		LC		10		S1W	34						
11		LC		10		S2W	35	B1	SW		10	26 BW	G
12		LC		10		BL1R	36	B1A	SW		10	26 BW	G
13		LC		10		BL2R	37	B1B	SW		10	26 BW	G
14		LC		10		O1R	38						
15		LC		10		O2R	39	D	SW		15	26 BW	G
16							40						
17	A	LW		100	24 BU	R	41	E	SW		15	26 BW	G
18		LW		100		BL2R	42						
19		LW		100		S2R	43	F	SW		15	26 BW	G
20		LW		100		S2BK	44						
21		LW		100		BL2Y	45						
22							46						
23							47						
24							48						

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SHEET ISS. 3

SHEET NO. 7

FIGURE 6

SD-1-4256 (1-69)
 WESTERN ELECTRIC COMP. INC.
 SYSTEMS EQUIPMENT ENG. DIV.

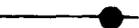
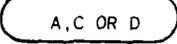
NOTES

LEGENDS

-  LETTER WITHIN TRIANGLE DENOTES FEATURE
-  "SW" WITHIN RECTANGLE DENOTES 24 BW SURFACE WIRE COLORED GREEN UNLESS OTHERWISE SPECIFIED
-  NUMBER WITHIN CIRCLE DENOTES "SEE NOTE 2"
- "F"

LEAD BROUGHT FROM CABLE ARM AT SEPARATE STITCH
- "PT"

LEADS FURNISHED WITH COMPONENT
- "LP"

LEADS TO BE LOOPED AT POSITION OF UNEQUIPPED APPARATUS
-  LEAD TO BE ADDED
-  LEAD CUT-DEAD
-  LEAD TO BE RECONNECTED
-  LEAD TO BE CONNECTED
-  LEAD TO BE DISCONNECTED
-  CONVENTION FOR INDICATING TERMINATING ENDS OF A LEAD FOR BUZZ TESTING PURPOSES
-  SWBD CABLE, LETTER DESIGNATION WITHIN THE CABLE SYMBOL DENOTES THAT LEADS WITHIN SYMBOL ARE:
 A = ADDED CABLE, C = CONNECT FROM PRESENT CABLE, D = DISCONNECT FROM PRESENT CABLE
- 103

A NUMBER WITH A LINE UNDER IT DENOTES THE PICTORIAL SHEET ON WHICH THIS WIRING IS TERMINATED
-  MTG PLATE LOCATION WITHIN FRAME OR BAY IS SHOWN WITHIN BRACKET. ANY DEVIATIONS FROM THIS ARE COVERED IN AN INSTALLERS NOTE.

FIGURE 7

INSTALLERS NOTES, CON'T

2. TERMINAL DESIGNATIONS USED ON THESE SHEETS AGREE WITH ACTUAL NUMBERING AS SHOWN ON THE WIRING DIAGRAM. TERMINALS HAVING NO DESIGNATION ARE IDENTIFIED BY (L) LEFT, (T) TOP, (M) MIDDLE, (BR) BOTTOM RIGHT ETC. AS VIEWED FROM WIRING SIDE.
3. THE ENTIRE LOOP LEAD IS TO BE ADDED AND SHALL BE LOOPED AND NOT CUT AT EACH POSITION OF EQUIPPED APPARATUS.
4. OPERATIONS (OPR) ARE IDENTIFIED AS FOLLOWS: A= ADD R= REMOVE AW= AGREE WITH
5. ALL APPARATUS NOT OTHERWISE IDENTIFIED SHALL BE CONSIDERED RELAYS.
6. LEADS SHOWN TERMINATED IN COMPONENTS WITHOUT TERMINALS ARE FURNISHED WITH COMPONENTS.
7. LOCATION SHOWN IN BRACKETS IS SK "A" AS SHOWN ON JXXXXXC-50.
8. DO NOT APPLY FEATURE "D" WITHOUT FIRST APPLYING FEATURE "C".

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SHEET 155 2

SHEET NO. 9

FIGURE 7 (Cont.)

SD-1-4259 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

LOCAL CABLE RUNNING LIST																			
LINE	FEAT	FROM				TO				LINE	FEAT	FROM				TO			
		COLOR	DESIG.	APP	STCH OR TERM	DESIG	APP	STCH OR TERM	COLOR			DESIG	APP	STCH OR TERM	DESIG	APP	STCH OR TERM		
1	A	BL	A		L	B	R	25	C	20 BH Wire									
2		BL	B		R	CK	KEY	26		Y	Misc.	T.S.	19	AR	RES				
3		O	BOA		M			27		24 C	Wire								
4		Loop				B1A		M		28	BK	OTT	30S	OTT	NET				
5		Loop				B2A		M		29	BL, BL-W (PAIR)								
6						B3A		M		30	BL	A		B	B		F		
7		G	WJ	NET		MTGA2	TS	54		31					C		M		
8						NOTE: The following add				32	BL-W	A		B	C		M		
9						lead could not be				33									
10						formed in as part				34									
11						of the supplementary				35									
12						Local Cable and				36									
13						should be made				37									
14						part of the existing				38									
15						local cable.				39									
16			BR	ST		L	E	M		40									
17			S	TP		M	R	RM		41									
18	P	BL	WJ	NET		LP		42											
19		O	EB			JH		43											
20		BL3W	AT	RES	L	OTT		IM	44										
21									45										
22						See Installers Note 2			46										
23									47										
24									48										

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SHEET ISS. 2

SHEET NO. 10

FIGURE 8

APPARATUS LOCATION TABLE														
LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC	LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC	LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC
1	A	CAP	101	B	25					49	A	CAP	101	1
2	A2	RES	101	D	26	Typical of Lettered Equipment Plate Location (Carrier Toll and Others)				50	AC	RES	101	4
3	AF	RES	102	BC	27					51	AF	RES	102	21
4					28					52				
5	C	CAP	101	BD	29					53	C	CAP	101	36
6	CI	KEY	103	BD	30				54	CI	KEY	103	36	
7	CW	NET	101	CD	31				55	CW	NET	101	52	
8		TXXXXX - 14			32				56		TXXXXX - 14			
9	CW	NET	105	CD	33				57	CW	NET	105	52	
10		TXXXXX - 29			34				58		TXXXXX - 29			
11					35				59					
12	DA	RES	101, 103	CD	36				60	DA	RES	101, 103	52	
13					37				61					
14	F	T.S.	101	CF	38				62	F	T.S.	101	54	
15	FA	RES	104	(Sk.A)	39				63	FA	RES	104	(Sk.A)	
16		See Installers Note 7			40				64		See Installers Note 7			
17					41				65					
18	QT-3	ET	102	BG	42	Typical of Numbered Equipment Plate Locations (#5 X-Bar)				66	QT-3	ET	102	38
19					43					67				
20	T1	REL	101	BT	44					68	T1	REL	101	41
21	T5	PT RES	101	BT	45				69	T5	PT RES	101	41	
22	TZ	REL	105	BT	46				70	TZ	REL	105	41	
23					47				71					
24					48				72					

FIGURE 9

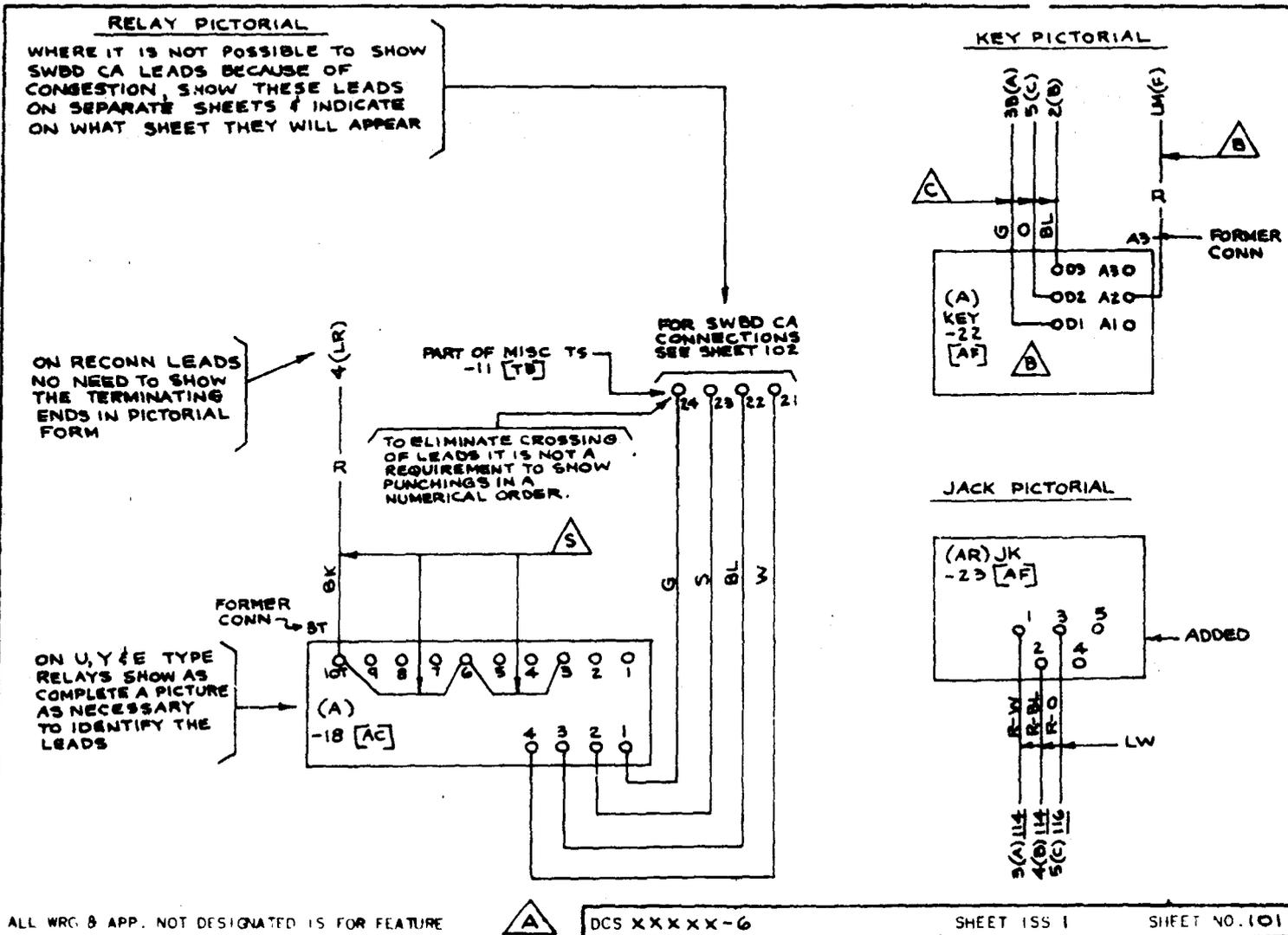
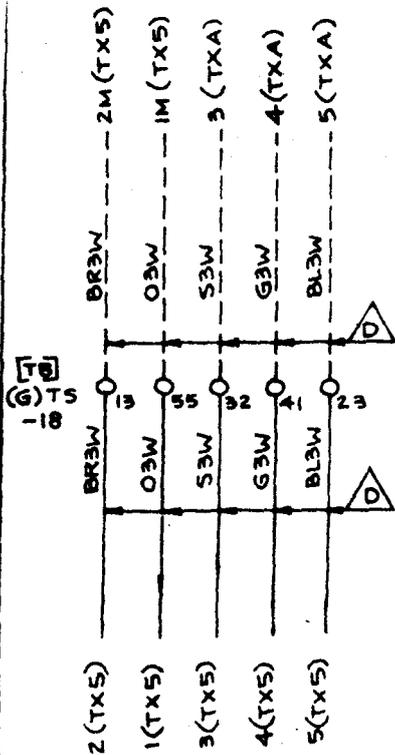


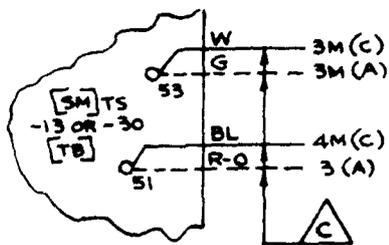
FIGURE 10

APPARATUS USING COORDINATE NUMBERING,
 ONLY SHOW TERMINAL AFFECTED BY THE
 CHANGE.

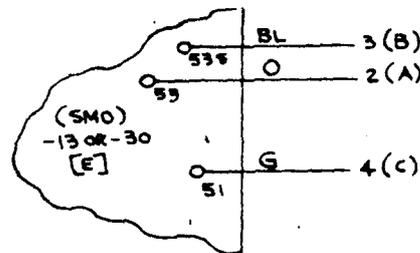
DSA TYPE TS



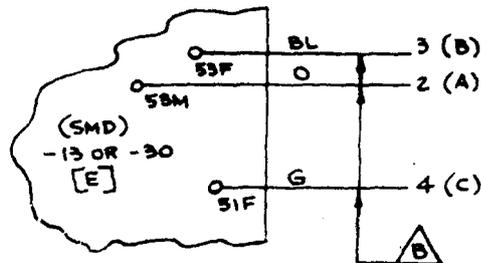
CAGA TS
 & SIMILAR TYPE



263, 286 & 287
 TYPE RELAYS



264 & 288
 TYPE RELAYS



ALL WRY 3 APP. NOT DESIGNATED IS FOR FEATURE



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SHEET 155 2

SHEET NO. 104

FIGURE 13

SD-1-4262 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

SWITCHBOARD CABLE INFORMATION																	
LINE	FEATURE OR FIG.	ONE END OF LEAD										OTHER END OF LEAD				REMARKS	
		DRAWING	SWBD CABLE		APPARATUS			AT TERMINAL				FRAME	APPARATUS				DRAWING
			CODE OR GAUGE	LEAD DESIG	EQPT. LOC.	TYPE	FUNCT DESIG	CONN	DIS-CONN	RE-CONN	CUT DEAD		TYPE	FUNCT DESIG	TERM		
1	A	TXXXXX-11	24BU	A	BC	T.S.	Misc	27				LLC	T.S.	A	02	TXXXXX-17	
2				B				28							04		
3				C				31							11		
4				D				32							13		
5				E				33							15		
6																	
7	C	TXXXXX-11	22BH	HB1	BD	T.S.	CHN		13	23		NGC	T.S.	FA	34	TXXXXX-12	
8				HB2					14	24					35		
9				HB3					15	25					36		
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	

FIGURE 14

INDEX SHEET												DCS <u>12345 YD 587A</u>		
OFFICE <u>MIDWOOD</u>		CITY <u>NEWARK</u>		STATE <u>NEW JERSEY</u>		ORDER <u>12345 YD</u>		SPEC. <u>587</u>						
<u>#5 CROSSBAR</u> SYSTEMS DCS FOR COMPLETING <u>MARKER CIRCUIT</u>														
SHEET INDEX AND ISSUE TABLE											NOTES			
SHEET	ISSUE	SHEET	ISSUE	SHEET	ISSUE	SHEET	ISSUE	SHEET	ISSUE	SHEET	ISSUE	DATE <u>6-1-68</u>		
1	2	101	1									DEPT. <u>352-8</u> Columbus TEL. NO. <u>614-868-2405</u>		
2	1	102	1									W.W.P. 1		
3	1	103	1									SHEET 4		
4	2											19AP RELAY (FA) CHG. TO 19AR		
5	1											W.W.P. 2		
6	1													
7	1													
8	1													
9	1													
												SHEET NO. 1		

FIGURE 15

SD-1-4252 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

DRAWINGS & ISSUES				SHEET INDEX TO FEATURES			
LINE	FEATURE	DRAWING OR SHEET NO.	ISS	LINE	FEATURE	DRAWING OR SHEET NO.	ISS
1	A	101 - 103		26			
2	B	101		27			
3	C	102		28			
4				29			
5				30			
6				31			
7				32			
8				33			
9				34			
10	A	TXXXX-12	15	35			
11	A & B	TXXXX-13	4	36			
12	A	TXXXX-15	2	37			
13	A	LCXXXX-B	5	38			
14	A	JXXXX-50	7	39			
15	A - C	JXXXX-51	6	40			
16	A - C	HXX - XXX	15	41			
17	C	AXXXX	3	42			
18				43			
19				44			
20				45			
21				46			
22				47			
23				48			
24				49			
25				50			

DCS 123456789A SHEET ISS. 1 SHEET NO. 2

FIGURE 16

DESCRIPTION															
LINE	FEATURE DESCRIPTIONS	FEAT	MODIFY			OPR	TO (SEE OPERATION)				MODIFY		TO		NOTE
			T - XXXXX				T - XXXXX				SD-		SD-		
			FIG	WRG	APP		FIG	WRG	APP	FIG	OPTION	FIG	OPTION		
1	Provides Facilities		-19	(G)	HG	AW	-24	H							
2	For Testing Markers	A													
3	Arranged for 21														
4	Classes of Service														
5															
6	Provides Facilities														
7	for Testing Markers														
8	in Offices Where														
9	Translation of	B				A	-15	(32)	XS						
10	Thousands, Hundreds,					A	-22	41, HA							
11	and Tens Digit														
12	is Required														
13	To Complete Calls														
14	To PEX Extensions														
15															
16															
17	Provides For		-19	HA		AW	-23	HB							
18	Operation with					A	-24	6							
19	Twelve	C													
20	Sender Groups														
21															
22															
23															
24															

DCS 12345YD 587A

SHEET ISS. 1

SHEET NO. 3

FIGURE 17

SD-1-4255 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

LINE	MATERIAL CHANGES											
	FEATURE	DESIG	CODE	MTG PLT SK	POS	DRAWING	REMARKS	MTG PLT SK	POS	DRAWING	REMARKS	
1						MATERIAL ADDED						
2	A	CCI	UB625 Rel	D	115	JXXXXXCF-50	Drill Per					
3							JXXXXX Fig. X					
4	A	---	208A Term	D	115RU	JXXXXXCF-50	Mt on (XY) Rel					
5	B	---	LCXXX-XXX	-	---	JXXXXXCF-50	- - - - -					
6			GRP. XX									
7												
8						MATERIAL REMOVED						
9	A	FA	19AR Rel	E	50	TXXXXX-11	Fig. 82					
10												
11						MATERIAL REPLACED						
12	B	---	189A (XXX)	A	---	JXXXXXAR-1	Repl By 189A(XXX)	A1				
13			MTG PLT				MTG PLT					
14	B	B1	185A Net	D	115R	TXXXXX-48	Repl by 185B Net	D	115R	TXXXXX-48		
15												
16						MATERIAL RELOCATED						
17	A	TO4	U597 Rel	B	144	JXXXXXW-1		A	60	JXXXXXW-1	TXXXXX-38	
18												
19						MATERIAL RELOCATED AND REPLACED						
20	C	ST	19AE Res	A	22	JXXXXXB-4	Repl By 19AT Res	A	28	JXXXXXB-4	Pos Unit Only	
21												
22						STAMPING INFORMATION						
23	B	CE	224A T.S.	F	80	JXXXXXAR-1	Add "LIT"			JXXXXXAR-1	Per Fig. CE	
24							on Left Side				on JXXXXXA-51	

FIGURE 18

SD-1-4263 (1-69)
 WESTERN ELECTRIC COMPANY, INC.
 SYSTEMS EQUIPMENT ENGINEERING

LIST OF WIRE SHEET

LINE	FEATURE	WIRE METHOD	TOTAL NO OF FEET	NO OF FT PER CKT	GAUGE AND TYPE	COLOR	LINE	FEATURE	WIRE METHOD	TOTAL NO OF FEET	NO OF FT PER CKT	GAUGE AND TYPE	COLOR
1	A	LC		10	26BY	BL	25	A	SW		6	24BW	R
2		LC		40		O	26	A	SW		8	24BW	BK
3		LC		30		G	27	A	SW		32	24BW	G
4		LC		20		BR	28						
5		LC		20		S	29	B	LC		10	26BY	G1R J ^P
6		LC		30		W	30		LC		10		G2R
7		LC		10		BLW	31		LC		20		R J ^P
8		LC		20		O1W J ^P	32		LC		20		G
9		LC		20		O2W J ^P	33		LC		10		BR1W
10		LC		10		S1W J ^P	34						
11		LC		10		S2W J ^P	35	C	SW		10	26BW	G
12		LC		10		BL1R J ^P	36		SW		10		
13		LC		10		BL2R J ^P	37		SW		10		
14		LC		10		O1R J ^P	38		SW		15		
15		LC		10		O2R J ^P	39		SW		15		
16							40		SW		15		
17	A	LW		100	24BU	R	41						
18		LW		100		BL2R	42						
19		LW		100		S2R	43						
20		LW		100		S2BK	44						
21		LW		100		BL2Y	45						
22							46						
23							47						
24							48						

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SHEET ISS. 1

SHEET NO. 5

FIGURE 19

INSTALLERS NOTES

2. TERMINAL DESIGNATIONS USED ON THESE SHEETS AGREE WITH ACTUAL NUMBERING AS SHOWN ON THE WIRING DIAGRAM. TERMINALS HAVING NO DESIGNATION ARE IDENTIFIED BY (L) LEFT, (T) TOP, (M) MIDDLE, (BR) BOTTOM RIGHT ETC. AS VIEWED FROM WIRING SIDE.
3. THE ENTIRE LOOP LEAD IS TO BE ADDED AND SHALL BE LOOPED AND NOT CUT AT EACH POSITION OF EQUIPPED APPARATUS.
4. OPERATIONS (OPR) ARE IDENTIFIED AS FOLLOWS: A= ADD R= REMOVE AW= AGREE WITH
5. ALL APPARATUS NOT OTHERWISE IDENTIFIED SHALL BE CONSIDERED RELAYS.
6. LEADS SHOWN TERMINATED IN COMPONENTS WITHOUT TERMINALS ARE FURNISHED WITH COMPONENTS.
7. LOCATION SHOWN IN BRACKETS IS SK "A" AS SHOWN ON JXXXXXC-50
8. DO NOT APPLY FEATURE "C" WITHOUT FIRST APPLYING FEATURE "B".

DCS 12345YD 587A

SHEET 1SS 1

SHEET NO. 7

FIGURE 20

LOCAL CABLE RUNNING LIST																	
LINE	FEAT	FROM				TO			LINE	FEAT	FROM				TO		
		COLOR	DESIG.	APP	STCH OR TERM	DESIG	APP	STCH OR TERM.			COLOR	DESIG	APP	STCH OR TERM	DESIG	APP	STCH OR TERM
1	A	BL	A		L	B		R	25	C	20 BH Wire						
2		BL	B		R	CK	KEY		26		Y	Misc. T.S.	19	AR	RES		
3		O	BOA		M				27		24C	Wire					
4		Loop				B1A		M	28		BK	OTT	30S	OTT	NET		
5		Loop				B2A		M	29		BL, BL-W	(Pair)					
6						B3A		M	30		BL	A		B	R		F
7		G	WJ	NET		MTC2	TS	54	31						C		M
8						NOTE: The following add			32		BL-W	A		B	C		M
9						lead could not be			33								
10						formed in as part			34								
11						of the supplementary			35								
12						local cable and			36								
13						should be made			37								
14						part of the existing			38								
15						local cable			39								
16		BR	RT		L	Z		M	40								
17		S	TP		M	R		RM	41								
18	B	BL	WJ	NET		LP			42								
19		O	EB			JH			43								
20		BLW	AT	RES	L	OTT		IM	44								
21						See Installers Note 2			45								
22									46								
23								47									
24								48									

FIGURE 21

APPARATUS LOCATION TABLE															
LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC	LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC	LINE	FUNCT DESIG	TYPE OF APP	DCS PAGE NO.	EQUIP LOC	
1	A	CAP	101	B	25	Typical of Lettered Equipment Plate Location (Carrier, Toll and Others)				49	A	CAP	101	1	
2	AC	RES	101	E	26						50	AC	RES	101	4
3	AF	RES	102	BC	27						51	AF	RES	102	21
4					28						52				
5	C	CAP	101	BD	29						53	C	CAP	101	36
6	CI	KEY	103	BD	30					54	CI	KEY	103	36	
7	CW	NET	101	CD	31					55	CW	NET	101	52	
8		TXXXXX - 14			32					56		TXXXXX - 14			
9	CW	NET	103	CE	33					57	CW	NET	103	52	
10		TXXXXX - 29			34					58		TXXXXX - 29			
11					35					59					
12	DA	RES	101,103	CF	36					60	DA	RES	101,103	52	
13					37					61					
14	F	T.S.	101	CF	38					62	F	T.S.	101	54	
15	FA	RES	103	(SK.A)	39					63	FA	RES	103	(SK.A)	
16		See Installers Note 7			40					64	See Installers Note 7				
17					41					65					
18	QT-3	RT	102	EG	42					66	QT-3	RT	102	38	
19					43					67					
20	T1	REL	101	ET	44	Typical of Numbered Equipment Plate Locations (# 5 Crossbar)				68	T1	REL	101	41	
21	T5	PT RES	101	ET	45						69	T5	PT RES	101	41
22	TZ	REL	103	ET	46						70	TZ	REL	103	41
23					47						71				
24					48						72				

FIGURE 22

WIRING INFORMATION

LINE	EQUIPMENT OR LOCATION	ONE END OF LEAD										OTHER END OF LEAD								REMARKS
		DRAWING	APPARATUS			WIRE	AT TERMINAL			DRAWING	APPARATUS			AT TERMINAL						
			EQPT. LOC.	TYPE	FUNCT. DESIG.		CONN.	DIS-CONN.	CUT-DEAD		EQPT. LOC.	TYPE	FUNCT. DESIG.	CONN.	DIS-CONN.	CUT-DEAD				
1		SURFACE WIRING																		
2																				
3	A	TXOXXX-11	X-1	REL	A	X	G	1T				X-1	REL	B	1T				TXOXXX-11	
4						X	G	2T							2T					
5						X	BK	3T							3T					
6						X	R	4T							4T					
7						X	G	5T							5T					
8																				
9																				
10		LOCAL CABLE WIRING																		
11																				
12	A	TXOXXX-11	X-1	REL	A	X	BL	1B				X-1	REL	B	1B				TXOXXX-11	
13						X	O	2B							2B					
14						X	G	3B							3B					
15						X	S	4B							4B					
16							BR					Fig 3	T.S.	Y			50			
17						X	BR	5B							20					
18																				
19	B	TXOXXX-12	X-1	REL	B	X	BL	1B				X-1	REL	A	1B				TXOXXX-12	
20						X	O	2B							2B					
21						X	G	3B							3B					
22						X	S	4B							4B					
23							BR										50			
24						X	BR	20							5B					

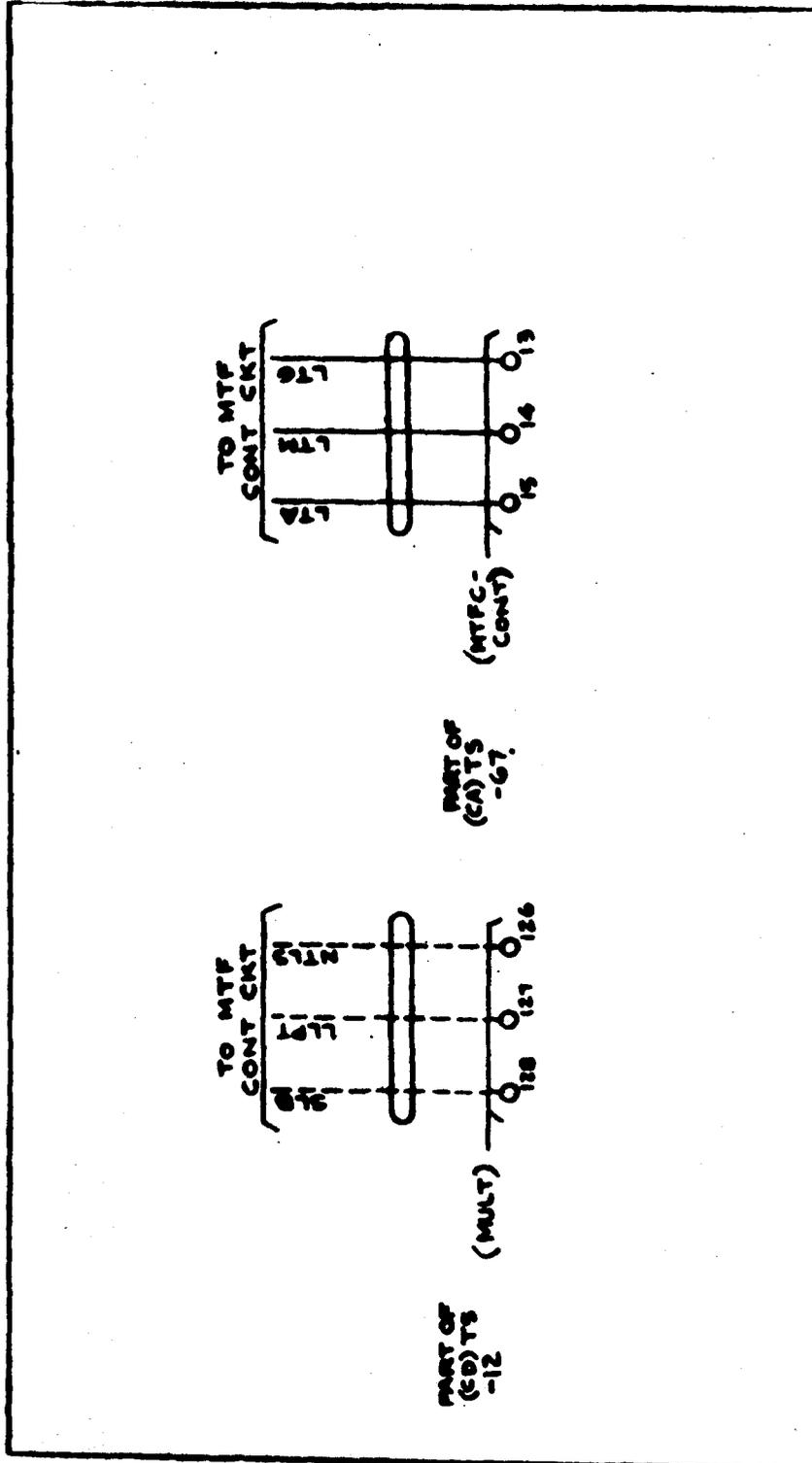
DCS 12345YD 587A

SHEET 1SS. 1

SHEET NO. 101

FIGURE 23

28-1-4250 (1-6-59)
ELECTRONIC FILTERS COMPANY, INC.
SYSTEMS EQUIPMENT ENGINEERING



PART OF
(CD) TS
-12
(MULT)

PART OF
(CA) TS
-67
(MTPC-
CONT)

ALL WRG B APP. NOT DESIGNATED IS FOR FEATURE  DCS 18 9-4-99B 907A SHEET 155 I SHEET NO 102

FIGURE 24

SWITCHBOARD CABLE INFORMATION																	
LINE	FEATURE OR FIG.	ONE END OF LEAD											OTHER END OF LEAD				REMARKS
		DRAWING	SWBD CABLE		APPARATUS			AT TERMINAL				FRAME	APPARATUS				
			CODE OR GAUGE	LEAD DES'G	EQPT. LOC.	TYPE	FUNCT DESIG	CONN	DIS-CONN	RE-CONN	CUT DEAD		TYPE	FUNCT DESIG	TERM	DRAWING	
1	A	TXXXXX-11	24BU	A	BC	T.S.	Misc.	27				LLC	T.S.	A	02	TXXXXX-17	
2				B				28							04		
3				C				31							06		
4				D				32							13		
5				E				33							15		
6																	
7	C	TXXXXX-11	22BH	HB1	BD	T.S.	CHN		13	23		NGC	T.S.	FA	34	TXXXXX-12	
8				HB2					14	24					35		
9				HB3					15	25					36		
10																	
11																	
12																	
13																	
14																	
15																	
16																	
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23																	
24																	
25																	
26																	
27																	
28																	

DCS 12345YD 587A

SHEET ISSUE 1

SHEET NO. 103

FIGURE 25