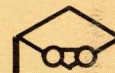
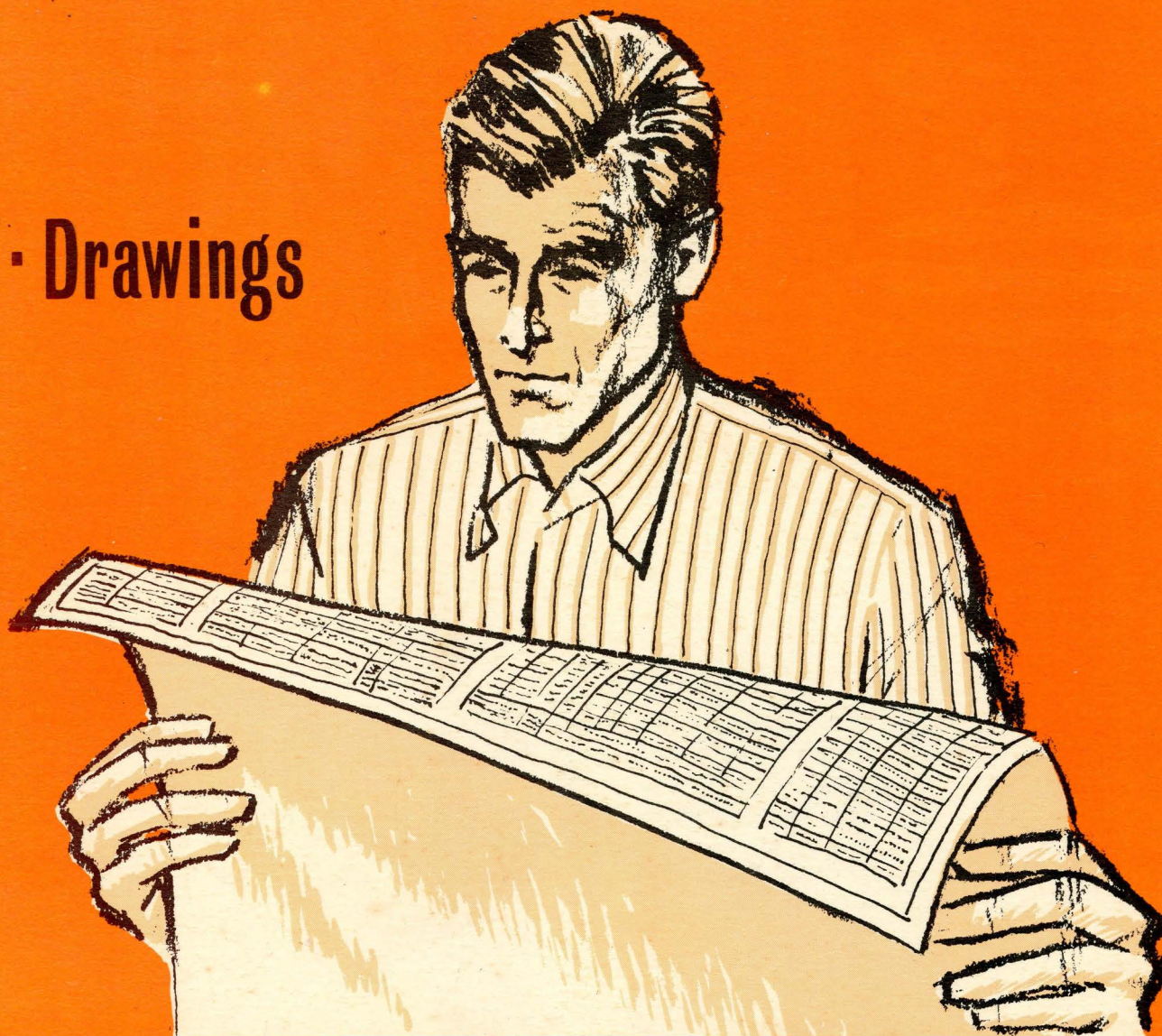


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Section 2



T-Drawings



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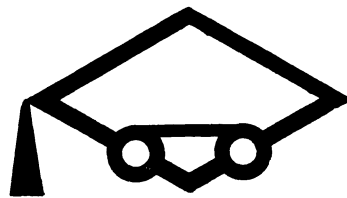
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Training Manual · 1000

Section 2

T Drawings



Section 2

"T" DRAWINGS

<u>LESSON NUMBER</u>	<u>SUBJECT</u>
1	"T" DRAWINGS - Title Block & Issue Notes
2	"T" DRAWINGS - Manufacturing & Engineering Notes - Sheet Index
3	"T" DRAWINGS - Tables
4	"T" DRAWINGS - Point-to-Point Method
5	"T" DRAWINGS - Highway Method
6	"T" DRAWINGS - Airline & Simplified Airline Method
7	"T" DRAWINGS - Wiring Symbols, Wiring Abbreviations Definitions of Wiring and Cabling.
8	"T" DRAWINGS - Tabular "T" Method.
	Drawing T-3D007-11 (Attachments A, B, C, and D)
	Drawing T*65752-16 (Attachments E, F, G, H, and J)

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LESSON NO. 1

"T" DRAWINGS

TITLE BLOCK & ISSUE NOTES

Objectives :

At the conclusion of the lesson you will be able to :

Identify the items which appear in the Title Block of a Western Electric Company Wiring Diagram or "T" Drawings.

Identify the Issue Notes and interpret the information contained in the notes.

The Title Block similar to that shown in Figure 1 will generally contain the following information :

Drawing Title	See A, Fig. 1
Drawing Number	See B, Fig. 1
Sheet Number	See C, Fig. 1
Number of Sheets	See D, Fig. 1
Drawing Rating	See E, Fig. 1
Issue Number	See F, Fig. 1

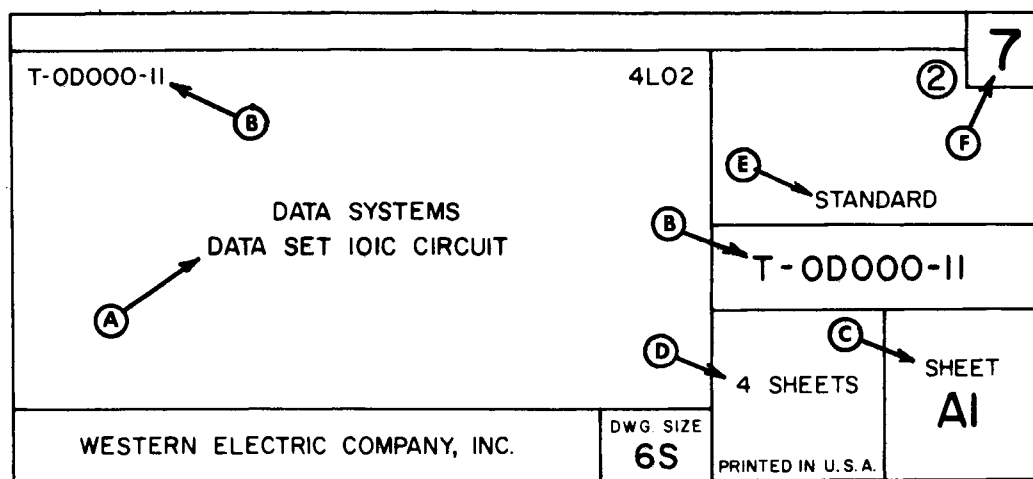


FIG. 1

Base numbers of "T" drawings will be the same as base number of S.D. drawings when prepared from Bell Telephone Laboratories Drawings.

Figure 2 is an illustration of actual S.D. and T drawing numbers.

Schematic Diagram

SD-3D007-01

Wiring Diagram

T-3DC07-11

Fig. 2

The sheet issue number will generally be found in a block at the upper right hand corner of the title block.

It is important that the latest issue of a drawing be used in the repair, modification or conversion of the equipment covered by the drawing.

The sheet number and number of sheet contained in a wiring diagram appear in the lower right hand corner of the Title Block.

Generally the first sheet will be the only sheet to indicate the total number of sheets in a drawing.

All drawings used throughout the Bell System must be rated.

Two ratings will concern users of T drawings Standard and Manufacture Discontinued.

Manufacture Discontinued indicates that equipment is no longer manufactured at the factory; however, it is still in use in the field.

Standard indicates that the drawing agrees with any material published by AT & T on the equipment.

Issue notes indicate, in most cases, all the changes that have been incorporated in a drawing since the original drawing was issued.

LESSON NO. 2
"T" DRAWINGS
MANUFACTURING AND ENGINEERING NOTES
SHEET INDEX AND ISSUE TABLE
SHEET INDEX NOTES

Objectives :

At the conclusion of this lesson you will be able to :

Locate Manufacturing and Engineering Notes on the wiring diagram.

Identify symbols used in conjunction with Manufacturing Notes.

Determine if the manufacturing note relates to the Shop or
Installation.

Identify the Sheet Index and Issue Table and Sheet Index Notes.
Interpret the information contained in the table and its use.

Manufacturing Notes are found on first sheet of the drawing or the first or second sheet if required.

They are numbered in sequence beginning with Note 1.

Manufacturing Notes may contain information which will apply to the Shop or Installation or it will be general information.

To indicate if a note applies to the Shop or to Installation an "X" is placed in either of two columns, which run vertically alongside the notes.

Figures 1 and 2 are examples of Manufacturing Notes.

		MANUFACTURING NOTES	
	SHOP	INST	
A	X		1. WIRES NOT OTHERWISE SPECIFIED TO BE 24BU.
	X		2. "SWI" WIRING TO BE 24BW COLORED GREEN UNLESS OTHERWISE SPECIFIED AND RUN AS SURFACE WIRING.
	X		3. "P" DENOTES PAIR.
	X		4. "PT" DENOTES LEADS PART OF APPARATUS.
		X	5. NO LEADS ON THIS DRAWING ARE TO BE RUN BY THE INSTALLER EXCEPT LEADS DESIGNATED $\varnothing$ AT TERMINAL STRIP.

Fig. 1

		MANUFACTURING NOTES	
	SHOP	INST	
	X		1. WIRES NOT OTHERWISE SPECIFIED TO BE 24BU.
(A)			2. "SWI" WIRING TO BE 24BW COLORED GREEN UNLESS OTHERWISE SPECIFIED AND RUN AS SURFACE WIRING.
	X		3. "P" DENOTES PAIR.
	X		4. "PT" DENOTES LEADS PART OF APPARATUS.
		X	5. NO LEADS ON THIS DRAWING ARE TO BE RUN BY THE INSTALLER EXCEPT LEADS DESIGNATED $\emptyset$ AT TERMINAL STRIP.
(B)	X	X	6. SHOP SHALL FURNISH "S", "Y" & "Z" WIRING IN ALL CASES.
			(A) INSTALLER SHALL REMOVE "S" WIRING AND ADD "R" WIRING WHEN CO NOMINAL VOLTAGE IS 39V OR LESS.
			(B) INSTALLER SHALL REMOVE "S" WIRING AND ADD "X" WIRING FOR ATTENDENT RESTRICTED.

Fig. 2

When no "X" is placed in either column this indicates that the note is general information. See A Figure 2.

In some instances an "X" will be in both columns, this indicates that the note is for both Shop and Installation. See B, Figure 2.

SHOP	INST	MANUFACTURING NOTES
		○----- DENOTES SHIELD CONNECTION —X— DENOTES SPLICE ○ DENOTES CABLE 1. ALL WIRING TO BE 24BW COLORED GREEN UNLESS OTHERWISE SPECIFIED. 2. "F" "F1" BRING FROM CABLE AT SEPARATE STITCH.
X	X	3. LEADS SHOWN TERMINATED IN COMPONENTS WITHOUT TERMINALS ARE FURNISHED WITH COMPONENTS. 4. SHIELDED WIRE TO BE #120 TX17-VL TENSULITE INSULATE WIRE, JUFLON CO. 5. "D2" WIRE TO BE 24BW COLORED GREEN AND RUN AND DRESSED IN PATHS AS SHOWN ON J1D101B-1.
X		6. THE SHIELD TERMINATIONS AT THE FILTERS & 210A TERM WILL BE LEFT UNCONNECTED.
X		7. SLEEVE BOTH ENDS OF THE SHIELDED WIRE CONNECTIONS WITH SLEEVING PER KS17831.

FIG. 3

Whenever any symbols are shown as in Figure 3, generally no note number will be assigned.

However if a symbol is shown in the Manufacturing Notes there will always be a definition given with the symbol.

If a student should encounter a symbol without the definition, the definition can be found in Bell System Practice Section 005-15C-101.

Engineering Notes can include the following :

List of connecting drawings.

Reference to associated equipment drawings.

Reference to tables found on the drawing Wiring Options.

Engineering Notes are intended for the use of the Engineer but can be useful to the Shop or Installation.

Engineering Notes begin with the number 51 and certain notes have been assigned a specific function.

They are as follows :

Note 51 shall be reserved for Western Electric Co. use.

Note 52 shall be reserved for listing connecting drawings.

Note 53 shall be reserved for listing equipment drawings.

Note 76 shall be reserved for explaining a deviation when the Sheet Index Table shows the designation MOD.

Note 77 shall be reserved for explaining an omission when it appears in the Sheet Index Table.

The Sheet Index Table (Table A) is a chart which lists all the sheets that have been issued under a specific drawing number.

It will also indicate the latest issue number of each sheet and the equivalent issue between the Bell Telephone Laboratories Schematic and the wiring diagram.

An example of a typical Sheet Index and Issue Table is shown on T-3D007-11.

This table indicates that Sheet A1 has been revised seven times and that the schematic diagram equivalent is Issue 2 MOD.

The designation MOD is shown only when there is a deviation between a wiring diagram and the schematic.

As was previously stated earlier in this lesson whenever the designation MOD is used, the Engineering Note 76 is used to explain what the deviation is.

Generally the same Sheet Index Notes which are shown on T-3D007-11 appear on all Wiring Diagrams or "T" Drawings.

They can, for all practicable purposes, be considered a set of rules which govern the sheets contained in a drawing and the sheet Index. They do not generally apply to the user of the drawing but primarily to the Engineer responsible for reissuing the individual sheets or the complete drawing.

LESSON NO. 3

"T" DRAWINGS

TABLES

Objectives :

At the conclusion of this lesson you will be able to :

Identify the tables and interpret the information contained in the tables.

Determine the relationship between these tables.

The following are a list of tables that will be found on a wiring diagram :

Record of Figure, Apparatus and Wiring Changes.

Wiring Diagram - Schematic Cross Reference.

Sheet Location of Figures and Options.

Feature Table.

Fuse Requirements.

Cabling Table.

Distributing Frame Requirements.

Interrupter Requirements.

Tables are sometimes referred to as Table B, Table C, etc. Since inconsistencies exist in identifying these tables, they are referred to by their titles.

The code letters which are more commonly used, will be shown in parentheses.

Using the T-3D007-11 wiring diagram provided with this manual, the Record of Figures, Apparatus, and Wiring Changes Table (Table B) indicates the following :

A. Options which affect "T" Drawing and necessitate the reissue of the drawing.

B. Issue of the drawing these options became Standard.

Table B on T-3D007-11 indicates that Option B and C Wiring became Standard on Issue 3 of the drawing (See A, T-3D007-11). It also indicates that Option D was Manufacture Discontinued (MD) on the same issue.

Prior to Issue 3, Option D did not exist as an option, however, it did exist as part of the circuit. The introduction of Option B and C Wiring formulated Option D.

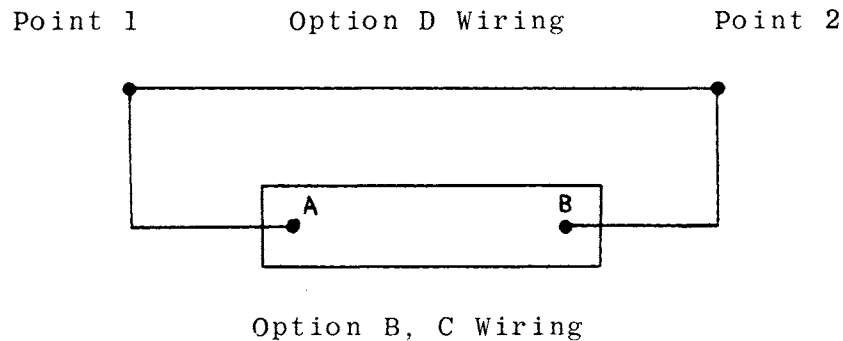


Fig. 1

To explain this briefly, using Figure 1. A wire which runs between points 1 and 2 of a circuit is an original part of the circuit. As an improvement of this circuit a change is introduced. This change will be called Option B and C. The change will now have a wire running from point 1 to point A and from point B to point 2.

With this, the wire running between point 1 and point 2 became option D.

The table mentions Office Records. To Service Center personnel, Office Records are actually "J" Drawing Lists. This being the case the table reads as follows :

If the "J" Drawing Lists do not specify Option B, C Wiring then Option D Wiring was furnished. This change was initiated on Issue 3 of the drawing when Option B, C Wiring was made Standard and Option D was Manufacture Discontinued (MD). MD meaning that units received new from the factory will no longer be furnished with Option D Wiring.

Again using the T-3D007-11 wiring diagram, the Schematic-Wiring Diagram Cross reference Table (Table C) indicates the relationship between sheets of a schematic diagram and a wiring diagram.

As an example :

Figure 1 of the schematic diagram is found on sheets B1, B2 and B3. The corresponding information on the wiring diagram is also in Figure 1 and is found on Sheets 30, 31 and 32. (See B, T-3D007-11).

Option B which is shown on Line 11, is found in Figure 1 on Sheet B3 of the schematic diagram. This same Option B is found on Sheets 30 and 31 of the wiring diagram. (See C, T-3D007-11).

SHEET LOCATION OF FIG. AND OPT.					
FIG.	APPEARS ON SHEET	OPT	APPEARS ON SHEET	OPT	APPEARS ON SHEET
1	3,4,5	A	3,5	ZD	5
		E	3,4,5	ZH	4
		F	3,4,5	ZJ	3,4,5
		G	3,5	ZL	3,4
		H	3,5	ZN	3
		R	3	ZP	3,5

FIG. 2

The Sheet Location of Figures and Options Table (Table D) will simply relate on what sheet of a "T" Drawing the Figures and Options appear.

As an example :

Option ZN appears on Sheet 3 of the drawing.

The Feature Table (Table D) will generally provide the following information : (See D, T-3D007-11)

- A. An option will be assigned an item number.
- B. It will indicate on what issue of the SD the option was applied.
- C. It will give a brief description of what the option will provide.

D. It will indicate the Figure on the drawing affected by the option and if the option is wiring, apparatus or both.

E. It will indicate quantity required.

The Fuse Requirements Table (Table F) will provide all fuse requirements for the circuits covered by the "T" Drawing. (See Figure 3)

TABLE F									
FUSE REQUIREMENTS									
ITEM	FIG	OPT	FUSE		POTENTIAL	DESIG	QUAN	LOCATION	REMARKS
			AMP	CODE					
COL	A	B	C	D	E	F	G	H	J

Fig. 3

The Cable Table (Table G) shown on T-3D007-11 is a typical cable table used on wiring diagrams.

The cable table can vary slightly as shown in Figure 4. In this table more information is given. The cable designation is given for each cable.

TABLE G												
CABLING												
ITEM	FIG	OPT	LEADS PER FIG	CABLES PER UNIT	CODE	FROM	CA DESIG	EQUIP LOC	TO	CA DESIG	EQUIP LOC	REMARKS
COL	A	B	C	D	E	F	G	H	J	K	L	M
1	HB		12	1/FR	811A	JSF	SC-1	(OC)(1C) T.S.	MS			CA IN SHIELD 2 PART OF T*1A129-53
	HA		2					(MISC) T.S.				
3	HB		8	1/FR	811A	JSF	SC-3	(OC) T.S.	CIDF		TS	CA IN SHIELD 3
4	HD	HA				TN(JS)	SC-4	SW 10-17	GRID 0 & GRID 1	JGF	FILE TN ()	SEE NOTE 55 CA IN SHIELD 3 MFR DIS PER ISS 12 OF THIS DWG
							SC-5					
5	HD					TN(JS)	SC-6	SW 10-17	GRID 0 & GRID 1	JGF	FILE TN ()	SEE NOTE 55 CA IN SHIELD 3
							SC-8					
							SC-7 SC-9					
6	HD	HB				TN(JS)	SC-10 SC-12	SW 10-17	GRID 0 & GRID 1	JGF	FILE TN ()	SEE NOTE 55 CA IN SHIELD 3
							SC-11 SC-13					

This may also be classified as a typical cable table.

The Distributing Frame Requirements Table (Table H) is generally used when the "T" Drawing covers PBX Equipment. It will provide information regarding the equipment required on this frame when used in various applications.

There are other tables which occasionally will be used on wiring diagrams. These tables may be assigned any number of titles and code letters. To go into detail in explaining these various tables would serve no useful purpose. The object of this lesson has been to expose the learner to those tables which are more commonly used.

LESSON NO. 4
"T" DRAWINGS
POINT-TO-POINT (FULL LINE) METHOD

Objectives :

At the conclusion of this lesson you will be able to :

Identify and use a wiring diagram that employs the Point-to-Point or Full Line method of preparation.

Identify the various shaped figures that represent components.

Trace any number of wire leads found on this type wiring diagram.

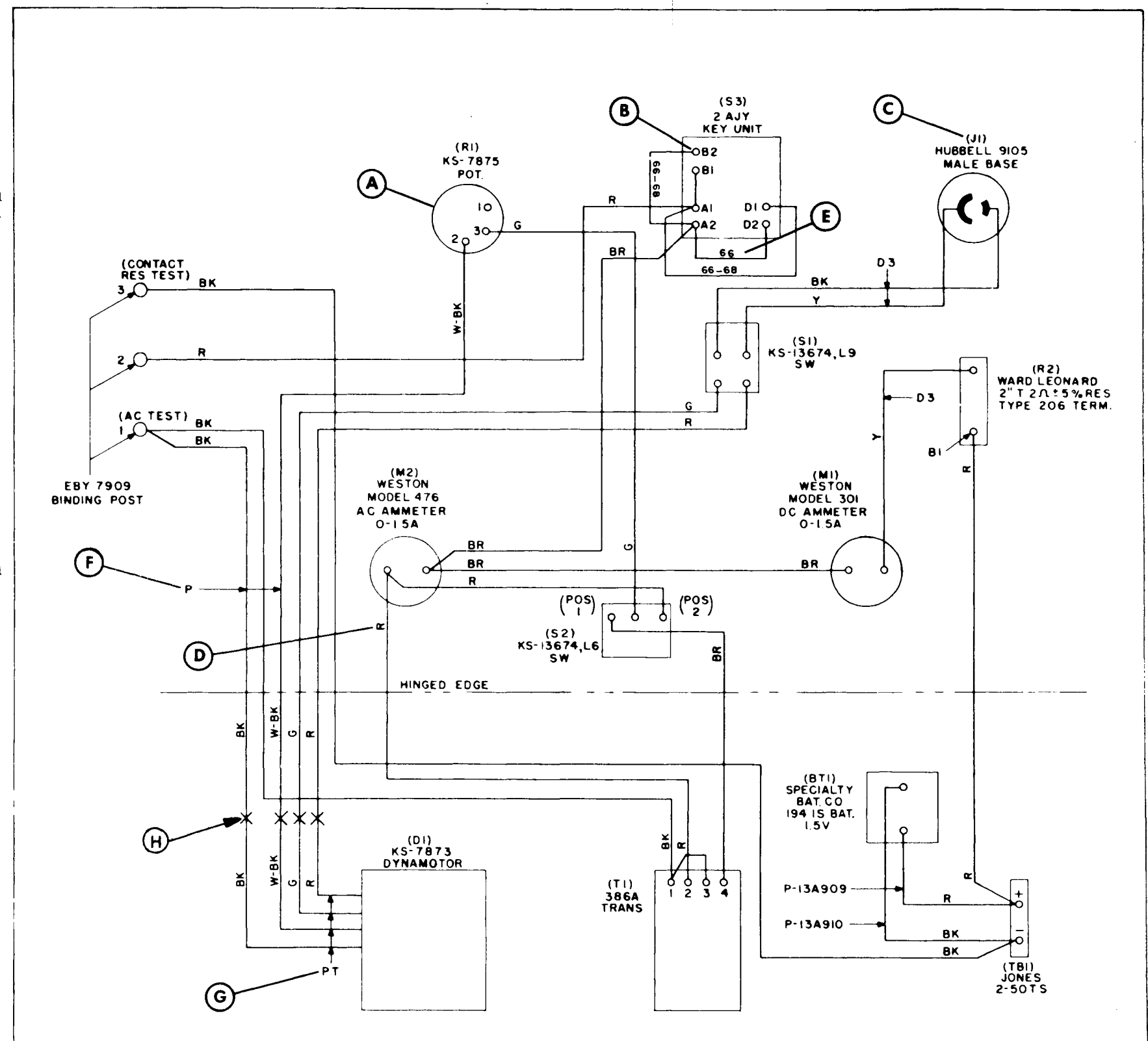
The Point-to-Point or Full Line method derives its name from its basic method of tracing a connection between two points by the use of a separate and continuous line for each wire.

Generally a series of notes are associated with a Point-to-Point wiring diagram. These notes will relate to the figure and provide information regarding soldering methods, splicing, cabling, etc. References to these notes will generally be found somewhere on the drawing.

The notes were the forerunner to the Manufacturing Notes covered in Lesson 2.

By examining Typical Wiring Diagram #1, one can readily see that the full line wiring diagram could very easily become burdensome as the apparatus was made more complex. To determine the path of any lead it is necessary to start at a given terminal of any component and physically trace this lead to its terminating point on another component. The more complex the apparatus became the more leads were involved and the more confusing the wiring diagram was to use. As a result of this complex apparatus the Highway System Methods was introduced in preparing wiring diagrams.

- Ⓐ Components are represented by either a circle or rectangle.
- Ⓑ Each component will indicate terminal numbers. These numbers should agree with those shown on schematic drawing or component itself.
- Ⓒ All components will be identified by a functional designation.
- Ⓓ All leads will be color designated.
- Ⓔ When no color designation is given, but another number is shown this indicates an item number. Item numbers can represent strapping, sleeving or other items.
- Ⓕ Letter "P" indicates paired wires.
- Ⓖ Letter "PT" indicates that these wires are furnished with component. Also known as pigtail leads.
- Ⓗ X indicates splice



Typical Point-to-Point (Full Line) Method Wiring Diagram

LESSON NO. 5
"T" DRAWINGS
HIGHWAY METHOD

Objectives :

At the conclusion of this lesson you will be able to :

Identify and use a wiring diagram that employs the Highway Method of preparation.

Identify the various shaped figures that represent components.

Trace any number of wire leads found on this type wiring diagram.

Generally, components symbols are shown as rectangles drawn with a heavy line. The windings, filaments, contacts and spring combinations are shown within these rectangles.

A functional designation is used to identify the components.

The components and wiring generally are arranged in one or more designated figures. Usually the size of the circuit determines the number of figures required.

All lines representing wire leads in a Highway Method drawing will be classified either Feed Lines or Highway Lines.

Feed Lines are individual wires coming from each component. Usually these lines are a short distance and then merged into a Highway line.

Feed Lines merge into a Highway at an angle of 60° and in such a manner as to indicate the direction of travel through the Highway.

All Feed Lines are arbitrarily numbered beginning with number one. This number is generally referred to as an identification number.

The same identification number will appear at the two Feed Lines representing the originating and terminating ends of a connection.

Generally there will not be more than (99) Feed Lines merged into the same Highway.

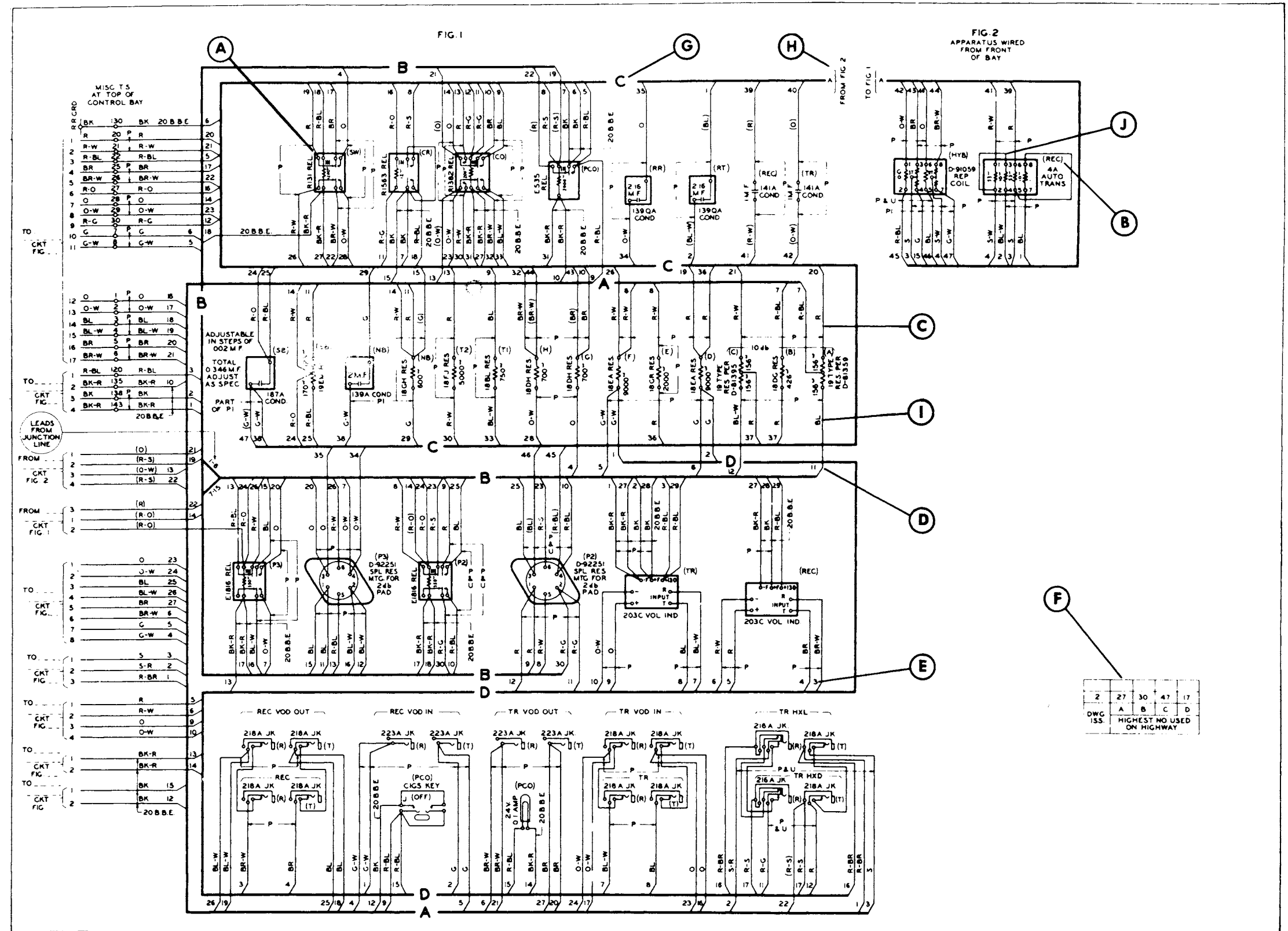
More than one Highway may be used on a wiring diagram. If a drawing employs two or more highways they are prominently designated A, B, C, etc.

Most Highway drawings will include a table which is generally located above the title block that will indicate the highest numbered Feed Line in each Highway.

Each wire lead will be color designated at both the originating and terminating ends.

Straps between terminals of the same or adjacent components are not run into a highway, but instead are run direct.

- Ⓐ Windings, filaments, contacts and spring combinations are shown within components.
- Ⓑ Functional designation, same type used in point-to-point drawing.
- Ⓒ Feed Lines.
- Ⓓ Angle feed line merges into highway.
- Ⓔ Feed Line Identification Number. Originating and Terminating ends.
- Ⓕ Feed Line Table.
- Ⓖ Highway designations.
- Ⓗ Highway bracket and designated when highway is common to two figures.
- Ⓘ Wire lead color designation.
- Ⓙ Straps not run into highway on the same or adjacent components.



Typical Highway Method Wiring Diagram

LESSON NO. 6
"T" DRAWINGS
AIRLINE AND SIMPLIFIED AIRLINE
METHOD

Objectives :

At the conclusion of this lesson you will be able to :

Identify and use a wiring diagram that employs the Airline or Simplified Airline Method.

Trace any wire lead found on these type wiring diagram.

Basically the components or apparatus on an Airline drawing are arranged in the same manner as on the Highway method.

Each component or portion of a component in the Airline Method is designated with a Location Number. (See (A) on typical wiring diagram #3.)

These Location numbers are assigned consecutively for the entire drawing, from left to right, and top down for each figure.

When more than one sheet per drawing is used, the connections between components on different sheets can be shown direct by the use of these Location numbers. This is accomplished by assigning Location numbers 1 to 99 for the first sheet, 100-199 for the second sheet, 200-299 for the third sheet, etc.

This is only one of the systems used in assigning Location numbers. T-3D007-11 employs the systems where the page number precedes the location number.

Generally when a multisheeted drawing is used which assigns location numbers as described above, a table will be shown depicting these assignments.

Drawing No.	Location No.
T-65752-11	1-99
-12	100-199
-13	200-299
-14	300-399
-15	400-499

Fig. 1

Figure 1 represents a typical table used to show Location Number assignments.

Feed lines which represent wire leads are basically the same in the Airline Method as in the Highway Method. They do differ in that they merge into a Base Line instead of a Highway line and at a 90° angle instead of a 60° angle. (See (C) on typical wiring diagram #3.)

All Feed Lines will have a color designation unless it is SW1 surface wire. The gauge of the surface wire will be indicated in the Manufacturing Note. (See (C) on typical wiring diagram #3.)

All the miscellaneous apparatus, such as cord fasteners, terminal punchings, etc., are not assigned individual Location numbers, but, instead, are arranged in groups. The extent of each group is indicated by a bracket, and then each bracket is given one location number. (See (B) on typical wiring diagram #3.)

With a few minor exceptions the Simplified Airline Method is essentially the same as the Airline Method.

These minor exceptions are as follows :

1. Windings, spring and contact symbols are omitted from the component symbols.
2. One Feed Line will generally represent all wires, both surface and local cable wiring.
3. Pairing of wires may be shown in a table instead of using the symbol directly on the drawing.

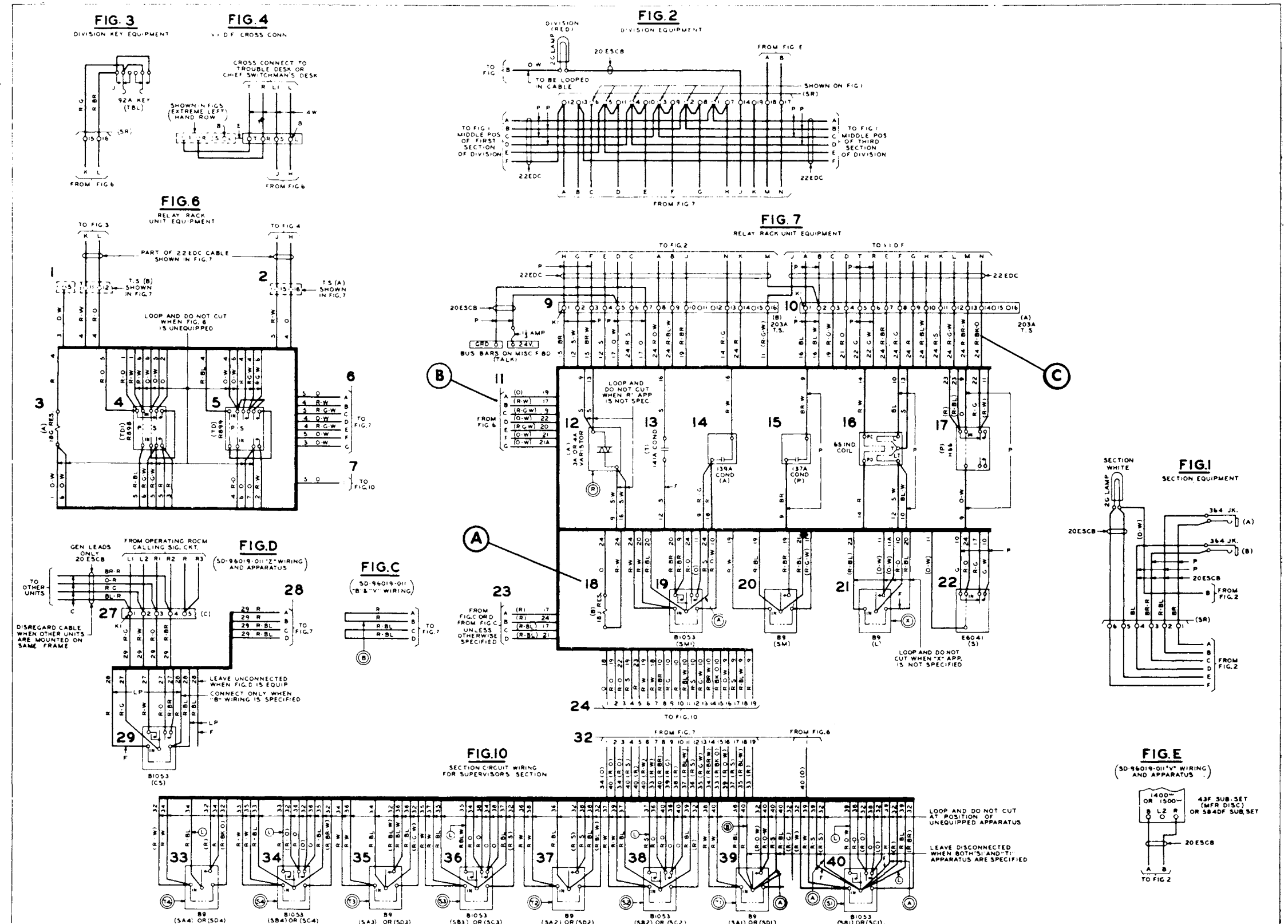
4. All relay terminals will be numbered as on an SD Drawing.

These numbers of course do not appear on the actual relay.

The Typical Simplified Airline Wiring Diagram shows these minor differences.

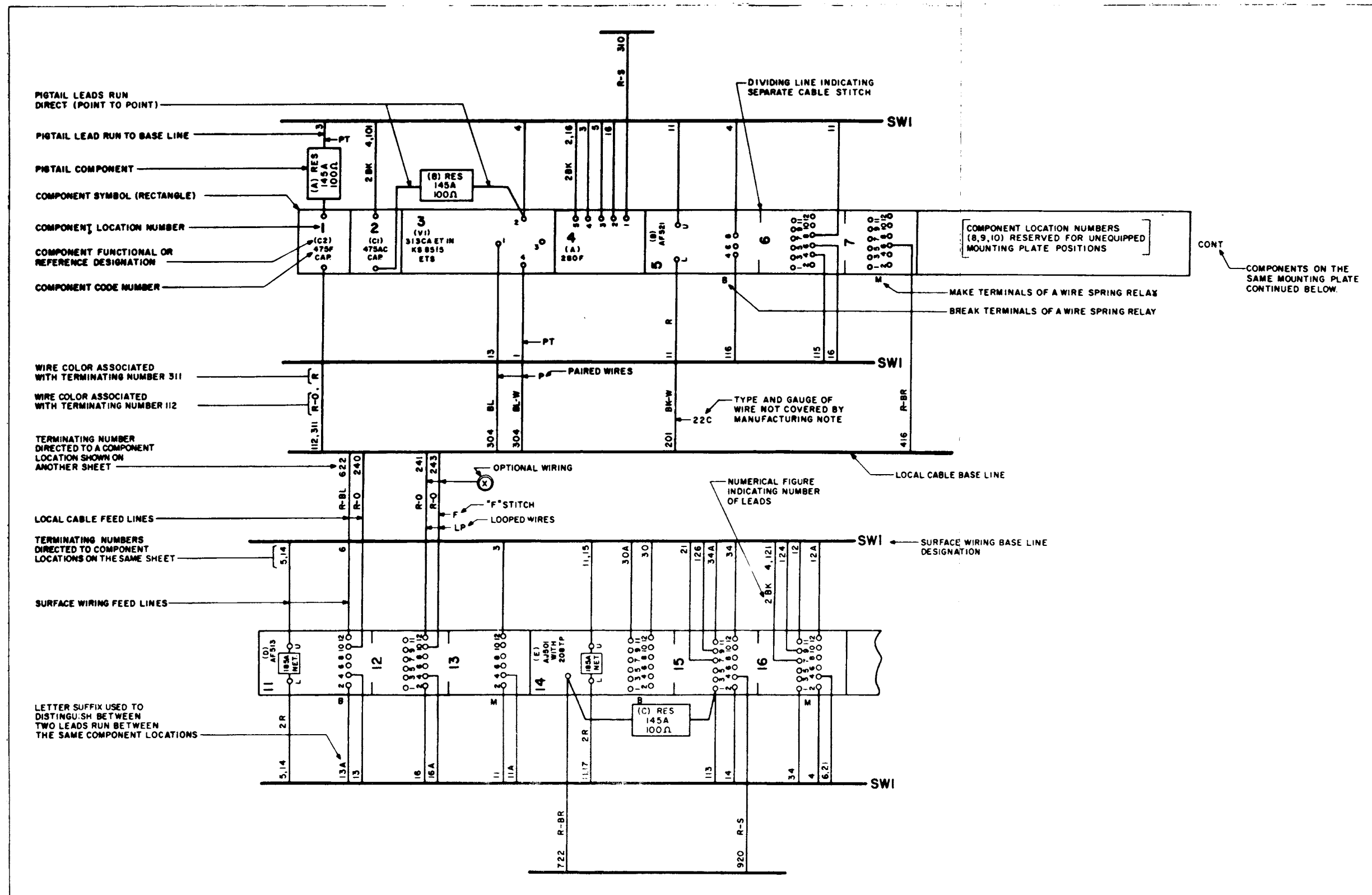
The guide that is also included in the section will aid the student in reading both the Airline and Simplified Airline Wiring Diagram.

- (A) Component location number
- (B) Connections between figures utilizing bracket method
- (C) Feed line



Typical Airline Method Wiring Diagram

TYPICAL WIRING DIAGRAM # 3



Guide to Terminology Used With the Simplified Airline Method

LESSON NO. 7
"T" DRAWINGS
WIRING SYMBOLS, WIRING ABBREVIATIONS
DEFINITIONS OF WIRING AND CABLING

Objectives :

At the conclusion of this lesson you will be able to :

Identify the more commonly used wiring symbols on all type wiring diagrams.

Become familiar with the Bell System Practice which covers all symbols wiring abbreviations and wiring and cabling definitions.

If the symbol "AT" is shown on a drawing this indicates that the wire is not to be connected until after the shop tests are completed.

Generally all symbols will be shown on the drawing close to the Feed Line or Lines and then an arrow will be drawn coming from the symbol pointing to the wire affected.

An example of this is shown in Figure 1.

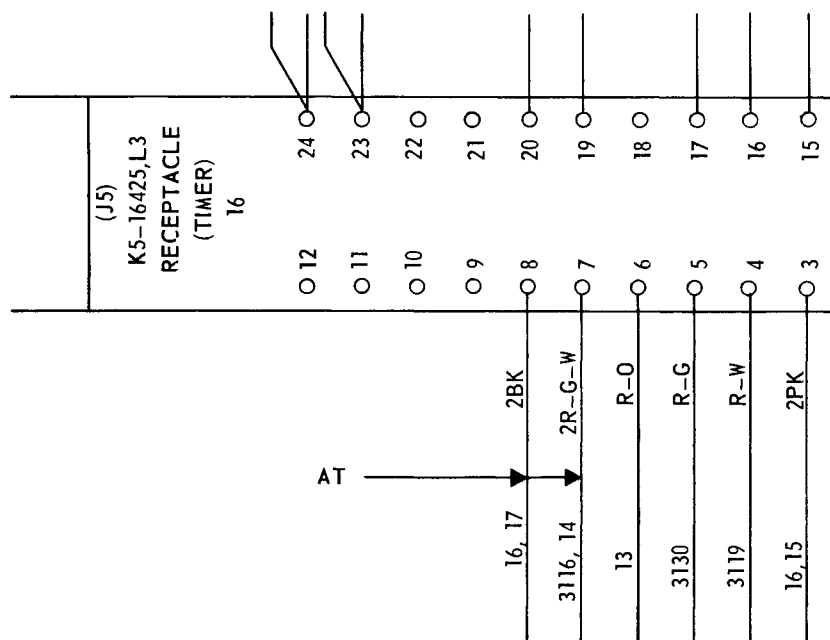


Fig. 1

Figure 1 is used to give an example of how many will be shown on a wiring diagram. This could apply to the "PT" symbol or "P" symbol or any of the other symbols.

Since the student package contains the Bell System Practice covering all symbols, they are not listed here.

The same will hold true for the wiring terms that are used on wiring diagrams.

LESSON NO. 8
"T" DRAWINGS
TABULAR "T" METHOD

Objectives :

At the conclusion of this lesson you will be able to :

Identify and use a wiring diagram that employs the Tabular "T" Method of preparation.

Trace any number of wire leads found on this type wiring diagram.

Locate components using the Coordinate Locating Numbers.

There are three sections in a Tabular "T" wiring Diagram. Sections A, B and C.

Section A consists of essentially the same information contained in the pictorial type wiring diagram "A" Sheets.

A pictorial type wiring diagram is the type drawing covered in the previous lessons. Point-to-Point, Highway, Airline and Simplified Airline.

Section B contains a complete list of all internally wired components in alphabetical and numerical order per Functional Designation.

The list serves as an index to the appearance of each component terminal that is used.

Section C contains detailed wire run information arranged numerically from Run Number 1 and up.

The definition of a run is as follows :

" All points connected together with zero resistance without going through a set of contacts."

The easiest method for identifying a Tabular T drawing is to look at the drawing number. If an asterisk (*) replaces the dash (-) between the T and the base number this indicates a Tabular T drawing.

A typical "T" drawing number is shown below :

T*12345-11

The Title Block on the Tabular "T" drawing is identical to the title blocks found on other wiring diagrams.

As was stated previously Section B contains a complete list, among other things, of all wired components. Figure 1, shows a typical portion of the B Section.

FIG. 8/OR OPT	COMPONENT		
	FUNCT DESIG	TYP	CODE
	LOC	TERMINAL	RUN WITH OPTION
1	A 1A012	REL IM	AF11 1/X/,2/Y/
2	A 9A157	TS 12	D5A 4
1	CH 1A056	REL 5	AF17 2
2	MB 5A097	REL L U	AF51 1/X/,3/Y/ 4
1	TI 1A101	INDR 1/IB	1640E 1/X/,2/Y/
2	UA 6A062	REL IM	AF11 6

Fig. 1

A Indicates the figure, option, type and code.

B Indicates functional designation in alphabetical - numerical order.

C Indicates type and code - Example : A is a AF11 Relay.

D Indicates the component coordinate number. Used to describe the components relative position to a local cable.

Also indicates the terminal number used on the component.

E Indicates the run number and option when required.

F Indicates the schematic number and identifying number.

If only one number is shown this represent the schematic number.

Figure 2 shows the use of Coordinate Location Numbers as used on a double bay frame.

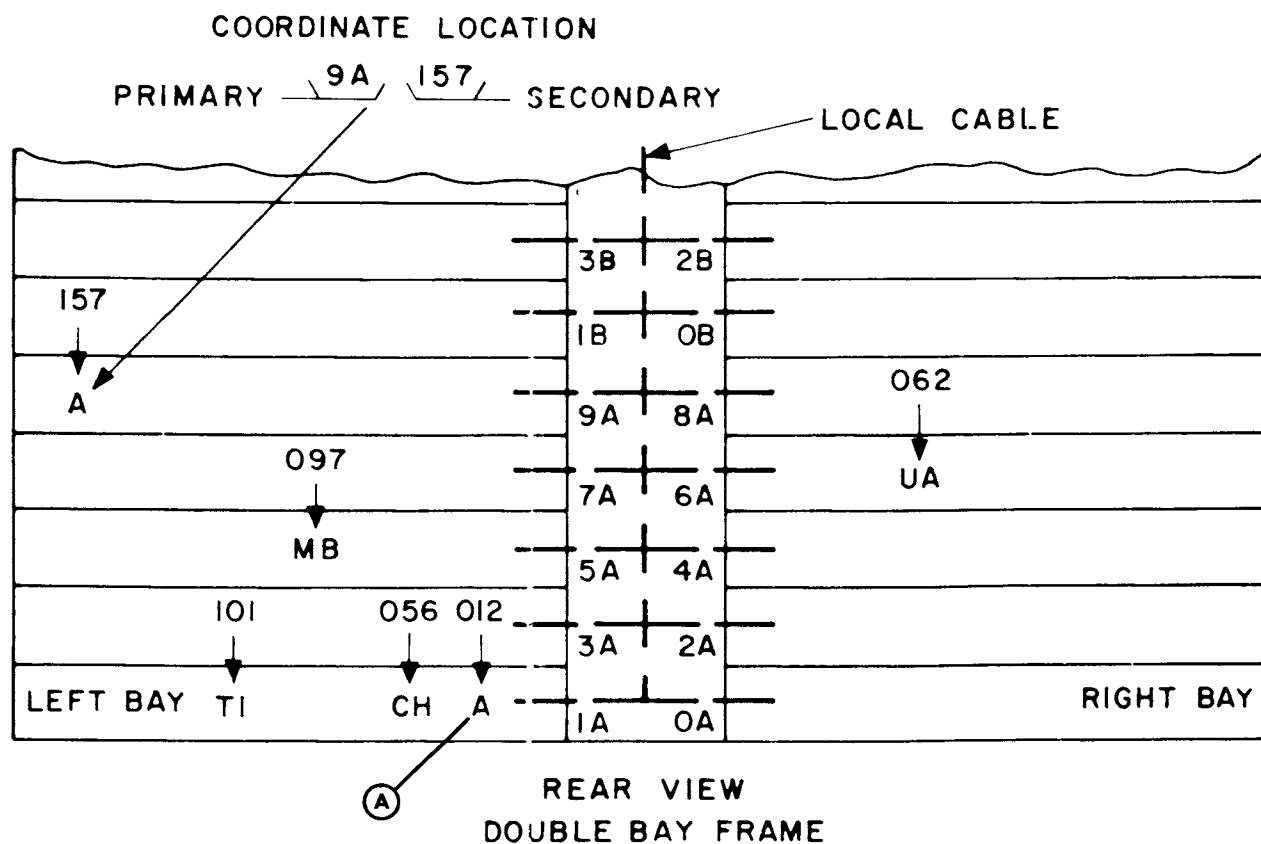


Fig. 2

A Indicates the location of component A with the coordinate number 1A012.

1A is the Primary Ordinate and (012) is the Secondary Ordinate.

Using the Primary and Secondary Ordinates any component on a frame can be located.

Using the first Coordinate Location number shown in Figure 1, which is 1A012. It indicates that this component, the AF11 Relay, is located in relation to the local cable as follows :

The 1 which is an odd number indicates the left bay, where a two bay configuration is used. The A indicates the first series of odd numbers ie: 1A, 3A, 5A, 7A & 9A. Together these indicate the first horizontal leg of the cable, one inch up from the bottom. Each subsequent odd number indicates an additional two inches upward. The 012 indicates that the component is 12 $\frac{1}{8}$ inch increments over to the left or $(12 \times \frac{1}{8})$ 1 $\frac{1}{2}$ inches to the left of the butt end of the leg. (See A, Figure 2)

The above explanation of coordinate location numbers applies to a double bay with the cable being fed into the center. This is only applicable to the double bay configuration.

When a single bay is used then the component locating is simplified. Generally the cable will be on the left side with the horizontal legs feeding to the right. The primary ordinate in this case will always be even, however it would be easier for the student to just remember that the secondary ordinates indicates that the component is so many increments from the butt end of the cable leg, regardless which side, left or right, the cable is on.

On the same line with the coordinate location in Figure 1, is the terminal number. This indicates one terminal of the component one wire of a run is connected to. (See D, Figure 1)

When two numbers are shown separated by a slash (/), the number on the left indicates the schematic number the number to the right is the identifying number. (See F, Figure 1) Generally a note will appear on the tabular wiring diagram explaining the identifying number.

This note will read as follows :

A slash line (/) in the terminal column separates the schematic number on the left from the identifying number shown to the right of the slash. Identifying numbers locate :

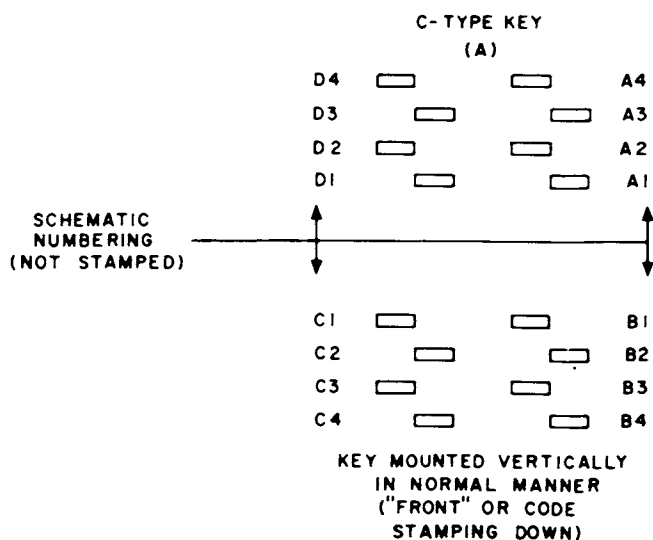
A. Terminals in horizontal rows. Number 1 and up, left to right - suffix T, M, or B indicates top, middle or bottom row.

B. Terminals in vertical rows. Number 1 and up, bottom to top - suffix L or R indicates left or right row.

It should be noted that in general, identifying numbers are assigned for each individual usage and the relationship between the schematic numbering and identifying numbers may vary according to mounting arrangement. An example of the use of identifying numbers is shown in Figure 3.

Identifying numbers are used to locate terminal numbers on keys, inductors, potentiometers, lamp sockets, transformers etc.

Figure 3 is an example of the use of identifying numbers on a C-Type Key.



COMPONENT		
TYPE	FUNCT DESIG	TERM NO.
KEY	A	C4/1L C3/2L C2/3L C1/4L D1/5L D2/6L D3/7L D4/8L B4/1R B3/2R B2/3R B1/4R A1/5R A2/6R A3/7R A4/8R

**MANNER IN WHICH DOUBLE
TERMINAL NUMBERS APPEAR
IN SECTIONS B AND C OF
TABULAR WIRING DIAGRAM
(PARTIAL SECTION C SHOWN)**

Fig. 3

When it is required to identify a terminal on a terminal strip a coordinate numbering system is used. Since the coordinate numbering systems vary, the best method for determining which system is used is to check the card catalog.

The figures shown on the next page are some of the typical Coordinate Numbering Systems used for various terminal strips.

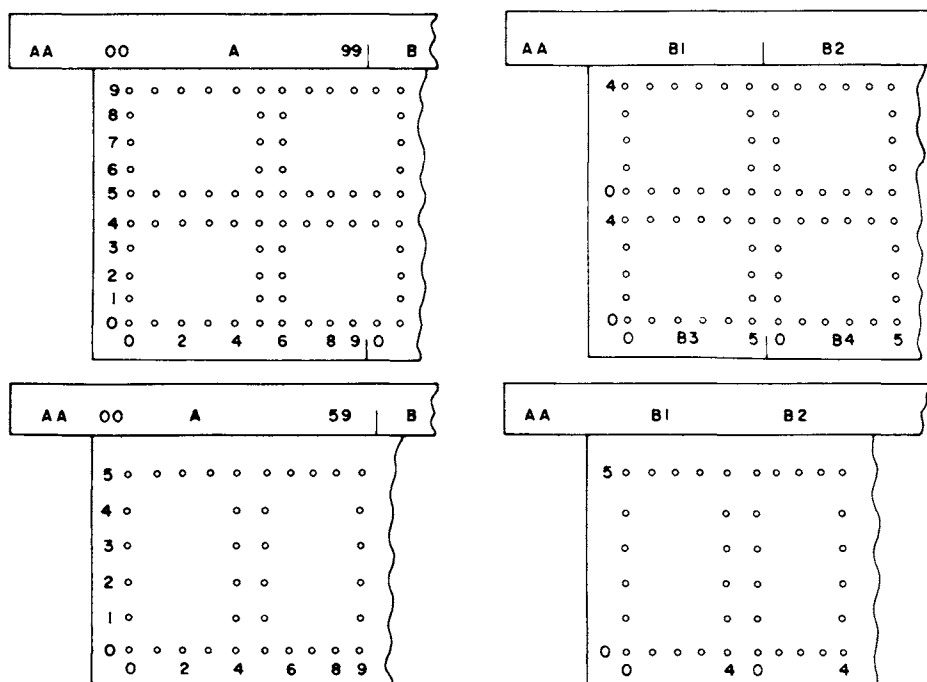


Fig. 4

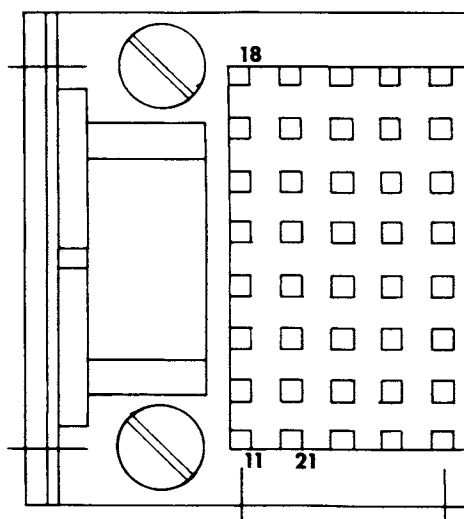


Fig. 5

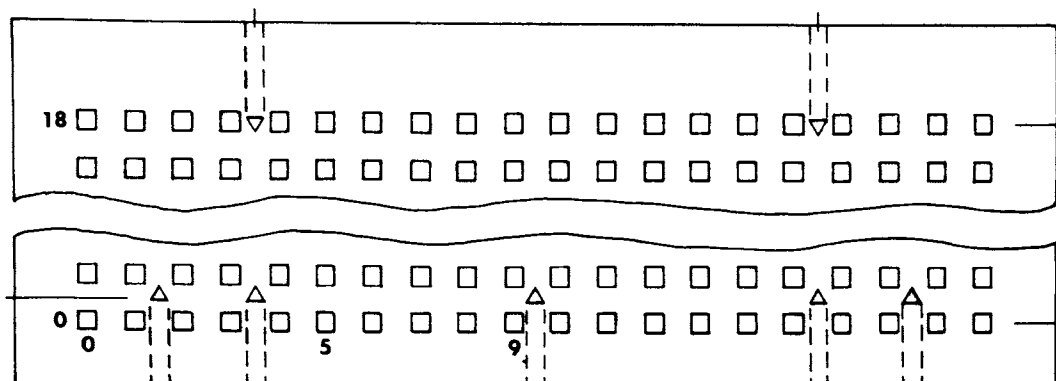


Fig. 66

The last item found on the same line with coordinate location number and terminal number is the run number or numbers along with an associated option (See E, Figure 1)

The run number shown in this typical portion of B Section list, indicates what terminal of the component is associated with a particular run. If the run number is shown next to a slash (/) then it will also show the option associated with the run.

Looking at "E" Figure 1. it indicates that the 1M terminal of the A relay has a wire from Run 1 with "X" option, and a wire from Run 2 with "Y" option, connected to it.

Following the complete list of components found in Section B, is another list. This is a complete list of all pigtail component used in the wiring diagram. A typical pigtail component list is shown in Figure 7.

S P Y T M	FIG OR OPT	PT COMPONENT									MFR NOTE
		FUNCT DESIG			CODE	TYPE		VALUE	COLOR CODE		
		C P O R I R	FROM			C P O R I R	TO				
			TYPE	FUNCT DESIG			TERM NBR		TYPE	FUNCT DESIG	
AA	2,X	OL		185 A		NET					
		OA	REL	OF		2M	OA	REL	OF		2
AB		R22		KS -19152,L2		RES		3900 OHMS		O-W-R-SLVR	
			POT	R21		2		TERM	TM		4
AC		R20		145 A		RES		0.1 MEG			
			ETS	TM		1		TERM	TM		4

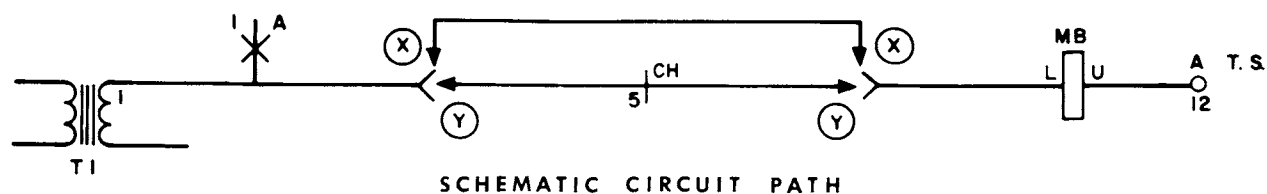
Fig. 7

This list indicates the Functional Designation, Code, Type, Value and Color Code of the pigtail component. It also indicates the "From" and "To" connections. Using the first pigtail component shown in Figure 7 as an example : this component is connected from terminal 2M of the OF relay to terminal 2 of the OF relay. It is a 185A Network.

The second pigtail component shown in Figure 7 is connected to terminal 2 of the R21 Potentiometer and terminal 4 of the TM terminal strip. It is a KS-19152, L2 Resistor 3900 ohms.

The final section to be covered is Section C. This section provides a list of all the Runs associated with a wiring diagram. These runs are presented in numerical order.

Figure 8 illustrates a typical portion of Section C.



(A)

RUN NO.	WITH OPTION	COMPONENT			WRG OPT	MFR NOTE	WIRE			WRG CONV SYM
		TYPE	FUNCT DESIG	TERM NO			METH	COLOR	PATH	
1	X	INDR	TI	1/IB			SWI			
		REL	A	IM	X	6	LC	BL		
		REL	MB	L						
2	Y	REL	A	IM			SWI			
		INDR	TI	1/IB	Y		SWI			
		REL	CH	5						
3	Y	REL	CH	5B	Y		LC	BL		
		REL	MB	L						
4		TS	A	12			SWI			
		REL	MB	U						

Fig. 8

The first column on the left indicates the Run Number. (See A. Figure 8)

The second column "With Option", indicates that the option is required to furnish or provide a given run. If no option is shown, the run is furnished all the time.

Run Number 1 in Figure 8 is read as follows :

Terminal 1/1B of the T1 inductor is connected to terminal 1M of the A relay by a green surface-wire SW1 lead: terminal 1M of the A relay is connected to terminal L of the MB relay by a blue local cable wire. ("X" wiring option)

Run Number 2 consists of the following :

Terminal 1M of the A relay is connected to terminal 1/1B of the T1 inductor by a green surface-wire SW1 lead: terminal 1/1B of the T1 inductor is connected to terminal 5 of the CH relay by a green surface-wire SW1 lead. ("Y" wiring option)

Run Number 3 consists of the following :

Terminal 5B of the CH relay is connected to the lower relay winding terminal of the MB relay by a blue local cable wire ("Y" wiring option)

Run Number 4 consists of the following :

Terminal 12 of the A terminal strip is connected to the upper relay winding terminal of the MB relay by a green surface-wire SW1 lead.

Schematic Circuit Path illustrated in Figure 8 represents the four runs just previously covered.

With the Schematic Circuit Path as an illustration it can readily be seen how any given lead can be traced using Section C and the correct run as a reference.

The Section C list contains additional information in other columns, there is the Wire Column, which will indicate the method, color and path of a lead used in a run. The path column will be filled in only when an actual path of a wire is required.

The last column shown on the list is a Wiring Convention Symbol Column. Symbols shown in this column are described in Section A under Manufacturing Notes. Anytime a wiring convention symbol is used the manufacturing notes will give an explanation or description of the symbol. Once again it becomes apparent that it is necessary for a user of any type wiring diagram to read all Manufacturing Notes.

Included in this package are a Typical Tabular T Wiring Diagram and a Typical Simplified Airline Wiring Diagram.

These typical wiring diagrams represent only two of the five types of wiring diagrams in existence. However the Simplified Wiring Diagram can be classified presently as the most widely used method and the Tabular T Wiring Diagram will soon become the most widely used method. This is the reason why these diagrams are included in this package.

TABLE A SHEET INDEX & ISSUE TABLE											
SD & T DRAWING SHEETS ARE IN AGREEMENT AS FOLLOWS-											
WIRING DIAGRAM	SHEET NO	SD	2	2	2	2	2	2	2	2	2
RT'G	ISS	ISS	ISS	ISS	ISS	ISS	ISS	ISS	ISS	ISS	ISS
	A1		1	2	3	4	5	6	7		
	30		1	2	3	4	5	6	7		
	31		1	2	3	4	5	6	7		
	32		1	2	3	4	5	6	7		

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

TABLE B RECORD OF FIGURES, APPARATUS AND WIRING CHANGES											
CHANGED ON ISSUE	IF OFFICE RECORDS SPECIFY	DO NOT SPECIFY	THIS OPTION WAS FURNISHED	ITEM NBR	STD	A B M	MD	SPL	RATING		
3		B.C. WRG	D.WRG	4	B.C						
6		R.O. WRG	Q.WRG	5	R						
6		V APP	NONE	6	V						

- MANUFACTURING NOTES**
- DENOTES SHIELD CONNECTION
 - ✕ DENOTES SPLICE
 - DENOTES CABLE
 - 1. ALL WIRING TO BE 24AW COLORED GREEN UNLESS OTHERWISE SPECIFIED.
 - 2. "F", "F1" BRING FROM CABLE AT SEPARATE STITCH.
 - 3. LEADS SHOWN TERMINATED IN COMPONENTS WITHOUT TERMINALS ARE FURNISHED WITH COMPONENTS.
 - 4. SHIELDED WIRE TO BE #120 TX17-VL TENSULITE INSULATED WIRE.
 - 5. "D2" WIRING TO BE 24AW COLORED GREEN AND RUN AND DRESSED IN PATHS AS SHOWN ON J1D101B-1.
 - 6. THE SHIELD TERMINATIONS AT THE FILTERS & 210A TERM WILL BE LEFT UNCONNECTED.
 - 7. SLEEVE BOTH ENDS OF ALL SHIELDED WIRE CONNECTIONS WITH SLEEVING PER KS-7851.
 - 8. CONNECTING INFORMATION FOR SHIELDED WIRE SHOWN ON SJ1D101-1.
 - 9. "SH" DENOTES SHARK CONNECTION.
 - 10. P-PAIR
 - 11. LEADS TO BE RUN BY THE INSTALLER
 - 12. WHEN OPTION "5" IS REQUIRED INST WILL REMOVE STRAP AT TERM 53-54 & RELOC TO TERM 51-52.
 - 13. SLEEVE ALL 195A NETS WITH KS-7851 (18GA) SLEEVING OR EQUIV.

TABLE D FEATURE TABLE											
ITEM	SD	SS	DATE APPLIED	SPECIFY T-30007-11	FIG	QUAN	WRG	APP	AUTOMATIC	REMARKS	
1	1	8-1-62		DATA SET 101C CIRCUIT FOR USE WITH TTY EQUIPMENT ARRANGED FOR FULL DUPLEX OPERATION.	1	1	G			SEE NOTES 55 & 56	
2	1	8-1-62		PROVIDES FOR CONNECTION REQUIRED WHEN CONNECTING CIRCUIT IS ARRANGED TO TRIP RINGING BOTH DURING THE SILENT AND RINGING INTERVAL.	[1]	1	I				
3	1	8-1-62		PROVIDES HALF DUPLEX CONNECTION	[1]	1	X				
4	3			PROVIDES FOR USE WITH FUTURE AUXILIARY DATA SETS	[1]	1	C,D				
5	3			ALWAYS PROVIDED ON NEW DATA SETS ARRANGES FOR DATA PHONE SERVICE	[1]	1	R			SEE NOTE 57	
6	3			PROVIDES APPARATUS FOR DATA PHONE SERVICE	[1]	1		V			
17	1	8-1-62		PROVIDES FOR CONNECTION REQUIRED WHEN CONNECTING CIRCUIT IS ARRANGED TO TRIP RINGING ONLY DURING THE SILENT INTERVAL.	[1]	1	S				

TABLE C SD-T DWG CROSS REFERENCE & SHEET LOCATION TABLE											
W.E. CO. ASSIGNED WIRING DIAGRAM FIGURES AND OPTIONS ARE PREFIXED WITH LETTER H AND MAY OR MAY NOT HAVE A SCHEMATIC EQUIVALENT. ITEMS IN () PARENTHESES ARE FOR INFORMATION ONLY AND ARE NOT TO BE RECORDED ON JOB WIRING LIST.											
LINE	SD	T	FIG	WRG	APP	SHEET	REMARKS				
1	61,2,3	1				30					
2	61,2,3	1				31					
3	61,2,3	1				32					
5	61,2,3	(1)	G	(1)	G						
6	61,2,3	(1)	H	(1)	H						
7	61	(1)	X	(1)	X	30					
8	61	(1)	S	(1)	S	30					
9	61	(1)	T	(1)	T	30					
10	C1		(1)			30	CONNECTING COORD				
11	63	(1)	G	(1)	G	30,31					
12	63	(1)	C	(1)	C	31					
13	63	(1)	D	(1)	D	31					
14	61,63	(1)	R	(1)	R	30,31					
15	G1	(1)	O	(1)	O	30					

TABLE G CABLING											
ITEM NO	FIG	LEADS PER FIG	CABLES PER UNIT	SD DESIG	CODE	FROM	EQPT LOC	TO	EQPT LOC	REMARKS	

ISSUE NOTES

8-1-62
R.O.S. WRG 1

ON SH 31 LOC 12 TERM 99T LEAD 31SE LEAD 31T LOC 13 TERM 203. BL LEAD TO 3012 RNM LOC 13 TERM 203. SH 31 LOC 37 TERM 1 LEAD READ 28K. 32, 302 LOC 32 LEAD 302 ON SH 31 LOC 37 ON SH 32 LOC 13 TERM 11 BL LEAD TO 3013 RNM LOC 17 TERM 8 BK LEAD FROM 3017 ADDED 11-5-63 CL D

8-2-62
E.P.B. 2

10 WIRING WAS NOT DESIG "B" & "C" WIRING ADDED 2-5-65 CL B

8-22-65
J.H. 3

SH 31, LOC 14, TERM 9 LD TO LOC 25 "G" 3211B, LOC 25, TERM 7B LD TO LOC 14 DESIG "H" OPT. SH 32, LOC 11, TERM 7 READ "3114" DESIG "H" OPT. TERM 13 "3114" READ "3114" 6-22-65 CL AD

8-2-65
J.H. 4

ON SH 31, FEATURE TABLE ITEM 10 WRG ADDED SH 31 LEAD BETWEEN 7B (M) RELOC OF 210A TERM LEAD BETWEEN TOP OF 210A TERM 4 LOC 14 & TERM 7 OF (J) RELOC ON SH 32 WERE NOT DESIG "G" WRG NOTE SH ADDED 8-20-65 CL A

8-2-65
J.H. 5

ON SH 31, FEAT. RE. TABLE ITEM 4,6, NOTES 51, 52, 53 ADDED ON SH 31, LOC 205, 21, "R" WRG WAS NOT DESIG. ON SH 32, AT LOC 14, "R" WRG ADDED. AT LOC 11, TERM 13, "R" WRG ADDED. TERM 13, "R" WRG ADDED. TERM 13, "R" WRG ADDED. ON SH 32, AT LOC 12, "R" WRG WAS NOT DESIG. AT LOC 11, "R" WRG ADDED. AT LOC 11, "R" WRG WAS NOT DESIG. AT LOC 11, "R" WRG ADDED. 7-1-65 CL B

ISSUE NOTES (CONT)

21 SH 31 LOC 27 TERM "2M" LEAD "3213" READ "3213A" 3-14-69 CL AD

28 SH 31 LOC 27 TERM "2M" LEAD "3213" READ "3213A" 3-14-69 CL AD

(ENGINEERING NOTES CONT'D)

ENGINEERING NOTES

51. FOR APPLICATION OF FIGURES & OPTIONS SEE FEATURE TABLE.
52. ORIGINAL CONNECTING DRAWINGS: PWR SUPPLY CKT T-81536-11
53. EQUIPMENT ARRANGEMENT: J1D101C-1 J1D101B-1 MOD. #
- * UNITS MODIFIED FROM SD-30006-01 TO SD-30007-01
54. ITEMS DESIGNATED WITH AN ASTERISK CONTAIN FIGURES OR OPTIONS REQUIRED BUT NOT COVERED ON J1D101C-1.
55. "H" WRG & APP OF FIG 1 IS NOT A FUNCTIONAL PART OF SD 30007-01 BUT CONSISTS OF WIRING AND APPARATUS FURNISHED IN THE 1013 DATA SET J1D101B-1 PER SD-30006-01 AND RETAINED WHEN THE 1013 SET IS CONVERTED TO A 101C SET PER SD-30007-01.
56. "G" WRG OF FIG 1 IS PROVIDED IN THE 101B DATA SET PER SD-30006-01.
57. WHEN R WRG IS ADDED AND H WRG IS IN PLACE, DISCONNECT THIS LEAD. (PART OF H WRG).

76 MOD OF SD-30007-01 CONSISTS OF ADDING CHANGES PER SD 24, 28, 20 & 2E TO BE APPLIED ON ISSUE 3

T-30007-11 4L02

DATA SYSTEMS DATA SET 101C CIRCUIT

STANDARD T-30007-11

4 SHEETS SHEET A1

APPARATUS ENGINEERING INFORMATION WESTERN ELECTRIC COMPANY, INC 6S

T-30007-11
A1

1-3D007-11

31

SHEET

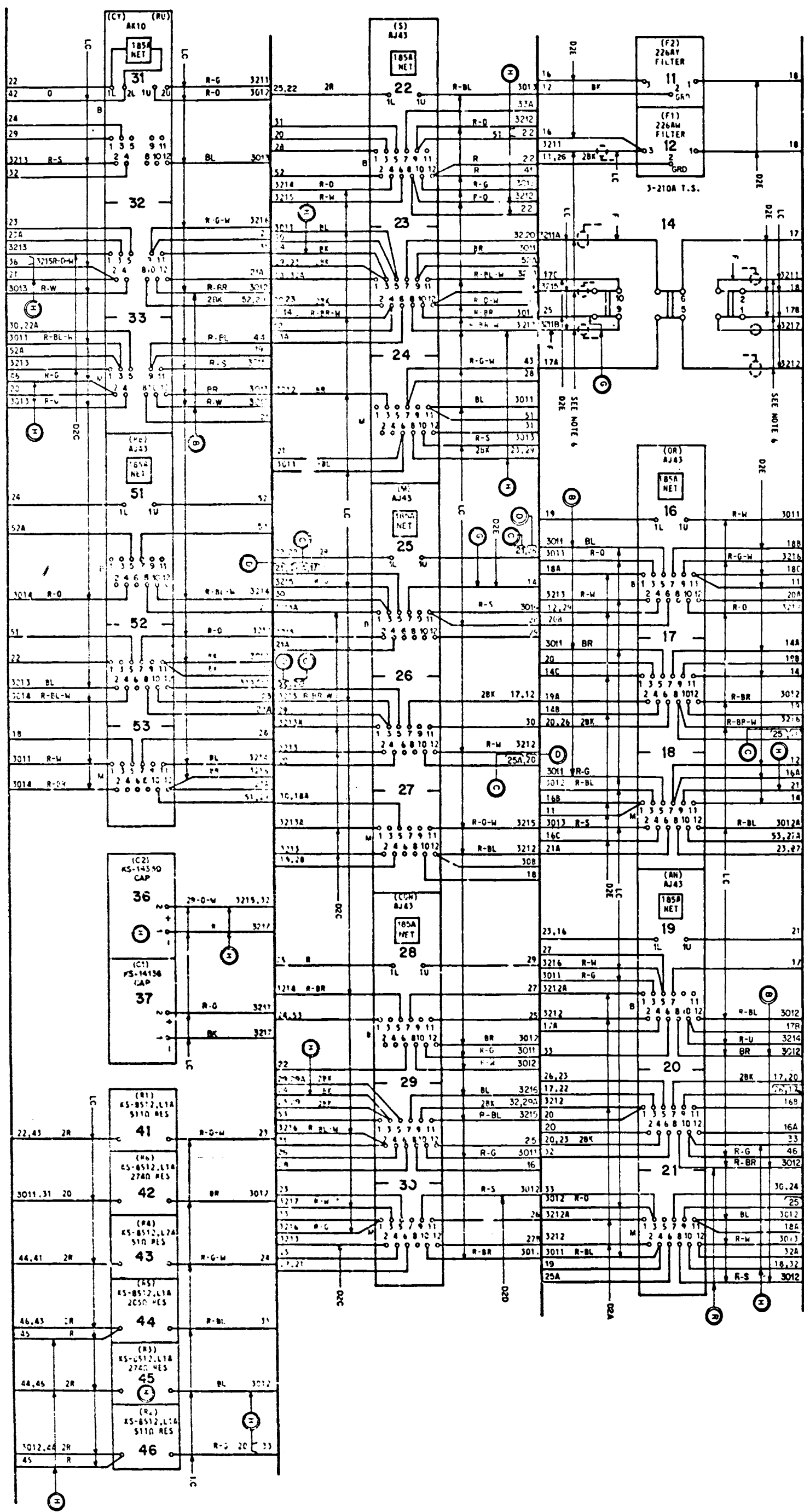
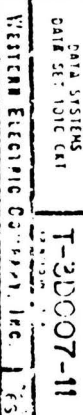


FIG. 1 (CONT)

DATA SYSTEMS
T-3D007-11
WESTERN ELECTRIC COMPANY, INC.

31

SHEET



SHEET INDEX NOTES

- 1 WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED
- 2 THE SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED
- 3 THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX THE ISSUE NUMBER OF A TRAILER SHEET WILL BE THE SAME AS THE SHEET IT SUPPLEMENTS
- 4 SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER
- 5 THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE
- 6 THE NUMBER ASSIGNED TO A TRAILER SHEET WILL AGREE WITH THE NUMBER OF THE SHEET IT SUPPLEMENTS
SUFFIXED WITH THE LETTER A, B, C, ETC

MANUFACTURING NOTES

X - PAIR

AA, AB ETC CROSS-REFERENCE SYMBOLS
IDENTIFY CONNECTION OF PIGTAIL
COMPONENTS LISTED IN THE "B"
SECTION

② A CONNECTION POINT OF A BIFURCATE TERMINAL
1 UNLESS OTHERWISE SPECIFIED ALL WRG TO
RE 24B) AND RUN AS LOCAL CABLE

ENGINEERING NOTES

51. SEE SHEET INDEX FOR DRAWING FROM WHICH THIS DRAWING IS MADE.

52. FOR APPLICATION OF FIGURES AND OPTIONS SEE FEATURE TABLE ON T-6575-11 SHEET 1.

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TM-1000																													
RUN NO		COMPONENT				WPG OPT	WIRE	WPG CONV SYM	RUN NO		COMPONENT				WPG OPT	WIRE	WPG CONV SYM	RUN NO		COMPONENT				WPG OPT	WIRE	WPG CONV SYM			
WITH OPTION	TYPE	FUNCT DESIG	TERM NO	WITH OPTION	TYPE				FUNCT DESIG	TERM NO	WITH OPTION	TYPE	FUNCT DESIG	TERM NO				WITH OPTION	TYPE	FUNCT DESIG	TERM NO	WITH OPTION	TYPE				FUNCT DESIG	TERM NO	
1	CONN REL	A SE9	50 9		LC	BL1W	P1 P1		29	CONN REL	A SE1	36 10		LC	G3W		39	REL CONN	SE1 A	12M ZE-ZF&YG		LC	BL3W						
2	CONN REL	A SE9	25 8		LC	DL2W	P1 P1		30	CONN REL	A SE0	11 11		LC	BR3W			REL CONN	SL1 R	31 #ZE&YF		LC	BL3W						
3	CONN REL	A SE8	49 5		LC	01W	P2 P2		31	REL CONN	SE9 A	12M ZE-ZF&YG		LC	G			REL CONN	SE1-U	12 ZF&YG		LC	BL3W						
4	CONN REL	A SE8	24 4		LC	02W	P2 P2			REL CONN	SE9 A	35 #ZE&YF		LC	G			REL CONN	SE1-U	1 ZF&YF		LC	BL3W						
5	CONN REL	A SE7	48 9		LC	G1W	P3 P3			REL CONN	SE9 A	12 ZF&YG		LC	G		AA	REL CONN	SE1-U	31									
6	CONN REL	A SE7	23 8		LC	G2W	P3 P3		32	REL CONN	SE8 A	1M ZE-ZF&YG		LC	BR			REL CONN	SE1-U	1 ZF&YF		LC	BL3W						
7	CONN REL	A SE6	47 5		LC	BR1W	P4 P4			REL CONN	SE8 A	10 #ZE&YF		LC	BR			REL CONN	SE1-U	6 #ZE&YF		LC	03W						
8	CONN REL	A SE6	22 4		LC	BR2W	P4 P4			REL CONN	SE8 A	1 ZF&YG		LC	BR		AB	REL CONN	SE1-U	1 ZF&YG		LC	03W						
9	CONN REL	A SE5	46 9		LC	S1W	P5 P5			REL CONN	SE8 A	8 ZF&YF		LC	BR			REL CONN	SE1-U	8 ZF&YF		LC	03W						
10	CONN REL	A SE5	21 8		LC	S2W	P5 P5		33	REL CONN	SE7 A	12M ZE-ZF&YG		LC	BL			REL CONN	SE1-U	29		LC	03W						
11	CONN REL	A SE4	45 5		LC	BL1W	P6 P6			REL CONN	SE7 A	34 #ZE&YF		LC	BL		AC	REL CONN	SE1-U	4		LC	03W						
12	CONN REL	A SE4	20 4		LC	BL2W	P6 P6			REL CONN	SE7 A	12 ZF&YG		LC	S			REL CONN	SE1-U	4		LC	03W						
13	CONN REL	A SE3	44 9		LC	01W	P7 P7		34	REL CONN	SE6 A	1M ZE-ZF&YG		LC	D			REL CONN	SE1-U	28		LC	03W						
14	CONN REL	A SE3	19 8		LC	02W	P7 P7			REL CONN	SE6 A	9 #ZE&YF		LC	D		AD	REL CONN	SE1-U	28		LC	03W						
15	CONN REL	A SE2	43 5		LC	G1W	P8 P8			REL CONN	SE6 A	1 ZF&YG		LC	D			REL CONN	SE1-U	3		LC	03W						
16	CONN REL	A SE2	18 4		LC	G2W	P8 P8		35	REL CONN	SE5 A	12M ZE-ZF&YG		LC	BR3W			REL CONN	SE1-U	3		LC	03W						
17	CONN REL	A SE1	42 9		LC	BR1W	P9 P9			REL CONN	SE5 A	33 ZE&YF		LC	BR3W			REL CONN	SE1-U	27		LC	03W						
18	CONN REL	A SE1	17 8		LC	BR2W	P9 P9			REL CONN	SE5 A	12 ZF&YG		LC	BR3W		AE	REL CONN	SE1-U	27		LC	03W						
19	CONN REL	A SE0	41 5		LC	S1W	P10		36	REL CONN	SE4 A	1M ZE-ZF&YG		LC	G3W			REL CONN	SE1-U	2		LC	03W						
20	CONN REL	A SE0	16 4		LC	S2W	P10			REL CONN	SE4 A	8 #ZE&YF		LC	G3W			REL CONN	SE1-U	2		LC	03W						
21	CONN REL	A SE9	40 10		LC	BL				REL CONN	SE4 A	1 ZF&YG		LC	G3W		AF	REL CONN	SE1-U	26		LC	03W						
22	CONN REL	A SE8	15 11		LC	D			37	REL CONN	SE3 A	12M ZE-ZF&YG		LC	S			REL CONN	SE1-U	26		LC	03W						
23	CONN REL	A SE7	39 10		LC	G				REL CONN	SE3 A	32 #ZE&YF		LC	S			REL CONN	SE1-U	1		LC	03W						
24	CONN REL	A SE6	14 11		LC	BR				REL CONN	SE3 A	12 ZF&YG		LC	S		AG	REL CONN	SE1-U	1		LC	03W						
25	CONN REL	A SE5	38 10		LC	S			38	REL CONN	SE2 A	1M ZE-ZF&YG		LC	S			REL CONN	SE1-U	8M		LC	03W						
26	CONN REL	A SE4	13 11		LC	W				REL CONN	SE2 A	7 #ZE&YF		LC	S			REL CONN	SE1-U	5M		LC	03W						
27	CONN REL	A SE3	37 10		LC	BL3W				REL CONN	SE2 A	1 ZF&YG		LC	S			REL CONN	SE1-U	4M		LC	03W						
28	CONN REL	A SE2	12 11		LC	03W				REL CONN	SE2 A	8 ZF&YF		LC	S		AH	REL CONN	SE1-U	48		LC	03W						

WESTERN ELECTRIC CO., INC.

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Sec.2 Attachment J

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