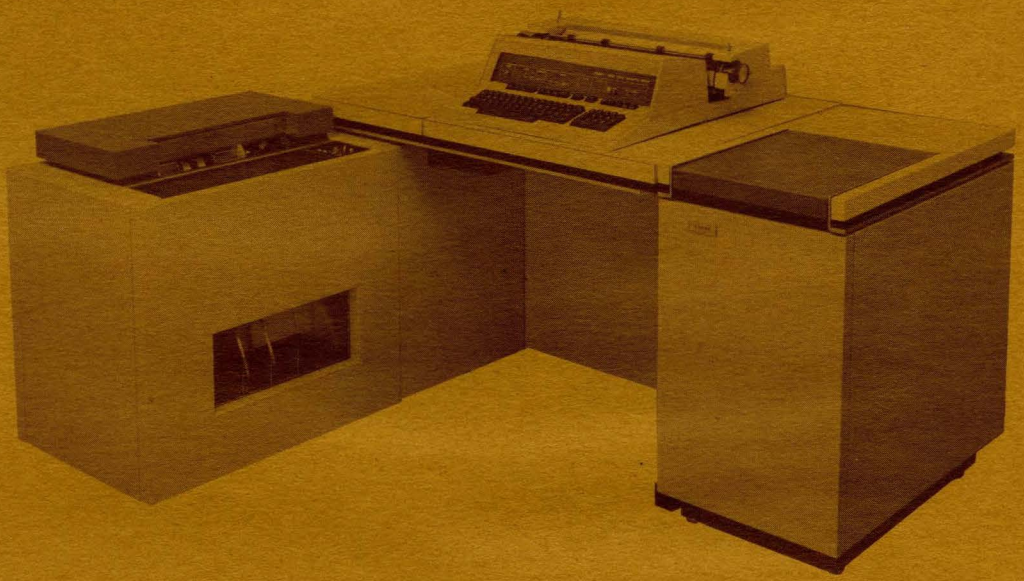
INSTALLATION GUIDE

5800 BILLING/ACCOUNTING SYSTEM



SINGER
FRIDEN DIVISION

INSTALLATION GUIDE

5800 BILLING /ACCOUNTING SYSTEM

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FRIDEN DIVISION
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PREFACE

This guide presents data needed to select and prepare a site for the installation of the 5800 Billing and Accounting System.

The physical and electrical specifications of the system are described and recommendations are made to help the customer meet these requirements.

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INTRODUCTION

This Installation Guide is intended for use by the Customer in planning the installation of the Singer 5800 Billing and Accounting System. With careful advance preparation, the system can be installed with little interruption of the daily routine.

In planning a 5800 installation refer to the SITE SPECIFICATIONS section of this guide for general requirements and suggestions, and to the UNIT SPECIFICATIONS section for the individual requirements of the workstation, processor, magnetic stripe ledger, auxiliary punches, and auxiliary readers.

Cabling requirements and sample system floor plans are contained in the CABLE GUIDE section of this guide.

To facilitate installation, it is advisable to prepare a system configuration floor plan of the proposed installation site, showing the location and arrangement of equipment, chairs, and storage cabinets.

The Friden Customer Service Representative will supervise its installation.

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SITE SPECIFICATIONS

ACCESS

Corridors, elevators and doors must be large enough to accommodate equipment 43.7 inches (111 cm) wide, 29 inches (74 cm) deep, and 38 inches (97 cm) high. Omitting door saddles and sills, or providing ramps to existing sills will facilitate installation of the 5800 System.

ACOUSTICAL SUGGESTIONS

Some degree of acoustical treatment is desirable in most equipment rooms. The amount of acoustical dampening used depends upon the ceiling height, room size, and the number of system components.

Ceilings properly treated with acoustical dampeners or acoustical materials provide the greatest reduction in noise levels. In a new building, it is suggested that the floor be constructed of materials which will dampen vibration transfer to other areas, and that walls contain a dead air space between two sound retardant wall faces.

OPERATING ENVIRONMENT

The 5800 System is designed to operate in a normal office environment within the following temperature and humidity limits:

Operating Requirements

Temperature	60°F to 85°F	15°C to 30°C
Relative Humidity	30% to 90%	

Some units have more or less restrictive requirements — refer to the UNIT SPECIFICATIONS for individual requirements.

The best conditions for system operation and for operator comfort are about 75°F (24°C) and 45% to 55% relative humidity.

Special care must be taken to ensure that no condensate forms on or in the system and to ensure that no corrosive or explosive gases have access to the room in which the system is located.

Dust and Dirt Control

The amount of particulate contamination usually found in office air will not interfere with the operation of the 5800 System. However, normal precautions should be taken to minimize dust, dirt, and other foreign matter.

It is desirable that the 5800 System be installed in an uncarpeted room. Drapes and other dust-gathering ornamentation should be eliminated.

STORAGE AND FILING PROCEDURES

Edge Punch Cards and Paper Tape

To eliminate the need for a conditioning period before use, edge punch cards and paper tape should be stored or filed in an area with the approximate temperature and humidity of the room in which the 5800 System is located.

Magnetic Stripe Ledger (MSL) Cards

MSL cards should be stored in a dust-free environment away from the possible influence of electric, electromagnetic, or magnetic sources such as large electric cables, machinery, transformers, or lightning rods. Additionally, the storage area should have the approximate temperature and humidity of the room in which the 5800 System is located. If this is not possible, the cards should be moved to the working location 24 hours before they are used.

A filing cabinet for MSL cards should be constructed from non-magnetic material. The cabinet drawers should have perforated bottoms or should be provided with raised rubber strips. Aluminum or vinyl drawer dividers should be used. Filing cabinets designed especially for MSL cards are commercially available.

MSL cards may be photocopied if a book-type copier

with an optical glass plate is used. Chemical copiers should not be used.

LIGHTING

Normal office lighting with a minimum average intensity of 40 footcandles (measured 30 inches or 76 cm above the floor) is adequate. Fluorescent lighting is recommended because it generates little heat and illuminates the work area evenly. To reduce the amount of dust which can accumulate in the area, flush fitting fixtures are recommended instead of hanging fixtures.

POWER REQUIREMENTS

All 5800 System components use single phase, 110V/60Hz or 220V/50Hz power. An earth conductor with a resistance of less than 10 ohms to earth (ground level) is required. The normal supply voltage variation is +10/-15%; if variation exceeds these limits, a voltage regulator must be installed. The acceptable frequency variation is ±3%.

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UNIT SPECIFICATIONS

CURRENT REQUIREMENT NOTE: The current requirements listed in the following tables for the component parts of the 5800 System are for the individual component only. To determine the total current required for a complete installation, the current requirements for each component must be added together.

MODEL 5817 WORKSTATION

Dimensions	Width	Depth	Height	
Inches	41	29	38	
Centimeters	104	74	97	
Minimum Service Clearances	**Front**	**Rear**	**Right**	**Left**
Inches	36	36	8	0
Centimeters	91	91	20	0
Weight	220 lb. 100 kg.			
Maximum Heat Output/Hour	3,460 BTU 907 kcal			
Electrical Requirements				
Voltage Range	110 to 125 (+10/-15%); 220-240 (+10/-15%)			
Frequency	50 or 60 Hz ($\pm$ 3%)			
Current	8.5 A at 110V; 4.5A at 220V			
Phases	Single			
KVA	1			
Grounding	Maximum 10 ohms			
Operating Environment				
Temperature	60 to 85°F; 15 to 30°C			
Relative Humidity	30 to 90%			

MODEL 5805 PROCESSOR

Dimensions	Width	Depth	Height	
Inches	16	28.5	29	
Centimeters	41	72	74	
Minimum Service Clearances	**Front**	**Rear**	**Right**	**Left**
Inches	0	0	36	24
Centimeters	0	0	91	61
Weight	122 lbs. 55 kg.			
Maximum Heat Output/Hour	1,380 BTU 360 kcal			
Electrical Requirements				
Voltage Range	110 to 125 (+10/-15%); 220 to 240 (+10/-15%)			
Frequency	50 or 60Hz ($\pm$3%)			
Current	3.3A at 110V; 1.8A at 220V			
Phases	Single			
KVA	.4			
Grounding	Maximum 10 ohms			
Operating Environment				
Temperature	60 to 85°F; 15 to 30°C			
Relative Humidity	30 to 90%			

MODEL 5819 MAGNETIC STRIPE LEDGER PROCESSOR

Dimensions	Width	Depth	Height	
Inches	43.7	16.1	29	
Centimeters	111	41	74	
Minimum Service Clearances	**Front**	**Rear**	**Right**	**Left**
Inches	36	36	0	0
Centimeters	91	91	0	0
Weight	198 lbs. 90 kg.			
Maximum Heat Output/Hour	1380 BTU 360 kcal			
Electrical Requirements				
Voltage Range	110 to 125 (+10/-15%); 220 to 240 (+10/-15%)			
Frequency	50 or 60Hz ($\pm$3%)			
Current	3.5A at 110V; 1.8A at 220V			
Phases	Single			
KVA	.4			
Operating Environment				
Temperature	60 to 85°F; 15 to 30°C			
Relative Humidity	45 to 60%			

MODEL 5818 AUXILIARY TAPE/EDGE CARD PUNCH

Dimensions	Width	Depth	Height	
Inches	16	28.5	29	
Centimeters	41	72	74	
Minimum Service Clearances	**Front**	**Rear**	**Right**	**Left**
Inches	0	36	24	0
Centimeters	0	91	61	0
Weight	110 lbs. 50 kg.			
Maximum Heat Output/Hour	520 BTU 130 kcal			
Electrical Requirements				
Voltage Range	110 to 125 (+10/-15%) 220 to 240 (+10/-15%)			
Frequency	50 or 60Hz ($\pm$3%)			
Current	.8A at 110V; .4A at 220V			
Phases	Single			
KVA	.15			
Grounding	Maximum 10 ohms			
Operating Environment				
Temperature	60 to 85°F; 15 to 30°C			
Relative Humidity	30 to 90%			

MODEL 5812 AUXILIARY TAPE READER

Dimensions	Width	Depth	Height	
Inches	16	28.5	29	
Centimeters	41	72	74	
Minimum Service Clearances	Front	Rear	Right	Left
Inches	0	36	24	0
Centimeters	0	91	61	0
Weight	110 lbs. 50 kg.			
Maximum Heat Output/Hour	520 BTU 130 kcal			
Electrical Requirements				
Voltage Range	110 to 125 (+10/-15%); 220 to 240 (+10/-15%)			
Frequency	50 or 60Hz ($\pm$3%)			
Current	.8A at 110 V; .4A at 220V			
Phases	Single			
KVA	.15			
Grounding	Maximum 10 ohms			
Operating Environment				
Temperature	60 to 85°F; 15 to 30°C			
Relative Humidity	30 to 90%			

CABLE GUIDE

5800 SYSTEM LAYOUT

The Standard Interface of the 5800 System allows flexibility in the arrangement of the peripheral devices. Since all the devices are serially cable-connected, system layouts can be set-up *in-line*, *L-shaped,* or even *U-shaped.* These layouts can be achieved using a minimum number of connection cables of different lengths. There are only two different power cord lengths and three different Standard Interface cable lengths required.

The attached diagrams display various system layouts, and also present the rules for calculation of required cable length of a given system. Examples are also given.

In each system three different kinds of cables are required.

- Cable between processor and workstation.
- Power cord connection among devices.
- Standard interface cable connection among devices.

Cable Between Processor and Workstation

This cable is required in every installation. Its length of 80.5 inches (205 cm) allows placing one peripheral device between the processor and the workstation. This cable is always required, always has the same length, and is always included in the shipment of any system.

Power Cord Connections Among Devices

Two lengths are available for the power cords connecting the devices, one for 115 volts and one for 220 volts. The standard length is 71 inches (180 cm) and provides for all interconnections for an in-line system. This length will automatically be delivered with the peripheral device to which it belongs.

A longer cord is available to *round a corner* in L-shaped or in U-shaped configurations. This cord is 103 inches (262 cm) long and must be ordered separately, if required, on a sales order form. The part numbers of the cords are:

Cord 1: length of 71 inches (180 cm) 115V, part no. 3002413
Cord 2: length of 71 inches (180 cm) 220V, part no. 3002405
Cord 3: length of 103 inches (262 cm) 115V, part no. 3002414
Cord 4: length of 103 inches (262 cm) 220V, part no. 3002406

Note

The workstation is connected to the main power by means of a standard Friden equipment power cord.

Standard Interface Cable Among Devices

Three cables of different lengths are available as follows:

A Cable: length of 80.5 inches (205 cm), part no. 3004528
B Cable: length of 122 inches (310 cm), part no. 3004529
C Cable: length of 157.5 inches (400 cm), part no. 3004530

A peripheral device is always shipped with one A cable.

B or C cables must be ordered as separate items.

The following illustrations provide all necessary information to enable selection of the correct cables.

Note 1

The 5814 Code Converter is a peripheral device and will automatically be delivered with the A cable.

Note 2

The 5824 Auxiliary Punch, if required, must always be placed immediately to the right of the workstation. It is cable-connected to the workstation with a dedicated cable,

which will be automatically delivered with each 5824 Punch or 5854 Punch Conversion Kit.

EXAMPLES

In the following examples of 5800 System configuration the unit model numbers are as follows:

Model 5805 Processor

Model 5814 Code Converter Module

Model 5819 Magnetic Stripe Ledger Processor

Model 5824 Auxiliary Paper Tape/Edge Punched Card Punch with Power Supply

Model 5825 consists of:

Model 5805 Processor

Model 5811 Keyboard/Control Panel

Model 5817 Workstation

Model 5820 Type Bar Serial Printer

Model 5822 Integral Paper Tape/Edge Punched Card Reader

Model 5835 consists of:

Model 5805 Processor

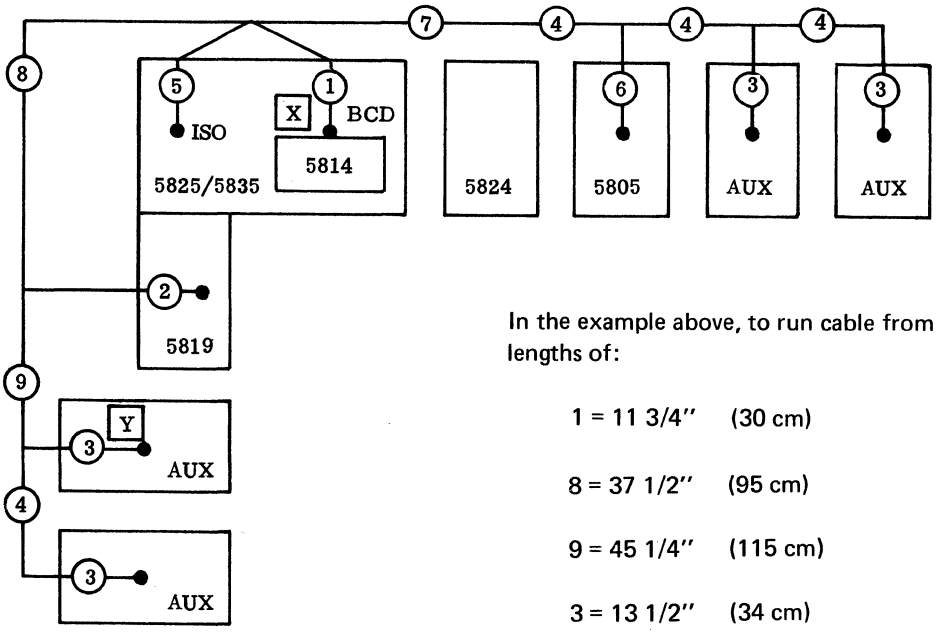
Model 5811 Keyboard/Control Panel

Model 5815 Integral Paper Tape/Edge Punched Card Punch

Model 5817 Workstation

Model 5820 Type Bar Serial Printer

Model 5822 Integral Paper Tape/Edge Punched Card Reader



In the example above, to run cable from X to Y, add the lengths of:

1 =	11 3/4"	(30 cm)
8 =	37 1/2"	(95 cm)
9 =	45 1/4"	(115 cm)
3 =	13 1/2"	(34 cm)
	108"	(274 cm)

Therefore, use a B cable (122", 310 cm).

1 = 11 3/4" (30 cm)

2 = 12 1/2" (32 cm)

3 = 13 1/2" (34 cm)

4 =15 3/4" (40 cm)

5 = 17" (43 cm)

6 = 21 1/2" (55 cm)

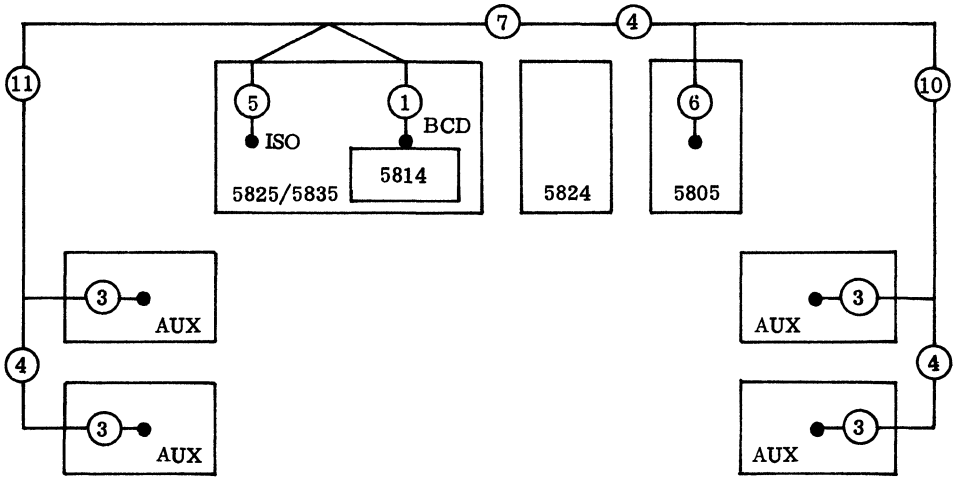
7 = 24 3/4" (63 cm)

8 = 37 1/2" (95 cm)

9 = 45 1/4" (115 cm)

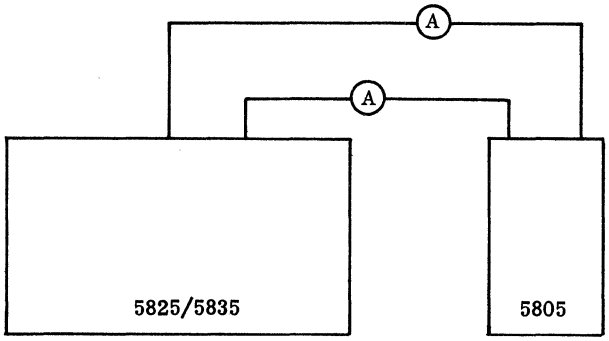
10 = 59" (150 cm)

11 = 98" (250 cm)

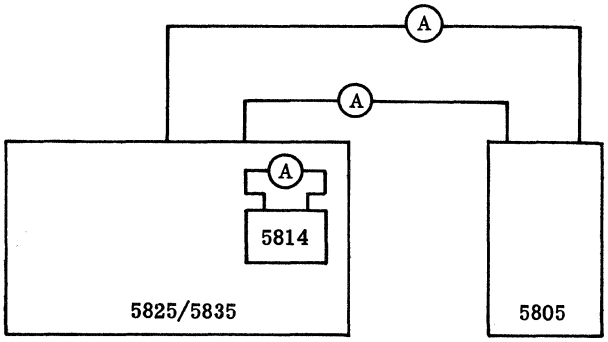


Note

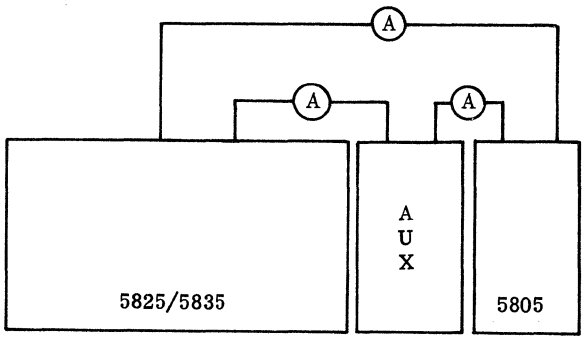
For lengths 10 and 11 above, use the special extended power cord, Part Number 3002414 (115V), 3002406 (220V), which is 103 inches (262 cm) long.



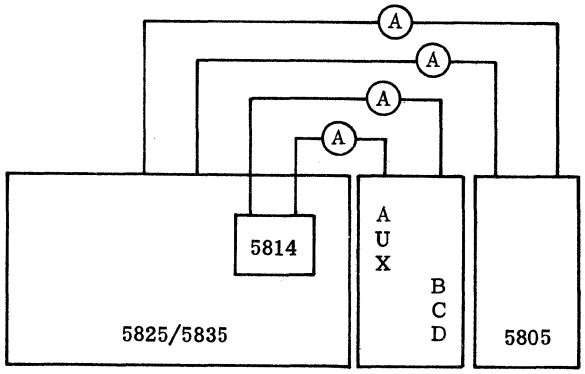
Two A cables required



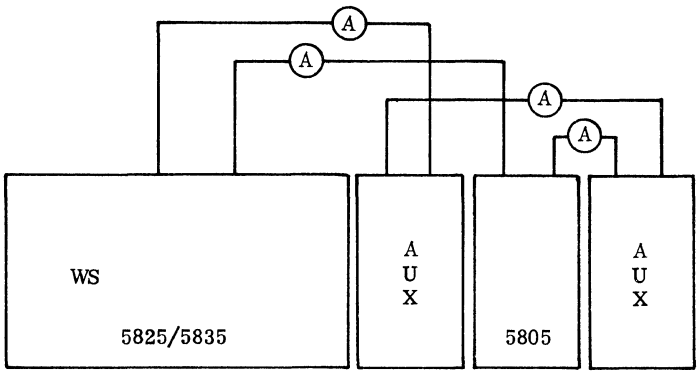
Three A cables required



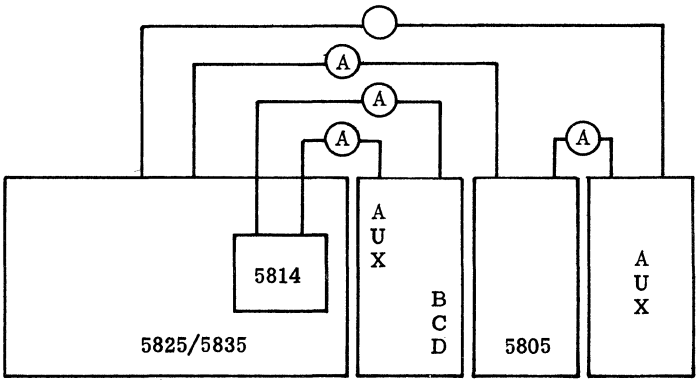
Three A cables required



Four A cables required

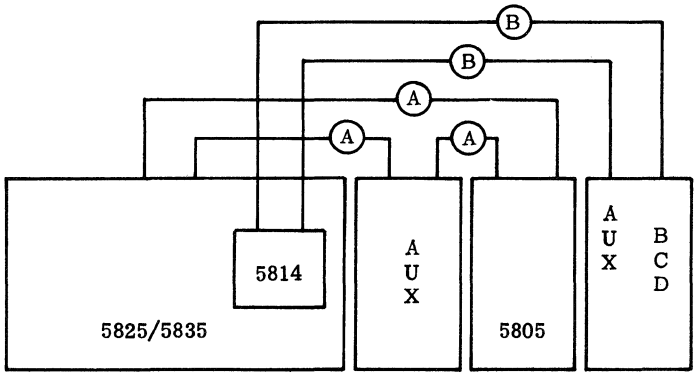


Four A cables required



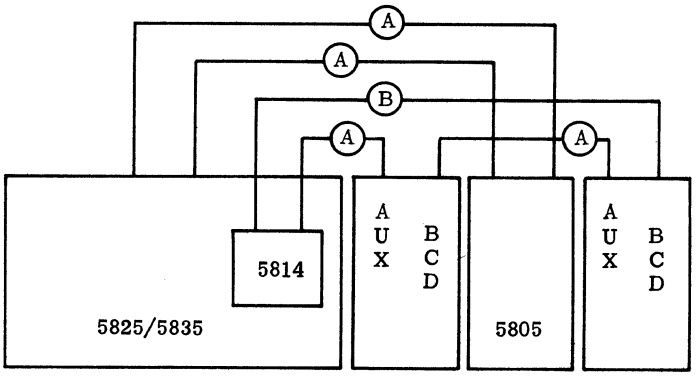
Requirements:

Four A cables
One B cable



Requirements:

Three A cables
Two B cables



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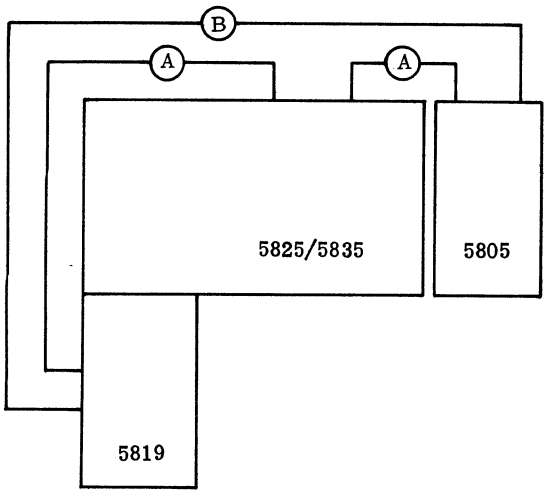
Four A cables
One B cable



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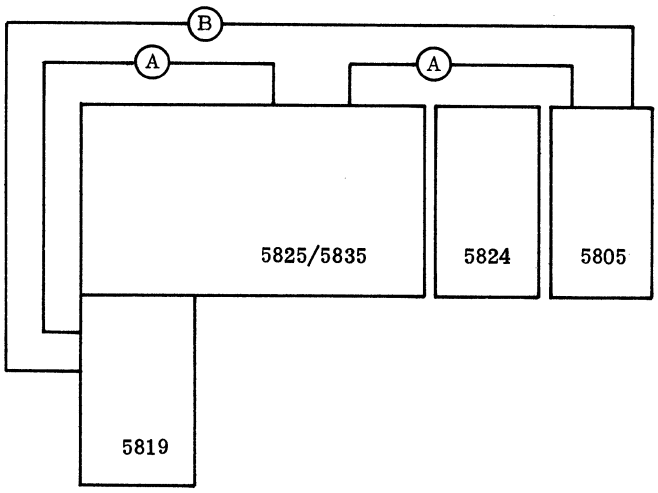
One B cable



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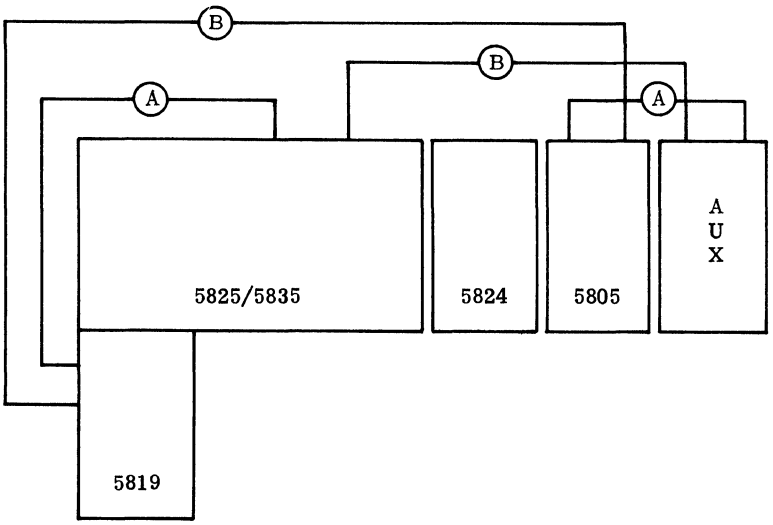
One B cable



Requirements:
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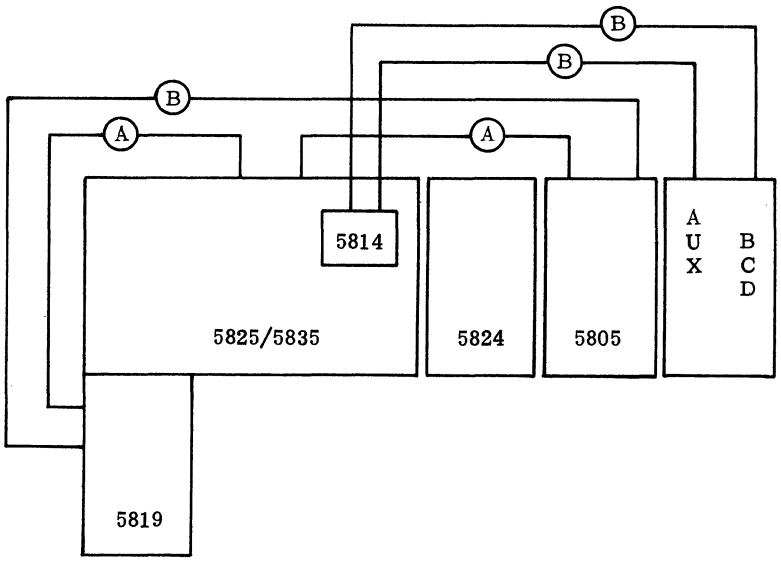
Two B cables



Requirements:
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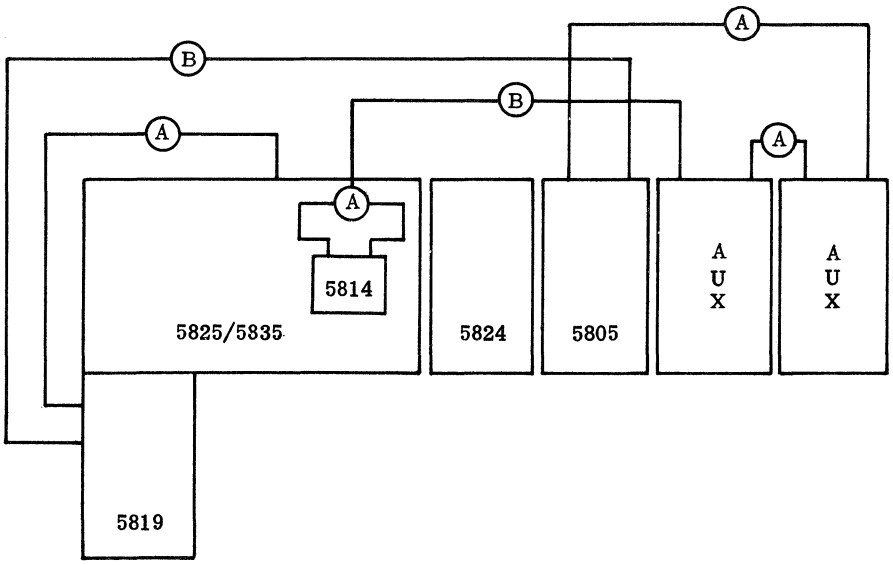
Three B cables



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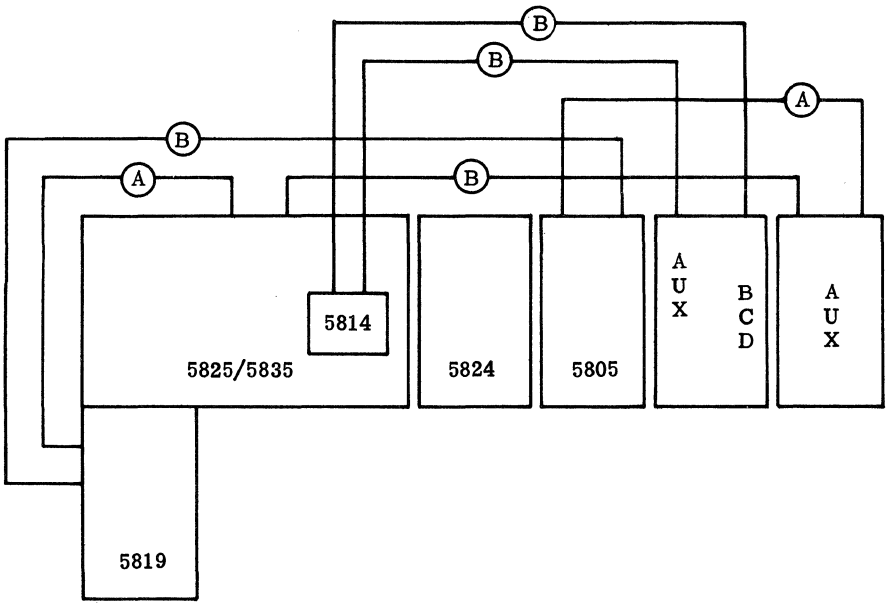
Two B cables



Requirements:
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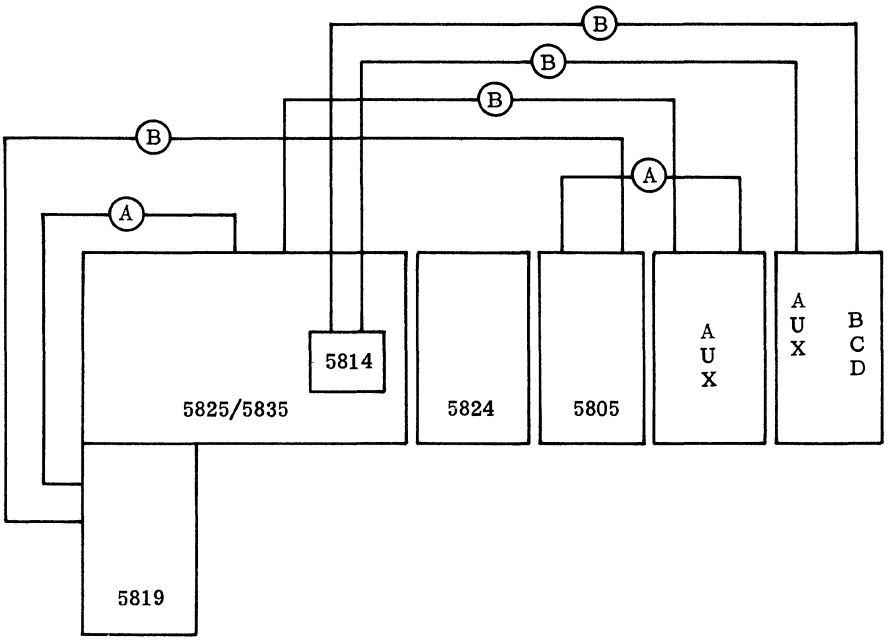
Four B cables



Requirements:
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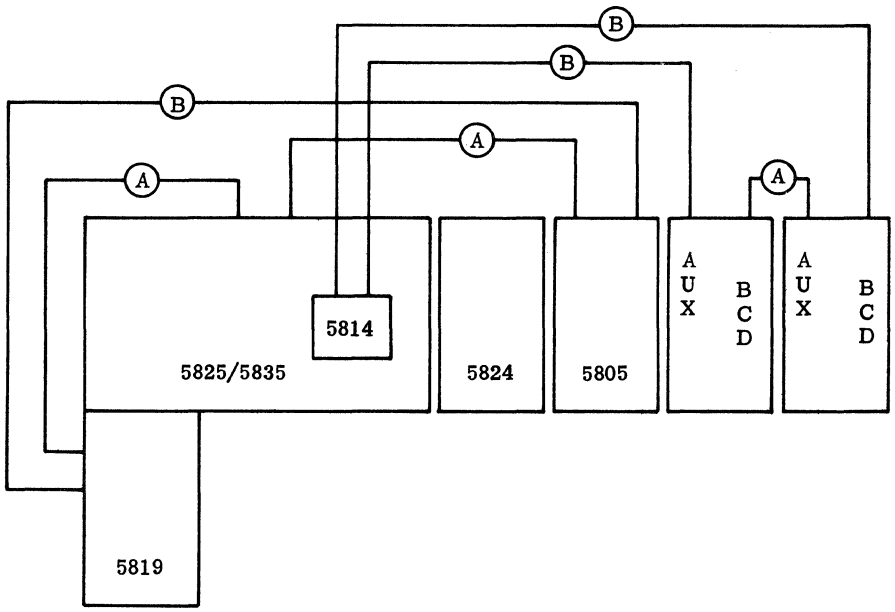
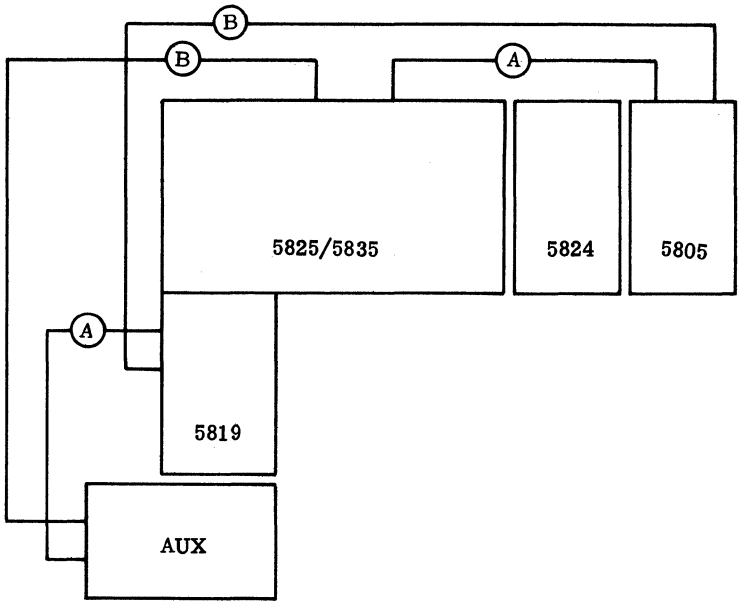
Four B cables



Requirements:
Three A cables
Three B cables



Requirements:
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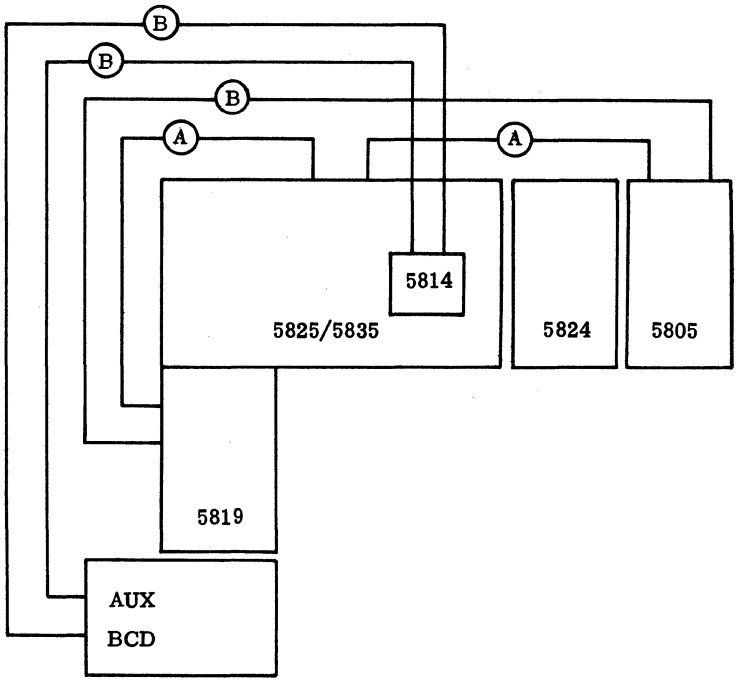
Two B cables



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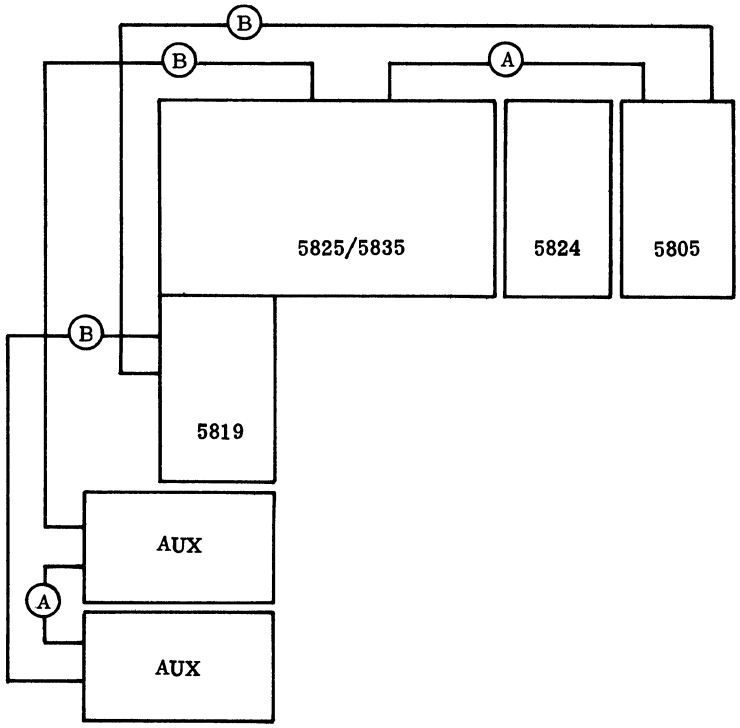
Three B cables



Requirements:
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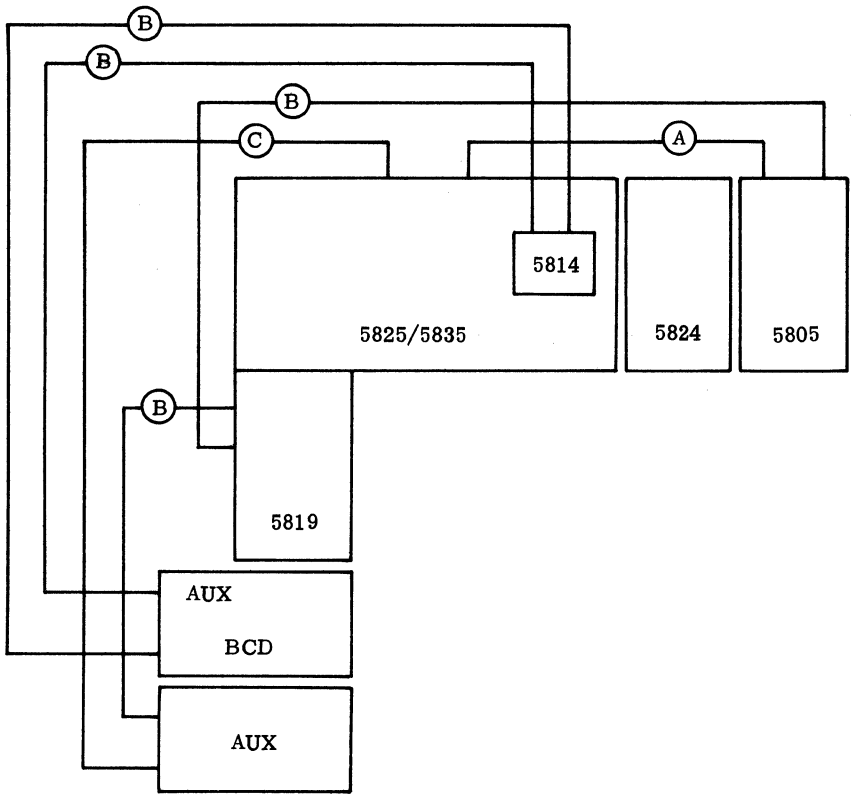
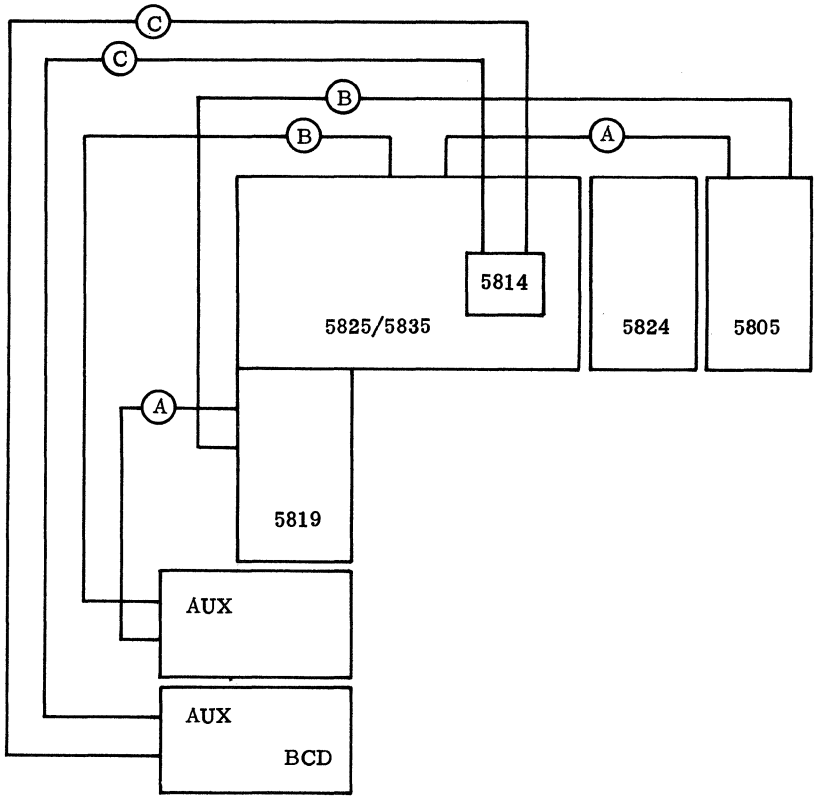
Three B cables



Requirements:
One A cable
Four B cables
One C cable



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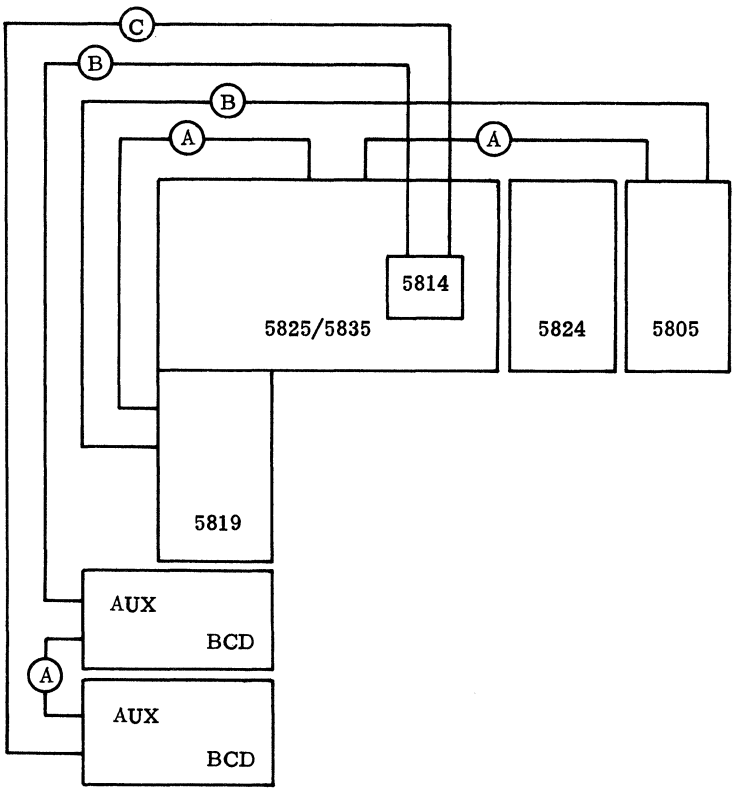
Two C cables



Requirements:
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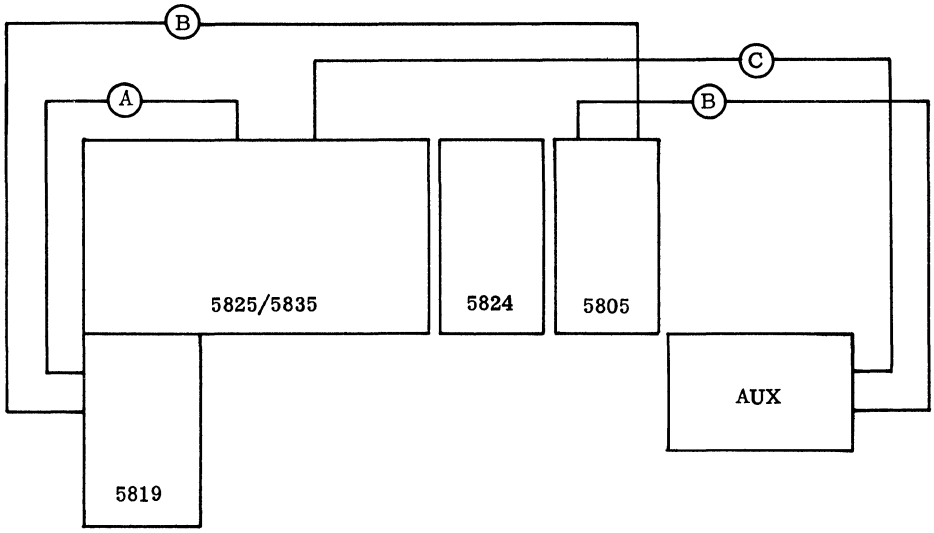
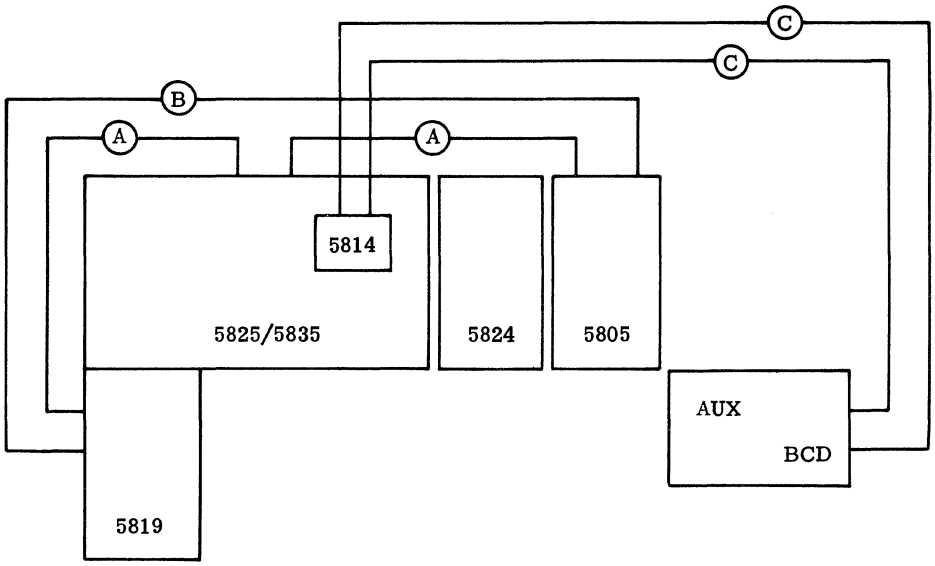
Two B cables
One C cable



Requirements:
One A cable
Two B cables
One C cable



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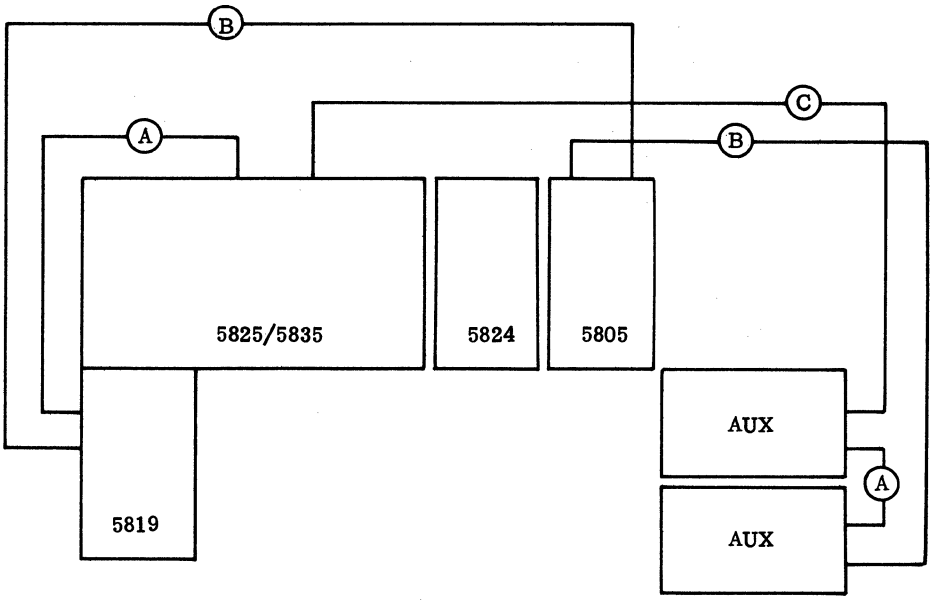
One B cable
Two C cables



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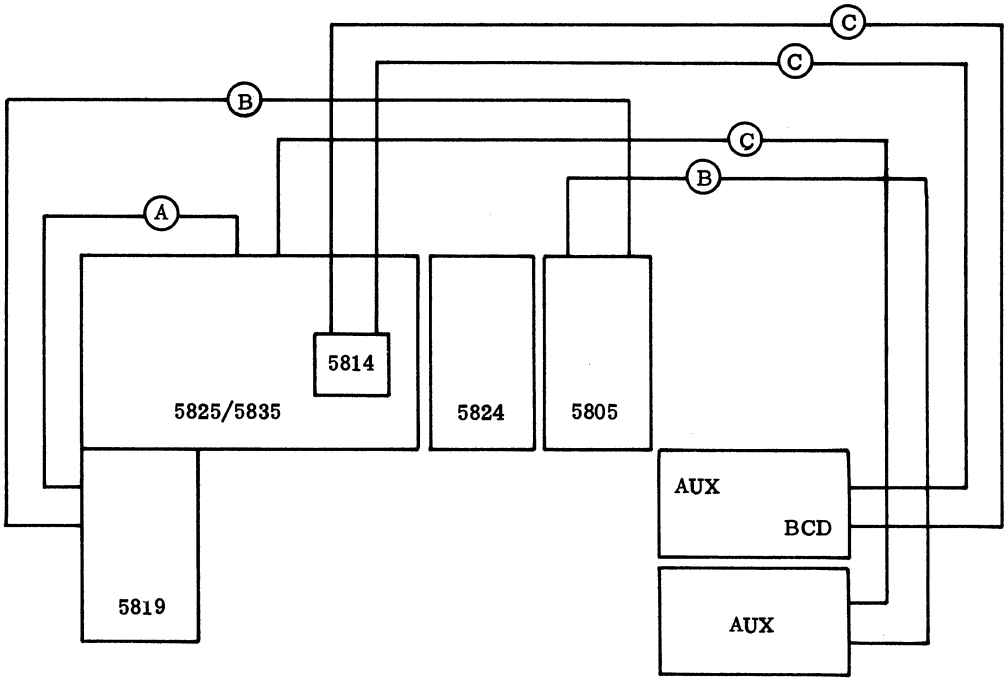
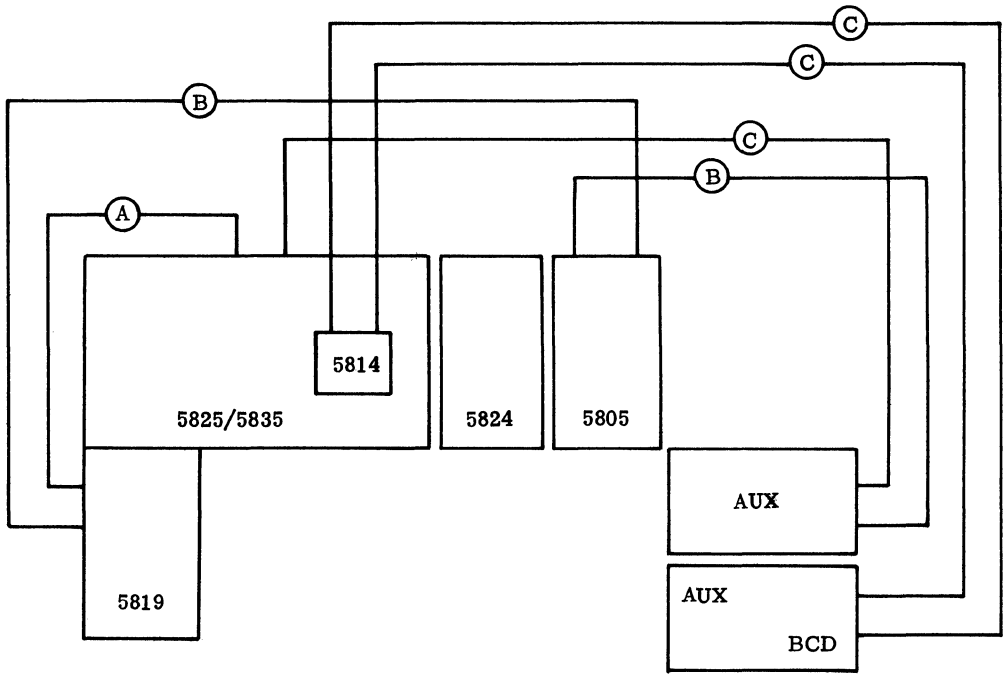
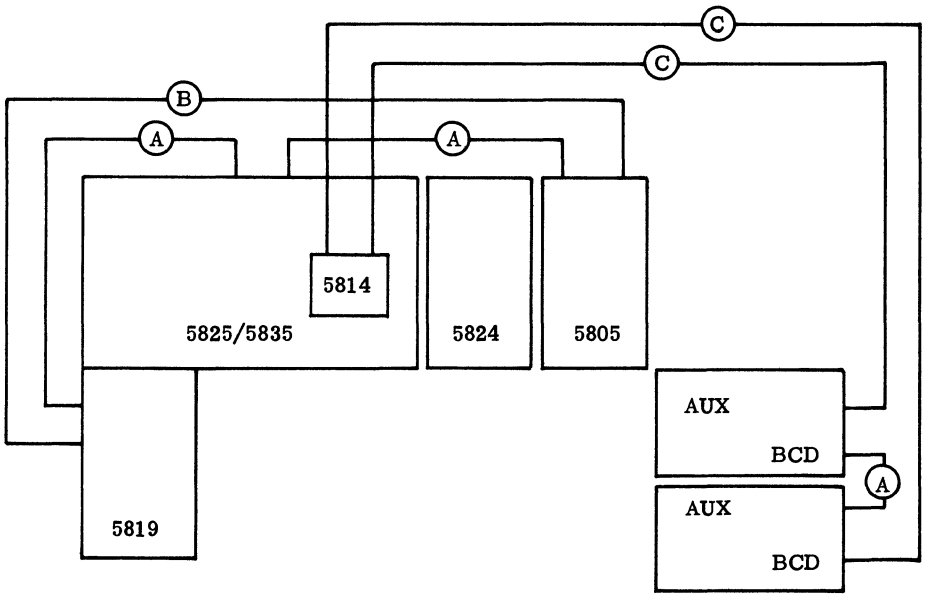
Two B cables
One C cable



Requirements:
One A cable
Two B cables
Three C cables



Requirements:
One A cable
Two B cables
Three C cables



Requirements:
Three A cables
One B cable
Two C cables

5/71

5800 BILLING/ACCOUNTING SYSTEM INSTALLATION GUIDE
Publication No. 10-702

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