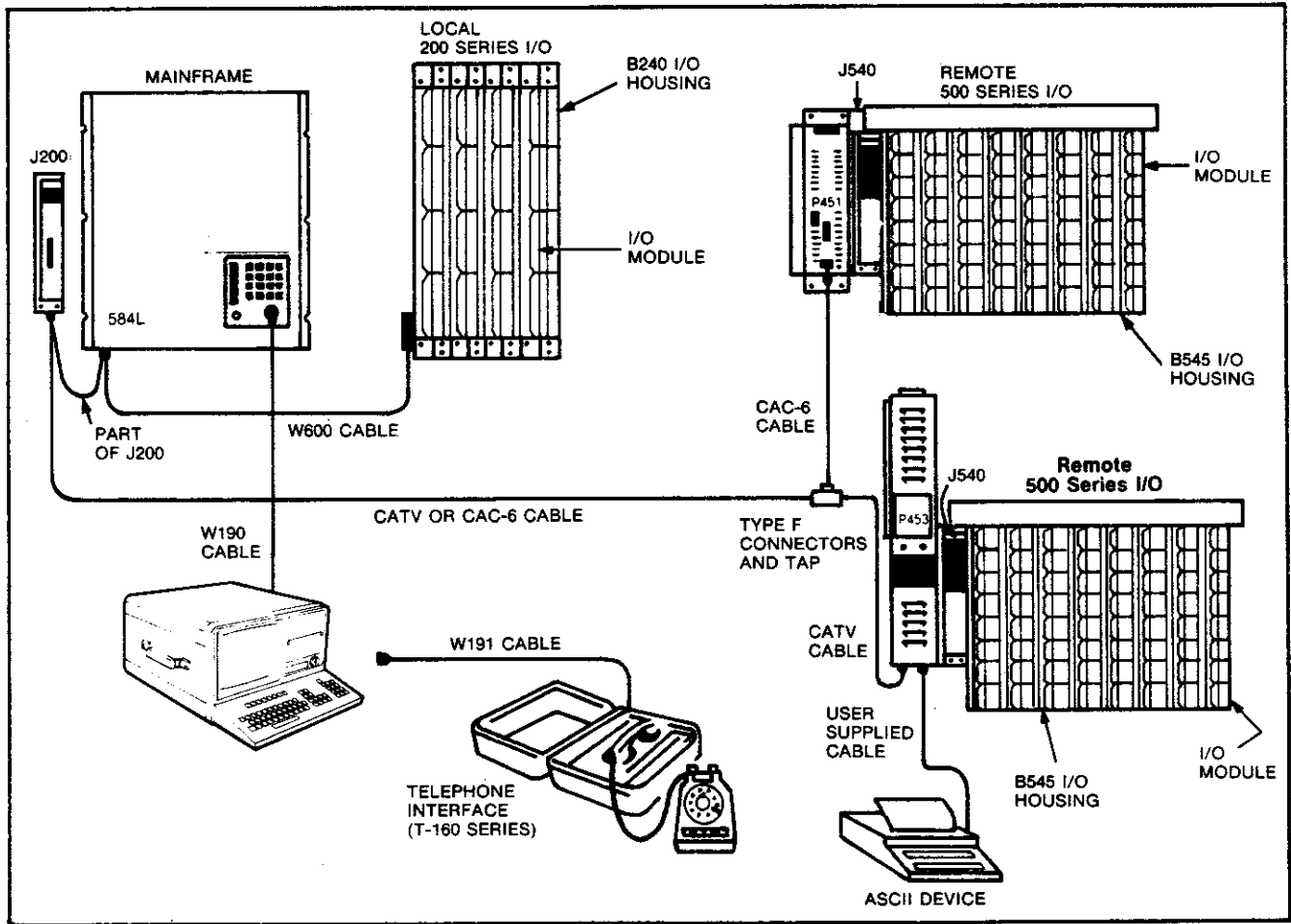


584 WITH 200 AND 500 SERIES I/O



I/O CHANNEL CONFIGURATION

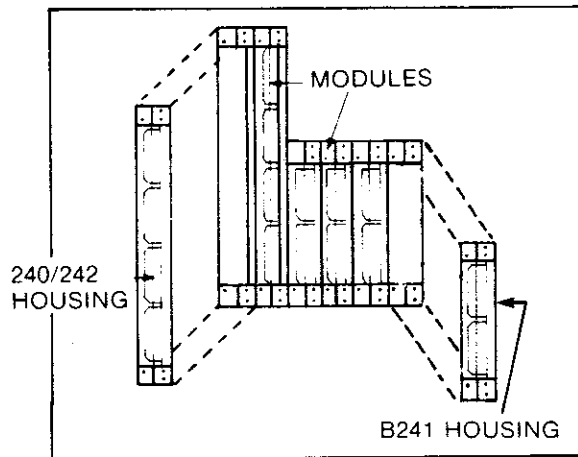
I/O Points

Each channel supports a maximum of 128 input and 128 output points.

- A 200 series channel supports 16 discrete I/O modules with 16 points each.
- A 500 series channel supports 64 discrete I/O modules with 4 points each.
- Each 500 series channel must be equipped with a J540 adaptor.
- An 800 series channel supports 128 input and 128 output points.
- Each 800 series channel must be equipped with a J810 or J812 (ASCII) adaptor.

200 Series I/O Configuration

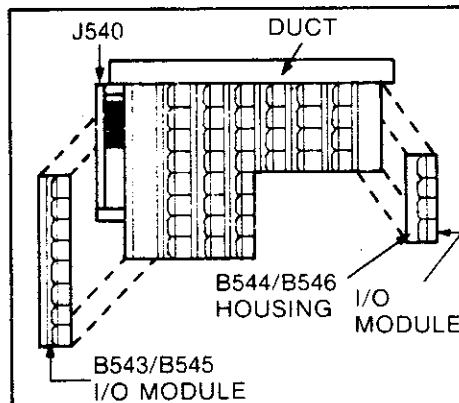
The 200 Series I/O provide modules with 16 circuits that are installed into a B240 I/O housing (up to four modules) or a B241 I/O housing (maximum of two modules). A special housing (B242) allows for special intrinsically safe modules only and is otherwise identical to the B240 and B241 housings. Housings are provided with a conduit for user wiring.



500 Series I/O Configurations With J540 Adaptor

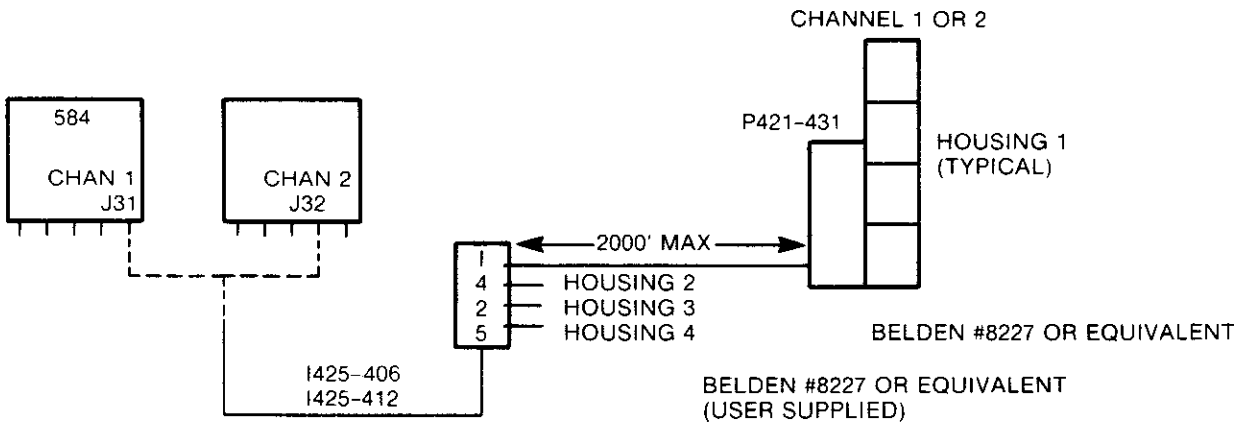
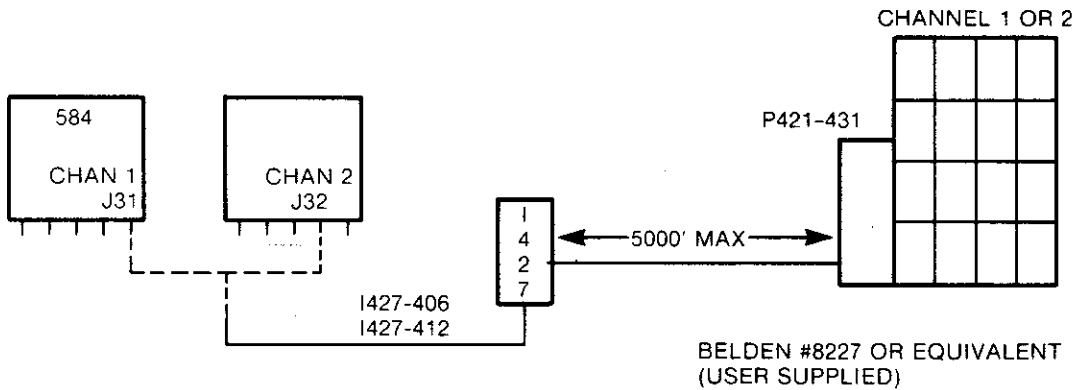
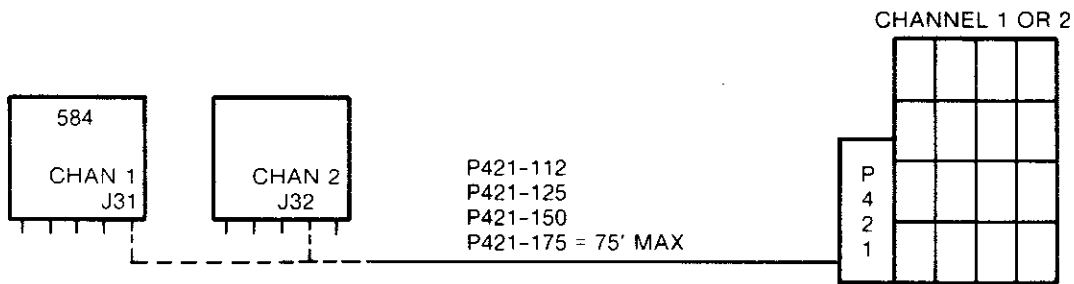
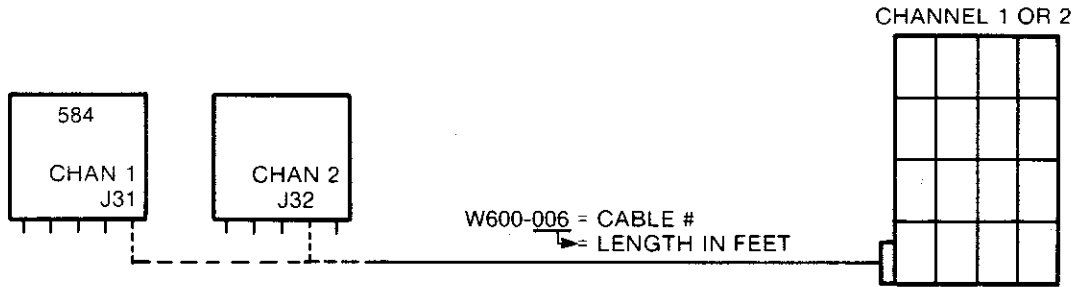
The 500 Series I/O provides modules with four circuits each, that are installed into a B545 I/O housing (up to eight modules) or a B546 I/O housing (maximum of four modules).

A metallic duct with removable snap out cover connects each housing across its top and contains a bus cable for connection to edge connectors on the top of each housing.



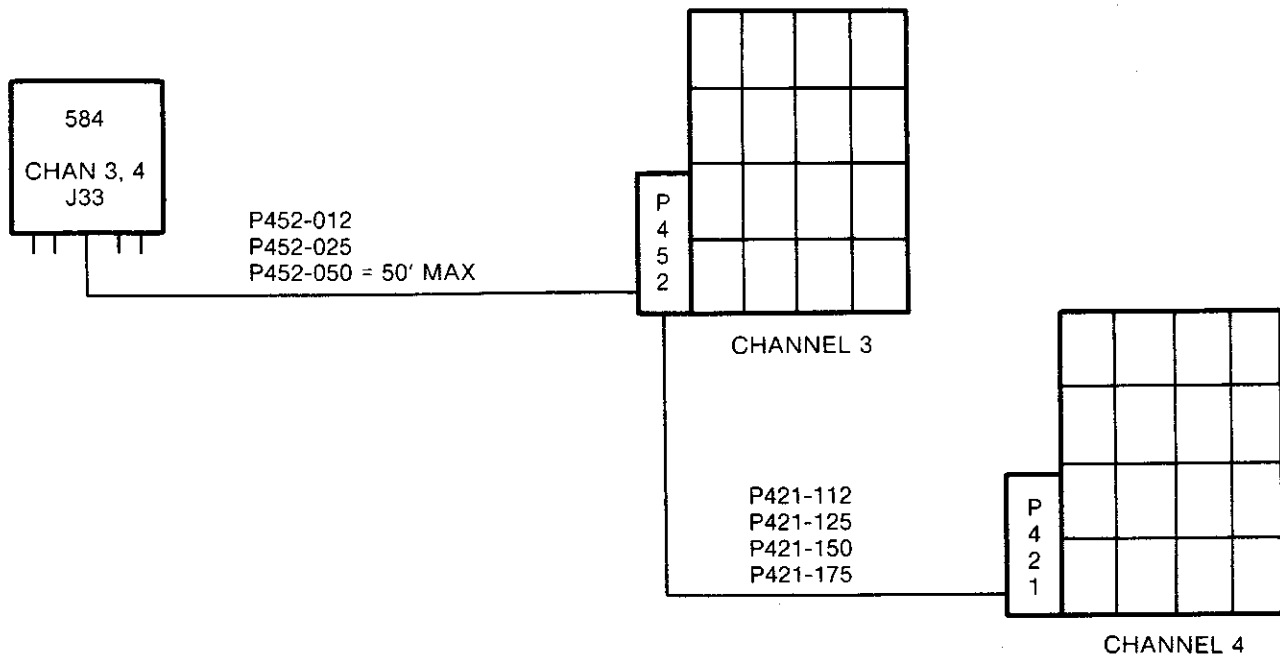
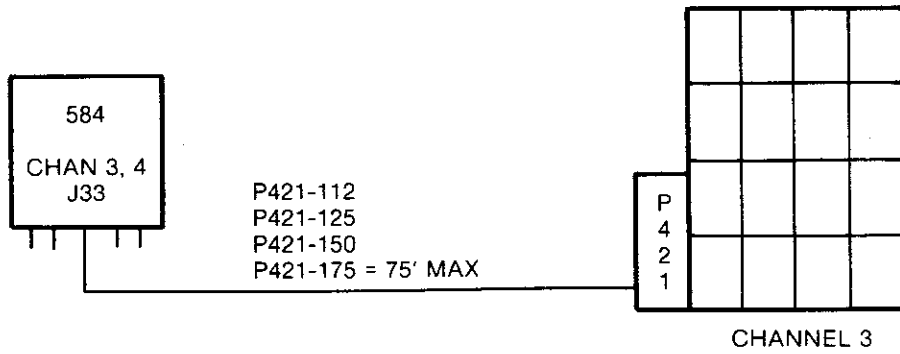
HARDWARE

Local I/O Hardware Configurations - Channels 1 or 2



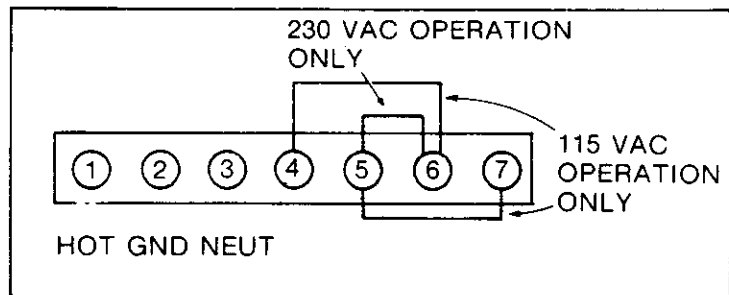
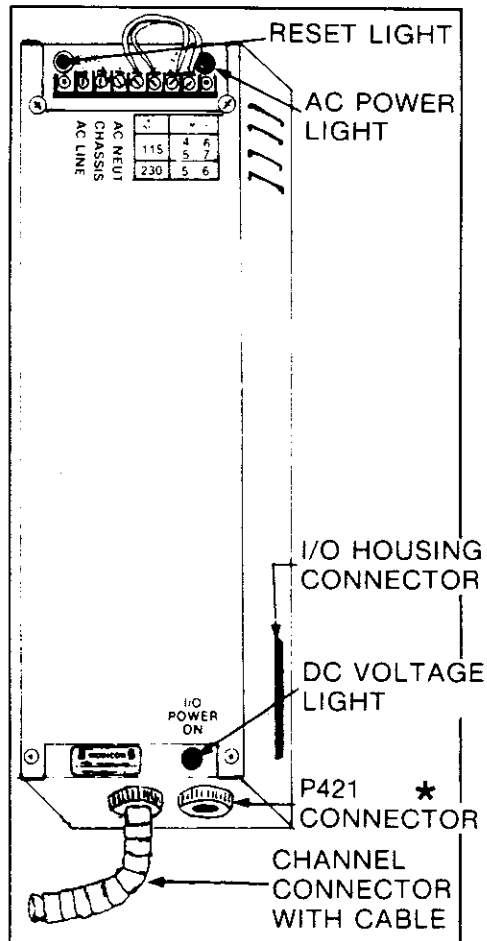
HARDWARE

Local I/O Hardware Configurations - Channels 3 & 4



P421/P452 AUXILIARY POWER SUPPLY

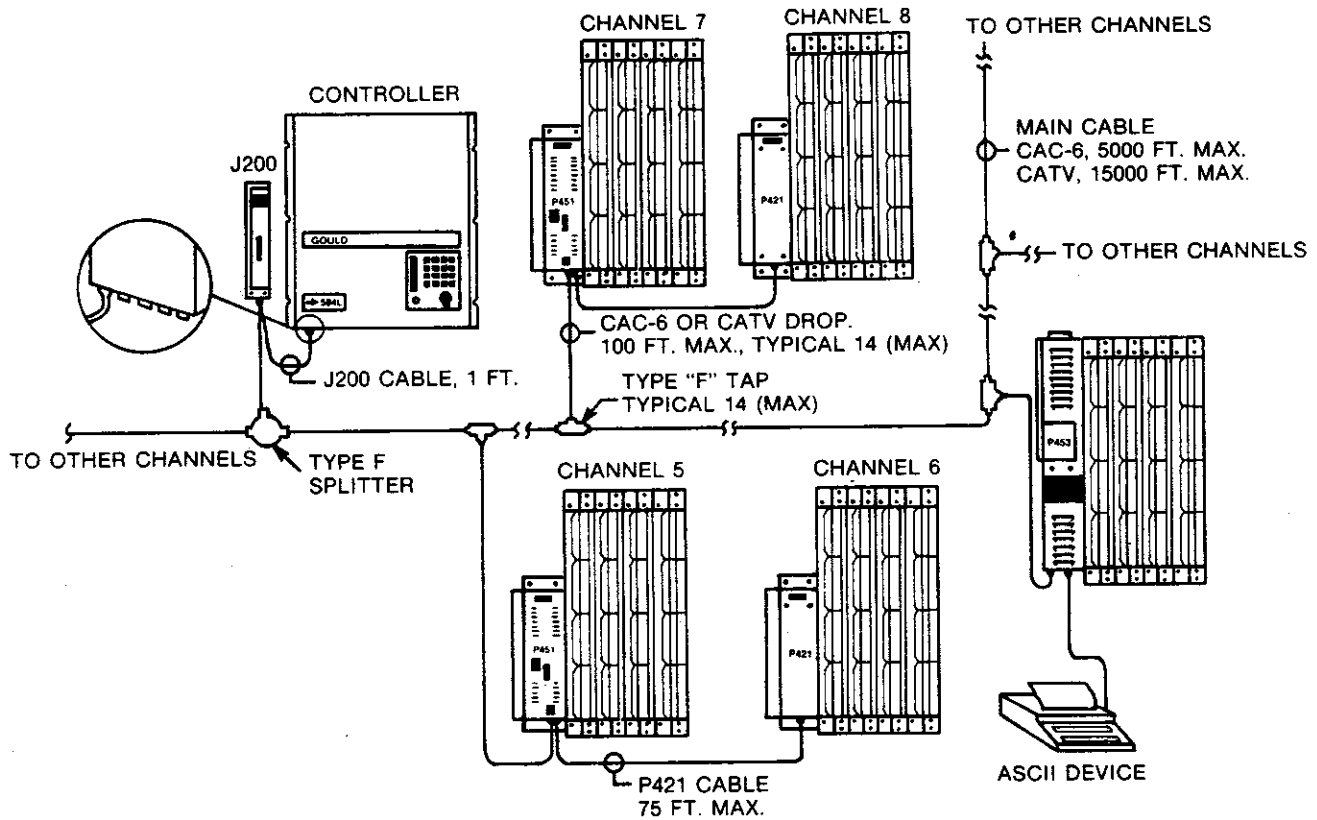
Indicator lights are provided to show presence of AC power (AC INPUT) and the output of DC voltage (I/O POWER ON). A reset (PUSH TO TEST) pushbutton permits verification of AC power.



* Not present on P421

I/O CHANNEL CONFIGURATION

Remote I/O - Channels 5 Through 32

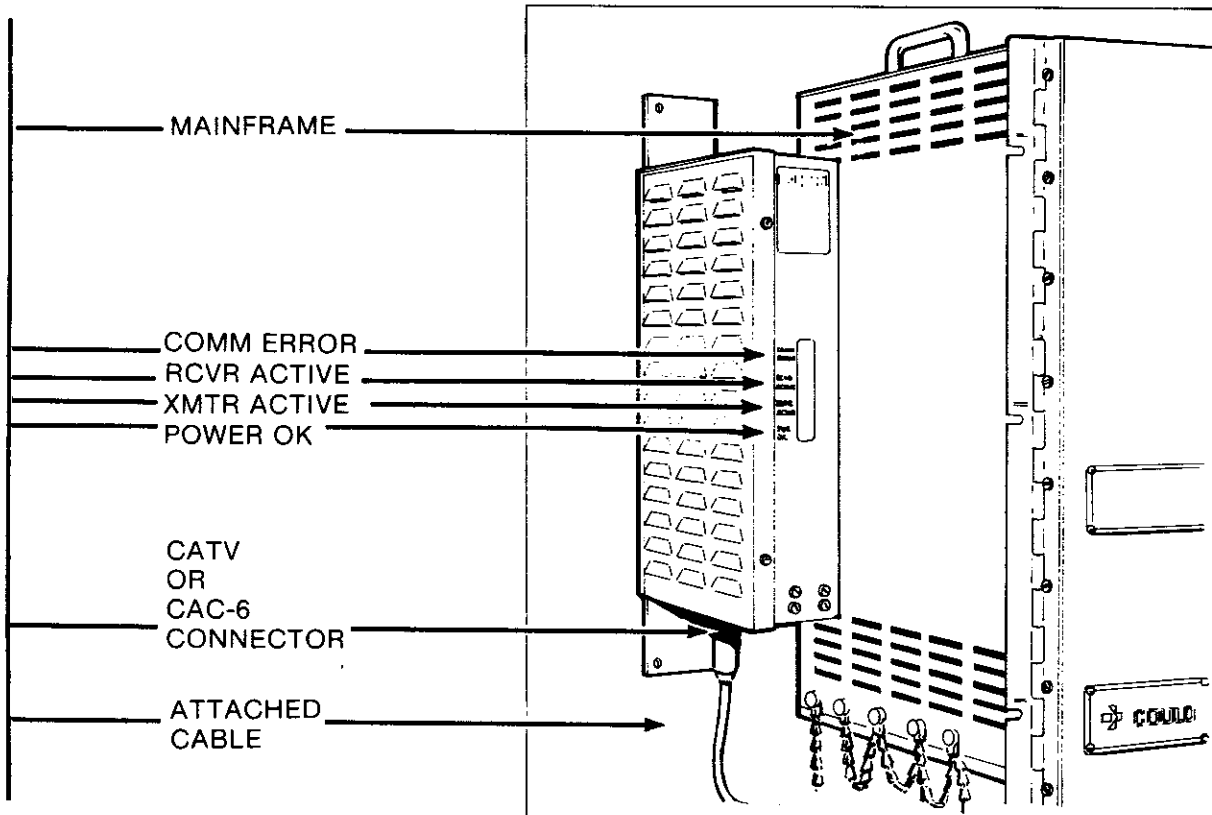


Auxiliary Power/Remote Configurations

- Remote channels are driven by a single J200 driver
- All odd numbered channels must terminate at a P451 or P453 (ASCII) interface/auxiliary power supply.
- All even numbered channels must terminate at a P421 auxiliary power supply.

NOTE: The 584L may optionally have all remote channels (1-32)

J200 REMOTE I/O SYSTEM EXPANDER



The J200 Remote I/O System Expander is an interface device that allows the Mainframe to operate a remote I/O system (up to 16 drops of two channels each).

It is connected to its own port on the Mainframe by fixed cable, and contains four status lights:

- COMM ERROR — blinks to show communication error between J200 and P451
- RCVR ACTIVE — blinks when receiving data
- XMTR ACTIVE — blinks when transmitting data
- POWER OK — lights when power is being received from the Mainframe

There are no switches on the J200.

At the bottom front there is a receptacle for CATV or CAC-6 connection. The bottom rear connection comes with cable attached and connector for communication to the J200 connector (J41) on the Mainframe.

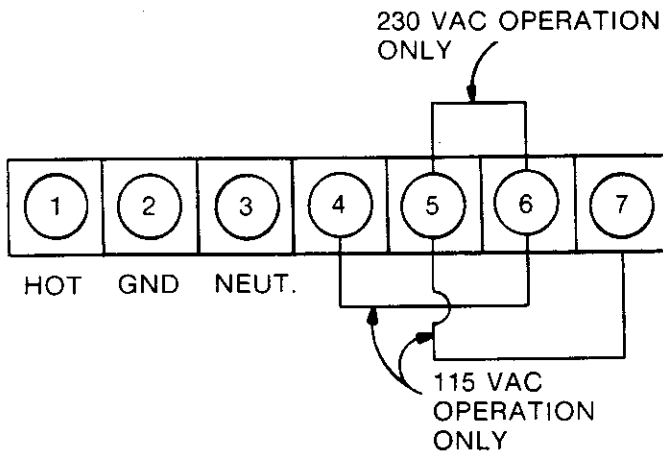
See Chapter 22, "Troubleshooting" for more information on the J200.

P451 REMOTE I/O POWER SUPPLY

The P451 Remote I/O Power Supply is necessary for 200 Series I/O (and 500 Series) remote use via the J200.

The P451 is connected to the J200 by connectors on a CATV or CAC-6 cable and allows for the use of one full channel separately and another full channel via cabling and a P421.

The P451 requires a single AC power source, standard 115 VAC or 230 VAC (jumper selectable). Indicator lights are provided to show presence of AC power (AC INPUT) and the output of DC voltage (I/O POWER ON). A reset (PUSH TO TEST) pushbutton permits verification of AC power.

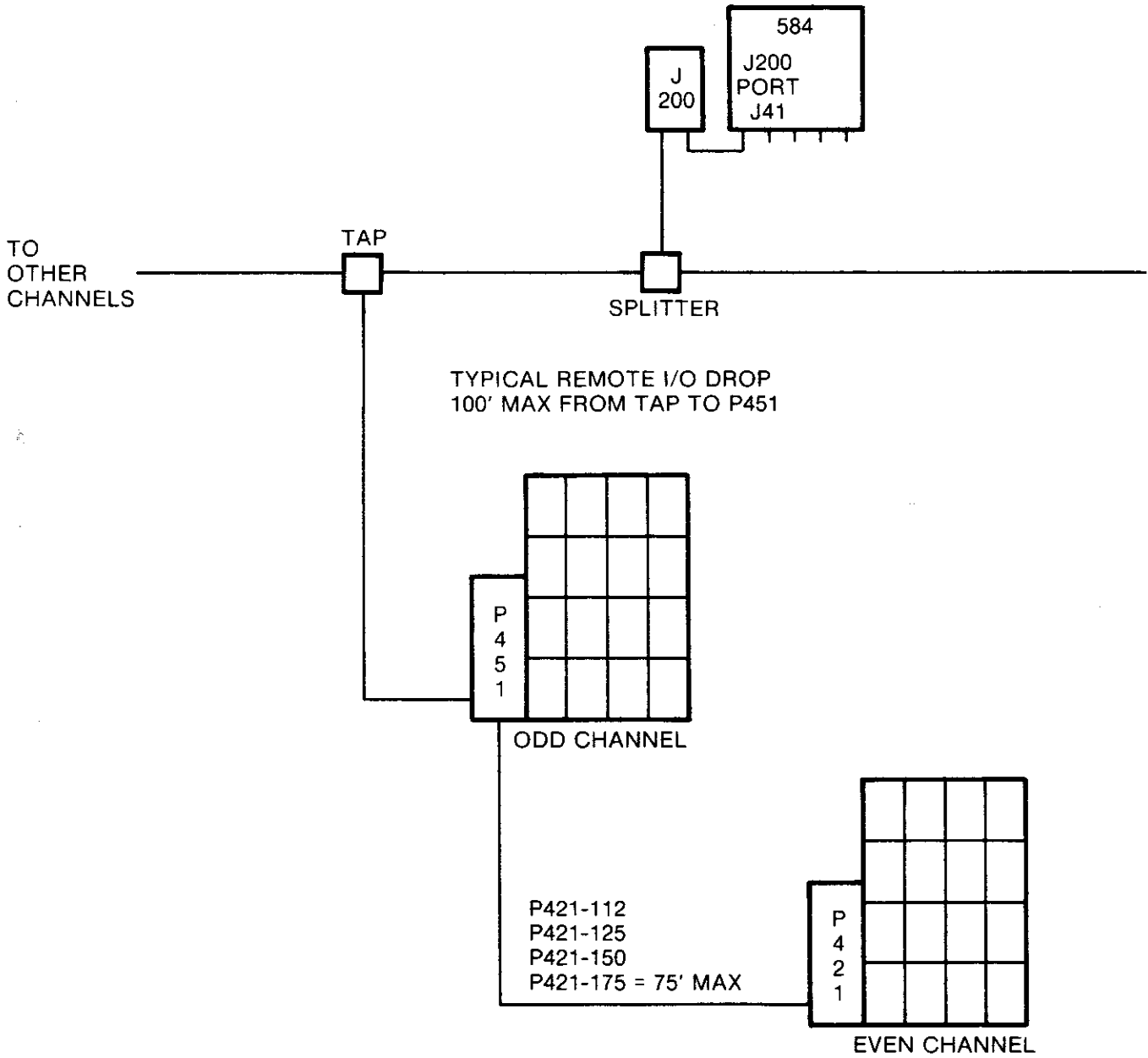


The indicator lights on the front panel show the status of communications during operation when lit:

- READY — P451 is ready to communicate with the Mainframe via the J200.
- COMM ACTIVE — Data is being received from the J200.
- S200 ERROR — Unsuccessful communication between the P451 and attached I/O.
- COMM ERROR — The P451 detected a communication error with the J200.

The bottom of the P451 contains the communication ports for the J200 and the P421.

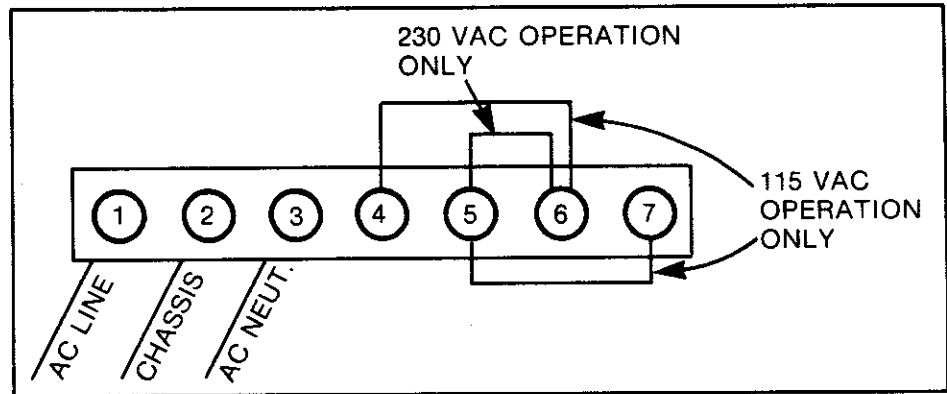
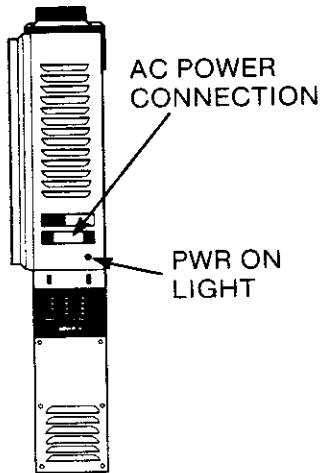
TYPICAL P451 DROP



P453 REMOTE I/O INTERFACE CONFIGURATION

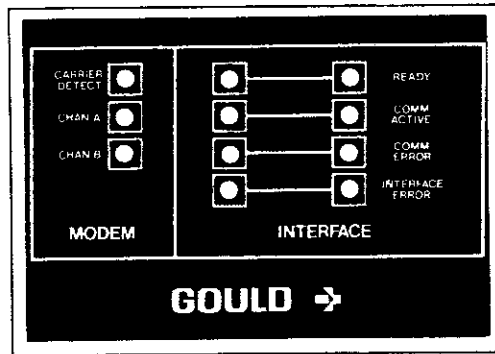
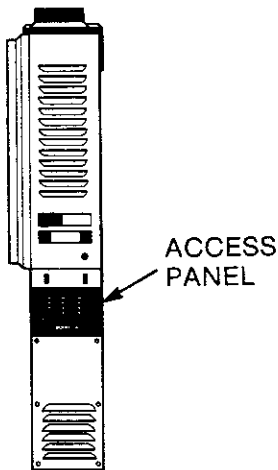
The P453 Remote I/O Interface can be connected to the J200 remote I/O system and will interface with ASCII devices, and up to two full channels of I/O.

Located on the front center of the P453 is an AC power on (PWR ON) light and AC power connections that require a single source — standard 115 VAC or 230 VAC (jumper selectable).



P453 AC POWER SUPPLY CONNECTIONS

453 I/O INTERFACE



P453 FRONT ACCESS PANEL

On the right front of the access panel is an INTERFACE diagram that shows the status of each ASCII PC board:

- READY — When lit, P453 is ready to communicate to the J200
- COMM ACTIVE — When lit, P453 is communicating with the J200
- COMM ERROR — When lit, P453 has a failure in communicating with the J200
- INTERFACE ERROR — When lit, error between P453 and its I/O channels.

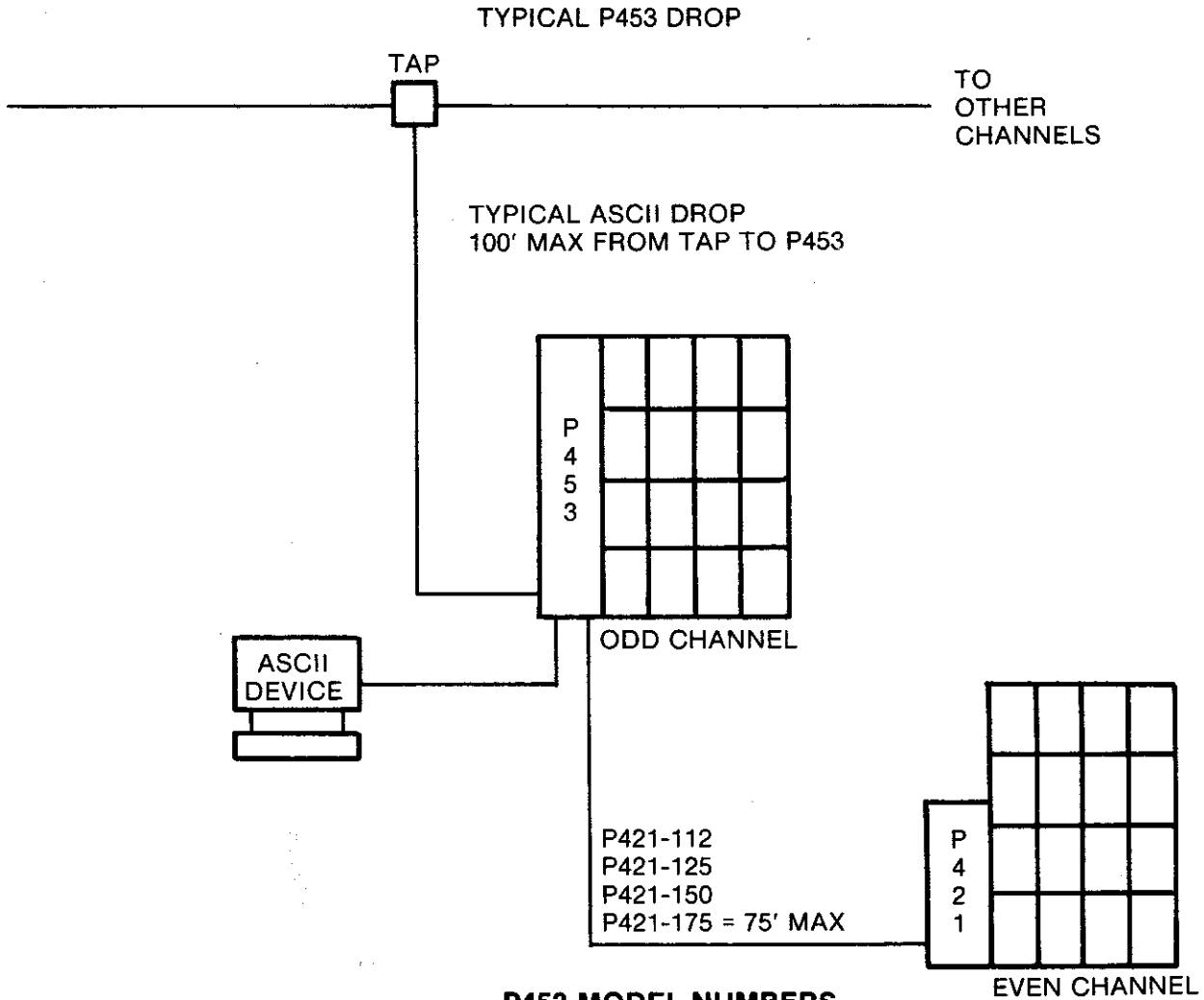
P453 ACCESS PANEL

On the left front of the access panel is a MODEM diagram that shows the links between the P453 and J200:

- CARRIER DETECT — When lit shows frequency link between P453 modem (first board) and modem on J200.
- CHAN A — When lit P453 modem board is running.
- CHAN B — Spare.

HARDWARE

Remote I/O Hardware Configurations



P453 MODEL NUMBERS

Model Number	I/O Channels	ASCII Ports	Redundancy Compatibility
AS-P453-*11	2	0	No
AS-P453-*12	2	0	Yes
AS-P453-*21	0	2	Yes
AS-P453-*22	0	2	Yes
AS-P453-*31	2	2	No
AS-P453-*32	2	2	Yes
AS-P453-*52	2	2	Yes
AS-P453-*41	0	4	Yes
AS-P453-*42	0	4	Yes

*5 = 50 Hz.
*6 = 60 Hz.

P453 MODEL NUMBERS

The following chart lists details of the various P.C. boards which can be installed in a P453:

Boards	Type	PROM Combination	Software Rev	On Board Switches
AS-210-010	Modem	3000	N/A	None
AS-212P-010	I/O	2000 2001 2002 2003	A B C D	8 position dip switch
AS-212P-020	ASCII	1000	A	8 position dip switch
AS-212P-110	I/O	3001 3002 3003	B C D	8 position dip switch on main board, 4 position dip switch on daughter board
AS-212P-210	I/O	4001 4002 4003	B C D	8 position dip switch and 16 position (0 to F) rotary switch
AS-212P-220	ASCII	5001	B	8 position dip switch, and 16 position (0 to F) rotary switch

SUMMARY OF P453 MODEL NUMBERS

Gould Part Number

Description

AS-P453-XXX

Model	Type	Redundancy Compatibility
11	I/O	No*
12	I/O	Yes
21	ASCII	Yes
22	ASCII	Yes
31	I/O and ASCII	No*
32	I/O and ASCII	Yes
52	I/O and ASCII	Yes
41	ASCII	Yes
42	ASCII	Yes
5	Frequency 50 Hz	
6	60 Hz	

*Due to DIP switch limitations on earlier version I/O board, no switch is available on the board to select the redundancy mode.

MODEL #11 (I/O)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-010	3000	N/A	Modem	None
	2000	A	I/O	8 position DIP switch.
	or 2001	B		
	or 2002 or 2003	C D		

MODEL #12 (I/O)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-110	3000	N/A	Modem	None
	3001	B	I/O	8 position DIP switch on main board and 4 position DIP switch mounted on daughter board.
	or 3002	C		
	or 3003	D		
----- OR -----				
AS-S210-010 and AS-212P-210	3000	N/A	Modem	None
	4001	B	I/O	8 position DIP switch and 16 position (O to F) Rotary Switch.
	or 4002	C		
	or 4003	D		

MODEL #21 (ASCII)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-020	3000	N/A	Modem	None
	1000	A	ASCII	8 position DIP switch.

MODEL #22 (ASCII)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-220	3000	N/A	Modem	None
	5001 or 5002	B C	ASCII	8 position DIP switch and 16 position (O to F) rotary switch.

MODEL #31 (I/O AND ASCII)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-010	3000	N/A	Modem	None
	2000 or 2001 or 2002 or 2003	A B C D	I/O	8 position DIP switch.
and AS-212P-020	1000	A	ASCII	8 position DIP switch.

MODEL #32 (I/O AND ASCII)

NOTE: Supports 2 channels of I/O w/Rev B interfaces and 2 ASCII ports w/Rev A functionality.

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-110	3000	N/A	Modem	None
	3001 or 3002 or 3003	B C D	I/O	8 position DIP switch on main board and 4 position DIP switch on daughter board.
and AS-212P-020	1000	A	ASCII	8 position DIP switch.
----- OR -----				
AS-S210-010 and AS-212P-210	3000	N/A	Modem	None
	4001 or 4002 or 4003	B C D	I/O	8 position DIP switch and 16 position (O to F) Rotary Switch.
and AS-212P-020	1000	A	ASCII	8 position DIP switch.

MODEL #41 (ASCII)

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-020 and AS-212P-020	3000 1000 1000	N/A A A	Modem ASCII ASCII	None 8 position DIP switch. 8 position DIP switch.

MODEL #42 (ASCII)

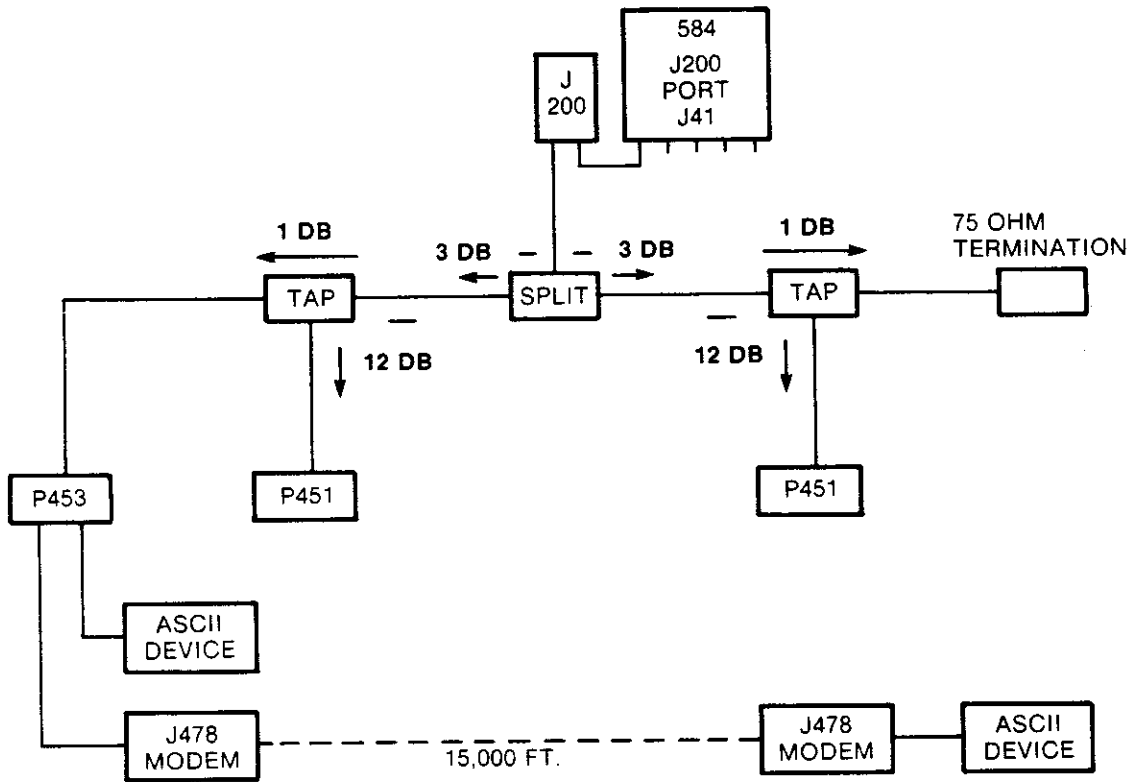
Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-220 and AS-212P-220	3000 5001 or 5002 5001 or 5002	N/A B C B C	Modem ASCII ASCII	None 8 position DIP switch. and 16 position (O to F) rotary switch. 8 position DIP switch and 16 position (O to F) rotary switch.

MODEL #52 (I/O AND ASCII)

NOTE: Supports 2 channels of I/O with Revision B interfaces and 2 ASCII ports with Revision B functionality.

Boards	Prom Comb.	Software Rev.	Type	On Board Switches
AS-S210-010 and AS-212P-110 and AS-212P-220	3000 3001 or 3002 or 3003 5001	N/A B C D B	Modem I/O ASCII	None 8 position DIP switch on main board and 4 position DIP switch on daughter board. 8 position DIP switch and 16 position (O to F) rotary switch.
----- OR -----				
AS-S210-010 and AS-212P-210 and AS-212P-220	3000 4001 or 4002 or 4003 5001 or 5002	N/A B C D B C	Modem I/O ASCII	None 8 position DIP switch and 16 position (O to F) Rotary Switch. 8 position DIP switch and 16 position (O to F) rotary switch.

Remote I/O Cabling



Cabling Requirements Summary (See Page 7-6 For Details)

1.

Cable Type	Max Length	Loss Per 1000'
RG-6U	5000'	7.0 dB
RG-11U	8000'	2.0 dB
CATV	15000'	0.8 dB

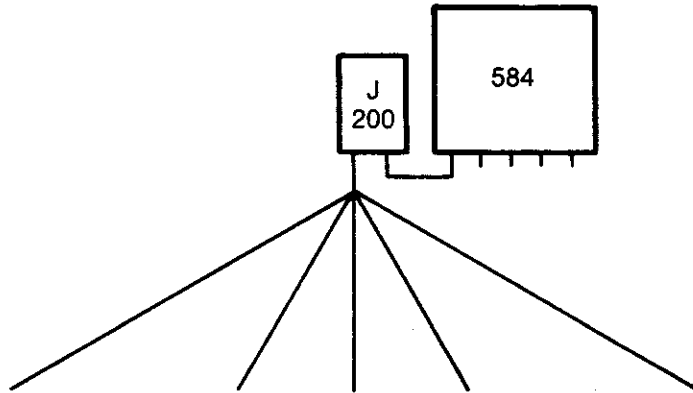
2. Max loss between J200 and any drop = 35 dB
3. Maximum length of any drop = 100'
4. Splitter dB loss = 3 dB from center to both sides
5. Tap dB loss = 1 dB thru, 12 dB down
6. One splitter per system equidistant from both ends
7. Linear configurations only
8. Cable must terminate at I/O channel or 75 ohm termination
9. Don't mix cables
10. Ensure proper 'F' connections
11. Isolate coax from high energy cables

HARDWARE

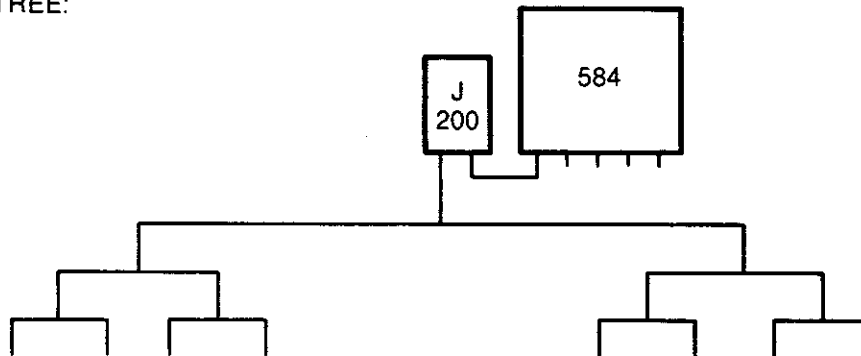
Remote I/O Cabling

The remote I/O configurations must be "linear" to avoid signal propagation problems. Do not use "star", "tree", and "ring" configurations.

STAR:



TREE:



RING:

