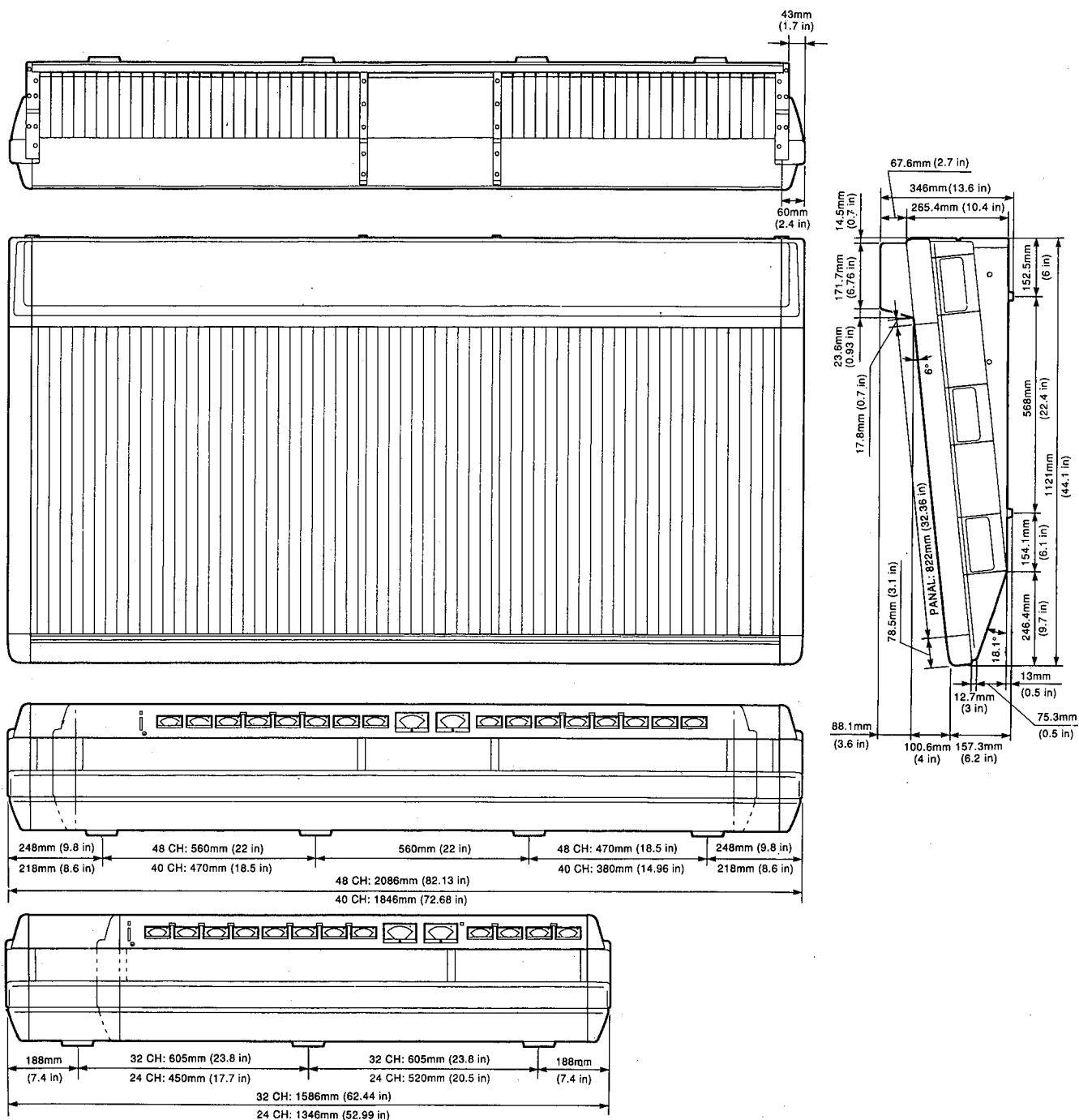
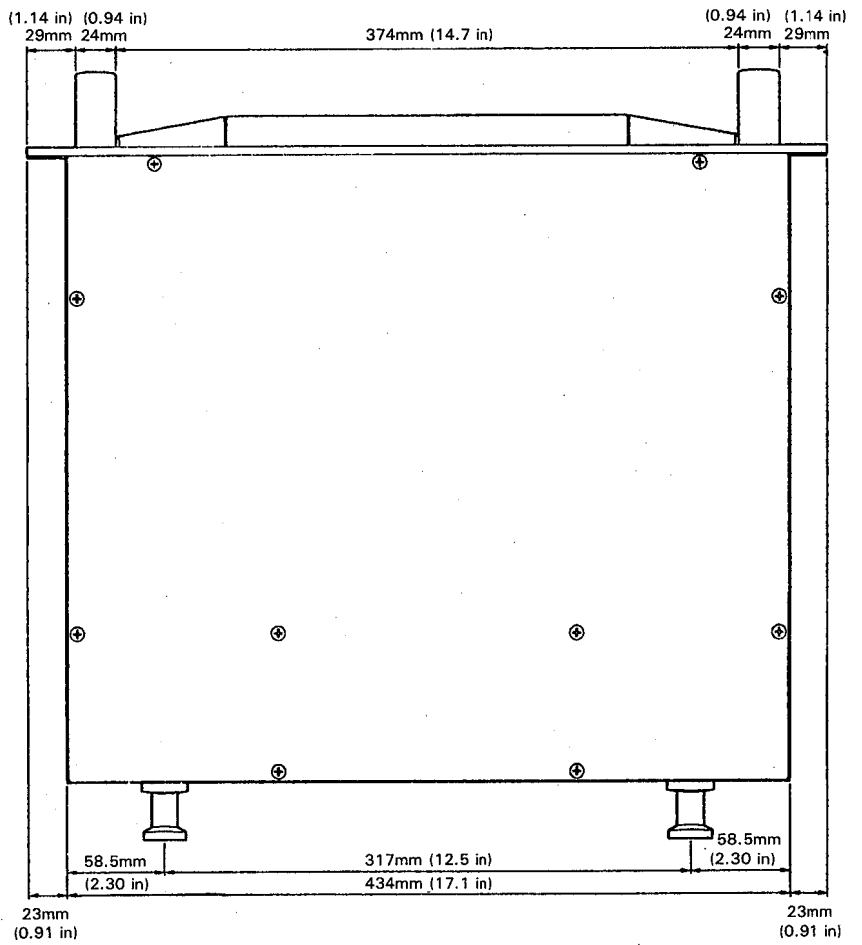
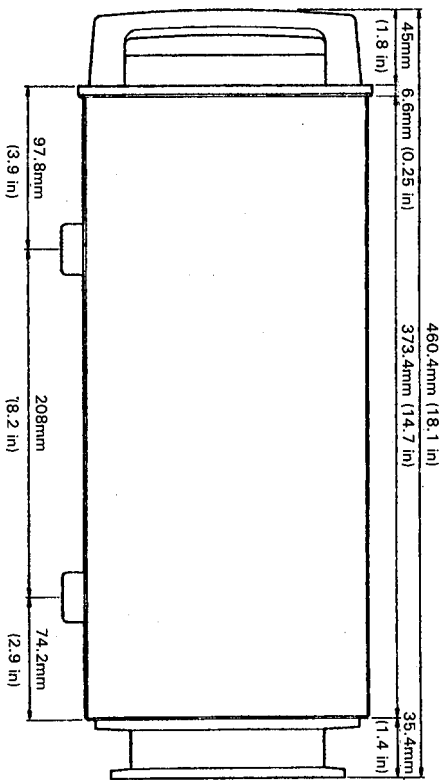
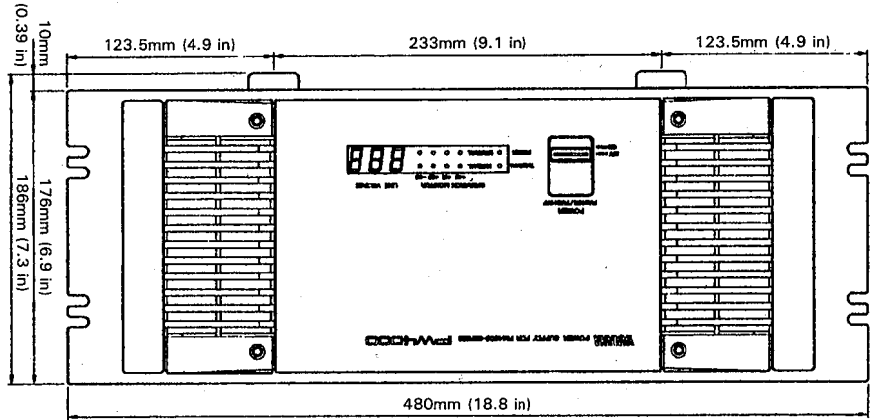


PM4000 DIMENSIONS (PM4000寸法図)



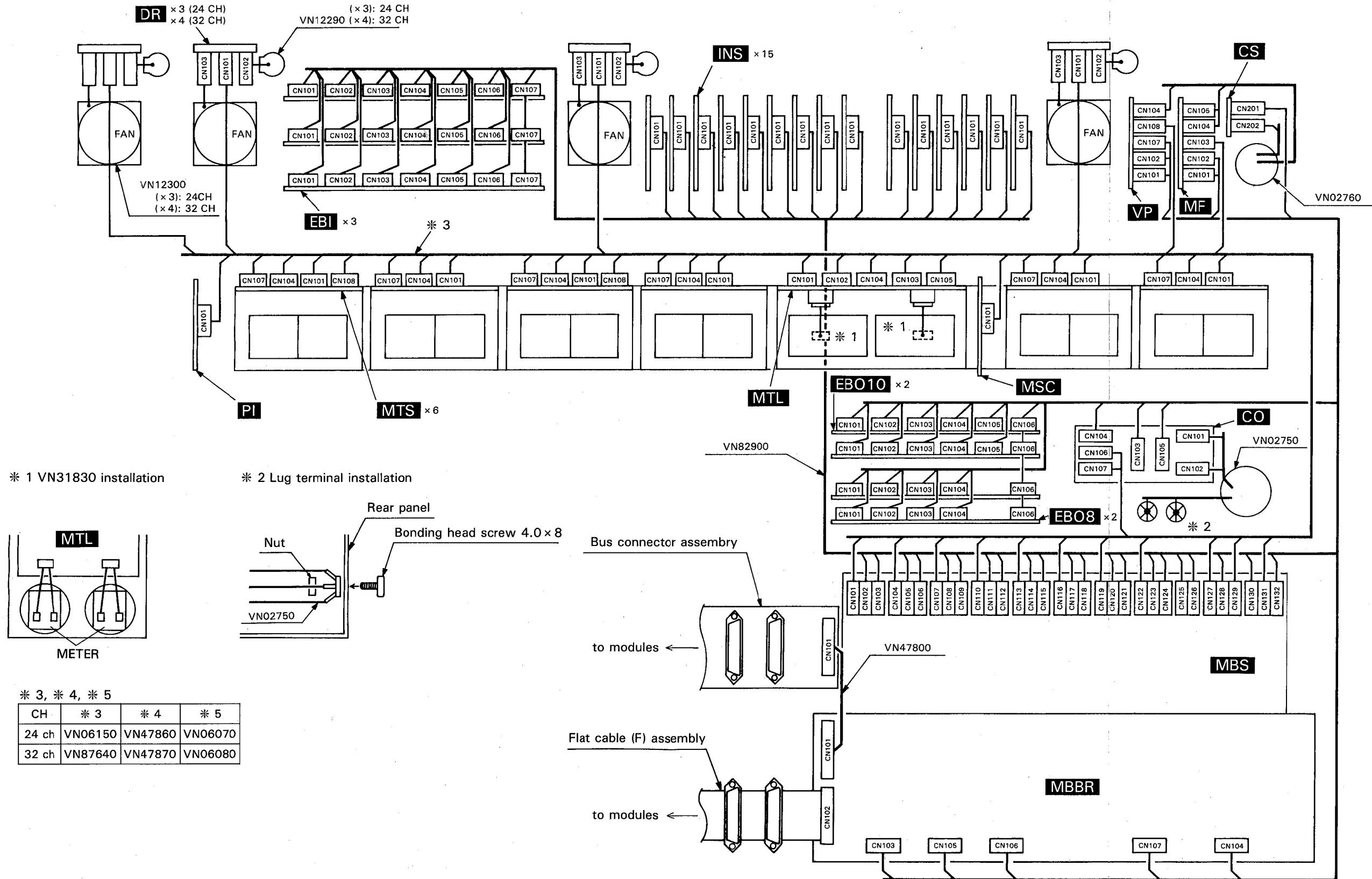
■ PW4000 DIMENSIONS (PW4000寸法図)



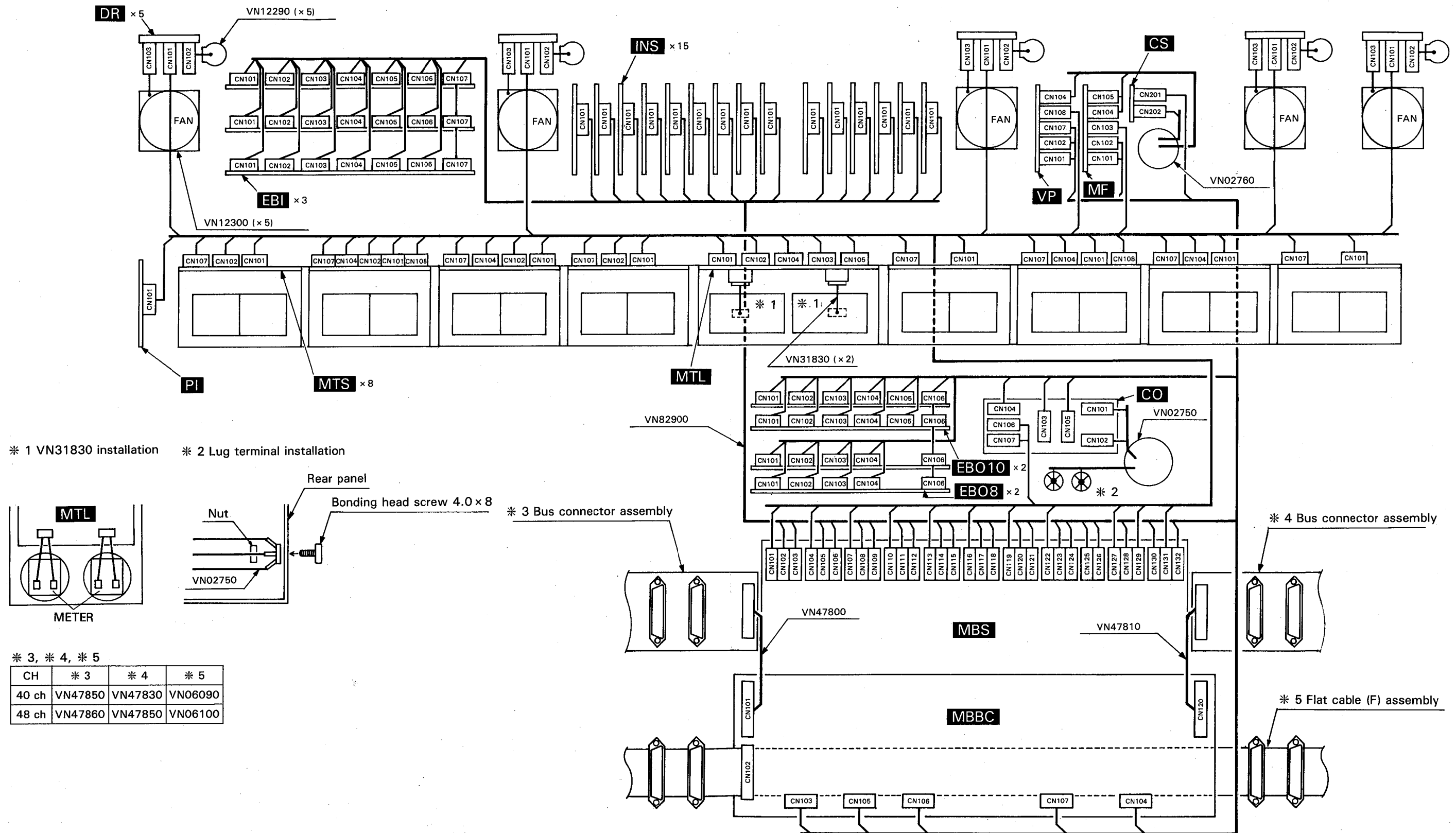
PM4000/PW4000

■ **CIRCUIT BOARD WIRING (基板結線図)**

● **PM4000-24, PM4000-32 Overall Assembly (総組立)**

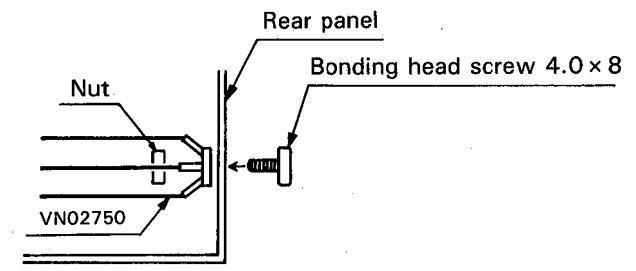
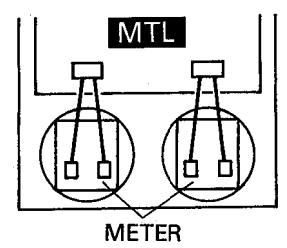


● PM4000-40C, PM4000-48C Overall Assembly (総組立)



* 1 VN31830 installation

* 2 Lug terminal installation



* 3 Bus connector assembly

* 4 Bus connector assembly

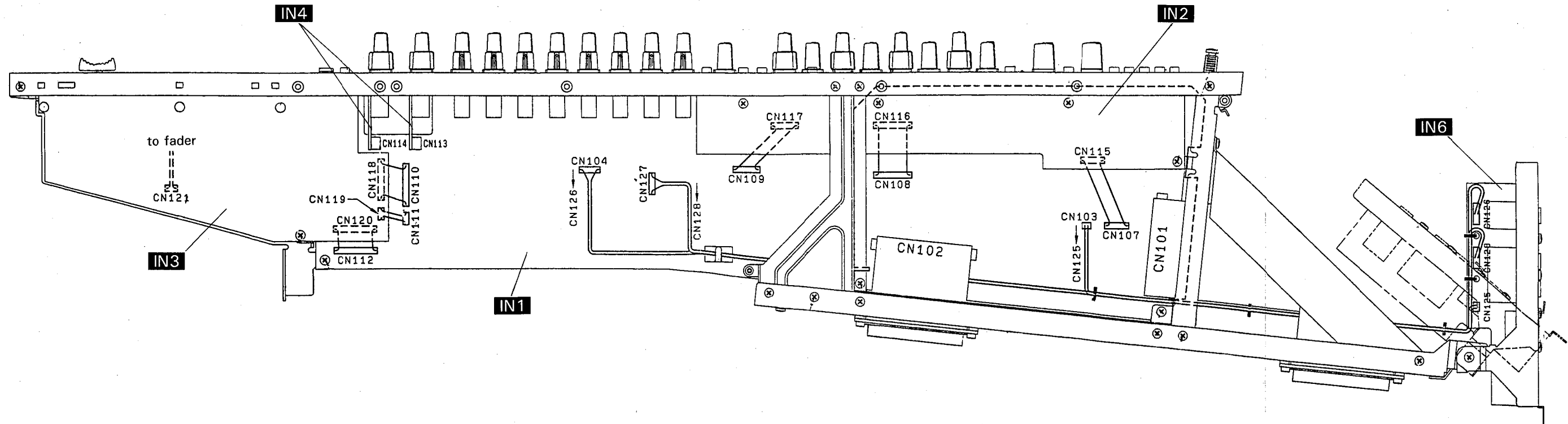
* 3, * 4, * 5

CH	* 3	* 4	* 5
40 ch	VN47850	VN47830	VN06090
48 ch	VN47860	VN47850	VN06100

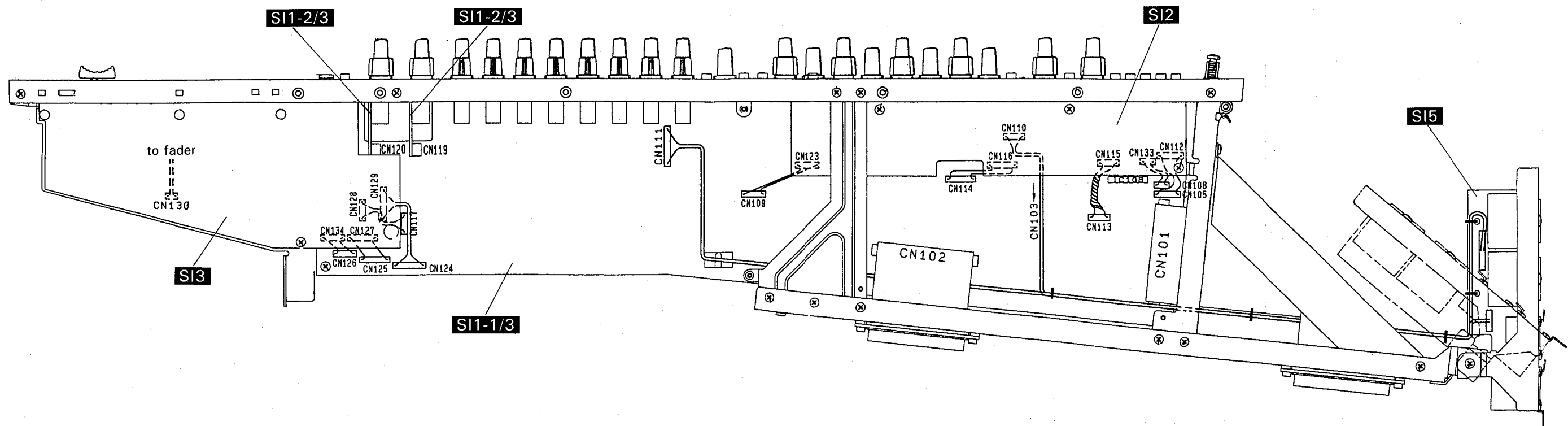
* 5 Flat cable (F) assembly

PM4000/PW4000

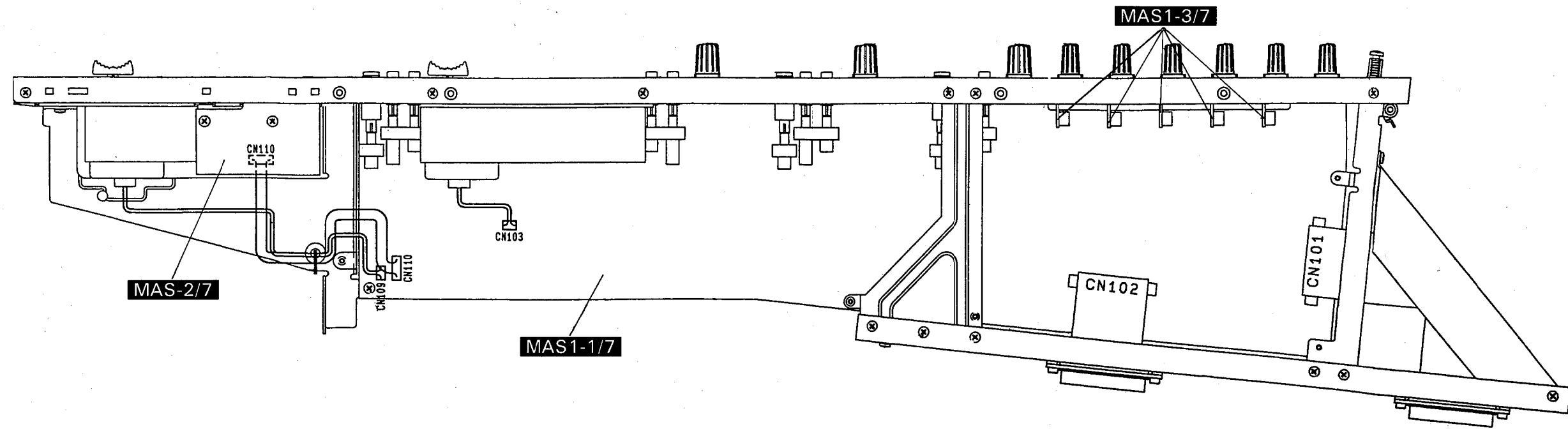
● Monaural Input Module (MONO INPUTモジュール)



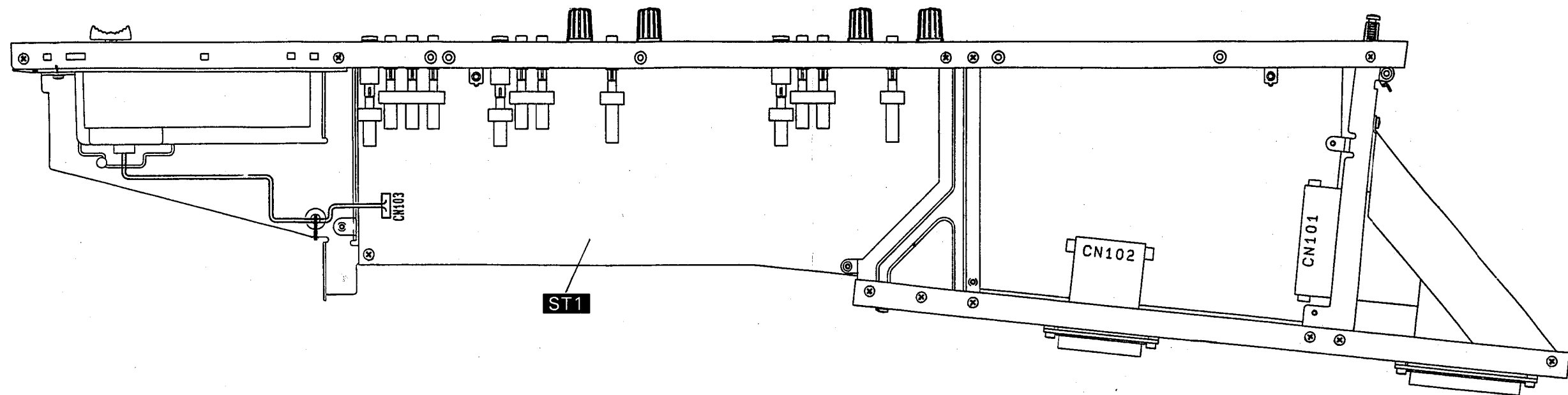
● Stereo Input Module (ST INPUTモジュール)



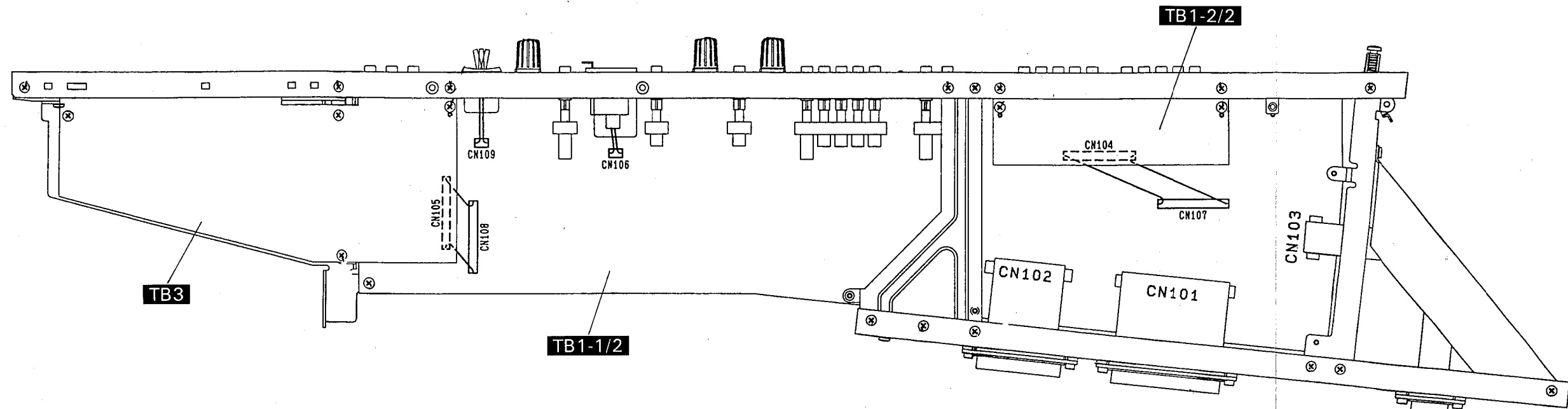
● Master Module 1-8 (GROUP MASTERモジュール)



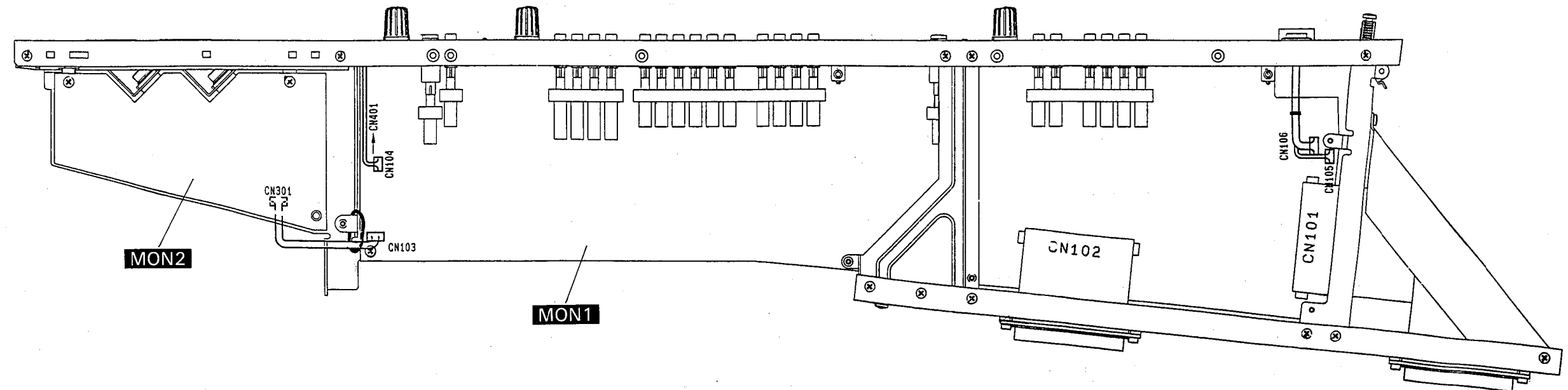
● Stereo Master Module (STEREO MASTERモジュール)



● Talkback Module (TALKBACKモジュール)



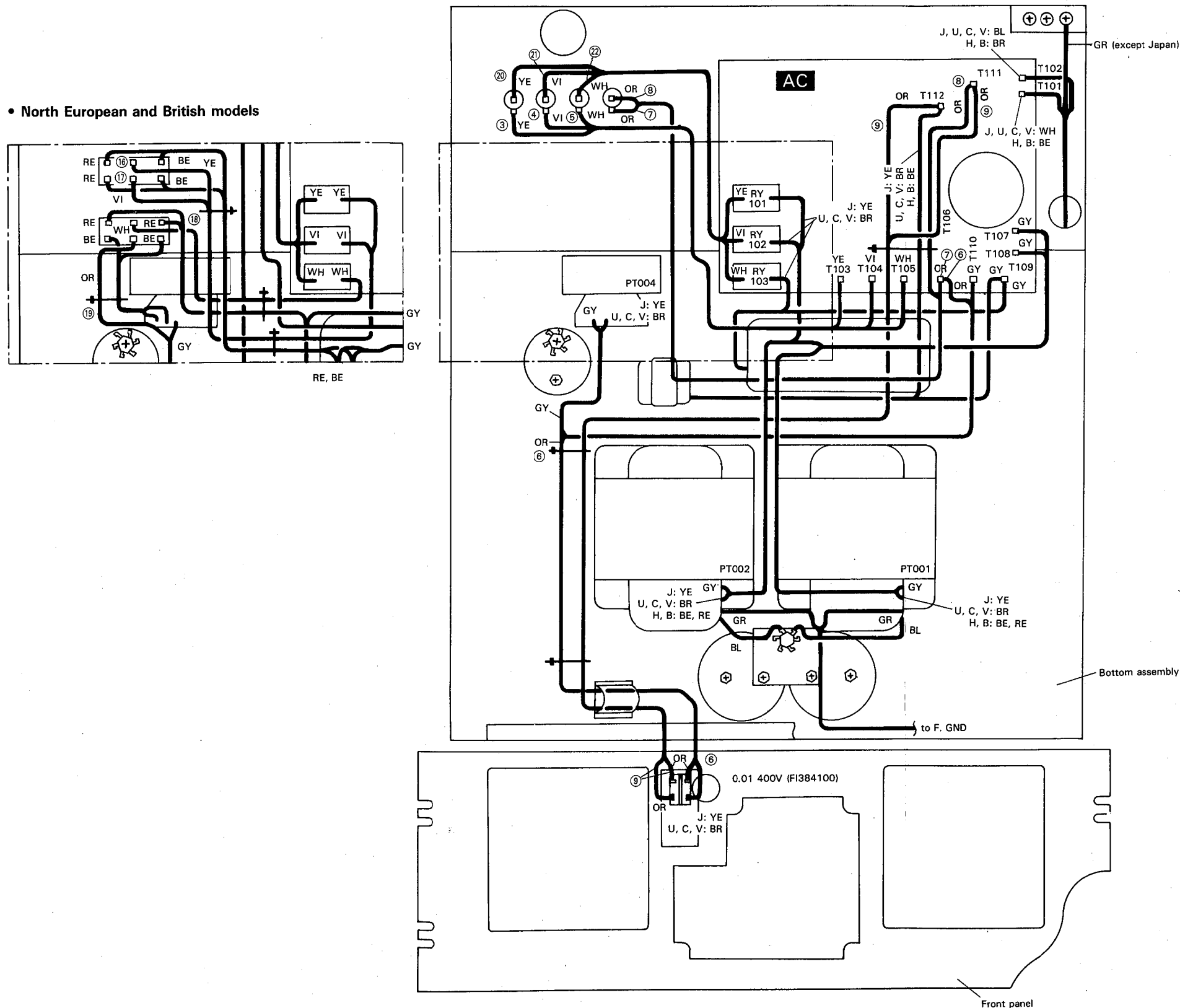
● Monitor Module (MONITORモジュール)



● PW4000 Overall Assembly — Primary (PW4000総組立-1次配線)

● Japanese, U.S. and Canadian models

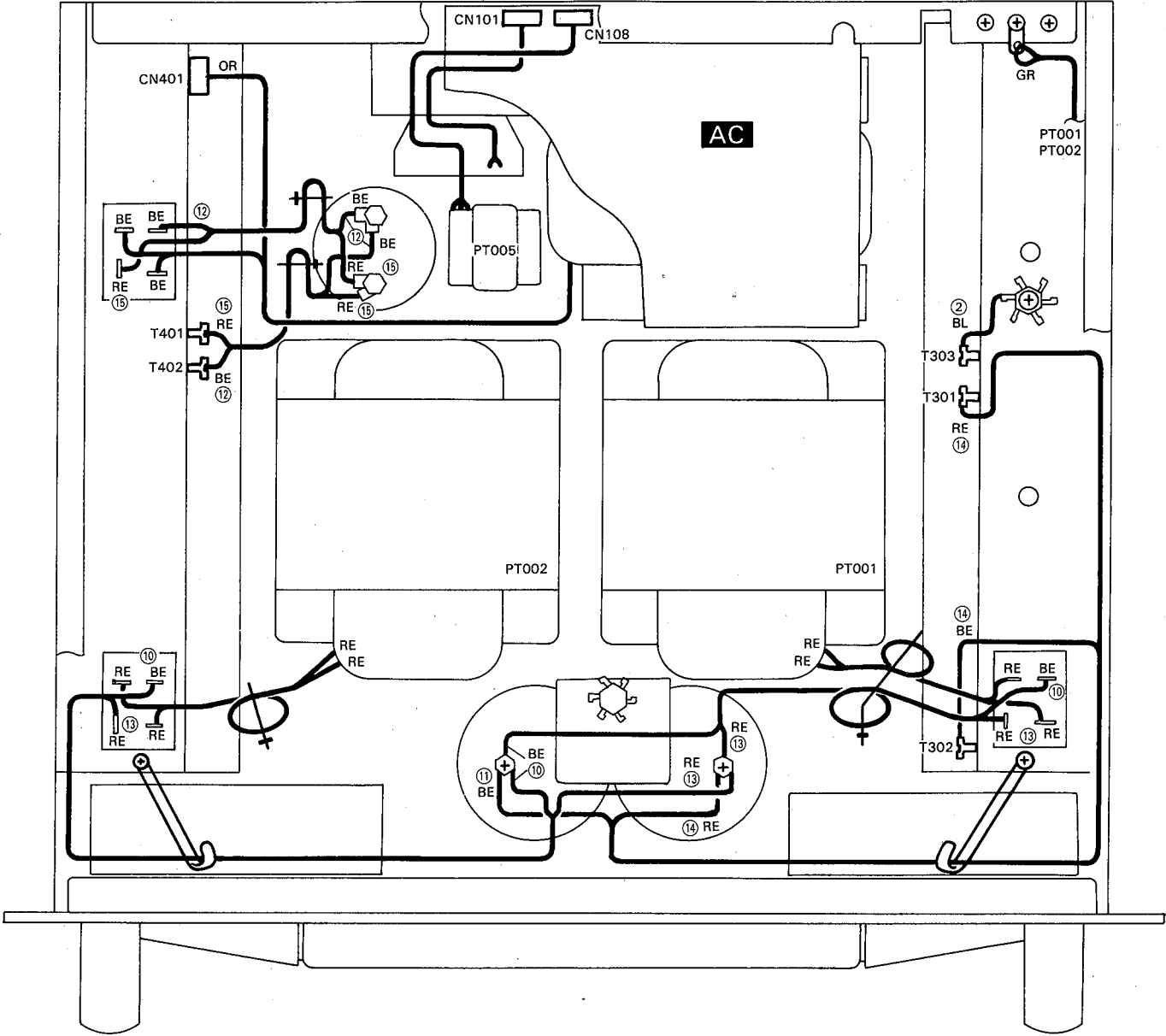
● North European and British models



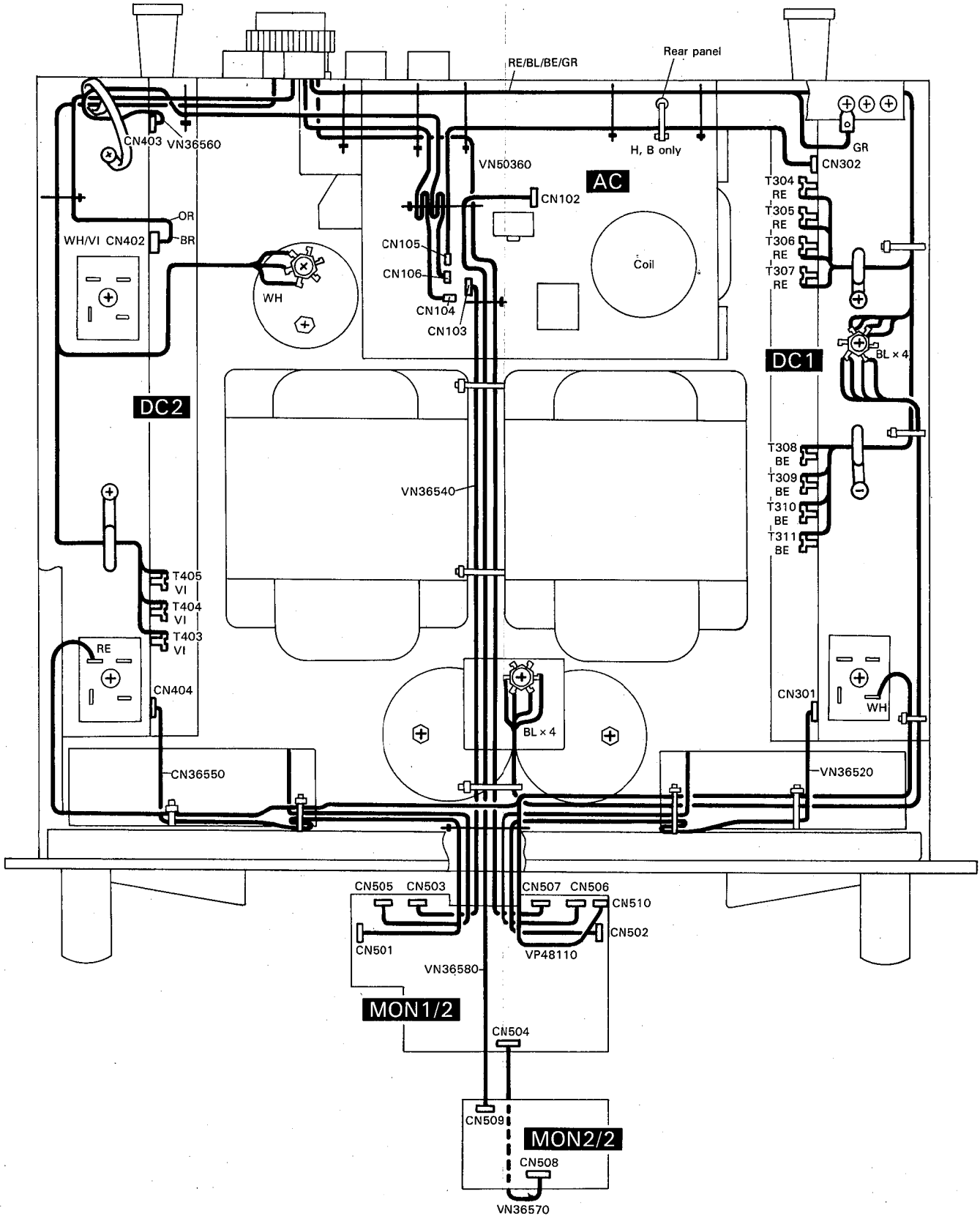
NO.	DESTINATION	LENGTH	WIRE COLOR	PART NO.
②	DC1 Right side P.T. plate	L = 50	BL	VA16590
③	T103 F001	L = 290	YE	VA16500
④	T104 F002	L = 290	VI	VA16530
⑤	T105 F003	L = 390	WH	VA16550
⑥	T106 SW001	L = 520	OR	VA16490
⑦	T106 F004	L = 370	OR	VA16490
⑧	F004 T1.11	L = 480	OR	VA16490
⑨	T111, T112 SW001	L = 630	OR	VA16490
⑩	68000 μ F DC4	L = 420	BE	VA16100
⑪	68000 μ F DC1	L = 440	BE	VA16100
⑫	10000 μ F, DC2 DC4	L = 160	BE	VA16100
⑬	68000 μ F DC4	L = 420	RE	VA16060
⑭	68000 μ F DC1	L = 540	RE	VA16060
⑮	10000 μ F, DC2 DC4	L = 160	RE	VA16060
⑯	RY101 SW002	L = 330	YE	VA16500
⑰	RY102 SW002	L = 330	VI	VA16530
⑱	RY103 SW003	L = 330	WH	VA16550
⑲	SW001 SW003	L = 520	OR	VA16490
⑳	RY101 F001	L = 200	YE	VA16500
㉑	RY102 F002	L = 200	VI	VA16530
㉒	RY103 F003	L = 200	WH	VA16550
㉓	Right side P.T. plate Electrolytic capacitor	L = 510	BL	VA16590

* Wires listed above are not available as service parts.
(上記の束線は、補修用部品としては用意されていません。)

● PW4000 Overall Assembly – Secondary (PW4000総組立-2次配線)

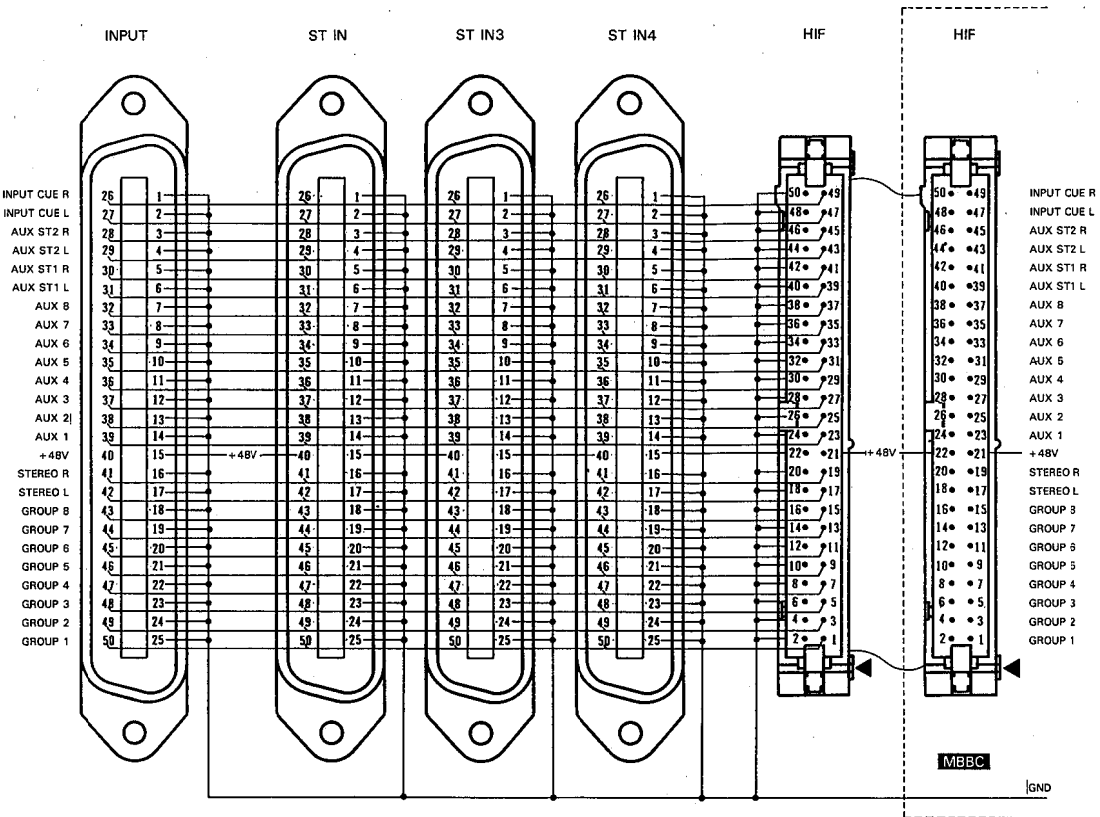


● PW4000 Overall Assembly – Connectors (PW4000総組立-コネクタ配線)

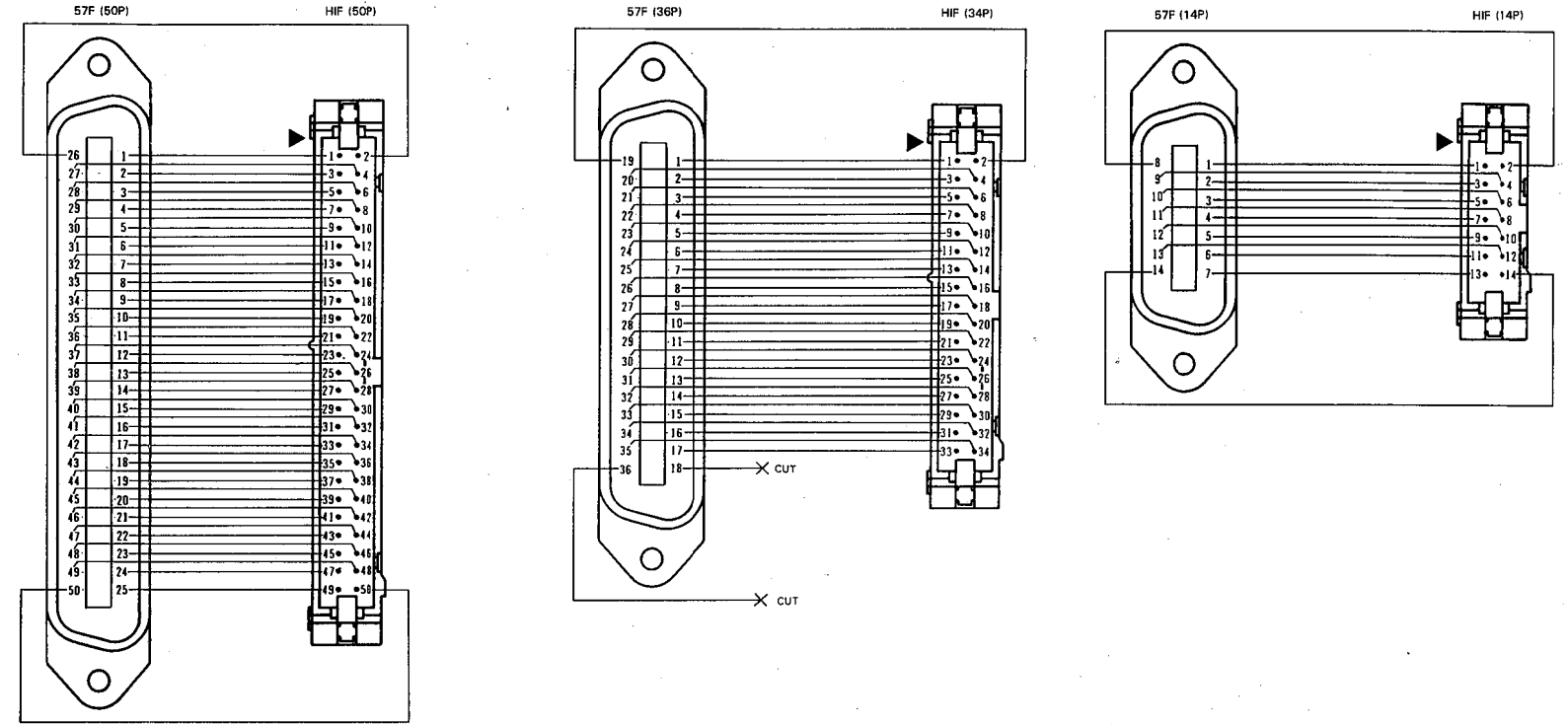


● SIGNAL bus connector (rear side) pin assignments

● Flat cable connector pin assignments

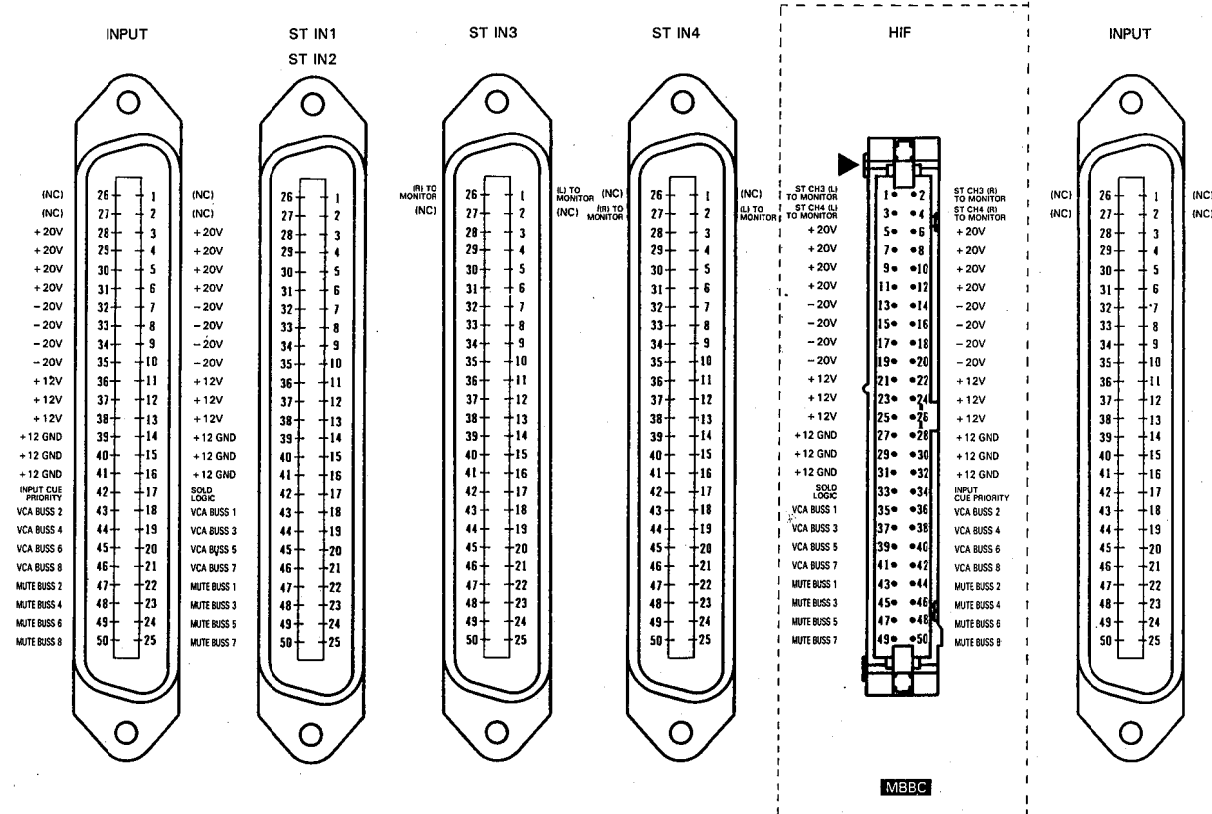


TYPE	NADE	COLOR	REMARK
57F	DDK	BLUE	BUS CONNECTOR RIBON CABLE
HIF	HIROSE	BLACK	USED ON BOARD/BORTH SIDE
APX	MATSUSHITA		

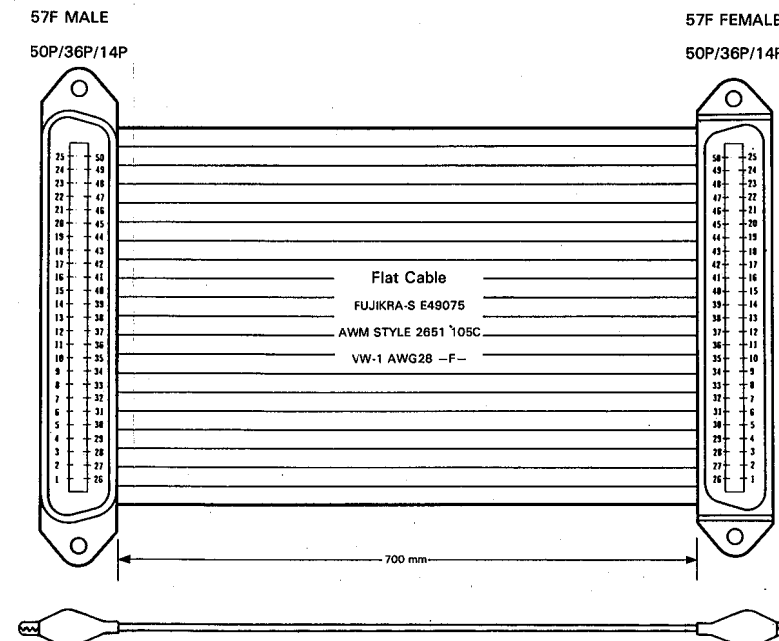


● DC control bus (front side) flat cable pin assignments

● PM4000 module extension cable for repair servicing



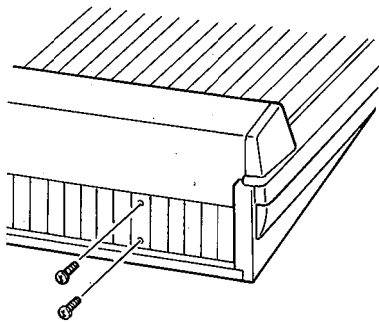
- 1 50P Flat Cable (700mm) With Connector × 2
- 2 36P Flat Cable (700mm) With Connector × 2
- 3 14P Flat Cable (700mm) With Connector × 1
- 4 Short Wire (700mm) With Clip × 1



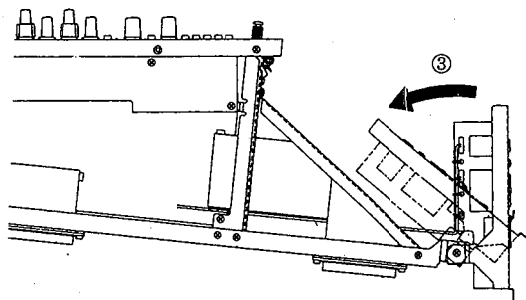
PW4000/PW4000

REMOVING AND INSTALLING A MODULE

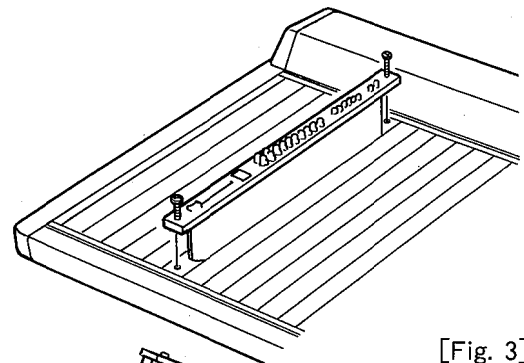
(モジュールの取り外しと取り付け)



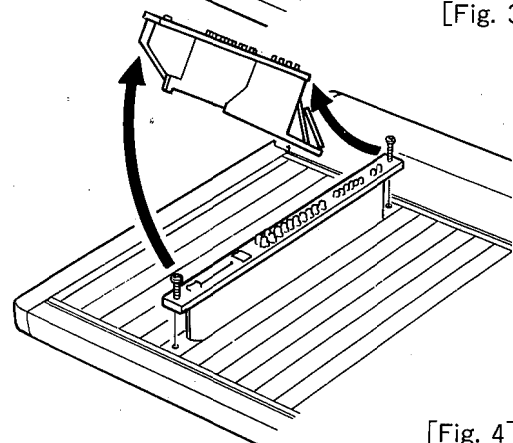
[Fig. 1]



[Fig. 2]



[Fig. 3]



[Fig. 4]

1. Turn the Power OFF first, before removing or installing a module.
2. Loosen the screws at the top and bottom of the rear panel input/output strip corresponding to the module being removed (except Master section modules). These screws are not retained so be sure to grasp them and set them aside for reinstallation of the module. [Fig. 1]
3. Loosen the retaining screws at the top and bottom of the module. These screws are retained in the module. [Fig. 3]
4. Lift up on the module's retaining screws (or you may also want to pull up gently on a control knob), and you will feel the two module connectors that join the connectors on the bottom of the console release. Then carefully lift the module out of the console. [Fig. 4]
5. Installation of a module should be done by reversing the order of this procedure. Work slowly to make sure that edge connectors mate properly.

NOTE: If you are moving a module to a different location in the mainframe, one which had housed no module or a different type of module, then you will have to also move the rear connector panel. Monaural and Stereo input modules may be placed anywhere in the frame, and you can exchange them freely (so long as you use the correct input/output connector panel on the rear). However, there should be no more than a total of 64 input channels per mainframe.

- ①モジュールを取りはずしたり、取り付けたりする前に、必ず電源をOFFにしてください。モジュール内部ICPが瞬断します。
- ②取りはずすモジュールのフロントパネル前・後2本の⊕ネジをゆるめます。このネジはモジュール上面に抜け出さないような構造になっています。
- ③MASTERセクションの各モジュールは②のフロントパネル前後2本のネジのみで本体に取付けられていますが、MONO/ST INPUTモジュールでは、該当するモジュールのリアパネルの上・下2本の⊕ネジもはずします。この時リアパネルの上部が内側に倒れていることを確認してください。倒れない場合は軽く手で押し倒してください。
- ④②でゆるめた前後2本のフロントパネルのネジを指でつまみ、モジュールをコネクタがはずれるまで上方に引き上げます。MASTERセクションの各モジュールは平行に引き上げると本体からはずれませんが、MONO/ST INPUTモジュールは、モジュールの手前側を後方よりやや先に上に持ち上げ、リアパネルがメーターブリッジの下をくぐるようにしてモジュールを取りはずします。
- ⑤モジュールの取り付けは、この手順と逆に行ないます。モジュール下部のコネクタが正しく合っていることを確認しながら、確実に行なってください。

ステレオインプットモジュールの増設

ステレオインプットモジュールの増設が可能です。標準装備のステレオインプットモジュールは4本ですが、モノラルインプットと置換えてトータルチャンネル数64まで増設することができます。置換えは一切のワイヤリングを必要とせず、モジュールを交換するのみでステレオモジュール機能を持たせることができます。

CHANGING THE FUNCTIONS WITH INTERNAL SWITCHES

(内部切替スイッチによる機能変更)

● Mono Input Direct Out Jack: Pre-Fader or Post-Fader (switch) Pre-ON or Post-ON Switch (jumper)

A slide switch in each input module permits the Direct Out point to be altered. As shipped, the console is set so that the Direct Out point is derived after the EQ and Fader (technically speaking, it comes after the VCA

which is controlled by the fader). If you wish the Direct Out to be Pre-EQ and Fader (actually pre-VCA), move the switch to the appropriate position, as illustrated.

As shipped, the direct out point comes ahead of the Channel ON switch, and is thus not affected by the Master Mute function. By changing internal jumpers, you can alter the Direct Out point to be Post-ON switch, also illustrated below.

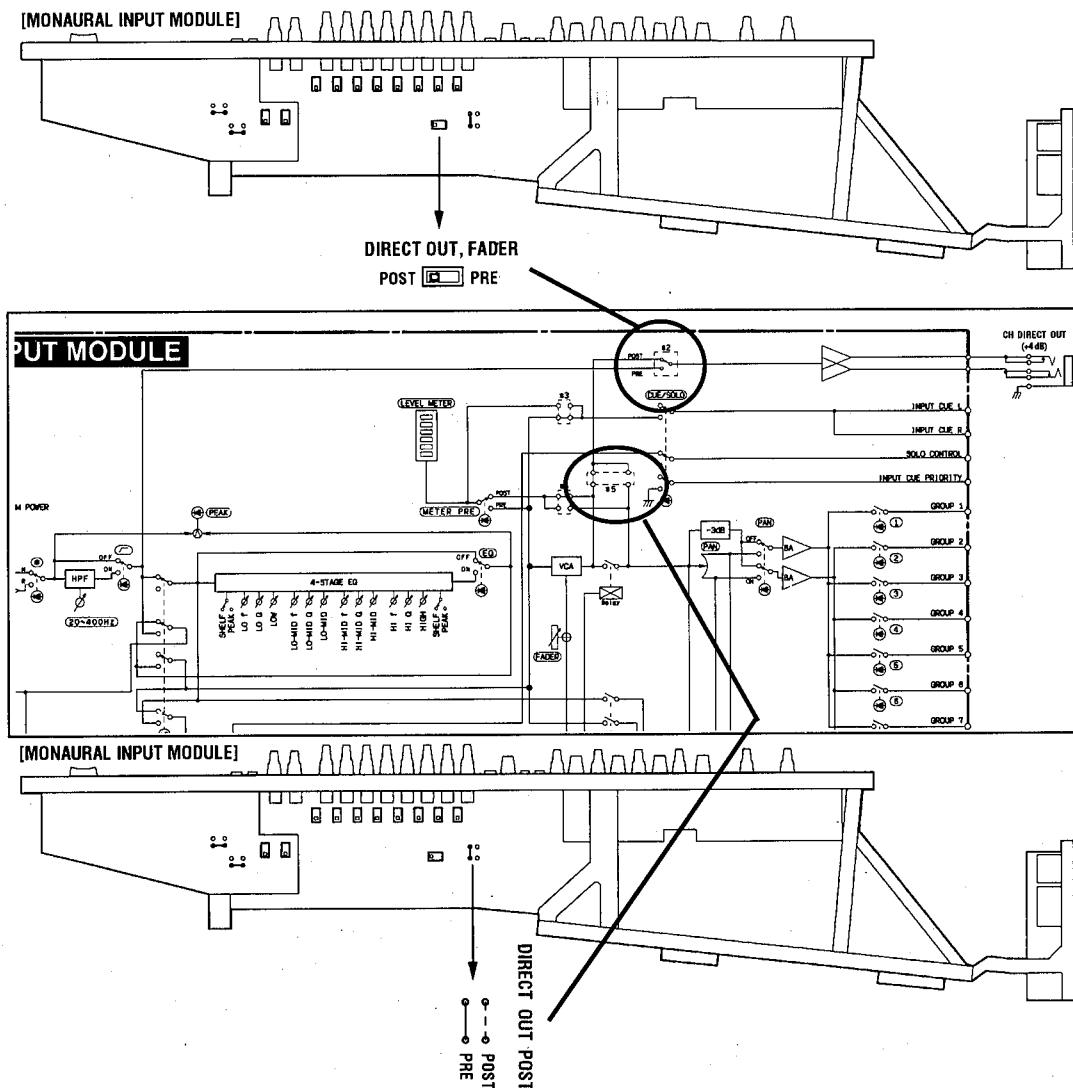
● MONO INPUT モジュール

DIRECT OUT の PRE EQ, PRE FADER/POST FADER

このスイッチにより、DIRECT OUT の出力を、プリ・イコライザー、プリ・フェーダーにするか、ポスト・フェーダーにするかを選択することができます。出荷時はポスト・フェーダーにセットされています。

DIRECT OUT の POST 位置での PRE ON SW/POST ON SW

このジャンパー線により、DIRECT OUT 信号取出しポイントをチャンネルONスイッチ前にするか、チャンネルONスイッチ後にするかを選択することができます。出荷時はプリ ON スイッチにセットされています。



Internal Switch Positions For Pre-Fader/EQ and Post-Fader/EQ Direct Out Point; Internal Jumpers for Direct Out Pre/Post Channel ON Switch; and Corresponding Block Diagram Location

● **Mono Input Aux Sends: Pre Fader & EQ or Pre Fader/post EQ**

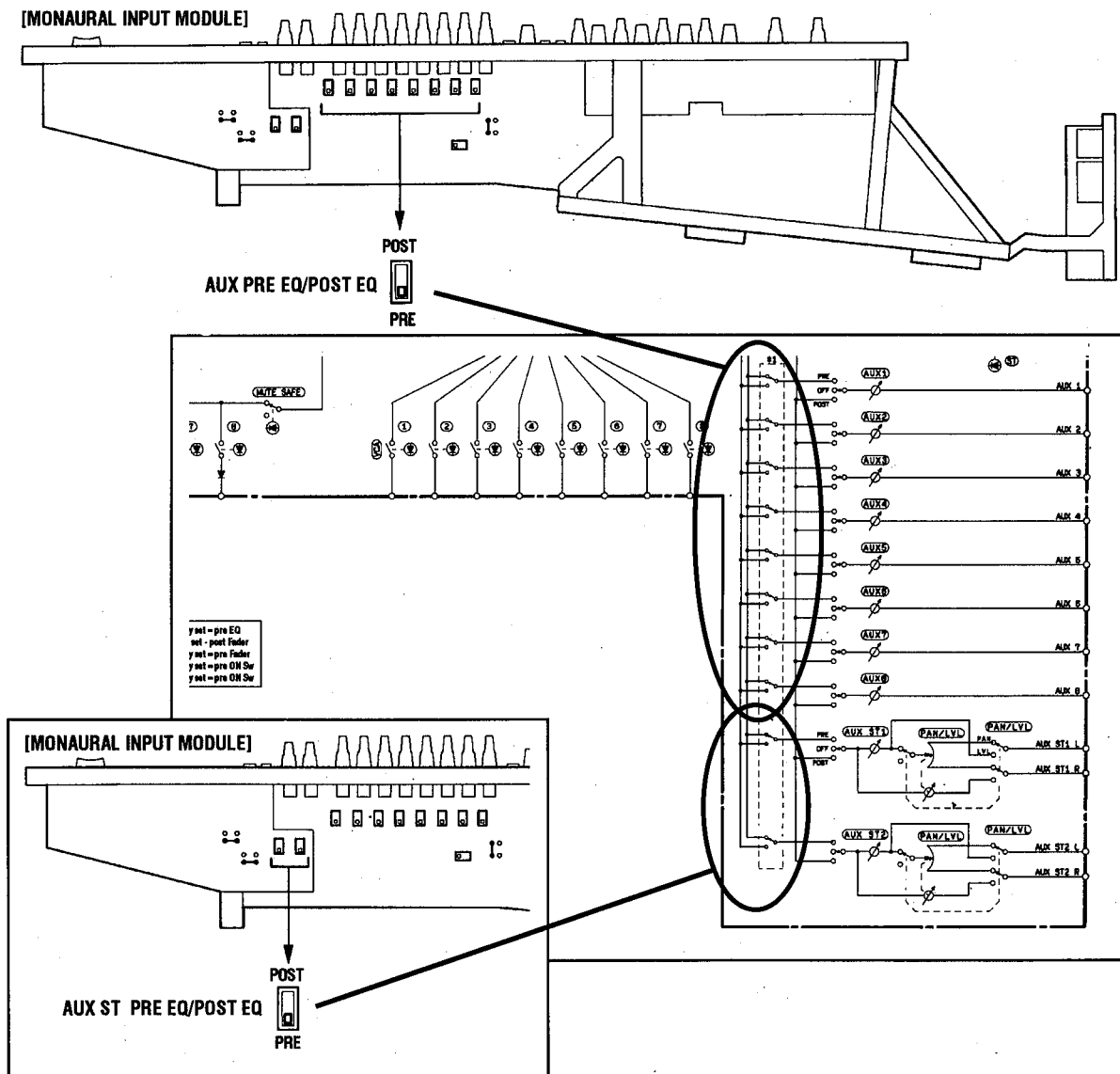
Ten slide switches in each input module permit each of the eight mono auxiliary sends and the two stereo aux sends to be altered. As shipped, the console is wired so that if the front-panel aux PRE/OFF/POST switch is set to PRE position, the aux send is derived ahead of the the fader and equalizer (but after the high pass filter). This is useful for stage monitor work, for example,

where the channel EQ for the house may not be desired for the monitors, yet rumble-reducing filtering is desirable. On the other hand, suppose that one aux mix is used for a pre-fader effects send. In this case, it may be desirable to apply channel EQ to the send. The POST position would provide EQ, but would also cause the channel fader to affect the send, which is not desirable. To solve the problem, the switch for that aux send can be reset so that the PRE position remains pre-fader, but is taken after the EQ.

● **MONO INPUT モジュール**

AUX SEND の PRE EQ/POST EQ

このスイッチにより、AUX (1~8),AUX ST1/ST2 (L,R) 信号の各々のバスへの取出し位置を、プリ・イコライザーにするか、ポスト・イコライザーにするかを選択することができます。出荷時はプリ・イコライザーにセットされています。



Internal Switch Positions for Mono Input Module Pre-EQ and Post-EQ Aux Send, and Corresponding Block Diagram Locations:
 Slide the Switches Toward Front Panel to Select Post-EQ, Toward Rear of Module for Pre-EQ.

● Mono Input Cue/Solo Switch: Pre-Fader or Follow MT PRE Switch

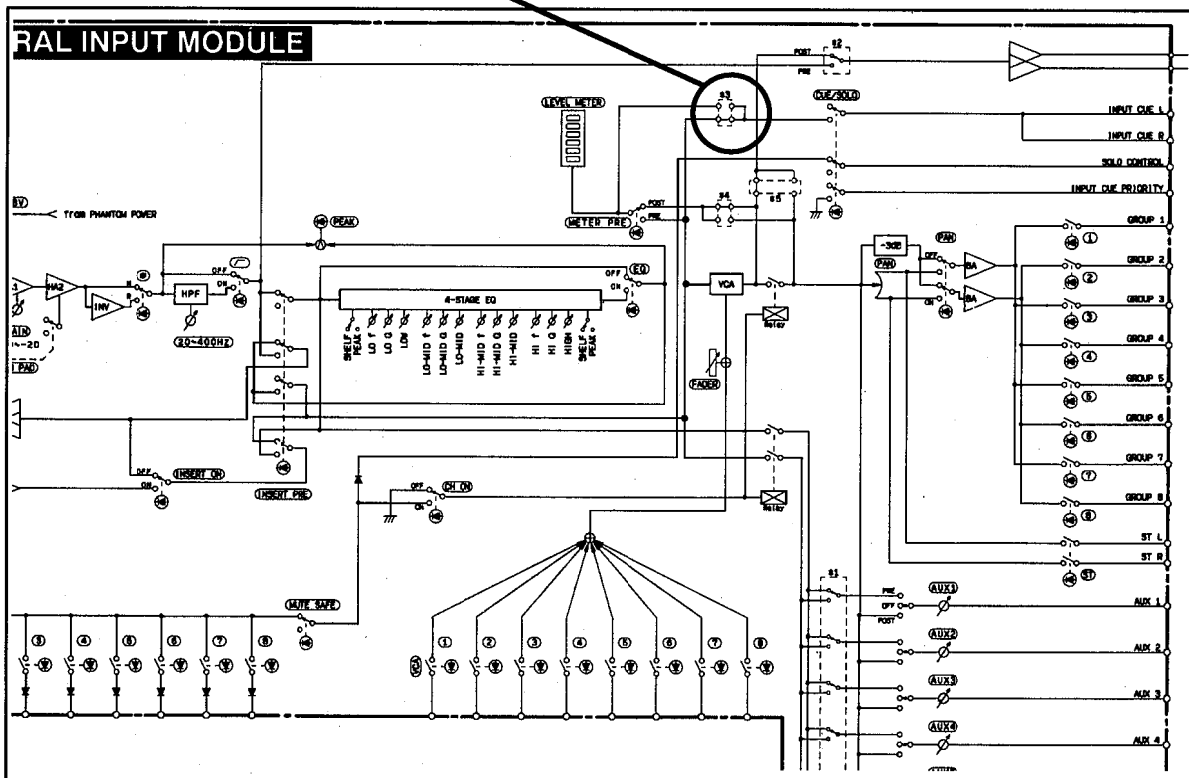
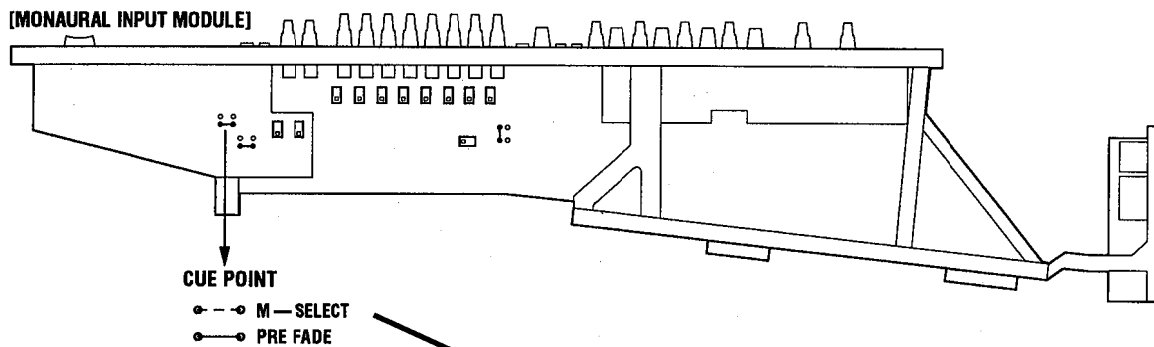
As shipped from the factory, the mono input channel CUE/SOLO switch applies signal to the left and right cue busses from a point which is derived just ahead of the channel fader (actually, just ahead of the fader-controlled VCA). However, an internal jumper in each mono input module enables this function to be altered

so that the take-off point for the cue/solo signal tracks the signal feed to the channel's LED level meter. In this way, the cue/solo feed will be post-fader (or post-VCA to be more exact) until the METER PRE switch is set to Pre mode; then it will be pre-fader. The channel's CUE output has left and right components, but both are derived from the same monaural signal. The switch positions are illustrated below.

● MONO INPUT モジュール

CUE入力 POINTの PRE FADER/follow MT スイッチ

このジャンパー線により、CUE入力ポイントをプリ・フェーダーにするか、メータースイッチ(MT PRE)のPRE,POSTの選択に一致しPRE,POST 選択可能とするかのいずれかを選ぶことができます。出荷時はプリ・フェーダーにセットされています。



Internal Switch Positions For Cue/Solo being Pre-Fader or tracking the METER PRE Switch on Monaural Input Module, and Corresponding Block Diagram Location.

PM4000/PW4000

● Stereo Input Cue/Solo Switch: Pre-Fader or Follow MT PRE Switch

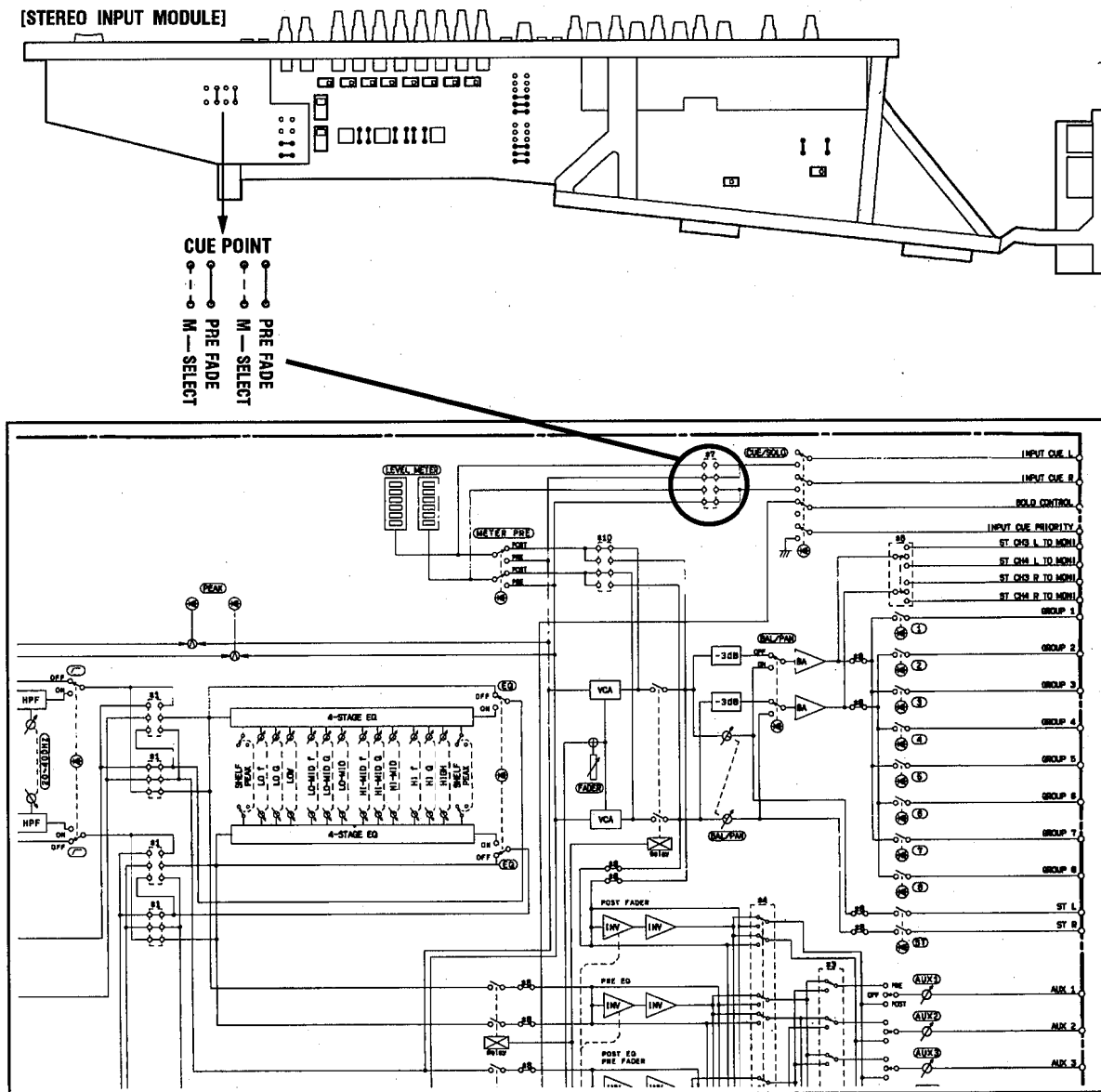
As shipped from the factory, the stereo channel CUE/SOLO switch applies signal to the left and right cue busses from a point which is derived just ahead of the channel fader (actually, just ahead of the fader-controlled VCA). However, an internal jumper in each stereo input module enables this function to be altered

so that the take-off point for the cue/solo signal tracks the signal feed to the channel's LED level meter. In this way, the cue/solo feed will be post-fader (or post-VCA to be more exact) until the METER PRE switch is set to Pre mode; then it will be pre-fader. The channel's CUE output has true stereo left and right components, derived from the discrete stereo input. The switch positions are illustrated below.

● ST INPUTモジュール

CUE入力POINT PRE FADER/follow MTスイッチ

このジャンパー線により、STEREO INPUTモジュールのCUE入力ポイントをプリ・フェーダーにするか、メータースイッチ (MT PRE) のPRE・POST選択に一致し、PRE・POST選択可能とするかのいずれかを選ぶことができます。出荷時はプリ・フェーダーにセットされています。



Internal Switch Positions For Cue/Solo being Pre-Fader or tracking the METER PRE Switch on Stereo Input Module, and Corresponding Block Diagram Location.

● **Mono & Stereo Input Channel MT PRE Switch: Pre- or Post-ON Switch**

Two jumpers in each mono input module (four on each stereo input module) permit the channel level meter's MT PRE switch function to be altered. As shipped, when the channel is set so that the meter is in

POST mode, the meter indicates the level after the Fader and the channel ON switch. By changing the jumpers as indicated, the POST function can be made to show the level after the Fader, but before the channel ON switch. This is useful for checking and adjusting the level even though the channel output is muted via a Master Mute function or the channel on/off switch.

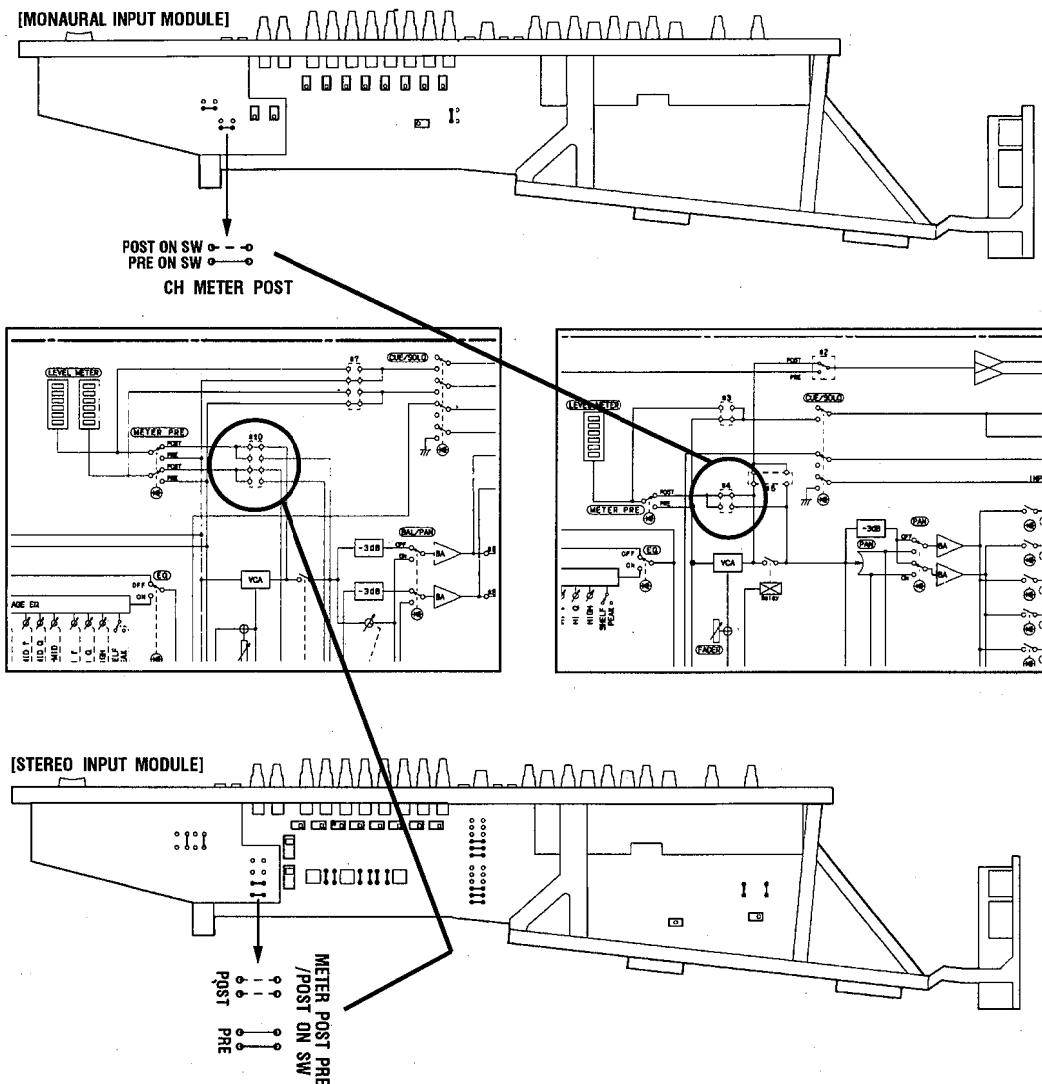
● **MONO & ST INPUT モジュール**

MT POST 位置での PRE ON SW/POST ON SW (MONO INPUTモジュール)

チャンネルレベルメーターの指示値はモジュールパネル面上のMT PREスイッチでプリ・フェーダーかポスト・フェーダーかを選択ができます。このジャンパー線でポスト・フェーダー時の信号検出位置を、チャンネルONスイッチ前にするか、チャンネルONスイッチ後にするかを選択することができます。出荷時はONスイッチの前にセットされています。

MT POST 位置での PRE ON SW/POST ON SW (ST INPUTモジュール)

MT PRE SWがPOST (OFF) の時このジャンパー線により、チャンネルレベルメーターの信号検出位置をチャンネルONスイッチ前にするか、チャンネルONスイッチ後にするかを選択することができます。出荷時はプリ ON スイッチにセットされています。



Internal Jumper Positions For MT PRE switch Post function Being Post Fader and Channel ON switch or Post Fader and Pre Channel ON switch, and Corresponding Block Diagram Location.

● Stereo Input Channel Insert In/Out Jacks: Pre-EQ or Post-EQ

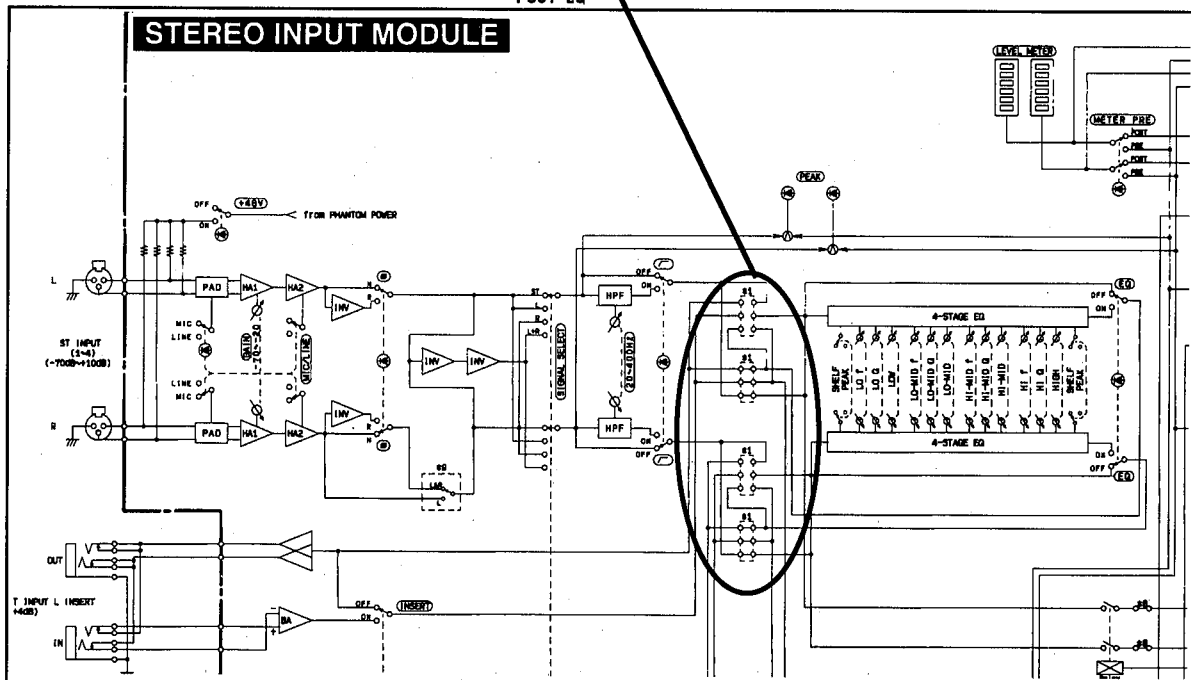
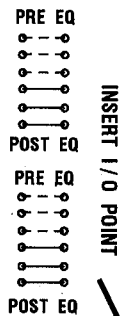
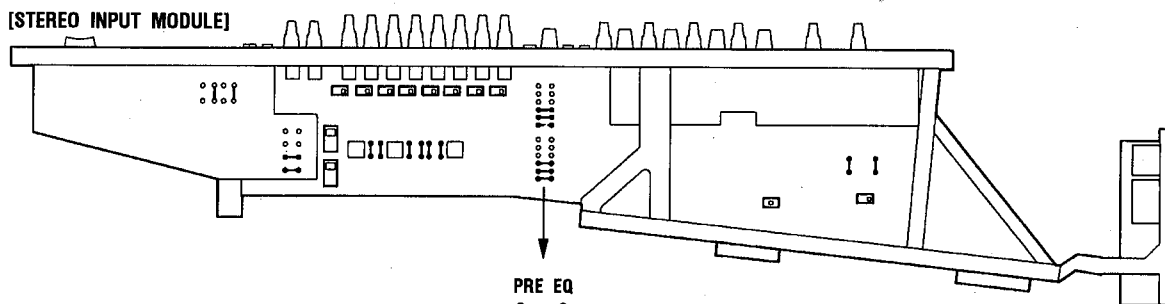
Four jumpers in each stereo input module permit the two pair of Insert In/Out points to be altered separately. As shipped, the console is set so that the Insert In/Out points come after the channel equalizer. This is useful,

for example, when one wishes to send to the signal processor... for example, to apply the boost prior to compression. However, sometimes one wishes to equalize the return from a signal processor. In this case, the In/Out points can be switched to come before the channel equalizer. Move the jumpers to the appropriate position, as illustrated.

● ST INPUTモジュール

INSERT IN/OUTのPRE EQ/POST EQ

このジャンパー線により、INSERT IN/OUT端子の信号入出力位置をプリ・イコライザーにするか、ポスト・イコライザーにするかを選択することができます。ジャンパー線はIN、OUTで各々3本ずつを移動することでポストからプリ・イコライザーに変更できます。但しIN、OUTを別個にプリ、ポストに設定することはできません。必ずIN、OUTを一緒にプリかポストにセットしてください。出荷時はポスト・イコライザーにセットされています。



Internal Jumper Positions For Pre-EQ and Post-EQ Insert In/Out Points on Stereo Input Module, and Corresponding Location on Block Diagram.

● Stereo Input Channel Aux Sends:
Pre Fader & EQ or
Pre Fader/Post EQ

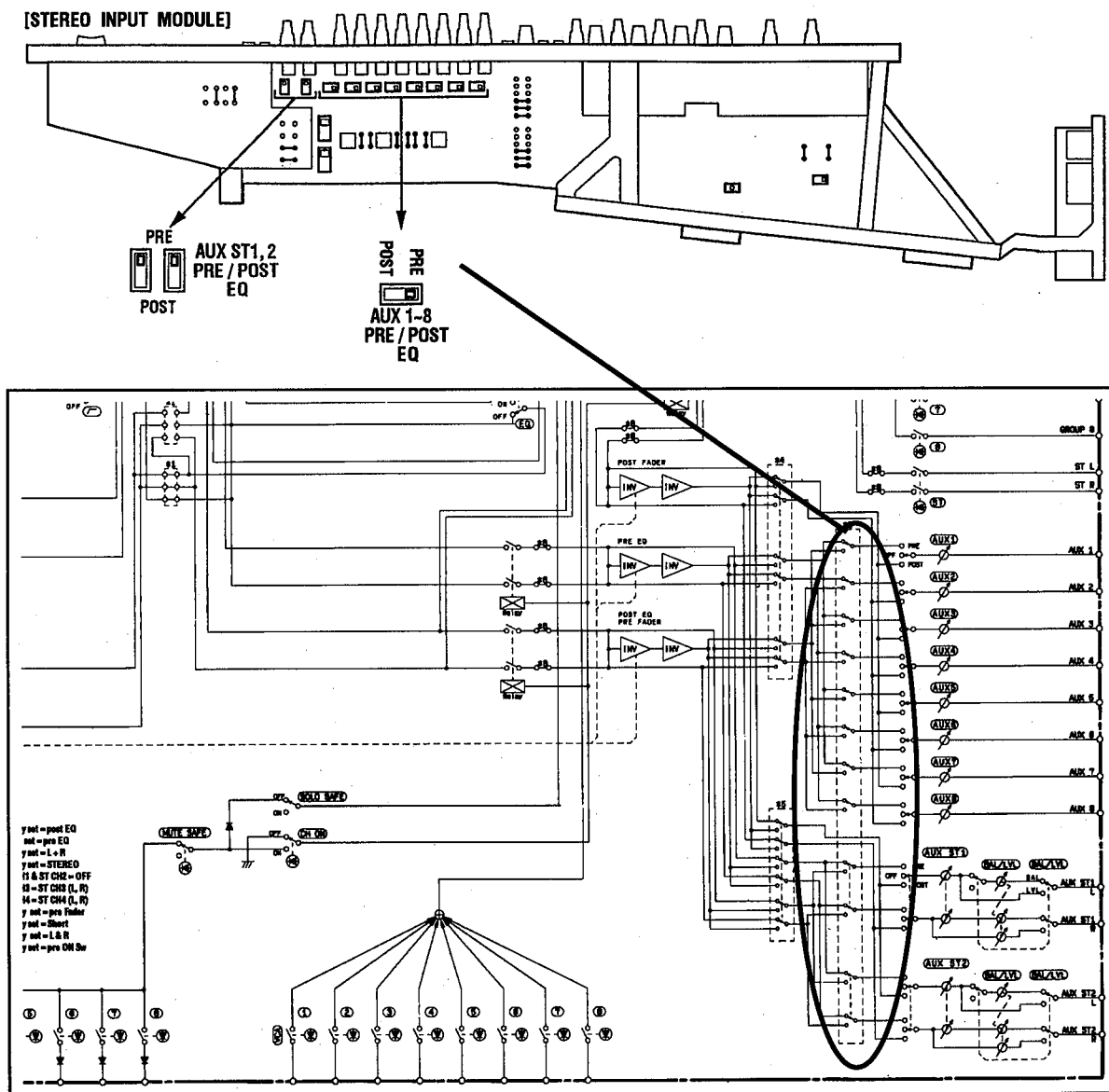
Eight slide switches in each stereo input module permit each of the eight mono auxiliary sends and to be altered. Two more switches perform the same function for the two stereo aux sends. As shipped, the console is wired so that if the front-panel aux PRE/OFF/POST

switch is set to PRE position, the aux send is derived ahead of the the fader and equalizer (but after the high pass filter). In situations where it is desirable to apply channel EQ to the send, the internal slide switch for that aux send can be reset so that the PRE position remains pre-fader, but is taken after the EQ. This is the same as the corresponding function on the mono input module.

● ST INPUT モジュール

AUX SENDの PRE EQ/POST EQ

このスイッチにより、AUX (1~8)、AUX ST1/ST2 (L,R) 信号の各々のバスへの取出し位置を、プリ・イコライザーにするか、ポスト・イコライザーにするかを選択することができます。出荷時はプリ・イコライザーにセットされています。



Internal Switch Positions For Stereo Input Module Pre-EQ And Post-EQ Aux Sends, and the Corresponding Location on the Block Diagram.

● Stereo Input Channel Aux Sends 1-8: L+R Blend or Stereo Pairs

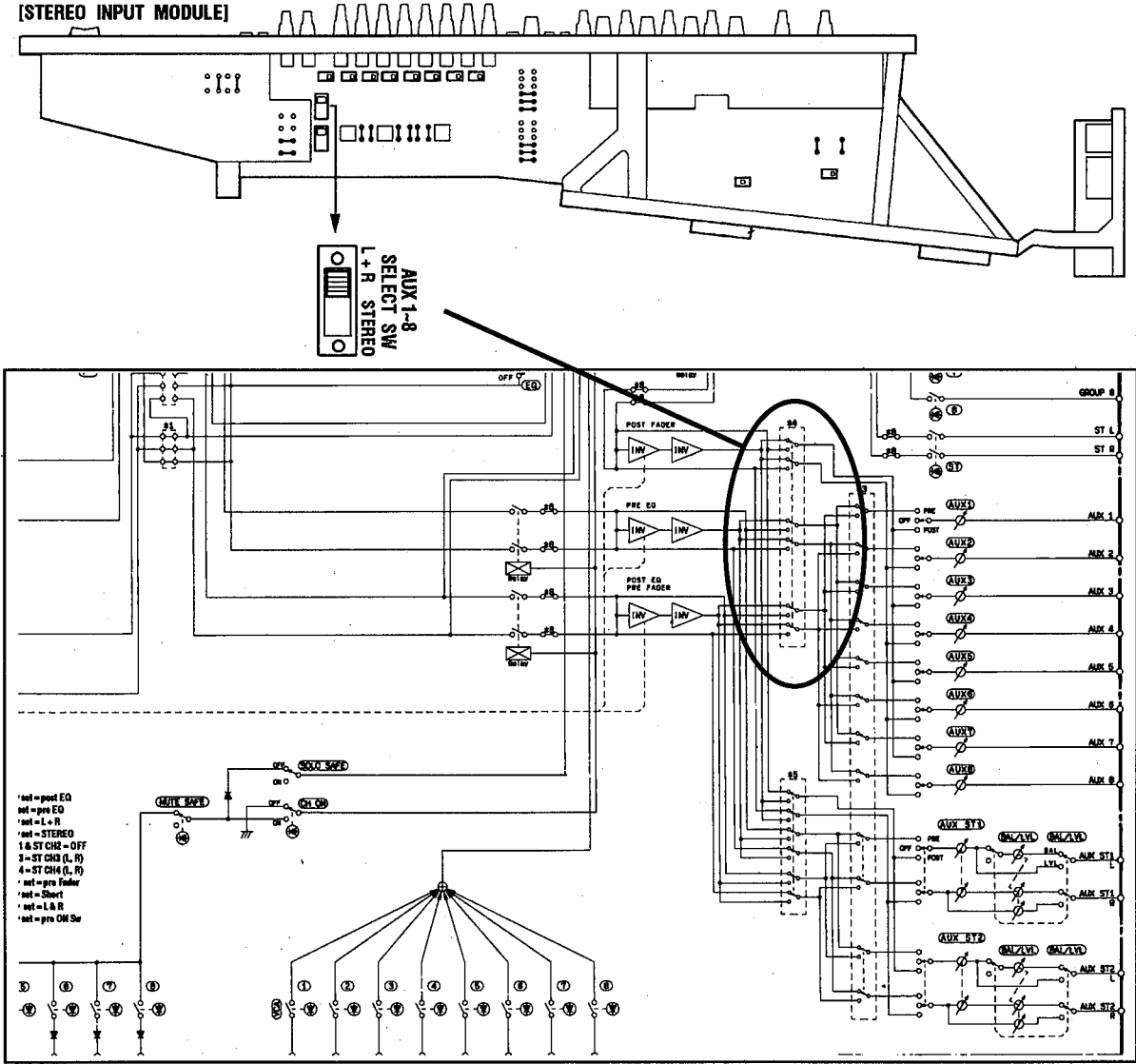
A single slide switch in each stereo input module changes the signal source for the Aux Sends 1 through 8 (without regard to pre or post status). As shipped, these Aux Sends each carry a mono combination of the left

and right inputs to the channel. Moving the switch changes the signal take-off points so that the odd-numbered Aux Sends derive signal from the channel's left input path, and the even-numbered Aux Sends derive signal from the channel's right input path.

● ST INPUTモジュール

L,R信号のAUXバス送出L+R/STEREO

このスイッチにより、L,R入力信号をL+Rにし、AUX (1~8) の全てのバスに同一信号を送出させるか、奇数バスにL信号を偶数バスにR信号を送出させ、STEREO信号のままにするかを選択することができます。出荷時はL+Rにセットされています。



Internal Switch Position For Stereo Input Module Aux Send 1 - 8 Mono Combine or Stereo Paired Signal Sourcing, and Corresponding Location on Block Diagram.

● Stereo Input Channel Stereo Aux Sends 1 & 2: L+R Blend or Stereo Pairs

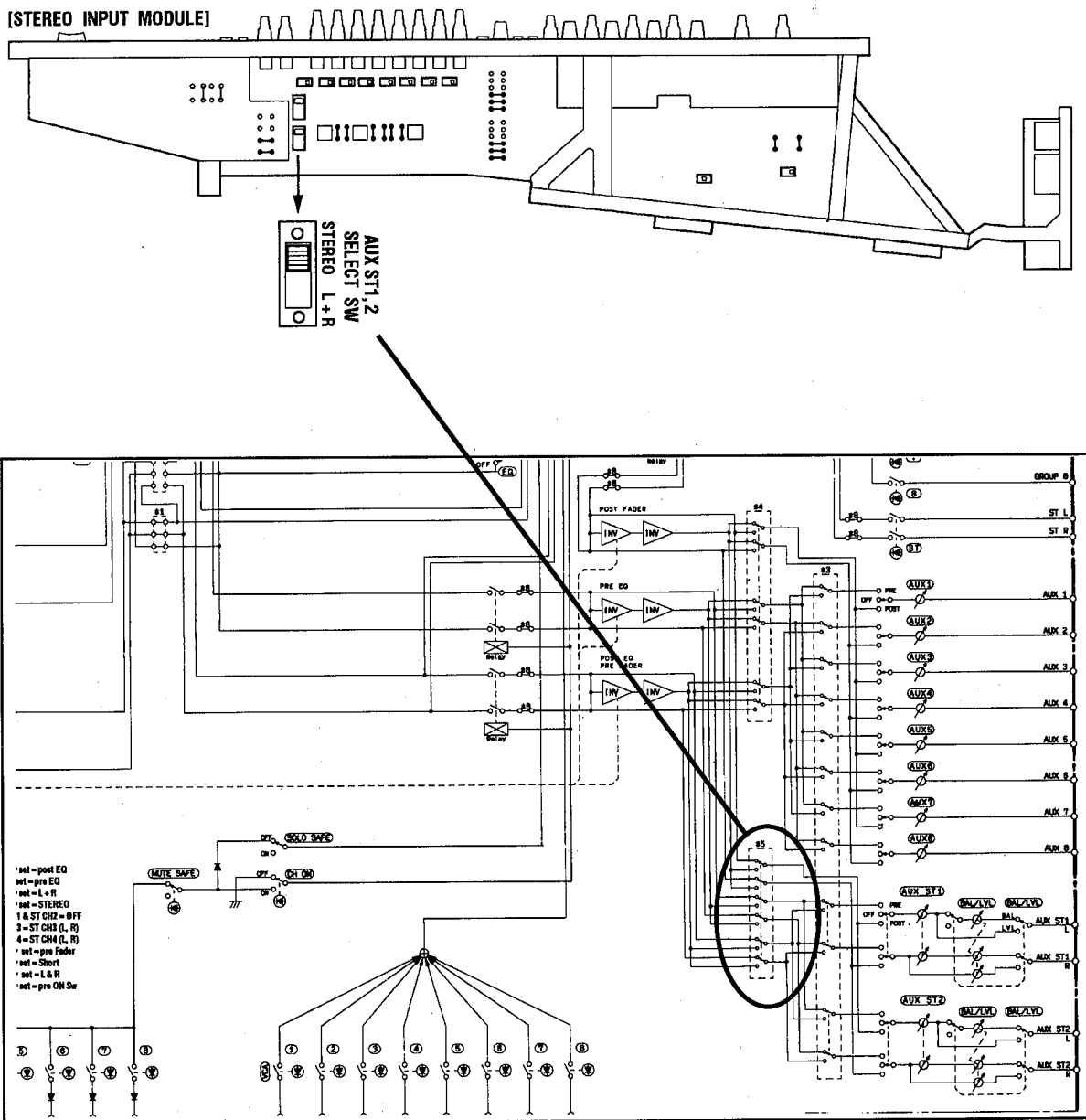
A slide switch in each stereo input module changes the signal source for the two stereo aux sends (without regard to pre or post status). As shipped, the two Stereo

Aux Sends each carry discrete left and right signals from the channel input. Moving the switch changes the signal take-off points so that the L and R sides of each stereo Aux Send both carry the same mono L+R combined signal (i.e. while the level applied to the L & R aux busses can be varied, the signal itself is the same).

● ST INPUTモジュール

L,R信号のAUX ST1/ST2 (L,R) バス送出STEREO/L+R

このスイッチにより、L,R入力信号をAUX ST1/ST2 (L,R) バスにSTEREO信号のまま送出させるか、L+Rとして送出させるかを選択することができます。出荷時はSTEREOにセットされています。



Internal Switch Position For Stereo Input Module ST Aux Send 1 & 2 Mono Combine or Stereo Paired Signal Sourcing, and Corresponding Location on Block Diagram.

● Stereo Input Channel Feed to Monitor Module ST IN 3 or ST IN 4

The Monitor module has provisions for selection and monitoring of signals assigned from the "Stereo In 3" and "Stereo In 4" modules. However, the stereo module numbers are arbitrarily designated; stereo modules can be located in just about any mainframe input module location, and more than one can contribute to the ST IN3 or ST IN4 monitor mix.

Determination of which stereo modules actually contribute to the monitors when the monitor module's ST IN3 or ST IN4 switch is engaged is dependent on the position of a slide switch in each stereo input module.

Locate the switch in the figure shown below and set it as shown so that a given module either does not contribute anything to these monitor busses, or so it contributes to ST IN3 or ST IN4 bus.

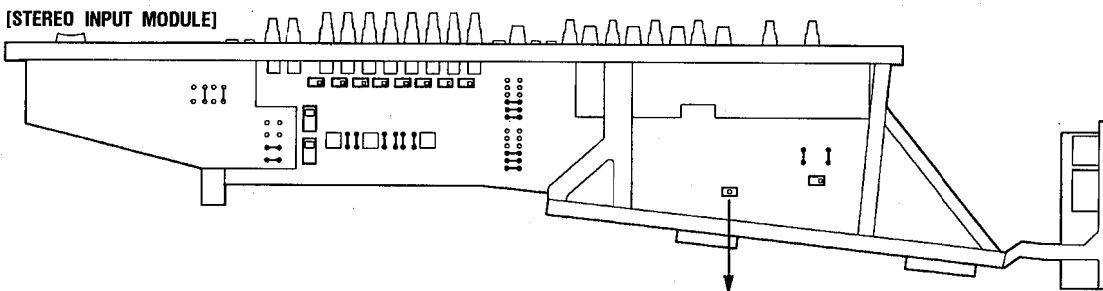
● ST INPUT モジュール

MONITOR ST CH3/ST CH4 送出セッティング

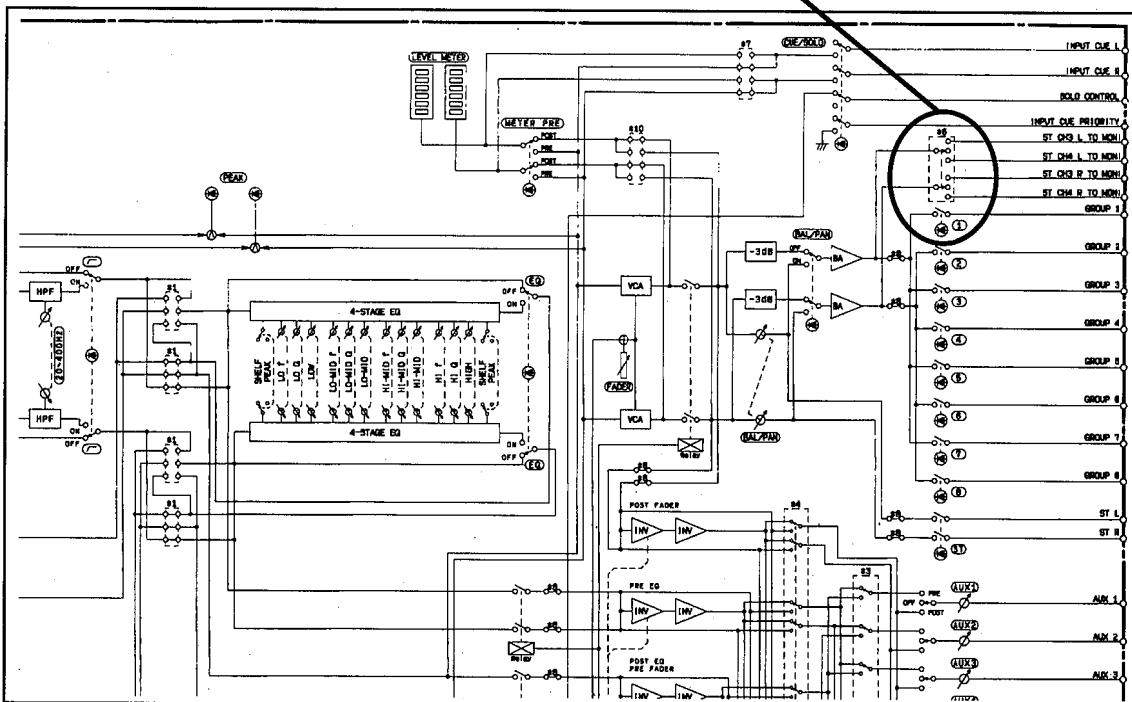
装着される STEREO INPUT モジュールの内2本のモジュール信号を、ステレオ信号で MONITOR モジュールに送りモニターすることが可能です。MONITOR モジュールのこれらの信号セレクトスイッチは ST CH3、ST CH4 と表示されています。ST CH3 スイッチでモニターしたい STEREO INPUT モジュールのプリセットスイッチは ST3 に、ST CH4 でモニターしたいモジュールは ST4 にセットします。モニターしないモジュールは OFF にセットします。

出荷時は4本のモジュールの左より3番目が ST3 に、4番目が ST4 に、1、2番は OFF にセットされています。モジュール交換時適切にセットすることが必要です。

[STEREO INPUT MODULE]



ST IN to MONITOR
ST4 ST3
OFF



Internal Switch Position For Stereo Input Module Signal Assigned to ST IN3, ST IN4 or neither Monitor Selection, and Block Diagram Location.

PM4000/PW4000

● **Phase Switch Function: Change Polarity of Both L and R inputs, or of L Only**

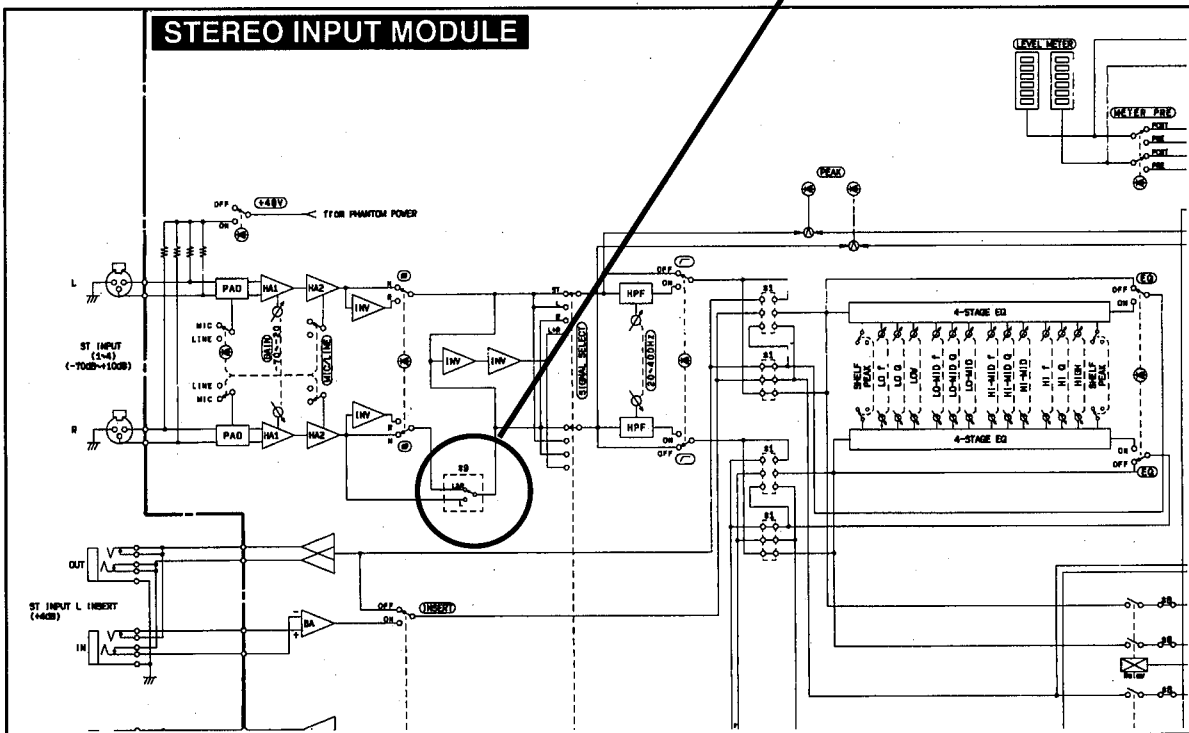
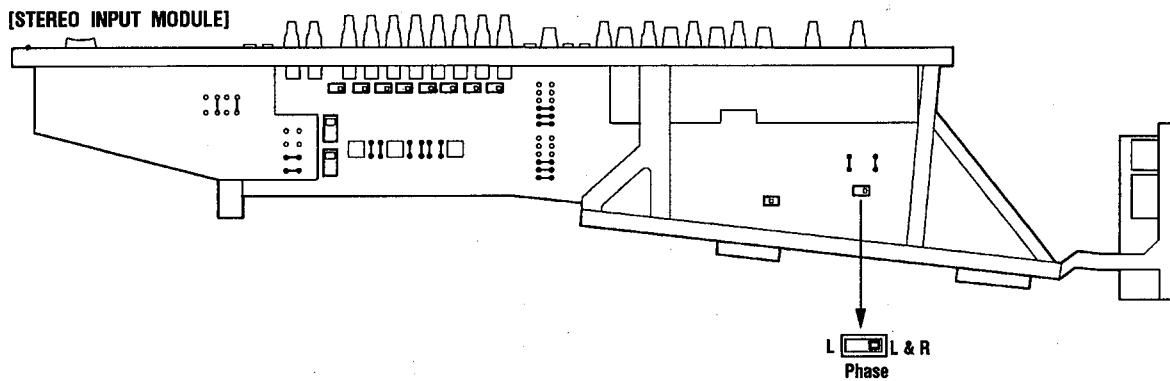
As shipped, the Stereo Input Module's Phase Switch (Ø) [8S], which is really a polarity switch, reverses the polarity of both the left and right inputs to the module.

If you wish to alter the polarity of the left input with respect to the right input, you must reset a switch on the module's circuit board. Once this switch is reset to the alternate position, then engaging the front panel Ø switch reverses polarity of the channel's left input only.

● **ST INPUT モジュール**

φの変更 L & R/L

このスイッチにより、STEREO INPUT モジュールのφ（位相反転）をL,R同時にするか、Lのみにするかを選択することができます。出荷時はL,R同時に位相が変わるようセットされています。



Internal Switch Position For Altering the Stereo Input Module Phase (Ø) Switch Function for Combined L & R Phase Change, or Change of L Input Only, and Block Diagram Location.

● **Stereo Input Module: Output Enable Jumpers to Group, Stereo and Aux Busses**

The stereo input module may be used as an effects return module. In this case, it could be disastrous if an incoming signal were to be assigned to the bus which is feeding the signal processor whose output is coming into the module. In other words, at the press of the wrong bus-assign button, there could be feedback that might shatter eardrums and shred loudspeakers. Careful operation can avoid this problem, but it cannot absolutely prevent it. Therefore, you may wish to disable a given stereo module's output to the group busses, the

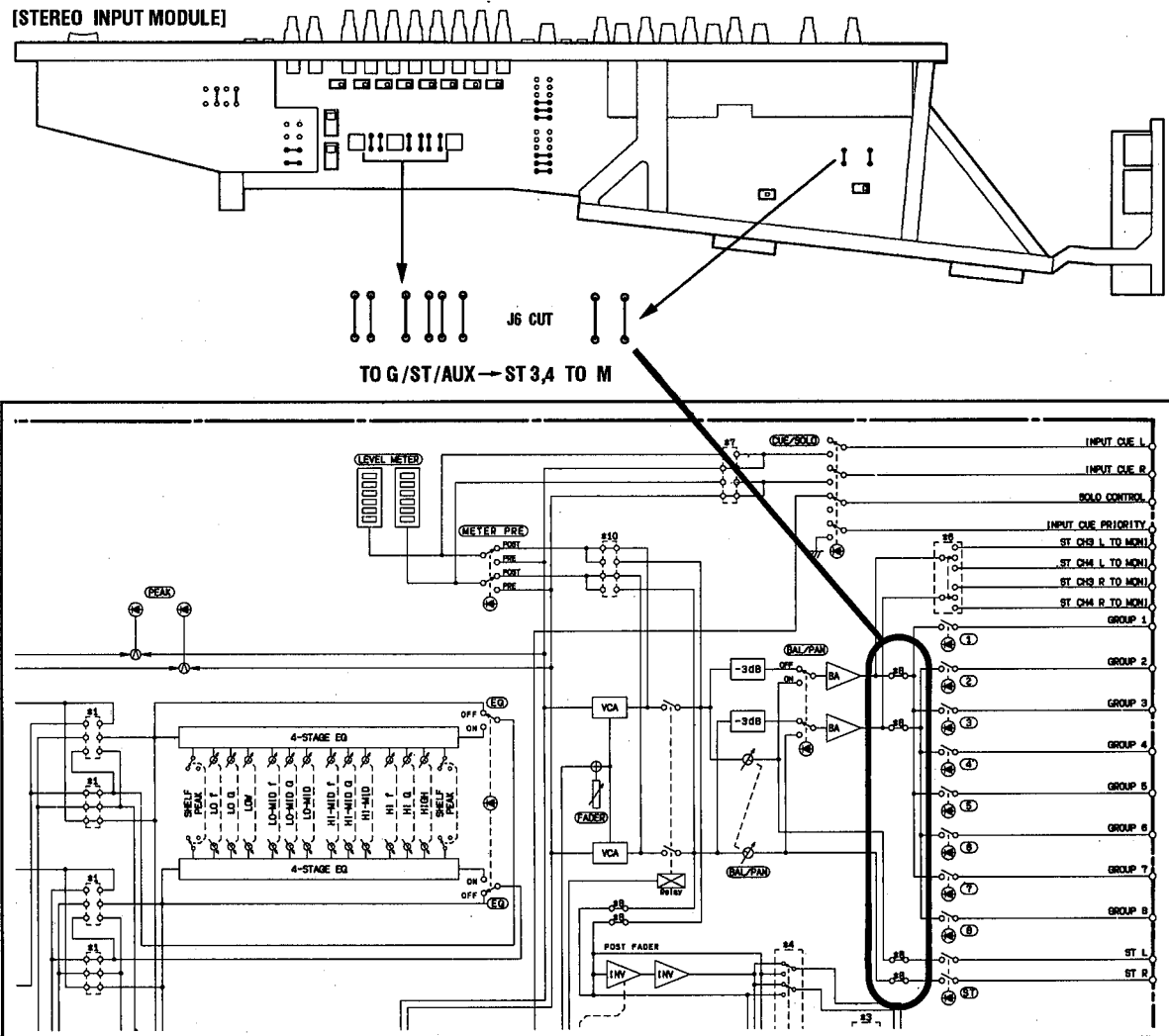
stereo bus, or the aux busses. As shipped from the factory, internal jumpers (headers) on the module carry the signals to these busses. You can "cut" one pair of jumpers to positively kill the module's output to the eight group busses by moving the header (two-pin clip) to the position which does not complete the circuit to the output; another pair of jumpers kill the output to the stereo bus; another three pair of jumpers kill the post-fader, pre-EQ and post-EQ feeds to the aux busses. These jumpers are identified in the figure illustrated below.

NOTE: Should you wish to reactivate a module's output to a given bus, you can always restore the jumpers so they are as originally shipped.

● **ST INPUT モジュール**

GROUPバス, STEREOバス, AUXバスへの信号送出カット

これらのジャンパー線をカットすることにより、STEREO INPUTモジュールの信号をGROUPバス, STEREOバス, AUXバスへ送出することを止め、STEREO INPUTモジュールをEFFECT RETURNモジュールとして使用することができます。(P56参照)



Internal Switch Positions For Pre- and Post- Group Master Fader Feeds to Mix Matrix, and Block Diagram Location.