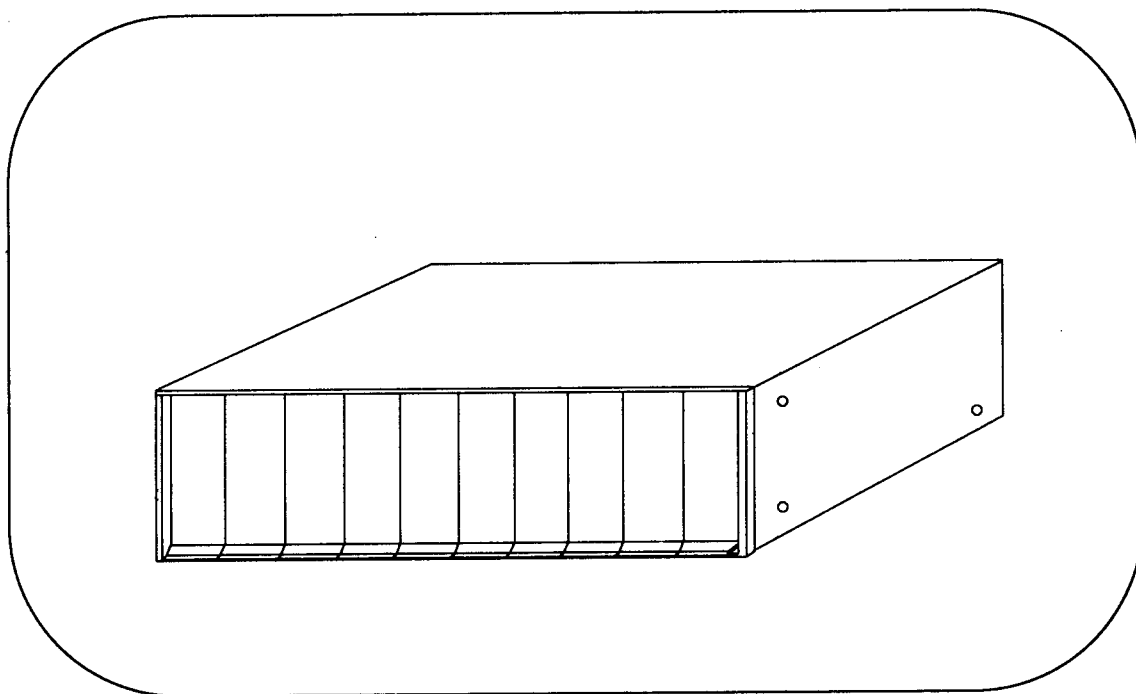




V
-1000 Series
OPERATING INSTRUCTIONS

MIXER MODULES

V-1000B



TOA Corporation

MIXER MODULES INDEX

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SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first so you are thoroughly aware of the potential safety hazards as well as understand the safety symbols and messages.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.



WARNING



CAUTION

■ When Installing the Unit

- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.

■ When the Unit Is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.

■ When the Unit Is in Use

- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the openings of the unit's rear panel, as this may result in fire or electric shock.

GENERAL DESCRIPTION

The TOA V-1000 series Amplifiers are an epoch-making system of module construction with various programming functions to meet wide applications in commercial fields. Up to 10 input modules among various types can be easily and quickly mounted in the Mixer Frame according to customers' needs. The V-1000 series can cover sound systems from simple to large, which are needed in shops, hotels, supermarkets, etc.

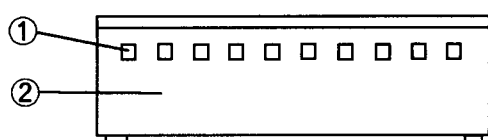
The input modules provide 7 programming functions (highest priority, speech filter, chime distribution, busy indication, first-in-first-served priority, cascade priority and mic enable) that can be programming by use of the programming switches.

Each input module has the in-use lamp (green LED or red LED) on the front. For the Microphone Preamplifier Modules having 7 programming functions, the green LED on the front panel extinguishes to indicate the module is inactivated when priority works on the module. Two or three channel preamplifiers are optionally available if users wish, by cutting the bus lines 10-pin connectors located inside the Mixer Frame. The number of input modules can be increased to more than ten by using the Interface Modules with plural mixer frames in a stack. With the brackets supplied with the V-1000 series, the Mixer Frame becomes rack-mountable.

To make the best of the V-1000 series in achieving the most satisfactory sound system, please read this operating instructions carefully.

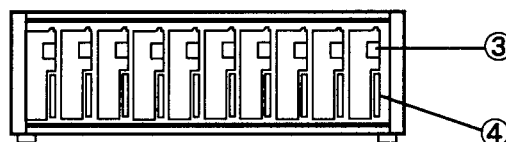
Mixer Frame V-1000B

APPEARANCE



Rear view

- ① Window for connection to DIN socket (Module)
- ② Removable rear panel for mixer modification



Front view

- ③ DIN socket on the module
- ④ Mixing connector for the PCB

SPECIFICATIONS

Input Capacity	Space for 10 modules max.
Dimensions	143(H) x 433.5(W) x 204(D)mm
Weight	3.6Kg
Finish	Black

The Mixer Frame, three-sized rack space, can accommodate up to 10 input modules. As for modules with priority mounted on the Mixer Frame, the priority level increases on modules located on the right hand side. To have more than 10 input modules, use the Interface Module V-1090B and the Connection Cables YR-1000's as shown Fig. 1. In this case, to have priority order, the Interface Module should be mounted in the extremely right position for the Mixer Frame having lower priority modules, and in the extremely left position for the Mixer Frame having higher priority modules.

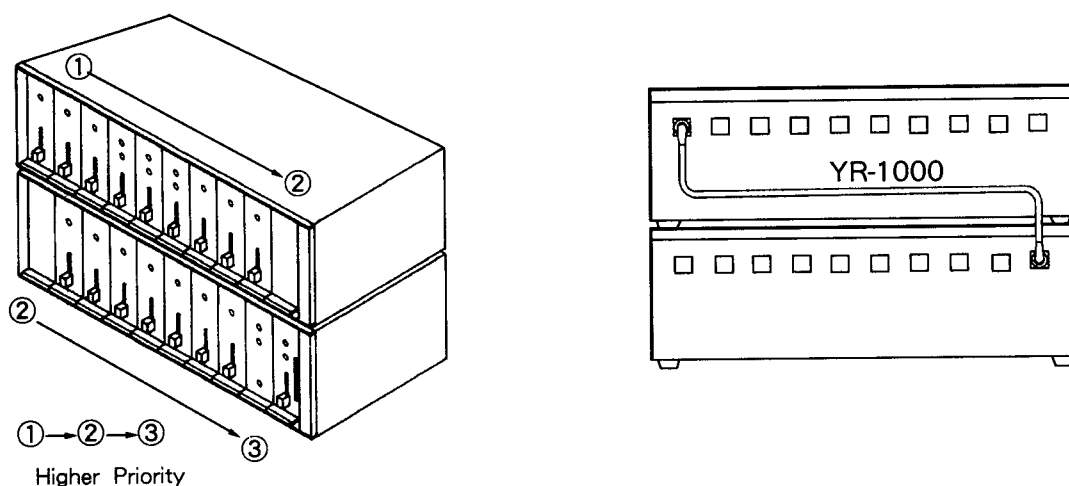
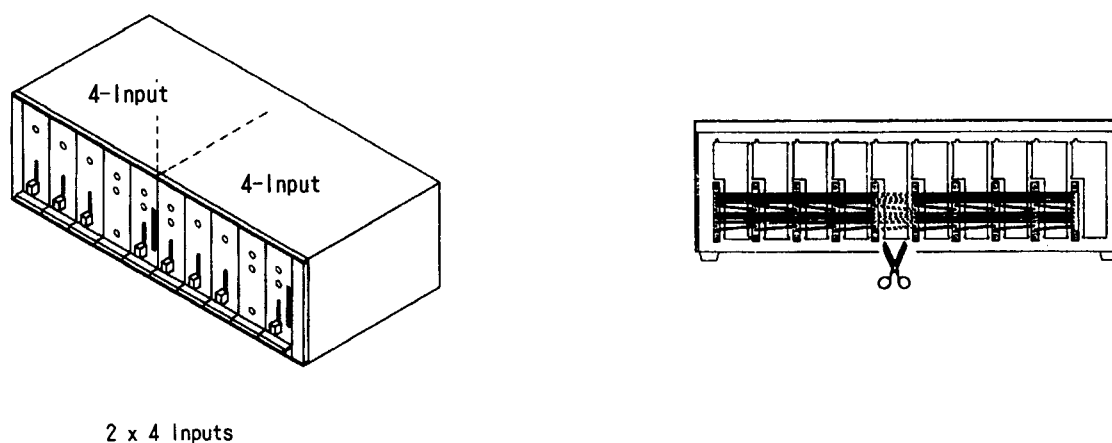


Fig. 1

It is possible to cut the mixing bus to realize several mixing sets in the same chassis V-1000B. It can easily be done after having removed the rear panel of the chassis.



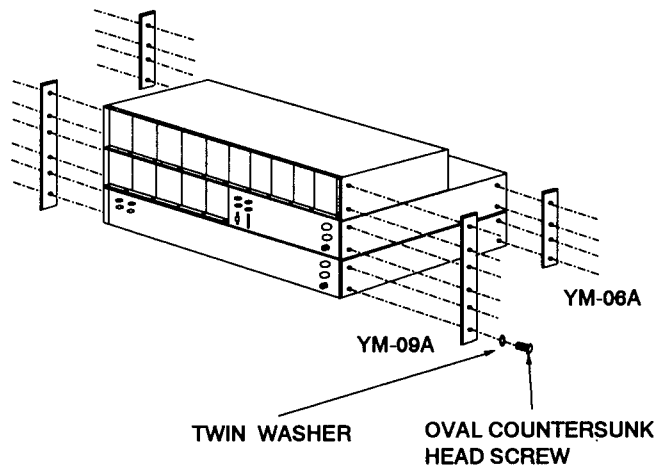
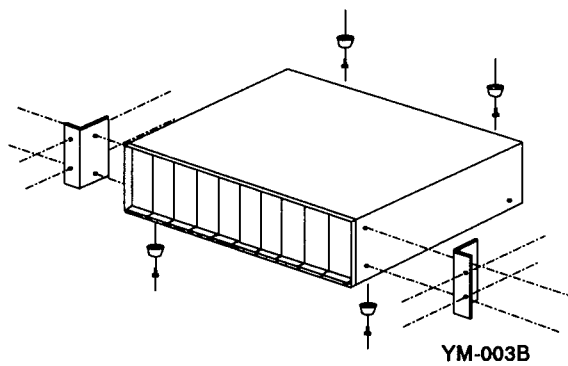
UNPACKING

Upon receipt of your equipment, please check no damage occurred in transit. If any, please declare it to the transportation company, telling the type of damage, the date and the waybill number.

INSTALLATION

–Rack Mounting or Stacking

The V-1000 series amplifiers are designed as packages. They can however be used in systems (stacked or 19" mounted). 19" rack-mounting is realized by means of YM-003B Mounting Bracket. At last, you can also stack amplifiers, using YM-06A/09A/12A Stacking Brackets for fastening.

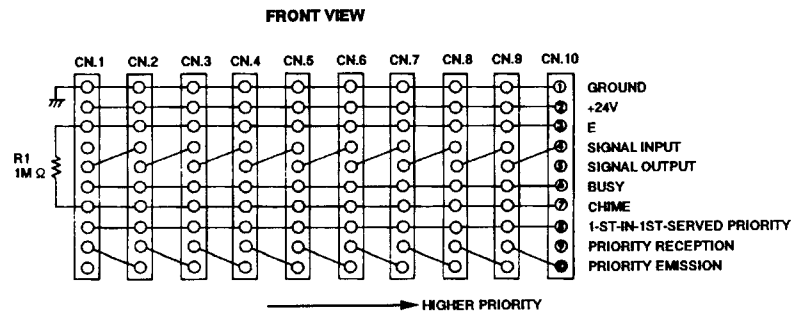


This chart shows an example where the VP-1240B, VM-1120B and V-1000B are stacked.

PROGRAM INPUT

The V-1000B Mixer Frame has 10 program inputs from input No.1 to input No.10 capable of accepting associated plug-in input modules of the V-1000 series. In the event of the input module units with priority function being used, the unit on the right hand side takes precedence over units on the left hand side. This means Input No.10 has the highest priority and No.1 the lowest.

V-1000B



The following table shows the programming functions available from each input module.

Programming Functions	V-1051B	V-1251B	V-1151B	V-1022B	V-1034B V-1054B V-1254B V-1061B
1. Highest Priority	●			●	
2. Speech Filter	●		●	●	
3. Busy Indication	●			●	
4. Chime Distribution	●			●	
5. 1st-In-1st-Served Priority	●			●	
6. Cascade Priority	●			●	
7. Mic. Enable	●				
8. Mute					●

Note: The Alert Signal Modules V-1014B/V-1016B and the Chime Module V-1015B work on the highest priority always when operated.

Programming Functions :

1. Highest Priority :

When this switch is in the ON position (electrically open position), signals from the left hand side of the module are cut off.

2. First-In-First-Served Priority :

When two or more modules have this priority switch in the ON position, the module activated first has dominance over the other modules.

3. Cascade Priority :

When two or more modules have this priority switch in the ON position, the module on the right hand side has dominance over those on the left hand side.

4. Speech Filter :

When the Speech Filter is in the ON position (electrically open position), frequencies are attenuated.

5. Busy Indication :

When the Busy Indication switch is in the ON position, the Busy lamp of the Remote Microphone VR-1005, VR-1010 or VR-1020 lights to indicate that another module with higher priority is in use.

6. Chime Distribution :

When the Chime switch is in the ON position, the chime module operates when the Microphone switch is depressed. Set the chime module at the right side of microphone input modules.

7. Mic. Enable :

By cutting the jumper wire of the Mic. Enable switch, a microphone without a talk switch becomes usable.

Note : Switches for Busy, Chime, 1st-in-1st-Served and Highest Priority should be set on the left side.

When the Cascade Priority switch is in the ON position (right side), announcements from the microphone are cut off if the other High Priority function is activated.

8. Mute :

Activation of priority function of the module situated on the right side mutes output level of modules on the left hand side. This mutes level can be controlled by a volume control on the front panel or the semi-fixed volume control (V-1061B) on the printed circuit board.

Note : When the unit is shipped from factory, the programming switch is set at left (OFF) which prevents the programming functions from operating. To activate the programming functions, move the switch to the right (ON).

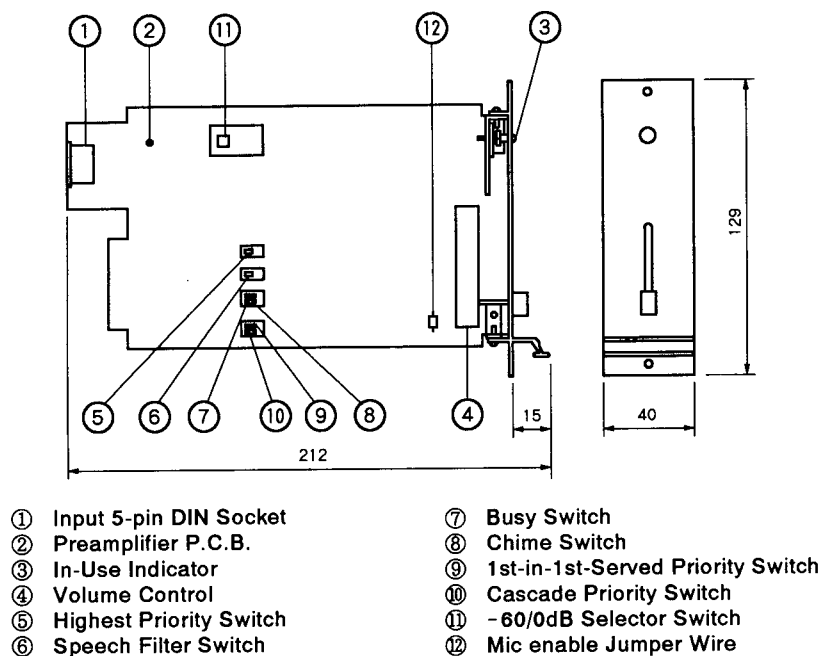
DESCRIPTION, APPEARANCES AND BLOCK/SCHEMATIC DIAGRAMS OF INPUT MODULES

MICROPHONE PREAMPLIFIER MODULE V-1051B

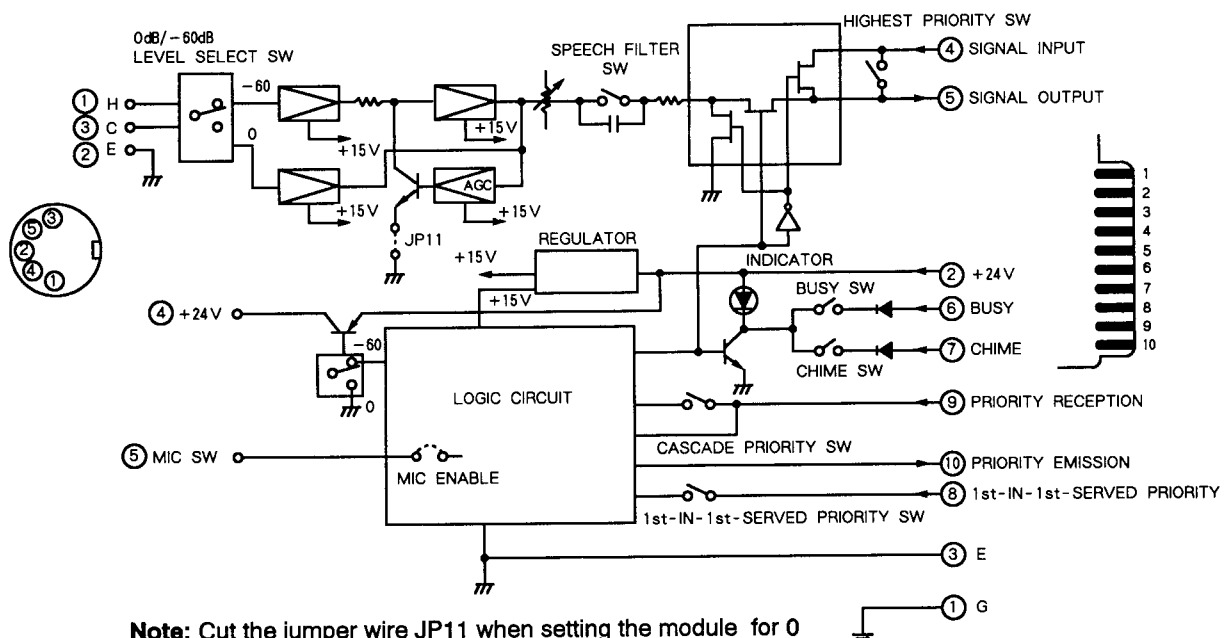
Description

The TOA Microphone Preamplifier V-1051B with an electrically balanced input and compressor circuit is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B. It has various applications which are determined by the selection of programming functions and the insertion location in the Mixer Power Amplifiers or the Mixer Frame.

Appearance



Block Diagram

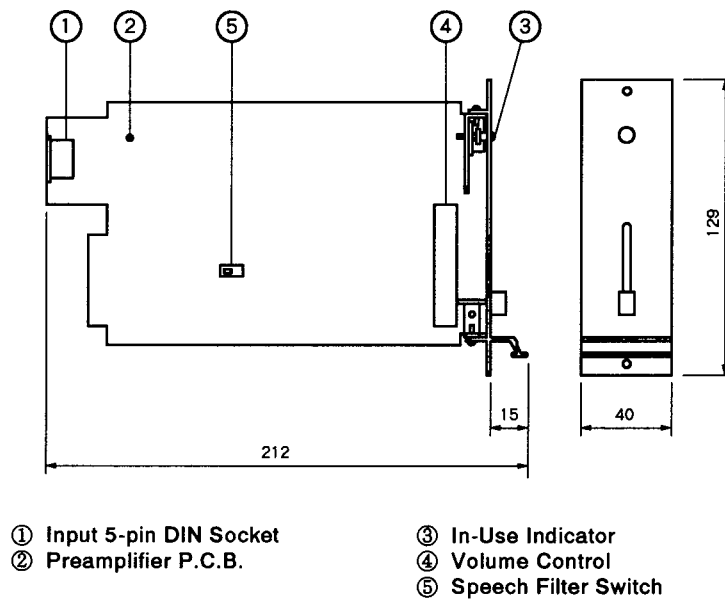


MICROPHONE PREAMPLIFIER MODULE V-1151B

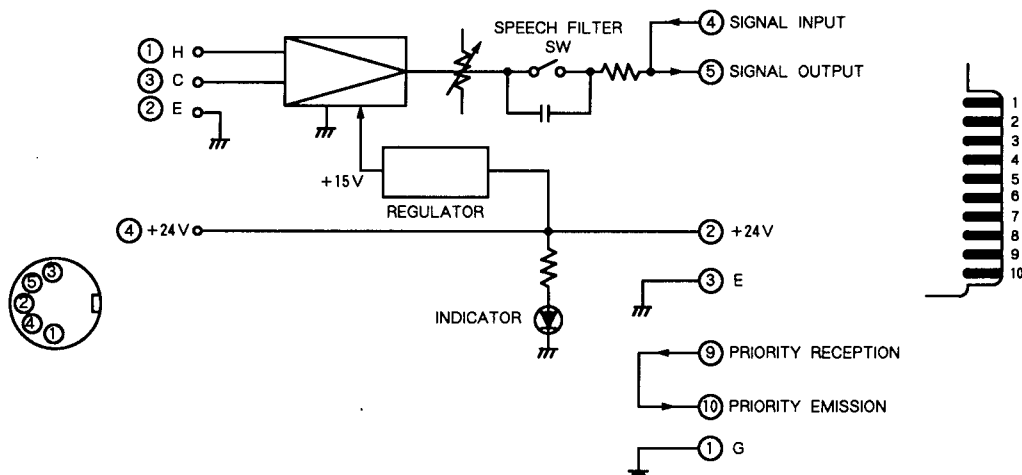
Description

The TOA Microphone Preamplifier Module V-1151B with electrically balanced low impedance input is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

Appearance



Block Diagram

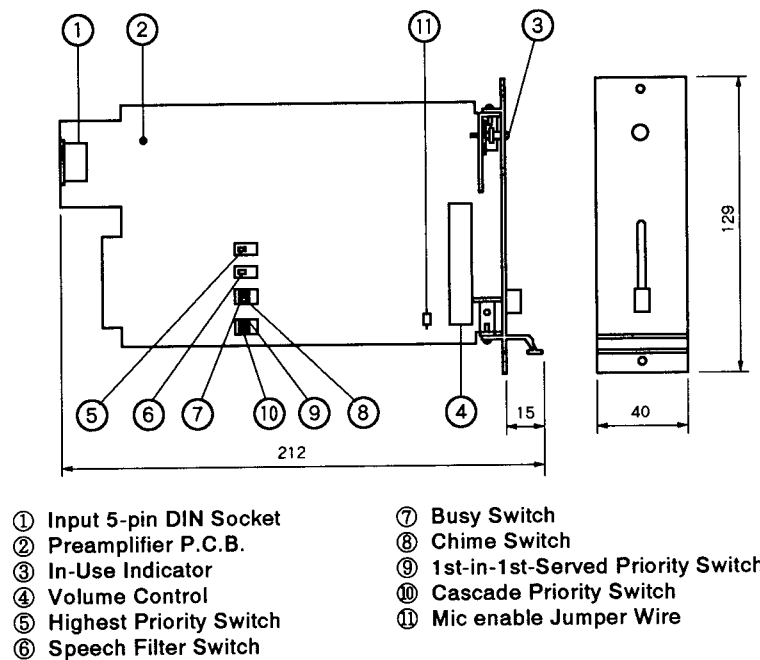


MICROPHONE PREAMPLIFIER MODULE V-1251B

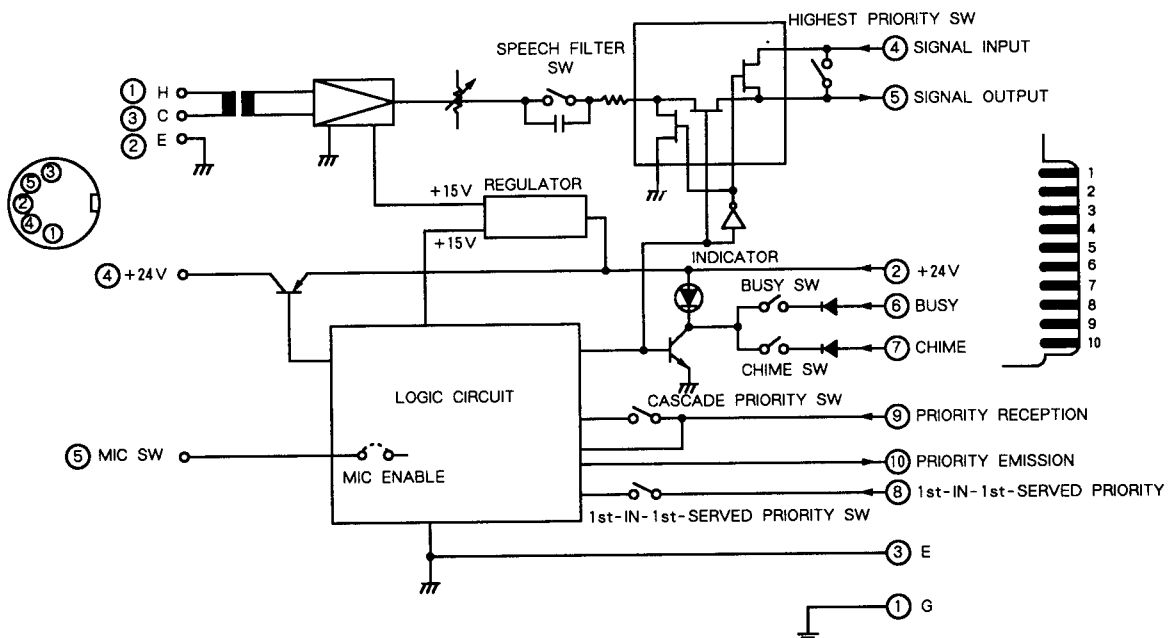
Description

The TOA Microphone Preamplifier Module V-1251B with a transformer balanced low impedance input is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B. It has various applications which are determined by the selection of programming functions and the insertion location in the Mixer Power Amplifiers or the Mixer Frame.

Appearance



Block Diagram



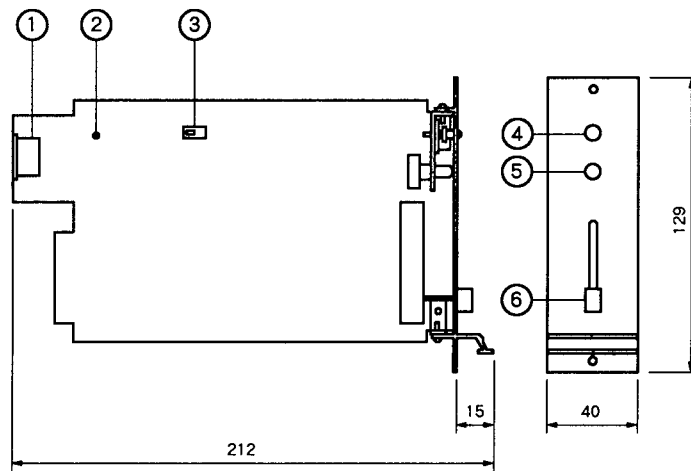
AUXILIARY PREAMPLIFIER MODULE V-1054B

Description

The TOA Preamplifier Module V-1054B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

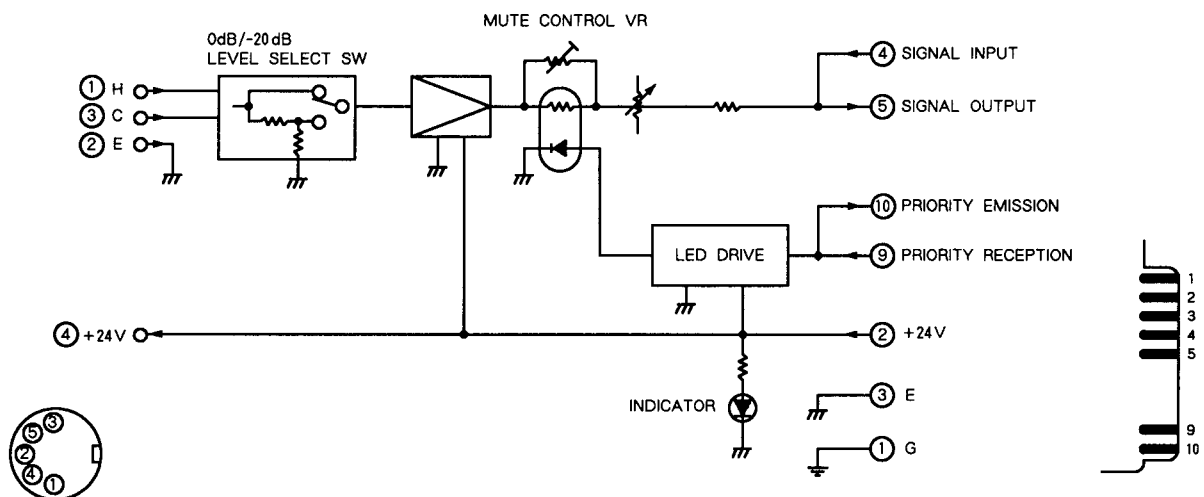
Removal or mounting is facilitated by a handle fitted to the front panel. The volume control on the front panel controls the output level. When the mute function is employed in the module, the operation of a module having the higher priority decreases the output level of this module, which can be controlled by means of the semi-fixed volume control located on the front panel.

Appearance



- ① Input 5-pin DIN Socket
- ② AUX Preamplifier P.C.B.
- ③ 0/-20dB Selector
- ④ In-Use Indicator
- ⑤ Muting Level Control
- ⑥ Volume Control

Block Diagram



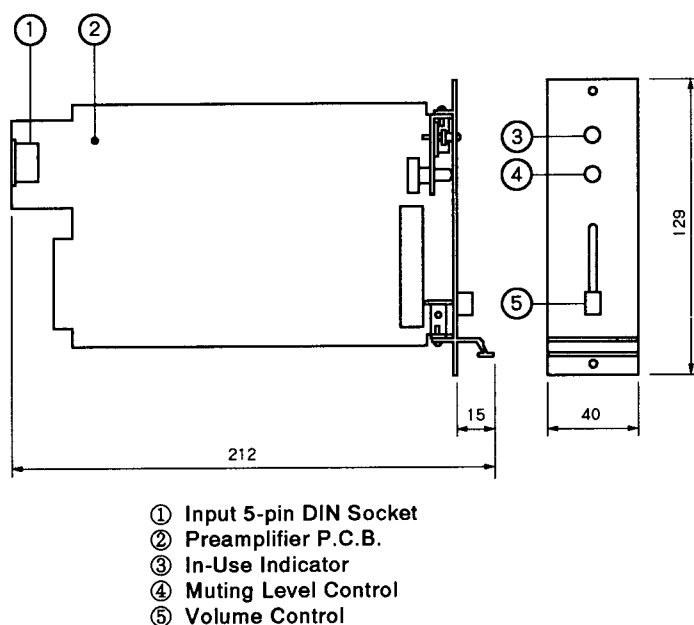
LINE INPUT MODULE V-1254B

Description

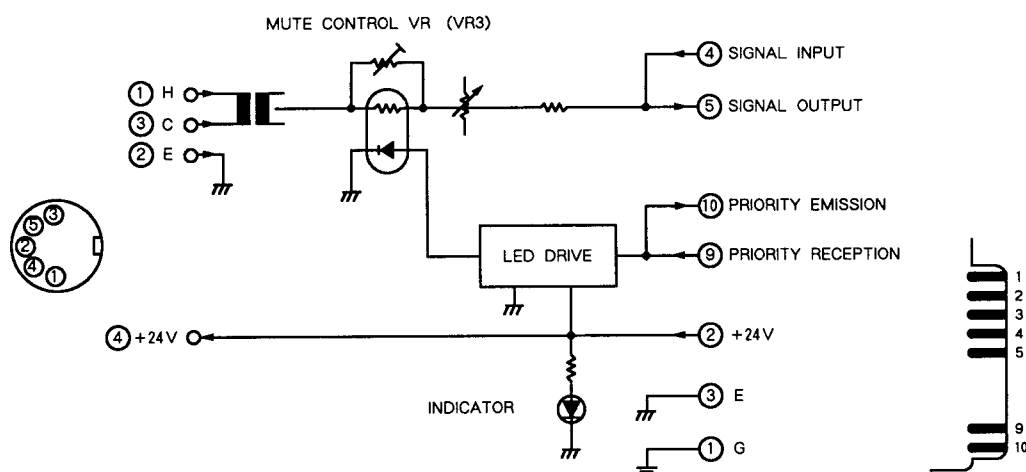
The TOA Auxiliary Input Module V-1254B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

Removal or mounting is facilitated by a handle fitted to the front panel. The volume control on the front panel controls the output level. When mute function is employed in the module, the operation of a module having the higher priority decreases the output level of this module, which can be controlled by means of the semi-fixed volume control located on the front panel.

Appearance



Block Diagram



Note : The VR3 located on the front panel is for control of muting level.
Adjust the VR3 to required muting level.

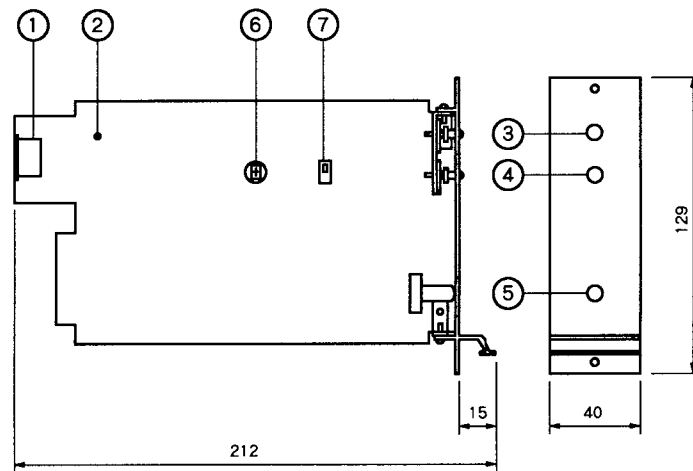
ALERT SIGNAL MODULE V-1014B

Description

The TOA Alert Signal Module V-1014B is designed for use with the VM Series Mixer Power Amplifiers and the Mixer Frame Model V-1000B.

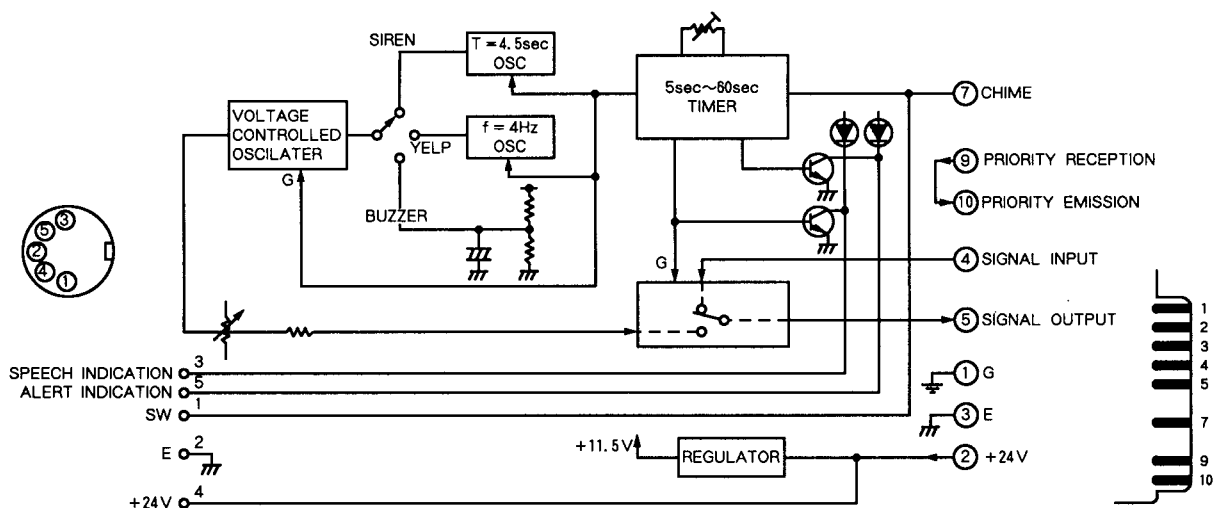
The V-1014B can generate three types of alert signals (siren, yelp, buzzer). A semi-fixed output level control and two indicators are provided on the front panel. The red LED remains lit while the alert is being activated. The green LED indicates the permission to talk. The active time of an alert signal can be varied by adjusting the semi-fixed potentiometer on this printed circuit board. An alert signal can be selected from three signals (siren, yelp, buzzer) by changing the position of the slide switch on this printed circuit board.

Appearance



- | | |
|-------------------------------|-------------------------|
| ① Indication Output Connector | ⑤ Volume Control |
| ② Chime P.C.B. | ⑥ Sounding Time Control |
| ③ Speech Indicator | ⑦ Chime/Gong Selector |
| ④ Chime Indicator | |

Block Diagram



Note : This module works on the highest priority always when operated.

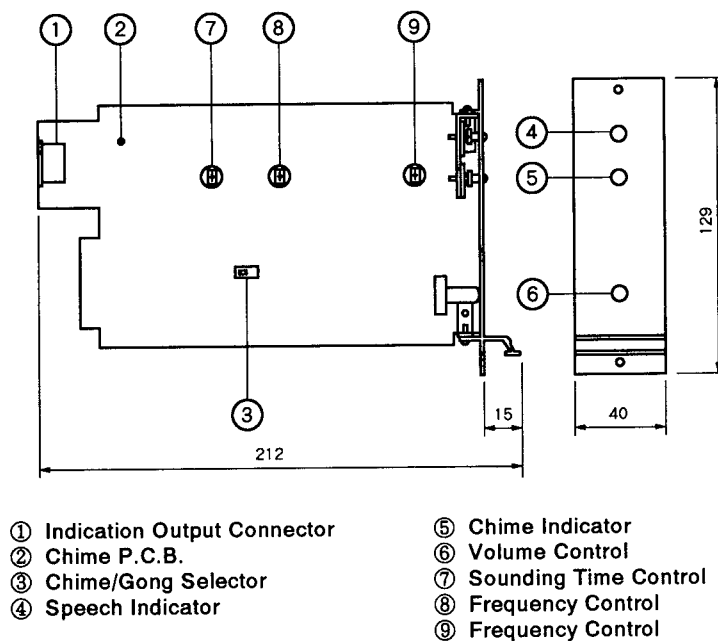
CHIME SIGNAL MODULE V-1015B

Description

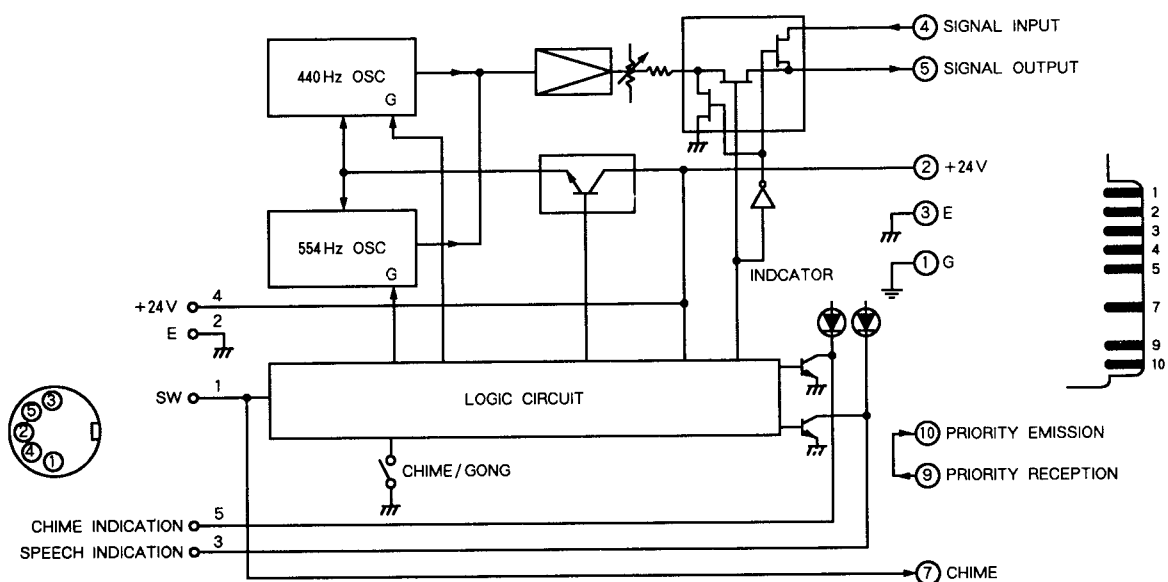
The TOA Chime Signal Module V-1015B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

Before making an announcement, this module sounds a two-note chime or a single gong tone to capture attention.

Appearance



Block Diagram



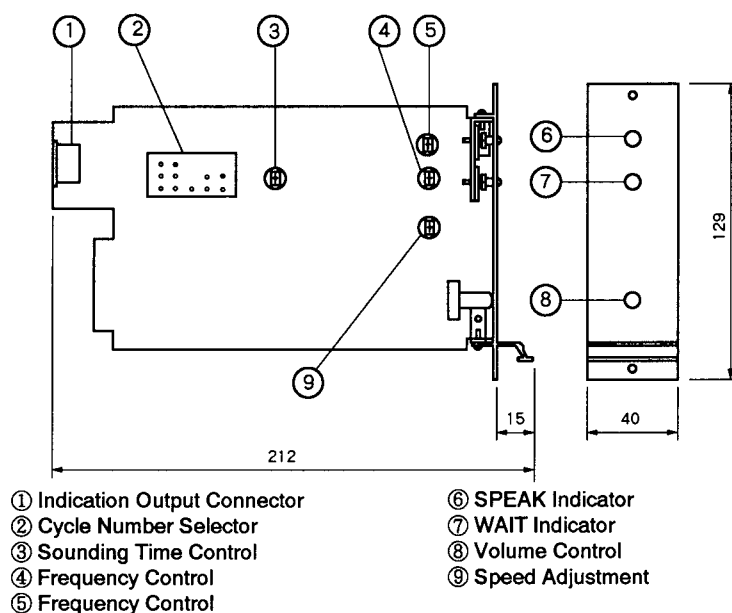
Note : This module works on the highest priority always when operated.

ALERT SIGNAL MODULE V-1016B

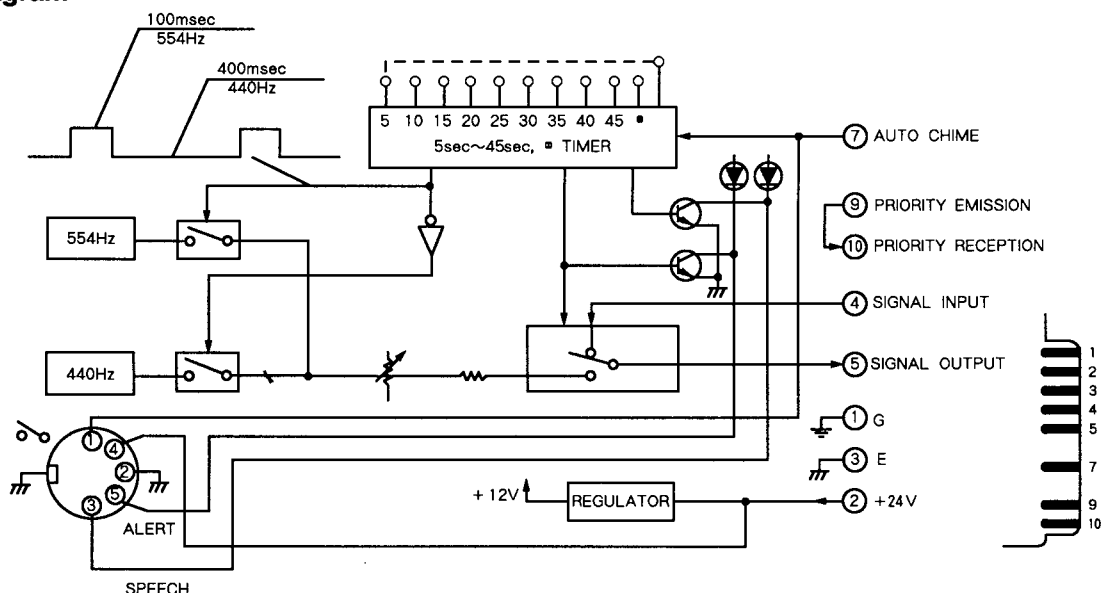
Description

The TOA Alert Signal Module V-1016B is designed for use with the Mixer Frame V-1000B. Two LED's (red and green) display the status of the module on the front panel. These informations can be sent to a remote microphone to control WAIT and SPEAK indicators. On the PCB, it is possible to adjust : the two frequencies, the length of the alert and the speed of frequencies switching. A volume control is accessible with a screwdriver on the front panel to avoid accidental modification of level adjustment.

Appearance



Block Diagram



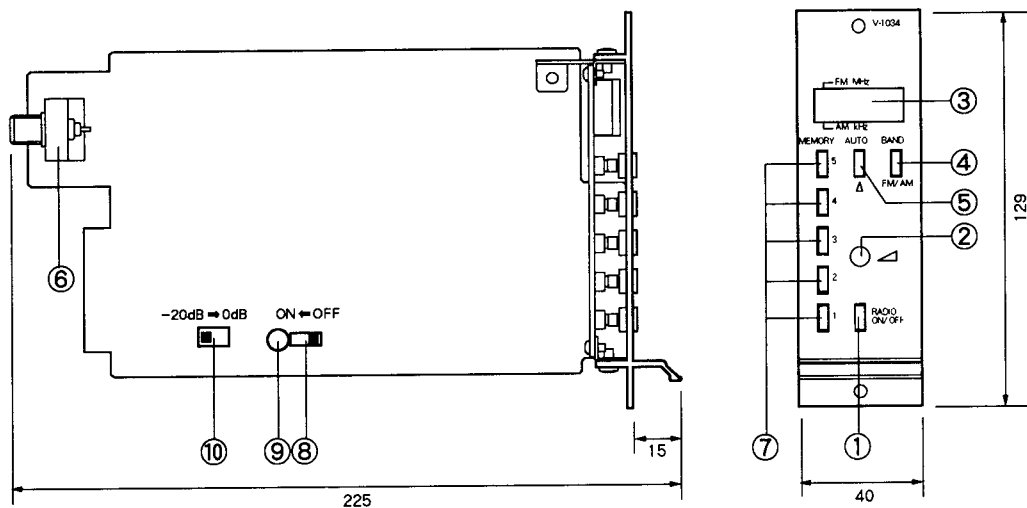
Note : The module can also be controlled by a V-1051B module.

AM/FM RADIO TUNER MODULE V-1034B

Description

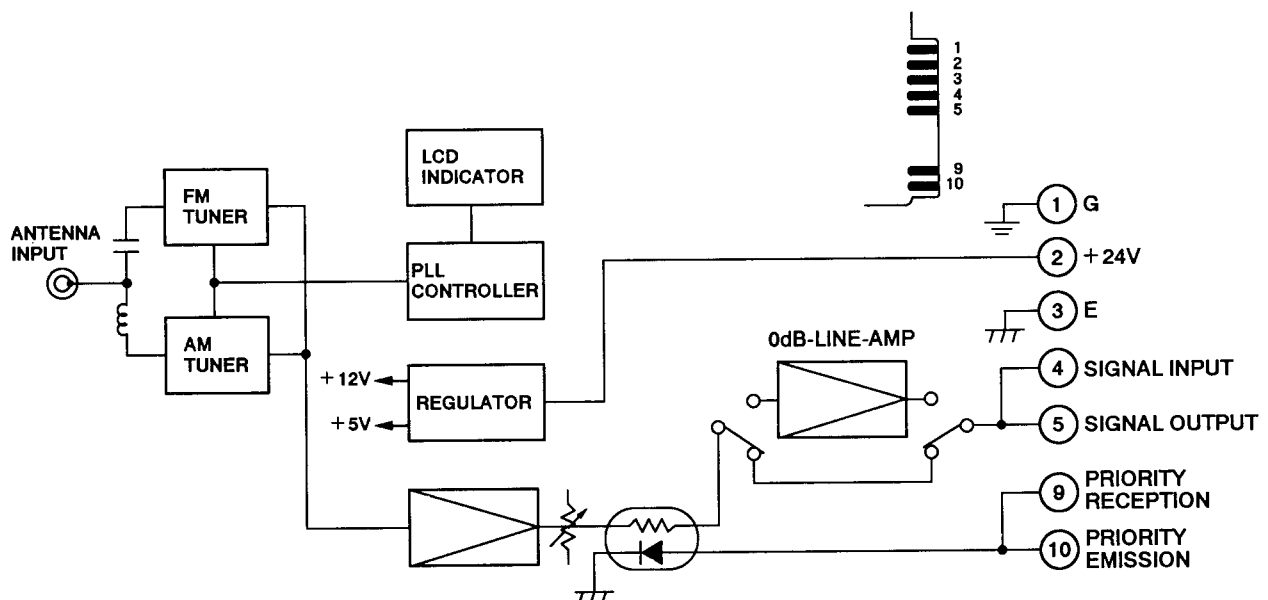
The TOA V-1034B AM/FM Radio Tuner Module is designed for use with the "VM" mixer power amplifier or V-1000B mixer frame. The V-1034B is equipped with a digital display which shows the current radio band. An internal microcomputer-controlled PLL synthesized circuit prevents signal deviation. When in automatic tuning mode, the V-1034B can be automatically tuned to an available station. Also, it can store up to five stations each for FM and AM broadcasts.

Appearance



- ① Radio ON/OFF Switch
- ② Volume Control
- ③ Digital Frequency Display
- ④ AM/FM Selection Button
- ⑤ Tuning Button
- ⑥ Antenna Input
- ⑦ Memory Buttons
- ⑧ Muting Level Control ON/OFF Switch
- ⑨ Muting Level Control
- ⑩ Output Level Selection Switch

Block Diagram



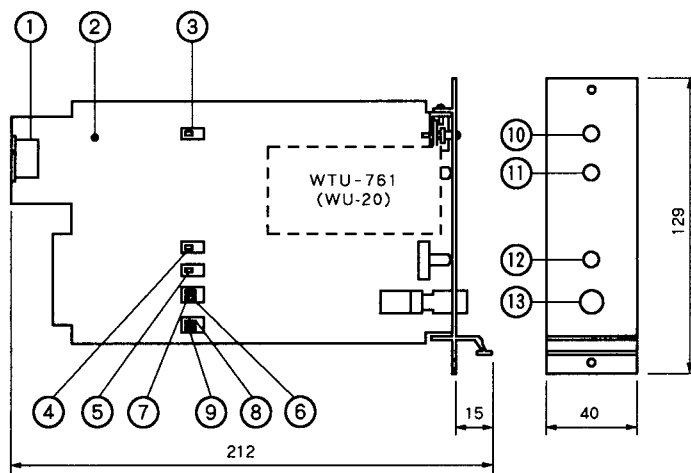
PREAMPLIFIER MODULE FOR WIRELESS TUNER V-1022B

Description

The TOA Preamplifier Module for Wireless Tuner V-1022B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

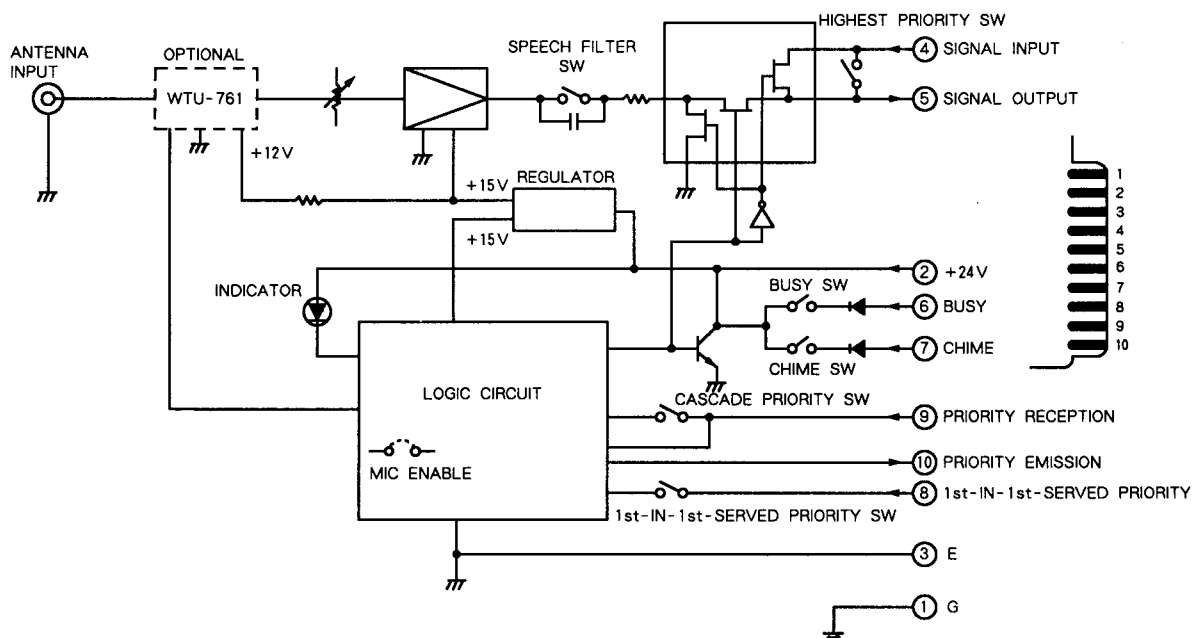
It can receive a carrier from the wireless microphone when used with the optional wireless tuner unit WTU-761. The V-1022B has various applications which are determined by the selection of programming functions and the insertion location in the Mixer Power Amplifiers or the Mixer Frame. These programming functions are activated when the tuner receives a carrier from the wireless microphone and the In-use Indication lights.

Appearance



- | | |
|---------------------------|-------------------------------------|
| ① Input 5-pin DIN Socket | ⑧ 1st-in-1st-Served Priority Switch |
| ② AUX Preamplifier P.C.B. | ⑨ Cascade Priority Switch |
| ③ 0/-20dB Selector | ⑩ In-Use Indicator |
| ④ Highest Priority Switch | ⑪ Carrier Squelch Level Control |
| ⑤ Speech Filter Switch | ⑫ Output Level Control |
| ⑥ Busy Switch | ⑬ Power Switch |
| ⑦ Chime Switch | |

Block Diagram



Optional Wireless Tuner WTU-761

Description

The WTU-761 is a compact, plug-in type wireless tuner requiring no tuning adjustments thanks to its built-in crystal-controlled tuning system. A superheterodyne FM detection receiving system with compander assures stable reception at all times and a built-in squelch control allows for adjustment of reception sensitivity. S/N ratio is better than 90dB and AF distortion is less than 1%.

Specifications

Model	WTU-761
Receiving System	Superheterodyne, FM detection
Receiving Frequency	One of 30 to 50MHz
Receiving Sensitivity	Better than 80dB (20dB μ V input, 1kHz modulation, 40kHz deviation)
S/N Ratio	Better than 90dB (60dB μ V input, 1kHz modulation, 40kHz deviation)
AF Output Level	0dBV (40kHz deviation)
AF Distortion	Less than 1% (at input of 60dB μ V)
Output Load Resistance	More than 2.2k Ω
Squelch Variable Range	0 to 40dB μ V variable
Aerial Input Impedance	75 Ω nominal (unbalanced)
Power Supply	9-15V DC, Less than 70mA
Ambient Temperature	-10°C to 50°C
Connector	6-pin PCB connector
Dimensions	42(W) x 20(H) x 106(D) mm
Weight	Approx.70g

* Specifications are subject to change without notice.

* WTU-761 is approved by ZZF : Zentralamt für Zulassungen in Fernmeldewesen (German Telecommunications Central Office). Type approval No. : ZZF A015279 BME

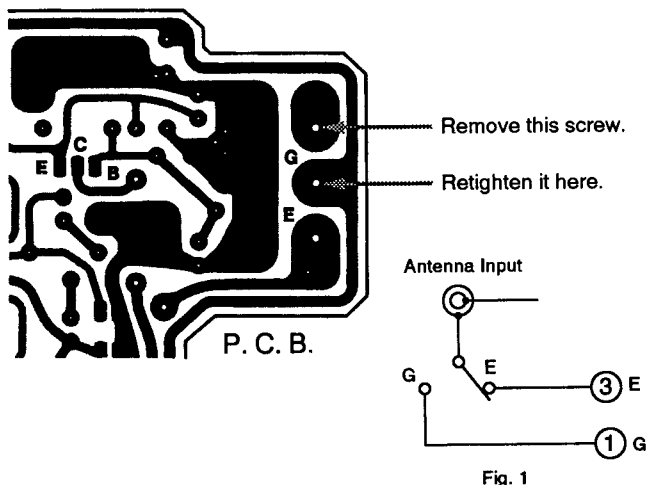
* Frequency must be specified when ordering.

Both the WTU-761 and WU-20 tuner modules can be used with the V-1022B. Make sure to use wireless microphones and tuner modules with the following combination only. Verify their combination before use.

Tuner Unit	Microphone
WTU-761	WM-260 (hand-held type) WM-360 (lavalier type)
WU-20	WM-210E, WM-220, WM-300E, WM-320

● Connection for mounting the V-1022B on the V-1000B Main Frame.

Insert the module into the frame. Fit the antenna plug to a coaxial cable from an external antenna and connect it directly to the module.



Note :

In the event that ham noise increases when the V-1022B is connected to an external antenna, disconnect a shield mesh of antenna cable from point "E" and reconnect it to point "G". See Fig. 1, below.

Cautions :

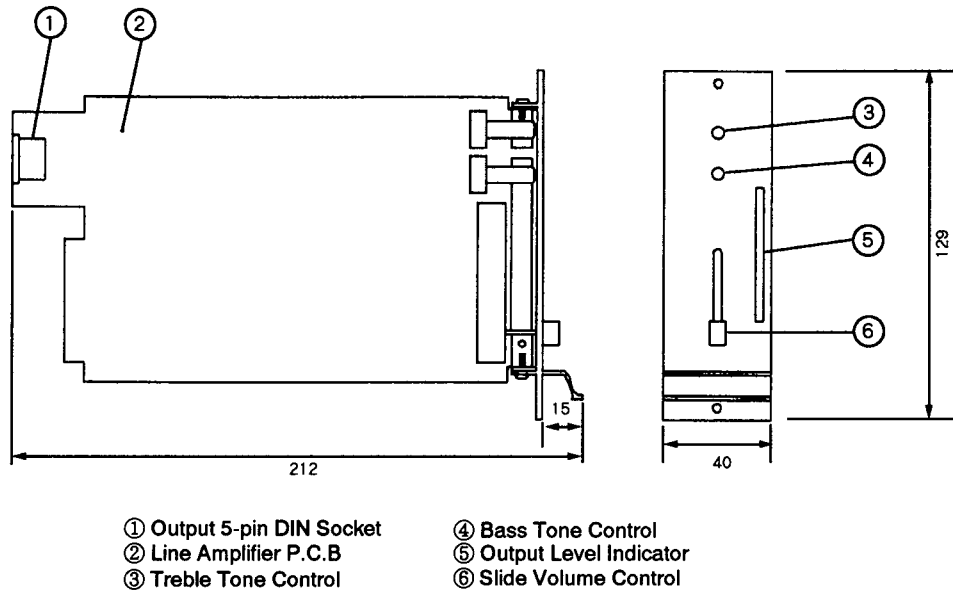
Simultaneous use of both the WTU-761 unit of 44.87MHz and the FM radio tuner may occasionally cause an interference by a wireless mic's signal to occur at a point near 89.75MHz of the FM radio tuner.

LINE AMPLIFIER MODULE V-1071B

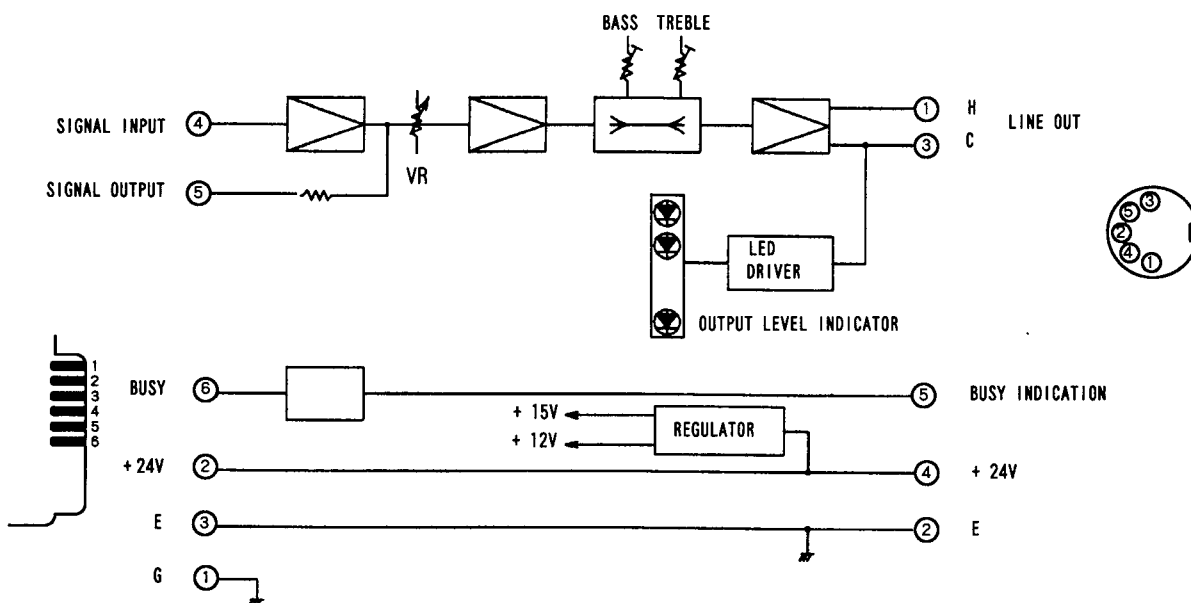
Description

The TOA Line Amplifier V-1071B is designed for use with the Mixer Frame V-1000B. The module combines output signals from the preamplifier sections without any mixing loss. The slide volume control on the front panel adjusts the output level indicated by the LED meter. Bass and treble controls on the front panel allow high and low frequencies to be attenuated or boosted by 10dB.

Appearance



Block Diagram

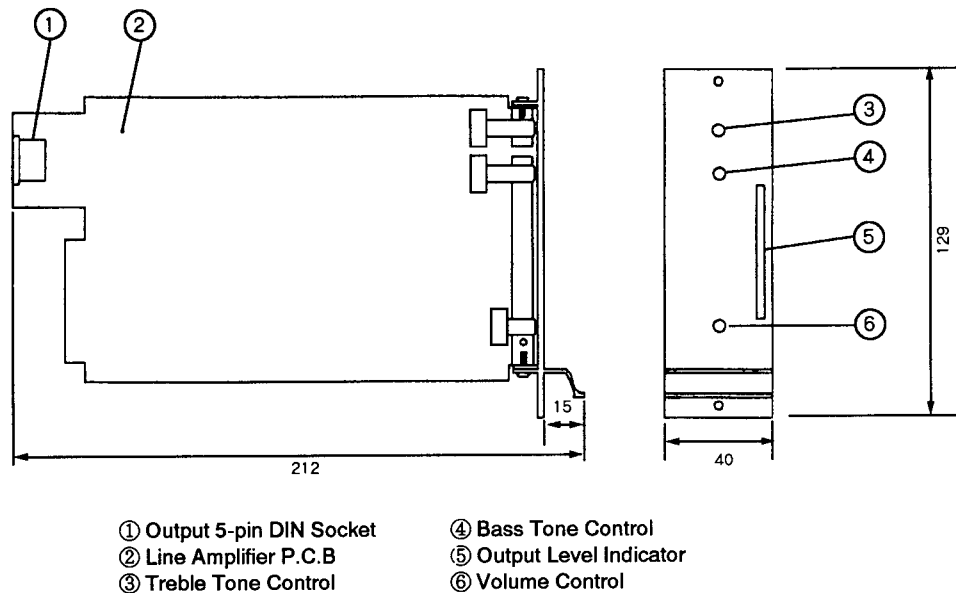


PRESET LINE AMPLIFIER MODULE V-1072B

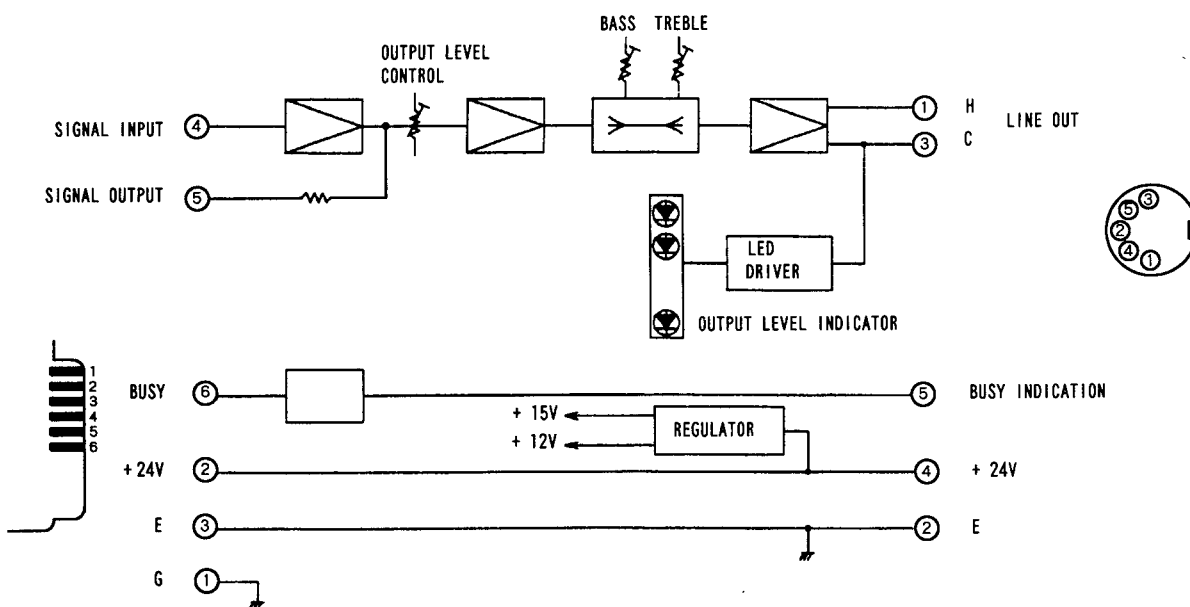
Description

The TOA Line Amplifier V-1072B is designed for use with the Mixer Frame V-1000B. The module combines output signals from the preamplifier sections without any mixing loss. The rotary volume control on the front panel adjusts the output level indicated by the LED meter. Bass and treble controls on the front panel allow high and low frequencies to be attenuated or boosted by 10dB.

Appearance



Block Diagram



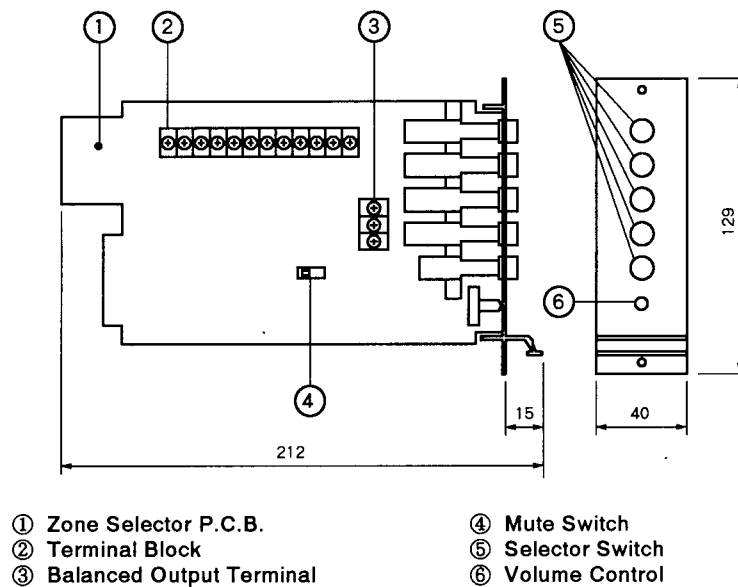
PROGRAM SELECTOR MODULE V-1061B

Description

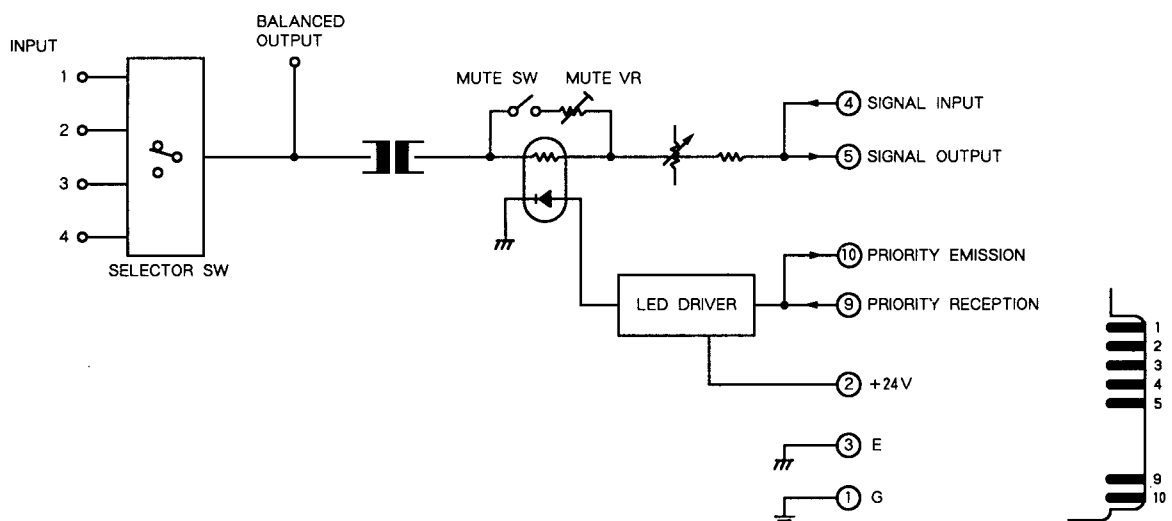
The TOA Program Selector Module V-1061B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

This module selects a program out of four inputs. Two outputs are provided with this module. One is a balanced output located on the P.C. board and is independent of volume and priority control. The other is an unbalanced output line on the edge connector, through which a signal is conveyed to the bus line of the mixer frame or the mixer power amplifier unit. The output level is adjusted by the semi-fixed volume control provided on the front panel. This output can be muted when the module receives a priority control, and when the mute switch is activated the muting level can be adjusted by the semi-fixed volume control located on P.C. board.

Appearance



Block Diagram



Note : The VR2 located on the PC board is for control of muting level when the mute switch (S5) is turned on (CONT VR. side). Adjust the VR2 to required muting level.

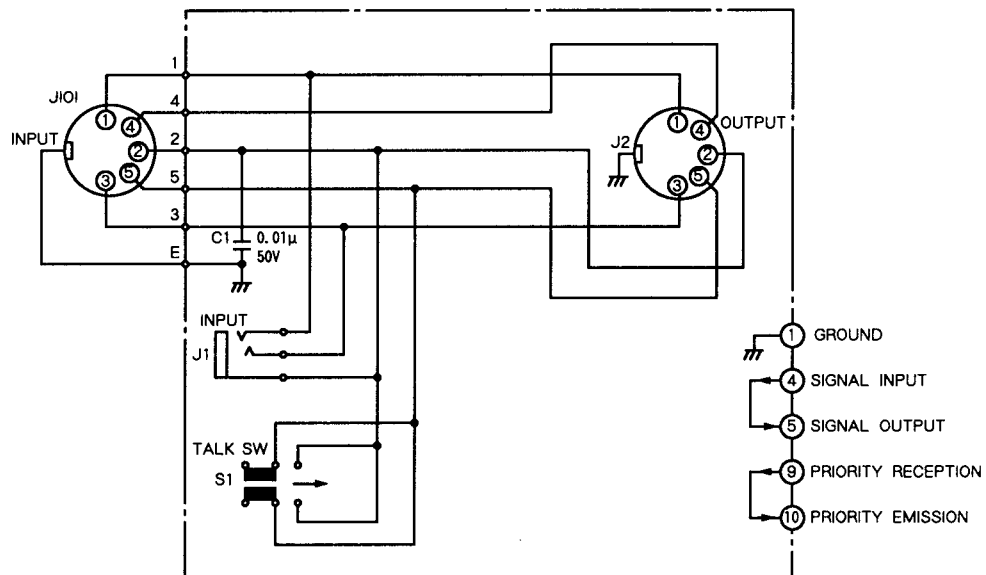
MICROPHONE INPUT PANEL V-1005B

Description

The TOA Microphone Input Panel V-1005B is designed for use with the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

This panel allows DIN or phone plugs of microphones to be plugged in from the front of the Mixer Power Amplifiers or the Mixer Preamplifiers.

Schematic Diagram

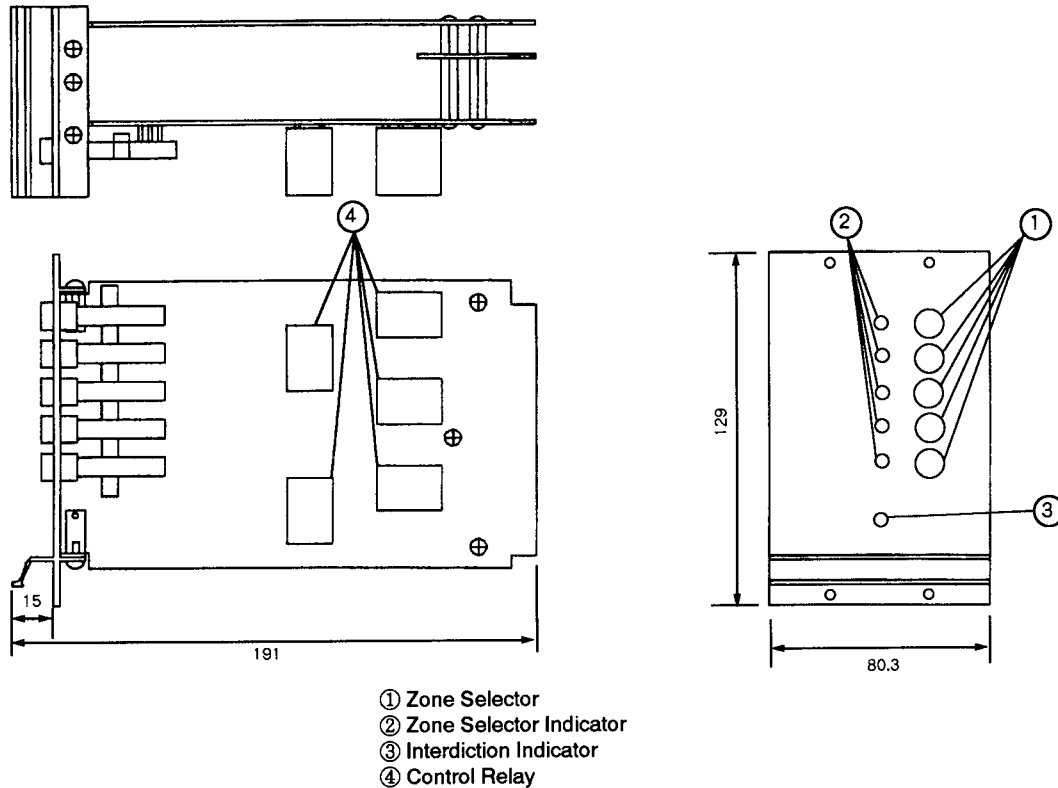


5-ZONE SELECTOR MODULE V-1062B

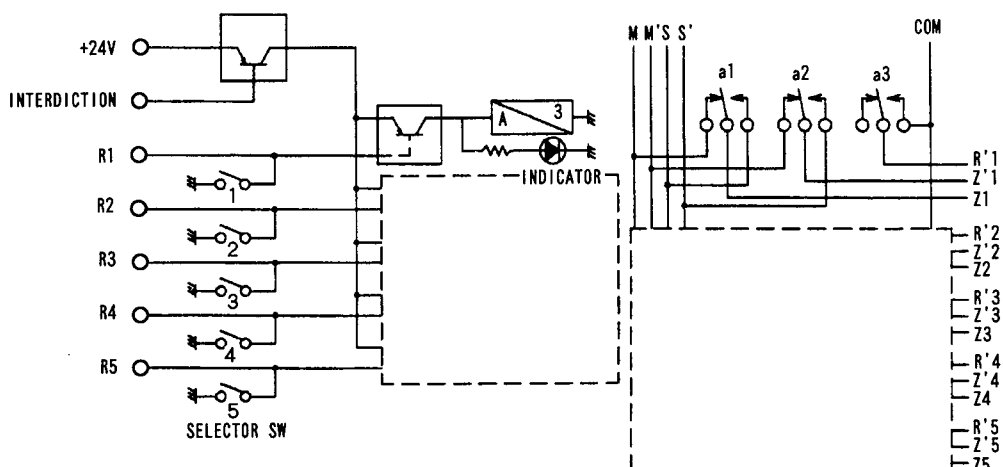
Description

The TOA 5-zone Selector Module V-1062B is designed for use with the Mixer Frame V-1000B. The module can be utilized as a program selector by allocating one of the two input signals to up to 5 outputs. Both green and red LEDs are provided to allow rapid monitoring of the zone selectors in use, in addition to monitoring if the interdiction function is being activated.

Appearance

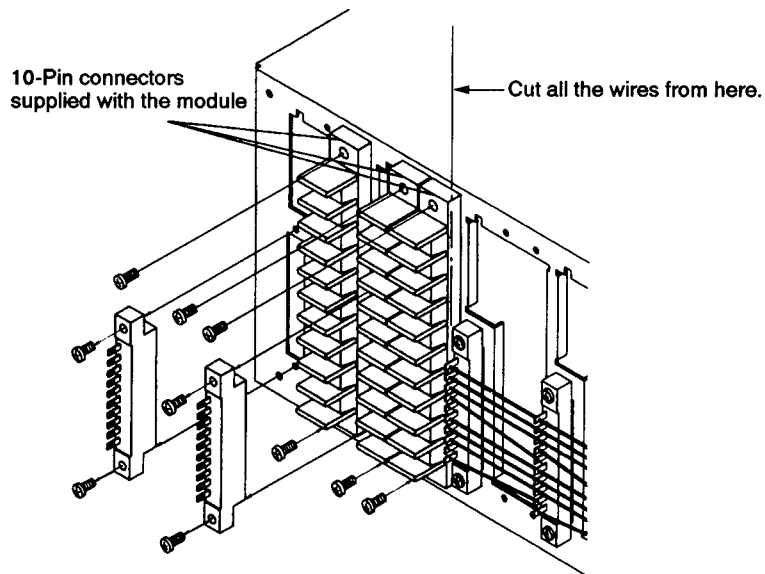


Block Diagram



How to mount the module

1. Unscrew the connector cover located on the rear of the Mixer Frame.
2. Cut all the wires between the 10-pin connectors where the module is mounted, and remove two of the 10-pin connectors.
3. Mount three of the 10-pin connectors supplied with the module as illustrated below.
4. Make wiring according to the instructions indicated on the connector cover, and then replace the connector cover.
5. Plug in the module from the front, and secure it with 4 screws supplied as accessory.



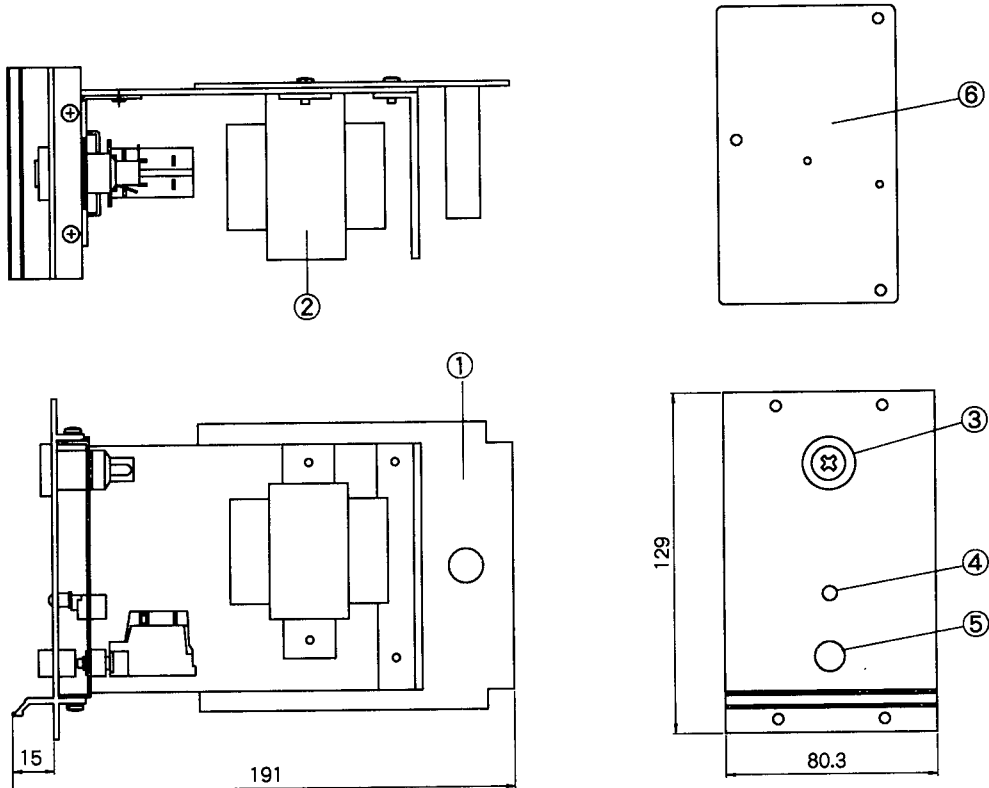
POWER SUPPLY MODULE V-1082B

General Description

Designed to be plugged in the mixer frame V-1000B, the TOA power supply module V-1082B supplies the 24 VDC power to other modules mounted in the mixer frame.

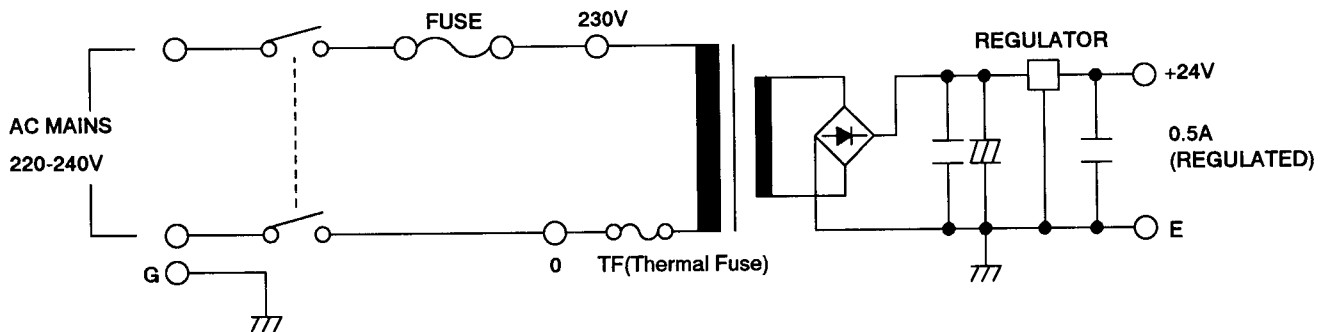
Note: The V-1082B can be used only with the V-1000B. Be sure to mount it in the mixer frame when using.

Appearance



- | | |
|-----------------------------------|---|
| ① Rectifier printed circuit board | ④ Power indicator |
| ② Power transformer | ⑤ Power switch |
| ③ AC fuse holder | ⑥ Accessory sub-panel (for mounting in the mixer frame V-1000B) |

Block Diagram



Module Installation

1. Remove the connector cover on the V-1000B's back.
2. Cut wires connected to two 10-pin connectors located on the left hand side (as viewed from the rear) to remove the connectors. (Figure 1)
3. Fit a sub-panel in place. (Figure 2)
4. Attach a 10-pin terminal block as shown in Figure 2.

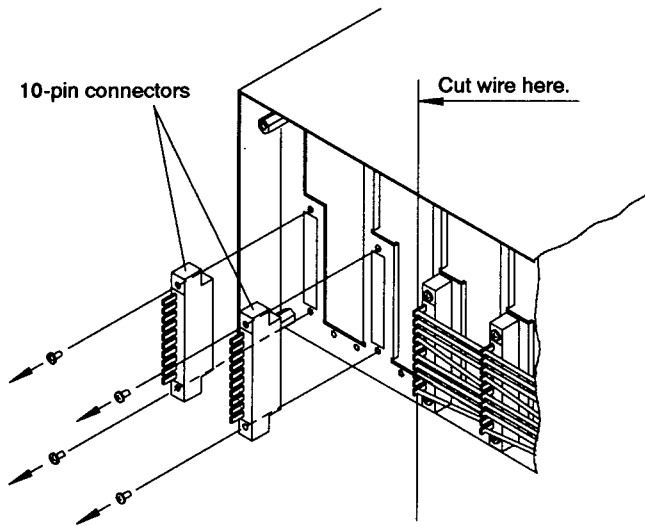


Fig.1

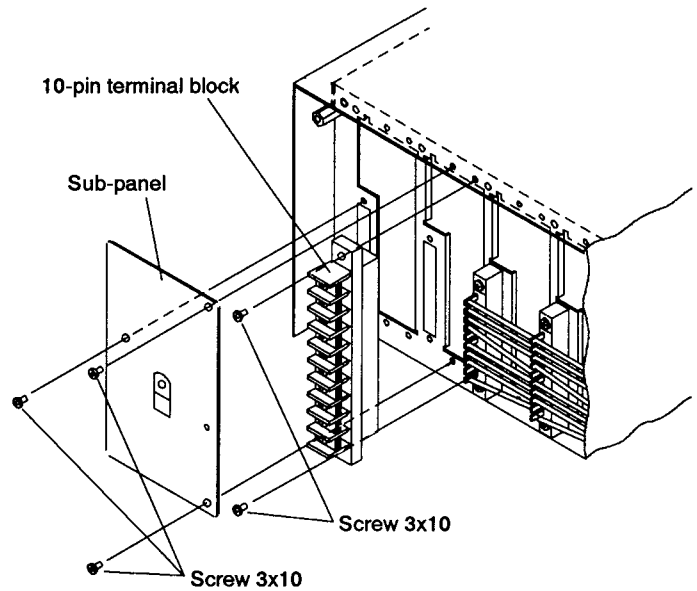


Fig.2

5. Run the power cable through cord entry bushings and the V-1000B's connector cover, then fit the bushings into the connector cover. (Figure 3)

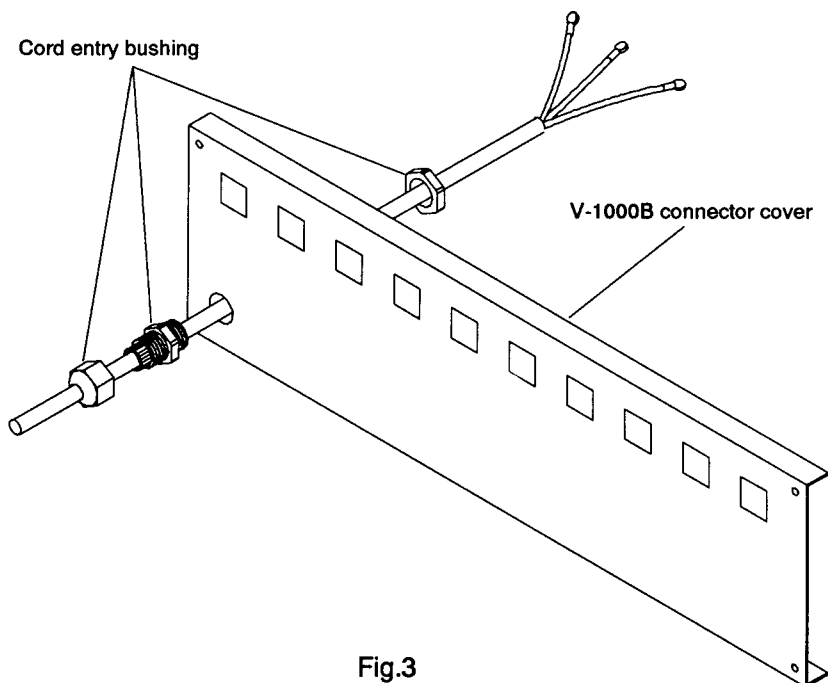


Fig.3

IMPORTANT: The frame should not be connected to the mains supply unless all spaces are filled with modules or blank panels properly secured with fixing screws. As stated above, the space next to the power supply module V-1082B must be fitted with a blanking plate and must NOT be fitted with another module.

6. Connect the power cable to the 10-pin terminal block in the following order. (Figure 4)

Terminal block - Power supply cable
LIVE-BROWN
NEUTRAL-BLUE
EARTH - GREEN/YELLOW

Using the supplied grounding cable, connect the ground terminal on the 10-pin terminal block to the ground terminal on the sub-panel. For connections of the supplied grounding cable and power cable to the ground terminal on the 10-pin terminal block, refer to Figure 4.

Also, when connecting the grounding cable to the sub-panel, insert the supplied toothed lock washer as shown in Figure 4.

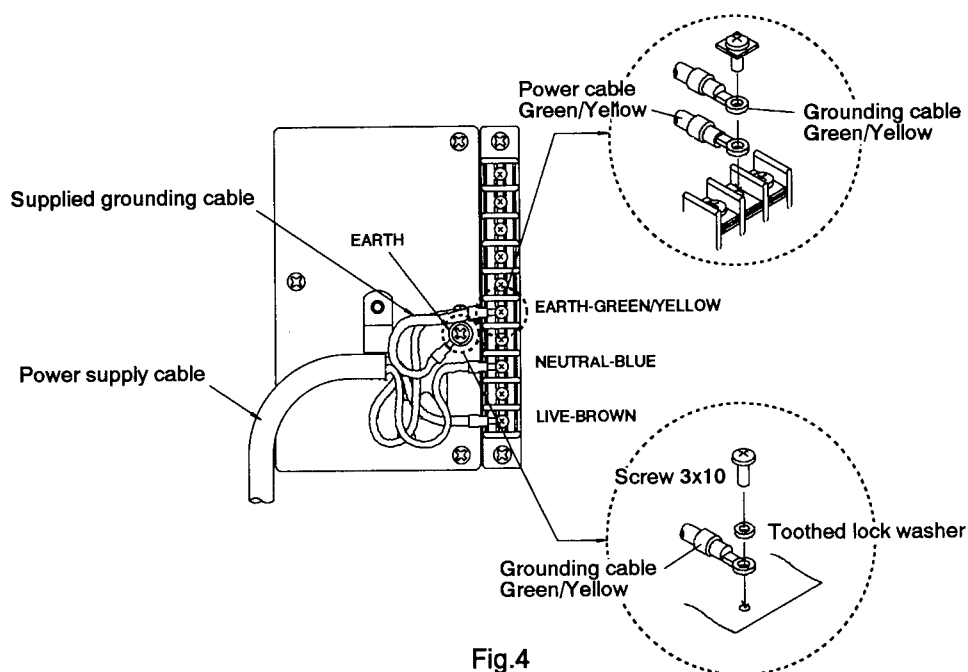


Fig.4

7. Secure the power cable connected to the terminal block to the sub-panel using a (nylon) cable clip. (Figure 5)
8. Connect wires according to the indication on the V-1000B's connector cover.
9. Pulling the power cable, attach the connector cover to the V-1000B's chassis. (Figure 6)

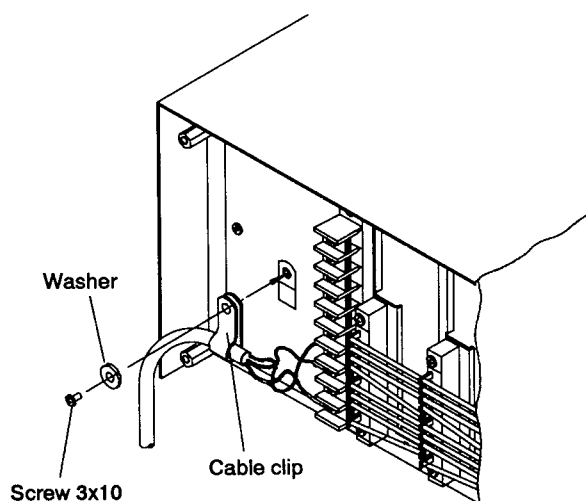


Fig.5

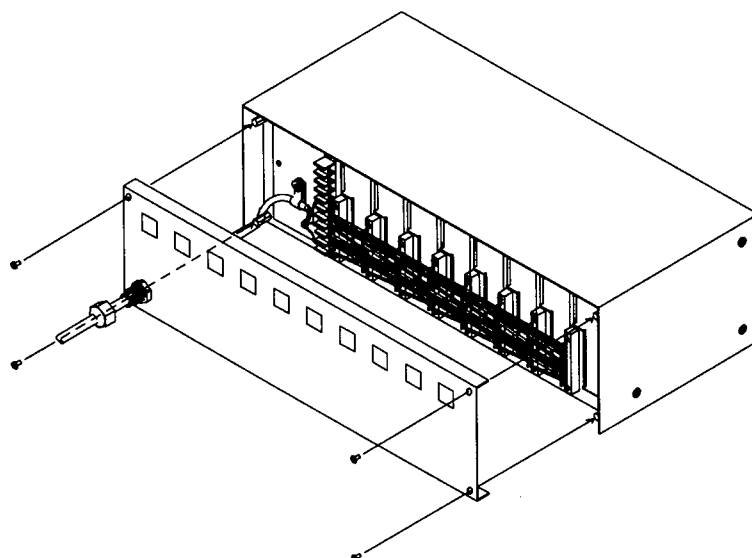


Fig.6

10. Attach the blank panel to the connector cover. (Figure 7)
11. Insert the V-1082B into the slot on the right hand side of the V-1000B's front and fix the module at 4 places using the supplied screws. In this event, mount a blank panel on the left hand side of the V-1082B power supply module. It must also be seen to that all other uncovered slots are covered with the blank panel. (Figure 8)
12. Connect the 24 VDC output on the V-1082B to the connector on the back of the V-1000B frame.

24 VDC + \longleftrightarrow Pin 2
24 VDC - \longleftrightarrow Pin 3

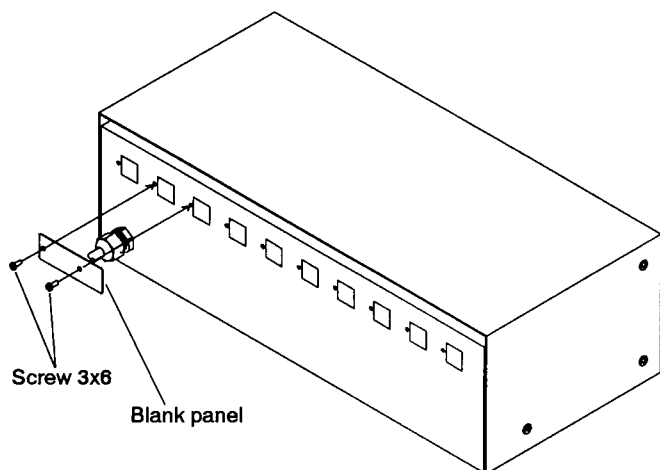


Fig.7

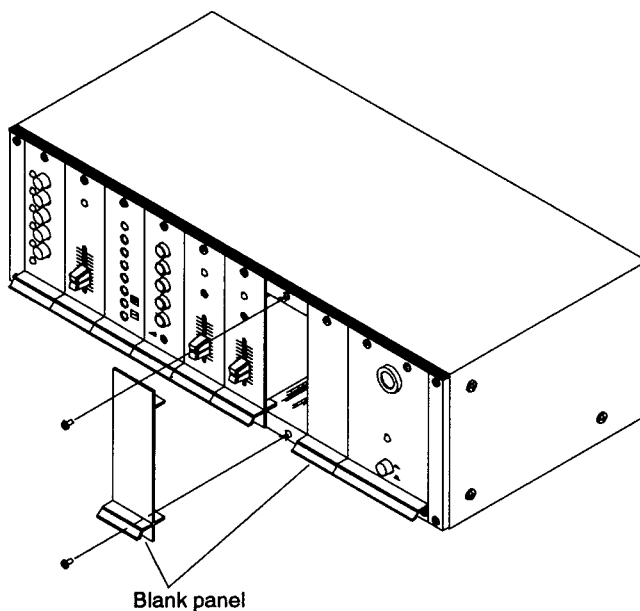


Fig.8

[Precautions]

- The maximum power the V-1082B can supply is 0.5 A. Use the module within the range not exceeding it.
- When mounting the V-1082B in the V-1000B frame, be sure to attach the supplied panel, and secure the power supply cable.
- Be sure to use the fuse of the same type and capacity (T315 mA) when replacing it.

Operations

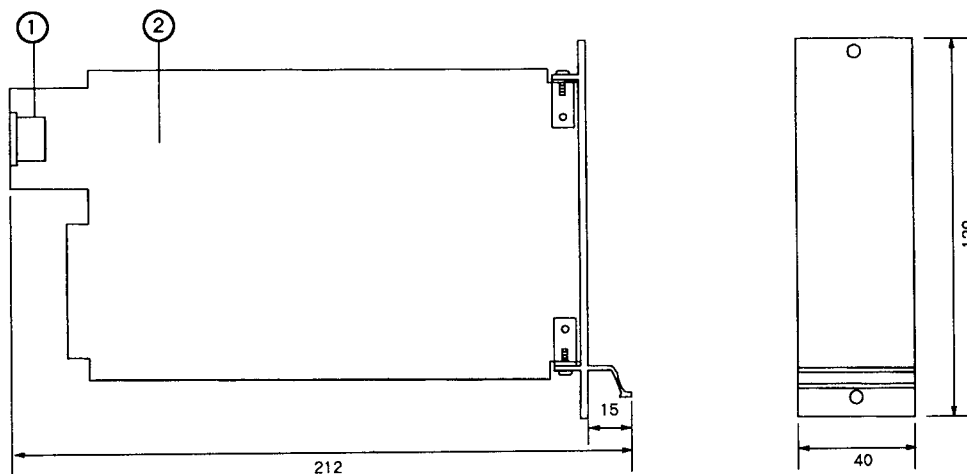
1. Make sure that the V-1082B and other modules are correctly mounted in the frame.
2. Make sure that the V-1082B is correctly connected to other modules and that individual modules are correctly connected to external equipment.
3. Fully plug the V-1082B's power supply cord into the AC outlet.
4. Press the V-1082B's power switch to switch on the power. (The V-1082B's power indicator lamp lights.)
5. The power is supplied to other modules as well, and the system can be used.

INTERFACE MODULE V-1090B

Description

The TOA Interface Module V-1090B is designed for use with the Mixer Frame V-1000B. This module links the bus lines of each preamplifier unit, and can serve as a bus output as well as input. When used for line output this module should be plugged into the right side of the main frame, and into the left side when used for line input.

Appearance



- ① 8-pin DIN Socket
- ② Interface P.C.B.

SPECIFICATIONS OF INPUT MODULES

MODULE TYPE	V-1051B	V-1151B
APPLICATIONS	MICROPHONE PREAMPLIFIER MODULE WITH COMPRESSOR AND PROGRAMMING FUNCTIONS	MICROPHONE PREAMPLIFIER MODULE
SPECIFICATIONS		
Input Sensitivity & Impedance	-60dBm 600Ω (Balanced) or 0dB 100kΩ (Balanced) (Switchable)	-60dBm 600Ω (Balanced)
Output Level & Impedance	-20dBV 10kΩ	
Frequency Response	30-20,000Hz ±1dB	
Speech Filter	-12dB at 100Hz	
Distortion	Less than 0.3% (f=1kHz sine wave)	
Tone Controls	—	
Noise Level (Equivalent Input Noise), 20Hz-20kHz, 200Ω Terminated	-124dBV	-125dBV
Power Requirement	24V DC	
Current Consumption	40mA	30mA
Indicator	In-Use Indicator (Green LED)	Power Indicator
Controls	1 x Slide Volume Control	
Programming Functions	1. Highest Priority 2. 1st-In-1st-Served Priority 3. Cascade Priority 4. Speech Filter 5. Busy Indication 6. Chime Distribution 7. Mic Enable Function	Speech Filter
Connections	Input : 5-pin DIN Socket Output & Power Received : 10-pin Card Connector	
Dimensions	129mm (H) x 40mm (W) x 212mm (D)	
Weight	151g	127g
Finish	Black	

* Specifications are subject to change without notice.

PROGRAMMING FUNCTIONS :

1. Highest Priority:

When this switch is in the ON position (electrically open position), signals from the left hand side of the module are cut off.

2. 1st-In-1st-Served Priority:

When two or more modules have this priority switch in the ON position, the module activated first has dominance over the other modules.

3. Cascade Priority:

When two or more modules have this priority switch in the ON position, the module on the right hand side has dominance over those on the left hand side.

4. Speech Filter:

When the Speech Filter is in the ON position (electrically open position), low frequencies are attenuated.

5. Busy Indication:

When the Busy Indication switch is in the ON position, the Busy lamp of the Remote Microphone VR-1005 lights to indicate that another module with higher priority is in use.

MODULE TYPE	V-1251B
APPLICATIONS	MICROPHONE REAMPLIFIER MODULE WITH TRANSFORMER-ISOLATED INPUT AND PROGRAMMING FUNCTIONS
SPECIFICATIONS	
Input Sensitivity & Impedance	-60dBm 600 Ω (Balanced)
Output Level & Impedance	-20dBV 10k Ω
Frequency Response	30 - 20,000Hz \pm 1dB
Speech Filter	-12dB at 100Hz
Distortion	Less than 0.3% (f=1kHz sine wave)
Tone Controls	_____
Noise Level (Equivalent Input Noise), 20Hz-20kHz, 200 Ω Terminated	-126dBV
Power Requirement	24V DC
Current Consumption	34mA
Indicator	In-Use Indicator (Green LED)
Controls	1 x Slide Volume Control
Programming Functions	<ol style="list-style-type: none"> 1. Highest Priority 2. 1st-In-1st-Served Priority 3. Cascade Priority 4. Speech Filter 5. Busy Indication 6. Chime Distribution 7. Mic Enable Function
Connections	Input : 5-pin DIN Socket Output & Power Received : 10-pin Card Connector
Dimensions	129mm (H) x 40mm (W) x 212mm (D)
Weight	162g
Finish	Black

* Specifications are subject to change without notice.

6. Chime Distribution:

When the Chime switch is in the ON position, the chime module operates when the Microphone switch is depressed. Set the chime module at right hand side of microphone input modules.

7. Mic. Enable:

By cutting the jumper wire of the Mic. Enable switch, a microphone without a Talk switch becomes usable.

Note : Switches for Busy, Chime, 1st-in-1st-Served and Highest Priority should be set on the left side.

When the Cascade Priority switch is in the ON position (right side), announcements from the microphone are cut off if the other High Priority function is activated.

8. Mute :

Activation of priority function of the module situated on the right side mutes output level of modules on the left hand side. This muting level can be controlled by a volume control on the front panel or the semi-fixed volume control (V-1061B) on the printed circuit board.

Note : When the unit is shipped from factory, the programming switch is set at left which, prevents the programming functions from operating. To activate the programming functions, move the switch to the right.

MODULE TYPE	V-1054B	V-1254B
APPLICATIONS	AUXILIARY PREAMPLIFIER MODULE WITH MUTING FUNCTION	LINE INPUT MODULE WITH TRANSFORMER-ISOLATED INPUT AND MUTING FUNCTION
SPECIFICATIONS		
Input Sensitivity	-20dBV/0dBV (switchable)	0dBV
Input Impedance	100k Ω (Balanced)	50k Ω (Balanced)
Output Level	-20dBV	
Output Impedance	10k Ω	
Frequency Response	30Hz-20,000Hz \pm 1dB	
Distortion	Less than 0.3% (f=1kHz sine wave)	
Noise Level (Equivalent Input Noise) (at 20Hz-20kHz)	-94dBV	—
Power Requirement	24V DC	
Current Consumption	22mA	17mA
Indicator	In-Use Indicator (Green LED)	
Controls	1 x Slide-Type Volume Control 1 x Muting Level Control	
Programming Function	<p>Mute:</p> <p>When priority function of a module located at the right hand side is activated, output level these modules goes down automatically in the range of 0 to 30dB which can be adjusted by means of the semi-fixed volume control on the front panel.</p>	
Connections	Input : 5-pin DIN Socket Output & Power Received : 10-Pin Card Connector	
Dimensions	129mm (H) x 40mm (W) x 212mm (D)	
Weight	132g	143g
Finish	Black	

* Specifications are subject to change without notice.

MODULE TYPE	V-1022B
APPLICATIONS	PREAMPLIFIER MODULE FOR WIRELESS TUNER
SPECIFICATIONS	
Adaptable Tuner	WTU-761 (Optional)
Antenna Impedance	75 Ω (Unbalanced)
Output Level & Impedance	-20dBV 10k Ω (Unbalanced)
Frequency Response	50Hz-15,000Hz \pm 2dB
Distortion	Less than 1% at 1kHz, rated output
S/N Ratio (at 20Hz-20kHz)	Better than 90dB
Speech Filter	-12dB at 100Hz
Power Requirement	24V DC
Current Consumption (With WTU-761)	Power switch off : 10mA Power switch on : 90mA
Indicator	In-Use Indicator (Green) Goes off: when the power switch is turned off or when other functions with higher priority are operated. Goes on and off : at no signal Lights : when receiving a signal from the wireless microphone.
Controls	1. Power Switch 2. Output Level Control 3. Carrier Squelch Level Control
Programming Functions	1. Highest Priority 2. 1st-In-1st-Served Priority 3. Cascade Priority 4. Speech Filter 5. Busy Indication 6. Chime Distribution
Connections	Antenna Input : F-type socket for coaxial cable Output & Power : 10-pin Card Received Connector
Dimensions	129mm(H) x 40mm(W) x 225mm(D)
Weight	151g
Finish	Black

MODULE TYPE	V-1071B/V-1072B
APPLICATIONS	LINE AMPLIFIER MODULE
SPECIFICATIONS	
Inputs Sensitivity	-20dBV
Outputs Level	0dBV
Output Impedance	600 Ω (Balanced)
Frequency Response	30-20,000Hz \pm 1dB
Distortion	Less than 0.3% at 1kHz
Tone Controls	Bass : \pm 10dB at 100Hz Treble : \pm 10dB at 10kHz
Noise Level (Equivalent Input Noise) (at 20Hz~20kHz)	-102dBV
Power Requirement	24V DC
Current Consumption	85mA
Indicator	LED Output Level Indicator
Controls	1 Output Level Control 2 Tone Controls
Connections	Inputs : 10-pin Card Connector Output/DC Input : 5-pin DIN Socket
Dimensions	129(H) x 40(W) x 212(D)mm
Weight	145g
Finish	Black

* Specifications are subject to change without notice.

MODULE TYPE	V-1034B
APPLICATIONS	AM/FM RADIO TUNER
SPECIFICATIONS	
Type	AM/FM Radio Tuner
Tuning Range	FM: 87.5MHz-108MHz (50kHz increment) AM: 522kHz-1620kHz (9kHz increment)
Sensitivity	FM: 2.5 μ V/98MHz for 30dB quieting AM: 20 μ V/999kHz for 20dB quieting
IF	FM: 10.7MHz AM: 450kHz
Antenna Impedance	75 Ω , unbalanced
Tuning Control	Auto (Manual mode available)
Preset Frequencies	FM: 5 AM: 5
Memory Backup	For 2 months (After DC power off)
Output Level	-20dBV/0dBV (switchable)
Output Impedance	-20dBV : 10k Ω , unbalanced 0dBV : 600 Ω , unbalanced
Distortion	Less than 1%
S/N Ratio (at 20Hz-20kHz)	FM: Better than 70dB AM: Better than 45dB
Power Requirements	20V DC - 24V DC
Current Consumption	150mA max.
Indicator	Digital frequency display: LCD
Controls	1 Radio ON/OFF Switch 1 AM/FM Selection Button 1 Tuning Button 5 Memory Button 1 Volume Control Following controls are provided on the printed circuit board. 1 Muting Level Control ON/OFF Switch 1 Output Level Selection Switch 1 Muting Level Control
Programming Function	Mute: When priority function of a module located at the right hand side is activated, output level of these modules decrease automatically by 45dB or 0 to 20dB (switchable). The muting level is adjustable with a slide switch and a semi-fixed volume on the printed circuit board.
Connections	Antenna Input : F-type socket for coaxial cable Output & Power Received : 10-pin Card Connector
Dimensions	129mm(H) x 40mm(W) x 219mm(D)
Weight	160g
Finish	Black

* Specifications are subject to change without notice.

MODULE TYPE	V-1014B	V-1015B	V-1016B
APPLICATIONS	ALERT SIGNAL MODULE	CHIME MODULE	ALERT SIGNAL MODULE
SPECIFICATIONS			
Signal	Siren, Yelp or Buzzer (switchable)	Two-Note Chime or Gong (switchable)	2 Tone alert
Frequency	Siren : 400Hz-750Hz Yelp : 500Hz-750Hz Buzzer : 400Hz	Chime : 440Hz & 554Hz Gong : Mixed freq. of 440Hz & 554Hz	440Hz and 554Hz in sequence
Sounding Time	Approx. 5-60 sec. (Variable)	Chime : Approx. 2.5 sec.	Cycle length: 5 to 45 sec.
Output Level	100mV	280mVp-p	280mV Peak/Peak
Output Impedance	10k Ω		
Power Requirement	24V DC		
Current Consumption	35mA	33mA	27mA
Indicators	Siren/Yelp/Buzzer: Red LED Speech : Green LED	Chime/Gong : Red LED Speech : Green LED	Alert : 1 red LED Speak + Outputs: 1 green LED
Controls	1 Output Level Control 1 Sounding Time Control	1 Output Level Control 2 Frequency Controls 1 Speed Control	1 volume, 1 Speed 2 Frequencies- Duration Selector
Connections	Indication Output : 5-pin DIN Socket Signal Output & DC Input : 10-pin Card Connector		5-pin DIN Socket: Indications + Remote Control 10-pin Card Connector: Power supply - Output Control
Dimensions	129mm(H) x 40mm(W) x 212mm(D)		
Weight	140g		130g
Finish	Black		

MODULE TYPE	V-1061B
APPLICATIONS	PROGRAM SELECTOR MODULE
SPECIFICATIONS	
Inputs	4 Inputs
Outputs	1 Balanced Output 1 Unbalanced Output
Switches	4 Selector Buttons 1 Reset Button
Programming Function	Mute : When priority function is activated, unbalanced output level of this module will be reduced automatically.
Power Requirement	24V DC
Current Consumption	4mA
Controls	1 Output Level Control 1 Muting Level Control
Connections	Input: 10-pin Terminal Balanced Output: 3-pin Terminal Unbalanced Output : 10-pin Card Connector
Dimensions	129mm(H) x 40mm(W) x 212mm(D)
Weight	180g
Finish	Black

MODULE TYPE	V-1062B
APPLICATIONS	5-ZONE SELECTOR MODULE
SPECIFICATIONS	
Inputs	2 Inputs
Outputs	5 Outputs
Switches	5 Selector Buttons
Indications	Zone Selector Indicator: Green LED's Interdiction Indicator: Red LED
Power requirement	24V DC
Current Consumption	160mA
Connections	Input/Output : 2 of 10-pin Terminal DC Input/Remote : 10-pin Terminal
Dimensions	129(H) x 80.3(W) x 191(D)mm
Weight	420g
Finish	Black

Specifications are subject to change without notice.

MODULE TYPE	V-1082B
APPLICATIONS	POWER SUPPLY MODULE
SPECIFICATIONS	
Output Voltage	24 VDC
Output Current	0.5A (Regulated)
Power Source	220V-240VAC, 50/60Hz
Regulation	2% max.
Ripple	4mV max. at 0.5A (output current)
Dimensions	129(H) x 80.3(W) x 191(D)mm
Weight	1,400g
Finish	Black

Specifications are measured on 230VAC operation.

MODULE TYPE	V-1005B
APPLICATIONS	MICROPHONE INPUT PANEL
SPECIFICATIONS	
Input	One 5-pin DIN Jack and One Phone Jack (Parallel)
Output	10-pin Card Edge Connector
Control	Talk Switch Button
Dimensions	130(H) x 40(W) x 212(D)mm
Weight	120g
Finish	Black

MODULE TYPE	V-1090B
APPLICATIONS	INTERFACE MODULE
SPECIFICATIONS	
Dimensions	129(H) x 40(W) x 212(D)mm
Weight	100g
Finish	Black

Specifications are subject to change without notice.

DESCRIPTION, APPEARANCES, DIMENSIONS, BLOCK DIAGRAMS AND SPECIFICATIONS OF OTHER EQUIPMENT

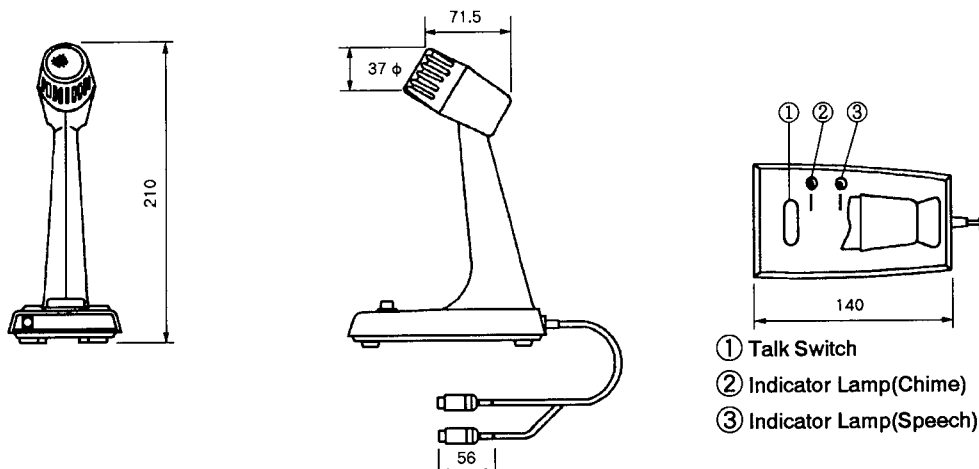
PAGING MICROPHONE VR-1001

Description

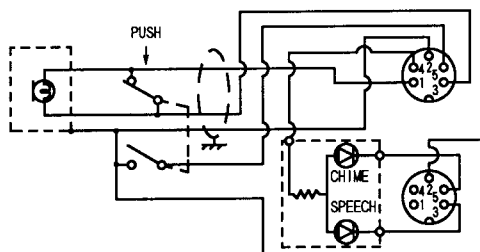
The TOA Paging Microphone VR-1001 has a unidirectional dynamic microphone element and a press-to-talk switch. It is designed for use with the Mixer Frame V-1000 series Microphone Preamplifier and Chime Modules.

When the microphone is attached to a chime module, activating the Talk switch causes the chime lamp to light and after chiming, the speech lamp lights. An output cable is provided, equipped with two 5-pin DIN plugs for microphone preamplifier and chime modules.

Appearance



Block Diagram



Specifications

Microphone Element	Dynamic Type
Polar Pattern	Cardioid (Unidirectional)
Frequency Range	200Hz~10,000Hz
Output Impedance	600 Ω \pm 30% at 1kHz (Balanced)
Output Level	- 76dB \pm 3dB at 1kHz (0dB = 1V/ μ bar)
Indicators	Chime Lamp : Red LED Speech Lamp: Green LED
Switch	Press-to-talk Switch
Weight	540g
Finish	ABS Resin Black

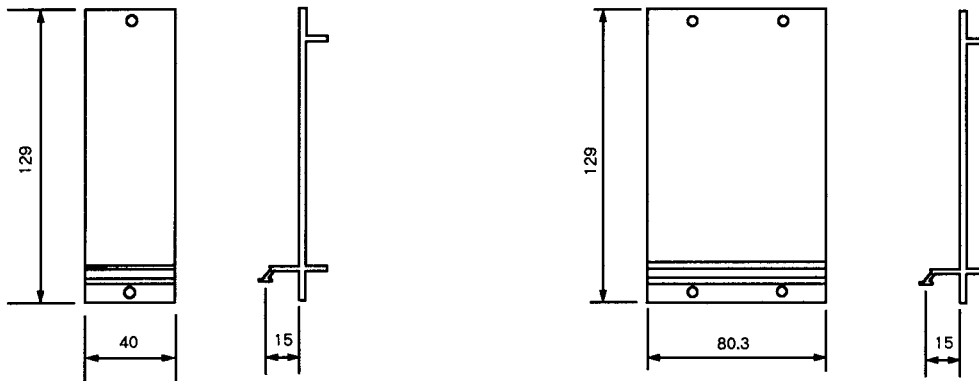
*Specifications are subject to change without notice.

BLANK PANELS V-1001B/V-1002B

Description

The TOA Blank Panels V-1001B/V-1002B are designed to cover unused sections of the VM series Mixer Power Amplifiers and the Mixer Frame V-1000B.

Appearance



Specifications [V-1001B]

Dimensions	40(W) x 129(H)mm
Weight	40g
Finish	Black

Specifications [V-1002B]

Dimensions	80.3(W) x 129(H)mm
Weight	80g
Finish	Black

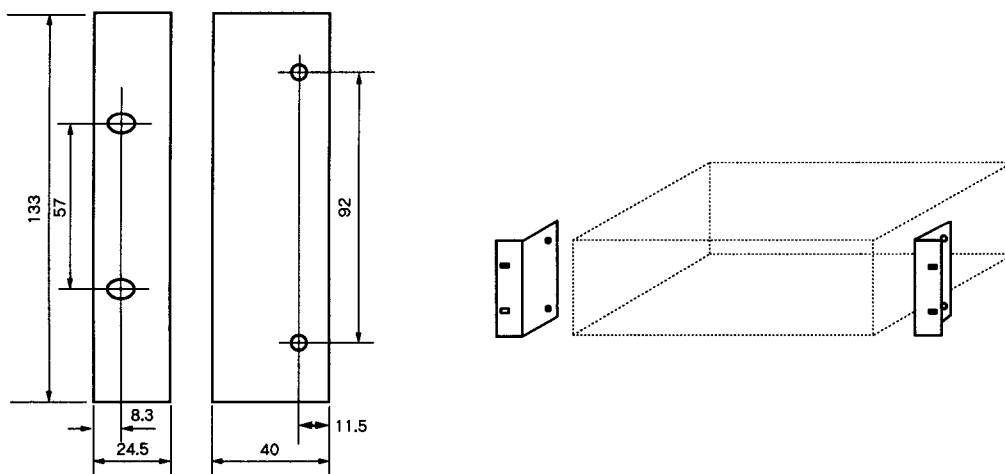
* Specifications are subject to change without notice.

RACK MOUNTING BRACKET YM-003B

Description

The TOA Rack Mounting Bracket YM-003B is a pair (left and right) of brackets for use with the following models when mounting in a standard 19" rack is desirable. Models V-1000B, BA-400 and AM-820.

Appearance



Specifications

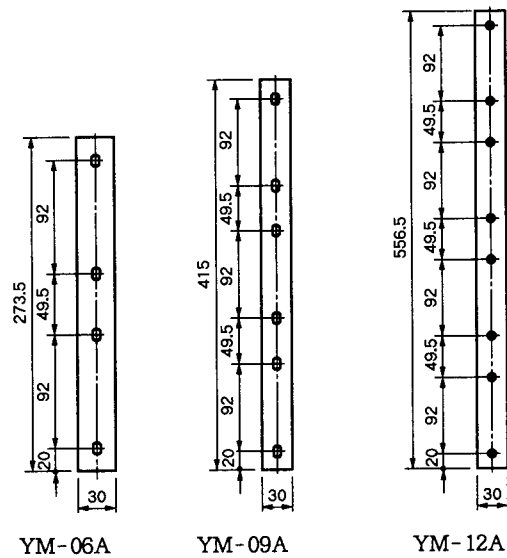
Dimensions	24.5mm(W) x 133mm(H) x 40mm(D)
Weight	300g
Finish	Black

STACKING BRACKETS YM-06A/YM-09A/YM-12A

Description

The TOA Stacking Brackets YM-06A, YM-09A and YM-12A are pairs (left and right) of brackets for stacking up to four amplifiers.

Appearance



Specifications

Model	YM-06A	YM-09A	YM-12A
Dimensions	273.5(H) × 30(W)mm	415(H) × 30(W)mm	556.5(H) × 30(W)mm
Weight	290g	430g	580g
Finish	Dark Gray		

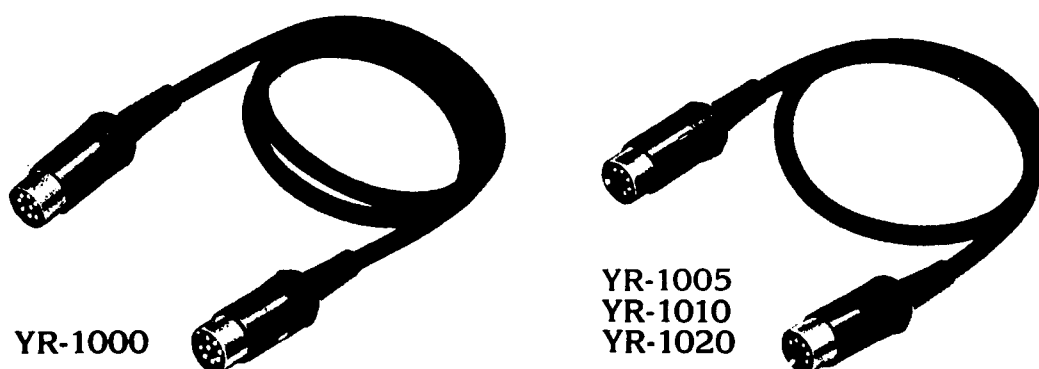
*Specifications are subject to change without notice.

CONNECTING CABLES YR-1000/YR-1005/YR-1010/YR-1020

Description

The TOA Connecting Cables YR-1000, YR-1005, YR-1010 and YR-1020 are designed for use as connections between Mixer Preamplifier outputs and Power Amplifier inputs or for strapping parallel inputs of Power Amplifiers to each other. The Connecting Cable YR-1000 is used for connecting interface modules.

Appearance



Specifications

Model	YR-1000	YR-1005	YR-1010	YR-1020
Connector	8-pin DIN Socket	5-pin DIN Socket		
Multi-Cable	One Shielded Cable and Five Cables	One shielded Cable and Two Cables		
Cable Length	70cm	50cm	100cm	200cm

*Specifications are subject to change without notice.



TOA Corporation

Printed in Taiwan
133-12-340-5A