

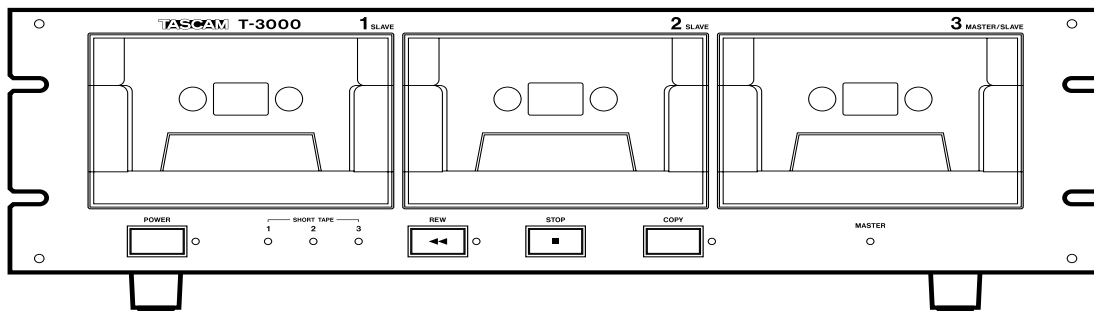
TASCAM

TEAC Professional Division

9101414500

T-3000

Cassette Duplicator



OWNER'S MANUAL



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons..



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.

Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Important Safety Precautions

IMPORTANT (for U.K. Customers)

DO NOT cut off the mains plug from this equipment.

If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not provided with a mains plug, or one has to be fitted, then follow the instructions given below:

IMPORTANT: DO NOT make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol \perp or coloured GREEN or GREEN-and-YELLOW.

The wires in the mains lead on this product are coloured in accordance with the following code:

BLUE	: NEUTRAL
BROWN	: LIVE

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.

IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.

For the consumers in Europe

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les utilisateurs en Europe

AVERTISSEMENT

Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa

Warnung

Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen ; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION:

- **Read all of these Instructions.**
- **Save these Instructions for later use.**
- **Follow all Warnings and Instructions marked on the audio equipment.**

- 1) Read Instructions** — All the safety and operating instructions should be read before the product is operated.
- 2) Retain Instructions** — The safety and operating instructions should be retained for future reference.
- 3) Heed Warnings** — All warnings on the product and in the operating instructions should be adhered to.
- 4) Follow Instructions** — All operating and use instructions should be followed.
- 5) Cleaning** — Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 6) Attachments** — Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- 7) Water and Moisture** — Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- 8) Accessories** — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- 9) A product and cart combination should be moved with care.** Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

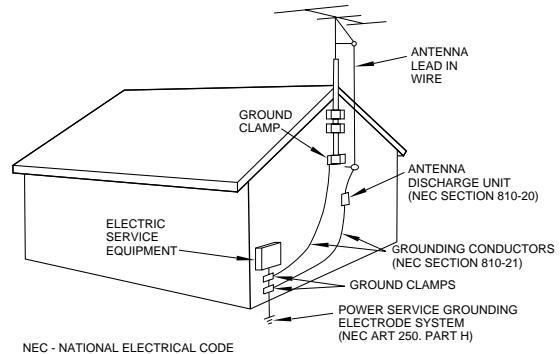


- 10) Ventilation** — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 11) Power Sources** — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12) Grounding or Polarization** — This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 13) Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 14) Outdoor Antenna Grounding** — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

"Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per National Electrical Code, ANSI/NFPA 70



- 15) Lightning** — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- 16) Power Lines** — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 17) Overloading** — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in risk of fire or electric shock.
- 18) Object and Liquid Entry** — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 19) Servicing** — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 20) Damage Requiring Service** — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a) when the power-supply cord or plug is damaged.
 - b) if liquid has been spilled, or objects have fallen into the product.
 - c) if the product has been exposed to rain or water.
 - d) if the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - e) if the product has been dropped or damaged in any way.
 - f) when the product exhibits a distinct change in performance — this indicates a need for service.
- 21) Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 22) Safety Check** — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 23) Wall or Ceiling Mounting** — The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 24) Heat** — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Before Getting Started

Thank you for choosing the TASCAM T-3000 cassette duplicator.

To get the most out of your T-3000, spend some time now to read this manual. This manual is a reference book; if you read it thoroughly at least once, you will know where to turn when you need answers.

This manual is divided into the following sections:

Important Safety Precautions	2
Important Safety Instructions	3
Before Getting Started	4
Setting Up	5
Cassette Tapes	5
How to Make Copies	6
Maintenance	6
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Standard Accessories

The T-3000 package includes the following in addition to the T-3000 itself, this manual and the warranty card:

- Rack mount vis kit
- Cable for connecting additional T-3000s

Installation Precautions

1. Operating Position

This unit is designed to be operated in vertical position.

2. Magnetic Field

Do not place this unit in the vicinity of televisions, amp transformers, speakers or other devices which utilize magnetic force.

3. Temperatures

Do not place this unit in locations subject to extremely high or low temperatures or to sharp temperature rise or drop.

4. Space for Ventilation

Do not place this unit in locations where no enough space is available for ventilation. Avoid also locations subject to excessive dust.

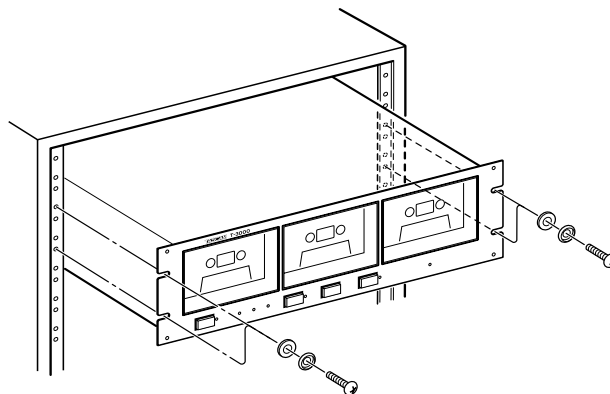
5. Horizontal and Solid Surfaces

It is risky to install this unit on inclined or unstable surfaces. Avoid this.

Mounting in a Rack (EIA standard 19-inch)

As for how to set the rear panel switch and connect the cable, refer to the section, "Setting Up" (p.5).

Remove the rubber feet, then use the provided rack mount vis kit to mount the unit in a rack, as shown.



Setting Up

Locate the SLAVE/MASTER switch on the rear panel and set it to MASTER, so that deck No.3 operates as the master (playback) deck.

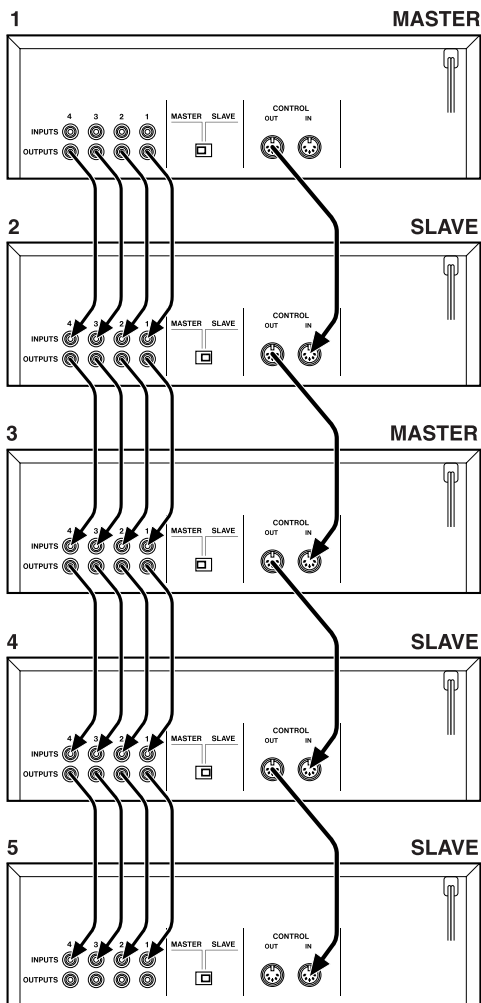
If you intend to use multiple T-3000s connected in series, set the SLAVE/MASTER switch to MASTER only on the 1st T-3000 (the switch on all the remaining T-3000s should be set to SLAVE).

Tips

If multiple T-3000s are in use and you set the SLAVE/MASTER switch to MASTER on the 1st and 3rd T-3000s for example, then you can record a copy of the master tape in deck "3" of the 1st T-3000 to decks "1" and "2" of the 1st T-3000 and decks "1," "2," and "3" of the 2nd T-3000; and the master tape in deck "3" of the 3rd T-3000 is copied to decks "1" and "2" of the 3rd T-3000 and decks "1," "2," and "3" of the remaining T-3000s.

CAUTION

Make sure that the power is turned off when you operate the SLAVE/ MASTER switch.



Cassette Tapes

Copying Time

The T-3000 makes recording on both A and B sides of a cassette simultaneously at 4-times speed. This means that the time it takes for the T-3000 to make a copy is about 7.5 minutes with a C-60 type tape (60 min. x 1/2 x 1/4) or about 11.25 minutes with a C-90 type tape (90 min. x 1/2 x 1/4).

The rewinding time is about 70 seconds with C-60 or about 90 seconds with C-90.

CAUTION

Do NOT use C-120 cassettes in the T-3000.

Record Protect Tab

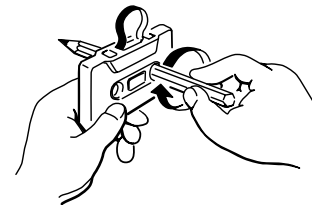
CAUTION

The T-3000 is designed to make copies, and can record on tapes without regard to the presence or the absence of the record protect tab on them. Be sure to insert the master tape into deck "3" under which the MASTER indicator is lit.

Slack in Tape

CAUTION

Before you load cassettes, take up any slack in each of the tapes as shown. If you do not remove excess slack, the tape might become tangled in the transport mechanism.



Removal of Cassette

CAUTION

If the tapes stop running in the process because of power failure or for any other reasons, be sure to let the head block go down by turning the T-3000 on again before attempting to remove the cassettes. If you attempt to remove the cassettes while the head block is up, it will mean damaging the head and the tape alike.

How to Make Copies

1 Press the POWER switch to switch on power to the T-3000.

A MASTER indicator will light under the right-most deck "3" of the T-3000 of which the SLAVE/MASTER switch is previously set to MASTER on its rear panel.

2 Load the pre-recorded master tape into deck "3" under which the MASTER indicator is lit.

3 Load cassette tapes to record on into the SLAVE decks.

We recommend you to load tapes of which the length is the same as that of the master tape to steer clear of confusion and trouble.

CAUTION

Pre-recorded tapes are overwritten (replaced). Be sure not to load a tape containing recordings you want to preserve into the SLAVE deck; or else they are being lost for ever.

4 Press the COPY button and a copy of what is on the MASTER tape starts being recorded on the SLAVE tapes.

Actions at Tape End

- If the master tape reaches its end while the slave tapes are still running in record, the COPY indicator that was lit solid starts blinking, and the master tape is automatically rewound. The slave tapes continue

to run, recording no signal, until their ends are reached.

- On the contrary, if a slave tape reaches its end while the master tape is still playing back, the corresponding SHORT TAPE indicator, 1, 2 or 3, turns on solid to indicate that copying on that tape was terminated in the process. The indicator turns off only when you remove the tape from the corresponding deck.

Button Operations

- The REW button is not operational when the COPY indicator is lit. Also, the COPY button is not operational when the REW indicator is lit. Press the STOP button and the REW or the COPY button becomes operational.
- When you are using multiple T-3000s connected in series, the STOP and REW buttons on the individual T-3000s have effect on the corresponding T-3000s. But any COPY buttons have no effect, except for the one on the T-3000 of which the SLAVE/MASTER switch is set to MASTER on the rear panel.

CAUTION

- *If the master tape contains recordings made at higher levels than normal, distortion may occur in the process of copying.*
 - *As long as a cassette tape is in the deck, the capstan motor is in motion. To prolong the service life of the motor, take out all the tapes of the deck after use; do not leave them inside.*
-

Maintenance

Dirty heads result in poor quality recording. Get into a habit to clean the heads, the pinch roller, and other elements in the tape path before starting each copying session.

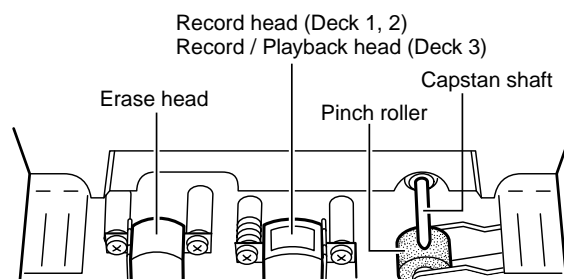
Hold the STOP button and press the POWER switch and the head block moves up and the SHORT TAPE indicators, 1, 2 and 3, turn on in turn, over and over again, to indicate that the T-3000 is in Cleaning mode.

NOTE

- 1: *The cleaning mode is automatically deactivated when five minutes are up, and the T-3000 goes back into normal mode.*
- 2: *Press the STOP button before five minutes are*

up and the T-3000 leaves the cleaning mode, going back into normal mode.

When attempting to demagnetize the tape path, closely follow the instructions given in the manual for a demagnetizer (Available as an option from TASCAM).



Specifications

Electronics/Mechanics

1 Configuration

Decks 1 & 2: Slave
Deck 3: Slave/Master switchable

2 Track Format: 4-track 4-channel

3 Head:

Record/playback head:
4-track 4-channel, in-line, ferrite

Erase head: Half-track 2-channel, in-line, ferrite

4 Tape: Normal/Chrome (CrO₂) auto switching, C-90 or shorter tapes

5 Motor

Capstan: FG, DD servo motor x1

Reel: DC motor

Mecha control: DC motor

6 Copying Speed: 19 cm/sec. (quadruple speed)

7 Bias Frequency: 200 Hz

8 Operating Position: Vertical

9 Power Requirements:

120 V AC, 60 Hz (U.S.A./Canada model)

230 V AC, 50 Hz (Europe/U.K. model)

240 V AC, 50 Hz (Australia model)

10 Dimensions (W x H x D):

482 x 152 x 334.5 mm

Typical Performance

1 Tape start-up time: About 0.5 second before reaching a specific speed

2 Tape speed accuracy: ±1 %

3 Rewinding time: Less than 70 seconds with C-60 cassette

4 Copying quality:

Frequency response: 50 to 10 kHz +3 dB/-3 dB

Signal-to-noise ratio: Better than 45 dB (WTD)

Distortion: Less than 3% (400 Hz reference level)

Crosstalk: Better than 35 dB (1 kHz)

Wow and flutter: 0.1% (WDT)

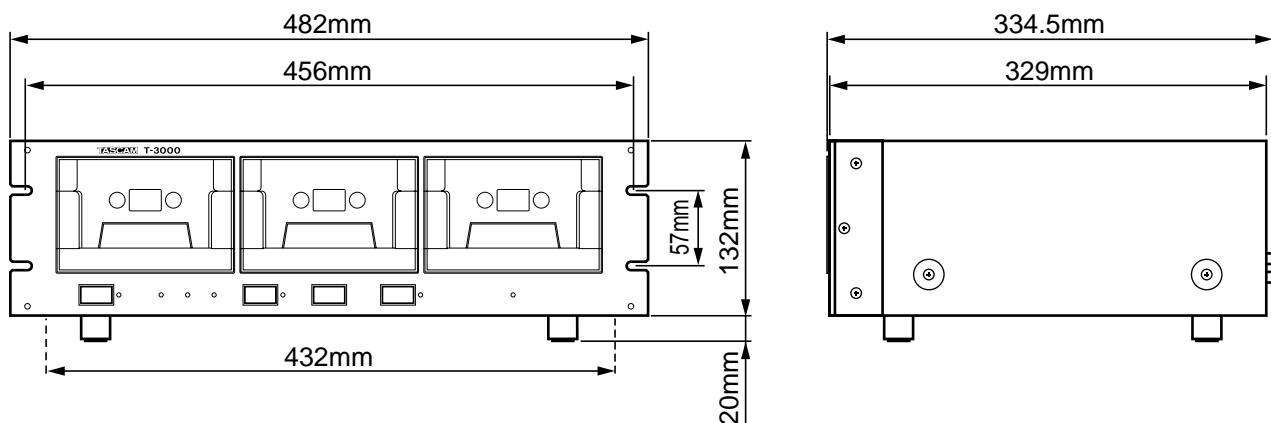
Others

1 Rack Mountable

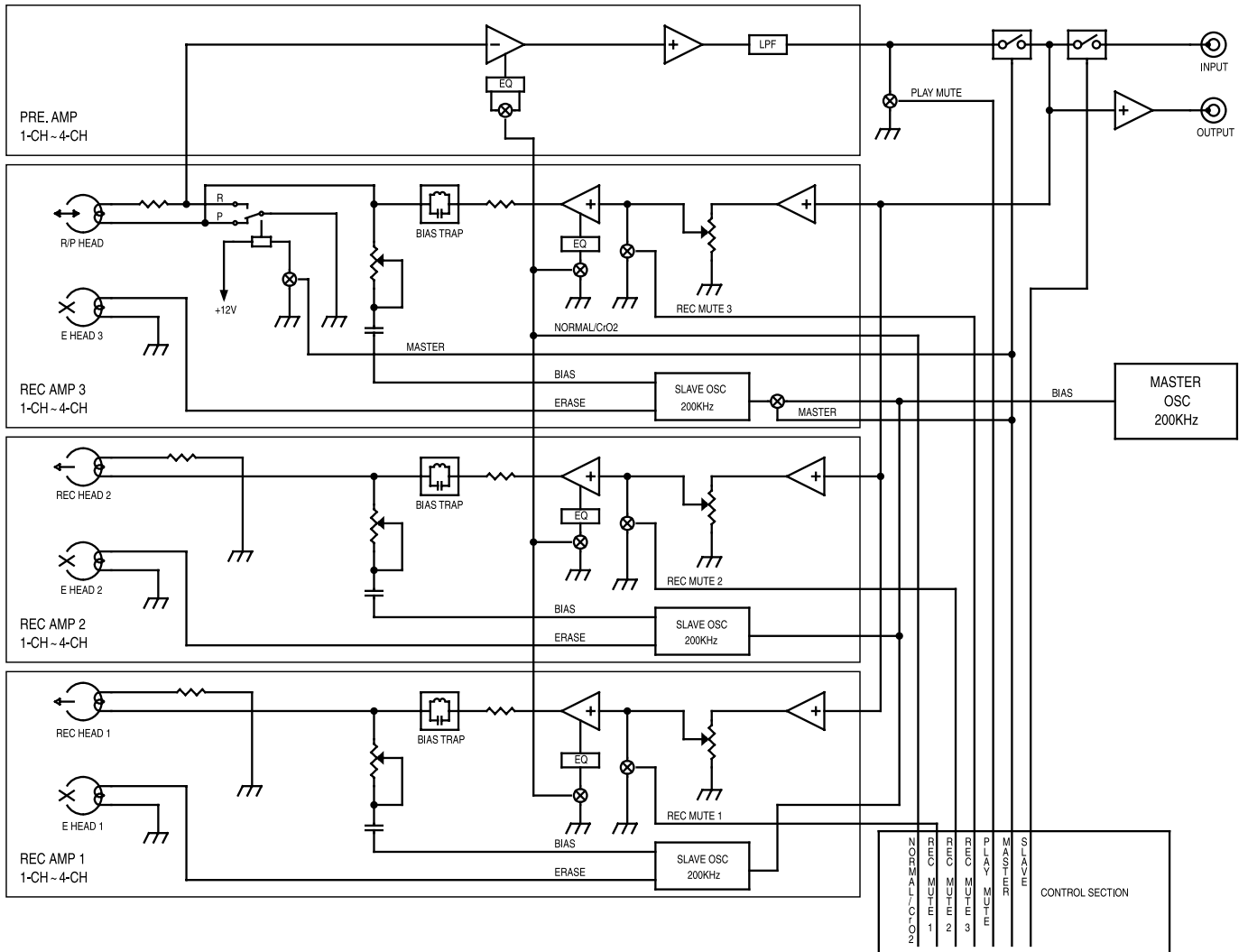
2 Connectable in Series: Up to 10 units

Specifications are subject to change without notice.

Dimensional Drawings



Block Diagram



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