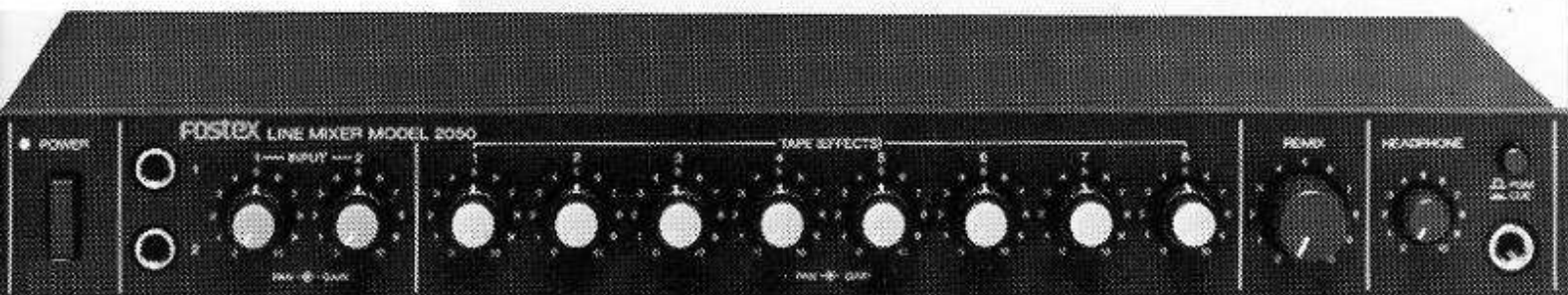


Model 2050

LINE MIXER

Owner's Manual

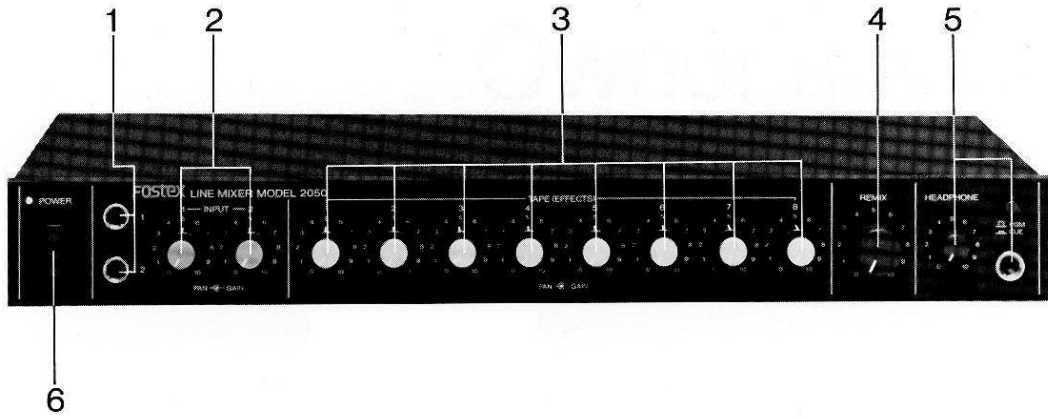


Fostex[®]

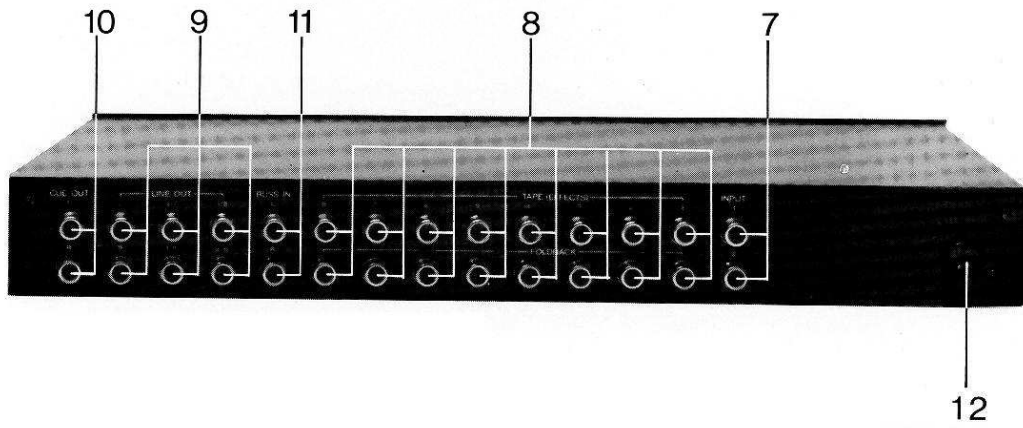
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WARNING: To avoid possible electric shock hazard, do not expose this appliance to rain or moisture. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.

FRONT PANEL



REAR PANEL



SECTION 1 THE CONTROLS AND THEIR FUNCTIONS

(1) Input jack (INPUT)

Two inputs each, of the standard type phone jack at the front panel, and RCA type phono jack at the rear panel, are provided. These jacks on the front and rear panels are wired to give priority to the front panel jacks which means that the rear jack circuit will be cut off if anything is plugged in the front jack.

(2) Input gain and pan pot (INPUT)

A dual concentric knob for input signal gain control and panning between two channels.

The outer knob is the pan pot and the inner knob for gain control.

(3) Tape in gain and pan pot (TAPE/EFFECT)

This has the same functions as the dual concentric input knob.

The rear panel TAPE IN signal is gain and pan controlled and applied to the cue out mixing circuit. These eight dual concentric knobs not only gain and pan control outputs from the recorder but can also be used to mix the effector outputs (such as from echo and reverberation units) to the output buss line.

(4) Remix pot (REMIX)

The mixed two channels of TAPE IN can be mixed via the REMIX pot into the output buss connected to the recorder.

This pot is used to mix the effector output into the output buss at original recording, or transfer of the mixed signal to another track without re-patching at ping-pong recording.

CAUTION: With the mixer output to the recorder input, the recorder output to the mixer tape in, and the recorder output is the record input monitor signal, then when the REMIX pot is rotated clockwise, the record input monitor is returned to the output buss, resulting in oscillation between the mixer and recorder.

In general, since the recorder output is switched to the record input monitor when a multi-track recorder is put in the record mode, you must be fully aware of these signal routes to prevent oscillation at record punch in/out operation.

(5) Headphone pot, switch and jack (HEADPHONE)

The headphone output can be switched to monitor either the output to the recorder or the cue output. Maximum output is about 100mW.

- (6) Power switch (POWER)
The LED at the upper left corner near the switch will light when this switch is depressed.
- (7) Input jack (INPUT)
Refer to Item (1).
- (8) Tape in jack (TAPE IN/FOLDBACK)
This jack is for receiving the recorder output. Nominal level is -10dBV (0.3V).
Depending on method of use, this jack can also be used to receive signals from an echo unit, reverberation unit, etc.
- (9) Output jack (OUTPUT)
Outputs A, C, LEFT; and B, D, RIGHT, respectively, are of the same signals. At connecting this mixer to the Model A-8 eight track recorder, connect its four inputs, for example, CHAN A, CHAN C, CHAN B and CHAN D, respectively, to the recorder CHAN 1, CHAN 3, CHAN 2 and CHAN 4.
Another suggestion would be to connect CHAN LEFT and CHAN RIGHT to the master recorder at mixdown.
- (10) Cue out jack (CUE OUT)
This can be used as a send jack to cue out or effector.
- (11) BUSS input jack (BUSS IN)
This jack is for system expanding. The level should be -10dBV and this signal is mixed with TAPE input.
- (12) Power cord (POWER)

SECTION 2 INTRODUCTION

FOSTEX Model 2050 is a line mixer designed to be used in companion with the Model A-8, 8 track 8 channel recorder/reproducer.

Against two line inputs to this line mixer, it has four outputs to the recorder, eight tape inputs for receiving outputs from the recorder, and also a stereo cue output and headphone output.

This is a very convenient mixer for the budding multi-track recordist when used between a music synthesizer and the recorder or as a straight mixer in the home studio.

This also has many applications such as a cue mixer or sub-mixer for effecters when used in combination with 8 or 16 input mixers.

In addition to standard type phone jacks on the front panel for inputs, RCA type phono jacks are also provided on the rear panel.

As a foldback output is provided in parallel with the tape input, this can be used as outputs for reverberation and echo units.

SECTION 3 **INSTALLATION**

Unpack the unit, and, before making any electrical connections, inspect for any evidence of possible shipping damage. Save all packing materials at least until you have verified that the unit is working properly. If there is any evidence of damage due to rough handling, consult your Fostex dealer before connecting or operating the unit.

Whatever the application, certain procedures should be followed for setting the mixer up for use.

The power cord of the mixer should be connected to an AC supply of the correct voltage.

While the outputs of the Model 2050 incorporate a circuit to prevent an audible power-on "thump", it is always advisable to turn the power on to amplifiers or tape recorders connected to the outputs of the mixer AFTER the mixer has been switched on.

CABLES

The Model 2050 has high impedance unbalanced inputs and outputs. It is recommended that all cables be kept to the shortest practical length, with a maximum of 10 feet (3 meters). Use only high quality cables with tightly braided shields, multiple-stranded center conductors, and low internal capacitance.

CONNECTING THE INPUTS.

The input circuits of the Model 2050 are such that they may accommodate -30dBV ~ +20dBV of input signals. You may connect virtually any signal such as that from a music synthesizer.

NOTE: Never connect any signal output rated in "Watts" to any input of the Model 2050. These are often high voltage signals ordinarily intended for loudspeakers. If you need to make such a connection, use a "Direct Injection" or "DI" box, or direct box obtainable from your dealer. Failure to do this may result in damage to the circuits of the Model 2050, and/or the power amplifier.

CONNECTING THE OUTPUTS.

All outputs are at a nominal -10dBV (0.3V) level. This signal level is compatible with all Fostex recording equipment and most other musician's studio equipment.

While you may find that certain recorders, amplifiers or signal processors are specified with a nominal "0dBm" or "0dBV" level, these often have a front panel input control or pre-set which will readily accommodate this -10dBV level.

It is important to set the input level control on equipment connected to the mixer outputs, to an optimum setting to achieve the best minimum noise, and maximum overload performance.

SECTION 4 **MULTITRACK APPLICATIONS**

Multitrack recording is generally considered to be the process of recording a performance in sequence, building tracks one or more at a time, then reviewing, changing, and adding new ideas, until each part is idealized. A single performer can thus create an entity not possible in real time, or individuals in a group may perform as many (or few) "takes" as necessary without imposing on the others. When all tracks have been satisfactorily recorded, one can take whatever time is required to combine them into an artistic composite in the "mixdown" process. Even at this point, flexibilities are available to change the sound or character of the separate tracks by means of electronic effects. Further, a performer not available at the initial recording date may be included hours, days or weeks later. It is this processing that the commercial recording companies have come to rely on, both in terms of economics as well as artistic flexibility. The "personal multitrack" concept of Fostex has made this process available to the independent musician.

Typically, the procedure begins with a basic rhythm track which provides the "meter" for the sections to come. Unlike ordinary real-time recording in mono or stereo, relative balance of the instruments or ensemble is of no concern during the recording phase (unless they are combined on a given track). Rather, an emphasis is made in getting the maximum undistorted level on each track in the interest of maximizing signal-to-noise ratios. Final balance is achieved during mixdown or re-recording, and the end product is a conventional mono or stereo tape or cassette.

While specifically designed to work with the Fostex A-8, A-4 and A-2 recorders, the mixer will interface satisfactorily with most makes of recorders provided that levels are matched correctly.

CONNECTIONS FOR BASIC TRACK RECORDING/
OVERDUBBING

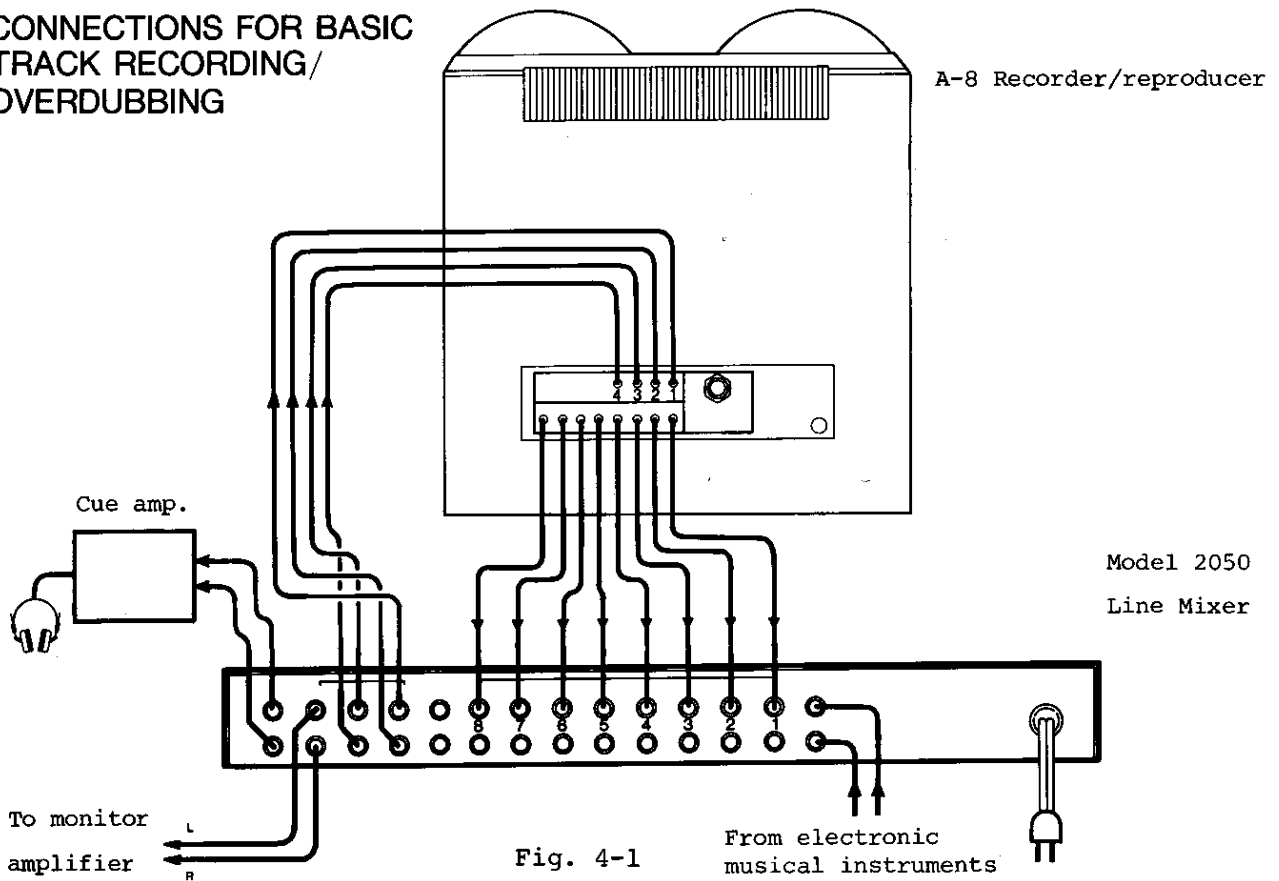


Fig. 4-1

CONNECTION FOR MIXDOWN

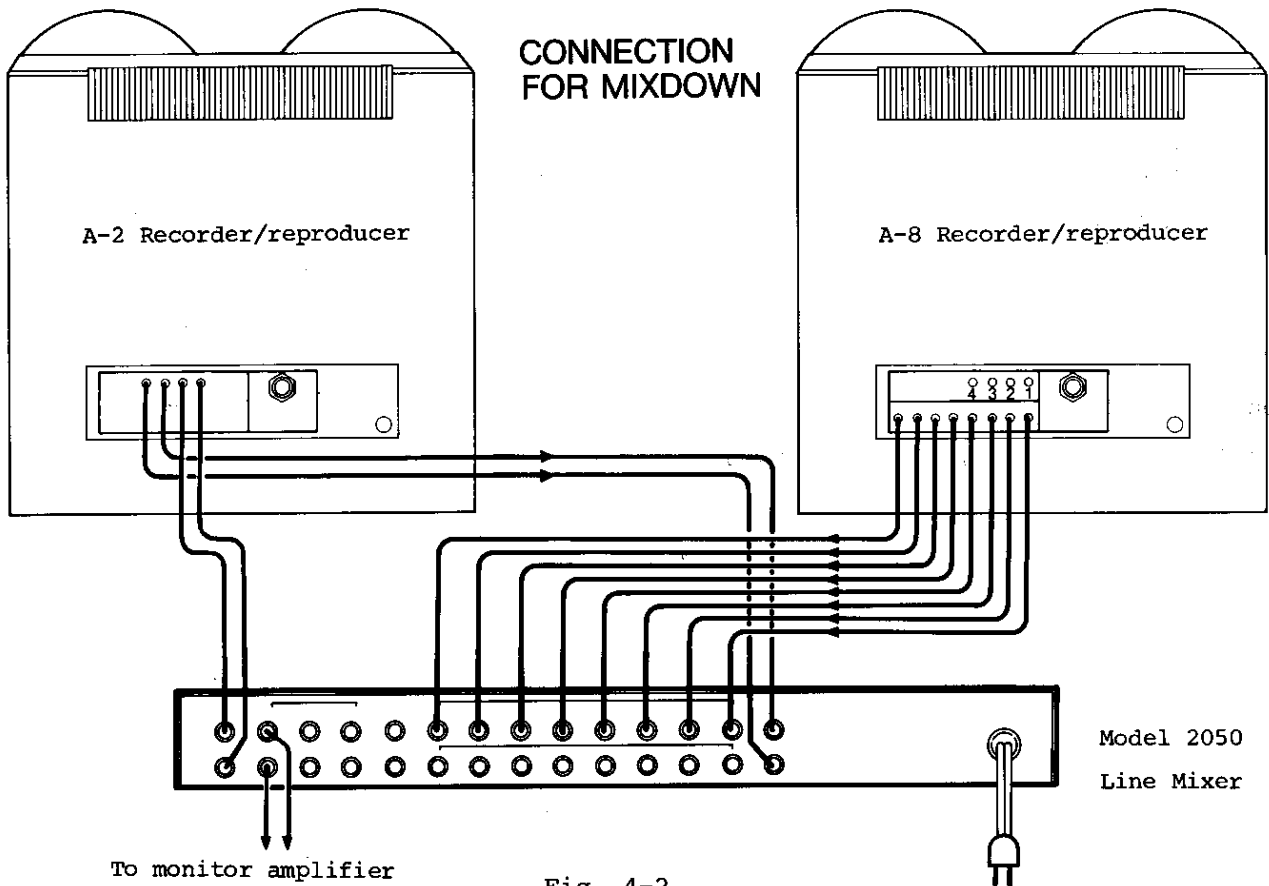


Fig. 4-2

RECORDING BASIC TRACK

First record the rythm section. Signals applied to the INPUT jacks of the Model 2050 are level set and panned by gain pot (2) and the PAN pot.

The PAN pot is set to either CCW or CW in accordance to the recorder input jacks.

During recording of the basic track, the REMIX knob is set fully CCW (min.).

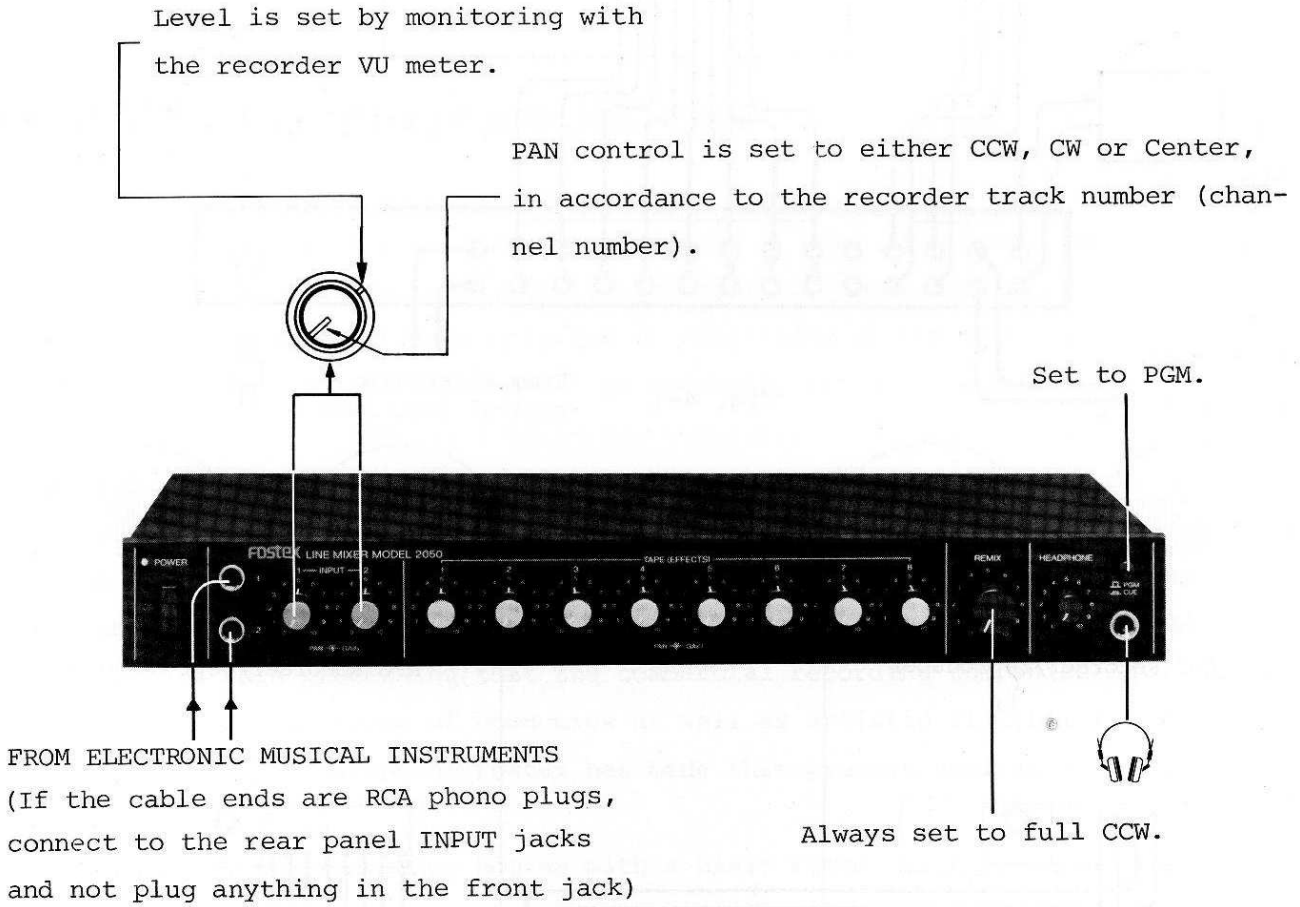


Fig. 4-3

OVERDUBBING AND MONITOR

Record the next section while monitoring the previously recorded rhythm section.

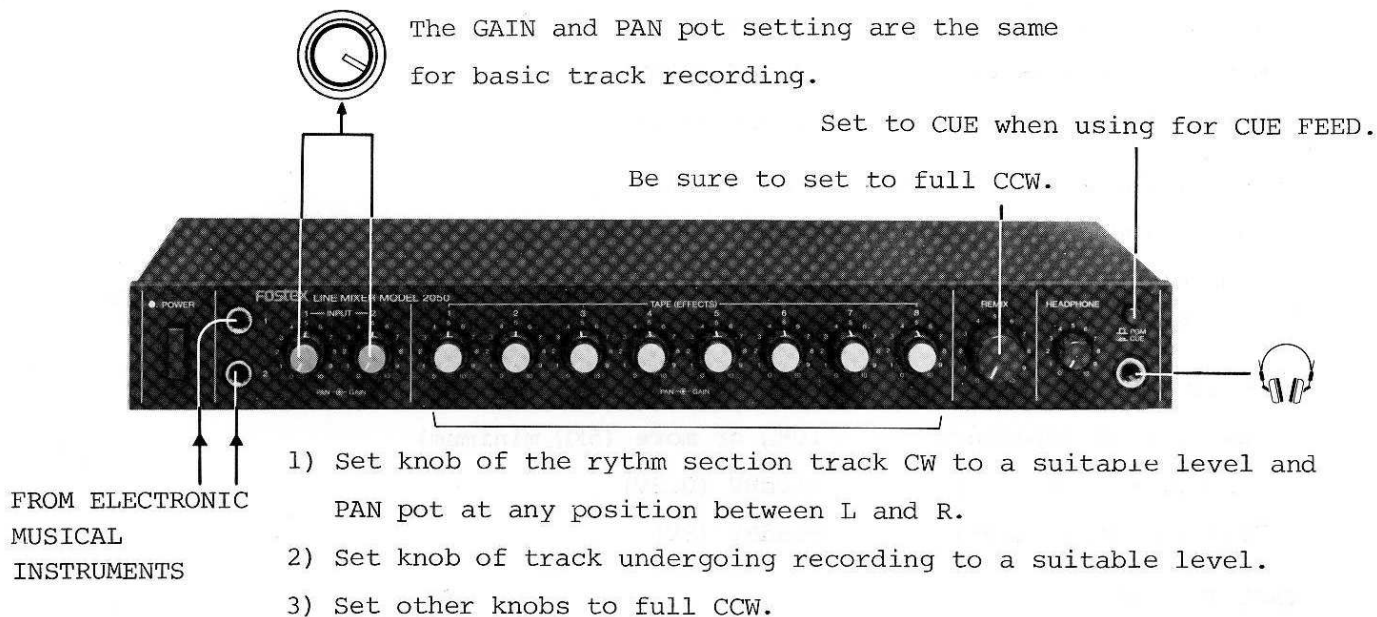


Fig. 4-4

MIXDOWN

After all tracks have been recorded, the next process is mixdown.

Re-connect for mixdown as shown in Fig. 4-2 from that for the basic track recording/overdubbing connections.

At CUE, signal applied to the master recorder can be monitored.

At PGM, tape out from the master recorder can be monitored.

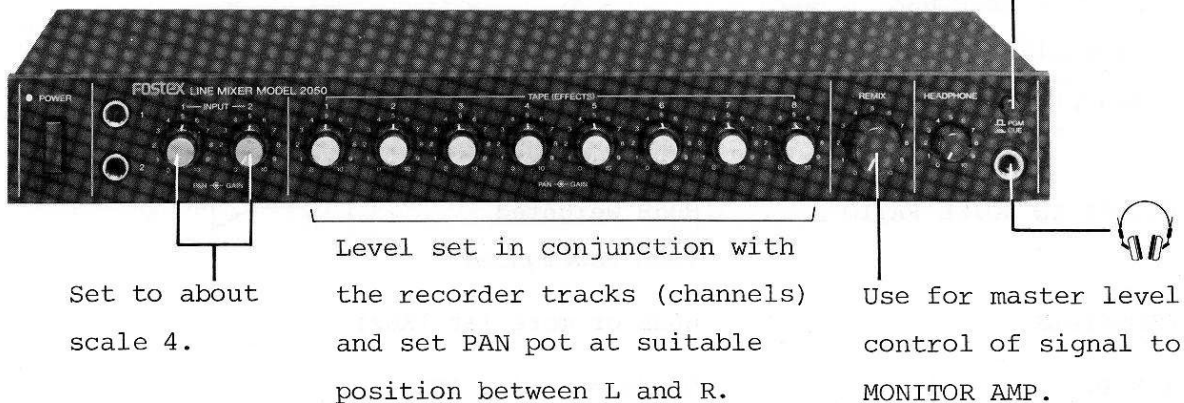


Fig. 4-5

SECTION 5 SPECIFICATIONS

INPUTS (X2)

Input impedance	40K Ω
Nominal input level	-10dBV (0.3V)
Minimum input level	-30dBV (30mV)
Maximum input level	+20dBV (10V)

OUTPUT (1/5, 2/6, 3/7, 4/8, LEFT & RIGHT)

Output load impedance	10K Ω or more (1K Ω minimum)
Nominal output level	-10dBV (0.3V)
Maximum output level	+18dBV (8V)

CUE OUT (Stereo)

Output load impedance	10K Ω or more (5K Ω minimum)
Nominal output level	-10dBV (0.3V)
Maximum output level	+18dBV (8V)

TAPE IN (X8)

Input impedance	40K Ω
Nominal input level	-10dBV (0.3V)
Minimum input level	-20dBV (0.1V)
Maximum input level	+20dBV (10V)

BUSS IN (Stereo)

Input impedance	20K Ω
Nominal input level	-10dBV (0.3V)
Maximum input level	+18dBV (8V)

HEADPHONE OUTPUT

Load impedance	8 Ω or more (4 Ω minimum)
Maximum output	100mW at 8 Ω

FREQUENCY RESPONSE

Overall - input to output	30Hz ~ 20KHz \pm 1dB
Headphone output	50Hz ~ 20KHz \pm 2dB
	40Hz ~ 20KHz \pm 3dB

SIGNAL TO NOISE RATIO

80dB weighted
78dB unweighted

CROSSTALK

60dB or more (at 1KHz)

T.H.D.

0.03% max. (at 1KHz)

POWER REQUIREMENTS

120V AC, 60Hz, 5W (U.S.A./Canadian model)
 220V AC, 50Hz, 5W (European models)
 240V AC, 50Hz, 5W (UK/Australian models)
 100/120/220/240V AC, 50/60Hz, 5W (General export models)

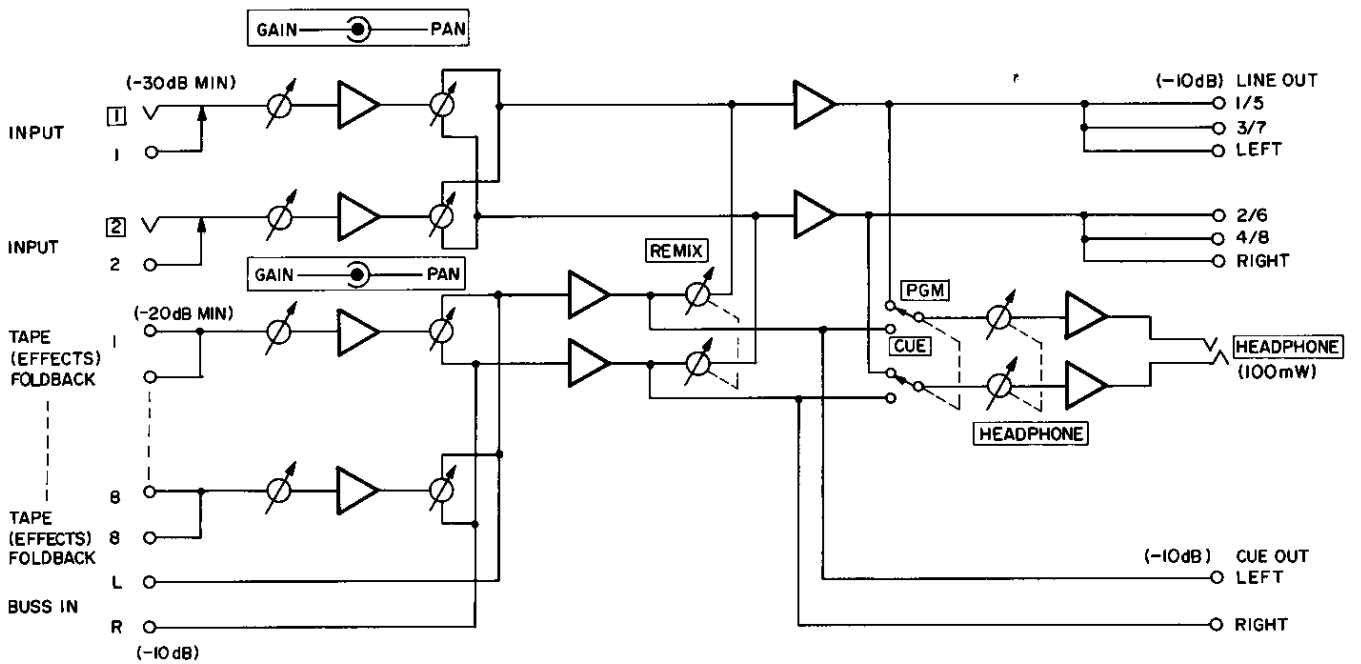
DIMENSIONS

14" (W) X 1-3/4" (H) X 6-1/2" (D)
 [360(W) X 44(H) X 165(D) mm]

WEIGHT

Net : 5-3/4 lbs. (2.5 kg.)
 Shipping: 6 lbs. (2.8 kg.)

SECTION 6 BLOCK DIAGRAM



Fostex

FOSTEX CORPORATION 512, MIYAZAWACHO, AKISHIMA, TOKYO, JAPAN

FOSTEX CORPORATION OF AMERICA 15431 BLACKBURN AVE., NORWALK, CA 90650, U.S.A.

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