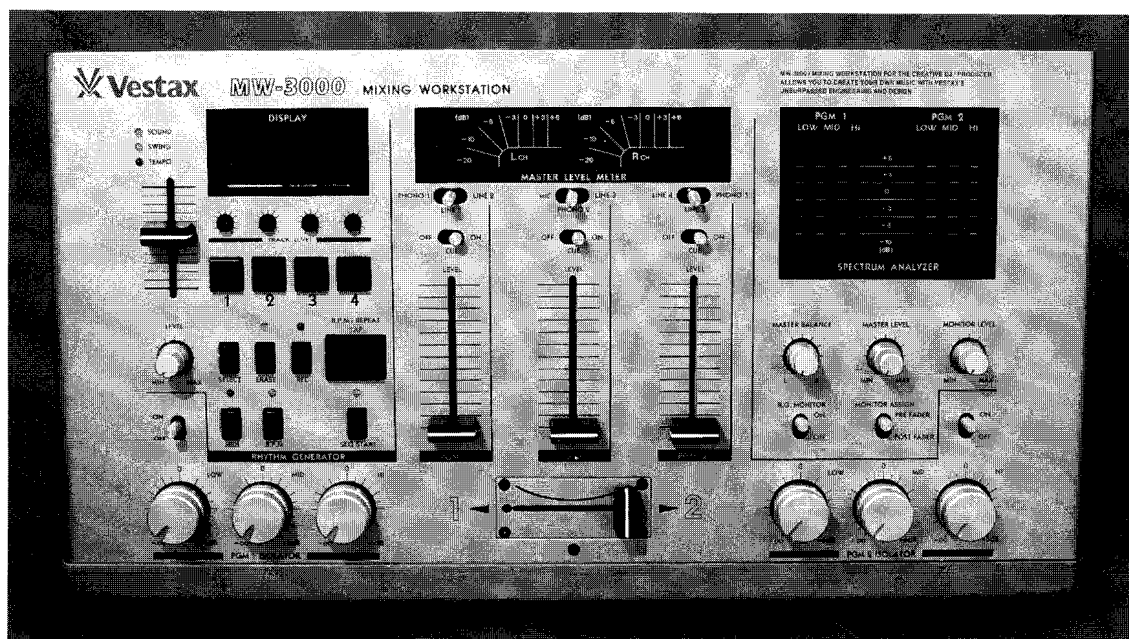




MIXING WORKSTATION

MW-3000

OWNER'S MANUAL



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CONGRATULATIONS!

Thank you for purchasing VESTAX MW-3000, Mixing Workstation. MW-3000 is the new style mixing controller with sequenced sound effects, frequency isolator and spectrum analyzers.

Please read this owner's manual carefully before you start to use your mixer, so that you will fully understand all of the special features and enjoy the full use of the product.

FEATURES

- The MW-3000 contains 20 kinds of sound effects. Four sound effects can be assigned to track pads. These effects can be played back manually by pressing track pad for sound effect performance. 20 of the sound effects are recorded in ROM (read only memory) chip. The ROM can be replaced for the other sound effects.
- The rhythm pattern can be created with sound effects by using built in sequencer. The rhythm pattern can be repeated to create rhythm track for creative mixing.
- The BPM (beat per minutes) of each song can be measured with built in BPM counter. The measured BPM can be output from MIDI out as the MIDI clock information. The external MIDI sequencer can be synchronized with mixing source with this advanced feature.
- Three band frequency isolators are provided on PGM 1 and PGM 2. The music source can be separated into 3 parts (hi, mid, low) of frequency range. The different songs can be mixed with their different frequency ranges (the bass and drum part of PGM 1 and melody part of PGM 2, etc.). The frequency isolator can be defeated with on-off switch for special effect technique.
- The three band spectrum analyzer is provided for each program inputs. Each frequency band can be monitored with bar graph LED meter.
- Each program can be monitored with cue switch. The monitor source can be selected from pre or post fader with monitor assign switch.
- 1 phono, 2 lines inputs are provided to each programs. 1 phono and 1 line inputs are provided to sub input channel for more mixing capability. The 60 m/m of long fader is provided for fine level mixing.

IMPORTANT

To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified personnel. Always disconnect all equipment from the main supply when disconnecting/reconnecting signal leads. The power cord should be connected last. Make sure that the power switch is off when connecting. Disconnect from AC supply when equipment is not used for extended time.

WARRANTY

Warranty might vary from country to country. Each distributor has their own warranty system in accordance with country or state regulations or laws. VESTAX observes the manufacturing country's regulations.

PRECAUTIONS

*Humidity and dust

Avoid use where there is high humidity and dust which may cause damage to internal parts.

*Temperature

Avoid use in hot, (over 35°C) and cold, (below 5 °C) locations. Keep the unit away from extreme direct heat such as direct sunlight, heating radiators, or closed vehicles.

*Power cord handling

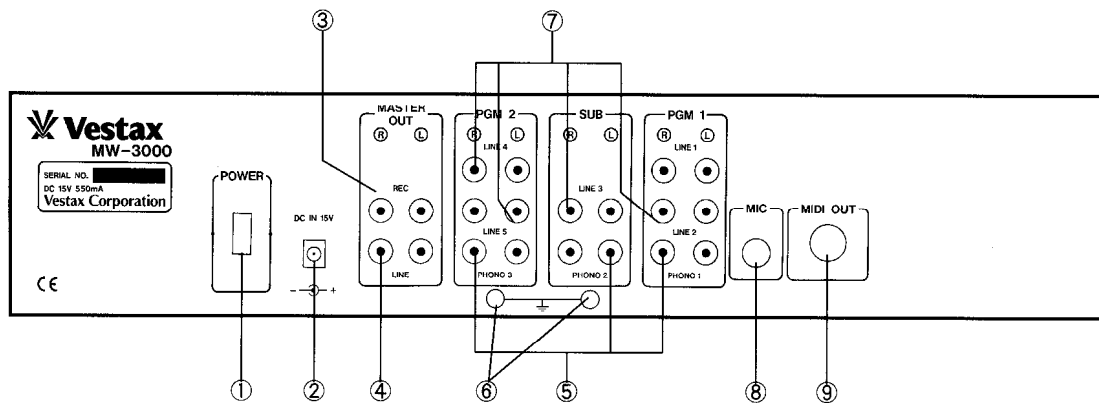
Connecting the power cord to other cords or joining cords together can cause fire and electric shock. This is extremely dangerous.

Take precaution when handling AC plugs and connectors. Handle only the plug or connector and do not perform these operations with wet hands.

*Keep away from liquids

Do not stand vessel containing liquids on or near the equipment. If liquid enters equipment, disconnect the power cord from the power outlet immediately.

CONTROL AND FUNCTIONS



REAR PANEL

1. POWER SWITCH

2. DC IN

Connect to the DC-15 AC adapter.

3. REC OUT

Output for recording. Connect with the input jack of the tape deck. Also use for sub output when you need the output beside main output. Pre-fader constant level output. MASTER LEVEL VOLUME does not effect level.

4. LINE OUT

Connect with the input of power amplifier.

<NOTE>

If your amplifier has a Phono Input Jack. Do not connect line out with Phono Input Jack, The Phono Inputs contains a phono amplifier which will create a distorted sound.

5. PHONO INPUT

Input Jack for PGM1, PGM2, SUBcH turntables. Connect turntables equipped with MM pickup cartridge only.

6. GND TERMINAL

Connect this terminal to ground lead of the turntable. This helps to reduce noise and hum.

7. LINE INPUT

Input connectors for line level equipment such as CD player, tape deck, DAT, MD etc..

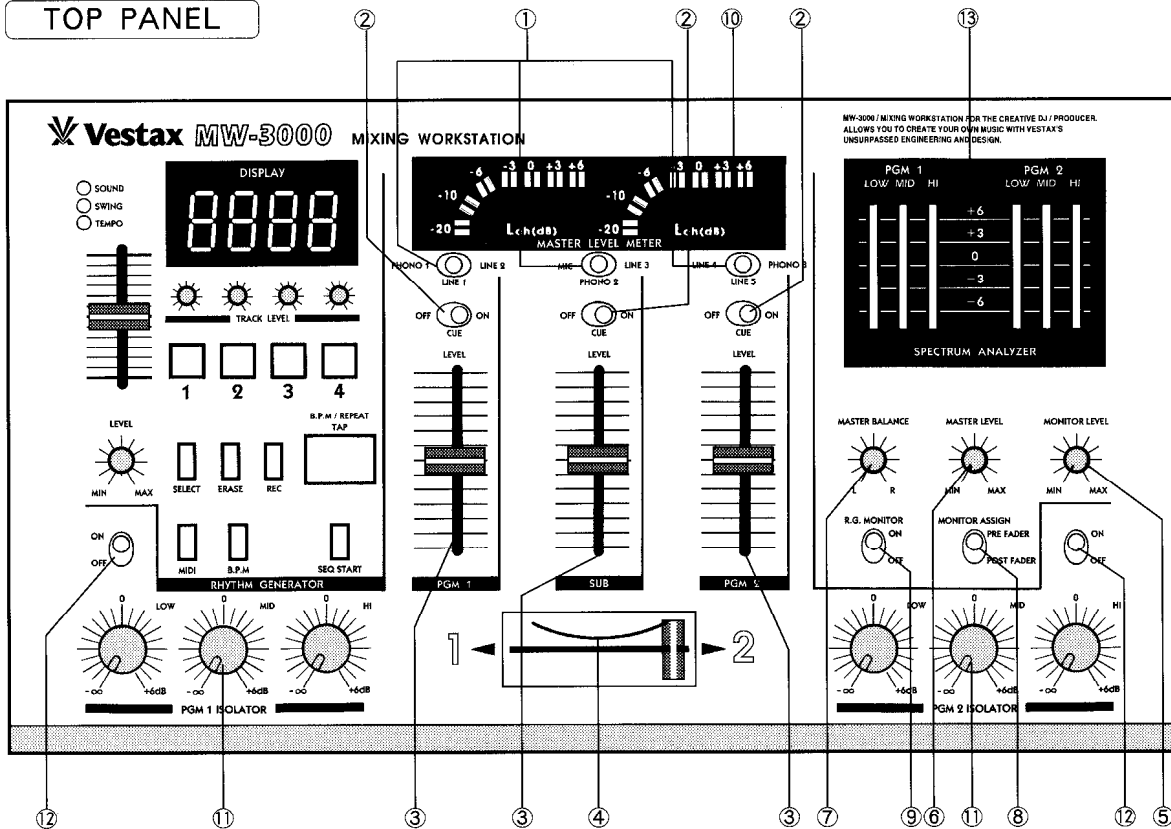
8. MIC INPUT

Input Jack of mic.

9. MIDI OUT

Output terminal of MIDI clock data. Connects with MIDI IN of sequencer, rhythm machine etc.

TOP PANEL



MIXER SECTION

1. INPUT SELECTOR

Used to select the input (two LINE or one PHONO) to be sent to each PGM channel.

2. CUE SELECTOR

Used to send the signal from each program to the monitor section for headphone monitoring. Monitoring input signals of each program with this switch on.

3. INPUT FADER

Used to adjust the input levels of each program. Most commonly set at level 8.

4. CROSSFADER

When the input level of PGM1 and PGM2 are properly set, PGM1 will be heard with the cross fader set to the left side, PGM2 will be heard with the cross fader set to the right side. When the cross fader is set in the center, both programs will be heard.

This is a detachable fader for ease of replacement with CF-R when it is worn out.

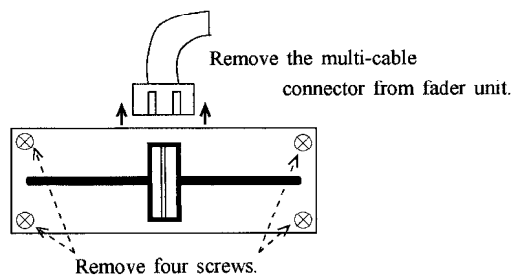
How to replace the fader:

- Remove a knob and four screws which hold the fader unit.
- Take the unit out.

- Carefully remove the multi-cable connector from fader unit.

- Insert the connector to the new fader unit.

- Replace the fader unit and fix it with screws.



5. HEADPHONE LEVEL

Adjusts the headphone output level.

6. MASTER LEVEL

Used to adjust the output levels from line out.

7. MASTER BALANCE VOLUME

Adjust balance between left and right channels.

8. MONITOR ASSIGN SWITCH

Monitoring input signals of each program selected by cue selector. Commonly used to select the monitor signal of prefader or the input signal of post fader.

9. RHYTHM GENERATOR MONITOR SWITCH (R.G. MONITOR SWITCH)

Used to send the signal from rhythm generator to monitor section for monitoring. Monitoring input signals of the RHYTHM GENERATOR will work only with the switch turn on.

10. MASTER LEVEL METER

The bar graph level meters indicate the peak and the left and right outputs.

11. 3 BAND ISOLETER

(1) HI VOLUME

Boost/cut of the treble range. Sound volume will go up when the knob is turned clockwise. When set to the position of 12"00, sound volume is just the same as BYPASS. Used to emphasize the sound of the cymbals or the high hats for example.

(2) MID VOLUME

Boost/cut of the middle range. Sound volume will go up when the knob is turned clockwise. When set to the position of 12"00, sound volume is just the same as BYPASS. Vocal and melody source can be by using this control.

(3) LOW VOLUME

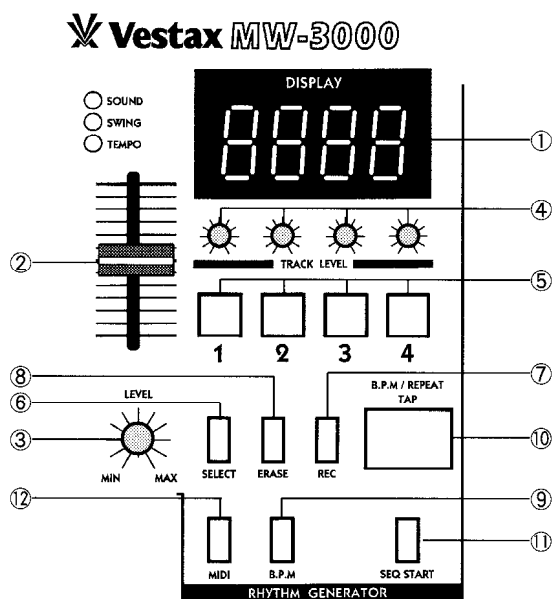
Boost/cut of the bass range. Sound volume will go up when the knob is turned clockwise. When set to the position of 12"00, sound volume is just the same as BYPASS. Used to emulate the effect of a capella.

12. 3 BAND ISOLETER ON/OFF SWITCH

The three band isolator will only work when the switch is turned on. Regardless of any position of each 3 volume levels.

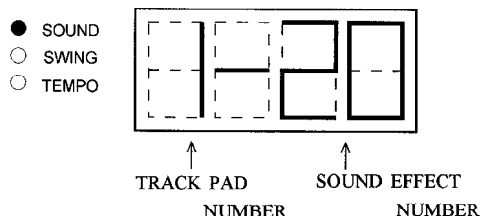
13. SPECTRUM ANALYZER

Divides the input signals of the PGM1, PGM2, PGM3 to 3 bands hi, mid, and low and the bar graph level meter indicates the peak of each band. Also as the spectrum analyzer chains 3 band isolation, 3 bands of level 2 discs can be adjusted slightly.



(2) SOUND MODE

This will indicate the track number to set and the sound number by the value volume.



(3) SWING MODE

This will display swing rate by percentage.

(4) B.P.M. MODE

This will indicate the input condition of B.P.M. count and the B.P.M. value to measure until the first decimal place.

2. VALUE VOLUME

Value volume has three functions for each mode.

(1) TEMPO MODE

The tempo of the RHYTHM GENERATOR is changed by moving this volume up or down. Moving value level down, tempo is faster. Moving value level up, tempo will slow down.

(2) SOUND MODE

Sound effect settings is selected by moving this volume up or down. Sound effect numbers change as number 1,2,3,.....20.

RHYTHM GENERATOR

1. DISPLAY

The display will indicates four of format so each mode.

(1) TEMPO MODE

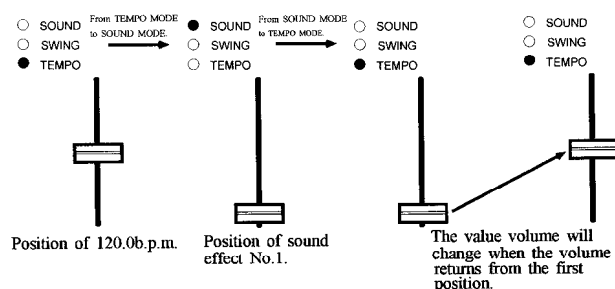
This display indicates the real time tempo of the sequencer by B.P.M. value.

(3) SWING MODE

Swing effect rate for sequence pattern is set for 0% to 100%. This can be adjusted by moving the volume up or down.

<NOTE>

The value volume has such functions which is not explained in the above details. For example with the TEMPO mode set at 120.0 B.P.M., then going to SOUND mode select, and selecting sound number 1, then returning to tempo mode, the value volume position is difference. To avoid this problem moving from mode to mode, changing value volume position and returning to the first mode, the value volume will change when the volume returns from the first position.



3.LEVEL VOLUME

Used to adjust the total RHYTHM GENERATOR level.

4.TRACK LEVEL VOLUME (Tracks 1 to 4)

Used to adjust the sound effect level of each tracks.

5.TRACK PAD (Tracks 1 to 4)

Set sound effect selected by selected value volume. After setting, push TRACK PAD, selected sound effects are out.

Manufacturing sequence pattern, as the TRACK PAD matches the sequence track, For example; Sound effect setting TRACK PAD-1 is set for SEQUENCE TRACK-1.

6.SELECT SWITCH

Used to select mode of value volume. When the power is turned on, the SELECT SWITCH is set at the tempo mode. Pushing the switch each time, the mode changes, SOUND mode , SWING mode, TEMPO mode.

7.REC SWITCH

When REC SWITCH is on, RHYTHM GENERATOR changes to REC mode, then recording the sequence pattern is possible.

8.ERASE SWITCH

You can erase the patterns by pressing the ERASE SWITCH while the MW-3000 is in REC mode. Erase function is used when the sequence patterns need to be erased.

9.B.P.M. SWITCH

B. P.M. mode is enabled by pressing this bottom. The B.P.M. of the music source can be counted. When B.P.M. switch is off, the mode will return to the sequence mode.

10.B.P.M./ REPEAT TAP

This TAP has two kind of function for each mode.

(1)B.P.M. MODE

Tap this five times of tempo of sound source to be counted. The B.P.M. is counted, the display indicates B.P.M. value.

(2)SEQUENCE MODE (while sequence pattern is playing)

Tap while sequence is playing, sequence pattern plays to return to top of one frame.

11.SEQ START SWITCH

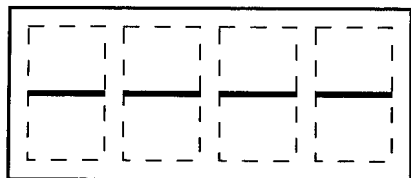
When SEQ START SWITCH is on, sequence pattern can be played. When SEQ START SWITCH is off, sequence pattern will not play.

12.MIDI SWITCH

With the MIDI SWITCH on, MIDI clock signal is out of the MIDI OUT terminal of rear panel. With MIDI SWITCH off, MIDI clock signal is not out.

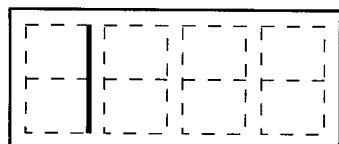
METHOD OF B.P.M. COUNT

1. Using RHYTHM GENERATOR as B.P.M. Counter, at condition with SEQ START SWITCH is off and REC SWITCH is off, set to B.P.M. mode with B.P.M SWITCH on.
2. Set to B.P.M. mode, the display the center bar as the fig.

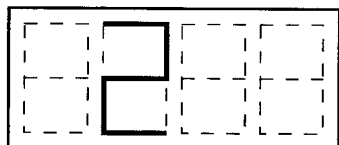


Indicating center bar

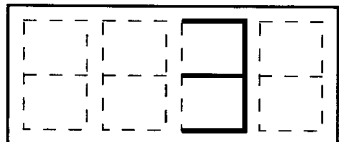
3. Tap the B.P.M./REPEAT TAP five times at the tempo of sound source to be counted. The display will indicate the fig. After tapping five times B.P.M. is calculated and indicated on the display.



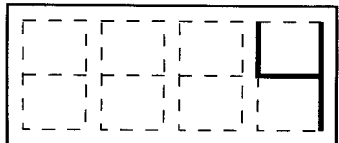
Entering first step of one frame



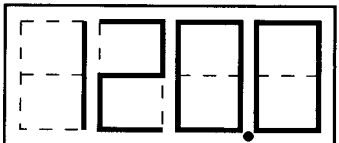
Entering second step of one frame



Entering third step of one frame



Entering forth step of one frame



Entering first step of next one frame

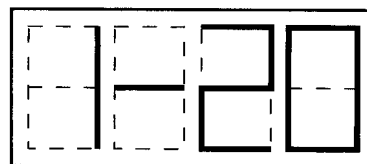
After tapping five times, B.P.M. is calculated and indicated on the display.

4. If value of B.P.M. is counted at less than 30 or more than 300 B.P.M., counter moves condition of waiting input, the display indicates centerbar.
5. Canceling B.P.M. mode, B.P.M SWITCH is off.

SETTING SOUND EFFECTS TO TRACK PAD

1. Set level volume of rhythm generator at minimum position.
2. Pressing R.G. MONITOR SWITCH, you can monitor the signals of the RHYTHM GENERATOR with headphones.
3. Pressing SELECT SWITCH will set the value volume to SOUND MODE.

- SOUND
- SWING
- TEMPO



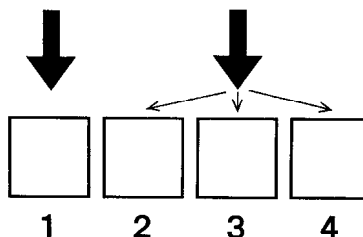
TRACK PAD
NUMBER

SOUND EFFECT
NUMBER

4. Pressing the TRACK PAD to set, previous settings sound effect or beginning set sound effect is out. By moving the value volume indicated on the display sound numbers and sound effects both change, therefore you can select your liking sound effect by pressing TRACK PAD.
5. To set a sound effect on the TRACK PAD, press the next setting TRACK PAD, the sound effect will set.

To set a sound effect
on the TRACK PAD-1.

Press the next setting TRACK PAD,
the sound effect will set.



RECORDING SEQUENCE PATTERN

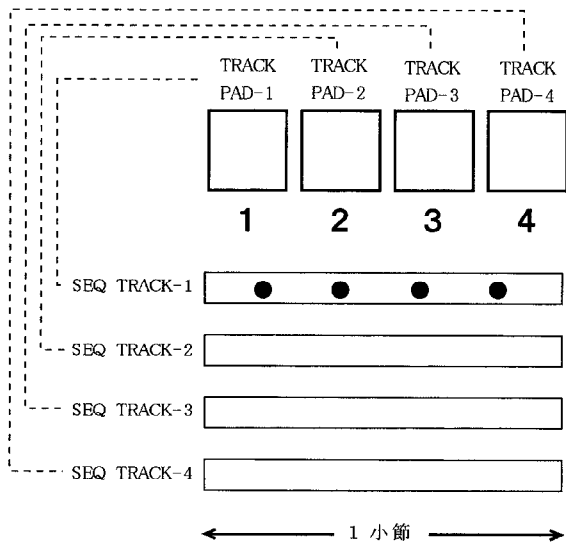
1. Make sure that the level of volume of the RHYTHM GENERATOR is at the minimum level.
2. By pressing the R.G. MONITOR SWITCH, you can monitor the RHYTHM GENERATOR with headphones.
3. By pressing the REC SWITCH, metronome will start at the tempo that is set. While listening to the tempo of the metronome, record the sound effect in the sequence track by tapping TRACK PAD-1 on like pattern.
4. To change the tempo of the metronome, tap B.P.M./REPEAT TAP five times to set your tempo. When the value of B.P.M. is counted, the tempo of the metronome is renewed at this time. The value volume will automatically change to the tempo mode. The display will indicate the value of the B.P.M.. Now that the B.P.M. is set automatically center position of value volume, so that it is possible to adjust the tempo at the range of $\pm 5\%$.



The B.P.M. is set automatically center position of value volume so that it is possible to adjust the tempo at the range of $\pm 5\%$

5. Select TRACK PAD so that the sound effect will record when sequence pattern is set. For example select TRACK PAD-1. After recording of one frame completed, the sound of TRACK PAD-1 is recorded into SEQ TRACK-1, the track will be replayed.

6. Using the same method, record each pattern from SEQ TRACK-2 and SEQ TRACK-4, the SEQ TRACK is played in recorded order.

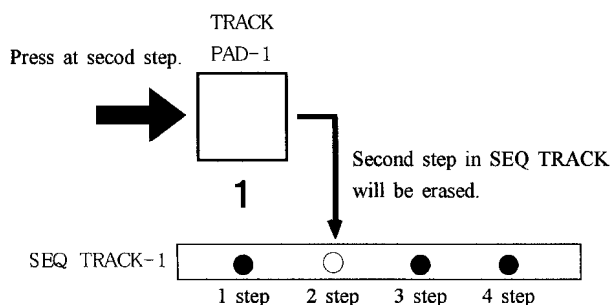


After recording of one frame completed, the recorded sequence track will be replayed.

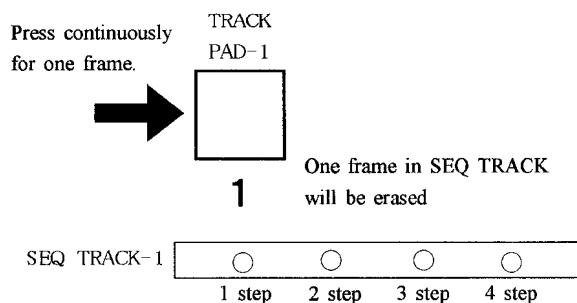
7. Turning off the REC SWITCH the sequenced pattern will finish.

ERASE SEQUENCE PATTERN

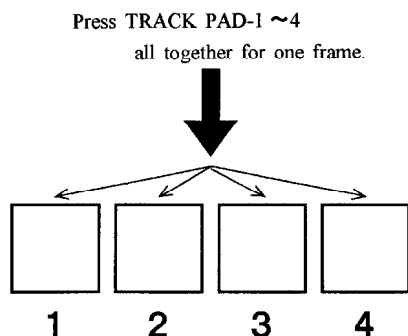
1. Make sure that the volume level of the RYTHM GENERATOR is low.
2. Pressing the R.G. MONITOR SWITCH, it will monitor the signal of the RHYTHM GENERATOR with headphones.
3. You can enter REC MODE by pressing the REC SWITCH. By pressing the ERASE SWITCH, you can enter the ERASE MODE.
4. To erase a sequenced track; Example to erase second step of one frame in SEQ TRACK-1, it will erase by pressing TRACK PAD-1 at second step.



5. To erase one frame in SEQ TRACK-1, press TRACK PAD-1 continuously for one frame.



6. To erase all sequenced track data in SEQ TRACK-1~4, press TRACK PAD-1~4 all together for one frame.



7. Turn off the ERASE SWITCH, the REC MODE is recovered to record the sequence pattern again.

<NOTE>

When erasing the sequence pattern, sound data in the sequenced track is not erased. And the sound data in the other setting is not erased.

REPLAY SEQUENCE PATTERN

1. Turning on the SEQ START SWITCH, the recorded sequence track is replayed.
2. Adjust the balance of the sequence tracks, you can do this by using TRACK LEVEL VOLUME above each TRACK PAD.
3. You can set the value volume in SWING MODE by pressing the SELECT SWITCH. Adjust the swing rate at the range of 1 to 100 %
4. To set the tempo of the sequencer to the tempo of the music source, press the SELECT SWITCH, set the value volume in TEMPO MODE, then set the B.P.M. by pressing the B.P.M. SWITCH. To count the value of B.P.M., tap the B.P.M./REPEAT TAP at the tempo of the sound source. After B.P.M. counts, the tempo of the sequence pattern is automatically set, it will be set at the range of $\pm 5\%$.

<NOTE>

In replaying the sequence track, B.P.M. /REPEAT TAP works as REPEAT TAP. But by setting B.P.M. MODE to change the tempo in replay, the B.P.M. /REPEAT TAP works as B.P.M. TAP. After counting B.P.M. and a changing the tempo, B.P.M. MODE is canceled and this works as REPEAT TAP.

5. To set the tempo of the sequence pattern with the music source. Mix the sequence pattern in the music source by raising the LEVEL VOLUME slowly.
6. Turn off the SEQ START SWITCH, replaying the sequence pattern will stop.

ONE SHOT PLAY

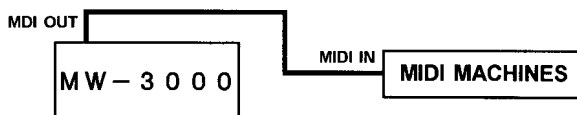
1. Turning off the SEQ START SWITCH will not replay the sequence pattern. You can mix the sound effect settings in the music source by tapping each TRACK PAD.
2. To mix sound effects in the sequence pattern, tap the TRACK PAD. For example; Record sequence patterns in SEQ TRACK-1 to 3 and do not record in SEQ TRACK-4. Then replay the pattern. SEQ TRACK-1 to 3 is replayed, therefore it is possible to mix the sequence pattern by tapping TRACK PAD-4.
3. Turn on the SEQ START SWITCH, tap each TRACK PAD while replaying SEQ pattern. Tapping the TRACK PAD at the same time, the sound effects of sequence track phones, both phones are piled up, track level is at the maximum level.

CHANGE SOUND EFFECT SETTING IN THE TRACK PAD

1. Press the SELECT SWITCH set the value volume to SOUND MODE. Then press TRACK PAD to change the set sound effect. Moving the value volume, the sound effect number of the display and sound effect is changed.
Now you can select the sound effect you want to change by tapping the TRACK PAD.
Pressing another TRACK PAD or changing other modes from SOUND MODE by pressing the SELECT SWITCH, the changed sound effect will set.
2. To change the sound effects of TRACK PAD in the replaying of the sequenced pattern, do the same as item 1, but the sound position data in the sequence track will not change, sound effect will only be changed, the sequence pattern will not change.

SYNCHRONIZE WITH OTHER MIDI MACHINES

1. Connect the MIDI cable to the MIDI IN of external device to the MIDI OUT of the MW-3000.



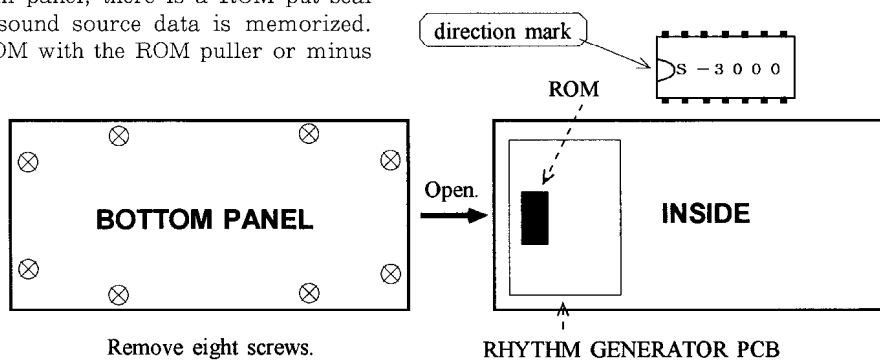
2. Turning on the MIDI SWITCH. MIDI clock information is out from the MIDI OUT JACK when SEQ START SWITCH is on.
3. Turning on the SEQ START SWITCH, units connected to the MW-3000 will function.
4. The external MIDI machines will synchronize to the tempo of MW-3000. And they will automatically adjust to the tempo of the value volume.
5. Turning off the MIDI SWITCH, the connected MIDI machines will not perform.

EXCHANGE SOUND SOURCE ROM

The MW-3000 has 20 kinds of sound effects, it is possible to exchange separate sound sources to ROM.

HOW TO EXCHANGE TO ROM

- Turn power off .
- Remove 8 screw which hold the bottom panel.
- Open the bottom panel, there is a ROM put seal "S-3000". The sound source data is memorized. Pull out the ROM with the ROM puller or minus driver.



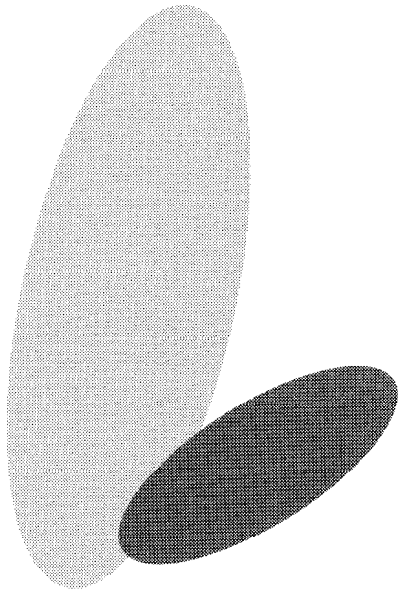
<NOTE>

Make sure you confirm the direction of the ROM before installing, you can damage the ROM by bending the pins.

- Return the bottom panel and put the screws in place.

SPECIFICATIONS

Nominal Input Level/Impedance	
PHONO	-42dBV/470k Ω
LINE	-10dBV/47k Ω
MIC	-46dB/3.3k Ω
Nominal Output Level/Impedance	
LINE OUT	-4dB/10k Ω
REC OUT	-10dB/10k Ω
Frequency Response	20Hz~20kHz (+0,-3dB)
S/N Ratio	\geq -70dB
Dimensions(W×H×D)	W437×H76×D220



Vestax Corporation

MAY. 1996 MW-3000E V1