



professional mixing controller

PMC-580 Pro

OWNER'S MANUAL

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CONGRATULATIONS !

Thank you for purchasing Vestax's PMC-580Pro professional mixing controller. We suggest that you read through this owner's manual thoroughly to enjoy this product safely and in knowledge of all its special features and suitable applications.

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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.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFEGUARDS

READ BEFORE OPERATING EQUIPMENT

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. **Read instructions**-All the safety and operating instructions should be read before the appliance is operated.
2. **Retain instructions**-The safety and operating instructions should be retained for future reference.
3. **Heed Warnings**-All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions**-All operating and use instructions should be followed.
5. **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, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9. This product should never be placed near or over a radiator or heat register. 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.
10. **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 appliance dealer or local power company.
11. **Lightning**-For added protection of 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. This will prevent damage to the product due to lightning and power-line surges.
12. **Overloading**-Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
13. **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.
14. **Servicing**-Do not attempt to service product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
15. **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 cabinet has been damaged.
 - f. When the product exhibits a distinct change in performance this indicates need for service.
16. **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 parts. Unauthorized substitutions may result in fire, electric shock or other hazards.
17. **Safety Check**-Upon completion of any service or repairs to product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
18. **Carts and Stands**-The appliance should be used only with a cart stand that is recommended by manufacturer.
19. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



PMC-580

A scion of the PMC-50, the 24bit full digital mixer of the next generation is now here. A multi effector and LOOP control individually equipped on each program channel along with an effect unit for the MASTER and MIC channel section. The significant layout of the buttons and knobs of the PMC-580Pro enable DJs to control 6 different effects and different parameters all at once. The PMC-580Pro also comes with USB connection, SPDIF digital IO, a new AD/DA analog circuit and 2 band EQ for monitor/booth output as an answer to the demands of NEXT STYLE DJs in the scene.

FEATURES

●6 program multi effecters to garnish the mix and DJ performance. Each program channel has a 6 effect multi effector with simple controllability, in addition to effects equipped in the MIC and MASTER section. A maximum of 6 different effects can be applied to the sound at the same time, powered by 5 DSP's (Digital Signal Processor) and 3 CPU's, the core parts which make such features possible to be performed.

<MIC EFFECTER / 3 EFFECTS>

- Pitch Shift
- Distortion
- MIC Echo

<PGM CH EFFECTER / 6 EFFECTS>

- LOOP
- DELAY
- LOW CUT DELAY
- REVERB
- FLANGER
- FILTER SWEEP

<MASTER EFFECTER / 11 EFFECTS>

- AUTO LPF (Low Pass Filter)
- AUTO BPF (Band Pass Filter)
- AUTO HPF (High Pass Filter)
- FLANGER
- PHASER
- DELAY
- REVERB
- AUTO PAN
- PITCH SHIFT
- TREMOLO
- PANNING DELAY

●Intuitive effect operation

-The PMC-580Pro's effects can be operated with 2 different effect switch modes.

<MOMENTARY MODE>

Useful for when you want instant effects on short phrases. The effect will be applied to the sound only while the effect button is pushed.

<ALTERNATE MODE>

-Useful for when you want to apply effects in to a long mix. The effect will be applied to the sound once the effect button is pushed, and will continue to be until the effect button is pushed again.

*Some effects apply to the sound differently regarding the selected effect switch mode.

●High quality design for supreme CLUB sound

-The PMC-580Pro is loaded with 5 high spec DSP chips. 3 to process effects and 2 for mixing sound signals.

-The Enhanced Dual Bit method, a high performance chip technology of ASAHIKASEI is applied to the AD/DA section of the PMC-580Pro, where sound signals are converted between digital and analog. (48 kHz/ 24bit)

-The PMC-580Pro is generated by a high capacity institutional power adaptor, which gains the heavy low groove required for supreme CLUB sound. The internal power supply which produces the sound signal circuit runs on +/-18V. With the two combined, +/-24dB of headroom is produced (analog output), creating dynamic sound.

-HI GAIN TRIM control circuit is a new feature designed to bridge the gap between digital media, MP3s and CD source sound levels.

-EQ / ISOLATOR select switch

-An EQ/ISOLATOR select switch is located on each program channel to enable DJs to select their preference sound adjustment method in regards of the music they play.

-BEAT KEY is a feature which operates simultaneously with the auto BOOM counter and TAP BPM counter.

-BEAT KEY will control the effects BPM along with the detected BPM of the playing track, selected from: 8, 4, 2, 1, 3/4, 2/3, 1/2, 1/4 and 1/8.

●INPUT/OUTPUT

-The two 44.1k, 48kHz sampling rate digital inputs enable digital connection and provide a sound system with no sound deterioration.

-Digital music files can be played from computers and tracks can be recorded to computers via USB input/output, a standard feature for digital mixers. (The USB circuitry of the PMC-580Pro utilizes the driver device within the operating system of the computer and does not require any specific driver to be installed)

●OPERATION

-Smooth 60mm input faders for high precision mixing.

-The reliable Vestax CF-PCV is applied as the cross fader together with fader curve control, suitable for mixing and scratching.

-The top panel layout is designed considering the DJ to play intuitively without mixing up the effect section and sound control section during club performance.

-Large effect knobs for dynamic effect control.

-Input faders and the cross fader can be easily replaced by detaching the section top panel.

●OPTION

-The DX panel, an option item to increase inputs and outputs can be installed to the front panel for DJs who wish to use DJ software with the PMC-580Pro.

●CLUB DJ FEATURES

-2 Band EQ, STEREO / MONO, select switch and CUE / MASTER select on BOOTH OUT and headphones to support the DJ when they're in the mix.

-The MIC section comes with a 2 Band EQ and TALKOVER switch for advanced mic performance.

-Club standard XLR connection applied to MASTER // BOOTH OUT.

PGM SECTION



P-① INPUT SELECT SWITCH

Selects the PGM channels input source. (Phono / Line)

P-② GAIN VOLUME

Adjusts the PGM channels input level.

P-③ BALANCE VOLUME

Adjusts the PGM channels L/R balance.

P-④ EQ SELECT SWITCH

Selects the PGM channels sound quality adjust control from EQ, OFF and ISOLATOR.

P-⑤ EQ HI

P-⑥ EQ MID

P-⑦ EQ LOW

P-⑧ PGM LEVEL METER

Displays the PGM channels sound level

P-⑨ EFFECT SW TYPE

Selects the PGM channel effects switch mode. (Alternate / Momentary)

P-⑩ EFFECT PARAMETER

P-⑪ PGM EFFECT BUTTON

P-⑫ EFFECT LEVEL

(PGM Effect Function & operation ⇒ Page11)

P-⑬ MONITOR CUE BUTTON

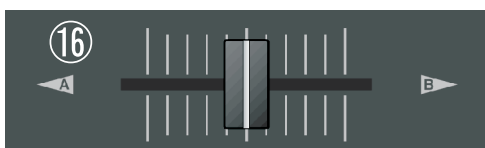
Selects the PGM channels sound to be monitored.
(Monitors the post PGM effector, pre Input Fader sound)

P-⑭ CF ASSIGN SWITCH

Assigns the PGM channels sound to A, master and B of the crossfader.

P-⑮ INPUT FADER VOLUME

Adjusts the PGM channels sound level.



P-⑯ CROSS FADER VOLUME

Mixes the sound signals assigned to the A and B side of the crossfader.

MIC / BOOTH / MONITOR SECTION



M-① MIC INPUT JACK

Input connection for microphones. XLR plugs (balanced) and 1/4inch phono plugs can be connected to the combo jack.

M-② MIC TRIM VOLUME

Adjusts the microphones input level.

M-③ MIC EQ HI

M-④ MIC EQ LOW

M-⑤ TALK OVER SWITCH

This switch lowers all PGM channels sound level in order to clearly output the mic sound.

M-⑥ MIC EFFECT SELECT SWITCH

Selects the type of effect you wish to apply to the mic sound.

M-⑦ MIC EFFECT VOLUME

Adjusts the parameters of the mic effect.
(Mic effect control ⇒ Page 16)

M-⑧ MIC LEVEL VOLUME

Adjusts the microphones sound level.

M-⑨ MIC PEAK INDICATOR

This LED blinks when the microphones sound level is too high.

B-⑩ BOOTH SELECT SWITCH

Selects the BOOTH OUT output sound. (CUE / MASTER)

B-⑪ BOOTH (MONO / STEREO) SELECT SWITCH

Selects BOOTH output from MONO and STEREO.

B-⑫ BOOTH EQ HI

B-⑬ BOOTH EQ LOW

B-⑭ BOOTH OUT LEVEL VOLUME

Adjusts the output sound level sent to BOOTH OUT.

Mo-⑮ MONITOR EQ HI

Mo-⑯ MONITOR EQ LOW

Mo-⑰ MONITOR SELECT VOLUME

Selects the sound you wish to monitor via headphones. (CUE / MASTER)

Mo-⑱ MONITOR VOLUME

Adjusts the output sound level sent to the headphones.

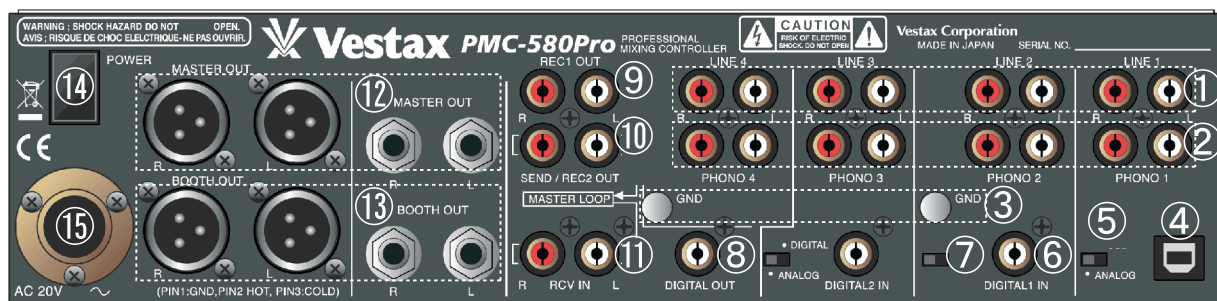
Mo-⑲ MONITOR (MONO / STEREO) SELECT SWITCH

Selects headphone output from MONO and STEREO.

Mo-⑳ MONITOR OUTPUT JACK

Connection for headphones.

REAR PANEL SECTION



R-① LINE INPUT JACK

LINE Input connection for each PGM channel. Connect devices such as CD players, MD Players, DAT, VTR Sound cables, MP3 Players and Audio interfaces.

R-② PHONO INPUT JACK

Phono input connection for each PGM channel. Connect turntables with MM cartridges.

NOTE: Amplifiers and Transformers are required if using MC cartridges.

R-③ GND TERMINAL

Connect the turntables ground cable to this terminal.

R-④ USB IN/OUT JACK

USB connection enables input sound data from computers and output the mixer's master output.

NOTE: No driver installment is required for connection with computers via USB. The computers OS will automatically run USB AUDIO DEVICE when the mixer is connected.

R-⑤ USB / ANALOG SELECT SWITCH

Selects the input source of PGM1 between analog input and USB digital input.

NOTE: GAIN control of PGM1 will be cancelled when USB is selected.

R-⑥ DIGITAL INPUT JACK

Digital input connection for PGM 2 and PGM 3. Connect devices with digital connection such as CD players.

R-⑦ DIGITAL IN / ANALOG SELECT SWITCH

Selects the input source of PGM 2 and 3 between analog input and digital input

NOTE: GAIN control of PGM 2 will be cancelled when digital is selected

R-⑧ DIGITAL OUT JACK

Digital output connection. (Outputs REC out digital signals)

R-⑨ REC1 OUTPUT JACK

Outputs REC sound signals. (REC sound is PRE Master and PRE BOOTH volume)

R-⑩ SEND / REC2 OUTPUT JACK

Output connection for AUX send. Connect to the input of devices such as external effecters. This output sends out the same signal as REC1.

R-⑪ RCV INPUT JACK

Input connection for AUX receive. Connect to the output of devices such as external effecters.

R-⑫ MASTER OUTPUT

Output connection for MASTER. Connect to devices such as amplifiers. 1/4inch phono jacks are unbalanced and XLR jacks are balanced. (HOT 2pin)

R-⑬ BOOTH OUTPUT

Output connection for BOOTH OUT. Connect to devices such as amplifiers. 1/4inch phono jacks are unbalanced and XLR jacks are balanced. (HOT 2pin)

R-⑭ POWER SWITCH

This switch turns the power off the mixer ON.

NOTE: Please make sure that all devices connected to the mixer are turned OFF or have the volume turned down when operating this switch.

R-⑮ AC ADAPTOR INPUT JACK

Connect the VESTAX AC-20 power adaptor included with the mixer. DO NOT use any other power adaptor for it may cause damage. Any damage caused by using a different power adaptor will not be warranted.

FRONT PANEL SECTION



F-**16** MONITOR OUTPUT JACK
Connection for headphones.

F-**17** C.F. CURVE VOLUME
Adjusts the curve characteristic of the
crossfader.
MIN ⇒ Mix curve
MAX ⇒ Scratch curve

F-**18** I.F. CURVE VOLUME
Adjusts the curve characteristic of the Input
fader.

F-**19** OPTION SLOT

PGM EFFECT FUNCTION & OPERATION

PGM EFFECT FUNCTIONS & OPERATION

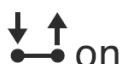
Effect Switch Type Select

The effect switches on each PGM channel can be operated in 2 ways.



ALTERNATE MODE

The effect will be turned ON once the effect button is pushed and will be turned OFF by pushing the button again. This mode is suitable for when you wish to apply the effect to long mixes.



MOMENTARY MODE

The effect will be turned ON only while the effect button is pushed. This mode is suitable for when you wish to apply the effect to a short phrase/mix.

* Operation for each effect in the modes above are different

PGM EFFECT FUNCTION

Each PGM channel of the PMC-580 has an individual effect unit with 6 effects. Each channel can set a different effect at the same time. (Ex. PGM1→ delay, PGM2→ loop, PGM3→ flanger, PGM4→ reverb)

Each effect can be adjusted with the following knobs.

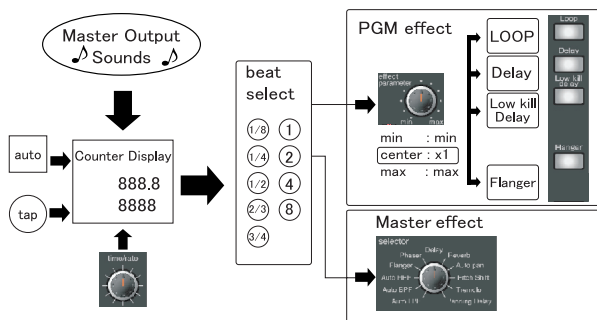
Effect parameter: Adjusts the parameter level of the selected effect.

Effect level: Adjusts the mix level between the effect sound and bypass sound.

* Functions of each knob change for each effect

BPM SYNC FUNCTION

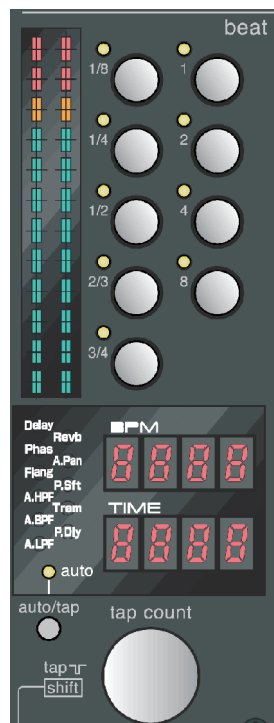
Each effects time and cycle can be synchronized with the beat of the AUTO BPM / TAP BPM counter located on the right of the mixer.



The BPM of the output sound is counted with the TAP button or with the internal auto BPM counter. (Can be adjusted with the master effect time control)

The counted BPM is used to set the effect BPM, located above the BPM display. The time/cycle of each PGM and MASTER effect will be in sync with the set effect BPM.

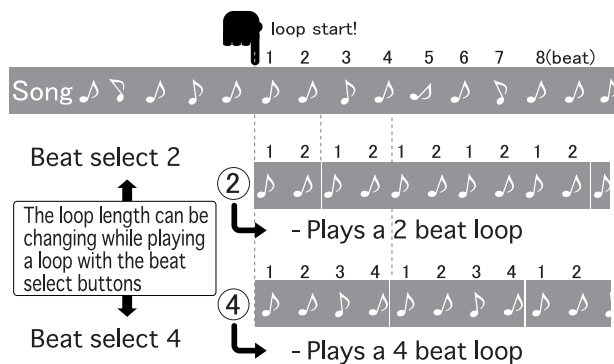
* Refer to each effects function guide for operational details



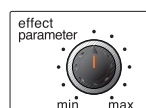
PGM EFFECT FUNCTION & OPERATION

LOOP

The length of the loop is selected with the Beat select buttons and played to the automatically/ manually set BPM. Maximum length of a single loop is 5,400ms.

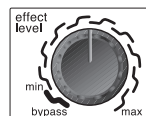


(effect parameter)



Adjusts the loop length(beat) set with the beat select button between $\times 1/8 \sim \times 8$. The center point value is times 1 of the selected beat select button.

(effect level)

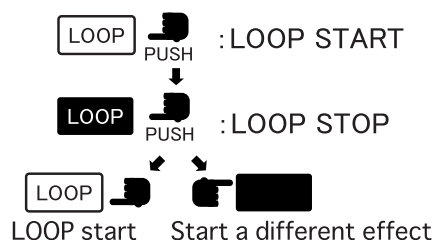


Adjusts the mix level of the LOOP sound and DRY sound.

sw type
↑↓

LOOP

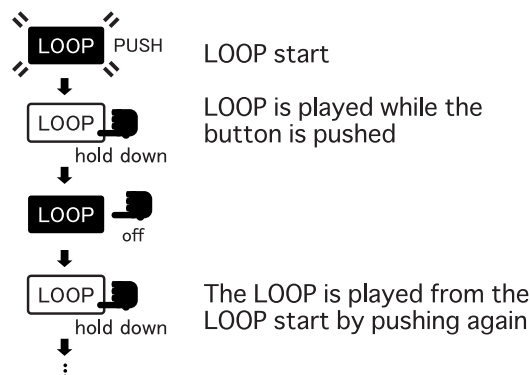
ALTERNATE MODE LOOP OPERATION



sw type
↑on

LOOP

MOMENTARY MODE LOOP OPERATION
Memory the LOOP start point



NOTE: The LOOP memory can be deleted by changing the switch mode or selecting a different effect.

Delay

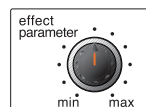
The delay time is set to the automatically/manually counted BPM and beats selected with the beat select buttons. The maximum delay time is 2,700ms at stereo.

LOW Kill Delay

The low frequency sound is masked with a filter function and the delay sound is applied only to the mid-hi frequency sound.

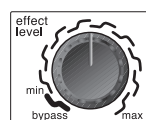
The delay time is set up to the maximum length when the delay starts down and repeats in order of each parameters setting. The time parameter and beat settings can be changed while a delay effect is turned on. (The delay sound will change such like an analog delay continuously when the time parameter is changed when the delay effect is turned on)

(effect parameter)

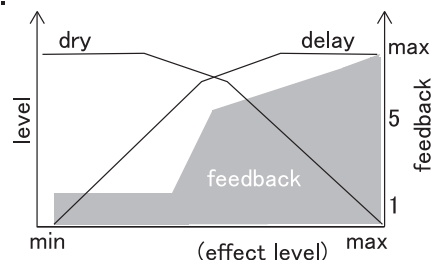


Adjusts the delay time set with the beat select button.

(effect level)

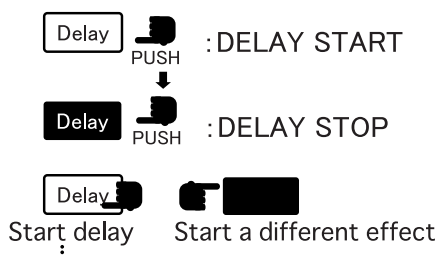


Adjusts the feedback level and the mix level of the delay sound and DRY sound.

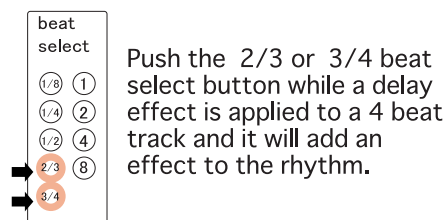


PGM EFFECT FUNCTION & OPERATION

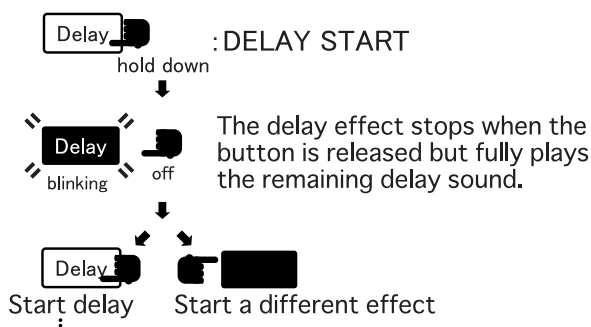
sw type **Delay** **LOW Kill Delay** ALTERNATE MODE DELAY OPERATION



DJ technique Change the delay tempo

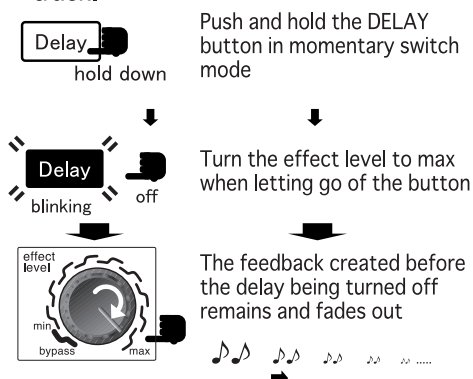


sw type **Delay** **LOW Kill Delay** MOMENTARY MODE DELAY OPERATION



DJ technique Let the delay sound remain

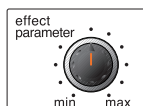
This is a technique where you let the feedback of the delay remain, very useful when switching to a different track.



Reverb

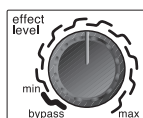
The depth of the reverb sound and the mix level with the input sound can be adjusted. As an additional function, the input sound can be cut to output the reverb sound on its own.

(effect parameter)



Sets the depth of the reverb.

(effect level)

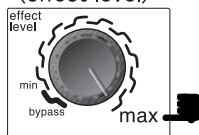


Adjusts the mix level of the reverb sound and DRY sound. The reverb sound will remain on its own when the knob is turned to max.

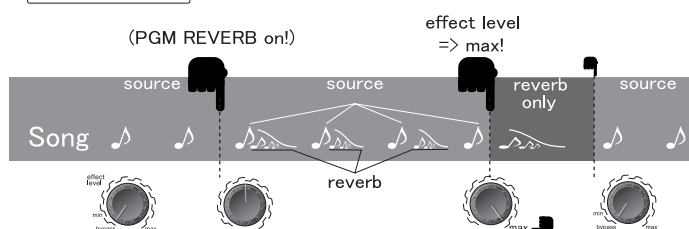
DJ technique Let the reverb remain

The reverb on each PGM channel has an additional effect for DJ play.

(effect level)



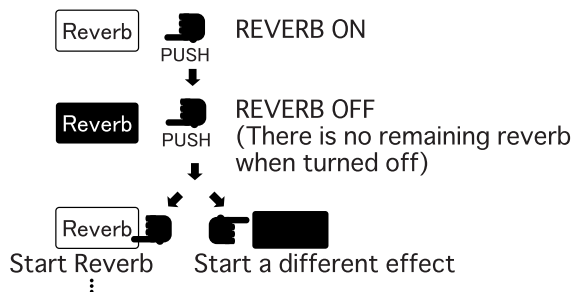
The input sound is cut when the effect level knob is turned to max and the reverb created until then will remain. This is useful to give the track a little edge or when mixing in another track.



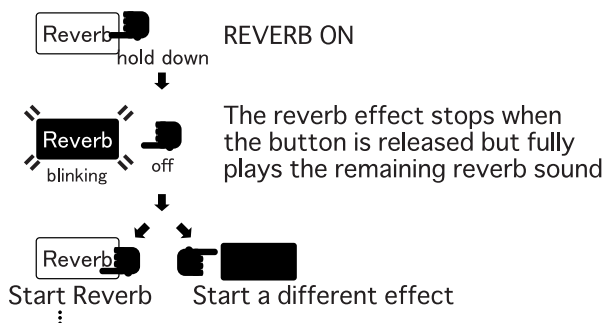
PGM EFFECT FUNCTION & OPERATION

Reverb

sw type  **Reverb** ALTERNATE MODE REVERB OPERATION



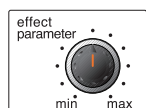
sw type  **Reverb** MOMENTARY MODE REVERB OPERATION



Flanger

Flanger is an effect which mixes the modulated time-delayed input sound with the original input sound, and produces an up and down sweep effect. The LFO cycle is adjusted automatically to the automatically/manually counted BPM and beats selected with the beat select buttons.

(effect parameter)



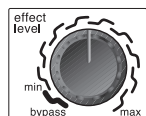
Adjusts the LFO cycle set with the beat select button.

Min = LFO rate time x 1/8

Center = LFO rate time x 1

Max = LFO rate time x 8

(effect level)



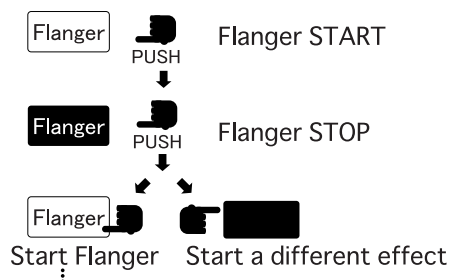
Adjusts the mix level of the flanger sound and DRY sound.

<Effect retrigger start >

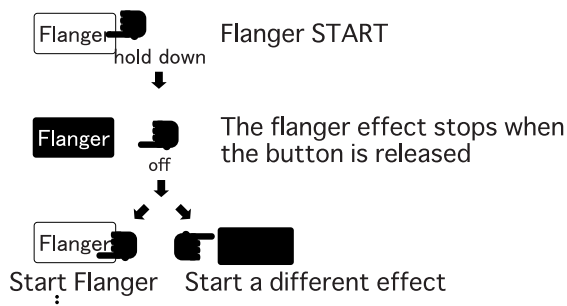
The flanger effect will start from the same modulation point when it is (re)started.

- * When the flanger button is ON in momentary mode
- * When the flanger button is ON in alternate mode
- * When the beat select button is reselected (including the same button)

sw type  **Flanger** ALTERNATE MODE FLANGER OPERATION



sw type  **Flanger** MOMENTARY MODE FLANGER OPERATION

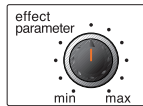


PGM EFFECT FUNCTION & OPERATION

Filter Sweep FILTER SWEEP (HI Pass Filter / LOW Pass Filter)

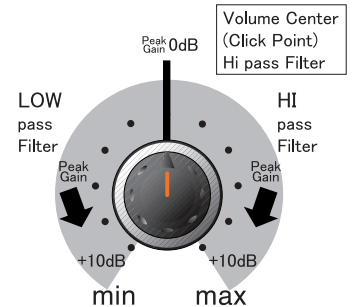
Filter sweep transforms the cut-off frequency of the input sound and gains a masking filter effect. The filter type can be selected from a HI-PASS filter and a LOW PASS filter, and the peak GAIN (resonance) is adjustable.

(effect parameter)

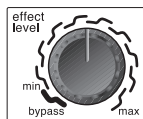


Selects the filter type from HI-PASS and LOW-PASS, and adjusts the peak GAIN (resonance)

Min = LOW PASS FILTER Max Resonance (Peak level +10dB)
Center = HI PASS FILTER Min Resonance (Peak level 0dB)
Max = HI PASS FILTER Max Resonance (Peak level +10dB)



(effect level)

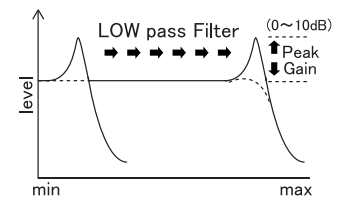


Adjusts the peak frequency of the filter.

LOW Pass Filter

Min=Variable to max fc

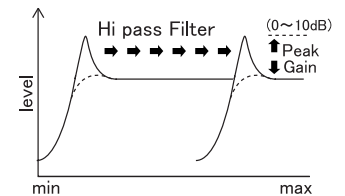
Max=Outputs the DRY sound



Hi Pass Filter

Min= Outputs the DRY sound

Max=Variable to max fc



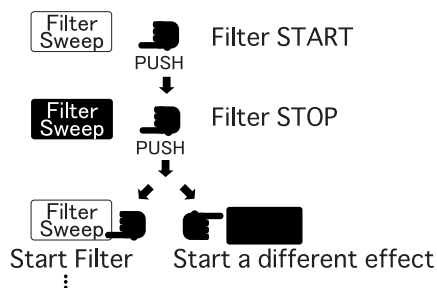
DJ technique filter/sweep

The effect parameter knob sets the effect as a peak-less HI-PASS filter when it is set to the center point. A low cut sound is created by adjusting the effect parameter knob such like an isolator.



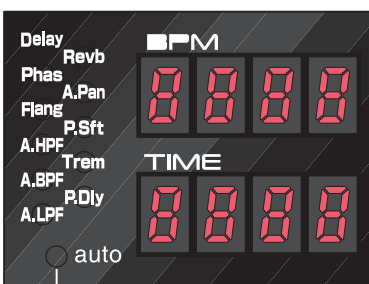
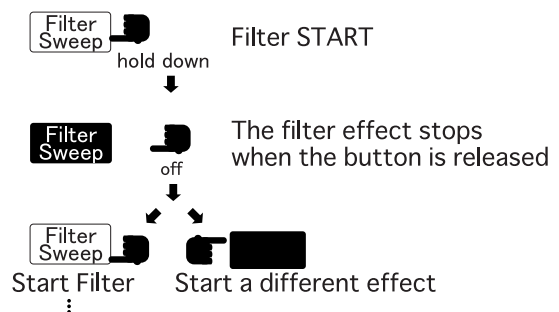
Filter Sweep

ALTERNATE MODE FILTER SWEEP OPERATION



Filter Sweep

MOMENTARY MODE FILTER SWEEP OPERATION



BPM and TIME display:

BPM synchronized effects such as Loop, Delay and Flanger (and others) have limits to their time/cycle settings. If the time/cycle is over the limit of the selected effect, the effect button will blink when it is selected and will display the limit value as shown in the picture and will run at that value.

Check the effect function chart for each limit value.

MIC EFFECT FUNCTIONS AND OPERATIONS

MIC EFFECT FUNCTIONS AND OPERATIONS

The MIC channel of the PMC-580 has 3 individual effects that operate separately from the MASTER effects and PGM channel effects.

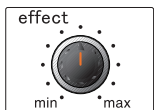
CAUTION!!

A MASTER effect cannot be applied to the MIC effect sound.
The MIC effect sound is assigned directly to the output section and is not sent to the MASTER section.

PITCH SHIFT

Shifts the input sound within a range of 1 octave up and 1 octave down.
(The DRYT sound will not be outputted when this effect is operated)

(effect)



Adjusts the pitch
min = 1 octave down
center = No pitch shift
max = 1 octave up

DISTORTION

Drives the input sound and creates a distortion effect.

(effect)



Adjusts the distortion level
min = weak distortion
center = medium level distortion
max = strong distortion

CAUTION!!

Strong distortion can cause feedback noises. Please be careful with the sound and distortion levels.

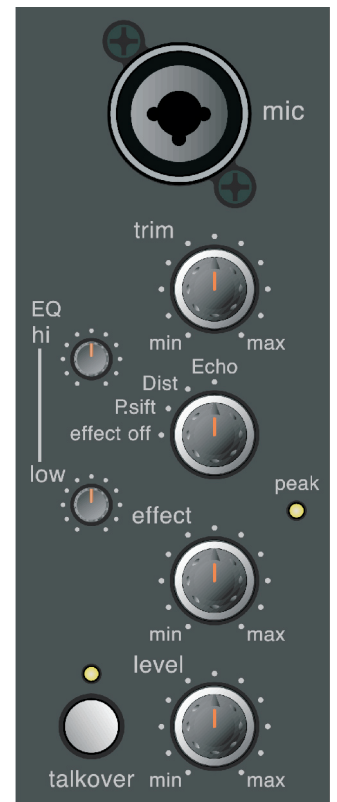
MIC ECHO

Creates an echo sound. The ECHO time is fixed at 100ms.
(This effect is not affected by the BPM counter and beat select buttons)

(effect)



Adjusts the number of times the echo is repeated
min = 1 repeat
↓
max = Maximum repeat level



MASTER EFFECT FUNCTIONS AND OPERATIONS

The MASTER channel of the PMC-580 has a multi effecter with 11 individual effects, which operate separately from the MIC effects and PGM channel effects.

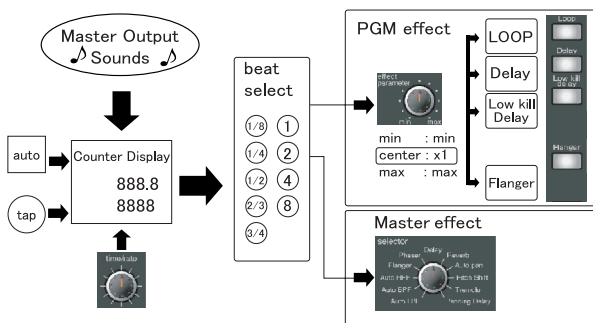
MASTER EFFECT ASSIGN

assign
master
cf-a  cf-b

The master effect can be assigned to each side of the cross fader and the main master sound.

BPM SYNC

The time and cycle of each effect synchronizes with the AUTO/TAP BPM counter located on the right of the mixer.



The BPM of the output signal can be counted manually with the TAP button or automatically with the built-in BPM counter. (Adjustable with the master effect time knob)

The beat select buttons determine the number of beats (length) which will be applied to the PGM and MASTER effect time/cycle parameter.

Each effect functions in a different way. Please refer to each effects operation guide.

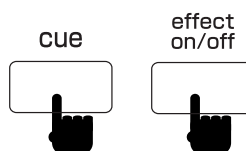
- Displays the BPM value counted by AUTO BPM or with the TAP button
- Displays the time (msec) of the counted BPM
- Blinks when AUTO BPM is operating and lights when the BPM is determined
- This button operates the AUTO BPM counter
- Tap this button along with the track to manually set the BPM

The TAP BPM counter calculates the average value between the latest 6 taps and displays it on the LED panel.

PRE MONITOR MASTER EFFECT

The MASTER EFFECT sound can be monitored through headphones, even when the MASTER EFFECT SWITCH is turned off. (The effect will not be sent to output)

Push the cue button next by the effect on/off button and set the monitor select volume in the monitor section to cue. The effect sound can be monitored through the headphones to check before it is actually outputted.



NOTE: The MASTER cue button and each PGM cue button cannot be turned ON together

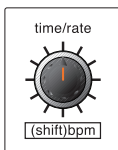


MASTER EFFECT FUNCTIONS AND OPERATIONS

AUTO LPF (LOW PASS FILTER)

Auto low pass filter is an automatic filter effect which operates in a LFO cycle set by the BPM count value and beat select button

* The peak frequency of the FILTER / SWEEP effect in the PGM effector is manually adjustable, but the filter effect in the MASTER effector fully synchronized with the BPM. Please use the filter effect whichever suits your DJ style

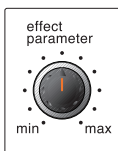


<time/rate>

The first value of the knob is set by the BPM count value and beat select button.
The LFO cycle time is adjustable by turning the knob.

:1 click → +/-10mSec
(Push and turn knob)
:1 click → +/-1mSec

Minimum LFO rate 10mSec
Maximum LFO rate 5400mSec(LFO half cycle)



<effect parameter>

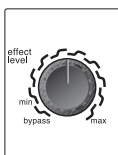
Adjusts the FILTER resonance (peak level)

Min → min resonance (peak gain 0)
Max → max resonance (peak gain +10dB)

<Effect trigger start>

The AUTO LPF effect will start from the same modulation point when it is (re)started.

- * When the AUTO LPF button is selected
- * When the flanger effect start button is turned ON
- * When the beat select button is reselected (including the same button)



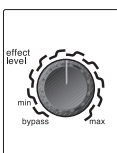
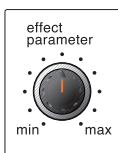
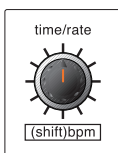
<effect level>

Adjusts the mix level of the FILTER sound and DRY sound. The output balance of the AUTO FILTER sound and DRY sound changes by turning the knob to the right.

AUTO BPF (BAND PASS FILTER)

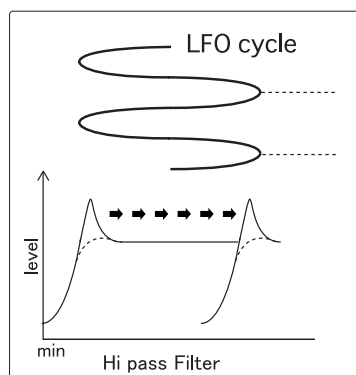
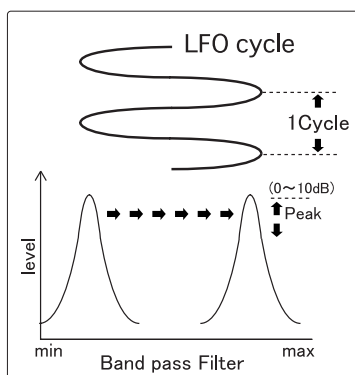
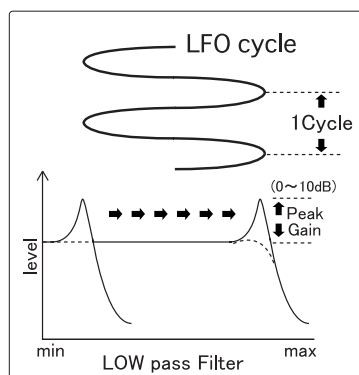
AUTO HPF (HI PASS FILTER)

Auto band pass filter and auto hi pass filter are both automatic filter effects which operate in a LFO cycle set by the BPM count value and beat select button.



:Refer to the operation guide of LPF.

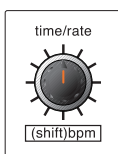
The FILTER peak frequency changes in order with the FO cycle set by the BPM count value and beat select button as shown below.



MASTER EFFECT FUNCTIONS AND OPERATIONS

FLANGER

Flanger is an effect which mixes the modulated time-delayed input sound with the original input sound, and produces an up and down sweep effect. The LFO cycle is adjusted automatically to the automatically/manually counted BPM and beats selected with the beat select buttons.

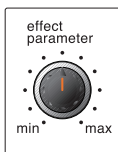


<time/rate>

The first value of the knob is set by the BPM count value and beat select button.
The LFO cycle time is adjustable by turning the knob.

:1 click ! +/-10mSec
(Push and turn knob)
:1 click ! +/-1 mSec

Minimum LFO rate 25mSec
Maximum LFO rate 5000mSec(LFO half cycle)



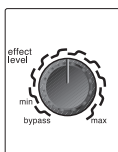
<effect parameter>

Adjusts the depth of the LFO

Min → min resonance (peak gain 0)
Max → max resonance (peak gain +10dB)

<Effect trigger start>

The AUTO FLANGER will start from the same point when it is (re)started.



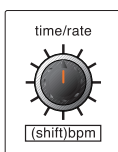
<effect level>

Adjusts the mix level of the FLANGER sound and DRY sound. The output balance of the AUTO FLANGER sound and DRY sound changes by turning the knob to the right.

- * When the FLANGER button is selected
- * When the flanger effect start button is turned ON
- * When the beat select button is reselected (including the same button)

PHASER

Phaser is an effect which continually alters the tone by altering the phase of the sound and interfering it with the DRY sound. The tone of the phaser effect alters periodically. The LFO cycle is adjusted automatically to the automatically/manually counted BPM and beats selected with the beat select buttons.

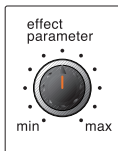


<time/rate>

The first value of the knob is set by the BPM count value and beat select button.
The LFO cycle time is adjustable by turning the knob.

:1 click → +/-10mSec
(Push and turn knob)
:1 click → +/-1 mSec

Minimum LFO rate 25mSec
Maximum LFO rate 5000mSec(LFO half cycle)



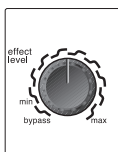
<effect parameter>

Adjusts the resonance (peak level)

Min → min resonance (peak gain 0)
Max → max resonance (peak gain +10dB)

<Effect trigger start>

The AUTO PHASER will start from the same point when it is (re)started.



<effect level>

Adjusts the mix level of the PHASER sound and DRY sound. The output balance of the AUTO FLANGER sound and DRY sound changes by turning the knob to the right.


- * When the PHASER button is selected
- * When the phaser effect start button is turned ON
- * When the beat select button is reselected (including the same button)

MASTER EFFECT FUNCTIONS AND OPERATIONS

DELAY

The delay time is set to the automatically/manually counted BPM and beats selected with the beat select buttons. The maximum delay time is 5,400ms at stereo.


<time/rate>



The first value of the knob is the delay time set by the BPM count value and beat select button. The delay time is adjustable by turning the knob.
:1 click → +/-10mSec (Push and turn knob)
:1 click → +/-1mSec

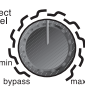
Minimum delay time : 10mSec
Maximum delay time : 5400mSec

<effect parameter>



Adjusts the feedback level
Min → 1 FEEDBACK
Max → Infinite FEEDBACK (doesn't hold)

<effect level>




Adjusts the mix level of the DELAY sound and DRY sound. The delay sound increases and the DRY sound decreases by turning the knob clockwise, altering the output balance.

REVERB


Reverb adds a reverberant effect to the input sound. The depth of the reverb sound and the mix level with the input sound can be adjusted.

<time/rate>



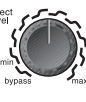
Adjusts the decay time
Min → 0
Max → 127

<effect parameter>



Adjusts the depth of the reverb (the depth size grows continuously from ROOM→HALL→PLATE)

<effect level>




Adjusts the mix level of the REVERB sound and DRY sound.

AUTO PAN

Auto pan is an effect which sends the input sound back and forth between the left and right output. The length of the interval between the left and right output is set with the automatically/manually counted BPM and beats selected with the beat select buttons.


<time/rate>



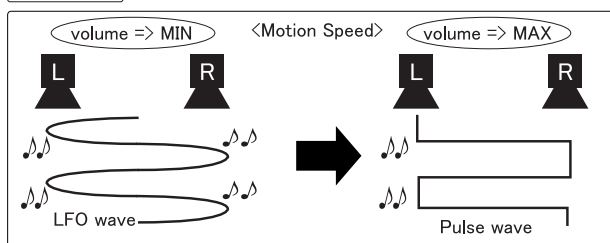
The first value of the knob is the interval time set by the BPM count value and beat select button. The interval time is adjustable by turning the knob.
:1 click → +/-10mSec (Push and turn knob)
:1 click → +/-1mSec

Minimum LFO rate : 10mSec
Maximum LFO rate : 5400mSec


<effect parameter>



Adjusts the motion speed of the panning.
Min → LFO : sin wave
Max → LFO : Pulse wave



<effect level>




Adjusts the mix level of the AUTO PAN sound and DRY sound. The AUTO PAN balance increases by turning the knob clockwise.

PITCH SHIFT


Pitch shift alters the pitch of the input sound between -100% and +1 octave.

<time/rate>



Adjusts the pitch which is set with the effect parameter between +/-50%.

<effect parameter>



Adjusts the pitch.
Min → Shifts the original pitch -100% down (more than 1 octave)
Center → The pitch stays the same
Max → Shifts the original pitch 1 octave up

<effect level>



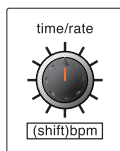
Adjusts the mix level of the PITCH SHIFT sound and DRY sound.

MASTER EFFECT FUNCTIONS AND OPERATIONS

TREMOLO

Tremolo produces a periodic variation in the volume of the input sound. The tremolo length is set with the automatically/manually counted BPM and beats selected with the beat select buttons.

<time/rate>

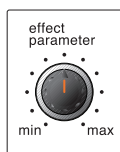


The first value of the knob is the tremolo time set by the BPM count value and beat select button. The tremolo time is adjustable by turning the knob.

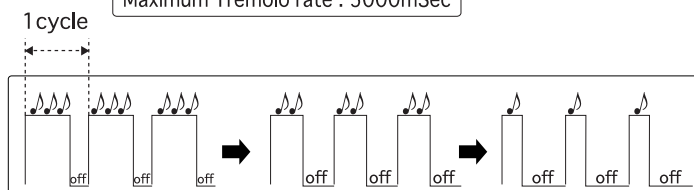
:1 click → +/-10mSec
(Push and turn knob)
:1 click → +/-1mSec

Minimum Tremolo rate : 25mSec
Maximum Tremolo rate : 5000mSec

<effect parameter>

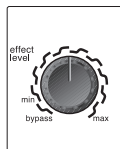


Adjusts the duty cycle



* Duty cycle is the ON / OFF proportion of time as shown in the picture above

<effect level>

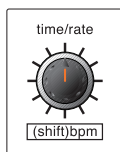


Adjusts the mix level of the tremolo sound and DRY sound
The tremolo balance increases by turning the knob clockwise, altering the output balance.

PANNING DELAY

Panning delay outputs the delay feedback between the left and right output. The length of the interval between the left and right output is set with the automatically/manually counted BPM and beats selected with the beat select buttons.

<time/rate>

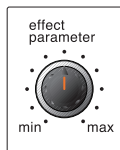


The first value of the knob is the interval time set by the BPM count value and beat select button. The interval time is adjustable by turning the knob.

:1 click → +/-10mSec
(Push and turn knob)
:1 click → +/-1mSec

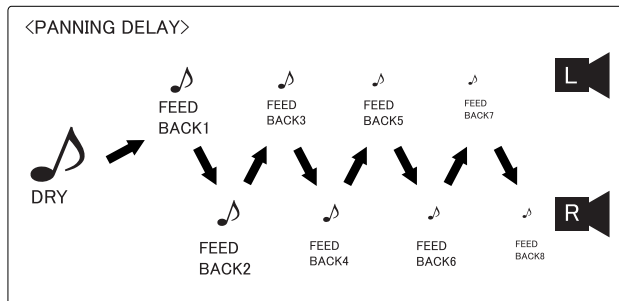
Minimum delay time : 50mSec
Maximum delay time : 5400mSec

<effect parameter>

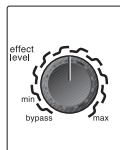


Adjusts the feedback level

Min → 1 FEEDBACK
Max → Infinite FEEDBACK (doesn't hold)



<effect level>



Adjusts the mix level of the DELAY sound and DRY sound.
The delay sound increases and the DRY sound decreases by turning the knob clockwise, altering the output balance.

Specification

– EFFECT –

<PGM>

O LOOP

O DELAY

O LOW CUT DELAY

O REVERB

O FLANGER

O FILTER SWEEP

<MASTER>

O AUTO LPF

O AUTO BPF

O AUTO HPF

O FLANGER

O PHASER

O DELAY

O REVERB

O AUTO PAN

O PITCH SHIFT

O TREMOLO

O PANNING DELAY

<MIC>

O PITCH SHIFT

O DISTORTION

O MIC ECHO

– INPUT / OUTPUT –

PHONO input	RCA PIN JACK
LINE/CD input	RCA PIN JACK
MIC input	COMBO JACK (XLR/PHONE)

DIGITAL input	RCA PIN JACK
RETURN input	RCA PIN JACK

MASTER output	(unbal.) PHONE JACK
	(bal.) XLR JACK

BOOTH output	(unbal.) PHONE JACK
	(bal.) XLR JACK

REC1/2(SEND) output	RCA PIN JACK
DIGITAL output	RCA PIN JACK

PHONES output	PHONE JACK
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USB input/output	B-type USB JACK
------------------	-----------------

– OPTION –

DX LINE input	RCA PIN JACK
DX LINE output	RCA PIN JACK

– GENERAL –

Power	AC-ADAPTOR / AC-20
Power Consumption	40 W
Weight	8.5 kg
Demension	326 (W) × 406 (D) × 100 (H)

Sampling Rate	48kHz
Mixer part	full digital, 32 bit DSP
Effect part	full digital, 24 bit DSP
CPU	32 bit * 2, 16 bit * 3
ADC	24 bit E-Dual bit DELTA-SIGMA 106dB
DAC	24 bit A-Multi bit DELTA-SIGMA 100dB

S/N Ratio	over 75 dBv (JIS-A)
Distortion	less than 0.05%
Freq response	20Hz – 20kHz ±3dB

– LEVEL –

INPUT Level / INPUT Impedance	
LINE	–10dBv / 18k ohm
MIC	–50dBv / 5.4k ohm
PHONO	–45dBv / 45k ohm
RETURN	0dBv / 32k ohm

OUTPUT Level / Impedance	
MASTER	0dBv / over 10k ohm (bal.) over 600 ohm
BOOTH	0dBv / over 10k ohm (bal.) over 600 ohm
REC	–10dBv / over 10k ohm
SEND	0dBv / over 10k ohm
PHONES	190 mW/over 8 ohm/68ohm

– CHARACTERISTIC –

PGM Equalizer / Isolator

<Equalizer>

Hi	10kHz	±12dB
MID	100 – 10kHz	±12dB
LOW	100Hz	±12dB

<Isolator>

HI	10kHz	+10dB ~ cut
MID	100 – 10kHz	+10dB ~ cut
LOW	100Hz	+10dB ~ cut

MIC Equalizer

HI	3kHz	±12dB
LOW	100Hz	±12dB

BOOTH/PHONES Equalizer

HI	10kHz	±12dB
LOW	100Hz	±12dB

