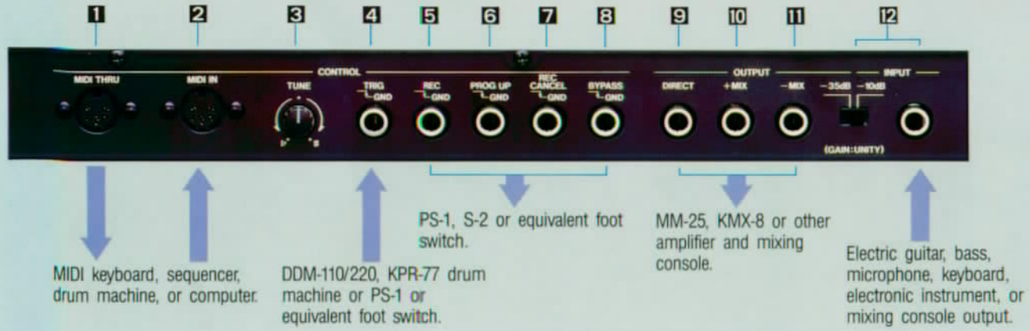
REAR PANEL



1 MIDI THRU
For connection to other MIDI equipment; provides same MIDI signal as received at MIDI IN jack.

2 MIDI IN
For reception of MIDI data.

3 TUNE
Pitch adjustment for playback in sampling and sequencer modes.

4 TRIG
For a drum machine or foot switch used to trigger playback of sampled sounds in the sampling mode or to set the delay time in the trigger overdub mode.

5 REC
For foot switch control instead of using the front panel REC switch.

6 PROG UP
Advances program number once each time a foot switch connected to this jack is pressed.

7 REC CANCEL
For foot switch operation of REC CANCEL function.

8 BYPASS
For foot switch control instead of using the front panel bypass switch.

9 DIRECT
Provides direct sound only.

10 +MIX
Provides a mixed output of the direct and effect (or recorded/sampled) sounds.

11 −MIX
Provides a mix of the direct sound and phase inverted effect sound.

12 INPUT
For signal from electric guitar, bass, microphone, keyboard, etc.

SPECIFICATIONS

■ INPUT: Input level (−35dBm/−10dBm), Impedance (47kΩ, 500kΩ) ■ OUTPUT (unity): Output level (−35dBm/−10dBm), Impedance (600Ω) ■ FREQUENCY RESPONSE: 20Hz～20kHz, ±1dB (DIRECT), 30Hz～18kHz, +1, −3dB (EFFECT, ×1 mode), 30Hz～4.5kHz, +1, −3dB (EFFECT, ×4 mode) ■ DYNAMIC RANGE: 90dB (IHF, EFFECT), 95dB (IHF, DIRECT) ■ S/N RATIO: 80dB (IHF, EFFECT) ■ DISTORTION: 0.05% (DIRECT), 0.1% (EFFECT) ■ DELAY TIME: 0～1092ms (×1 mode: can be set in 0.1ms steps from 1 to 10ms), 0～4368ms (×4 mode) ■ FEEDBACK: 0～±110% (63 steps) ■ MODULATION: Intensity Frequency (∧, 0.1～10Hz) ■ REC SYNC: Mode (TRIG OVERDUB, SEQUENCER, SAMPLING), REC Switch, TRIG LED ■ PROGRAMMER (64 PROGRAM): FREQUENCY, INTENSITY, EFFECT, FEEDBACK, TIME×4, TIME, PROG/PARA, WRITE, Display (Program number, Data, Time), INCREMENTAL CONTROL ■ INPUT: HEADROOM, INPUT LEVEL ■ OUTPUT: DIRECT LEVEL, BYPASS ■ REC CANCEL LED ■ INPUT: jack×1 ■ ATTENUATOR (−10dB, −35dB) ■ OUTPUT: jack×3: DIRECT, +MIX, −MIX ■ CONTROL: jack (⏚ GND)×5: BYPASS, REC CANCEL, PROG UP, REC, TRIG ■ TUNE VOLUME (±50 cent) ■ MIDI-IN, MIDI-THRU ■ DIMENSIONS: 482(W)×44(H)×344(D)mm ■ WEIGHT: 4.5kg ■ POWER SUPPLY: Local voltage ■ POWER CONSUMPTION: 17W ■ SUPPLIED ACCESSORIES: Rack mounting screws×4

OPTIONS

- PEDAL SWITCH PS-1
- SYNC/MIDI CABLE (1.5m/3m/5m)
- HARD CASE

*Specifications and features are subject to change without notice for further improvement

6004D00TH *Printed in Japan.*

N O T I C E

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KEIO ELECTRONIC LABORATORY CORPORATION
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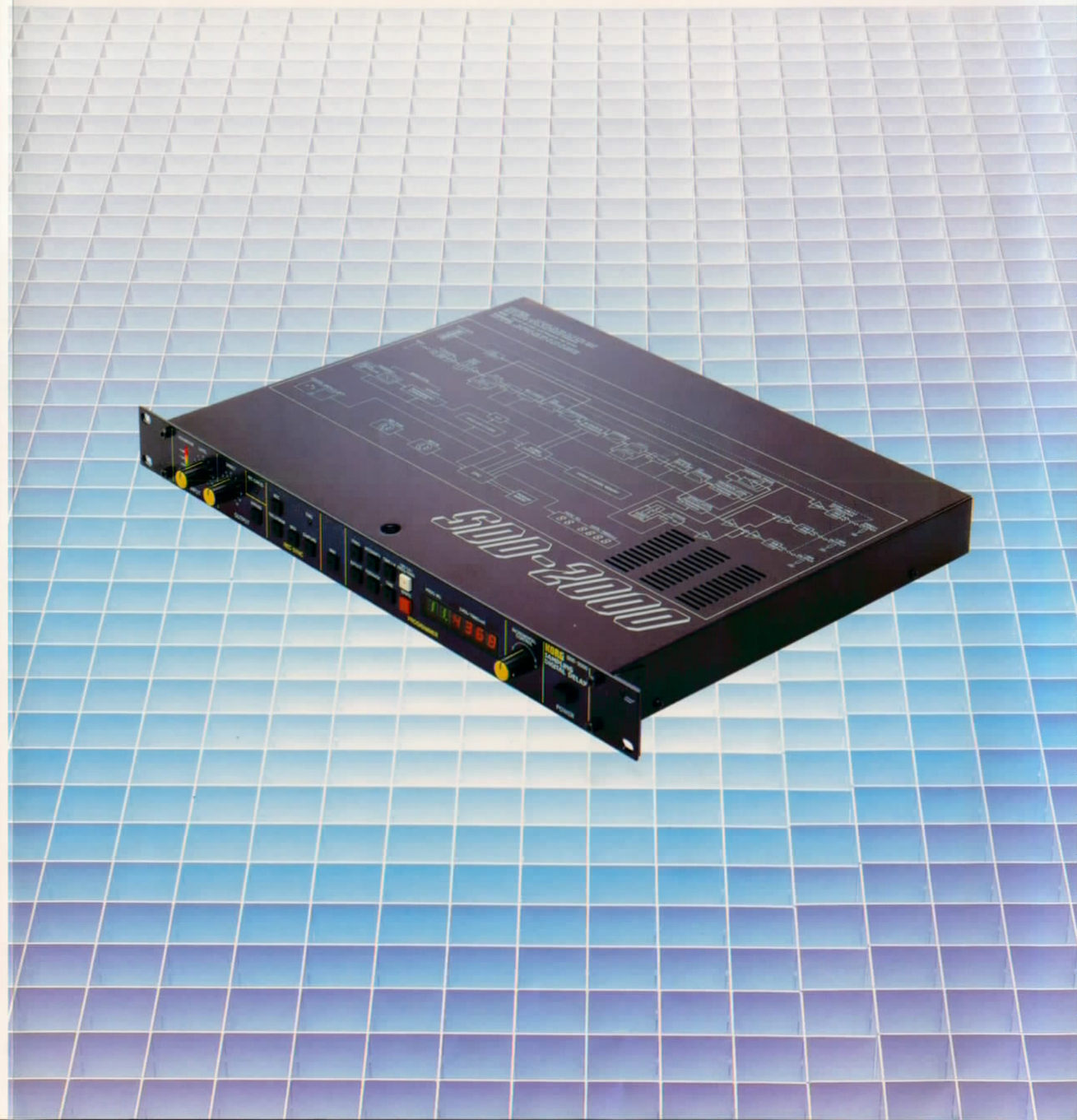
SDD-2000

SAMPLING DIGITAL DELAY

Step Into Tomorrow's Music

KORG

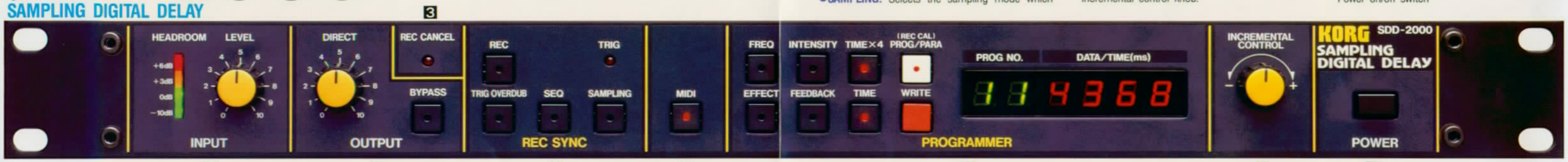


Delays with a Difference——MIDI Pitch Controllable with up to 4368ms Sampling Time

Introducing the digital delay that works with your MIDI keyboard, drum machine or sequencer. The SDD-2000 starts with the outstanding programmable digital performance that you know from other Korg delays: 64-program memory, stereo chorus, flanging, vibrato and other fantastic effects. Then it accelerates into the future with MIDI controllable delay time, MIDI selectable effect program number, MIDI modulation, and MIDI pitch control of sampled sounds. With the REC SYNC function, for example, you can record a sound and have it played back immediately (and repeatedly) in the SEQUENCER mode. Or reproduce the phrase at will, using a foot switch, drum machine trigger, or MIDI data in the SAMPLING mode. In either case, you can "play" the recorded sound with any MIDI keyboard. The TRIGGER OVERDUB mode lets you use a foot switch, drum machine, or MIDI signal to set the delay time. This makes it easy to quickly match the delay to the music. The REC CANCEL function enables a more natural switch from effect to non-effect output. Other valuable features include stereo outputs, incremental control and 6-column display.

SDD-2000

SAMPLING DIGITAL DELAY



1 2 4 5 6 7 8

Functions of the SDD-2000

- **SDD-2000**
  - **Digital Delay Mode** — Provides short and long delays, chorus, flanging and other effects. 64 effect programs can be stored in memory. Programs can be edited. With MIDI switch ON, programs can be changed from a MIDI device (keyboard, computer, etc.)
  - **Trigger Overdub Mode** — Lets you set the delay time using a foot switch or rhythm machine trigger signal or MIDI timing clock. Makes it easy to match the delay to the tempo of the music.
  - **Sequencer Mode** — For immediate and repeated playback of the audio input signal. Useful for special vocal chorus, ensemble and other effects.
  - **Sampling Mode** — Lets you use a trigger signal or MIDI NOTE ON input to initiate reproduction of recorded sounds. Can be used with piano and other percussive sounds having long decay contours.

A MIDI keyboard can be used to control playback pitch with both of these modes. A MIDI sequencer or MIDI equipped computer can also be used.

MIDI data response chart

DATA \ MODE	DELAY	TRIGGER OVERDUB	SEQUENCER	SAMPLING
PROGRAM CHANGE	○			
TIMING CLOCK		○		
NOTE ON/OFF (WITH VELOCITY)			○	○
PITCH BEND			○	○
MODULATION			○	○
OMNI ON/OFF	○	○	○	○
ALL NOTES OFF			○	○
SYSTEM EXCLUSIVE	○			
ACTIVE SENSING			○	○

Features

1 INPUT
- **HEADROOM:** Input level indicator.
- **LEVEL:** Input level control.

2 OUTPUT
- **DIRECT:** Controls volume of direct sound in +MIX and –MIX outputs.
- **BYPASS:** Cuts effect so only the direct sound is sent to the outputs.

3 REC CANCEL
LED illuminates during REC CANCEL operation.

4 REC SYNC
- **REC:** Controls recording in sampling and sequencer modes. Sets delay time in trigger overdub mode.
- **TRIG OVERDUB:** Selects the trigger overdub mode for automatic setting of delay time.
- **SEQ:** Selects the sequencer mode for recording and repeated playback of phrases of up to 4368ms.
- **SAMPLING:** Selects the sampling mode which allows recording of audio signal inputs and reproduction of the sampled signal when triggered by a foot switch or other signal source.
- **TRIG:** Illuminates when a trigger signal is received at the rear panel trigger jack during trigger overdub or sampling mode operation.

5 MIDI
- **MIDI Switch:** Enables reception of MIDI data. LED illuminates when switch is on.

6 PROGRAMMER
- **FREQ:** Selects display of the modulation frequency value and enables adjustment using the incremental control knob.
- **INTENSITY:** Selects display of the modulation intensity value and enables adjustment using the incremental control knob.
- **EFFECT:** Selects display of the volume level of the delayed signal (or the sampled signal to be reproduced) and enables adjustment using the incremental control knob.
- **FEEDBACK:** Selects display of the amount of feedback and its phase. Enables adjustment of feedback value using the incremental control knob.
- **TIME X4:** Selects maximum delay or sampling time: 4368ms when on (X4 mode); 1092ms when off (X1 mode).
- **TIME:** Enables setting of the delay or sampling time.
- **PROG/PARA:** In the delay mode, this switches between allowing "program change" and allowing editing of individual parameters. In the sequencer and sampling modes it allows "recording calibration."
- **WRITE:** Used to store programs in memory when in delay mode.

7 INCREMENTAL CONTROL
Used to adjust, set or select parameters, program numbers, MIDI channels, and so on.

8 POWER
Power on/off switch

SAMPLING — Sampling and MIDI Keyboard Playback

I Preparation

1. Turn on MIDI switch.

2. Set MIDI data processing parameters.

If the SDD-2000 is set to respond to NOTE OFF data, then the release of a key on the MIDI keyboard will stop reproduction of recorded sounds. If set to respond to VELOCITY data, the volume of the reproduced sound will depend on how hard keys are played on the MIDI keyboard, if the keyboard itself has velocity control capability.

1) Press the MIDI switch and at the same time press the sampling switch.
2) Now pressing the REC switch will toggle the setting back and forth between "response" and "no response" to NOTE OFF data. The upper LED bar illuminates when set for positive response. Pressing the TRIG OVERDUB switch will toggle the setting between "response" and "no response" to VELOCITY data. The lower LED bar illuminates when set for positive response.

3. Press the SAMPLING switch.

4. Press the TIME X4 switch.

This toggles the time mode between X4 and X1.

5. Set supported note range.

A sound recorded in the X4 mode can be reproduced over a range of nearly three octaves. A sound recorded in the X1 mode can be reproduced over a range of nearly one octave. The pitch of the lowest note in the supported note range can be set in semitone steps.

1) Hold down the MIDI switch and at the same time press the SEQ (sequencer) switch. The display will flash, indicating the current supported note range's lowest note.
2) Keeping the MIDI switch and the SEQ switch depressed, turn the INCREMENTAL CONTROL knob to set the lowest note of your desired supported note range.

6. Set the sampling note.

When using a keyboard you can assign the original pitch of the sampled sound to a particular key within the supported note range. This key is called the sampling note. Set this according to how much lower or higher you want the reproduce sounds to be in relation to the pitch of the recorded sound. The sampling note can be set in semitone steps.

1) Hold down the MIDI switch and at the same time press the SAMPLING switch. The display will flash, indicating the current sampling note.
2) Keeping the MIDI switch and the SAMPLING switch depressed, turn the INCREMENTAL CONTROL knob to set the sampling note.

7. REC CALIBRATION.

Deviations in MIDI reproduced pitch can be corrected by this procedure.

1) Press the REC CAL (PROG PARA) switch (the one with the slowly flashing LED). The SDD-2000 then performs calibration for notes C through B.

II Recording/Playback Procedure

1.

Begin playing the sound that you want sampled (recorded). Recording will begin automatically when input signal level reaches +3dB, as shown on the HEADROOM indicator.

2.

Press the REC switch at the point that you want recording to end.

3.

Perform rec calibration.

4.

Play keys within the supported note range on the keyboard. Your sampled sound will be reproduced with corresponding pitch. If the SDD-2000 is set to respond to NOTE OFF data then notes will be sounded only while keys are depressed.

5.

To record again, press the REC switch and repeat from step 1 above.