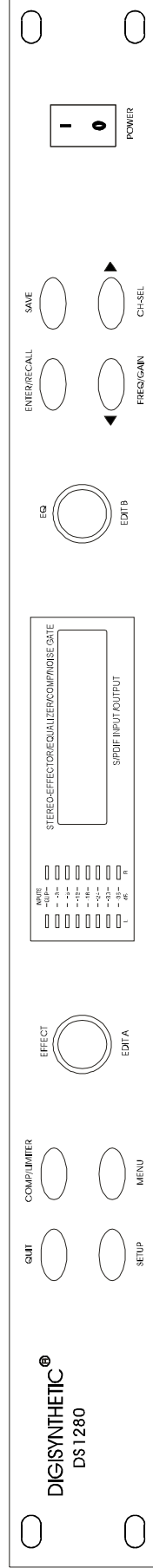


# DIGISYNTHETIC<sup>®</sup> PRO

## MULTI-FUNCTION PROCESSOR DS1280



# Instruction Manual

## ATTENTION!

All DIGISYNTHETIC PRO products are carefully packed and designed to protect the units from rough handling Before shipping out from the factory. Examine your good upon receiving, to ensure no damage during transport. Any damage claim should be informed & notified to relative dealer within 14 days of good received. The dealer will not except failing of such. The consignee must make all shipping claims.

The DS1280 fits into a standard 19" rack unit of space (1 3/4"). Allow at least an additional 4" depth for the connectors on the back panel. Be sure that there is enough air space around the unit for cooling and ventilation. DO NOT place the DS1280 on high temperature devices like power amplifiers to avoid overheating.

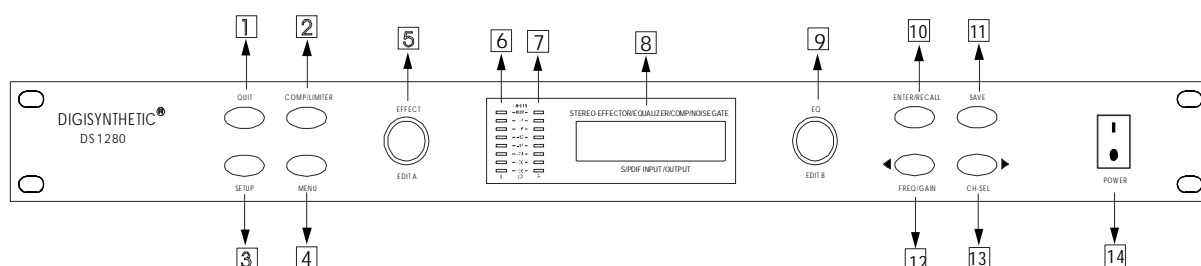
Using a main cable and a standard IEC receptacle makes the main connection of the DS1280. It meets all of the international safety certification requirements.

Please make sure that all units have a proper ground connection. For your own safety, do not remove the ground connection within the unit or at the supply, or fail to make this connection at all.

This machine is only intended for qualified personnel to operate & install. Do not attempt to repair and service yourself but referred to qualified technical service personnel. The user must have sufficient electrical contact to earth. Electrostatic charges might affect the operation of the DS1280.

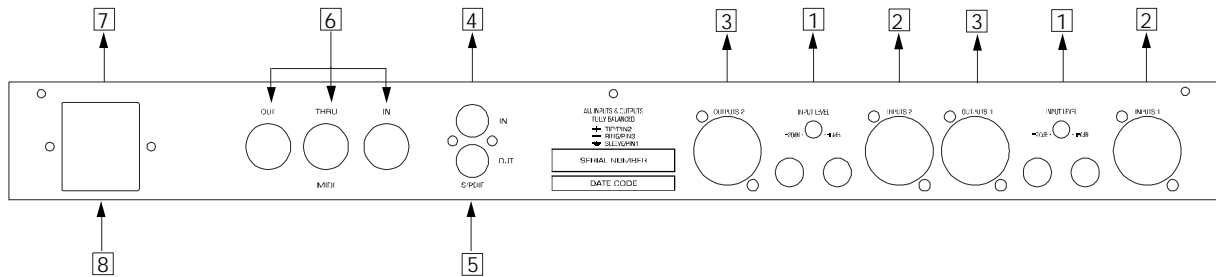
**NOTICE:** Before switching, fuse must be installed with correct type and rate.

## I. FRONT PANEL



1. **QUIT**——Press this button to quit the current interface and allow to select the effect program
2. **COMP/LIMITER**——Pressing this button allows to select all the parameters of compressor
3. **SETUP**——Pressing this button allows to select **SYSTEM SETUP, NOISE GATE SETUP** and **Interface Setup(RS232, MIDI)**
4. **MENU**——Select the menu
5. **EDIT A/EFFECT**——Encoder: select all the setup menu and the corresponding parameters and edit the value of parameters
6. **Indicator for the input of left channel**
7. **Indicator for the input of right channel**
8. **2×16 LCD with backlit**
9. **EDIT B/EQ**——Encoder: edit the value of EQ parameters, setup the password and edit the name of EQ program
10. **ENTER/RECALL**——Confirm/recall the EQ program
11. **SAVE**——Save the edited EQ program
12. **FREQ/GAIN(t )**—— Select the EQ parameters ( move the cursor to the left )
13. **CH-SEL(u )**——Select the channel ( move the cursor to the right )
14. **POWER**——Power ON/OFF

## II. REAR PANEL



- 1. INPUT LEVEL**——Input level adjustable. Make the unit fit to the different work level
- 2. IN PUTS**——Inputs with XLR and 1/4" jack, Each group of XLR and jack is parallel used for the balanced and unbalanced connection.
- 3. OUTPUTS**——outputs with XLR and 1/4" jack used for the balanced or unbalanced connection
- 4. S/PDIF IN**——Digital signal input (coaxial, 75  $\Omega$  input impedance)
- 5. S/PDIF OUT**——Digital signal output (coaxial, 75  $\Omega$  output impedance)
- 6. INTERFACE CONNECTOR** ——MIDI IN(RS232 IN)/MIDI OUT/MIDI. Remote control with the connector
- 7. FUSE:** See the enclosed specification
- 8. Power receptacle:** switch mode power supply 90V~250V, 50Hz/60Hz.

### III. OPERATION INSTRUCTION

#### 1. ENTER PASSWORD

The unit has the engineering password to avoid the error operation. If you forget the password, please contact the supplier. The original password initiating when leaving factory is [2003].

Only 128 effects can be selected unless the password is entered when using the unit. Power on the unit, press any key (except the QUIT), screen shows as Fig. 1.

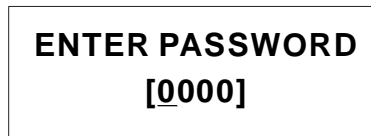


Fig. 1

Press the key of **t** to move the cursor on the screen to the left while pressing the key of **u** to move the cursor to the right. Turn the encoder **EDIT B** to edit the figure from 0 to 9. Press the **ENTER/RECALL** to confirm the password. If the password is correct, the screen shows as Fig.2 and then the system can be Adjusted. If the password is wrong, the screen shows as Fig.3. Then press the Other key to return the interface as Fig.1 to enter the password again.



Fig. 2



Fig. 3

#### 2.SYSTEM SETUP

1.Press the **SETUP** to system setup, as Fig. 4:

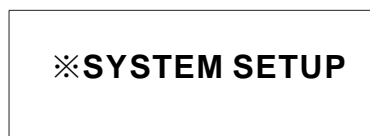


Fig. 4

2. Then pressing the **MENU** allows to select the following menu

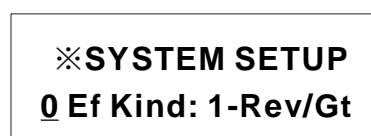


Fig. 5

under setup:

- 0 Ef Kind: 1-Rev/Gt ( Effect select )**
- 1 In/Out: 1-A to A ( Input/output setup)**
- 2 Work Md: 1-Mono (Mono or Stereo work mode set)**
- 3 Effect Sw: ON (Effect enable or disable set)**
- 4 Compress Sw: ON (Compress enable or disable set)**
- 5 Ns-gate Sw: ON (Noise gate enable or disable set)**
- 6 EQ Sw: ON (Equalizer enable or disable set)**
- 7 Reset Effect (Reset present effect to default)**
- 8 Reset System (Reset system to default)**
- 9 Modify Password(new password set)**

2.1 Under the status of 0 Ef Kind ..., turn the encoder EDIT A to select the Desired effect as fig. 6:

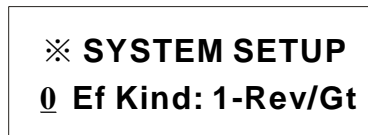


Fig. 6

Effect type as follows:

- 1 Rev/Gt (Reverb/Gate)**
- 2 Ech/DI (Echo/Delay)**
- 3 Chorus**
- 4 Flang**
- 5 Distort ( Distortion)**
- 6 Pitch (Pitch Shift)**
- 7 Chor+ (Chorus+Other)**
- 8 Flang+ (Flang+Other)**
- 9 Pitch+ (Pitch+Other)**
- 10 Dist+ (Distortion+Other)**
- 11 Delay+ (Delay+Other)**

Detailed classification refers to the attached effect list.

2.2 Under the status of 1 IN/OUT..., turn the encoder EDIT A to select the desired work mode as fig. 7:

※ SYSTEM SETUP  
1 In/Out→ 1-A to A

Fig. 7

Four options under the menu as follows:

- 1—A to A——Analog In-Analog Out
- 2—A to D——Analog In-S/PDIF (Digital out)
- 3—D to A ——S/PDIF In -Analog Out
- 4—D to D——S/PDIF In -S/PDIF Out

2.3 Under the status of 2 Work Md..., turn the encoder EDIT A to select the MONO or STEREO as Fig. 8:

※ SYSTEM SETUP  
2 Work Md: 1-Mono

Fig. 8

2.4 Under the status of 3..., 4..., 5..., 6... (Effect Sw, Compress Sw, Ns-gate Sw, EQ Sw), turn the encoder EDIT A clockwise to select ON while turning it anticlockwise to select OFF.

2.5 Under the status of 7 ( Reset Effect ), turn the encoder EDIT A to reset the current setting to the default. The screen show as Fig. 9.

※ SHORT ROOM A  
RESET EFFECT OK!

Fig. 9

2.6 Under the status of 8 ( Reset System ), turn the encoder EDIT A to reset all the parameters of system to the default. The screen shows as Fig. 10 and fig.11.

※ RESET SYSTEM ※  
PLEASE WAIT.....

Fig. 10

※ RESET SYSTEM  
LOAD OK!!!

Fig. 11

**2.7 Under the status of 9 ( Modify Password ), turning the encoder EDIT A allows to modify the system password. The screen shows as Fig. 12, and then set new password as the step of ENTER PASSWORD**



Fig. 12

**Note: When the unit is powered on, the password can be changed at any time after accessing the password system. Once the unit is turned off, the correct password is needed before changing the system setting.**

### **3. NOISE GATE SETUP**

**※Set the noise gate ON at first. Pressing the key of SETUP until the screen shows as Fig.13. Then press the MENU and turn the EDIT A encoder to adjust the threshold from -66dB to -24dB.**



Fig. 13

### **4. COMPRESSOR SETUP**

**※Set the compressor ON at first. Press the key of COMP/LIMITER, the screen shows as Fig.14. The down-left corner of screen shows the current channel.**



Fig. 14

**Then press the MENU in order to select all the parameters of compressor and Turn the encoder EDIT A to adjust the value of corresponding parameter.**

**1 Thre: -4 dB threshold. Adjustment range: -48dB~0dB,  $\pm 1.5$ dB in step.**

**2 Ratio: 1/1 compression ratio. Adjustment range: 1/1~LIMIT.**

**3 Attack: 1.3ms attack time. Adjustment range: 1.3ms ~500ms**

**4 Release: 1.3 ms release time. Adjustment range: 1.3ms~500ms**

**5 Boost:  $\times 1$  boost gain. Adjustment range:  $\times 1 \sim \times 8$**

## 5. EFFECT SETUP

### 5.1 Select the effect in order

Under any menu or submenu, pressing the QUIT simply to enter the EFFECT menu as Fig.15:



→01 SHORT ROOM A  
LR

Fig. 15

Then turn the encoder EDIT A to select 128 effects (see attached effect list).

Pressing the MENU allows to check all the parameters of the relative effect and

Turn the encoder EDIT A to adjust the value as Fig. 16.



※ 01SHORT ROOM A  
LR 1RLPF→20KHz

Fig. 16

### 5.2 Select the effect in shortcut

Press the SETUP, then press the MENU to step into the submenu of 0 Ef Kind: 1 Rev/Gt, later turn the encoder EDIT A to select any one out of 11 effects.

Finally, press the QUIT to access the desired effect quickly and turn the encoder EDIT A to adjust.

The specific steps as follows:

Press SETUP→Press MENU (Access effect menu)→Turn EDIT A(Select effect)→  
Press QUIT( Return effect menu)→Turn EDIT A(Select effect)

## 6. EQ SETUP

6.1 Set the EQ SWITCH to ON at first. Refer to the step 2 of SYSTEM SETUP.

6.2 Press the ENTER/RECALL for a long time about 2 seconds to step into the interface of EQ as Fig. 17.



※ LOAD EQ MODE

Fig. 17

Then turn the encoder EDIT B to select any one out of 10 preset EQ modes. The second line of screen shows the information.

**6.3 Press the ENTER/RECALL for a short time to enter the selected preset EQ mode. The first line of screen shows the information.**

**6.4 Press the FREQ/GAIN to switch the submenu of frequency and gain. Turn the encoder EDIT B to adjust the parameters. The left of the second line of screen shows the following information: channel, center frequency of EQ and the EQ Gain as Fig. 18**

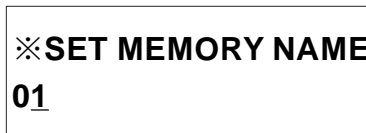


※ 01 FLAT  
L 3.15KHz +12dB

Fig. 18

### **6.5 Save EQ**

**Pressing the SAVE first allows to edit the name of EQ program as Fig. 19:**



※SET MEMORY NAME  
01

Fig. 19

**Press the t and u to move the cursor and then turn the encoder EDIT B to edit the letter.**

**Press the ENTER/RECALL to save the program. The screen shows SAVE OK!**

## **7. PC COMMUNICATION SETUP**

**Press the SETUP, the screen shows as Fig.20.**



INTERFACE SETUP  
1 RS232 SW: ON

Fig. 20

**Press the MENU to select the different PC communication as follows:**

**1 RS232 SW: ON**

**2 MIDI SW: OFF**

## Appendix 1

<b>Reverb</b>	
<b>RLPF</b>	Reverb pre low pass filter(low pass filter on input) Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Rev Mix</b>	Reverb volume 0~100%, step in 1%
<b>RTime</b>	Reverb time 0~10s, step in 0.1s
<b>RvHDAMP</b>	High frequency filter on reverb decay 0~100%, step in 1%
<b>RvLDAMP</b>	Low frequency filter on reverb decay 0~100%, step in 1%
<b>RevDens</b>	Reverb density 0~100%,step in 1%
<b>Rrate</b>	Reverb chorus rate 0~3.87Hz, step in 0.12Hz
<b>RvDepth</b>	Reverb chorus depth 0~100%, step in 1%
<b>Gate</b>	
<b>GtLP</b>	Gate pre low pass filter Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Gate Mix</b>	Gate volume 0~100%, step in 1%
<b>Gtime</b>	Gate time 0~800ms, step in 10 ms
<b>Echo</b>	
<b>EcLP</b>	Echo pre low pass filter Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>EchoMix</b>	Echo volume 0~100%, step in 1%
<b>ETime</b>	Echo time 0~1000 ms, step in 10 ms
<b>EcHDAMP</b>	High frequency filter on echo feedback 0~100%, step in 1%
<b>EcLDAMP</b>	Low frequency filter on echo feedback 0~100%,step in 1%
<b>Echo FB</b>	Echo feedback 0~100%,step in 1%
<b>Delay</b>	
<b>DeLP</b>	Delay pre low pass filter Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Del Mix</b>	Delay volume 0~100%, step in 1%
<b>Dtime</b>	Delay time 0~80ms, step in 1ms
<b>Del FB</b>	Delay feedback 0~100%,step in 1%
<b>DeHDAMP</b>	High frequency filter on delay feedback 0~100%,step in 1%
<b>DeLDAMP</b>	Low frequency filter on delay feedback 0~100%, step in 1%
<b>Chorus</b>	
<b>ChLP</b>	Chorus pre low pass filter Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Cho Mix</b>	Chorus volume 0~100%, step in 1%

<b>Ctime</b>	<b>Chorus delay</b> 0~60ms, step in 1ms
<b>Cho FB</b>	<b>Chorus feedback</b> 0~100%, step in 1%
<b>Crate</b>	<b>Chorus rate</b> 0~15.5Hz, step in 0.49Hz
<b>ChDepth</b>	<b>Chorus depth</b> 0~100%, step in 1%
<b>Flanging</b>	
<b>FILP</b>	<b>Flanging pre low pass filter</b> Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Flg Mix</b>	<b>Flanging volume</b> 0~100%, step in 1%
<b>FTime</b>	<b>Flanging delay</b> 0~60ms, step in 1ms
<b>Flg FB</b>	<b>Flanging feedback</b> 0~100%, step in 1%
<b>Frate</b>	<b>Flanging rate</b> 0~15.5Hz, step in 0.49Hz
<b>FIDepth</b>	<b>Flanging depth</b> 0~100%, step in 1%
<b>Distortion</b>	
<b>Dist</b>	<b>Switch of distortion</b> ON/OFF
<b>DiDepth</b>	<b>Depth of distortion</b> 0~100%, step in 1%
<b>Freq</b>	<b>Low pass filter of distortion</b> Frequency range same as that of EQ in MONO, 31 frequency as appendix 2
<b>Resonan</b>	<b>Low pass filter resonance of distortion</b> 0~100%, step in 1%
<b>Amplitu</b>	<b>Input amplitude of low pass filter</b> 0~100%, step in 1%
<b>Pitch shift</b>	
<b>L Coarse</b>	<b>Pitch shift coarse tune of left channel</b> -12~+12, step in 1
<b>Lfine</b>	<b>Pitch shift fine tune of left channel</b> -1~+1, step in 1/50
<b>L Efvol</b>	<b>Pitch shift sound to left output</b> 0~100%, step in 1%
<b>R Coarse</b>	<b>Pitch shift coarse tune for right channel</b> -12~+12, step in 1
<b>Rfine</b>	<b>Pitch shift fine tune for right channel</b> -1~+1, step in 1/50
<b>R Efvol</b>	<b>Pitch shift sound to right output</b> 0~100%, step in 1%
<b>Pit Mix</b>	<b>Pitch shift sound to other output</b> 0~100%, step in 1%

## Appendix 2

(EQ frequency of MONO /Hz)

20,25,31.5,40,50,63,80,100,125,160,200,250,400,500,630,800,1.0k,1.25k,1.6k,2.0k,2.5k,3.15k,4.0k  
5.0k,6.3k,8.0k,10k,12.5k,16k,20k

(EQ frequency of STEREO/Hz)

25,40,63,100,160,250,400,630,1.0k,1.6k,2.5k,4.0k,6.3k,10k,16k

### Appendix 3: Effect list

<b>EFFECT</b>	<b>EFFECT</b>	<b>EFFECT</b>	<b>EFFECT</b>
<b>Rev/Gate</b>	40 <b>Long Time Cho</b>	78 <b>Up/Down Oct</b>	117 <b>UpM3/D4+Ech'</b>
1 <b>Short Room A</b>	41 <b>Leslie Slow</b>	79 <b>Up octave</b>	118 <b>DnM2/D4+Ech'</b>
2 <b>Short Room B</b>	42 <b>Leslie Fast</b>	80 <b>Down Octave</b>	119 <b>Upm3/D4+Rev'</b>
3 <b>Short Room C</b>	<b>Flanging</b>	81 <b>Light Detune</b>	120 <b>Dist Flang1</b>
4 <b>Room A</b>	43 <b>Flang Light 1</b>	82 <b>Deep Detune</b>	121 <b>Dist Flang2</b>
5 <b>Room B</b>	44 <b>Flang Light 2</b>	83 <b>Doubler</b>	122 <b>Dist+Chor.1</b>
6 <b>Small Hall A</b>	45 <b>Flang Med 1</b>	84 <b>Robot Voice1</b>	123 <b>Dist+Chor.2</b>
7 <b>Small Hall B</b>	46 <b>Flang Med 2</b>	85 <b>Robot Voice2</b>	124 <b>Dist +Echo</b>
8 <b>Large Hall A</b>	47 <b>Flang Med 3</b>	86 <b>Robot Voice3</b>	125 <b>Dist +Gate</b>
9 <b>Large Hall B</b>	48 <b>Flang Med 4</b>	87 <b>Dark Voice1</b>	126 <b>Dist +Oct Dn</b>
10 <b>Church A</b>	49 <b>Slow Flange 1</b>	88 <b>Dark Voice2</b>	<b>Del+Other</b>
11 <b>Church B</b>	50 <b>Flange Deep1</b>	89 <b>Dark Voice3</b>	127 <b>Sh. Del+Rev</b>
12 <b>Cathedral A</b>	51 <b>Flange Deep2</b>	90 <b>Mouse Voice1</b>	128 <b>Sh. Del+Gate</b>
13 <b>Cathedral B</b>	52 <b>Flange Deep3</b>	91 <b>Mouse Voice2</b>	
14 <b>Cathedral C</b>	<b>Distortion</b>	92 <b>Mouse Voice3</b>	
15 <b>Forward Gate</b>	53 <b>Tube Dist L1</b>	93 <b>Mouse Voice4</b>	
16 <b>Reverse GT A</b>	54 <b>Tube Dist L2</b>	94 <b>Mouse Voice5</b>	
17 <b>Reverse GT B</b>	55 <b>Tube Dist M1</b>	95 <b>Mouse Voice6</b>	
18 <b>Left-Right GT</b>	56 <b>Tube Dist M2</b>	96 <b>Ligh.Doubler</b>	
<b>ECH/Delay</b>	57 <b>Tube Dist H1</b>	97 <b>Med.Doubler</b>	
19 <b>Mono Echo</b>	58 <b>Tube Dist H2</b>	98 <b>Deep Doubler</b>	
20 <b>Stereo Echo</b>	59 <b>Grunge</b>	99 <b>Oct DnDouble</b>	
21 <b>Mono 3/4Echo</b>	60 <b>Meta 1</b>	<b>Chor+Other</b>	
22 <b>Stereo 3/4Echo</b>	61 <b>Fuzz 1</b>	100 <b>Chorus +Rm 1</b>	
23 <b>Mono 4/4Echo</b>	62 <b>Fuzz 2</b>	101 <b>Chorus +Rm 2</b>	
24 <b>Stereo 4/4Echo</b>	63 <b>Sharp</b>	102 <b>Chor.+Hall 1</b>	
25 <b>Mono Triplet</b>	64 <b>Heavy</b>	103 <b>Chor.+Hall 2</b>	
26 <b>Ster Triplet</b>	65 <b>Mess</b>	104 <b>Ch.+Church'</b>	
27 <b>Delay Mono</b>	66 <b>Dist Filter</b>	105 <b>Ch.+Cathed.'</b>	
28 <b>Delay Stereo</b>	<b>Pitch Shift</b>	106 <b>Leslie +Hall</b>	
29 <b>DelFb Mono</b>	67 <b>UpM3rd/Dn4th</b>	107 <b>Leslie +Room</b>	
30 <b>DelFb Stereo</b>	68 <b>Upm3rd/Dn4th</b>	108 <b>Chorus +Ech1</b>	
<b>Chorus</b>	69 <b>UpM3/Dn Aug4</b>	109 <b>Chorus +Ech2</b>	
31 <b>ChorusLight 1</b>	70 <b>Up 4th</b>	110 <b>Chorus +Ech3</b>	
32 <b>ChorusLight 2</b>	71 <b>Down 4th</b>	<b>Flg+Other</b>	
33 <b>Chorus Med 1</b>	72 <b>Up 5th</b>	111 <b>Flg +ShortRm</b>	
34 <b>Chorus Med 2</b>	73 <b>Down 5th</b>	112 <b>Flange+Room</b>	
35 <b>Chorus Deep1</b>	74 <b>Up 6th</b>	113 <b>Flange+Hall</b>	
36 <b>Chorus Deep2</b>	75 <b>Down M6th</b>	114 <b>Flg +Cathed.</b>	
37 <b>Chorus Fast 1</b>	76 <b>Down M6th</b>	115 <b>Flange+Echo'</b>	
38 <b>Chorus Fast 2</b>	77 <b>DnM2nd/Dn4th</b>	116 <b>Pitch other</b>	

## Appendix 4: Technical specification

### Analog Inputs

Connectors	XLR and 1/4" jack
Type	Balanced
Impedance	40k $\Omega$ Balanced, 20k $\Omega$ Unbalanced
Input Level Adjuster	-20dB ~ +4dB
Max Input Level	+7Vpp

### Analog Outputs

Connectors	XLR and 1/4" jack
Type	Electronically Servo-balanced Output
Impedance	<100 $\Omega$
Max Output Level	+10dB $\mu$ , Load in 600 $\Omega$
Frequency Response	20Hz ~ 20KHz, $\pm 0.25$ dB
THD	<0.01% @ 1KHz, Input Level +8dB $\mu$
Channel Separation	>80dB, 20Hz ~ 20KHz Input Level +8dB $\mu$
Noise Gate	-66dB ~ -24dB

### Compressor

Threshold	-48dB~0dB, 1.5dB step
Ratio	1.0~Limit
Attack Time	1.3ms~500ms
Decay time	1.3ms~500ms
Boost Gain	$\times 1$ , $\times 2$ , $\times 4$ , $\times 8$

### Equalizer

Mono mode	2 $\times$ 31Band ISO Frequency Equalizer, $\pm 15$ dB boost/cut gain, 1dB step
Stereo	2 $\times$ 15 Band

### Interface

5-Pin-DIN-Socket MIDI IN(RS232 IN)/MIDI OUT/MIDI THRU

### Digital Process

AD/DA	24 bit Sigma-Delta
Sampling Rate	48KHz
S/PDIF	Coaxial: Input Impedance 75 $\Omega$ Output Impedance 75 $\Omega$

Display 2  $\times$  16 LCD with Backlit

Power Supply 90~250VAC, 50Hz/60Hz

Fuse T1A/250V

Power Consumption 10W  
Mains Connection Standard IEC Receptacle

### Physical

Dimension(H $\times$ W $\times$ D)	45mm $\times$ 480mm $\times$ 152mm
Net weight	2kg
Shipping Weight	3kg