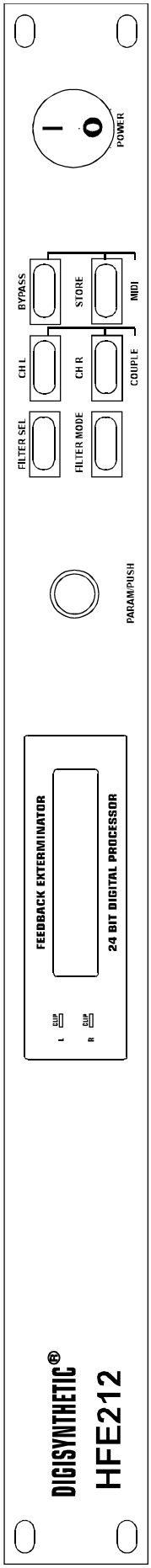
DIGISYNTHETIC® PRO



Instruction Manual

AUTOMATIC FEEDBACK ELIMINATOR
/PEQ

HFE212

ATTENTION!

All DIGISYNTHETIC 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 transportation. Any damage claim should be inform & notify 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 HFE212 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 HFE212 on high temperature devices like power amplifiers etc. to avoid overheating.

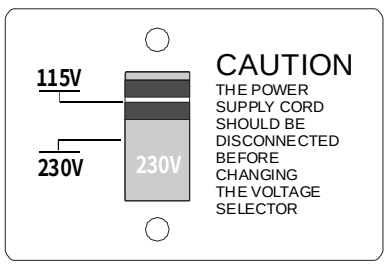
Using a main cable and a standard IEC receptacle makes the main connection of the HFE212. It meets all of the international safety certification requirements.

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.

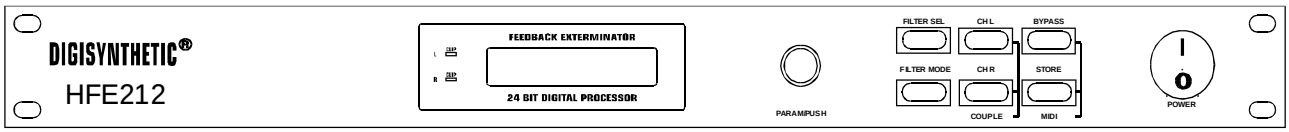
Before switching voltage for local supply requirement, correct fuse type and rate must be installed. Refer to 4.Appendix.

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 HFE212.

NOTICE: Before switching voltage for local supply requirement, correct fuse type and rate must be installed. When the power supply is 230V, fuse is 125mA; and the power supply is 115V, fuse is changed to 250mA. The switch is preseted to 230V in the factory.



DIGISYNTHETIC® MODEL HFE212



- 64/128 time over-sampling for ultra-high resolution, 24-bit A/D & D/A converter, precise analysis
- 12 auto detect feedback frequencies in every channel, intelligent management
- 24 types of editable parametric EQ by either manual or MIDI connection
- Convenient setting enables immediate, complete feedback compress function
- Single preset & auto mode control & Lockable filter until manual adjust or reset
- Manual function able to set 2x12 parameters of filter inclusive of frequency, bandwidth, gain, etc.
- Servo balance input & output, gold plated XLR & TRS connectors
- 3 modes for every filter function: SINGLE, AUTO & MANUAL
- Left & Right channel is able to work individually or combination by dual modular processor
- High quality 24-bit processor ensures effective signal transmission
- Soft touch with relay ON/OFF switch, gate noise function
- 2x16 character back light LCD display screen
- Full MIDI capability allows real time controlling with USER program memory
- High quality components and exceptionally rugged construction ensures durability
- Internal power supply design for professional application

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1. Introduction

HFE212 is a cost-effective machine with auto digital feedback destroyer. It can store up to 10 groups of data, and meet 10 different environmental requirements tone control. It increases signal output from +16dB~48dB. When feedback occurs, HFE212 will analyze through DSP calculation and auto detect & destroy feedback frequencies. Then stores all result to memory. As HFE212 only control & destroy the decay of filter bandwidth It only eliminates the feedback signals and does not affect the music signal with high definition.

(1) Adjustable Filter frequency bandwidth

While in compressing feedback, filter frequency bandwidth is fluctuating and adjustable from 2 times frequency range to 1/60. This compresses feedback effectively.

(2) Adjustable compression Threshold

User can adjust the Threshold of HFE212 to initial feedback filtering in different excited level from -3dB to -9dB.

(3) Displays all parameters

LCD screen with back light to display all filtering parameters in AUTO or SINGLE mode entering parametric EQ manual, e.g.: you are able to read the feedback frequencies, frequency bandwidth & decreasing values. User Is able to make changes from all this data through LCD screen.

(4) Act as Parametric EQ

There are 12 filter in every channel of HFE212. In normal situation, feedback sound will not be more than 3 or 4 frequencies, thus the remainder ones are not been use and can be uterlise as parametric EQ for adju -sting room acoustic & to compensate lost frequencies.

2.Control Front Panel

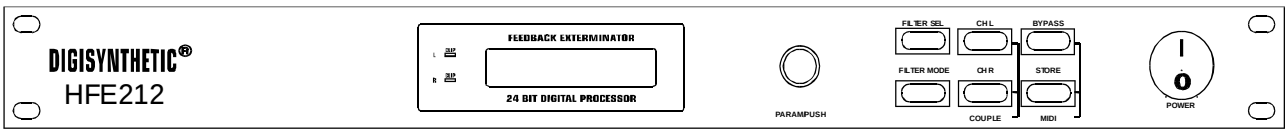


Fig 2.1 HFE212 Front Panel

There are 6 function buttons for control & editing purpose and 1 LCD display screen in the HFE212 Front panel.

2.1 Menu display & functions

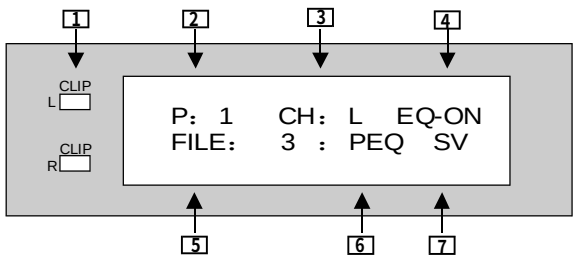


Fig 2.2 Menu selection

(1) **2** LED light for left/right input/output indication.

(2) **"P:"** indicates menu sequence select. Select any sequence from 0~10 by blinking ":" symbol with rotary knob.

(3) "CH:" -- Adjustable Left/Right channel menu display. "CH: L" & "CH: R" indicate able to edit left & right channel respectively. "CH: LR" means left & right channel is able to edit at the same time.
(4) "EQ" -- When this symbol is seen to indicate "EQ-ON". To on all filter: "EQ-OF", Auto & Single not affected, "BYPA." -- BYPASS mode, all filter effect is not functioning.
(5) "FILT:"-- Able to select any filter from 1~12 by knob when ":" blinks.
(6) ":PEQ"-- Turning rotary knob while ":" blinking to select 4 types of filter mode from: OFF (off), PEQ (parametric EQ), AUTO(automatic) & SING(single).
(7) To edit parameters of filter and parametric EQ. LCD reads "SV" to remind user that editable parameters is ready for save & memory by 2 seconds ***slow*** blinking interval. Press "STORE" button once and it will blink ***fast*** for 1 second interval to remind user whether to save or not. Presses "STORE" button one time to save and "SV" will disappear to indicate edited parameters had been save in present sequence. (If user does not press "STORE" while "SV" blinking ***fast*** within 10 times, it will go back to ***slow*** blink)

2.2 Function Buttons & knob

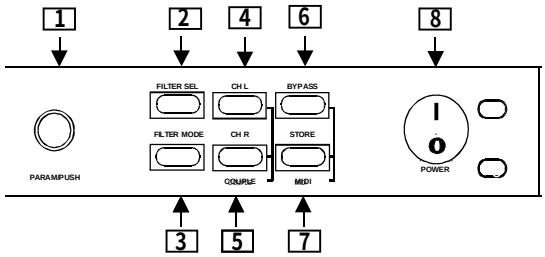


Fig 2.3 Function Buttons & knob

(1) PARAM/PUSH- Rotary knob with ON/OFF ability. While selecting "PEQ" in filter mode, press jog wheel to enter parametric EQ editing (as fig.2.4).

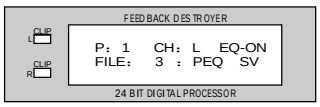


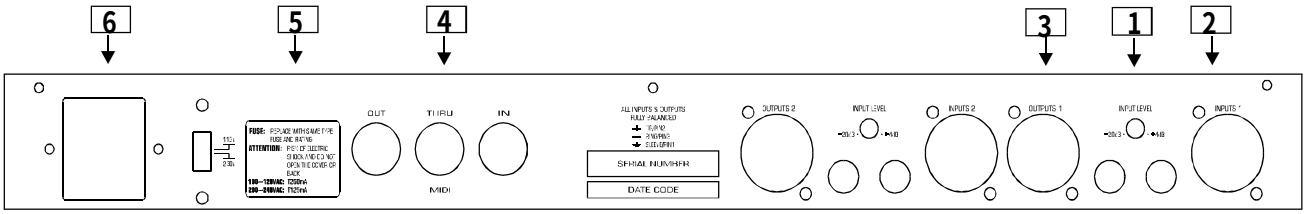
Fig 2.4 Parametric EQ menu

FREQ: To select desire frequency
GAIN: To increase or decrease values for selected filter
BAND: To decide frequency band for selected filter, adjustable values from 2-time frequency range (120/60-octave range) to 1/60 octave range.
(2) FILTER SEL- Sequence & Filter Select Button. Available 12 Filters or 10 channels. Press once to enter Filter, press second times to enter sequence selects.
(3) FILTER MODE- Filter Mode Select Button. Press this button and turn knob to activate "OFF" (off), "PEQ" (parametric EQ), "SING" (single) & "AUTO" (automatic) modes. Press FILTER MODE & PARAM /PUSH button together for 1 second, you are able to adjust Threshold of feedback compression from -3~-9dB.
(4) CHL, (5) CHR- Left and Right channel parameters button enable left & right channel editing. Press CHL & CHR button to activate left & right channel function. Press left channel button "CHL" before pressing "CHR" button to copy left channel parameters to right channel.
(6) IN/OUT (input/output) Button- allows optional bypassing of the parametric equalizer or all filters.
(7) STORE Button- Any preset parameters can be edited by STORE button. (Remarks: Press twice to store data and symbol "SV" will disappear.)

2.3 Combination Buttons

(1) Hold CHL or CHR button (do not release), and press another button to disable Left & Right channel adjus -tment at the same time.
(2) Press FILTER MODE & PARAM/PUSH button to adjust Threshold of feedback destroyer.
(3) Press STORE & IN/OUT button to enter MIDI control menu.
(4) Press FILTER SEL & STORE button then on power supply to display "RESET". System is reset to original factory default status.

2.4 Rear Panel



(1) INPUT LEVEL ADJUSTER: From -20dB ~ +4dB
(2) ANALOG INPUT: XLR or TRS input socket, Parallel between XLR & TRS input. Balance & Unbalance configuration.
(3) ANALOG OUTPUT : XLR or TRS output socket, Parallel between XLR & TRS input. Balance & Unba -lance configuration.
(4) MIDI OUT/THROUGH/IN : Able for total Remote Control via MIDI Channel.
(5) AC VOLTAGE-SELECTOR: Make sure that the selector is properly set.
(6) MAIN CONNECTOR/FUSE HOLDER/VOLTAGE SELECTOR: Before you connect the unit, please make sure that the displayed voltage corresponds to your Mains supply, Please note that the AC voltage selection is defined by the position of the Fuse Holder. If you intend to change the two markers monitors the selected voltage, Please note that, depending on the mains voltage supplied to the unit, the correct fuse type and rate must be installed (see 4.3 Technical Specifications). Please use the enclosed main cable to connect the unit to the mains power supply.

3. Function Descriptions

HFE212 is able to work with 4 different modes. In order to meet flexible & complicated signal processing, you may combine all the 4 modes in one sequence.

3.1 Activate & Cancel Filter mode

During "OFF" mode, Filter will be cancel able to activate by below selection:

3.2 Manual Filter/Parametric EQ

HFE212 is able to process any musical signal. To increase or decrease fix frequency level, you may use manual filter to select all these frequencies (parametric EQ mode). Every filter is able to set central frequency, octave band (1/60) & increase/decrease value (in dB).

3.3 Auto Filter

The AUTO Filter will work with 2 types of modes: SINGLE & AUTO mode. In order to sense feedback, HFE212 will divide the entire frequency bandwidth 1/60 octave steps (20Hz~20kHz) and decide on this Frequency band responsive level, evaluate and comparing this value & the entire signal level, thus the Different Value in signal level will determine whether to activate filter or not. You may change the feedback sensitivity From -3dB ~ -9dB (in 1dB Steps). The standard value is -6dB and is applicable in most of the feedback

Reconization & situation. In solely speech transmission, you may lower the feedback sensitivity to -9dB. This will compress feedback speedily. On the other hand, increase in feedback sensitivity (e.g. -3dB) will be More stabilize, but will be slower in detecting the feedback signal.
SINGLE mode in filtering process will analyze music signal automatically in order to detect feedback frequencies. Once detected the feedback frequencies, filter will set its parameters to compress feedback automatically. As filter is lock on detected feedback frequencies, thus these types of mode are very suitable for compressing feedback with constant frequency. Effective application such as fixed located microphone (e.g. inside a permanent installed conference room system). Although Filter will adjust automatically and enter to a lock mode to fix the frequencies, but the octave band and depth of filter are still effective for feedback frequencies. Once feedback frequencies move, there will be an increase in octave band range resulting feedback in preference and decrease in gain till feedback repeated.
All moveable microphones are advice to work with AUTO mode for feedback control as they always have changeable feedback frequencies. Under AUTO mode operation, filter will follow & compress feedback frequencies even frequencies moved about. Filter will set its parameter as narrow band as possible and not to affect musical signal.

3.4 Sequence Select

In order to store and save your favorable preset, HFE212 consist of 10 USER program preset sequence and shortcut preset sequence. All operated parameters are able to store in shortcut sequence manual for user to select desire program. All data is good for 20 years and above storage memory. In shortcut preset (display "0". It acts as user's basic sequence, NOT user's memory channel), all filter maintain at its parameter mode, octave band will set at 1 time frequency range, frequency as 500Hz and 0dB gain.

3.4.1 Adjusting Sequence

After power is on, HFE212 will display previously used preset value. Turning knob to select your desire preset value.

3.4.2 Program Sequence Select

Fig. 3.1 Displays all Filter mode program.

Display	Operation Modes
OFF	Disable
PEQ	Parametric EQ
AUTO	Automatic
SING	Single
LOCK	Lock

Fig.3.1 HFE212 Filter Operation Modes

To alter filter mode: First, press FIL SEL (filter select) button and select filter from 1~12 by knob. Use CH (channel select) button not only to select left **or** right channel but also selection of both left **and** right channel. Then press FILTER MODE (filter mode) button and turn rotary knob to select filter mode.
If "LOCK" displays to indicate there is a filter from SINGLE mode already in processing with feedback situation. You are not able to release this filtration by going back to SINGLE mode. Once discover new feedback point, HFE212 will immediately shirt the previous filter frequency to a new one. If you escape from AUTO & SINGLE mode and entering parameter mode, filter will remain all parameters that have been set.

3.4.3 Adjusting Filter parameter

In order to adjust Filter setting, it must be set inside parametric EQ mode. Press knob to select FREQ (frequency) menu, turn knob to select desire ISO frequency. In FINE (fine) Manual, user is able to fine tune selected ISO frequency (in1/60-octave steps) within 1/3 octave band to display mathematics ratio between value & confirmed frequency, and detect desire frequency speedily. At this moment, user may adjust filter octave band from 2 times frequency range to 1/60 times frequency range by selecting BAND

(band). Select GAIN (gain) Menu to increase or decrease desire dB gain in selected frequency. "+" Means increase in level and "-" means decrease. During SINGLE & AUTO mode, you are not able to edit any Filter parameter. You are only able to adjust Filter parameter in these modes for similar filter frequency and octave band with 0dB gain. Simply press FILTER MODE button and hold for 2 seconds to re start a lock Filter by selecting SINGLE or AUTO mode.

3.4.4 Store Sequence

Use STORE button to activate store sequence. Basically, all edited parameter in parametric EQ mode is able to store & save. Filter will adjust automatically and save required data under SINGLE & AUTO mode operation. E.g.:

To edit a sequence by function button & knob. LCD displays 2 seconds interval blinking "SV" (save) symbol, this is to indicate preset has been edited but not been save yet. Press FILTER SEL button to enter sequence select channel manual, press STORE button once and "SV" symbol will blink fast in 1-second interval. In order to maintain original setting, you may use knob to select an editable different preset channel no. Press STORE button again, "SV" symbol will disappear and save data in the selected preset store channel no. If user wish to change original preset, simply press STORE button twice after editing to store all the changes.

Remarks: When you change a preset and press STORE button twice, then all the data before this preset will be void and only new parameter will be rewrite. But if you wish to keep previous setting, then you have to select another preset store channel no (by knob) before you press STORE button second time.

3.5 MIDI control

Use the MIDI key combination to select the MIDI parameters you wish to adjust. For this purpose press and keep the IN/OUT and the STORE buttons. All parameters can be edited with the knob and the IN /OUT button. The MIDI menu includes 6 pages, which you can select by pressing the IN/OUT button several times. In page 1, you are able to select MIDI channel as display "CH-XX" in screen. User is able to select channel from OFF to 1 through 16 by knob. To disable MIDI function, simply select "OFF".

You are able to select full MIDI mode in 2nd page. This means the unit transmits/receives on all 16 MIDI channels. "Omni" will display in screen and by turning knob to "ON" or "OFF" to enable or disable all function modes.

User is able to configure controller commands in the 3rd page. "CONTROLX" will display in screen and jog wheel selects one of the following 4 controller modes:

Display	Modes
CONTROL0	No controller data are transmitted
CONTROL1	Controller data are received but not transmitted
CONTROL2	Controller data are transmitted but not received
CONTROL3	Controller data are transmitted and received
CONTROL4	Similar to 3 with Filter sequence no

Fig.3.2 Controller Settings

When you select controller 4, you may select different menus from frequency, gain, fine tune frequency. HFE212 will send auto filter parameter.

The fourth page gives you access to the program change setup. The display reads "ProgramX", here, too. Four modes can be selected with the knob, as follows:

Display	Modes
Program0	Program changes are not transmitted
Program1	Program changes are received but not transmitted
Program2	Program changes are transmitted but not received
Program3	Program changes are transmitted and received

Fig.3.3 Program change settings

The fifth page of the MIDI menu shows the "SAVE" symbol in the display. The "SAVE OFF" disable the reception of controller #28, and therefore protects the user presets from being modified via MIDI. Accordingly, the "SAVE ON " value enables MIDI controller #28 so that you can modify or replace presets with a remote MIDI device or a sequencer. In this case the actual settings will be stored directly to the location that corresponds to the controller value.

ATTENTION! Since the "store enable" mode allows you to access memory locations directly via MIDI, it is possible that stored presets will be replaced or altered if controller #28 messages are sent on the same MIDI channel. The purpose of this mode is to facilitate MIDI backup and restore operations without express conformation at the HFE212. It is therefore recommended to disable "SAVE OFF" mode as soon as the intended data transfer has ended. This is done automatically when you switch off the HFE212.

On the sixth, and presently the last, page you can access the "System Exclusive"(SYSEX) functions. This is indicated by a "d" (for dump) in the display.

-SYS OFF means that no SYSEX data will be sent or accepted.

-SYS RXD will enable the HFE212 to receive data. When STORE is pressed the unit will wait for data; this is shown by "RXD" flashing.

-SYS TXD will enable the HFE212 to send a "bulk dump". Start your sequencer and press STORE on the HFE212 to start the transmission. OFF will display when transmission is completed.

During a bulk dump, all audio functions of the HFE212 will be deactivated.

To load these settings again, press STORE and start your sequencer, If your press IN/OUT button again, you will leave the MIDI setup. You can at all times press any other key to leave the MIDI setup directly. HFE212 has total command of MIDI ability and able to combine & work with any MIDI system.

MIDI IN

Any MIDI data sent to the HFE212 (sequencer, MIDI footswitch, etc) are received via the MIDI IN jack. For example, when you wish to use the HFE212 as an effects devices for our guitar rack, you can connect the MIDI IN jack to a MIDI footswitch that allows for selecting program presets. If your rack includes an -other MIDI effects devices (e.g. a multi-effects processor), the data sent from the MIDI footswitch can be routed via the HFE212 MIDI THRU jack to your multi-effects processor.

MIDI THRU

The MIDI THRU jack is used to loop through incoming MIDI data; i.e. any control received at the MIDI IN of the HFE212 can be transmitted via MIDI THRU jack to other MIDI devices or instruments.

MIDI OUT

The MIDI OUT jack allows for transmitting MIDI data that originate from the HFE212.

4.Appendix

4.1 Frequency data chart

Display	-9/60	-8/60	-6/60	-4/60	-2/60	ISO	+2/60	+4/60	+6/60	+8/60	+10/60	Display
20Hz						20	20.5	21	21.5	22	22.5	20Hz
25Hz	22.8	23	23.5	24	24.5	25	25.7	26.3	27	27.6	28.3	25Hz
32Hz	28.6	28.9	29.6	30.2	30.9	31.5	32.4	33.2	34.1	34.9	35.8	32Hz
40Hz	36.2	36.6	37.5	38.3	39.2	40	41	42	43	44	45	40Hz
50Hz	45.5	46	47	48	49	50	51	53	54	55	57	50Hz
63Hz	57	58	59	60	62	63	65	66	68	70	71.5	63Hz
80Hz	72.4	73	75	77	78	80	82	84	86	88	90	80Hz
100Hz	91	92	94	96	98	100	103	105	108	110	113	100Hz
125Hz	114	115	118	120	123	125	129	132	136	139	143	125Hz
160Hz	144	146	150	153	157	160	164	168	172	176	180	160Hz
.20KHz	182	184	188	192	196	200	205	210	215	220	225	.20KHz
.25KHz	228	230	235	240	245	250	257	263	270	276	283	.25KHz
.32KHz	286	289	296	302	309	315	324	332	341	349	358	.32KHz
.40KHz	362	366	375	383	392	400	410	420	430	440	450	.40KHz
.50KHz	455	160	470	480	490	500	513	526	539	552	565	.50KHz
.63KHz	572	578	591	604	617	630	647	664	681	698	715	.63KHz
.80KHz	724	732	749	766	783	800	820	840	860	880	900	.80KHz
1.00KHz	910	920	940	960	980	1000	1025	1050	1075	1100	1125	1.00KHz
1.25KHz	1138	1150	1175	1200	1225	1250	1285	1320	1355	1390	1425	1.25KHz
1.60KHz	1443	1460	1495	1530	1565	1600	1640	1680	1720	1760	1800	1.60KHz
2.0KHz	1820	1840	1880	1920	1960	2000	2050	2100	2150	2200	2250	2.0KHz
2.5KHz	2275	2300	2350	2400	2450	2500	2565	2630	2695	2760	2825	2.5KHz
3.2KHz	2858	2890	2955	3020	3085	3150	3235	3320	3405	3490	3575	3.2KHz
4.0KHz	3618	3660	3745	3830	3915	4000	4100	4200	4300	4400	4500	4.0KHz
5.0KHz	4550	4600	4700	4800	4900	5000	5130	5260	5390	5520	5650	5.0KHz
6.3KHz	5715	5780	5910	6040	6170	6300	6470	6640	6810	6980	7150	6.3KHz
8.0KHz	7235	7320	7490	7660	7830	8000	8200	8400	8600	8800	9000	8.0KHz
10.0KHz	9100	9200	9400	9600	9800	10000	10250	10500	10750	11000	11250	10.0KHz
12.5KHz	11375	11500	11750	12000	12250	12500	12850	13200	13550	13900	14250	12.5KHz
16.0KHz	14425	14600	14950	15300	15650	16000	16400	16800	17200	17600	18000	16.0KHz
20KHz	18200	18400	18800	19200	19600	20000						20KHz

4.2 Preset table

Preset	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8	Filter 9	Filter 10	Filter 11	Filter 12
1	MONO:9 single shot filters attenuate room resonance before 3 automatic filters destroy variable feedbacks											
Left	SING	SING	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	AUTO
Right	SING	SING	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	AUTO
2	2xMONITOR AS FEEDBACK DESTROYER ONLY:7 single shots/5 automatic filters for most monitor setup											
Left	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	AUTO	AUTO	AUTO
Right	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	AUTO	AUTO	AUTO
3	MONO AUTO PILOT:12 filters per channel constantly chase and destroy feedbacks											
Left	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO
Right	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO	AUTO
4	STEREO PARAMETRIC EQ:Preset with 12 ISO frequencies, all set to 1/3 octave,gain +0dB											
Couple	125Hz	160Hz	200Hz	250Hz	315Hz		500Hz	630Hz	800Hz	1K	1.25K	1.6K
5	STEREO PARAMETRIC EQ:Preset with 12 ISO frequencies,all set to 2/3 octave,gain +0dB											
Couple	40Hz	63Hz	100Hz	160Hz	250Hz	400Hz	630Hz	1K	1.6K	2.5K	4K	6.3K
6	23MONO:Sample monitoring,left for handheld(lead)microphone(s),right for fixed(backing)ones											
Left	SING	SING	SING	AUTO	AUTO	AUTO	AUTO	AUTO	PEQ	PEQ	PEQ	PEQ
Right	SING	SING	SING	SING	SING	AUTO	AUTO	AUTO	PEQ	PEQ	PEQ	PEQ
7	MONO PARAMETRI AND SINGLE SHOT FILTERS: A good start for fixed(backing)ones											
Left	SING	SING	SING	SING	SING	SING	SING	SING	PEQ	PEQ	PEQ	PEQ
Right	SING	SING	SING	SING	SING	SING	SING	SING	PEQ	PEQ	PEQ	PEQ
8	STEREO FOH EQ:providing 4 parametric EQ (low roll in filter and 2),plus 8 single shot filters											
	PEQ	PEQ	PEQ	SING	SING	SING	SING	SING	SING	SING	SING	
Couple	40Hz	80Hz										
		10ct.	Channels coupled,changes onone channel are valid for both.									
	-8dB	-4dB										
9	MONO FREE											
Left	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	PEQ	PEQ	PEQ
Right	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	PEQ	PEQ	PEQ
10	STEREO FREE											
Couple	SING	SING	SING	SING	SING	SING	SING	AUTO	AUTO	PEQ	PEQ	PEQ

4.3 Specifications

Analog Inputs

Connectors	XLR and 1/4" jack
Type	RF filtered, servo balanced , 20kOhms unbalanced
Impedance	40kOhms balanced, 20kOhms unbalanced
Nominal Operating Level	-20dB to +4dB
Max. Input Level	+16dB at +4dB nominal level, +2dB at -20dB nominal level

Analog Outputs

Connectors	XLR and 1/4" jack
Type	Electronically servo-balanced output stage
Impedance	66Ohms balanced, 33Ohms unbalanced
Max. Output Level	+16dB at +4dB nominal level, +2dB at -20dB nominal level

System specifications

Bandwidth	20Hz to 20KHz
S/N	98dB, weighted, 20Hz to 20KHz
THD	0.065%typ. @+4dB, 1KHz, Gain 1
Crosstalk	-95dB, 20Hz to 20KHz

MIDI Interface

Type	5-Pin-DIN-Socket IN/OUT/THRU

Digital Processing

Converters	24-bit Sigma-Delta, 64/128-times Over-sampling
Sampling Rate	48KHz

Display

Type	16X2 LCD-Display

Power Supply

Mains Voltages	115VAC, 50-60Hz 230VAC, 50-60Hz
Fuse	115VAC:250mA 230VAC:125mA
Power Consumption	10 Watts
Mains Connection	Standard IEC receptacle

Physical

Dimensions(H*W*D)	45mmX482mmX152mm
Shipping Weight	3kg

All technical specifications in DIGISYNTHETIC products are subject to changes for product improvement *with* or *without* NOTICE.