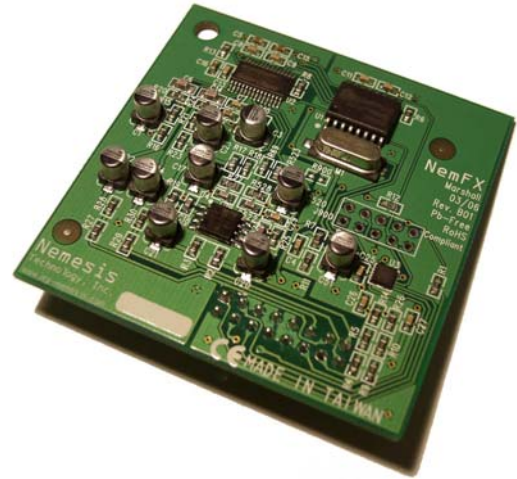


Evaluation Board For NemFX M-Type Version Digital Multi-Effects Module



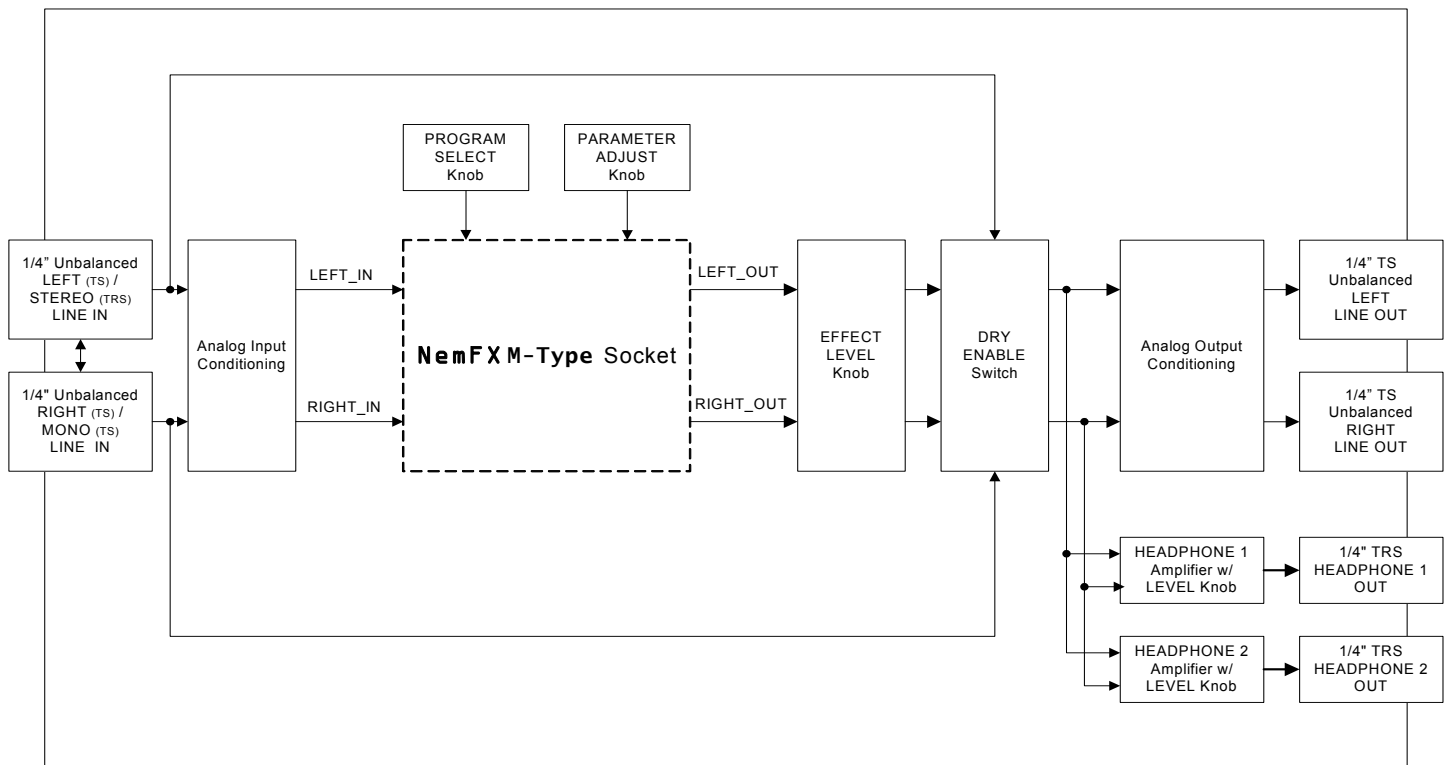
Features

- 1/4" Line Inputs
- Program Select Knob
- Parameter Adjust Knob
- Effect Level Control Knob
- Dry Signal Enable Switch
- 1/4" Line Outputs
- Dual 1/4" Headphone Outputs

Description

The NemFX M-Type Evaluation Board is an excellent means for evaluating the popular NemFX M-Type Digital Multi-Effects Modules. Standard 1/4" Line Inputs and Outputs enable easy connection to commonly available signals. Dual 1/4" Headphone Outputs allow convenient critical listening. The Program Select and Parameter Adjust Knobs provide for easy, complete control of the Module. The Effect Level Knob and Dry Signal Enable Switch allow quick experimenting with wet/dry mix levels.

Block Diagram



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Application Information

Power Supply

The Evaluation Board requires a 9V AC 1000 mA power supply.

Line Inputs

A 5.6 Vpp single-ended signal will drive the NemFX M-Type Module inputs to full scale.

The 1/4" Line Inputs provide for several ways of connecting to stereo or mono line-level input sources.

To connect to a **stereo** input source using **two 1/4" Tip-Sleeve (TS)** cables:

- Plug the left source into the LEFT/STEREO LINE IN jack.
- Plug the right source into the RIGHT/MONO LINE IN jack.

To connect to a **stereo** input source using a **single 1/4" Tip-Ring-Sleeve (TRS)** cable:

- Plug the stereo source into the LEFT/STEREO LINE IN jack. The left channel should be on the Tip and the right channel should be on the Ring. Do not plug anything into the RIGHT/MONO LINE IN jack.

To connect to a **mono** input source using a **single 1/4" Tip-Sleeve (TS)** cable:

- Plug the mono source into the RIGHT/MONO LINE IN jack. Do not plug anything into the LEFT/STEREO LINE IN jack.

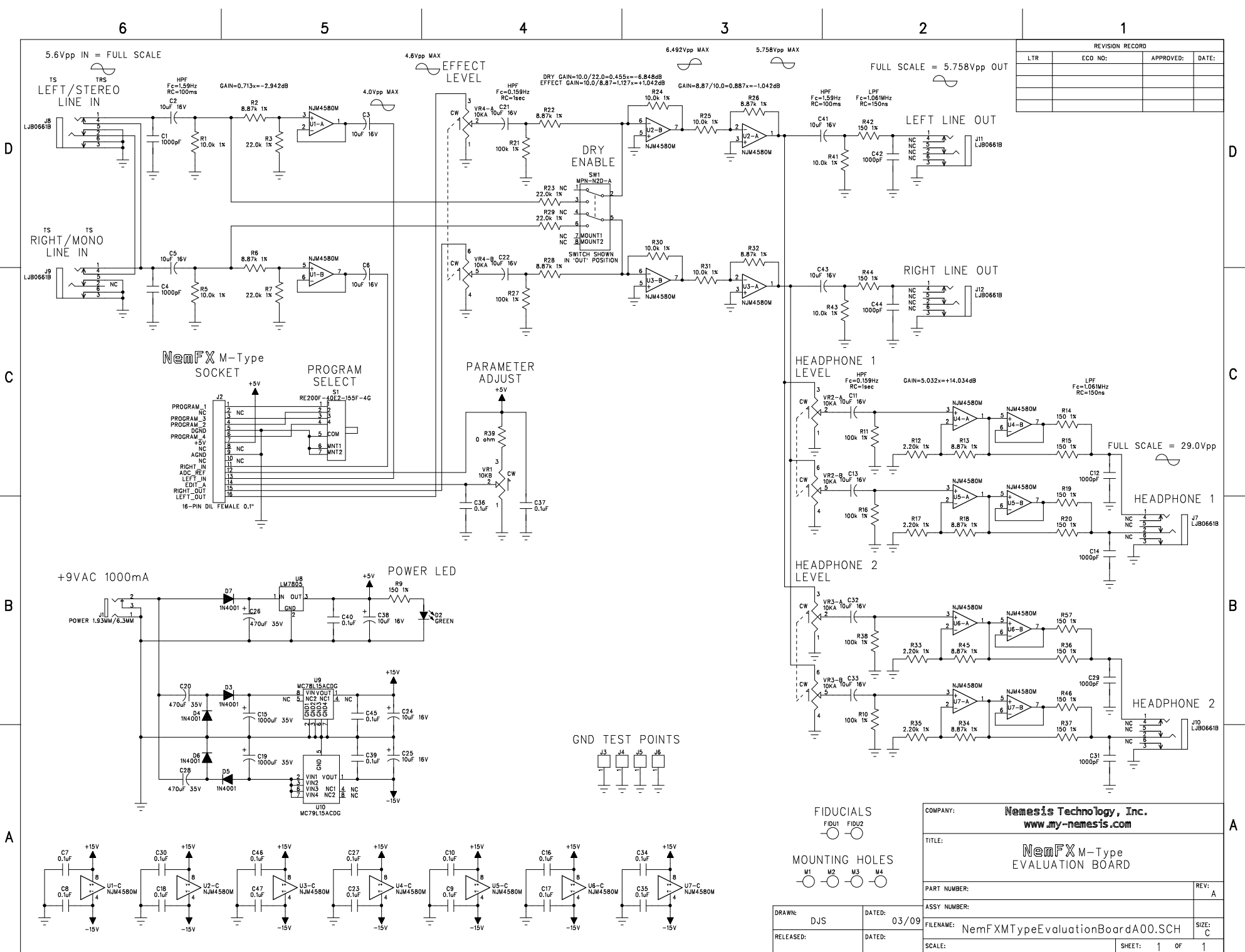
Line Outputs

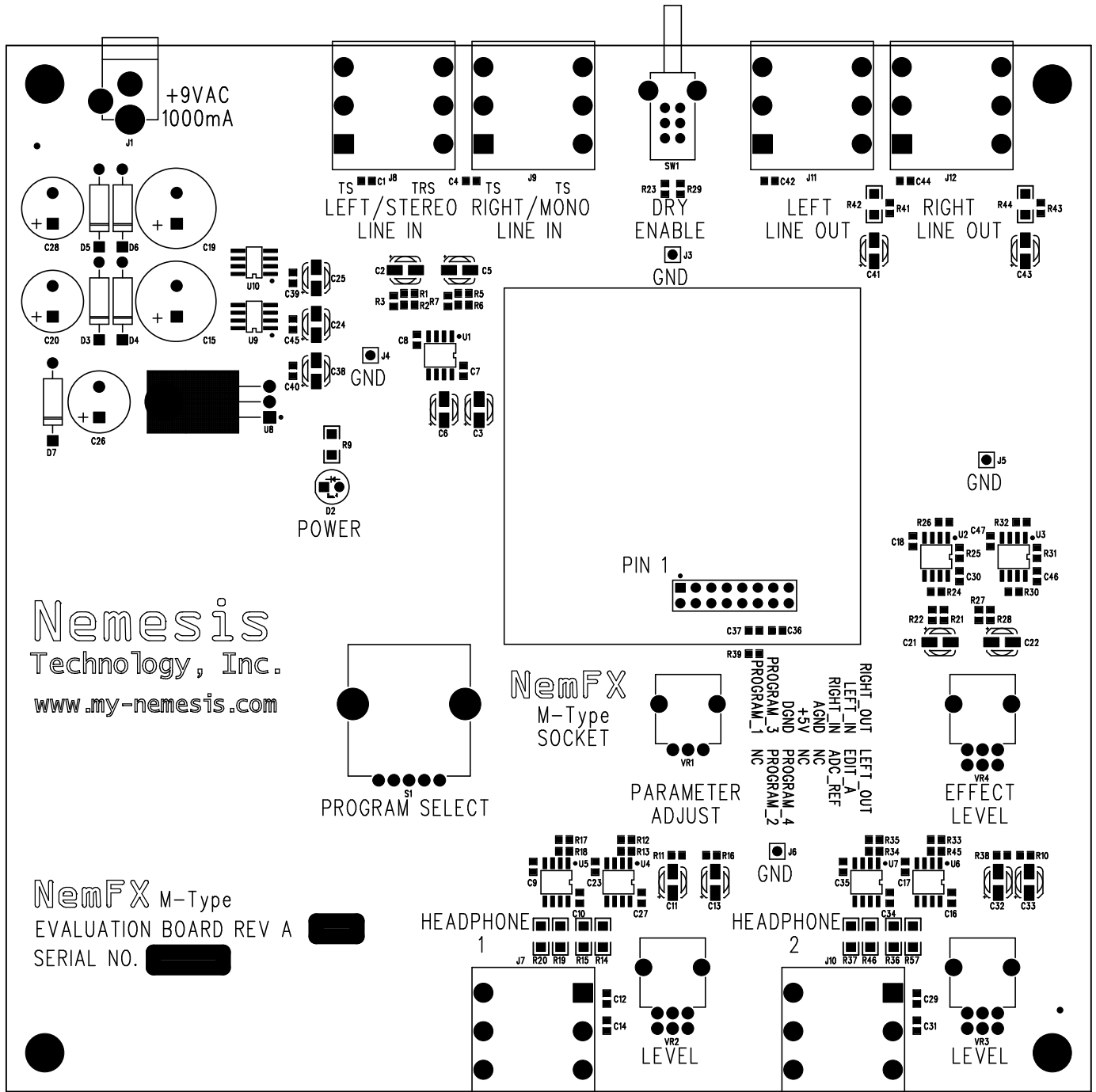
When the Evaluation Board's Line Inputs are driven to a 5.6 Vpp maximum input level and the EFFECT LEVEL Knob is set to maximum and the DRY ENABLE Switch is IN, then the Line Outputs will output a maximum 5.758 Vpp single-ended signal.

Controlling the Wet and Dry Mix Ratio

The EFFECT LEVEL Knob allows the "wet" level coming from the NemFX M-Type Module to be adjusted from off to full scale. The DRY ENABLE Switch allows the original, un-effected "dry" signal to be switched on or off. Using these two controls in combination enables easy comparison of the dry versus the wet signal. Varying the ratio of wet and dry levels can change the sound dramatically.

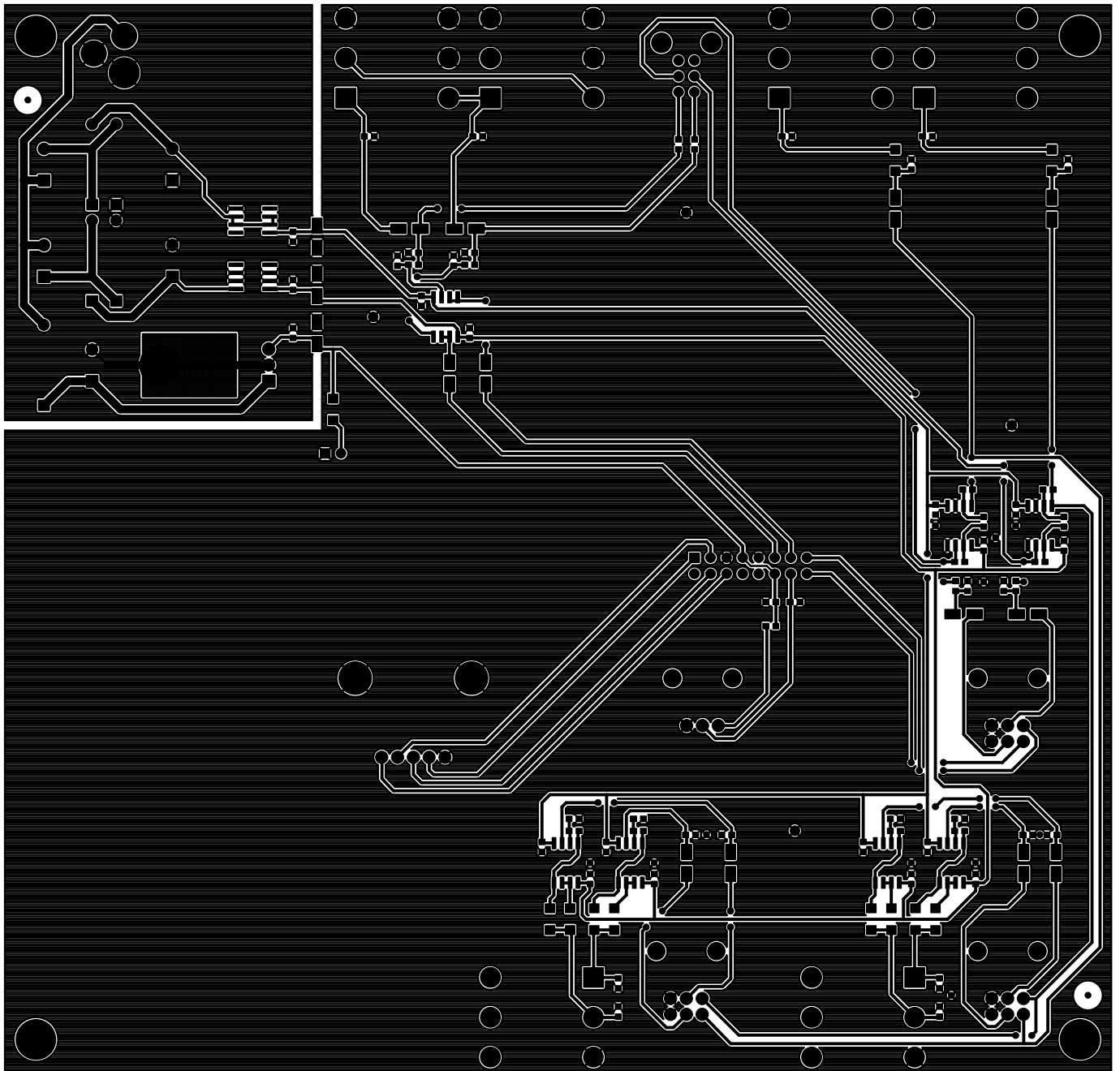
For best results, Nemesis recommends mixing the wet signal about 6 dB higher than the dry signal. On the Evaluation Board, this can be achieved by setting the EFFECT LEVEL Knob to maximum and pushing the DRY ENABLE Switch to the IN position.

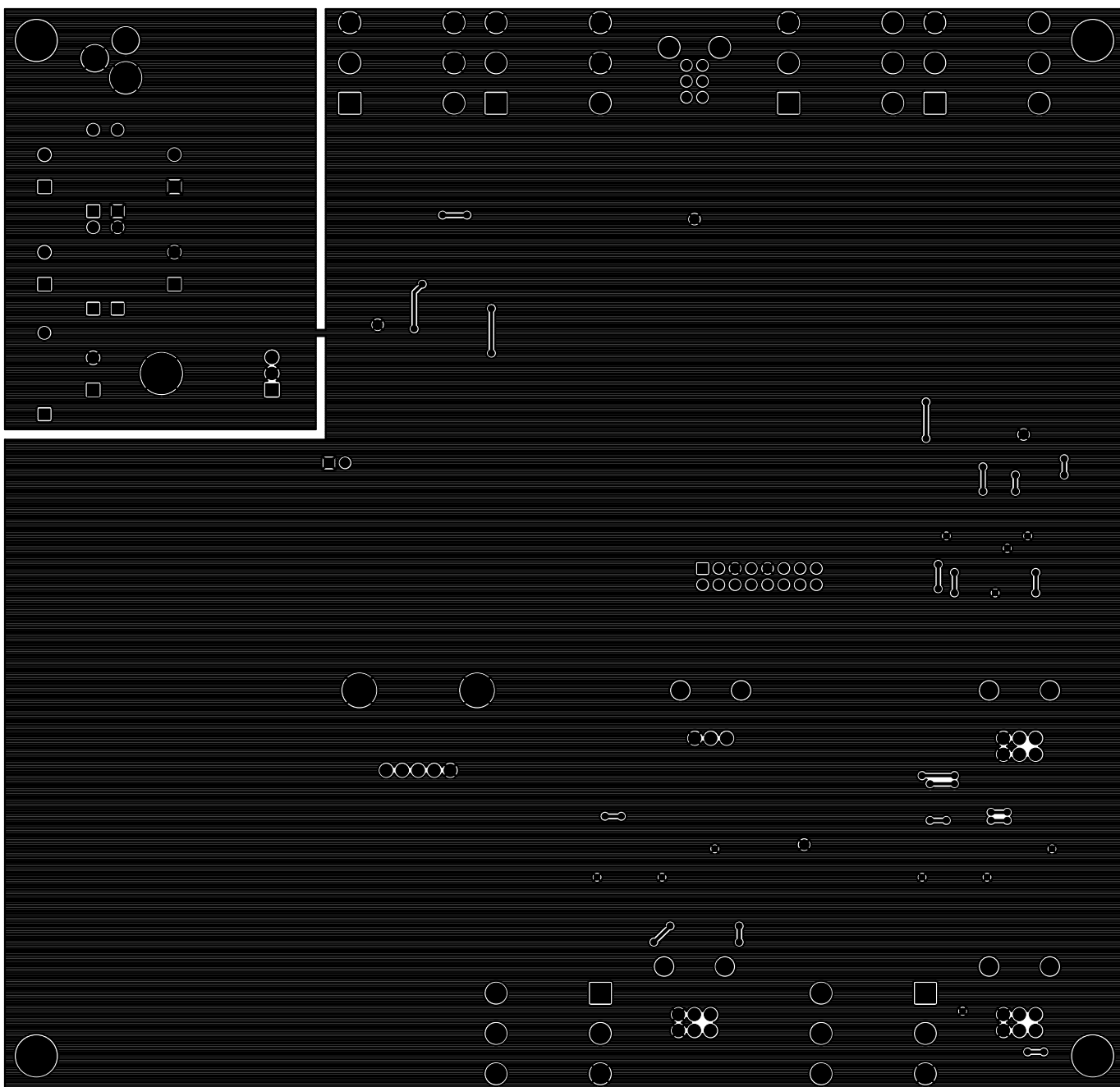




Nemesis
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NemFX M-Type
EVALUATION BOARD REV A
SERIAL NO. [REDACTED]





Item	Qty	Reference(s)	PART DESC	MFG	MFG P/N
			PCB Assembly Nemesis NemFX M-Type Evaluation Board Revision A00	(Nemesis custom)	
1	11	R9 R14-15 R19-20 R36-37 R42 R44 R46 R57	RES 150 OHM 1% 1/4W 1206	YAGEO	RC1206FR-07150RL
2	1	R39	RES 0 ohm 5% 1/10W 0603		
3	8	R1 R5 R24-25 R30-31 R41 R43	RES 10.0k 1% 1/10W 0603		
4	6	R10-11 R16 R21 R27 R38	RES 100k 1% 1/10W 0603		
5	4	R12 R17 R33 R35	RES 2.20k 1% 1/10W 0603		
6	4	R3 R7 R23 R29	RES 22.0k 1% 1/10W 0603		
7	10	R2 R6 R13 R18 R22 R26 R28 R32 R34 R45	RES 8.87k 1% 1/10W 0603		
8	1	VR1	POT SINGLE 10KB PCB MOUNT VERTICAL METAL SHAFT 9mm RK09L ALPS	ALPS	RK09L114001T
9	3	VR2-4	POT DUAL 10KA PCB MOUNT VERTICAL METAL SHAFT 9mm RK09L ALPS	ALPS	RK09L12D0A1T
10	2	C15 C19	CAP ELEC 1000uF 35V THRU 5MM		
11	3	C20 C26 C28	CAP ELEC 470uF 35V THRU 5MM		
12	8	C1 C4 C12 C14 C29 C31 C42 C44	CAP CERAMIC 1000pF 16V X7R 0603		
13	19	C7-10 C16-18 C23 C27 C30 C34-37 C39-40 C45-47	CAP 0.1uF X7R 0603 50V +/-10%		
14	15	C2-3 C5-6 C11 C13 C21-22 C24-25 C32-33 C38 C41 C43	CAP 10uF ELEC 16V SMT 4x5.4mm 85 degC	Nichicon	UWX1C100MCL1GB
15	5	D3-7	DIODE POWER 1N4001	FAIRCHILD	1N4001
16	1	U8	REG LM7805 +5V TO-220	NATIONAL	LM340T-5.0
17	7	U1-7	IC NJM4580M DUAL OPAMP 8-PIN SOP 0.2"	NJR	NJM4580M
18	1	U9	IC REG LINEAR +15V 100mA MC78L15ACDG SOIC-8 Pb-Free	ON SEMICONDUCTOR	MC78L15ACDG
19	1	U10	IC REG LINEAR -15V 100mA MC79L15ACDG SOIC-8 Pb-Free	ON SEMICONDUCTOR	MC79L15ACDG
20	1	D2	LED GREEN T1-3/4		
21	6	J7-12	JACK 1/4" TRS W/ TRS SW LIH SHENG LJB0661B	LIH SHENG	LJB0661B-6
22	1	J1	JACK POWER 1.93MM/6.3MM RA SWITCHCRAFT RAPC722	SWITCHCRAFT	RAPC722
23	4	J3-6	HDR 1-PIN		
24	1	J2	HEADER FEMALE 16-PIN DIL 0.1"		
25	1	S1	4-BIT GRAY ROTARY SHAFT ENCODER 20mm VERTICAL	ALPHA	RE200F-40E2-155F-4G
26	1	SW1	SWITCH MINI. PUSH DPDT LOCKING PCB-MNT TONELUCK MPN-S2D-A	TONELUCK SWITCH	MPN-S2D-A
27	1		PCB Nemesis NemFX M-Type Evaluation Board Revision A	(Nemesis custom)	

Important Information

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NemFX Modules are electronic devices and should be handled in static safe and otherwise appropriate manner. Nemesis Technology, Inc. will not be held responsible for any mishandling of NemFX Modules.

Nemesis Technology, Inc. will, however, accept responsibility for adding the sweet sounds of reverb and other effects to your audio products.

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