

DATA SHEET

DSTB03AEN - May 2012 - Rev. 3a

TEST BOARD for
D. R. E. I. ALL INSIDE
(Dynamic Reduction of Electronic Interactions)

FEATURES

- Two Channels / Stereophonic
- Completely analog audio processing
- Developed to test the DREi tech All Inside module
- Low Power Consumption 50mA
- Supply Range $\pm 15V$ to $\pm 18V$
- Maximum input 2.8Vrms
- 10 pin connector
- Extremely simple to use
- Includes all of the components
- It allows bypass between input/output
- Includes 3 Resistors Response Control positions

AUDIO APPLICATIONS

- Audio MIX consoles
- Preamplifiers
- Amplifiers
- Distribution amplifiers
- CD, DVD, SACD, BRD players
- Graphic/Parametric equalizers
- Various processors
- Hi-Fi & PRO Audio equipment
- DACs, A/D & D/A converters.
- Broadcasting equipment
- Active speakers & Subwoofers
- Any audio system.

DESCRIPTION

This PCB TEST BOARD is aimed at the technicians and engineers responsible for designing audio systems and includes everything you need to check the operation of the "DREi ALL INSIDE" Neutral Audio Technologies module so you can evaluate its integration in future systems.

Its simple connection allows you to use it with any existing audio system. You only need a symmetric power supply between ± 15 and $\pm 18Vdc$ and the audio signal at line level with a maximum of 2.8Vrms

It includes a switch that allows you to bypass the input to the output, so you can check in real-time the effect of DREi technology in the system in which it has been inserted.

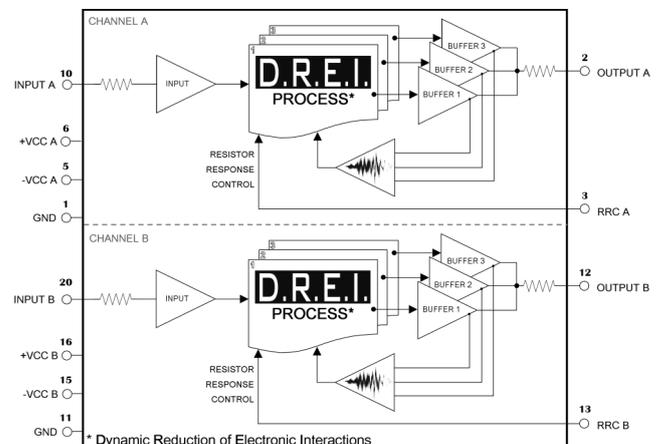
It includes two switches to check the performance through R.R.C. of the buffer controls. (Please view the module DREi All Inside module documentation for more information on this).

No adjustments are needed, no software control protocols. The audio signal doesn't suffer any digital process, everything is done in the analog domain.

Order the TEST BOARD through the [form on the web](#) or by e-mail to info@neutralaudio.com

D.R.E.i. TECHNOLOGY www.x-drei.com

There are DREi ALL INSIDE libraries available on the web which you can download to help you design using CAD.



We also offer a customized integration service. You can send us the equipment you want to update with a DREi module to our customer technical service department and we will install it.

PRODUCTION DATA information is current as of publication date. The specifications might have changed. Production processing does not necessarily include testing of all parameters.

CONNECTION

The pcb "DREi ALL INSIDE" circuit test board includes everything needed for its function and needs only to apply the appropriate voltages. Internally it consists of two monophonic blocks, channel A and B that can be used interchangeably.

You must supply a voltage within $\pm 15Vdc$ and $\pm 18Vdc$ of the highest possible quality. The consume does not exceed 50mA when fully operational.

At the input of each channel you must apply an audio signal with a line level that does not exceed 2.8Vrms, usually the output of the test board is returned to the origin point. For example in a preamp the audio signal source could be taken from the volume control, on a mixer at the output of the master, in an amplifier in the input, on a DAC in the output of the D/A converter, etc.

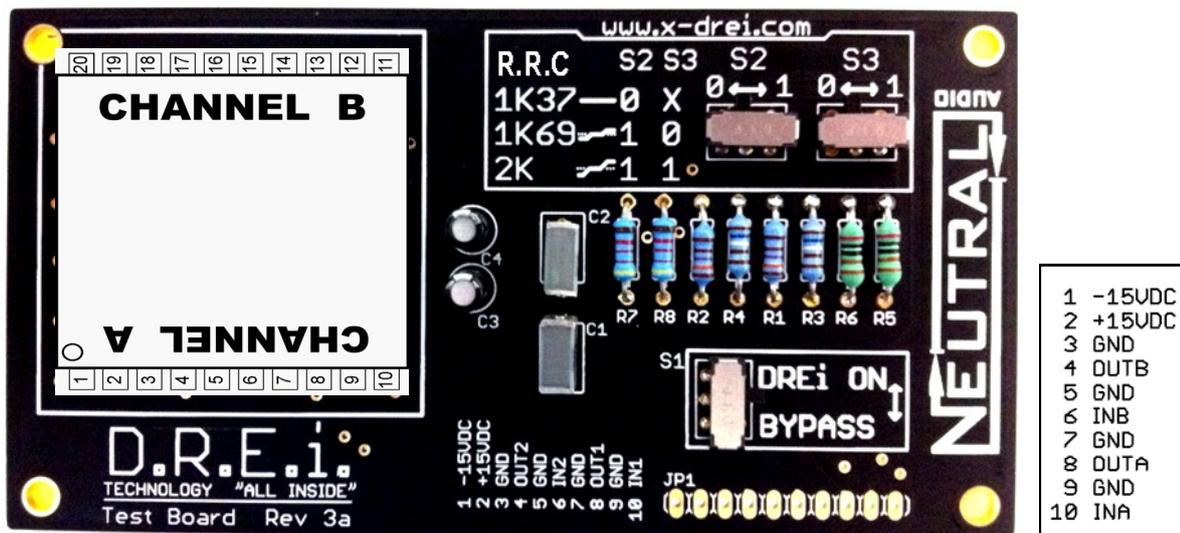


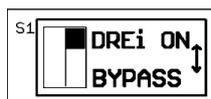
Figure 1

Two electrolytic capacitors (C3 and C4) of 1uF/25V have been placed at each voltage terminal to filter any noise in the current.

Two capacitors (C1 and C2) are included at the audio signal output between 1uF and 10uF Non Polarized and (R7 and R8) resistors of 42K2 to decouple the circuit and remove the small DC that may be generated or that may be present at the input. This DC at the input is not a problem for the operation, but if it is high you should consider placing another similar capacitor at the input.

SWITCH S1 "BYPASS ↔ DREi ON"

The S1 switch situated at the input makes a bypass of the audio signal in both channels and switches it to the output without going through the DREi tech, so you can experience directly, and without disconnecting any cables the benefits of the DREi tech to your audio circuits. It can be activated without turning off the Test Board.



R.R.C. RESISTOR RESPONSE CONTROL

A plus of DREi All Inside is the ability to alter the dynamic response of the internal buffers and thus adapt the final response to the tastes and needs of the designer, or the customer. The DREi process always operates 100% regardless of this setting.

For a better understanding a graph (figure2) is attached in which you can observe the correlation between the audible frequencies with the RRC resistance.

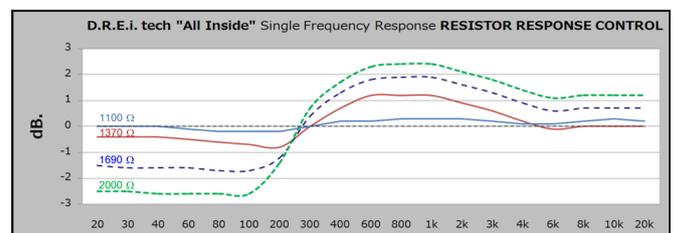


Figure 2: RRC value

It's important to know that the response between frequencies using the DREi is slightly altered by it's internal processes. This graph shows these differences with single frequencies, but with musical content these differences are smaller.

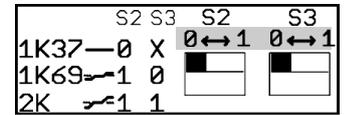
SWITCHES S2/S3 RRC

The S2 and S3 switches switch three different resistor values to the RRC. Please refer to the information of the DREI All Inside module to learn more about this feature that allows you to optimize the final performance of DREi regarding the associated electronics.

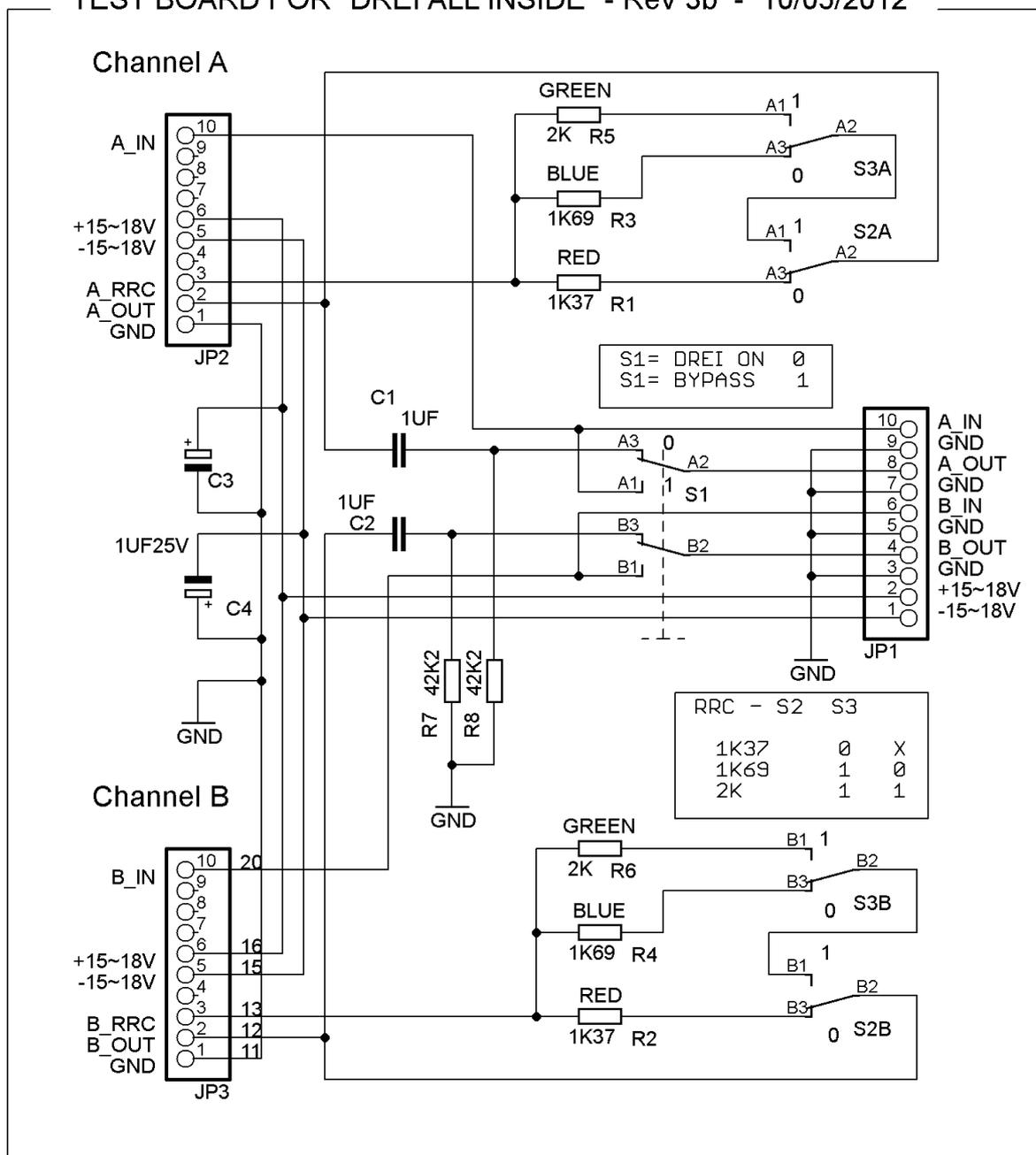
The designer can use the most appropriate value experimenting between the recommended values of 2K2Ω and 1KΩ but can also use any value outside these ranges, even 0Ω he finds it appropriate. No value will cause damage to the circuits.

The selected resistance depends on the position of both switches as you can see on the following table:

Value Ω	S2	S3
1370	0	X
1690	1	0
2000	1	1



TEST BOARD FOR "DREI ALL INSIDE" - Rev 3b - 10/05/2012



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