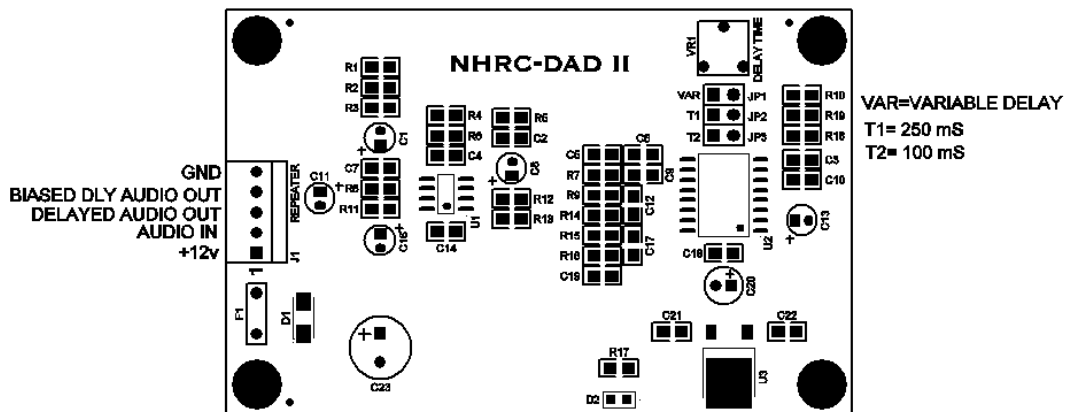


NHRC
REPEATER CONTROLLERS
 415 4TH RANGE ROAD
 PEMBROKE NH 03275
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NHRC-DAD-II Installation / Operating Instructions

The NHRC DAD-II Digital Audio Delay module is designed for use with NHRC repeater controllers to completely mute all touch tones and eliminate squelch bursts that occur when users un-key their radios.

The DAD is capable of producing a maximum input to output delay of approximately 340ms sec. Delay time is set by installing a jumper shunt in position T1(250mS), T2 (100mS) or VAR (up to ~340Ms) Install a jumper in T2 for newer NHRC controllers sold after 2010. Use Position T1 for older NHRC controllers. Use VAR if you wish to experiment with variable delay times.



The AC coupled audio input impedance is approx 100K ohms. Max audio input is 2V P-P. Audio output impedance is approx. 70 ohms and is user selectable DC biased or AC coupled output. DC biased output is required on all NHRC controllers. An AC coupled output is provided for use with controllers of other manufacturers. DC input requirements: 9-16v 25mA

NHRC recommends ~ 100mS delay time. The firmware in most newer controllers has been optimized to provide the best DTMF muting and squelch tail elimination performance at this setting. Please note, the audio pipeline through the DELAY board is always live and streaming audio. Longer delay times are not recommended and may cause squelch tails to appear upon PTT keyup due to the large amount of audio in the delay pipeline at the time of key up. Use the minimum amount of delay to obtain the desired result.

A cable is provided in some application for direct connection to your NHRC controller. Other applications may come with mating connector pins for J1. The mating connector is a Molex KK series .1 in center.

J1 Pinout:

- 1 = +12V IN
- 2 = AUDIO IN
- 3 = DELAYED AUDIO OUT AC COUPLED
- 4 = DELAYED AUDIO OUT DC BIASED
- 5 = GROUND

Reverse polarity will destroy this unit. Accidental damage is not covered by the NHRC LLC limited warrantee.

NHRC LLC Limited Warranty

NHRC LLC warrants that its assembled and tested products will be free from defects in materials and workmanship for a period of NINETY DAYS from the date of shipment. During this period, NHRC LLC will repair or replace, at our option, any of our products that fail as a result of defects in materials or workmanship. NHRC LLC's liability will be limited to parts, labor, and return shipping for this period.

NHRC LLC warrants that its kit products will contain components that are free from defects in materials and workmanship for a period of THIRTY DAYS from the date of shipment. During this period, NHRC will replace any of the components in a kit ONCE. Subsequent replacement of any component any subsequent times is completely at the discretion of NHRC LLC, and may require the complete return of the kit.

In no case will NHRC LLC be liable for products damaged by improper wiring (including, but not limited to, overvoltage or application of reverse polarity), physical damage resulting from misuse and/or abuse of the product, neglect, or acts of God (lightning, floods, etc.).

Unauthorized modification of an NHRC product will void the warranty on the modified product.

In no case will NHRC LLC be liable for any direct, consequential, or incidental loss or damage resulting from the use or inability to use any of its products.

This warranty applies only to the original purchaser of the product; proof of purchase must be presented to receive warranty service.