



For additional information, please visit the Bybee web site at www.BybeeLabs.com

MUSIC RAIL Installation Notes

1. Vin must supply 11.5mA idle current to the Music Rail circuit (plus an additional 5mA to ZD1 when a high-voltage adaptor is used).
2. J1 is the AC ground that bypasses noise currents and input ripple to ground.
3. J12 is the DC ground that returns idle current to the input source.
4. J1 and J12 may be tied together or run separately to optimize noise floor (experimentally).
5. J2-J6 (Vin) can carry 3A each and should be ganged together to carry higher currents.
6. J7-J11 (Vout) can carry 3A each and should be ganged together to carry higher currents.
7. 15A Music Rails must use appropriate heat sink ($Pd=2.1V \times$ load current).
8. Transistor on 15A Music Rails must be isolated from ground with thermal insulator.
9. Output capacitor not recommended (see app note J0409: Bypass Capacitors).
10. After installing each unit, insure that correct voltage drop appears from input to output (0.5V for 2A modules, 2.1V for 15A modules). See data sheet for additional test data.
11. When negative polarity modules are used above 30V, the zener clamps in the hi-voltage adapter must be reversed. All other connections remain the same.
12. As a final test, ensure that the output noise is lower than the input noise (if not, see FAQ).

MUSIC RAIL Mounting Notes

1. Try to locate the high-voltage adapter parts within 6" of the associated Music Rail.
2. Try to locate each Music Rail within 12" of the stage it feeds.
3. Power resistors in high-voltage adaptors should be derated 5-7 times and should be at least 10mm distance from noise cap. Leave resistor leads 10-20mm long for increased cooling.
4. The Music Rails can be bypassed for demonstration purposes. Simply jumper the input to the output. Wire guage must be appropriate for load current.
5. For coplanar PC board mounting, a set screw can be used to mount each module to an existing board standoff.
6. The mounting collar in each module is isolated and can be mounted directly to the chassis.
7. The mounting collar accepts #4 screws, but can be drilled out to accept 6-32 screws if required. Mounting screw heads and standoffs should be 0.25 diameter max. Do not exceed mounting pad diameter unless nylon or fiber washers are used for isolation.
8. 15A modules can be mounted to existing heat sinks. Simply drill and tap into the heat sink. **Use caution.** Taps are hard and brittle. Take care not to over twist the tap.

If you need additional help, please e-mail techsupport@bybeelabs.com

MUSIC RAILS are manufactured in the United States.

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