



BTDR-3 DIGI-LOG™ REVERB MODULE

Accu-Bell

CAT.NO.: BTDR

Features

- Reverb depth (decay) adjustable via 2 external resistors or 1 dual pot
- Stereo outputs may be summed for mono operation
- Simple interface: input, output, +5V, and ground
- AC-coupled input and outputs require no external capacitor



Specifications

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage	V_{CC}	4.5	5.0	5.5	V
Supply Current	I_{CC}		60	100	mA
Input Voltage	V_{IN}			1.5	V_{PEAK}
Voltage Gain			-3		dB (each output)
Residual Noise			-77	TBD	dBV
Input Impedance	Z_{IN}		10k		Ω
Output Impedance	Z_{OUT}		220		Ω
Operating Temperature		-40		+85	C

*Preliminary, subject to change without notice.

Connections

1. +5V	5. Output 2	7. Pot 1A
2. Power GND	6. Output 1	8. Pot 1B
3. Input		9. Pot 2A
4. Signal GND		10. Pot 2B

Note: Pins 2 and 4 are internally connected. See the Application Circuit for more information on how to connect the grounds.



BTDR-3 DIGI-LOG™ REVERB MODULE

Accu-Bell

CAT.NO.: BTDR

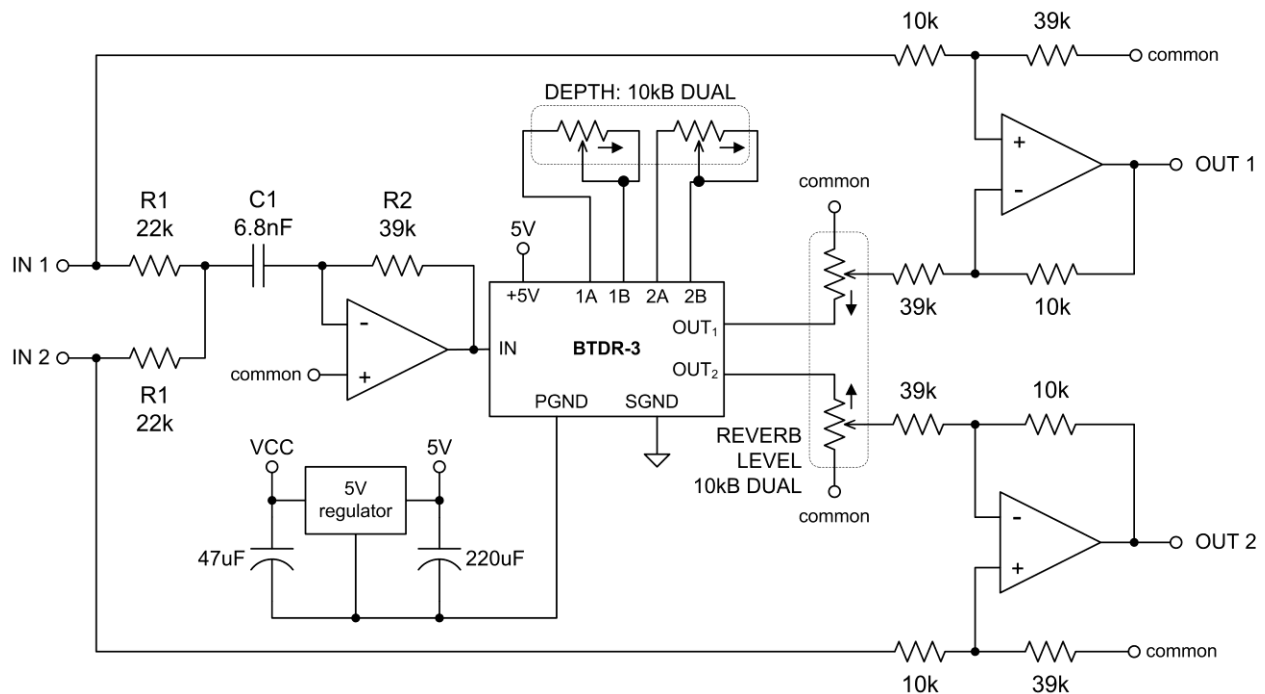
Applications

A regulated 5V supply is mandatory. An LDO regulator is recommended for battery-powered devices.

The following example circuits are for instrument-level signals:

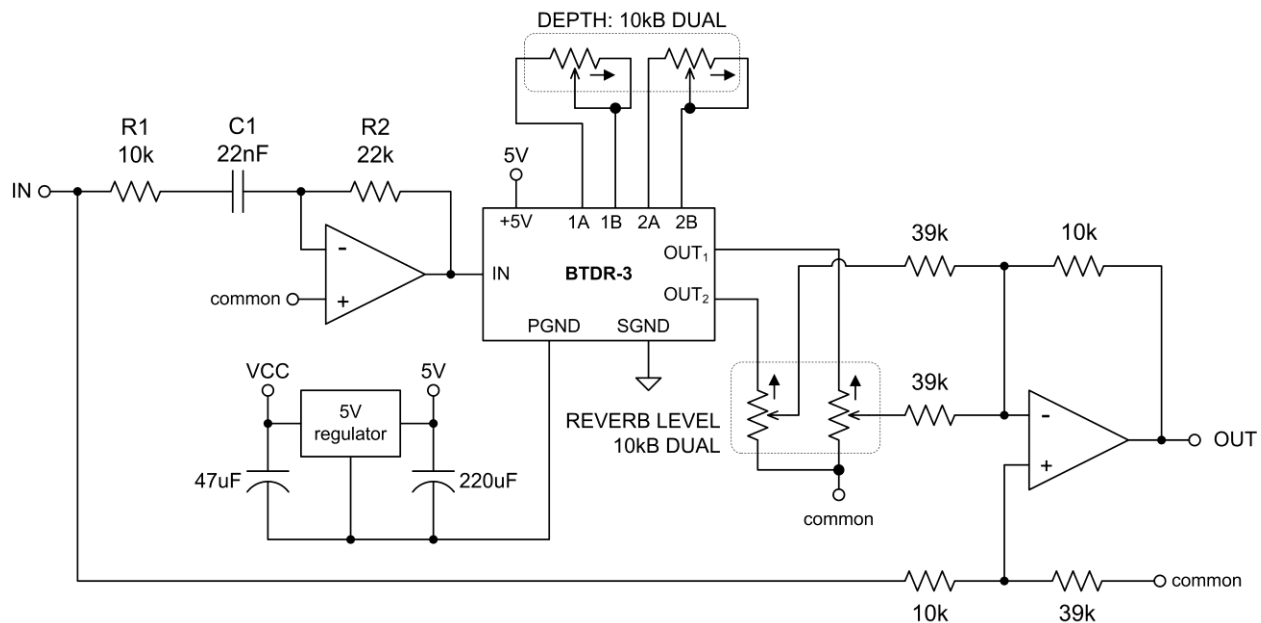
- "Common" is "Signal GND" in a split-supply circuit or $V_{CC}/2$ in a single-supply circuit.
- Audio noise during power-down can be minimized by quickly discharging supply from 5V to 0V; otherwise, external output muting may be necessary.
- R1, R2 and C1 create a pre-EQ high-pass filter and may be adjusted to taste.

Stereo Circuit



- High-pass frequency (Hz) = $1/(\pi \cdot C1 \cdot R1)$
- High frequency gain (dB) = $20 \cdot \log(2 \cdot R2/R1)$

Mono Circuit



- High-pass frequency (Hz) = $1/(2\pi \cdot C1 \cdot R1)$
- High frequency gain (dB) = $20 \cdot \log(R2/R1)$

Considerations for FCC Compliance

- ◆ The maximum internal clock frequency is approximately 14MHz.
- ◆ Although Accu-Bell believes that circuits employing solely the BTDR-2 will easily pass FCC Part 15, no guarantees of compliance are made; the circuit must be tested as a whole for radiated and conducted emissions.