

INTRODUCING THE K7DYD D-104 AUDIO PROCESSOR MK2

We are introducing a new version of the D-104 audio processor with features used in broadcast type audio processing chains in addition to the compression and limiting of the original version.

PHASE ROTATOR

The phase rotator circuit has been used for many years in the broadcast industry to provide louder audio without introducing distortion. Here is an article by W3AM describing the technique:

<http://www.w3am.com/8poleapf.html>

The new MK2 processor incorporates the phase rotator while retaining the the same size as the original D-104 processor which fits conveniently in the base of the D-104 microphone stand.

NOISE GATE

The compression averaging time has been extended to avoid having the noise gate open between words and the noise gate threshold has been lowered. Also, a jumper has been added to allow the noise gate function to be disabled completely for operation in a quiet room.

LOW PASS FILTER

A low pass filter has been added to provide a gentle rolloff above 6 KHz to reduce broadband noise from the D-104 microphone.

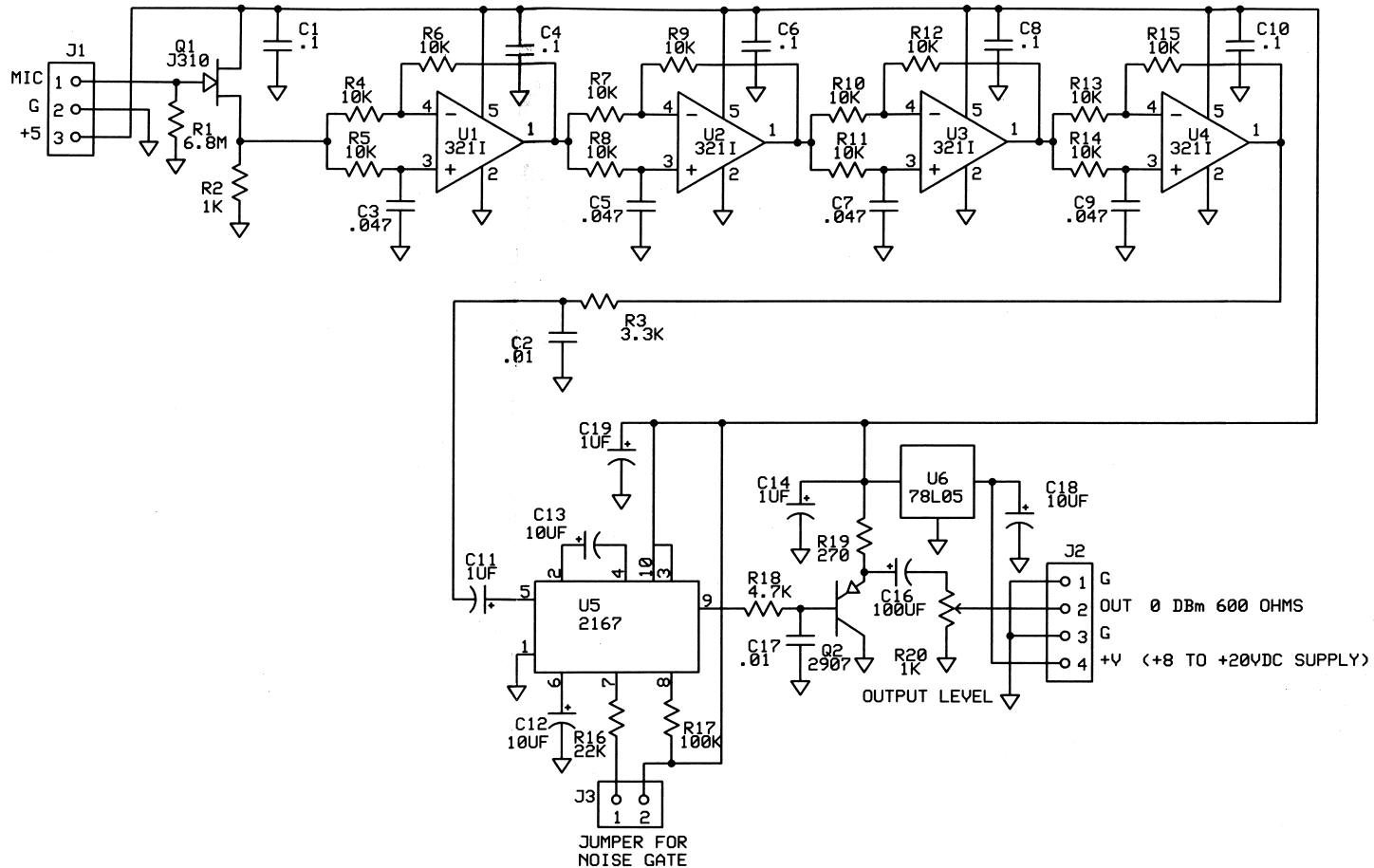
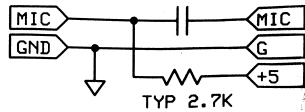
The K7DYD MK2 Audio Processor is offered at \$80.00 postpaid and may be ordered through k7dyy.com



USING THE K7DYY AUDIO PROCESSOR

1. The audio processor uses high gain, high impedance circuitry. It must be mounted in a shielded enclosure to avoid hum pickup.
 - a. The mounting holes in the PCB are spaced to fit the base of D-104 microphones.
 - b. Alternatively the processor can be mounted in a 2" X 4" diecast aluminum box.
2. The processor requires 8 to 15 volts DC at 20 mA. This is supplied by the class D transmitter or a battery can be used. The supply is connected between terminals +V and G on the PCB.
3. The audio output is designed to drive a load impedance of 600 ohms or higher. It can be plugged directly in the microphone input of most transmitters.
4. The input is high impedance (6.8 meg) and can be connected directly to crystal or ceramic microphones. The schematic diagram shows how to adapt the unit for use with electret microphones.
5. If using the processor with a vintage transmitter it is best to leave the transmitter's mic gain control at its normal setting and adjust the MOD control for full modulation. This will make A vs B comparisons easier.
6. The noise gate function may be disabled by removing the jumper.

(ELECTRET MIC INPUT)
.1UF 50V



BRUCE FRANKLIN

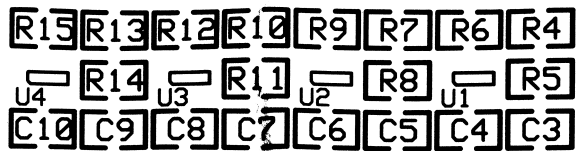
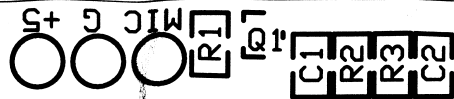
AUDIO PROCESSOR MK2

Bruce Franklin

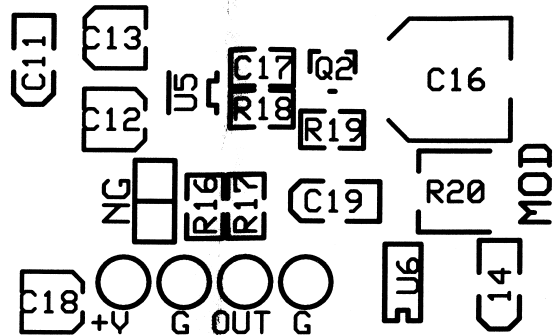
Rev 1.1

5/27/15

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WIRING THE MK2 PROCESSOR IN D-104 BASE

