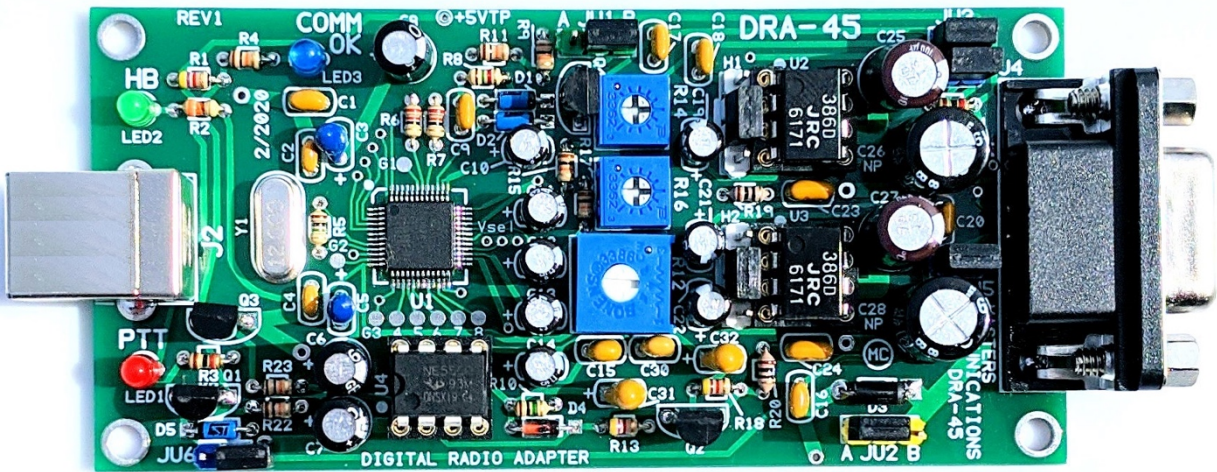


Product Documentation

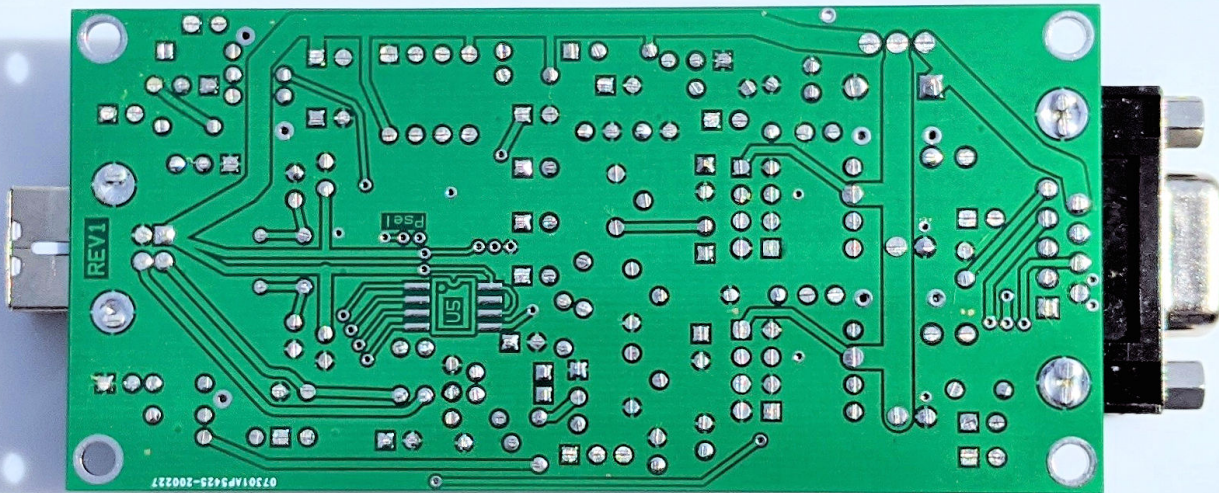
Model DRA-45

A Radio Interface for Digital Two-Way Radio Applications

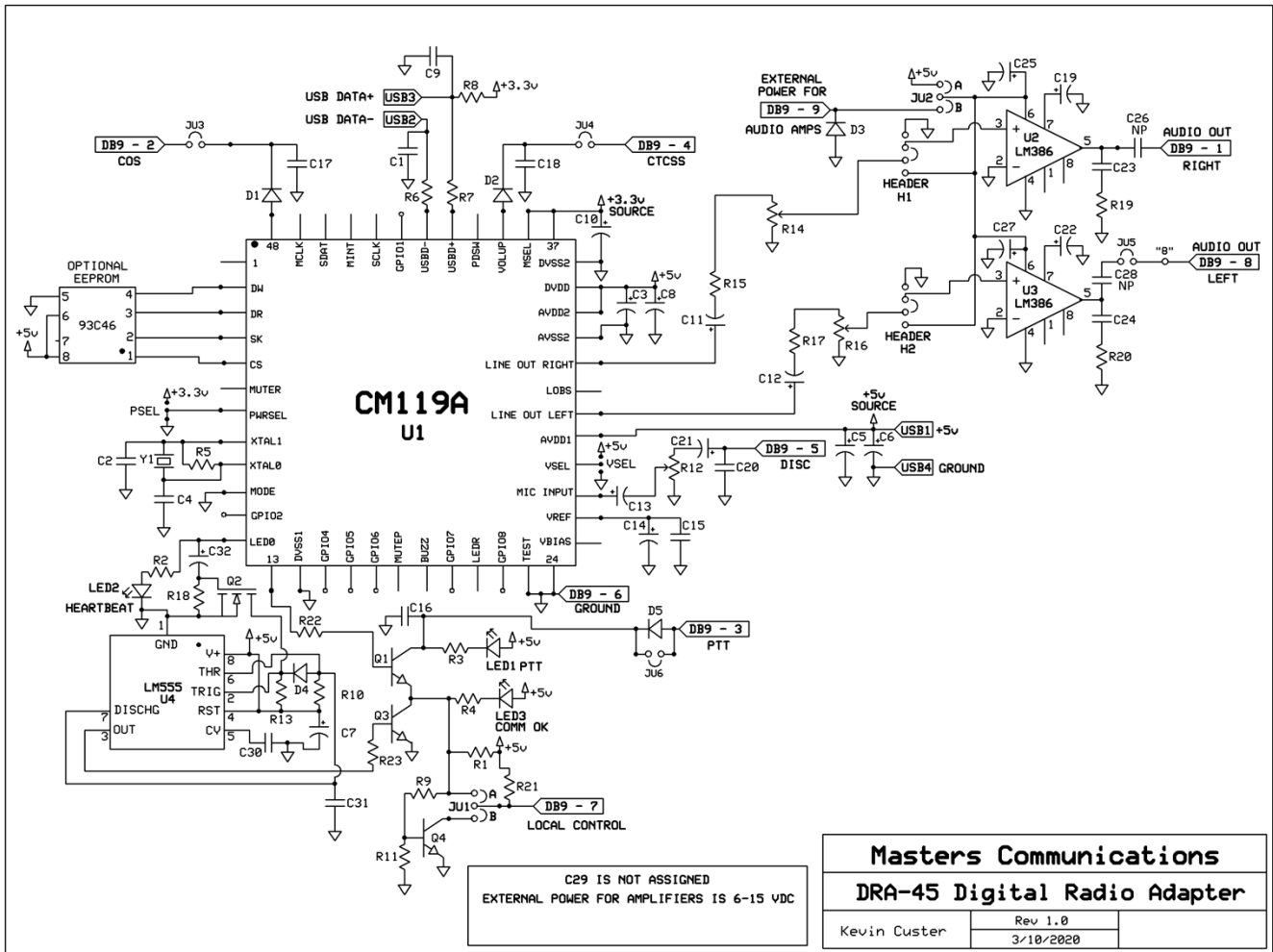
Top side of DRA-45 board - shown slightly enlarged.



Bottom side of DRA-45 board - shown slightly enlarged.



Schematic Image



Differences between the DRA-30 and DRA-45:

The DRA-45 is similar to the DRA-30, but has these additional features:

- 1 - High audio output capability, for interfacing those hard to drive radios.
- 2 - FL-10 filter capability for when you need to drive the FM modulator directly.

NOTE: Since the DRA-45 would not likely be used with a portable radio, the PTT keying resistor locations were not added to this unit.

Parts List:

If you purchased our kit, refer to the parts list and make sure you have all of the components you need to build it.

[Click here](#) for Parts List.

Construction/Assembly:

[Click here](#) for assembly instructions and construction notes - with large photos.

DB9 Pinout and Jumper Settings:

[Click here](#) for DB9 Pinout, jumper settings, and other board connection assignments.

Installation:

This device is intended to be installed inside a radio, computer, or project box for protection. Refer to the schematic for the pinout of the DB9F where all of the logic signals, power connections, and audio signals are listed.

H1 and H2 header pin assignments:

[Click here](#) for a detailed header pin explanation. The primary purpose of the headers H1 and H2 are for installation of [optional FL-10 audio filters](#). The FL-10 is designed to be installed onto the header pins directly or remotely by extending the four pins with wires. Jumpers are needed over the center two pins if the optional filters are not installed.

Recommended powering requirements:

The board is supplied with 5 VDC from the USB connection. The audio amplifiers and optional filters can run from this, or from an external power source of 6 to 15 VDC. Jumper JU2 controls where the voltage is sourced from.

Recommended discriminator audio input level:

The DRA-45 accepts the widest range of audio compared to any other similar radio adapter. The input signal is attenuated by a potentiometer, giving the broadest range of acceptable levels. As little as 20 mV P-P, and as much as 20 volts P-P. If your discriminator level is adjustable or programmable ([like in a Kenwood TKR-750](#)), we recommend around 2.0 volts P-P. This allows very good signal-to-noise ratio and low cabling cross talk. This level results in a 50% rotational setting of the potentiometer.

Optional Plastic Case:

A [Plastic Case](#) is available optionally for the DRA-45. Choose this option from our PayPal ordering drop-down. See below.

* [The white is supplied by default.](#)

All DRA-45's are supplied with a Genuine C-Media CM119A, but the DRA-45 board was designed to be versatile. It will accept a CM119 (without the A) and even the CM108. There are slight differences between these components, and the board can be 'programmed' to accept any of the three.

Information on the CM119A.

[Click here](#) to download a manual for the C-Media CM119A.

Secure PayPal ordering is available from the DRA-45 main page.

Custom cables available from [URI Cables](#). They will build a custom cable for the DRA-45 for many radios.

[Email Kevin Custer](#) for support, ordering information, order by check, and/or support of this exciting product.

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Specifications may change without notice.

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Board layout by Kevin Custer - W3KKC.

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