

# XTBR High-Power X10 Transmit Booster / Repeater

## JV Digital Engineering

Revised 04/27/15

The original XTBR developed in 2006 was a simple plug-in module that boosted the output of any X10 transmitter plugged directly into it. The XTBR added the ability to repeat commands received over the powerline. While the new version of the XTBR no longer has the X10 Boost input, it can still provide that capability for an X10 transmitter plugged into a nearby AC outlet.

The new XTBR is based on the proven XTBR-232/523 hardware design, but the serial port has been eliminated to reduce the cost. The power transformer has been downsized, but it still outputs just as strong of a signal as the original XTBR because it doesn't waste power on unnecessary 3-phase signal bursts. The XTBR can deliver more than 10 times the signal power of a typical X10 transmitter.



The XTBR can be plugged into any AC outlet. Best performance is obtained when it is located near the distribution panel to minimize signal loss in the run to the panel. Since the XTBR only drives the phase it is plugged into, a good passive coupler is still required to propagate its strong signal to the opposite phase. A coupler may also be necessary to receive signals from other transmitters on the opposite phase. Note that a coupler/repeater like the X10 XPCR will not propagate the XTBR signal to the opposite phase because it uses its own transmitter to do that. If the installation does not already include a good passive coupler like the X10 XPCP, it may be worth considering the XTBR-IIR, which drives both phases directly, and includes its own passive coupler.

Since the X10 Boost input is no longer included on the cover, this version XTBR will directly boost the output of an X10 transmitter plugged into a nearby outlet. It uses a high threshold for this mode to prevent it from being triggered by powerline noise. And there is a mode option to disable this function if necessary.

When functioning as a repeater, the XTBR error checks all incoming data, and can cancel its transmission when a collision is detected. Like its bigger brother, XTBR includes the ability to repeat a series of sequential dims to avoid their being recognized by some dimmers as micro-dim commands. The XTBR will also repeat the “doublet” extended commands produced by controllers such as the CM15A, HomeVision, and some other controllers.

Since the XTBR firmware evolved from the latest XTBR-IIR, it includes several new features. Now it is easy to check the status of any mode option directly on the LED. This new version also includes the ability to prevent repeating commands on selected housecodes, which can be handy when two X10 homes share the same utility transformer.

See the [XTBR Mode Options](#) document for a detailed description of the available mode options.