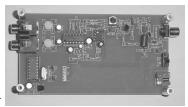
# KITS - R.F PROJECTS

# PLL controlled FM Stereo Transmitter Kit - top of the line. The finest in Stereo transmitters, and latest technology.

A two board FM Stereo Transmitter kit with the best possible features that our designers could think of. In addition to very clean, accurate stereo reproduction, the PLL tuning provides stability that is simply not available in most transmitters. Unit has an LCD display with an EEPROM memory to retain frequency setting even if powered down. Listen on your Walkman, or any stereo FM radio in your home or car. The top board is the controller, with the keypad switches and LCD readout. The bottom board is the transmitter, employing an NJM2035 for the stereo generator, buffered tuning from the PLL for quiet performance and an RF amp stage on the output. The circuit can be tuned in 5K steps, for fine tuning.



You will want to use a very "clean" power supply for this circuit; batteries (12 volts DC, at least 75mA.) are a perfect source of power. Or, a well filtered power supply to be sure to eliminate power line hum.

This circuit can broadcast any line-level input, such as a computer sound card, CD player, tape player etc. far enough to provide excellent reception around an average house and yard. Instructions for a low cost FM antenna are included.

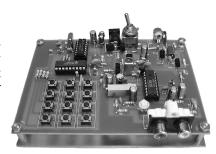
The top board size is 5 1/2" long and 3.3" in width; the finished unit fits neatly into a Philmore No PB170 plastic case (which is not in the kit, sold separately). The unit will function on voltages as low as 9 volts and as high as 14.9 volts; at the suggested 12 VDC the unit needs up to 75mA supply. While assembly is easy and straight forward, we suggest the kit only for builders with some experience in kit building.

No. 80-057

#### **PLL Tuned FM-Stereo Transmitter**

Try this with your computer to re-transmit Internet radio!

This is truly a slick product! The PLL (phase locked loop) tuning means stable broadcasting, which results in big advantages. Being on frequency and drift-free equals much better transmit distance and receive quality. Frequency is "entered-in" on a keypad, and the unit stays exactly on frequency. Transmit to your portable radio! For input use your CD player or tape player or your computer so that you can broadcast programming on the Internet to your portable radio; listen anywhere around the home. Operates on 9 to 12 Volts DC.

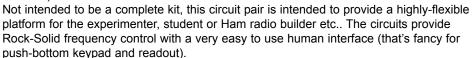


NO. 80-055

### **PLL-VFO Experimenter Package**

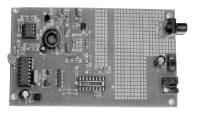
#### (experienced builder only) 440Khz to 185MHz.!

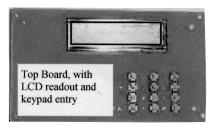
This new VFO Circuit is a two part (two board) system for the experimenter. The "Bottom Board" is the PLL and VFO, complete with an area for the experimenter to add whatever circuit he desires; such as a transmitter, receiver, transceiver etc.. The "Top Board" is a controller with a keypad for frequency entry and an LCD digital readout that displays frequency. The Top Board controller communicates with the MC145170 chip on boards may be stacked with spacers and will mount neatly in a Philmore No. PB107 plastic case (not included).



Included are circuit ideas, in schematic form, including a forty-meter transmitter and a radio receiver circuit. The prototyping area is large; the user can build a simple or multistage AM or FM receiver, CW rig, signal generator etc. The circuit may be used with various oscillator designs from 440Khz to 185Mhz.

The circuit employs an MC145170 PLL IC which provides drift-free tuning with considerable stability. Operates on 12 volts DC. You will need up to 100mA to power the kit plus don't forget to add enough current capability to handle your own addition to the PC board.

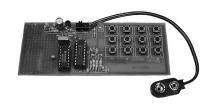




No.80-1401

## PLL Experimenter Kit from KHz to 185MHz

An exciting circuit, the PLL Experimenter kit may be used for making a stable AM or FM transmitter, a Signal Generator (from low KHz to about 185MHz), a QRP Ham transmitter, circuit diagrams for all of these are included. What you get is a very high quality PLL circuit module, with touch-tone style keyboard (to set frequency) and you will have to add the components for the circuits mentioned above. Crystals can be expensive; here is the answer. Not a beginners kit; intended for the serious experimenter, Hams or very advanced beginner. Operation from 8 to 12V DC; a nine volt battery is ideal. Fine tuning in 10 KHz steps. Extra room on board for added components. This circuit is really worth having!



No. 80-035 240