

PLL 01A FOR "A" CHANNELS (Cont'd):

"A" CHANNEL MODIFICATION

(Applies to virtually all PLL radios)

This modification will allow almost any PLL radio to pick up all the "RC" channels, plus all the 1 channel skips when operating in the extended channel mode (above or below channels 1-40). Comes in very handy on those **radios** which are hard to modify for 10 KHz slide.

The PLL program pins on every PLL chip work by applying a voltage (or shorting to ground in some systems) to the various pins. We are all familiar with switching **voltage** to certain pins to get extra channels. What is really happening is that by applying a voltage to these pins; say pin 19 in a Upd 858 chip, for example, you are shifting your frequency up by 400 KHz. Other pins in the chip control lesser amounts of frequency. There is always one pin in all PLL radios which controls 10KHz of frequency movement. Apply a voltage to this pin and you go up 10KHz. If this pin already has an applied voltage, remove it and you go down 10KHz. This pin is alternately switched on and off for every other channel as you go from 1-40.

Depending on which RC channel you desire to reach, it will be necessary to drop down 10KHz to reach it, and on other RC channels with the same chip, it will be necessary to go up 10KHz to reach it.

You must locate the 10KHz pin on the chip in use first. This is ascertained by monitoring the voltage at the PLL pin. This pin is always one of the end pins in the series of wires connecting the chip to the channel selector switch. This voltage will go from 0 to a positive (usually about 5V) to 0 again on every other channel. Another way to identify this pin is that it is at the opposite end of the chip as the pins you switch to when modifying for high frequencies. Several common chip applications will be found at the end of this article.

You begin by isolating the 10KHz pin from the channel selector by cutting the foil near the pin and then bridge this cut with a 4.7K ohm resistor. Run a wire directly from the PLL pin to common of a center-off SPDT switch. The other terminals on the switch go to a positive voltage source (usually about 5V) and the other terminal to PC ground. This will allow either 10 KHz up or down. Depending on the channel you are on, you will be able to go up or down, but not both; remember the state of this pin alternates between high and low from channel to channel. If it is high, you flip the switch one way to take it low, and if the 10KHz pin is low, you flip the switch the other way to take it high. And of course, in the center off position you will have your normal channels.

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SPECIFIC APPLICATIONS

Upd 858 chips:

10 KHz - pin 13
+5V - near pin 24
P.C. ground - pin 22 or 23

UNIDEN MB8719 Chips:

10 KHz pin - pin 16
+8V - pin 9
P.C. ground - pin 18

CYBERNET PLL 01A Chips:

10 KHz - pin 16
+5V - pin 9
P.C. ground - pin 8

CYBERNET PLL 02A Chips:

10 KHz - pin 15
+5V - pin 8
P.C. ground - pin 16

TYPICAL APPLICATION

