radi8 / autotune

Arduino software to control an autotuner

184 commits 1 branch 2 releases 1 contributor GPL-2.0

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radi8 resolved merge conflict Latest commit 785f5f0 on 29 Aug

Documentation	resolved merge conflict	2 months ago
Resource	Final version	2 years ago
AutoTuner.ino	Added keyboard entry of presets	2 months ago
LICENSE	Final version	2 years ago
README.md	Final version	2 years ago
defines.h	Fixed some defines	2 months ago

README.md

autotune

Arduino software to control an autotuner

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The autotuner is the kitset from the EB104.com website. Any tuner of the LC type with 8 shunt capacitors and 8 series inductors plus facility to switch capacitors to either end of inductors will do the job. The relays should be 12 volt or 24 volt types.

The output of a Stockton or Breune style bridge are connected to the forward and reverse power inputs (A6, A7) of the Arduino for VSWR detection.

The 8 capacitor relays are driven from D2 ... D9 via a ULN2003 driver chip

The 8 inductor relays are driven from D12 ... D19 pins. (D14 ... D19 = A0 ... A5) which are set up as digital outputs. Again the relays are interfaced via a ULN2003 driver chip.

D10 is connected to a pushbutton to initiate a tuning sequence. RF should be applied to the tuner then the button pressed. A course tune sequence is initiated where the capacitors are stepped first looking for best SWR and holding on best capacitor. The inductors are similarly stepped and held on the inductor prodicing the lowest SWR.

D11 is an output to change the capacitor relay set from end to end of the series inductors.

A fine tune sequence is established to set exact capacitor value followed by best inductor. A reiteration is done to get the final values and the tuner waits for another button press.

Bit out of date now. Will sort out readme soon.