

SCC-1 VHF CRYSTAL CALIBRATOR

GENERAL

The SCC-1 is a solid-state crystal calibrator providing 50 KHz calibration points on all HF amateur bands and 50 KHz calibration points on 6 meters and 2 meters. The SCC-1 is also usable on 432 MHz. The SCC-1 uses a Field Effect transistor, TIS34, as a 100 KHz oscillator. The output of the oscillator is fed to a trigger transistor, 2N3394, and then to an integrated circuit, Fairchild 923, frequency divider. From the frequency divider the signal is fed to another integrated circuit, Fairchild 914, where the signal is amplified and shaped.

There are four output connectors on the SCC-1. Two meters, 6 meters, Direct (HF) and a connector for an extra converter, such as 432 MHz. An EXT SW connector is provided that can be used to turn the SCC-1 on and off. This could be a foot switch if so desired.

OPERATION

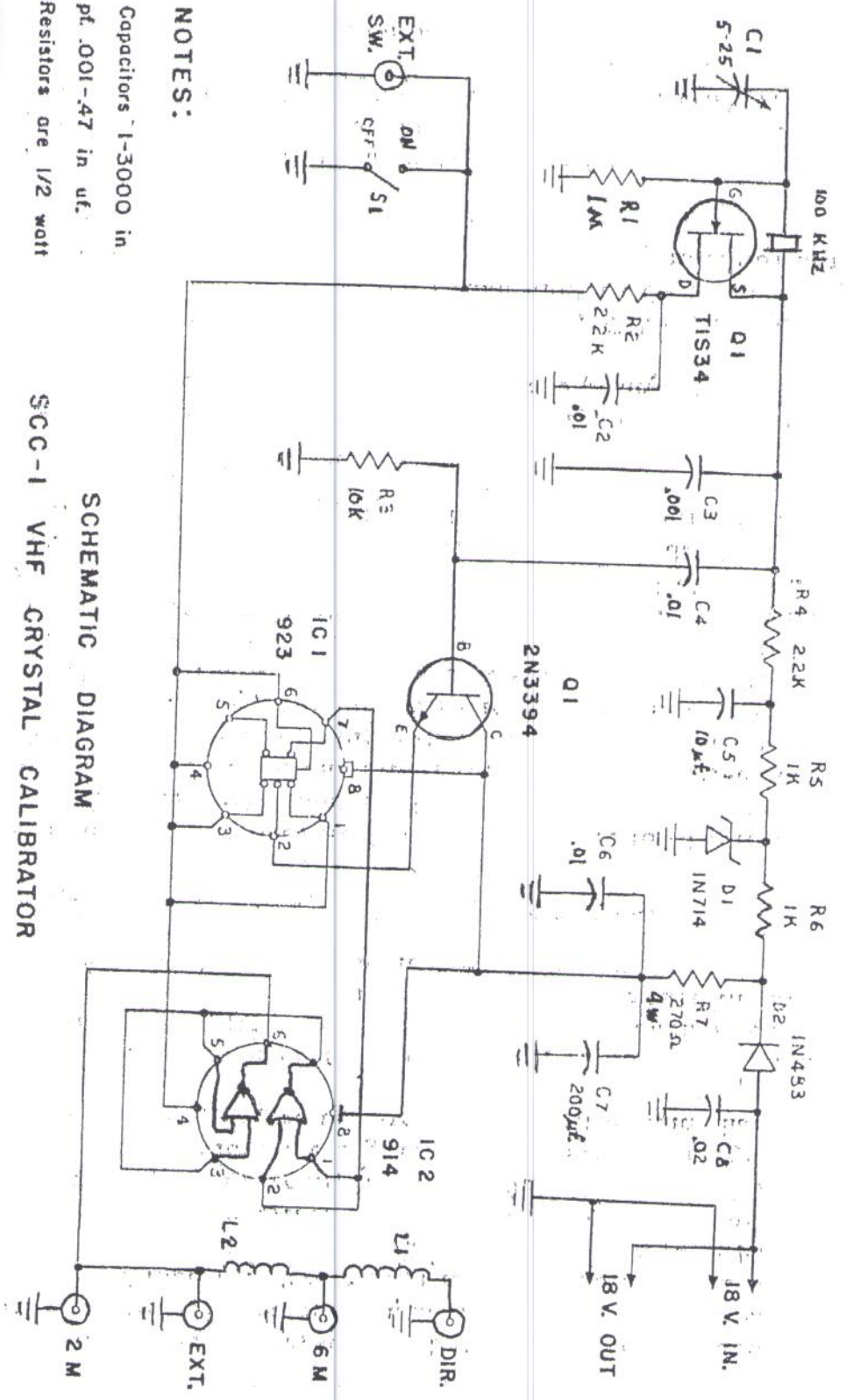
The SCC-1 is designed to operate from a positive 14 to 18 volt dc source, at about 40 ma. The Drake Model CPS-1 is designed to supply the proper voltage for the SCC-1 and either the SC-2 or the SC-6 converters. To connect the SCC-1, simply plug either the SC-2 or SC-6 converters into one side of the SCC-1, and plug the CPS-1 into the other side. Power from the CPS-1 powers both the SCC-1 and the converter. Connect a shielded low capacity cable from the desired output of the SCC-1 to the CAL input connector of the converter being used. The cable should be as short as possible. Turn the OFF-ON switch to ON. One hundred and 50 KHz calibration points are then obtained. It is possible to connect all the converter outputs to the desired converters at the same time.

If the SCC-1 is to be used as a HF calibrator only, connect the output of the SCC-1 to the receiver antenna through a 5 pf disc capacitor.

A console is available that will accept the SCC-1, CPS-1, SC-6, SC-2, and one other converter. This is the Drake Model CC-1. Switching between converters and HF is provided by one knob, and calibrator OFF-ON is provided from the front panel.

A clearance hole is provided in the end of the SCC-1 cover so that C-1 can be adjusted to the exact frequency by beating against WWV. The frequency is factory adjusted but can be checked against WWV.

Schematic on back.



NOTES:

Capacitors 1-3000 in
 pt. .001-.47 in uf.
 Resistors are 1/2 watt

SCHEMATIC DIAGRAM
SCC-1 VHF CRYSTAL CALIBRATOR

92867