

Here is process to explain how to modify Sceptar UHF(CP-AV02)

A. The reason why Sceptar UHF emits spurious

For lack of via holes on the ground pattern of PCB

RF amplifier emits abnormal oscillation at the range of 2GHz.

B. Measure

By adding Via holes on the ground pattern of PCB
it stabilized the circuit.

C. Process of modification

To take off spurious, we added 16 through holes on the PCB.

See the attached photo Page 1. You can check 16 holes, which are marked by red circles.

Especially the hole indicated by red arrow (See page1 below
it is located near RF amplifier transistor) is very efficient to
the spurious.

The holes indicated by red circles are drilled 0.5mm wide in diameter.

Note:

1. There is no change on the used parts on the PCB and
the circuit pattern
2. The PCB has not been remade from the beginning
The PCB has been modified as attached doc. Page 2
Page 2 explained how to modified PCB of Sceptar UHF.