2.1033 (b) (13) Brief Description of Circuit Function

The device is a synthesized R.F. plug-in module for use with the Airtronics Inc. M-8 hand held transmitter. The unit is composed of a crystal controlled synthesized oscillator with a base frequency of 11.155 Mhz. This base frequency is factory tuned with trimmer capacitor C28 to meet the 0.002% tolerance. The oscillator frequency can be user changed thru two rotary switches S1 and S2 from 18.8525 to 18.9975 Mhz in 5Khz steps. The output frequency of this oscillator is applied to the first amplifier whose output is tuned to the fourth harmonic to produce the final output frequencies of 75.410 to 75.990 Mhz in 20Khz steps. This signal is sent to the next tuned amplifier to supply enough energy to drive the final class C output tuned amplifier. The output of the Class C amplifier is filtered and matched to the transmitters antenna. The synthesized oscillator is FM modulated thru a low pass filter and adjusted with potentiometer P1 to obtain the proper modulation index.

The DSC input turns the power off to the module when a DSC cord is plugged into the hand held transmitter. This cord is also plugged into the receiver without danger of RF being transmitted even if the transmitters power switch is turned on.

The complete module is enclosed in an orange nylon case.