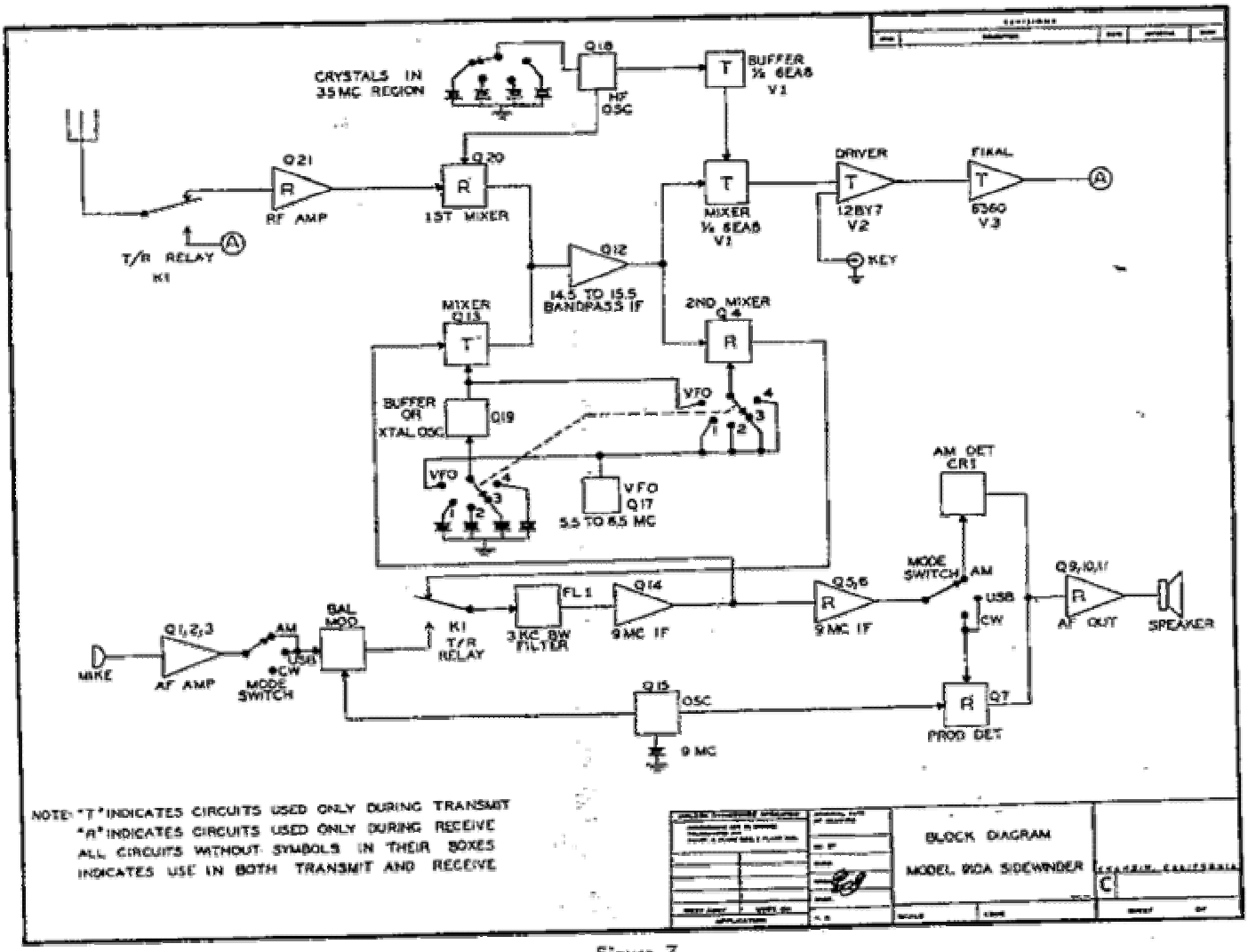

Figure 7

switch is at 51, and so forth. Thus, each single crystal employed provides the capability of four crystal controlled points within the 6-meter band. The following chart will aid in determining your operating frequency:

Sector Control		*Crystal Frequency		Operating Frequency
50	+		-5.5 =	
51	+		-5.5 =	
52	+		-5.5 =	
53	+		-5.5 =	

*Insert the frequency of the crystal in mc to determine the operating frequency.

In addition to the crystal socket on the front panel, three sockets are provided internally which may be selected by the front panel crystal switch for more frequently used crystals. Access to these sockets is provided by removing the Sidewinder cover and the VFO (center) module cover. The socket nearest the rear of the Sidewinder is selected by switch position #2, the middle socket by switch position #3, and the socket nearest the front by switch position #4. The #2 crystal socket (rear) is provided with a trimmer so that the crystal installed in this socket may be pulled a few kilocycles to the exact frequency. This trimmer is the protruding screw located near the crystal sockets.

CAUTION: Do not turn this screw out (CCW) to more than 5/8" above the chassis, or the trimmer will be damaged. Also, take care not to turn the similar trimmer on the opposite end of the VFO as this trimmer is only used for VFO calibration.

NOTE: It is difficult if not impossible to damage the Sidewinder by improper tune-up. It is possible, however, to produce a poor quality signal by careless operating techniques. Therefore, it is recommended that the above instructions be understood and followed carefully.

THEORY OF OPERATION - Receive

The receive portion of the Sidewinder is an all transistor, dual conversion, superheterodyne unit, employing many specially designed circuits to provide high performance and reliability in a compact, rugged enclosure.

The block diagram (Figure 7) will aid in the following circuit description. The signal from the antenna is fed to the RF amplifier, Q21, by the operation of the T/R relay, K1. A tuned circuit ahead of the RF amplifier provides an impedance match to the amplifier from the antenna as well as attenuating the noise and unwanted signals outside the 6-meter band. The RF amplifier, Q21, is coupled to the first mixer, Q20, by way of