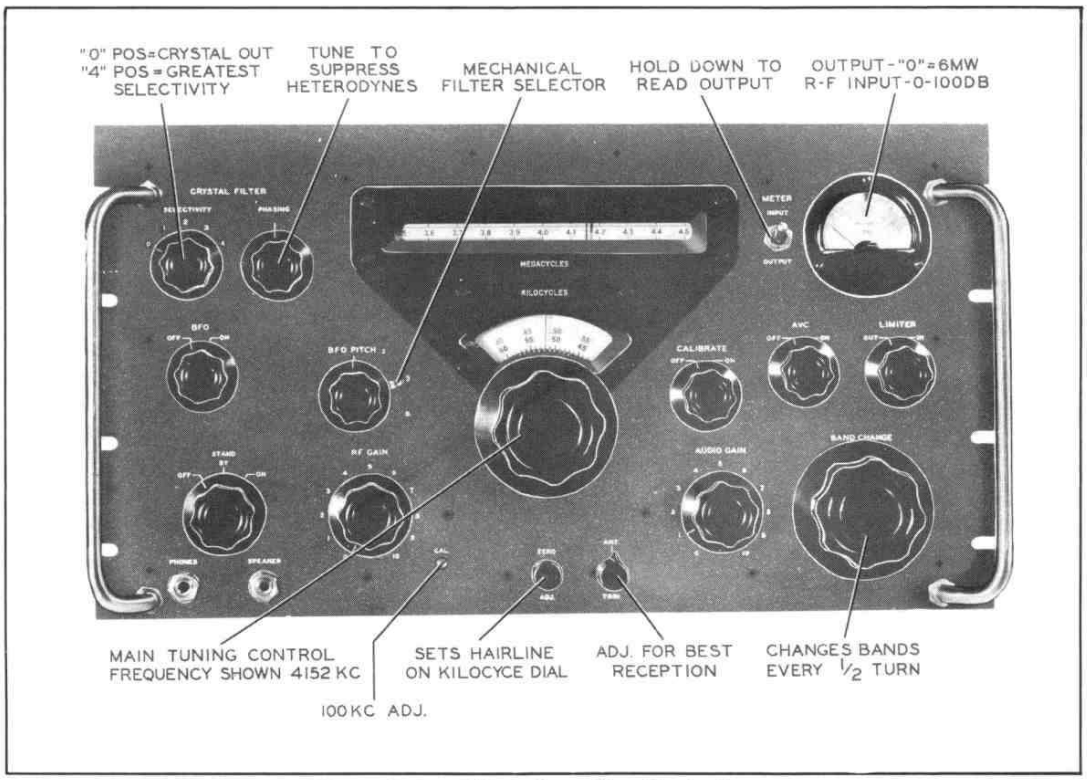

Figure 3-1. 51J-4 Operating Controls

used to log the calibrated position of the hair line on the various bands in lieu of recalibrating each time the band is used.

NOTE

WHEN READING THE FREQUENCY OF AN INCOMING SIGNAL, THE BFO PITCH CONTROL MUST BE LEFT IN THE SAME POSITION AS IT WAS WHEN THE RECEIVER WAS CALIBRATED.

(h) METER INPUT-OUTPUT. - The METER switch is a momentary spring-return type toggle switch. In the normal or INPUT position the meter is connected as an S meter. In the OUTPUT position, the meter is connected in the audio output circuit as a db meter.

(i) BFO OFF-ON. - In the ON position this control turns ON the beat frequency oscillator for CW reception. In the OFF position, it grounds the screen grid of the BFO tube.

(j) BFO PITCH. - The BFO pitch control varies the frequency of the beat frequency oscillator to change the pitch of the audio tone which is produced by combining the BFO signal with the incoming signal. A range of about ±3 kc minimum can be obtained with this control.

(k) CALIBRATE OFF-ON. - This switch is in the cathode circuit of 100 kc crystal oscillator tube V104 and turns the 100 kc oscillator ON or OFF. For an explanation of how to use the oscillator, see paragraph (g) above.

(l) AVC OFF-ON. - This switch turns AVC ON or OFF. In most cases AVC should be ON for both AM and CW reception, but may be turned OFF for CW reception if desired.

(m) LIMITER OUT-IN. - The noise limiter is useful for both AM and CW reception. When noise is not a problem, turn the LIMITER to OFF, as the distortion will be less in this position. When noise of the impulse type is being received, turn the LIMITER to ON. Adjustment of RF and AF gain controls is necessary for best CW noise limiting.

(n) CRYSTAL FILTER.

SELECTIVITY. - In position 0 of this control, the crystal filter is not used and selectivity is determined by the receiver's tuned circuits alone. In position 1 through 4, the crystal filter is in the