

Description

The Mode 1 2-LF consists of a highly stable solid state crystal oscillator, mixer, and low pass filter. When plugged into the crystal calibrator socket on the Model 2B Receiver, it converts incoming signals between 100 KC and 3.5 mc to the three ten meter bands on the 2B.

The crystal supplied (27.9 mc) allows reception from .1 - 1.8 mc and an accessory crystal 26.2 mc allows coverage from 1.8 to 3, 5 mc.

Sensitivity is less than 2 micro volts for 10 DB S/N and IF rejection is better than 50 DB.

The antenna input impedance is from 50 to 500 ohms unbalanced.

Installation

Remove the 2-LF from its carton and insert it in the crystal calibrator socket of the 2B Receiver. Insert the 27.9 mc crystal in the crystal socket on top of the 2-LF chassis.

Install 24.5 and 25.6 mc Xtals in the 10₁ and 10₃ sockets of the 2B if you have not already done so.

Disconnect the antenna from the 2B antenna terminal (Failure to do this Will result in the reception of both low frequency and 10 meter signals simultaneously) .

Connect a long wire antenna to the 2-LF antenna terminal.

Operation

The 2B Controls should be set in the manner prescribed in the 2B Instruction Book for the desired mode of operation. An improvement in signal to noise ratio Will usually be obtained by reducing the RF gain control setting and increasing the AF gain.

Charts 1, 2, and 3 illustrate the proper setting of the 2B controls for reception of the desired frequency between 100 KC and 1.8 mc. If reception between 1.8 and 3.5 mc is desired, the 27.9 mc crystal must

be removed from the converter crystal socket and a 26.2 mc series resonant crystal must be inserted. Charts 4, 5, and 6 must then be used for frequency determination.

Due to size restrictions, and in the interest of simplicity, the input circuit of the 2-LF has been broadbanded. Therefore, occasional cross modulation may be noticed when there are strong stations nearby.

Operation below 100 KC

A 23.9 mc crystal inserted in the E accessory socket of the 2B (available from R. L. DRAKE COMPANY) and the 27.9 mc crystal in 2-LF socket, allows coverage of 10 to 500 KC at 010 to 500 KC on the log scale.

At 0 on the logging scale, the oscillator of the 2-LF is received directly as a large signal.

Careful adjustment of two BAL-CKT adjustments will null down this signal to a point that allows reception down to about 10 KC.

Chart #1

Coverage .100 to .700 mcCrystal Freq. 27.9 mc Band/Crystal socket 10₁
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	.1	.2	.3	.4	.5	.6	.7

Chart #2

Coverage .600 to 1.200 mcCrystal Freq. 27.9 mc Band/Crystal socket 10₂
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	.6	.7	.8	.9	1.0	1.1	1.2

Chart #3

Coverage 1.200 to 1.800 mcCrystal Freq. 27.9 mc Band/Crystal socket 10₃
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	1.2	1.3	1.4	1.5	1.6	1.7	1.8

Chart #4

Coverage 1.800 to 2.400 mcCrystal Freq. 26.2 mc Band/Crystal socket 10₁
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	1.8	1.9	2.0	2.1	2.2	2.3	2.4

Chart #5

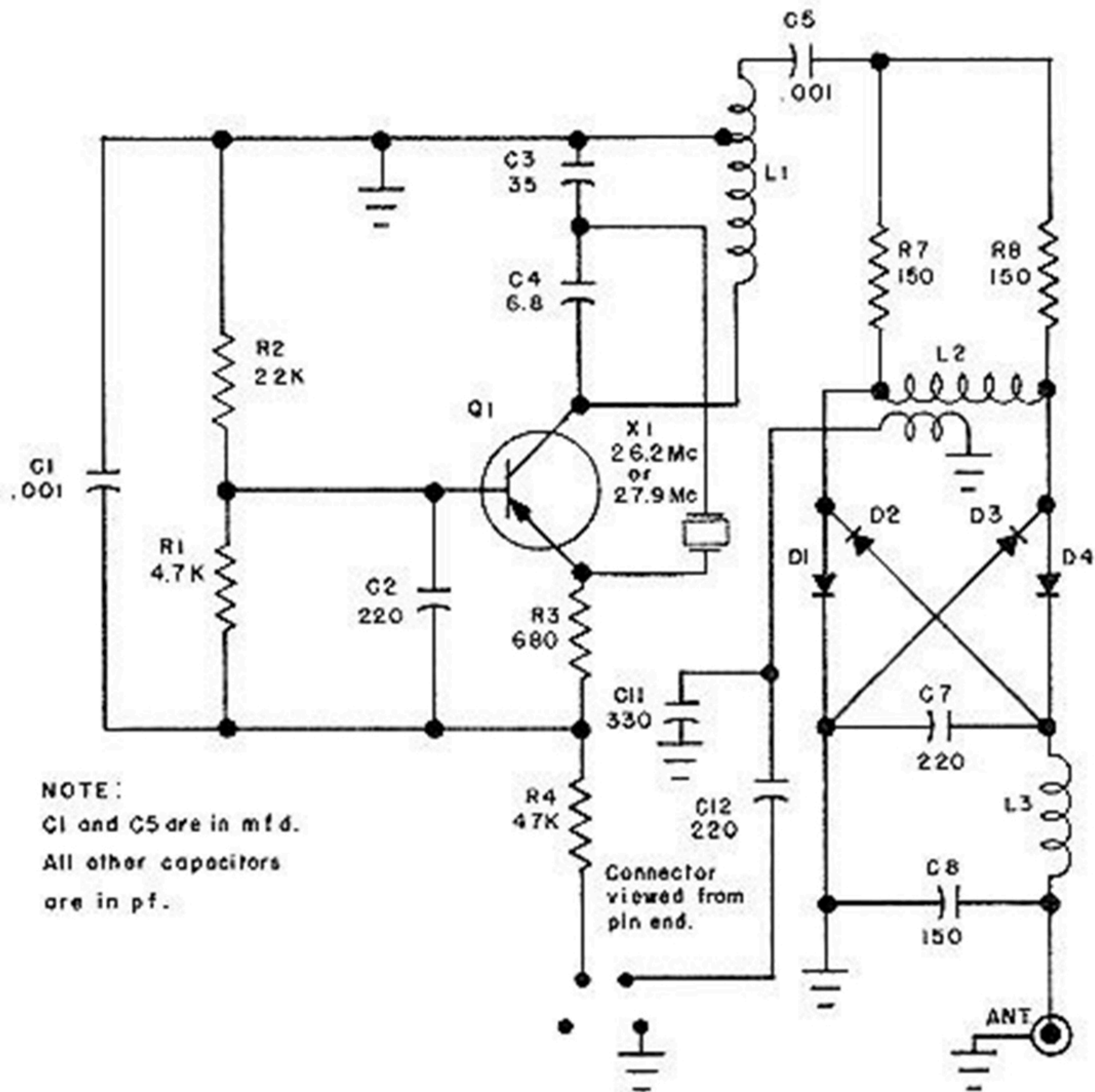
Coverage 2.300 to 2.900 mcCrystal Freq. 26.2 mc Band/Crystal socket 10₂
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	2.3	2.4	2.5	2.6	2.7	2.8	2.9

Chart #6

Coverage 2.900 to 3.500 mcCrystal Freq. 26.2 mc Band/Crystal socket 10₃
(Converter)

	Log Scale						
	500	400	300	200	100	0	-100
Preselector	Freq. Mc.						
10 meter	2.9	3.0	3.1	3.2	3.3	3.4	3.5



MODEL 2-LF CONVERTER SCHEMATIC DIAGRAM