

President Lincoln and HR2600

ALIGNMENT PROCEDURE

PLL and CARRIER OSCILLATOR PORTION

Test equipment required:

Power Supply: 13,8 V

Oscilloscope

Frequency Counter

DC Voltmeter

Preparation alignment:

PA SW

Off

RIT

Middle position

Mode

AM

Frequency

28.000 MHz

Step	Condition	Adjustment	Procedure
1	AM RX	L315	Connect the Oscilloscope and Frequency Counter to TP306. Adjust for 6.200 MHz +/- 20 Hz
2	AM RX	L318	Connect the Oscilloscope and Frequency Counter to TP304. Adjust for 38.6950 MHz +/- 20 Hz. Check: USB : 38.6975MHz LSB : 38.6925MHz
3	AM RX	L317	Connect the DC Voltmeter to TP 303. Adjust for 6.5 V +/- 0.1 V
4	CW RX	L117	Connect the Oscilloscope and Frequency Counter to TP1. Adjust for 10.695 MHz +/- 20 Hz
5	LSB RX	L118	Connect the Oscilloscope and Frequency Counter to TP1. Adjust for 10.6925 MHz -40 Hz to + 0 Hz
6	USB RX	L116	Connect the Oscilloscope and Frequency Counter to TP1. Adjust for 10.6975 +/- 20 Hz
7	USB RX	VR111	Connect the Oscilloscope and Frequency Counter to TP5. Adjust for 38.6975 +/- 20 Hz

Adjustment	Description
VR304	Amplifier Gain Adjustment
	Only in President HR2600

Adjustment of Balanced Mixer`s

Adjustment	Description
VR301	DC Balance Adjustment for Balanced Mixer
L303	9-10MHz Signal Balance Adjustment to Mixer
L304	14-18MHz Signal Balance Adjustment to Mixer
	Connect Oscilloscope to IC304 pin 2. Adjust VR301 for correct DC-balance. Adjust L303 for maximum signal. Adjust L304 for maximum signal.

Adjustment	Description
VR302	DC Balance Adjustment for Balanced Mixer
L313	22MHz Signal Balance Adjustment to Mixer
L314	36-40MHz Signal Balance Adjustment to Mixer
	Connect Oscilloscope to IC305 pin 2. Adjust VR302 for correct DC-balance. Adjust L313 for maximum signal. Adjust L314 for maximum signal.

BandPassFilter Adjustment

Adjustment	Description
L310	High Band Adjustment
L319	Low Band Adjustment
	Connect Oscilloscope to Output Terminal for VCO. Adjust L310 for maximum at 29.000MHz. Adjust L319 for maximum at 28.500MHz.

Band	Frequency Range (Without ChipSwitch or Frequency Modification)
A	28.000 to 28.4999 MHz
B	28.500 to 28.999 MHz
C	29.000 to 29.4999 MHz
D	29.5000 to 29.699 MHz

Output Frequency from PLL-PCB to Analog-PCB

$$F_{vco} = F + 10.6950\text{MHz} + a$$

F = Transmitting and Receiving frequency

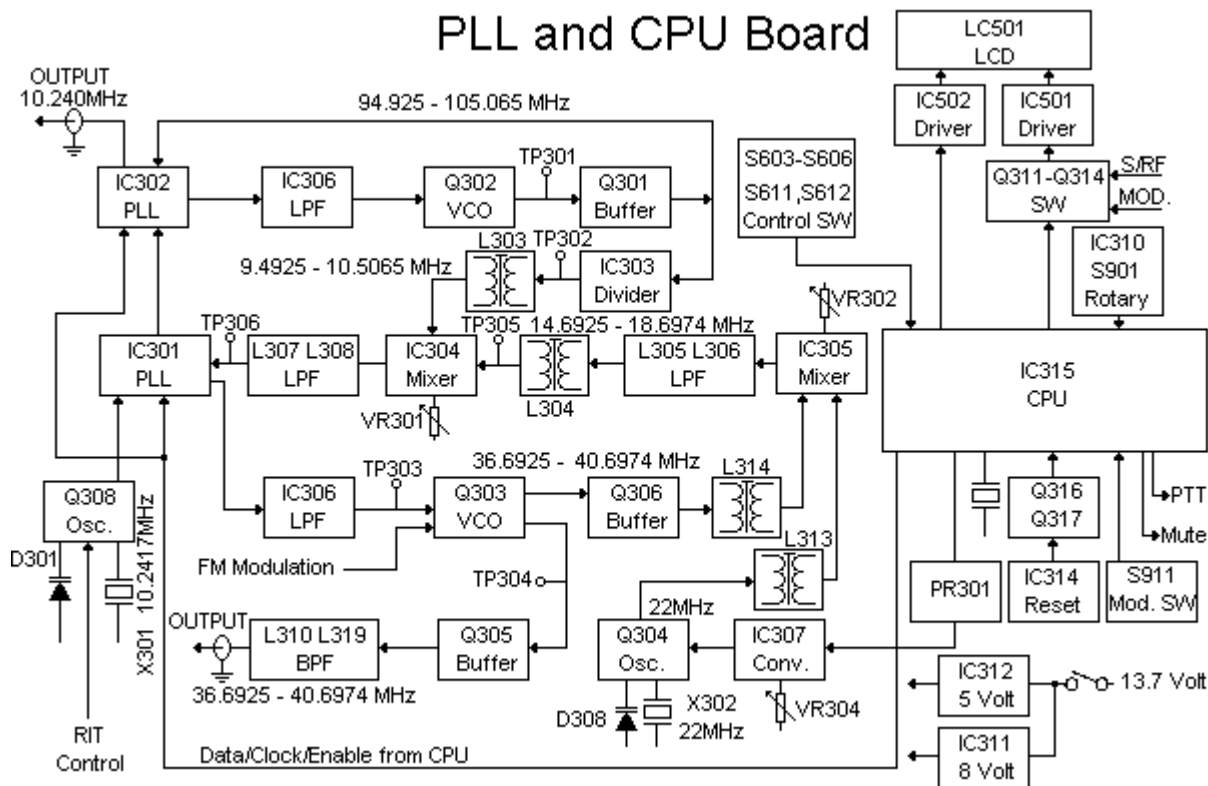
F_{vco} = VCO Output frequency

a = 0kHz for CW/FM/AM

a = +2.5kHz for USB

a = -2.5kHz for LSB

PLL and CPU Board



PCB

