

NS100 ALIGNMENT AND ADJUSTMENT METHOD

Required Test Equipment :

- Regulated DC power supply, 15V,10A
- Audio signal generator,10Hz~3kHz
- Digital multi-meter
- Deviation meter
- Frequency counter,0~500MHz high impedance
- Oscilloscope
- RF power meter, $\geq 30W$
- High frequency standard generator,>500MHz
- Distortion analyzer
- Audio level meter
- Alignment drivers, etc.
- Or a radio communication test set

Ex. HP8920

Step-1 Alignment of VCO

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|--------------------|
| CH16 | TP3 | TX : L15 | TX : 2.0V +/- 0.1V |
| CH16 | TP3 | RX : L12 | RX : 2.0V +/- 0.1V |

Step-2 Alignment of TX Frequency

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|---------------------|
| CH16 | N/A | CV2 | 156.800MHz +/- 50Hz |

Step-3 Alignment of TX Power @HI

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|---------------|
| CH16 | N/A | BY PC | 23W +/- 1W |

* Exclusive “PC Editor Software” is used for adjustment of TX Power.

Instruction of PC EDITOR is mentioned in appendix-A.

Step-4 Alignment of TX Power @LO

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|---------------|
| CH16 | N/A | BY PC | 0.8W +/- 0.1W |

* Exclusive “PC Editor Software” is used for adjustment of TX Power.

Instruction of PC EDITOR is mentioned in appendix-A.

Step-5 Alignment of Modulation Limiting.

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|-------------------|
| CH16 | N/A | BY PC | 4.6KHz +/- 0.1KHz |

* Exclusive “PC Editor Software” is used for adjustment of Modulation Limiting.

Instruction of PC EDITOR is mentioned in appendix-A.

Step-6 Alignment of FSK Modulation

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|---|
| CH70 | N/A | BY PC | Y-State : 2.6KHz +/- 0.1KHz B-State : 4.2KHz +/- 10% |

Step-7 Confirmation of RX sensitivity.

| Channel | TP | Alignment | Specification |
|---------|-----|-----------|---------------|
| CH16 | N/A | N/A | -5dBuV/emf |

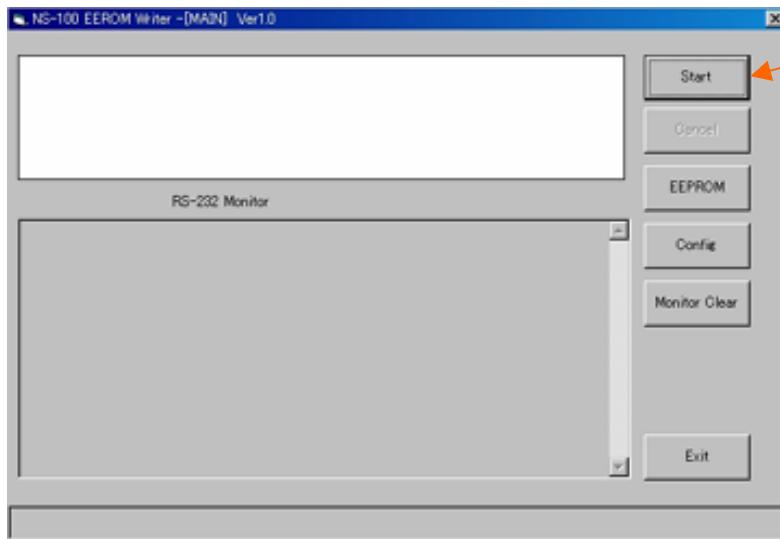
Step-8 Alignment of WX Alert Detecting.

| Channel | TP | Alignment | Specification |
|---------|-------|-----------|----------------|
| WX 1 | TP WX | VR301 | 2100Hz +/-10Hz |

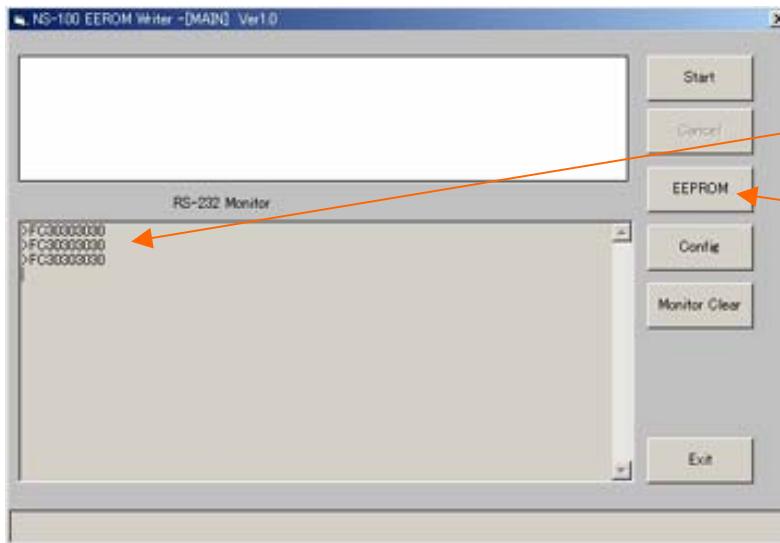
Appendix Instruction of PC Editor for NS100

1. Connect the Editor Cable to Radio.
2. Start the Editing Software in the PC.

Stat up Screen

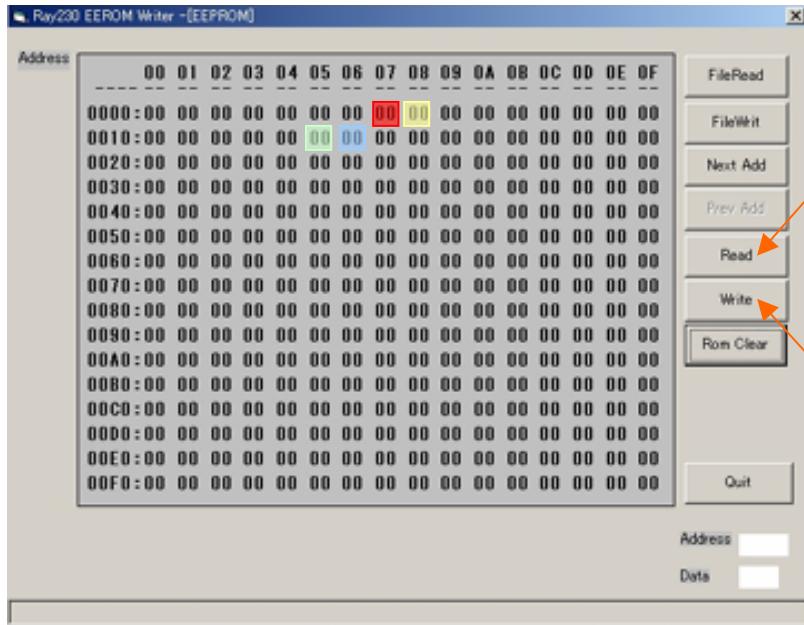


Step-1 Click "Start"



Step-2 Turn the Radio on.
Three sequences appears in a monitoring screen.

Step-3 Click "EEPROM"



Step-4 Click “Read” to upload the data to PC from Radio.

Step-5 Edit the data to align.

Address for TX Power HI : “0007” highlighted in RED.
Address for TX Power LO : “0008” highlighted in YELLOW.
Address for Mod Limiting : “0015” highlighted in GREEN.
Address for FSK Modulation : “0016” highlighted in BLUE

Step-6 Click “Write” to download the data from PC to Radio.

Step-7 Click “Quit” to return the stat up screen.

3. Disconnect the Editor Cable from Radio.

4. Confirm each item that is changed by Editor.