

Instruction Manual

LNR FX-4

QRP 17/20/30/40 Meter
CW/SSB Transceiver

**Thank you for purchasing the LNR FX-4
17/20/30/40 Meter CW/SSB Transceiver.
This unit is designed as a small and lightweight transceiver
perfect for portable use.**

**We hope you find this transceiver as fun to use as we do.
Please follow the instructions carefully and you will find this
transceiver to be a powerful, yet user-friendly unit.**



FX-4 Specifications Sheet

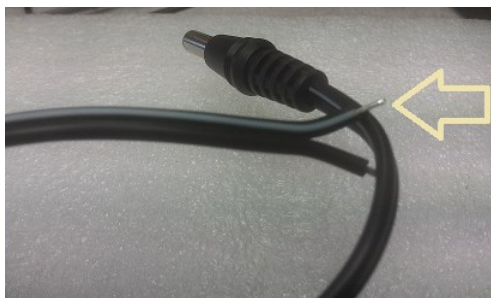
Transceiver Weight	12.8 oz.
Current drain on Receive	250-270ma
Current drain on Transmit	1200ma
Receive/Transmit Bands	40M: 7.000.00-7.300.00 MHz 20M:14.000.00-12.350.00 MHz 30M:9.999.99-10.155.00 MHz 17M:18.068-18.168.00MHz
Display Type	LCD: 128 x 64
Transmitter Max Output Power	5 Watts CW & SSB
Spurious Emissions	-43dB at 5 Watts
Side Tone Pitch Independent Side Tone Adjust	550Hz to 1.5KHz Adjustable
Receiver Sensitivity	0.3uV
Selectivity	-3dB/2.6K-40dB/4.5K
Audio Output	1 Watt with 8ohm speaker
Keyer	Iambic A&B Adjustable speed from 5 to 50 wpm
Memory Storage	10 per each band; 40 total
DSP Filtering	CW: 300Hz, 500Hz, 1.3KHz SSB: 1.6KHz, 1.9KHz, 2.2KHz, and 2.5KHz
VFO Drift	<5Hz after 5 minute warm up at 30c(<10Hz after minute op- eration @40c)

Important Instructions

Note: All command functions in the manual will be indicated as “Press and Hold [PH]” and “TAP”. Several switches have dual-functions which are entered by pressing and holding [PH].

Before Initial Use: Please Read

- The power requirements for the FX-4 are 12VDC to 13.8 VDC. The power plug (provided) is marked with a white line on the positive connection to power supply (see below).



- 50 Ohm antenna connection using BNC connector is required.
- 8 Ohm speaker (standard or amplified) or headphone with 1/8" stereo plug is required.
- For CW Mode: Either straight key or paddle key will work with FX-4 using 1/8" stereo type plug.
- Microphone connection requires 1/8" stereo plug (Your FX-4 purchase includes a microphone for SSB).

Initial Set-Up

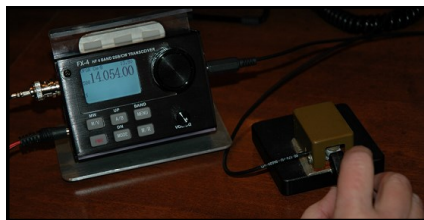
1. To Power UP, plug power cord to FX-4. Center conductor is + Positive.
2. [PH] Power Button until Display is illuminated. The display will read revision 3.5 and VFO setting.
3. Power Off by TAP of PWR button. Note: Unit will not power off while in MENU. Must exit menu first.
4. Plug in speaker into port labeled PHONE.

Configuration

- [PH] MENU to load menu. Cursor is to top/left of CW Delay (Default).
- While in Menu Mode, TAP UP (A/B) button until cursor is on CW Mode. Turn VFO knob to select Auto (Paddle) or Manual (Straight-Key).
- Tap UP (A/B) button to CW Fre. Turn VFO knob to set sidetone adjustment (normal 0700 Hz).
- Tap UP (A/B) button to CW Vol. Turn VFO knob to adjust volume.
- Tap UP (A/B) button to CW Delay. Turn VFO knob to 0.2S (best operation).
- Advance thru menu pages by tapping Up/Down button until CW Key. Turn VFO knob to change to Paddle reverse (1 Dash on Left, 2 Dits on Left)
- Tap M/V button to exit menu mode.

Memory Storage

- The FX-4 has 10 memory stores per each of the 4 bands. To access, TAP the M/V button. "CH 00" and Mode will be displayed in the top left corner of the display. Rotate VFO knob to change memory storage location number. The setting begins at CH00 and goes through CH09 and then will roll to next band.
- To Store Frequency, [PH] M/V button and an * (asterisk) will appear right of "Mode". Select Frequency to be stored then Mode. Tap M/V to exit and save.
- Tap VFO knob to advance tuning rate!
- The FX-4 has TWO VFOs although they cannot be used as split operation. The TWO VFOs are good to use for CW Mode or USB/LSB operations.
- S-Meter Function: The S-Meter reads signal strength, output power, and reflective power. It also monitors input for small batter operations.



Basic Operation

- Connect antenna to your radio or dummy load.
- Plug in your desired HAM key into port labeled KEY.
- Opt. for SSB: Plug in microphone into port labeled MIC.
- Before you plug in Straight key or Paddle, you may want to get familiar with the screens and functions.
- Rotate the VFO knob and notice the frequency change. By tapping the VFO knob, it will move the frequency tuning rate to the next character. The tuning rate cycles between 10Hz, 100Hz, 1KHz, 10KHz, and 100KHz. Do this a few times to familiarize yourself with this feature.
- Volume control can be increased by turning knob clockwise. Volume will show on display as a value between 0-63. Volume control has an additional feature which is covered later in the manual.
- Tap BAND button to desired frequency (ex. 40M, 30M, 20M, 17M). FX-4 has a VFO A and a VFO B. To toggle between VFO A and VFO B, Tap the A/B Button. Tap MODE button to toggle between CW, LSB, USB.
- To toggle CW/A to CW/B mode, [PH] A/B button.
- Filter settings for CW is applied by TAPPING W/R button.
- For SSB mode, tap MODE button until USB/LSB (upper sideband/lower sideband) is displayed.
- Filter settings for SSB can also be applied by TAPPING W/R button.
- To activate RIT feature, [PH] W/R button until RIT is displayed. Adjustments can be made by VFO knob. To exit RIT, [PH] W/R button.

NOTES

- The FX-4's VFO knob is not freespooling. We designed it with detents so that tuning can be much more precise.
- The FX-4 has an RIT function; and is accessed by [PH] W/R switch. RIT will be display left of screen above filter settings., Once in RIT mode there is two frequency's displayed. Bottom is Original VFO setting while the Top (Large) numbers is the RIT setting. It is adjustable by rotating the VFO knob. To exit RIT [PH] the W/R switch.
- The FX-4 has VSWR built in Protection and requires no set up. It is always good practice to make sure your antenna has a good match on the bands being worked. You can verify your antenna match by placing FX-4 in Manual key mode and hold key down for a few seconds and observe the Power and reflective meter (S) on the FX-4. The More bars that are on the lower scale or (S) the more reflective power is generated and requiring antenna adjustment or antenna tuner to get 50 ohm match.
- If FX-4 has a good match with antenna and power supply voltage of 13.8 VDC, you should have 5 watts output on CW and SSB operation.

SSB Operation

- FX-4 has Side Band or voice capability and has DSP filters of 1.6 kHz, 1.9 KHz, 2.2 kHz, and 2.6 KHz. Each filter is accessible by tapping W/R switch while in the USB/LSB Mode.
- The FX-4 has a Noise Blanker and can be access by [PH] the MODE switch. NB will be displayed top center of screen, to close NB, [PH] and Mode switch. Noise Blanker is only used LSB/LSB modes.

CW Operation

- FX-4 has Iambic A and B functionality. To change from A to B mode, TAP Mode switch and observe the CW/A or CW/B at top center of display. [PH] A/B button to toggle between settings.
- CW mode has 3 DSP filters: 300Hz, 500Hz, and 1.3 kHz. They are activated by TAP of W/R switch and filter setting is displayed center left of screen.
- CW speed is set by [PH] VFO Knob and rotating VFO knob. Speed can be adjusted between 5 to 50 WPM. Exit speed change by TAP of VFO knob. Note: speed is not programmed until you exit the speed set point screen.
- Cq Cq Cq can be used with your programmed call by tap of VOL/CQ knob.

CW in Auto Mode

- On Power-up, the CW Mode defaults to AUTO which is paddle mode. If operator wishes to operate in CW mode, select BAND, TAP MODE button until CW/A or CW/B mode is displayed. CW/A and CW/B distinguishes between Iambic A and Iambic B.
- [PH] VFO Knob to display paddle speed. Turning the VFO knob will then allow you to adjust the speed between 5 and 50 WPM. TAP VFO knob again to store setting.

CW in Manual Mode

- To switch to Manual Mode, [PH] Menu Button, press DN button to CW Mode. Turn VFO knob to manual and exit menu by TAP of M/V button.

Menu Features

[PH] MENU button until menu display appears.

MENU Features - Page 1

*CW Delay:		0.1Sec to 1.5Sec
*CW Vol (Sidetone):		01 to 10
*CW Fre (Pitch):		0550Hz 1500 Hz
*CW Mode:		Auto = Paddle Manu= Straight/Bug
*H-VWR-P:		OFF (not used)
*Light: (Backlit Timer)		Delay 1Sec - 9Sec/ Always Open
*IF:		Default - 0-0.700Hz
*Call: (Rotate VFO knob and TAP to move to next char) Leave one space af- ter call for letter K		-----

MENU Features - Page 2

R BFO:		8.998.600 Hz
T BFO:		8.999.300 Hz
USB BFO:		9.000.800 Hz
LSB BFO:		8.997.800 Hz
REF :		75.000.120 Hz
*CW KEY: (Paddle reverse)		Mode 1 / 2

*Indicates menu feature is adjustable.

Note: only * indicated items should be adjusted. Other items should not be adjusted beyond their stated values.

Menu Notes

All settings are adjustable however certain settings are for informational use only should not be changed as this will affect selective and off frequency operation.

The following settings should NOT be changed. No Set Point Change Required.

R BFO: 8.999.300Hz

T BFO: 9.000.000Hz

USB BFO: 9.001.500Hz

LSB BFO: 8.998.500Hz

REF: 75.000.000Hz (Clock)

We hope you enjoy your new
LNR FX-4 17/20/30/40 Meter
QRP Transceiver.
For technical assistance, please
contact us via the



*PAR ENDFEDZ® ANTENNAS &
PRECISION TELEGRAPH INSTRUMENTS*

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