

SIGMA EURO-COMM Ltd

SE HF X-80 INSTRUCTION SHEET

Thank you for purchasing the SE HF X-80 VERTICAL, this instruction sheet should help you get the best from your new antenna.

The SE HF X-80 consists of a 6 m aluminium vertical radiating section and an UNUN transformer used to lower the high impedances found at the feedpoint of the vertical to the 50 Ohms that is required by your transceiver.

Specifications:

- Type End fed vertical antenna
- Frequency TX/ 3.5 – 52MHz (with ATU)
RX/ 1.8 – 55MHz (with ATU)
- Max power 400 Watts PEP
- Impedance 50 Ohms
- Connector SO-239
- Height 6 m

Assembly and mounting:

Before you install your antenna, select the most available open site away from power lines and telephone lines. The antenna can be mounted at ground level or at height so giving you many options for installation.

Mount the antenna using the u bolt or other attachment.

Assemble aluminium elements using jubilee clamps, leaving 11cm in each section and secure.

At the top of the base cradle place the three nuts and bolts into the black moulding and secure.

Attach the PL-259 plug on the 50 Ohm feeder coax to SO-239 socket on the UNUN.

We recommend that you should always earth at the tuner point rather than at the transformer for best performance and safety. If you wish to ground the antenna, attach adequate wire to the base cradle.

For permanent installation it would be prudent to seal the jubilee clamps with amalgamating tape or similar to prolong the life and quality of the antenna.

Pack contents:

- 6x Aluminium poles.
- 1x base cradle + Unun transformer.
- 5x Jubilee clamps.
- 1x Base bolt.
- 3x Top molding nuts and bolts.
- 2x U-Clamps + washers and nuts.
- 1x Top cap (red)

Please note:

This antenna is for amateur radio and broadband receiving use. Do not use other than for the purpose of antenna.

Please use the antenna within the standard specifications described in this manual. Failure to do this may cause heat and break down of the transformer unit.

**Warning: High RF Voltages are present on the element when transmitting.
DO NOT TOUCH.**

SE HF X-80 DATA SHEET

The SE HF X-80 is an end fed aluminium vertical antenna, capable of allowing the user to work 80 metres through 6 metres bands using an ATU, also not requiring any counterpoise and can be fed using coax cable. The antenna can be pole mounted at ground level or elevated depending on the user's personal requirements. The antenna is rated at 400 watts PEP. The antenna comes complete with all fixings and fixtures and full installation guide.

How it works: The antenna is fed using 50 Ohm coax via a SO-239 socket at the base of the unit. A 6:1 UNUN transformer is located in an IP65 weather sealed box at the bottom of the 6 meter telescopic aluminium element. The transformer reduces the impedance at the feed point to a more acceptable level making the antenna much more efficient and allowing proper and easy tuning via an external ATU and automatic ATU's found in most modern radios.

The antenna can be grounded if the user experiences excessive local static noise, but as the UNUN is DC grounded: grounding will not affect the tuning ratios.

The Highlighted bands in the chart below will require a manual ATU, the others an internal ATU.

Frequency	VSWR
3.5 MHz 80 m	with Manual ATU 1.1
7 MHz 40 m	with ATU 1.1
10 MHz 30 m	with ATU 1.1
14 MHz 20 m	with ATU 1.1
18 MHz 17 m	with Manual ATU 1.1
21 MHz 15 m	with ATU 1.1
24 MHz 12 m	Manual ATU 1.1
28 MHz 10 m	with ATU 1.1
50 MHz 6 m	with Manual ATU 1.1

Please use a good quality 50 Ohm coax, RG-213 or Mini 8 are probably the best choice.