Remote Antenna Switch
MFJ-4713

INSTRUCTION MANUAL

MFJ Enterprises, Inc.
300 Industrial Park Rd. Starkville, MS 39759
P: (662) 323-5869
F: (662) 323-6551

DISCLAIMER

The information in this manual is for user purposes only and is not intended to supersede information contained in customer regulations, technical manuals or documents, positional handbooks, or other official publications. The copy of this manual provided to the customer will not be updated to reflect current data. Customers using this manual should report errors or omissions, recommendations for improvements, or other comments to MFJ Enterprises, 300 Industrial Park Road, Starkville, MS 39759.

Phone: (662) 323-5869
Fax: (662) 323-6551
Business hours: M-F 8:00 AM - 4:30 PM CST.

Contents

List of Figures

1 THE MFJ-4713

1.1 DESCRIPTION

The MFJ-4713 *Remote Antenna Switch*™ is MFJ's answer for the rat's nest of cables building up around your multi-antenna deployment. Why run multiple cables back into your shack when you can just run one instead? The MFJ-4713 allows you to connect up to four antennas and drive them at full legal power. Best of all, you only need a single piece of coax. No extra control or power cables are needed!

(a) Switch Box (b) Control Box

Figure 1: MFJ-4713 Components

The MFJ-4713 has two components: the Switch Box (Figure 1a) which goes as close to your antennas as possible, and the Control Box (Figure 1b) which goes on your bench. The Switch Box has a two-inch plate for mounting the unit. It can either be mounted at the base of a mast using the provided U-bolt, or it can be mounted to a wall using screws. Wherever it is attached, be sure to mount it with the SO-239 connectors facing the ground to prevent water buildup inside the unit. The Control Box is designed to either sit upright on its rubber feet or to be mounted along the edge of your bench. This will secure it from tipping over if you are using heavy coax and keeps it out of the way.

The MFJ-4713 has an RF safety ground in the event of a chassis fault and the switch box contains a 1 A bus fuse to protect against transient voltages coming in along the power supply. Remove the four corner screws and the cover to access the fuse.

1.2 FEATURES

A compact and rugged design means this switch won't clutter up your bench, yet is tough enough to handle legal-limit operating all day long. The SWR remains low across all amateur bands up through 150 MHz (Figure 2), meaning that the MFJ-4713 will have minimal impact on the performance of your station. Other than the convenience of controlling four antennas from a single point, it will be as if it isn't even there! The switch turns freely and easily, illuminating the bright LEDs to show which antenna you currently are using. Finally, both units are built with a folded edge for ease of mounting.

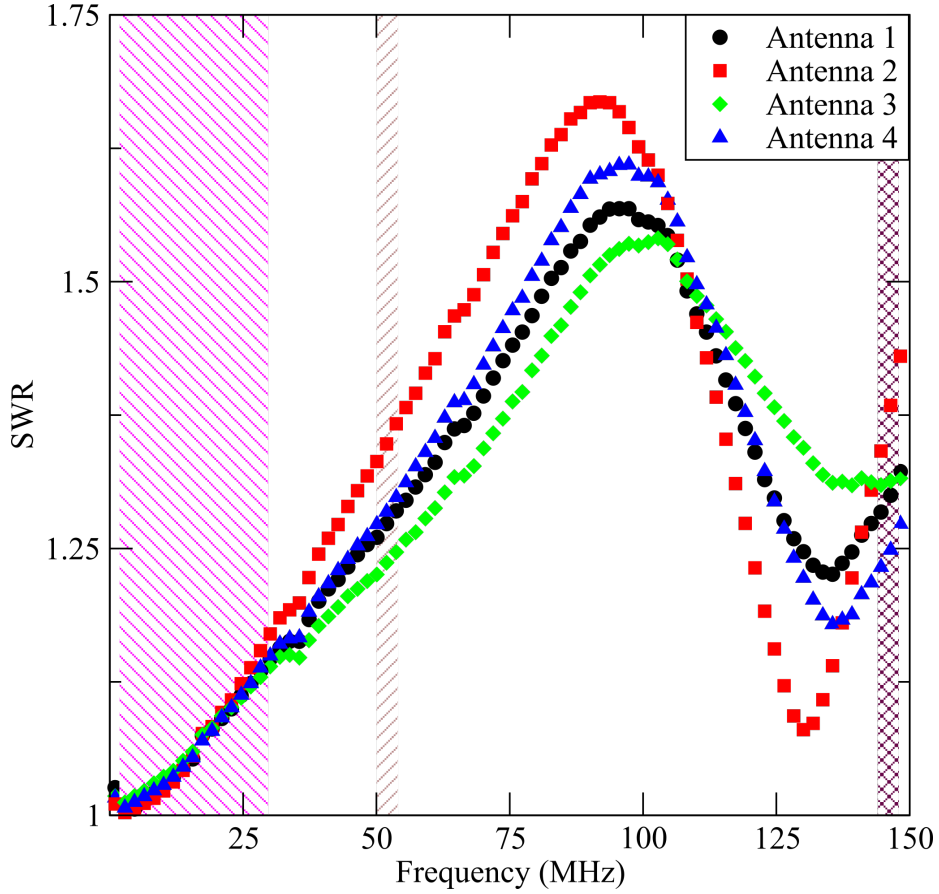

Figure 2: SWR plot of each antenna port. HF and VHF frequencies are highlighted.

1.3 CONTROLS & CONNECTIONS

The MFJ-4713 *Remote Antenna Switch*™ is designed to be simple and intuitive to use. All controls have been reduced to a single rotary switch that controls the 12V AC* power and selects the desired antenna. Figure 3 shows an annotated layout of both units.

1. Radio: Connect coax from radio or tuner here.
2. 12V AC: Coaxial power input.
3. Box Link: Connect a piece of coax between these two ports.
4. Selector: This rotary switch controls power and selects the desired antenna port.
5. Indicators: Bright LEDs light up to indicate which antenna is selected.
6. RF Ground: RF safety ground.
7. Antenna Ports: Connect antennas here.

Figure 3: MFJ-4713 Controls: 1.) To Radio, 2.) 12V AC input, 3.)Box Link, 4.) Antenna Selector, 5.) Antenna Indicators, 6.) Safety Ground, 7.) Antenna Ports.

*This is not a typo. The MFJ-4713 requires a 12V *AC* power supply. This is provided but if lost or damaged can be reordered as part number 407-1072.

2 SYSTEM SETUP & OPERATION

Seting up the MFJ-4713 is simple. Figure 4 shows one possible station setup that includes the MFJ-4713. The Control Box is placed on the bench where you can easily reach it. It has a conveniently folded edge with two screw holes for mounting to the edge of your bench. This both secures it and keeps it out of the way of the main action. The Switch Box is placed as close to your antennas as you can get it and has a folded edge with a U-bolt to allow clamping to a mast. The only connection between the boxes is a single piece of coax. Just make sure to pick coax that can handle the power you want to run! Finally, plug the AC power adapter into the power port on the Control Box. Turn the selector switch to the position you want, and you're ready to operate!

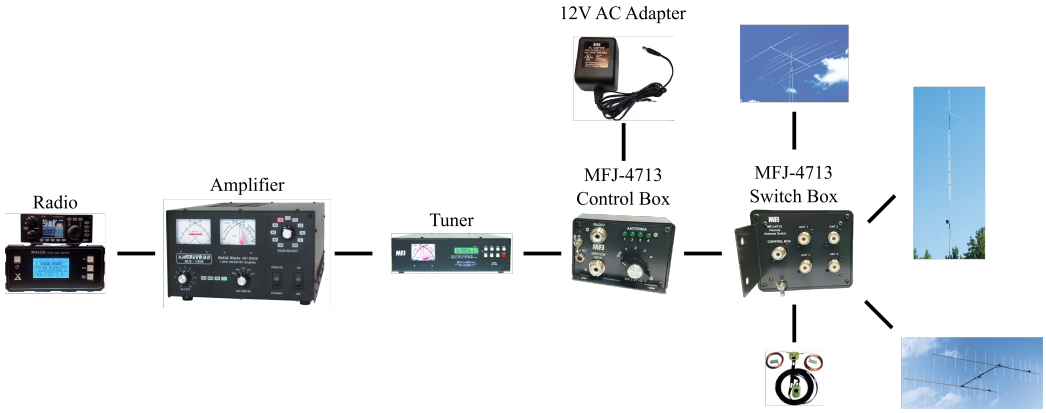

Figure 4: MFJ-4713 Station Setup

Operation of the MFJ-4713 even easier than the setup as there is only a single control. Connect an antenna to the desired port, then turn the selector switch to match.† If the Switch Box is nearby, you may hear the relays clicking. This is normal behavior.

3 TECHNICAL ASSISTANCE

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or reading the manual does not solve your problem, you may call MFJ Technical Service at (662) 323-0549 or the MFJ Factory at (662) 323-5869. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions by mail to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759; by Facsimile (FAX) to 662-323-6551; or by email to techinfo@mfjenterprises.com. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

†Be certain to never transmit into an open antenna port. Reflected signals with dangerous voltages could result.

USER NOTES