

Ultra Beam

Dynamic Antenna Systems

MANUAL

“COAX SWITCH”



WiMo Antennen und Elektronik GmbH

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ELECTRONIC COAX SWITCH

Some Ultrabeam models use a dual-driver yagi circuitry.

This circuitry has one additional element (2 for the 6-EL.) on the highest frequencies and allows, at the same time, greater spacing on lower frequencies.

However, this circuitry requires an additional driver.

The electronic coax switch is installed on the antenna boom and is managed directly by the controller, which switches the coaxial line to driver 1 or 2 automatically, depending on the frequency used.

Dual driver models	Driver 1 (bands)	Driver 2 (bands)
UB-20	10-12-15	17 - 20
4 ELEMENTS 6.20 - DX	10-12-15	17 - 20
6 ELEMENTS 6.20 - DX	10-12-15	17 - 20
UB-40	10-12-15-17-20	30 - 40
UB-50	10-12-15-17-20	30 - 40
3 ELEMENTS 6-40	10-12-15-17-20	30 - 40
4 ELEMENTS 6-40	10-12-15-17-20	30 - 40
UB640-VL2.3	10-12-15-17-20	30 - 40
UB640-VL3.4	10-12-15-17-20	30 - 40

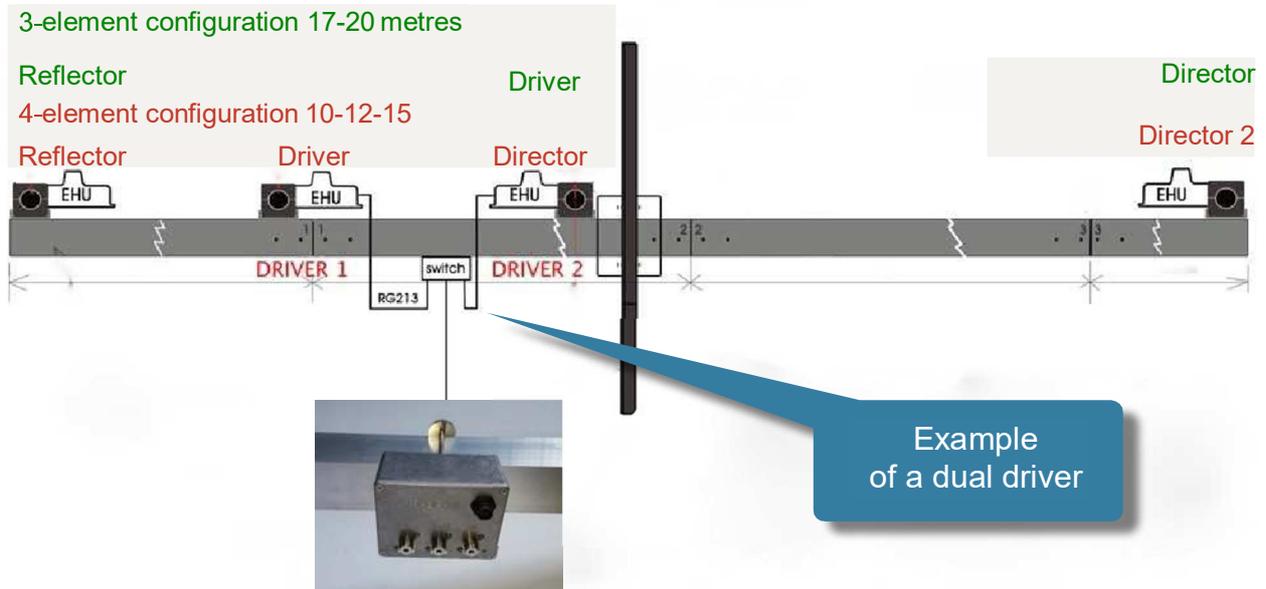
Active band elements	10	12	15	17	20	30	40
UB-20	3	3	3	2	2	-	-
4 ELEMENTS 6.20 - DX	4	4	4	3	3	-	-
6 ELEMENTS 6.20 - DX	6	6	6	4	4	-	-
UB-40	3	3	3	3	3	3	2
UB-50	3	3	3	3	3	1	1
3 ELEMENTS 6-40	3	3	3	3	3	2	2
4 ELEMENTS 6-40	4	4	4	4	4	3	3
UB640-VL2.3	3	3	3	3	3	2	2
UB640-VL3.4	4	4	4	4	4	3	3

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LAYOUT OF A DUAL DRIVER ANTENNA

4 ELEMENTS 6-20 DX



The layout of the 4 Elements 6-20 DX is used as circuitry example on dual driver models. When the antenna works over 17 and 20 metres, we have a 3-element yagi configuration. In this case, the antenna is powered on **Driver 2**, (driver 1 is deactivated)
When the antenna works over 10 to 15 meter bands, the coax switch connects the line to **Driver 1** activating a 4-element configuration.

When the antenna works with Driver 1, the sliding contacts inside Driver 2 are short-circuited by an internal relays. This allows the driver to work as a passive element and, thus, as a director. Therefore, all Drivers 2 will have a 6-pole connector (2 more compared to other motor units).

NOTE: the coax switch is powered and controlled directly by the controller. If its power cable is not connected or the controller is powered-off, we will have continuity at output 1 and the antenna will work with Driver 1.

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INSTALLING THE SWITCH

The switch is mounted on the boom by means of a new ABS support. Holes are not required. You just have to insert the two M6 bolts inside the box (fig.1) and tighten them to the ABS support (fig.2).

The switch is positioned between the two drivers. Before you tighten the screws, find a position that facilitates the passage of the coax cables to which it must be connected.



Fig.1



Fig.2

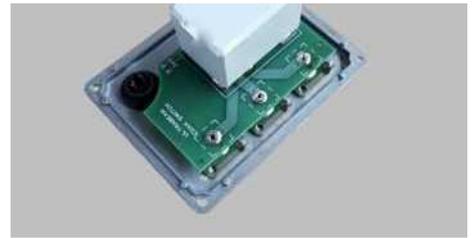
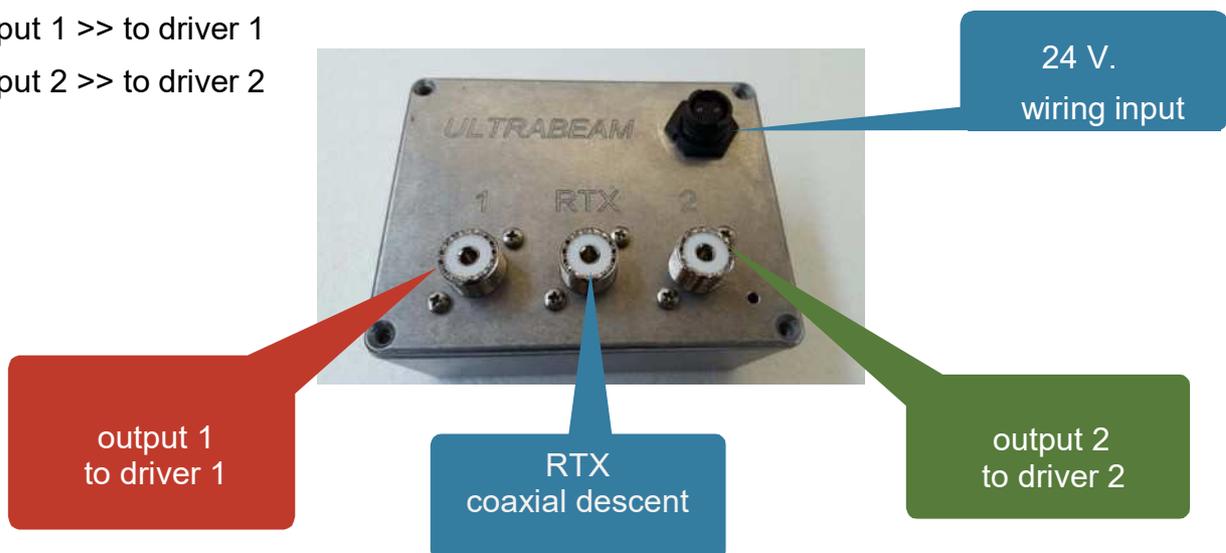


Fig.3

CONNECTING THE COAX CABLES

The coax cables used for the connection to the drivers are supplied with attached connectors. The connection procedure is extremely intuitive:

- output 1 >> to driver 1
- output 2 >> to driver 2



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