

Introduction:

The 905 rental kit was assembled to give interested radio amateurs an opportunity to test selected GHz bands without making a large investment. The kit includes the IC-905, antennas for the 23 cm (1.2 GHz), 13 cm (2.4 GHz), and 6 cm (5.6 GHz) bands, the antenna mast, RF cables, and a drive-on base for portable operation. Only a 13.8 V / 5.5 A power supply is additionally required. Depending on the setup, the controller is connected to the RF unit using either the supplied 5 m or 1 m PoE cable.

Possible setup configurations for the 905 rental kit

1.) Using the car as a counterweight (drive-on base): the rotation range is limited when the controller is mounted on the mast. It is advisable to define a preferred direction so that the available rotation range can be used effectively. Alternatively, the controller can be positioned remotely using the 5 m PoE cable, for example inside the vehicle.

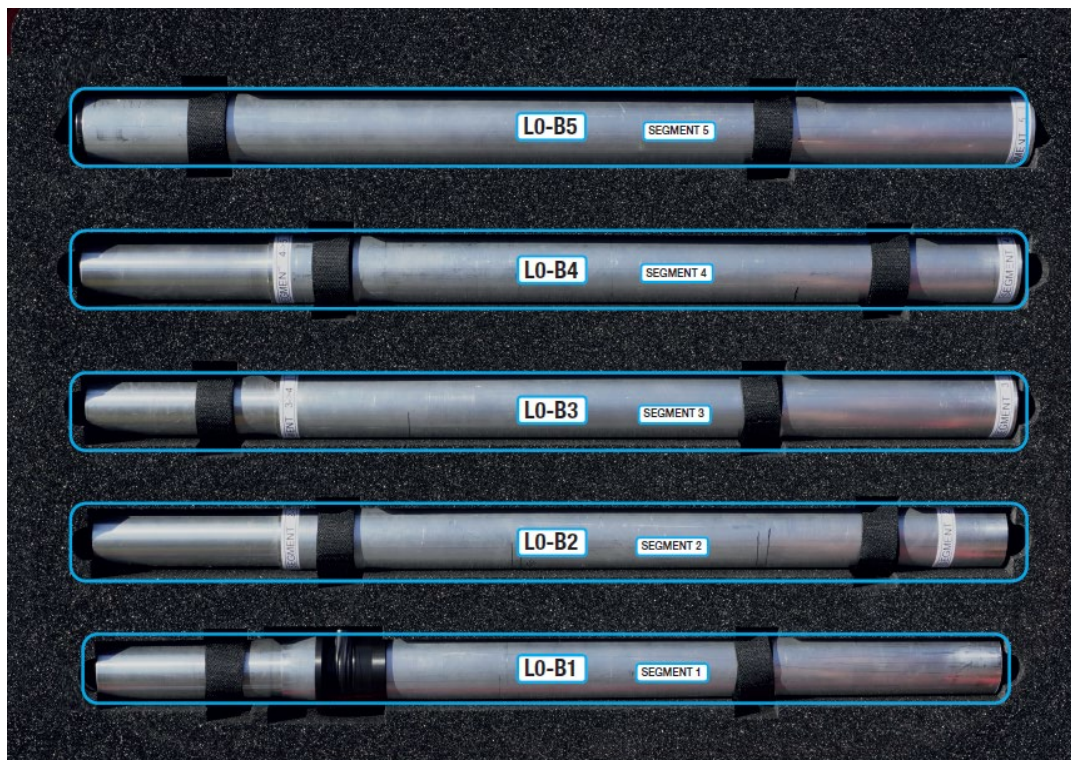


2.) Using weights (lead-acid battery, concrete slabs, etc.) on the drive-on base: the complete system can be rotated through 360°. The controller is connected to the RF unit using the supplied 1 m PoE cable.

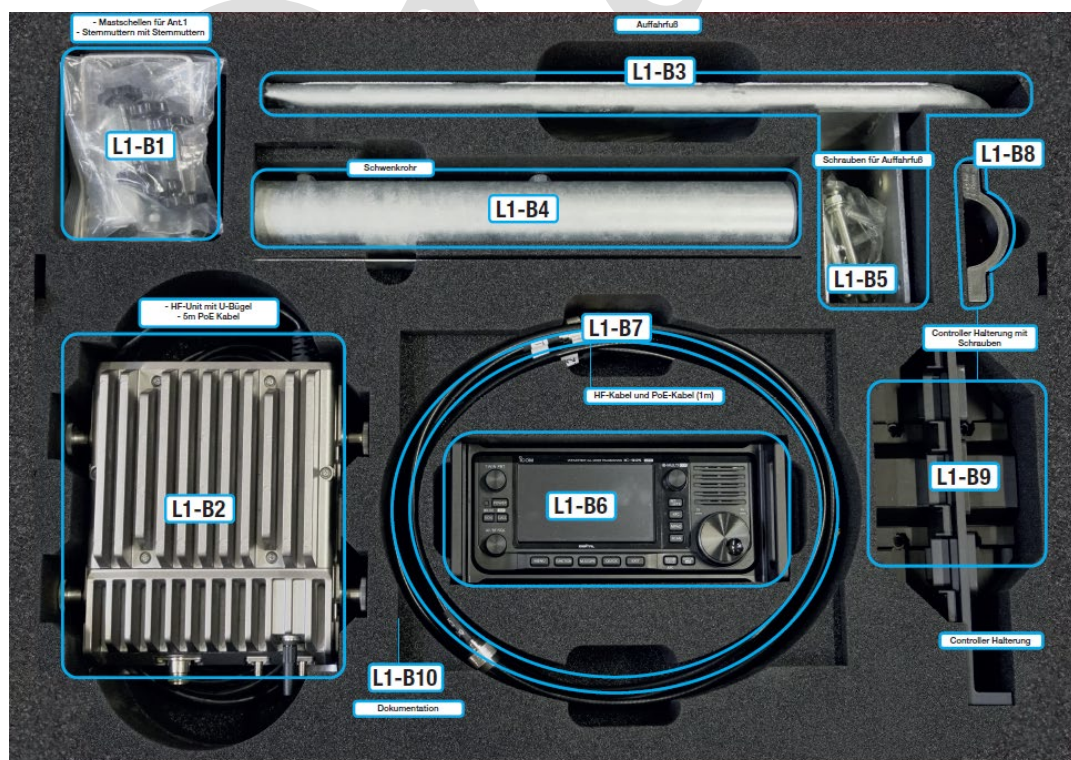


Layer labels:

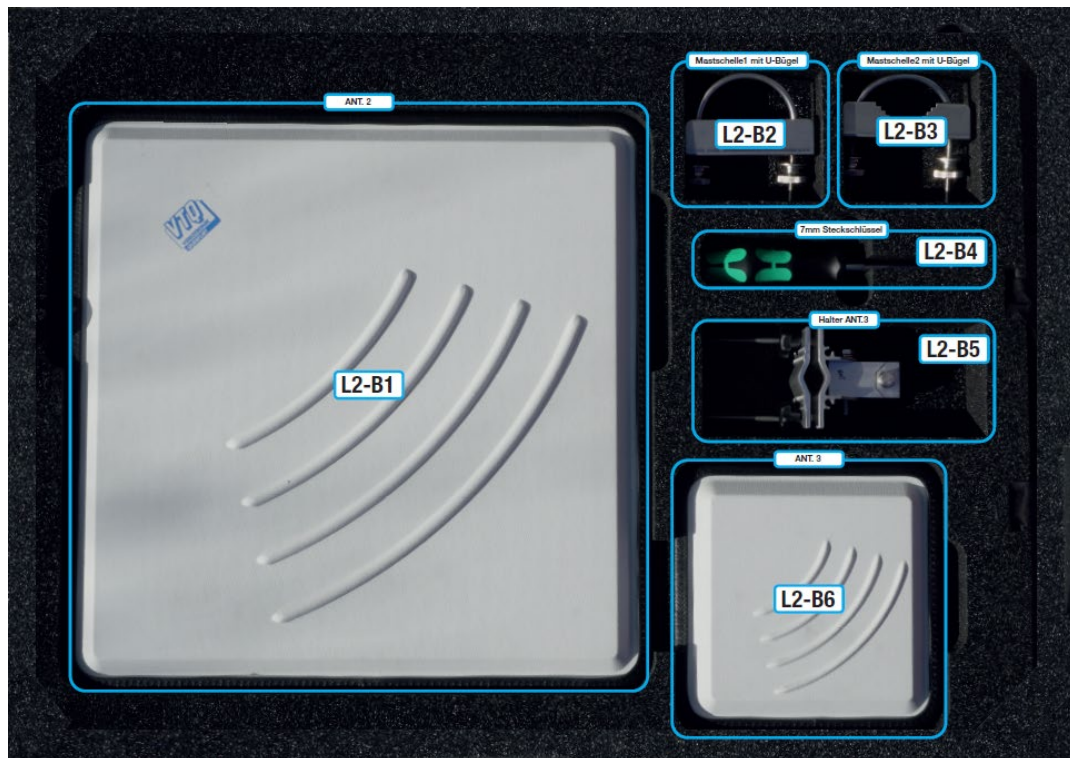
The red labels in square brackets in this guide indicate the position of the corresponding item in the case. Example: [L0 -B1] means Layer 0, Box 1. In this example, this is mast segment 1.



Layer 0



Layer 1



Layer 2



Layer 3

Assembly:

For assembly, it is recommended to prepare two boxes, beverage crates, trestles, etc. to use as supports and work surfaces. Assembly should be carried out by two people.

General: The markings on the mast always indicate the lower edge of the mounting position for the respective item.



1. Remove the drive-on base [L1-B3] (Photo 1) and pivot tube [L1-B4] from Layer 1, and secure the pivot tube with the screw set [L1-B5] (Photo 2).

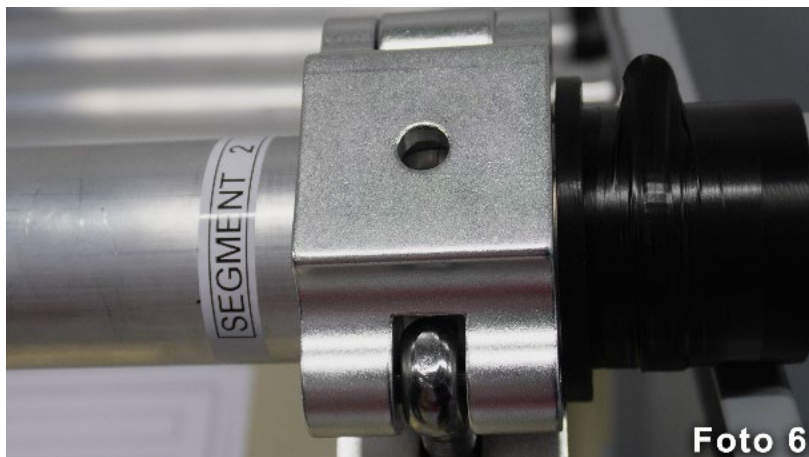


2. Remove the mast tubes from the lid [L0-B1 to B5] (Photo 3) and connect them, observing the alignment marks - lines - (Photo 4). Loosely secure them with the M6x60 star-knob screws [L1-B1] (Photo 5). If available, place the mast on the supports.



3. Remove Layer 1 from the case.

4. Remove Layer 2 from the case.



5. Remove the brake clamp [L3-B2] (Photo 6) and install it at the rotating joint between (SEGMENT1) and (SEGMENT2).



6. Remove ANT1-WIMO (1.2 GHz) [L3-B1] (Photo 7) and attach the mast clamps [L1-B1] (Photo 8) to the antenna (Photos 9 and 10). Then mount the complete antenna at the very top of the mast (SEGMENT5), observing the mark (Photo 11).





Foto 10



Foto 11

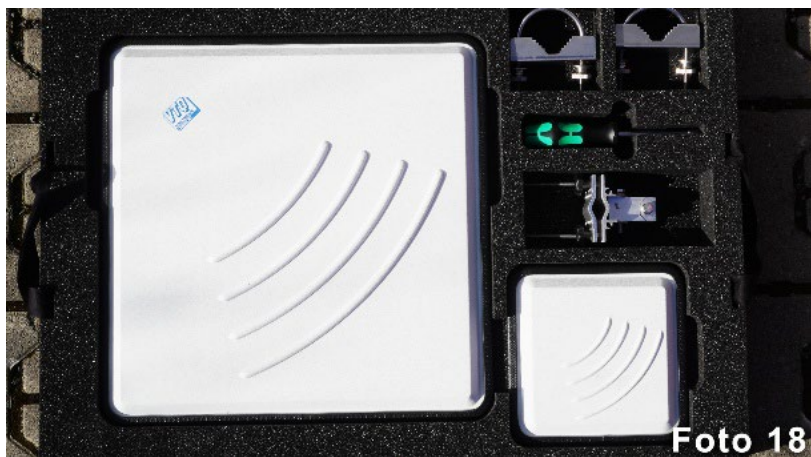


Foto 18

7. Remove ANT2-VTQ (2.4 GHz) [L2-B1] (Photo 18) and attach mast bracket [L3-B5] (Photo 13) to it (Photo 14). The N socket should be on the same side of the mast as ANT1; this makes cable routing easier later. For easier installation, separate the mast again between segments 3 and 4 and slide on the hose clamps (Photo 15). Now mount the antenna on the mast at SEGMENT4 using the hose clamps [L3-B5] (Photo 16), observing the mark (Photo 17).



Foto 13



Foto 14



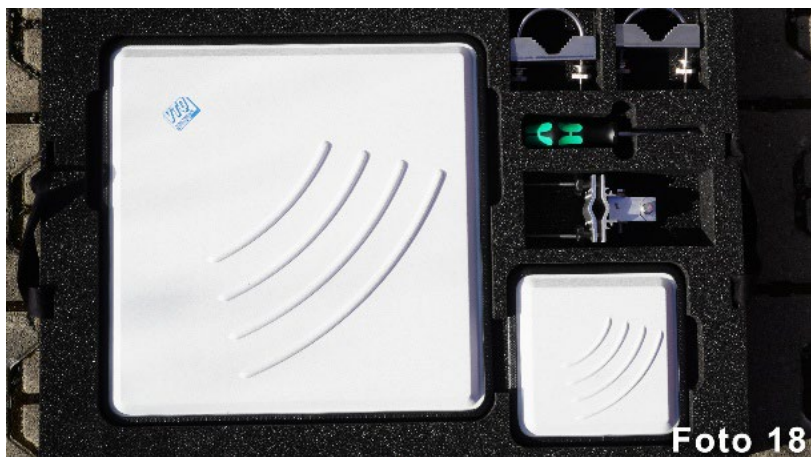
Foto 15



Foto 16



Foto 17



8. Remove ANT3-VTQ (5.6 GHz) [L2-B6] (Photo 18) and install mast bracket [L2-B5] (Photo 19). Again, position the N socket on the same side as ANT1 for cable routing. Then mount the complete antenna on the mast at SEGMENT4, observing the mark (Photo 20).



9. Remove the IC-905 RF unit [L1-B2] (Photo 21) and loosen the U-bracket using the knurled screws (Photo 22). The 5 m PoE cable is stored in the space between them. Mount the U-bracket on the mast at SEGMENT2 using the mast clamps [L2-B2] [L2-B3], observing the mark (Photo 23). This mark indicates the lowest mounting position for the RF unit. Depending on the vehicle, it may be mounted up to 15 cm above the mark to allow 360° rotation. Orient it toward the rear side of the antennas. Then place the RF unit back into the U-bracket and tighten the knurled screws (Photo 24).





10. Remove the controller [L1-B6] (Photo 25), the three-piece bracket [L1-B8 | L1-B9], and the M6x40 mm screws. Assemble the bracket (Photos 26, 27 and 28), but do not tighten the screws yet. As with ANT2, for easier installation separate the mast again between segments 3 and 4 (Photo 29), slide on the controller bracket, and mount it on the mast at SEGMENT3, observing the mark (Photo 30).





Foto 31

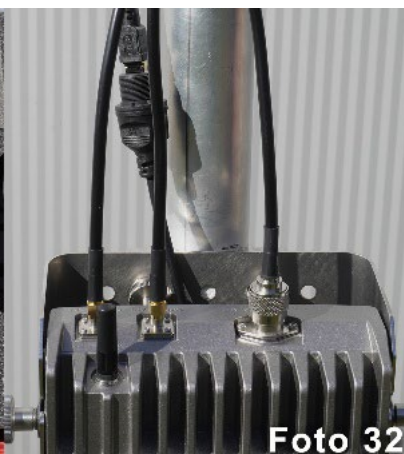


Foto 32

11. Remove the RF cables [L1-B7] (Photo 31) and connect them to the RF unit.

SMA - N, 1 m for ANT3 5.6 GHz

SMA - N, 1.50 m for ANT2 2.4 GHz

N - N, 2 m for ANT1 1.2 GHz

(Photo 32) Then screw them onto the antennas. Route the cables carefully along the mast (Photo 33) and secure them appropriately.



Foto 33



Foto 34



Foto 35

12. Depending on the setup, connect the appropriate PoE cable: 1 m [L1-B7] (Photo 34) when the controller is mounted directly on the mast, or 5 m [L1-B2] (Photo 35) when the controller is positioned remotely, e.g. inside the vehicle.



Foto 36



Foto 37

13. Insert the fully assembled mast into the pivot tube on the drive-on base (Photos 36 and 37), secure it with the wing screws, and raise it. Then insert the safety screw and tighten all three screws on the drive-on base.



Foto 38

14. Insert the DC cable from [L3-B4] and the microphone [L3-B3] into the corresponding sockets on the controller (Photo 38).