en/GPS-System

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1 Video assembling Set Navigation

2 The GPS-System

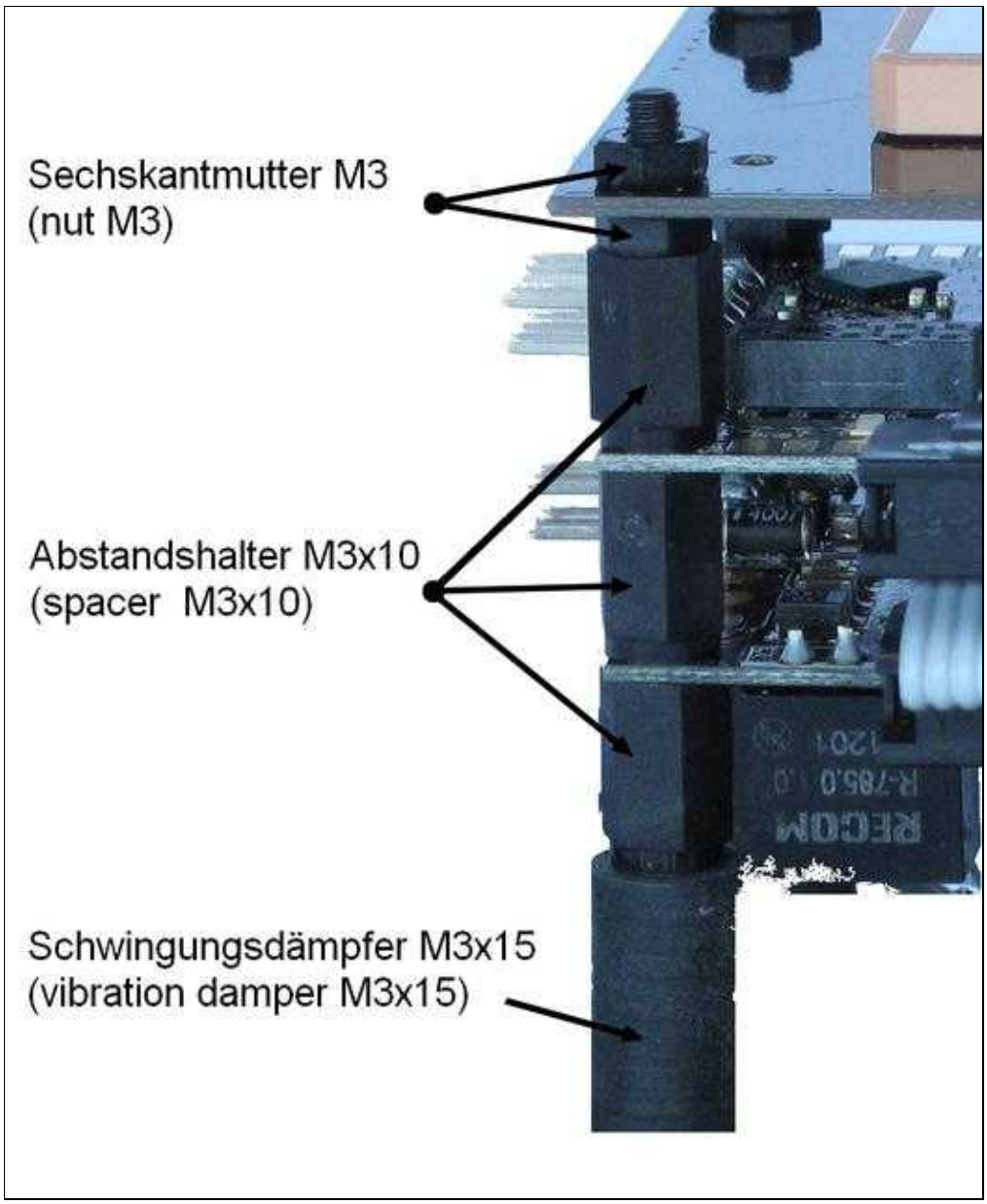
The GPS system consists of NaviCtrl and MKGPS. Both modules can be easily mounted over the FlightCtrl.
The order is this:

- FlightCtrl (bottom)
- NaviCtrl with compass (center)
- MKGPS (on top)

To mount the GPS-System you need some things to assemble the single PCBs.
You need:

- 4x Vibration damper M3x15 (Link)
- 12x Spacer M3x10 (Link)
- 8x Nut M3 (Link)

INFO: If you have the not the NaviCtrl V2.0 with integrated compass and use the "old" red NaviCtrl **V1.1** with MK3Mag, you need 4x spacer M3x15 (Link) between NaviCtrl and MKGPS!


Sechskantmutter M3
(nut M3)
Abstandshalter M3x10
(spacer M3x10)
Schwingungsdämpfer M3x15
(vibration damper M3x15)

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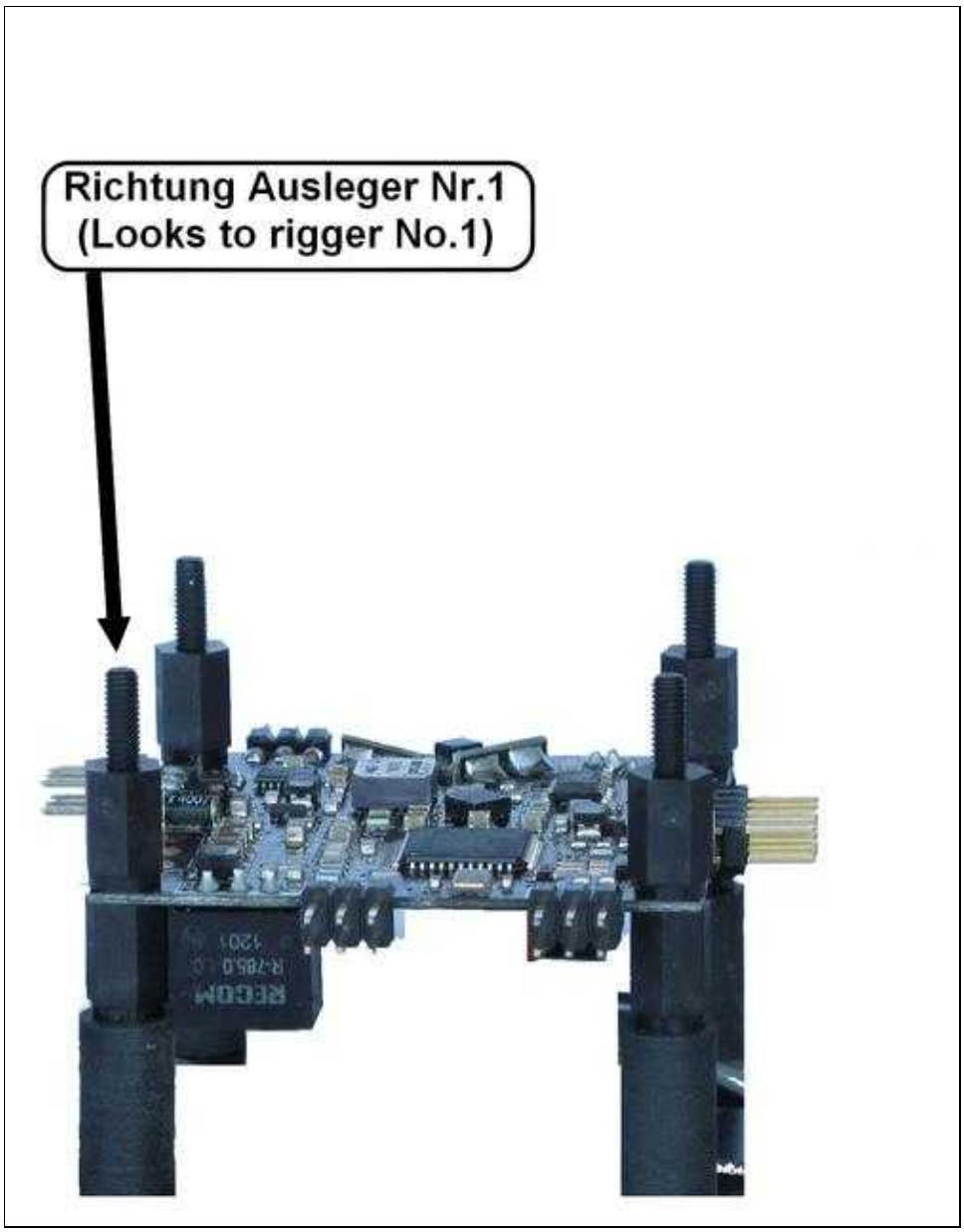
TIPP:
If you buy a Basicset from the MK-online shop, somedamper, spacer and nuts are already include.
The NaviCtrl and MKGPS includes already the needed cable to connect each other.

2.1 The assembly

the assembling is easy and fast to do:

Step 1

The FlightCtrl is mounted on the 4 vibration dampers and fixed with 4 spacers.
Importantly: The SMD components are above and the arrow shows to rigger Nr.1 (red rigger).


Richtung Ausleger Nr.1
(Looks to rigger No.1)

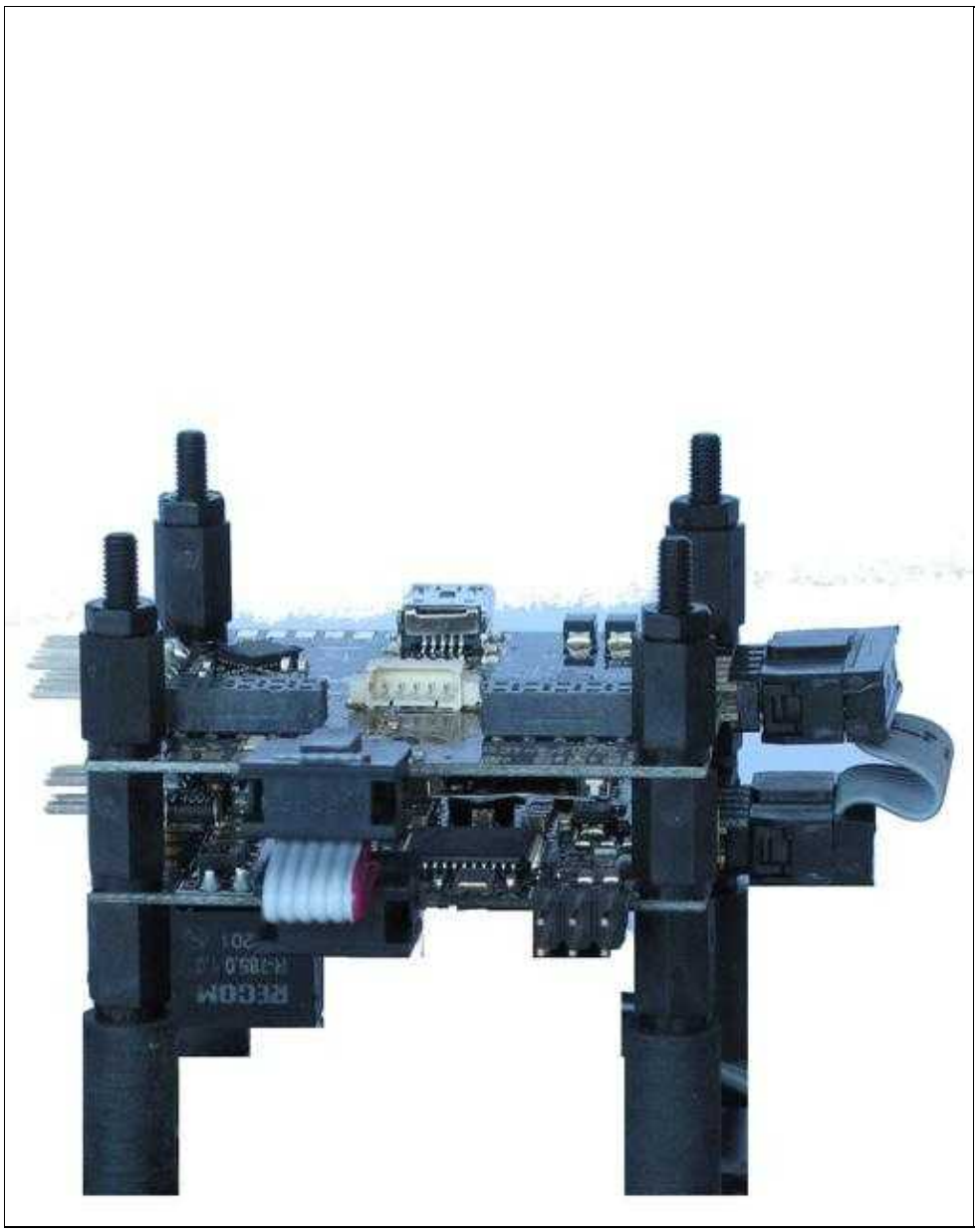
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Step 2

Place the NaviCtrl on the spacers.
Importantly: the 10pol- and 6pol-pin header of the FlightCtrl and NaviCtrl are superposed.
Then connect both PCBs with the ribbon cable.

Fix the NaviCtrl with 4 spacers. On each spacer you can use a nur. This will give more space between booth PCBs.
If you use a GPS-Shield on your MKGPS (Link) there is then some space between GPS-Shield and the 6pol/10pol connector.)

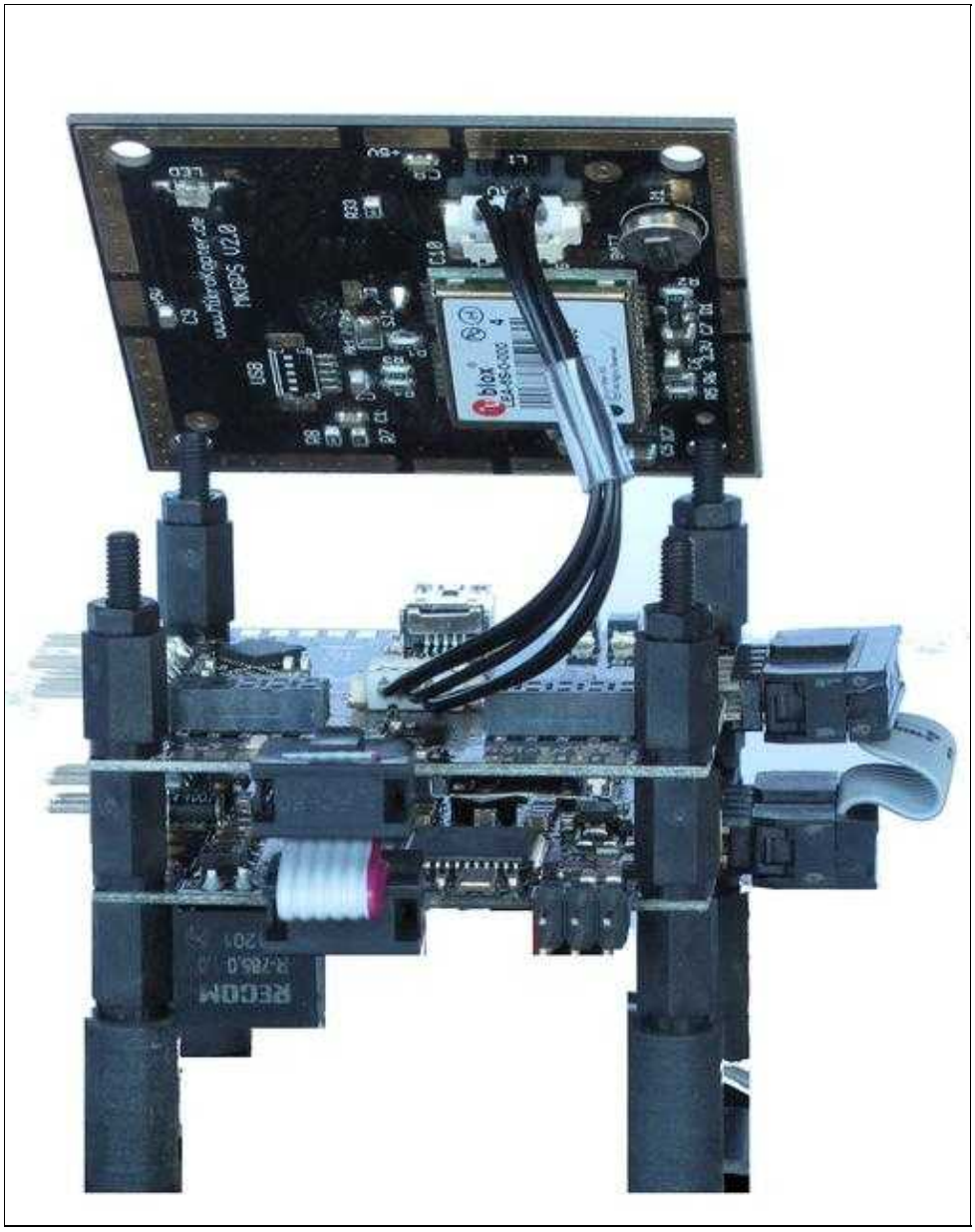




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Step 3

Finally mount the MKGPS on top. Connect the MKGPS and the NaviCtrl with the Molex cable and fix the GPS with 4 nuts M3.

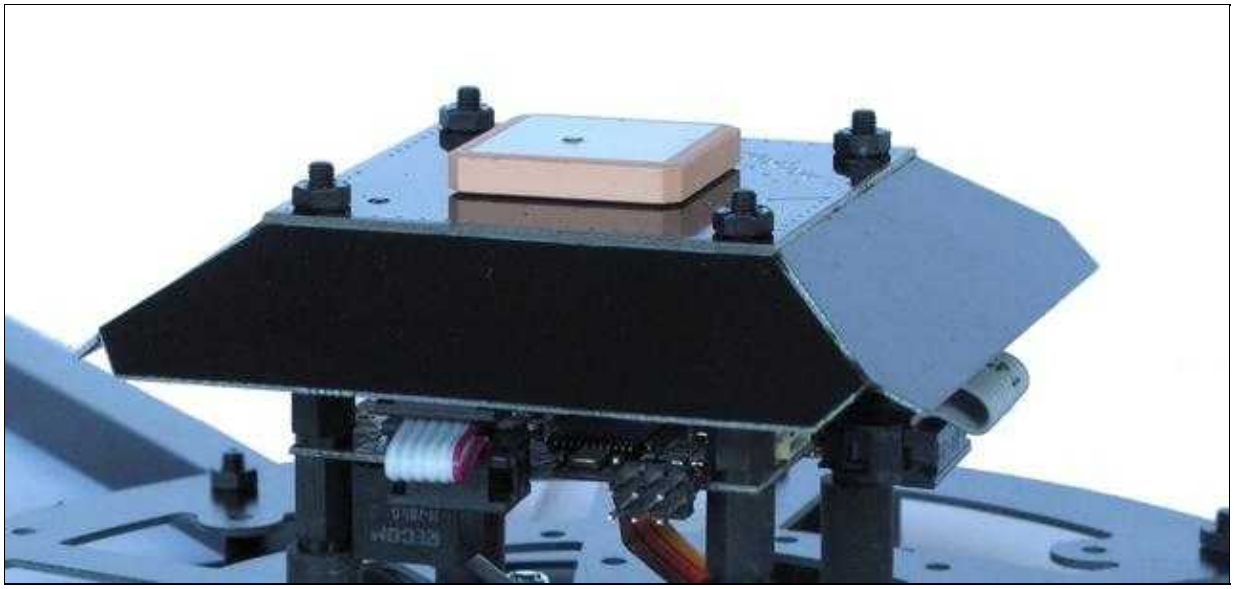




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3 GPS-Shield V1.1

To receive a much more better signal from the satellites, you should use the GPS-Shield V1.1 (Shoplink). This will also help to minimise the problems with a solar storm (Info-link).

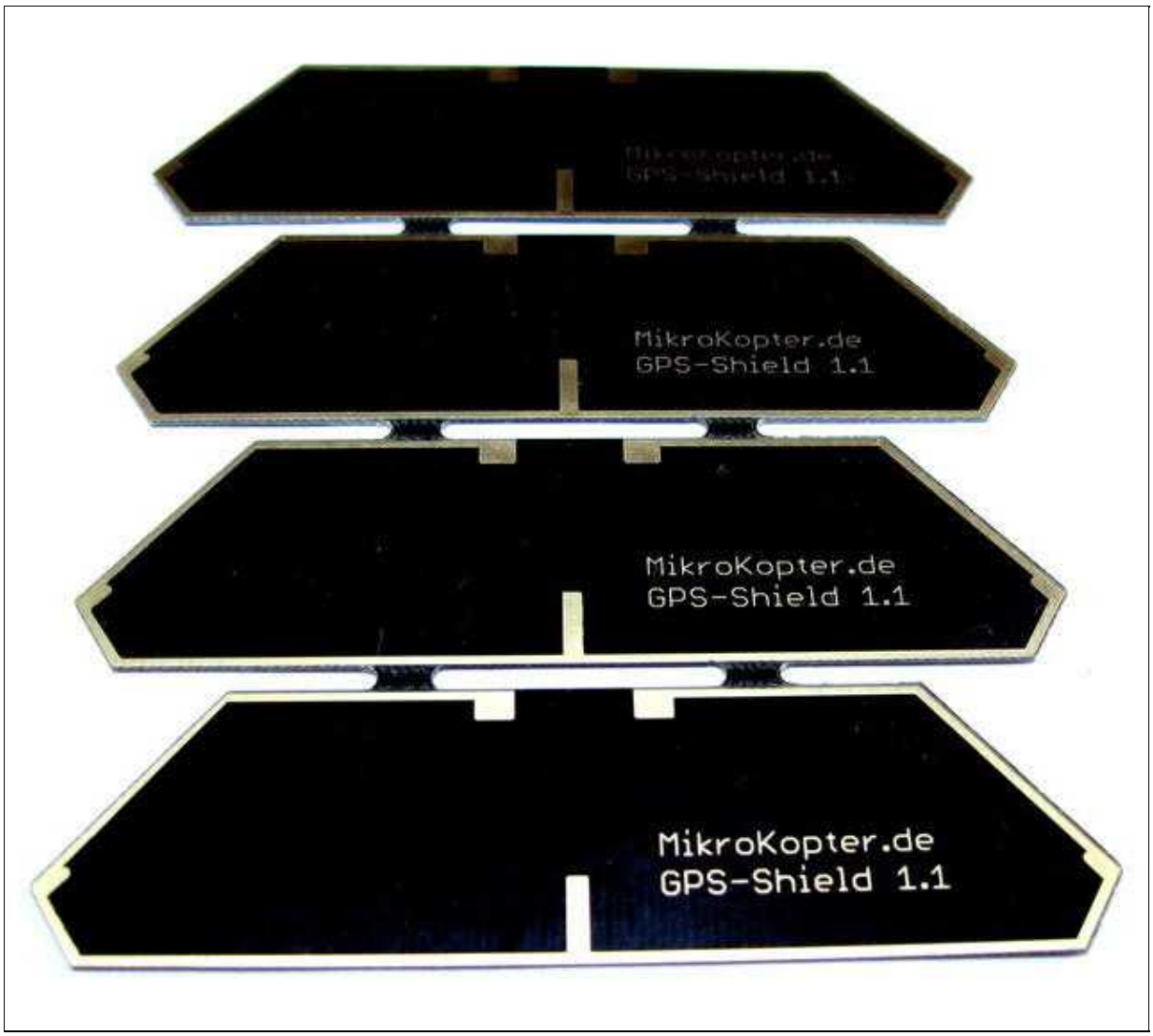


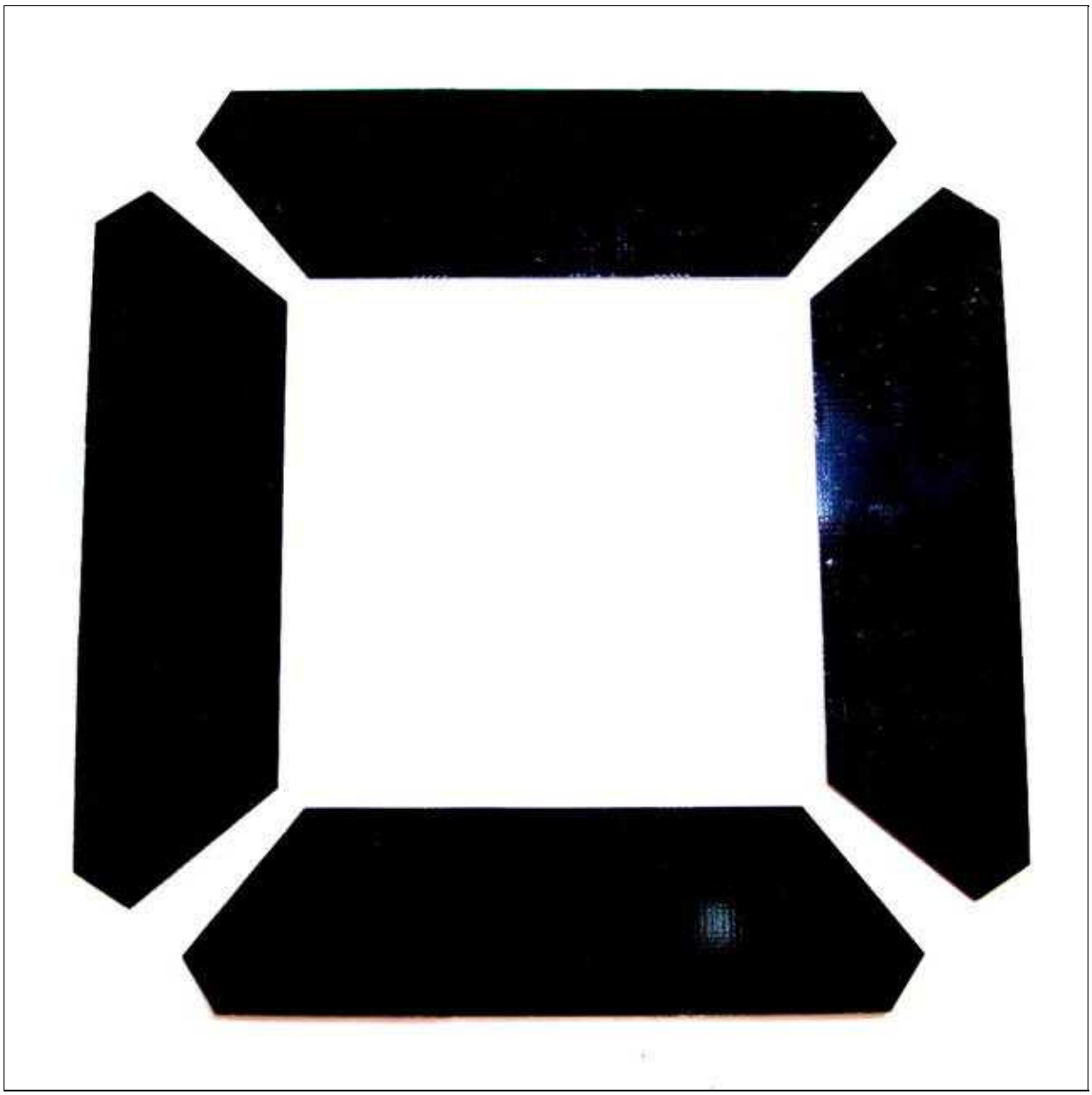
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3.1 Assembling GPS-Shield V1.1

Step 1

Separate the single PCBs from each other and remove the webs with a file.


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GPS-Shield 1.1
MikroKopter.de
GPS-Shield 1.1
MikroKopter.de
GPS-Shield 1.1



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Step 2

Now connect each upper side with a tape.
Important: The boards should be composed aligned as closely as possible.

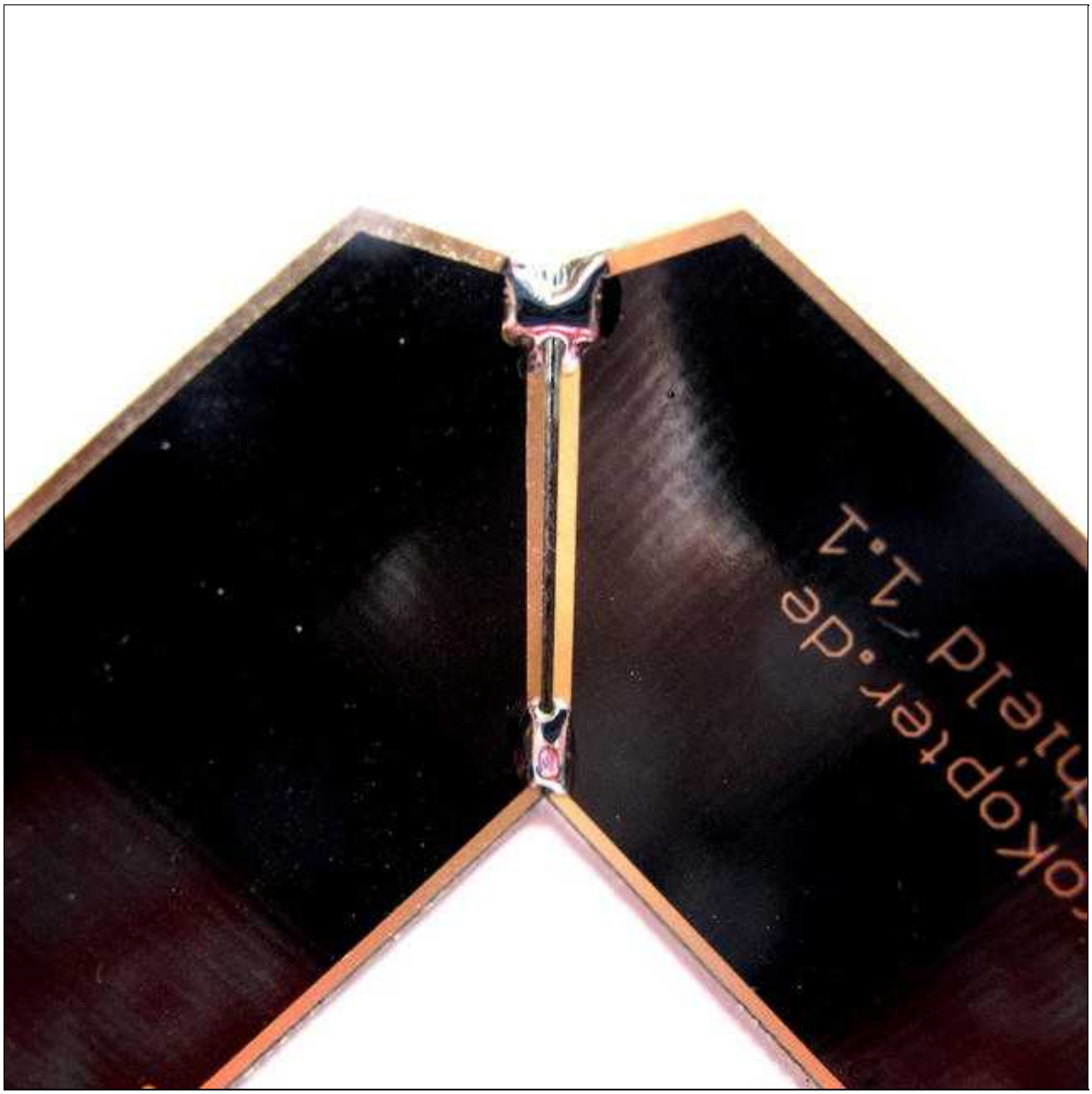


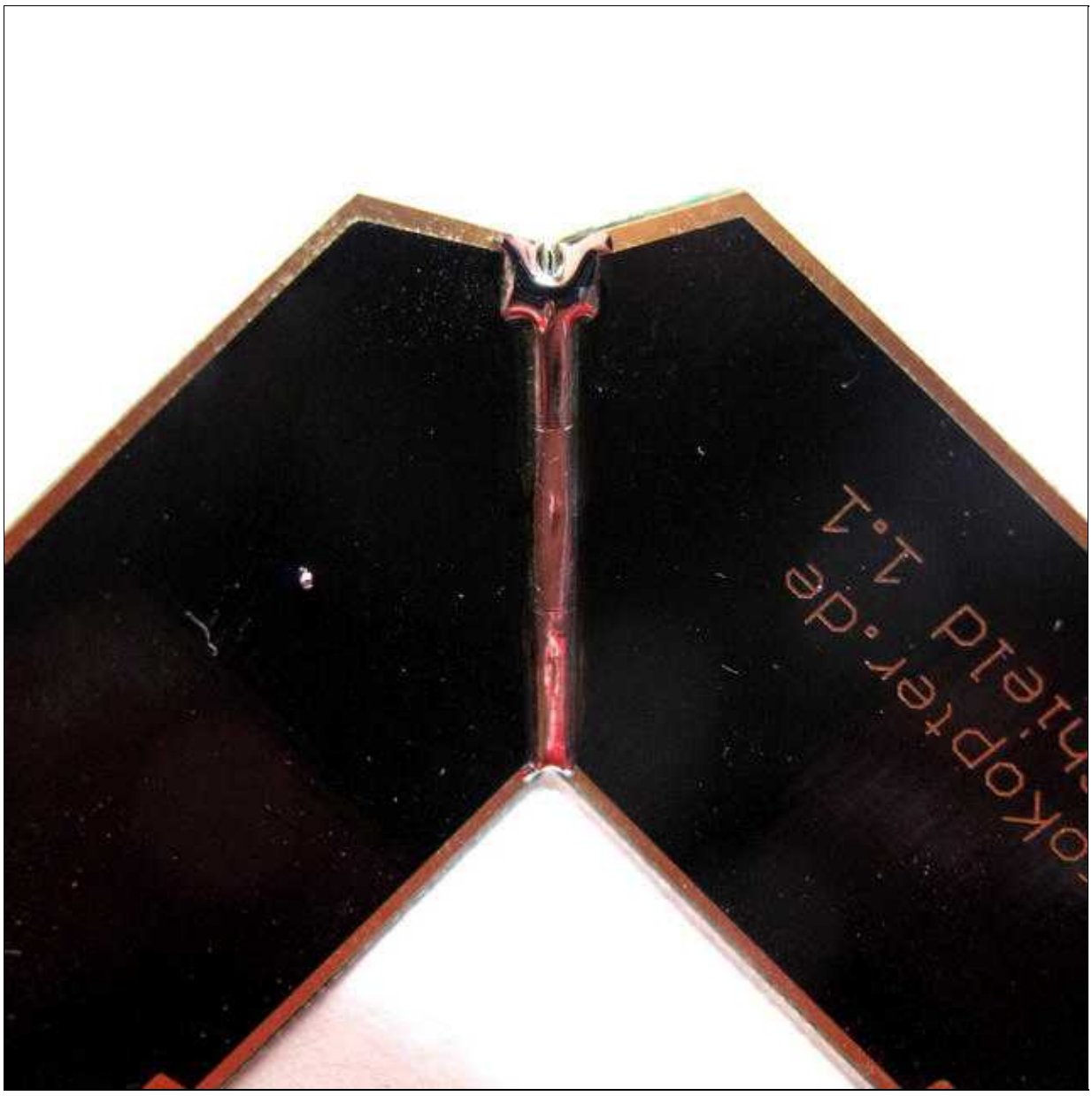


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Step 3

In the next step we can solder the PCBs. For this solder a small solder point on each edge.
If this is done, the entire edge can be soldered.




V1.1


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GPS-Shield 1.1
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GPS-Shield 1.1

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Step 4

To connect the MKGPS with the GPS-Shield V1.1 you need only some small solder point.

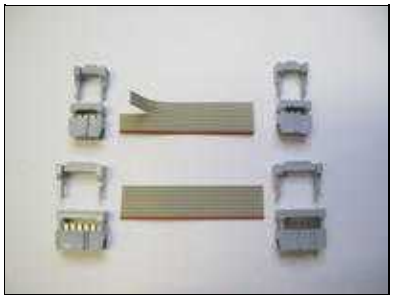


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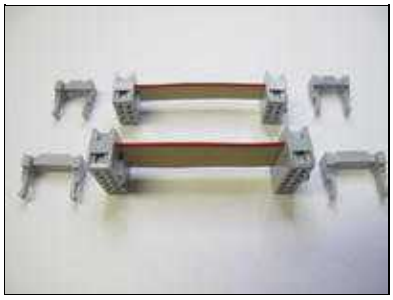
4 Assemble the cable yourself

INFO:
The NaviCtrl and the MK-GPS includes already the needed ribbon cable and the Molex cable.

To assemble the 6-pin and 10-pin ribbon cable yourself, proceed as follows.
Needed is a ~5cm long ribbon cable, 2x jack 6pol and 2x jack 10pol.
(to obtain a 6 pin cable, simply cut off 4 wires from one 10pin cable.)



Now each jack can be crimped at the ends of the ribbon cable connector. The red side of the ribbon cable is the first on the connector. Is where the little arrow is.



Finally, rotated the jack and connect the strain relief. Done.

