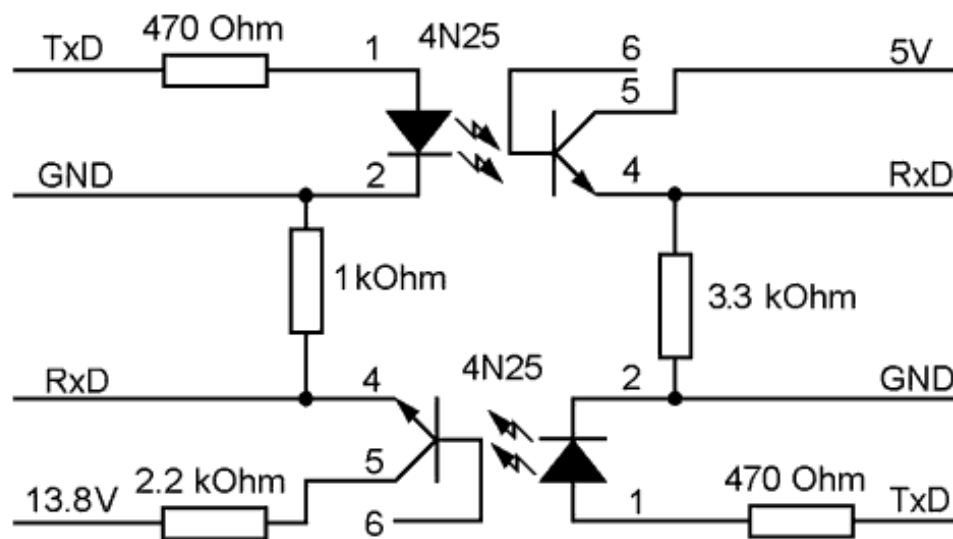


## Yeasu FT-8x7 CAT Cable with Optocouplers

Recently I found on e-bay USB CAT cable for YEASU FT-8x7 transceivers for a good price. I bought one, but when I connected it to my rig I found that noise level rised significantly.

Internal inspection revealed another unpleasant fact - CAT cable is not insulated...

To fix the problem I decided to add optocouplers. After some laboration I succeeded with following device:

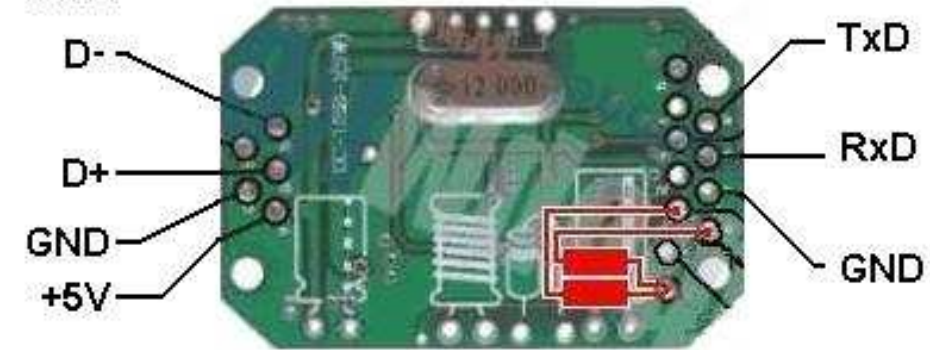


Original idea was to add optocouplers to the same small box where PL-2303 is mounted, but finally - mainly due to possible high HF voltage corona - I decided to put optocouplers on a small piece of universal PCB and close both - original USB/RS232 and optocouplers - into small metal box providing also device shielding.

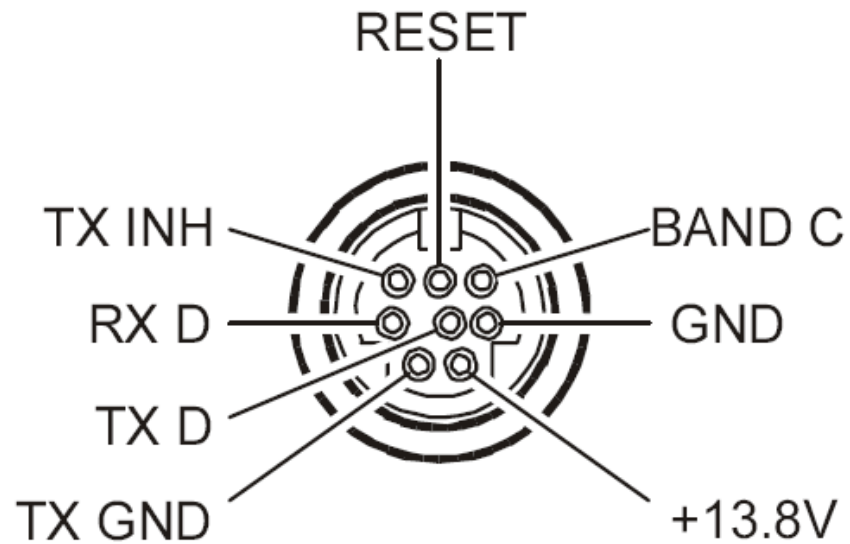
To make implementation easier here is internal view of the USB/CAT black box:

# PL-2303

## USB



Note, that original cable between mini-DIN CAT connector and optocouplers must be replaced. In my case it was possible, with real care, to dismount connector and replace cable with 3 shielded wires (to bring 13.8V to optocouplers). This is connector description to allow proper re-wiring:



Interface was tested with speeds 9.600 Bd and 4800 Bd. Higher speed was not tested.

**Note:**

Optocoupler 2N25 in reality doesn't suite to this application due to low sensitivity and piece-to-piece vaiability. In second piece of CAT cable I made I had to reduce resistor 470 Ohm from TxD princpally and add emitor follower as current amplfyier to solve the problem...

This is  visit from Aug. 23<sup>th</sup>, 2009.