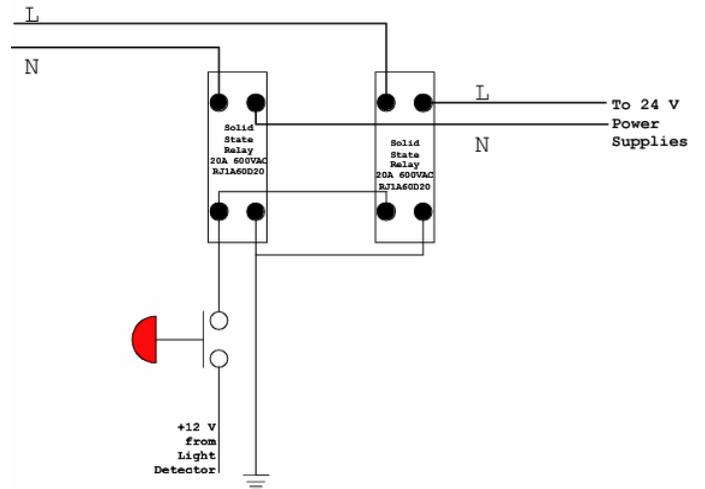
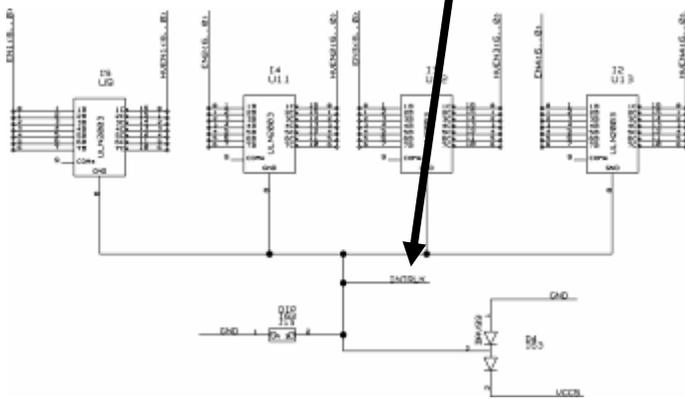
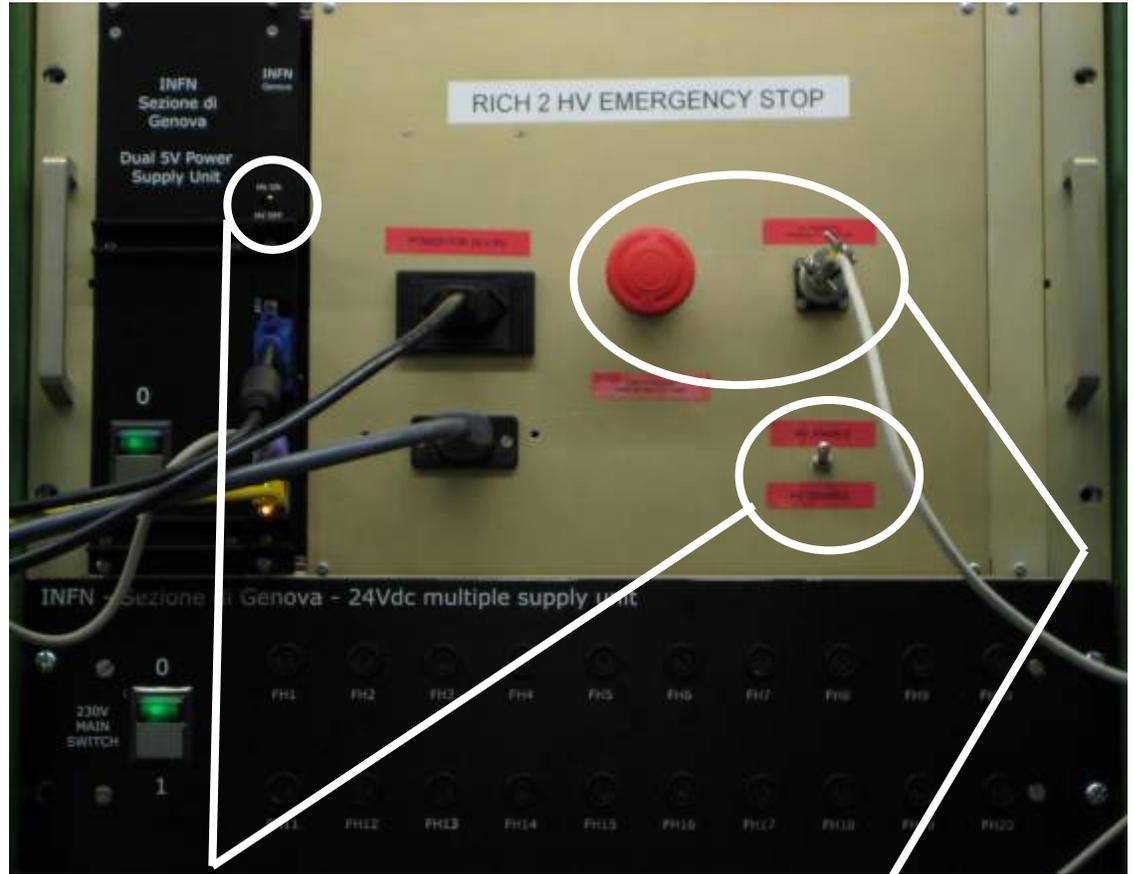


# HPD HV Interlock Chain

What you see.



See: [https://edms.cern.ch/file/815288/1/motherboard\\_schematics.pdf](https://edms.cern.ch/file/815288/1/motherboard_schematics.pdf) for details

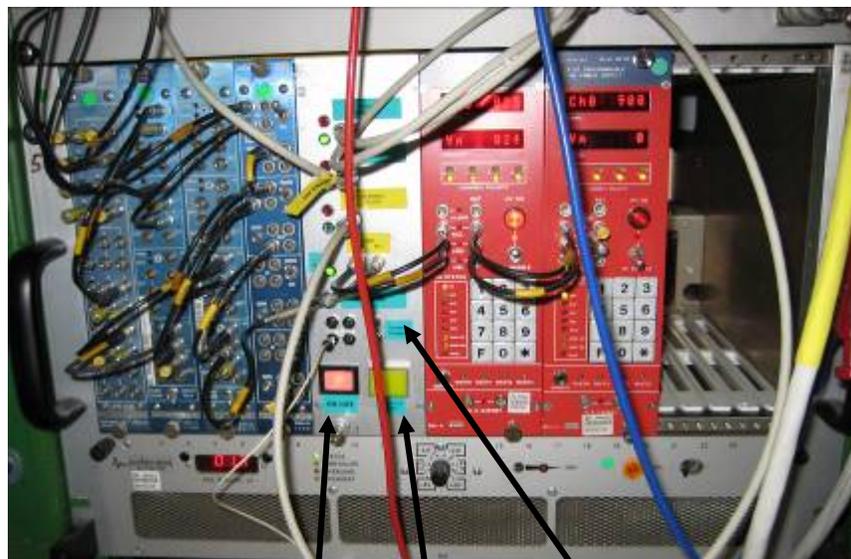
The light detector is described on the next page

## The Light Leak Detector for RICH 2

What is:

Background Light Appearance Catcher, BLAC. (Formerly known as olav's folly). 4 PMs, 2 on each side, will measure the light background in the HPD enclosures. The XP2060 PMs are mounted on 120 cm long and 40 mm diameter Plexiglas rods. The Plexiglas rods are polished and glued onto the PMs by Bicon Optical Cement BC-600.

The signals from the PMs are amplified, discriminated and ORed in standard NIM electronics. The HV is provided from a standard CAEN NIM HV unit. See photo. The UNIT has 2 thresholds for the ORed counting rate. LOW and HIGH.



ON/OFF

RESET

The UNIT

The HPD HV Enable if

**LOW < (counting rate) < HIGH**

If this condition is satisfied, then:

12 V on the relays which power the 24 V to the ISEG HPD HV

Closed contact to DSS

A manual RESET is required if this condition was not satisfied and the conditions are back to normal.

### PM HV

- If the UNIT is OFF, the HV is in state KILL. The HV has to be manually ramped.
- The HV has to be manually ramped after power cut on the NIM crate.
- If the door switches are activated, the HV is in state  $V_{sel} = 0$  V. The HV will ramp to operating voltage when the door switches are closed again.
- With a high light flux, a PM might switch off due to over current. This will influence both HIGH and LOW. A manual ramp is required.

How to ramp the PM HV via the CAEN key pad. Channels 0,1,2 and 3.

F0\* followed by 0\*/1\*/2\*/3\* let you chose channel 0,1,2 or 3

F10\* will then ramp up channel 0,1,2 or 3

F6\* displays the voltage on the chosen channel (lower display) and set voltage (upper display)

F7\* displays the current

F11\* ramp down of this channel

F12\* OFF on all channels