

## Instructions for Changing the Trigger in exp 09042

- 1) If you don't know what you're doing, don't change the trigger.
- 2) The master trigger logic is in Rack 3 (far right rack), Crate C. All locations refer to this crate.
- 3) Only two cables need to be moved to change the trigger.
- 4) First, decide if LASSA will be in the readout.
  - a. If so, plug the cable labeled "comp trigger" into slot 9, section 3, output Y. This is labeled "complete -> comp trig".
  - b. If not, plug the cable labeled "comp trigger" into slot 9, section 1, output Y. This is labeled "master".
- 5) Make sure the other end of the cable labeled "comp trigger" is still in the input to the computer trigger latch, slot 12, section 1. This should never move.
- 6) Next, decide what the trigger condition will be. This may be pulser, FA+MB, Csl OR, etc.
- 7) Find the location where that trigger option is located on the attached diagram of the bin. Trigger options are located in slots 4-8. If a section is labeled "unblocked", don't use that section. Instead use the same trigger "live" in slot 8.
- 8) Plug the cable labeled "master trig", which has two colored paper tape "flags" on it, into the output of the trigger you selected above.
- 9) Make sure the other end of the cable labeled "master trig" is still plugged into the input of slot 9, section 1, which is labeled "master". This should never move.

# Rack 3.C Master Logic

10/5/09

FIFO 2x8	FIFO 4x4	FIFO 4x4	QD6-6	Logic Box	Comp V.I.E	QD6-6	FIFO 4x4	Latch
prompt trig master	FA Submaster = FA OR	NW Submaster = NW OR	FA wide 350ns	FA + MW	pulser trigger live	Master X: prompt 20µs 14 Y: comp trigger 40ns		Computer trigger latch
↓	MB submaster = MB multiplicity	LASSA or NW May Do mult not fire use	X: MB wide 300ns	FA + MB	CSI OR line	delayed master X: 134ns Y: comp busy latch		↓
Master trig busy	LASSA S <sub>i</sub> submaster = LASSA OR	CSI OR (unblocked)	X: 120ns Y: delayed LASSA	S <sub>i</sub> + MB		complete → comp trig S <sub>i</sub> : LASSA complete X: 10ms Y: comp trig	comp busy	Computer busy latch
↓	LASSA complete		LASSA or NW X: 300ns	S <sub>i</sub> OR + Master		Pulser trig (unblocked) X: 500ns Y: output	comp ready	↓
2	4	5	6	7	8	9	10	12