

Description of Hardware of UITF MeV COMTRA DAQ

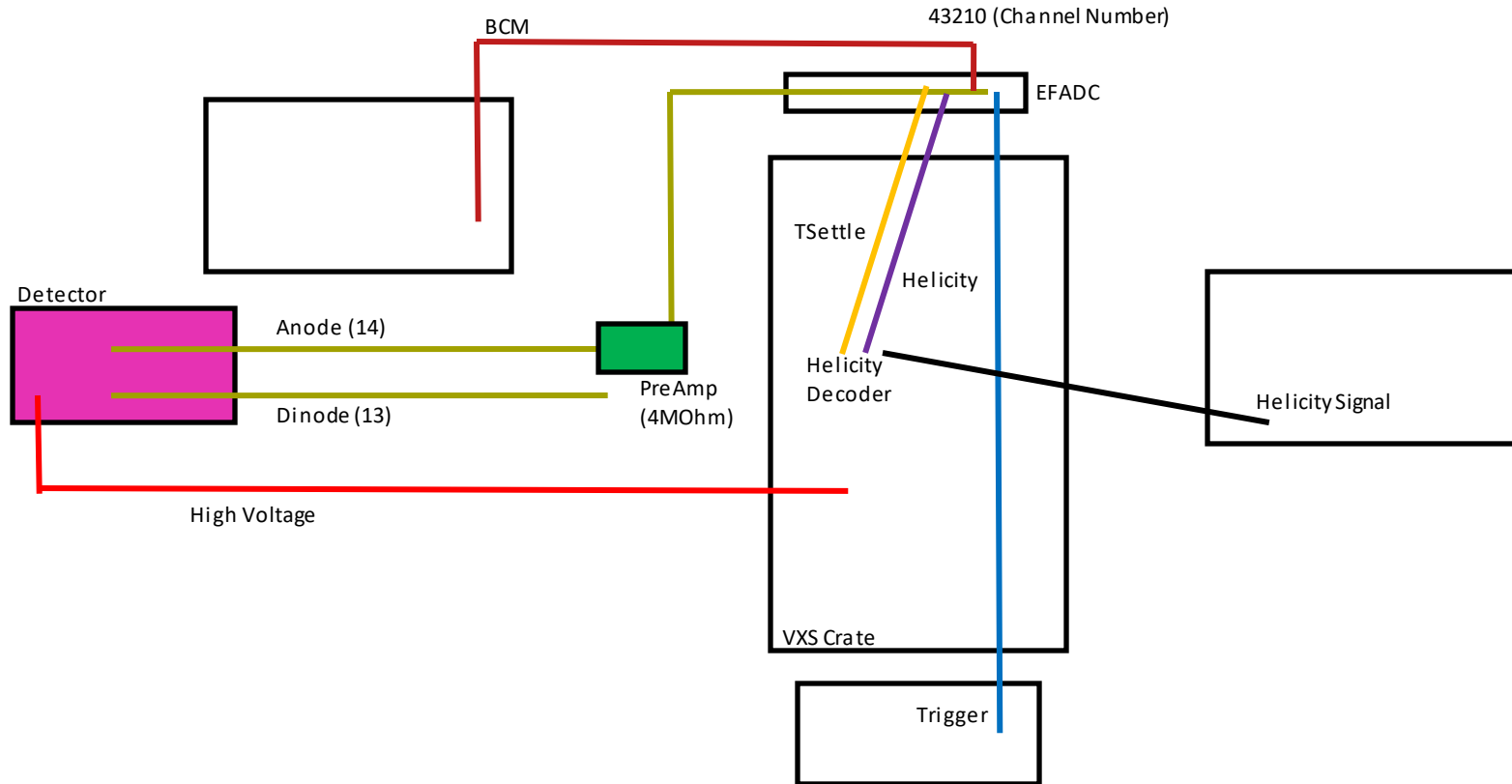


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October 31, 2022

 Jefferson Lab

Upgraded Injector Test Facility – COMTRA Data Acquisition



DAQ Hardware

- VXS Crate
- COMTRA detector (Preamps and Amplifiers)
- Magnet (KepCo) power supply
- Signal generator (trigger)
- Helicity signals from Helicity Board

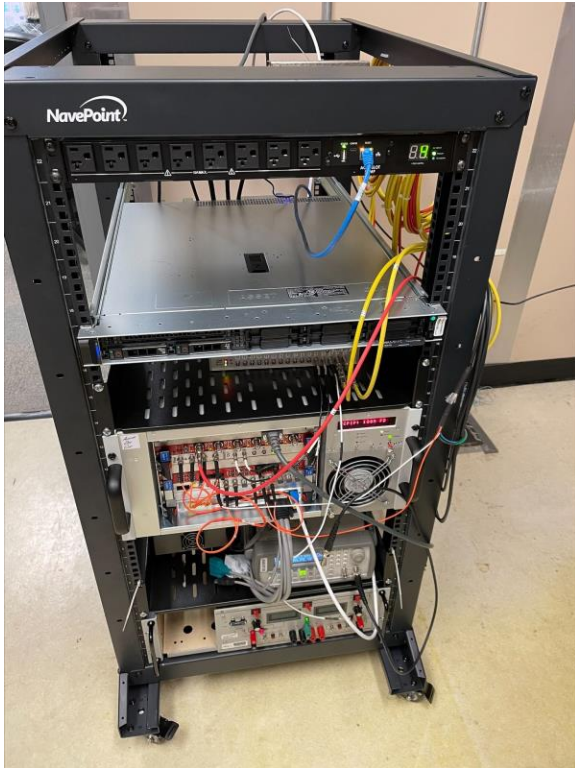


COMTRA RACK

Slot	Item
1	Magnet Power Supply
2	Magnet Power Supply
3	Magnet Power Supply
4	EFADC Power Supply
5	Signal Generator (trigger)
6	Empty
7	Empty
8	Empty
9	VXS Crate
10	VXS Crate
11	VXS Crate

Slot	Item
12	VXS Crate
13	VXS Crate
14	EFADC
15	Empty
16	Empty
17	ITF Comtra DAQ
18	Empty
19	Empty
20	BNC -> NIM rack
21	Empty
22	Power

COMTRA DAQ

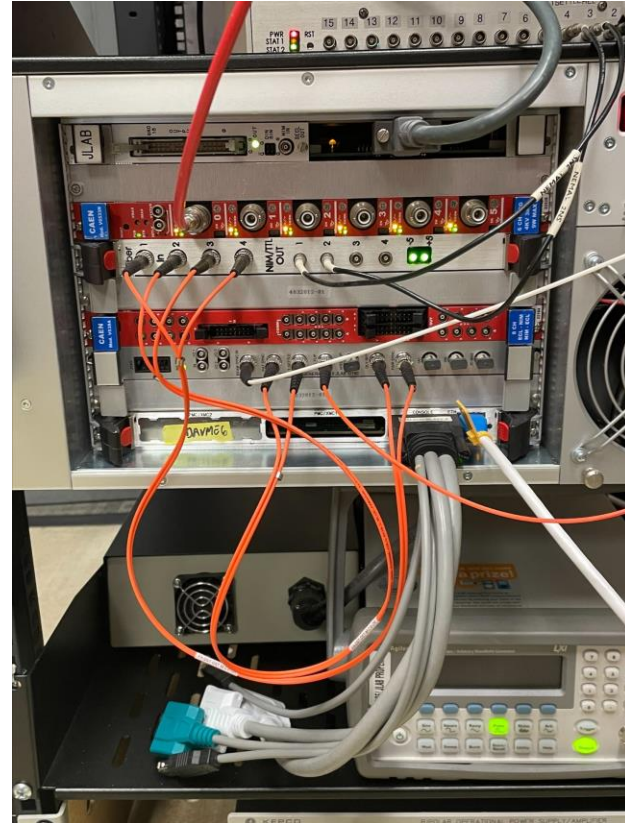


Hardware	Rack
itfcomtradaq0	Portable COMTRA DAQ
COMTRA VXS Crate	

COMTRA DAQ Crate

VXS Crate

Slot	Board
1	PreAmp flexio
2	Empty
3	HV
4	Fiber to NIM converter
5	Empty
6	Level Translator
7	Helicity Board
8	Empty
9	Linux SBC comtrasbc0



CHANNEL ASSIGNMENT – PREAMPLIFIERS



Style	Gain	Bandwidth
Main	4M Ω	27kHz

Signal Generator (trigger)

Trigger is fed to input 0 on FADC

Time(us)	Information
12.8	Signal
1	Trigger pulse
11.8	Time between pulses

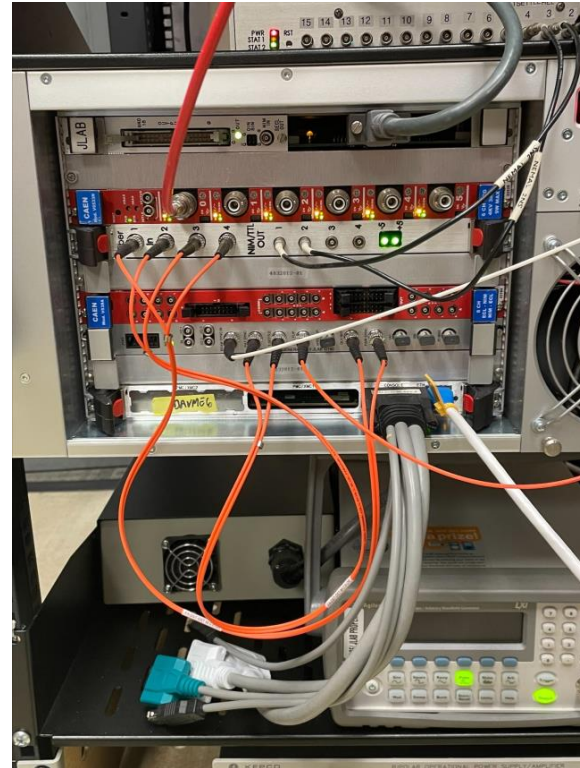
Voltage	Information
-0.425	Offset
0.85	Amplitude



CHANNEL ASSIGNMENT – HELICITY DECODER BOARD

Chanel	Name
INPUT	BeamSync
1	DLY RPT (Helicity)
2	TSettle
3	PatSync
4	PairSync

FADC Channel	Name
3	Helicity
4	TSettle

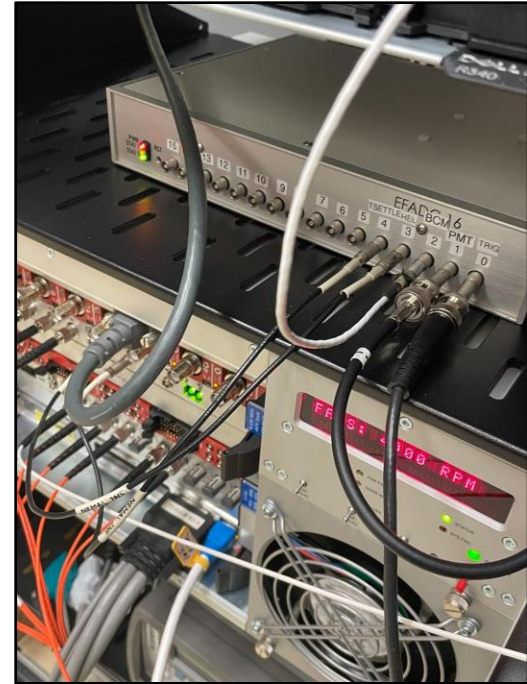


EFADC

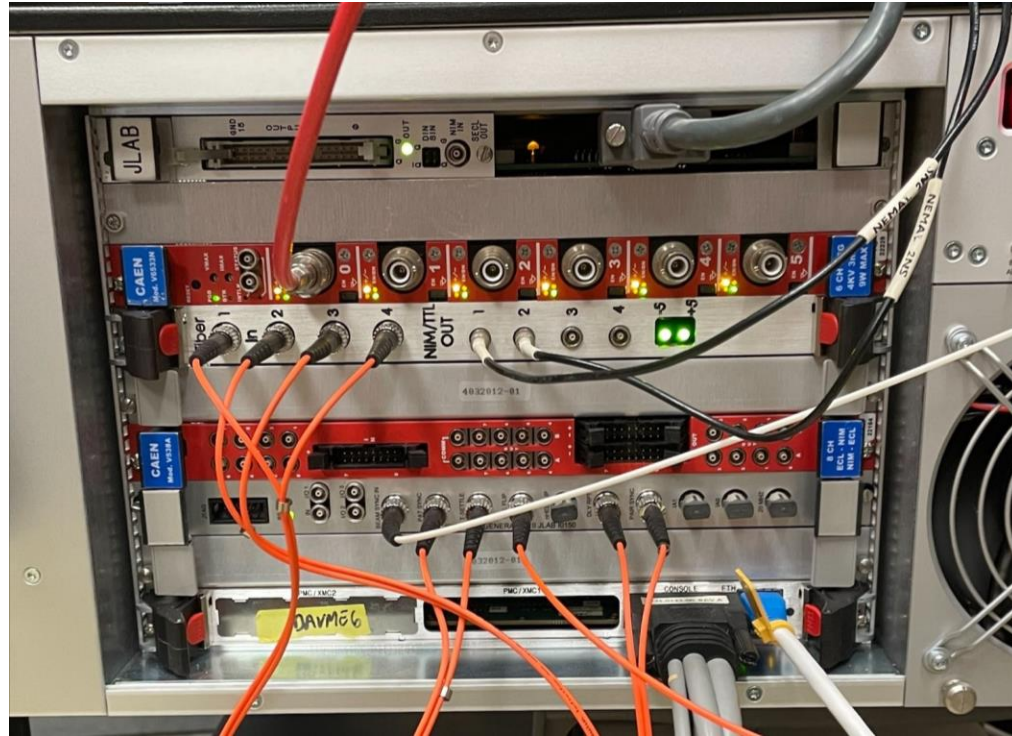
COMTRA

FADC Chan	Signal
1	Trigger
2	PMT
3	BCM
4	Helicity
5	TSettle
6	Empty
7	Empty
8	Empty

FADC Chan	Signal
9	Empty
10	Empty
11	Empty
12	Empty
13	Empty
14	Empty
15	Empty
16	Empty



VXS Crate



Data Taking Modes

Name	Output	Trigger
COMTRA_Sample	COMTRA_Sample_%d.dat	Signal Gen
COMTRA_SemInt	COMTRA_SemInt_%d.dat	Signal Gen