

HypTPC DAQ Manual

test bench at Tohoku University (version Jan 16, 2023)

Before starting DAQ

1. Make sure AsAd LV is turned on

The screenshot shows a web browser window titled "MPOD LV Power Supply System Controller" with the URL "192.168.10.14/mpod/?order=1". The main content area displays a large blue banner with the text "Low current Alarm!" and a message about emergency off. A table below lists 13 power supplies (U0 to U103) with their measured values. On the right, a "Group Controller" panel offers options like "Change group setting", "Reset emergency off", and "Enable kill".

Name (U)	Voltage	Measured Sense V	Measured Current	Measured Terminal V	Maximum Terminal V	Group	Switch
U0	3.5996 V	3.5977 V	0.0247 A	3.5977 V	5.5996 V	1	On
U1	3.5996 V	3.6055 V	0.0176 A	3.6055 V	5.5996 V	1	On
U2	3.5996 V	3.5967 V	0.0247 A	3.5967 V	5.5996 V	1	On
U3	3.5996 V	3.5967 V	0.0186 A	3.5967 V	5.5996 V	1	On
U4	3.5996 V	3.5977 V	0.0288 A	3.5977 V	5.5996 V	1	On
U5	3.5996 V	3.6035 V	0.0129 A	3.6035 V	5.5996 V	1	On
U6	3.5996 V	3.6006 V	0.0249 A	3.6006 V	5.5996 V	1	On
U7	3.5996 V	3.5996 V	0.0154 A	3.5996 V	5.5996 V	1	On
U100	3.5996 V	3.6006 V	0.0242 A	3.6006 V	5.5996 V	1	On
U101	3.5996 V	3.5996 V	0.0234 A	3.5996 V	5.5996 V	1	On
U102	3.5996 V	3.6016 V	0.0188 A	3.6016 V	5.5996 V	1	On
U103	3.5996 V	3.5898 V	0.0100 A	3.5898 V	5.5996 V	1	On

Get HypTPC DAQ Ready

1. Start getEccSoapServer

```
$ ssh -Y axis@geteb1
$ cd getdaq/config/bench_e72_2024jan
$ getEccSoapServer
```

2. Start GANIL Run Control

```
$ ssh -Y axis@geteb1
$ start_acq bench_e72_2024jan
rc [Enter]
```

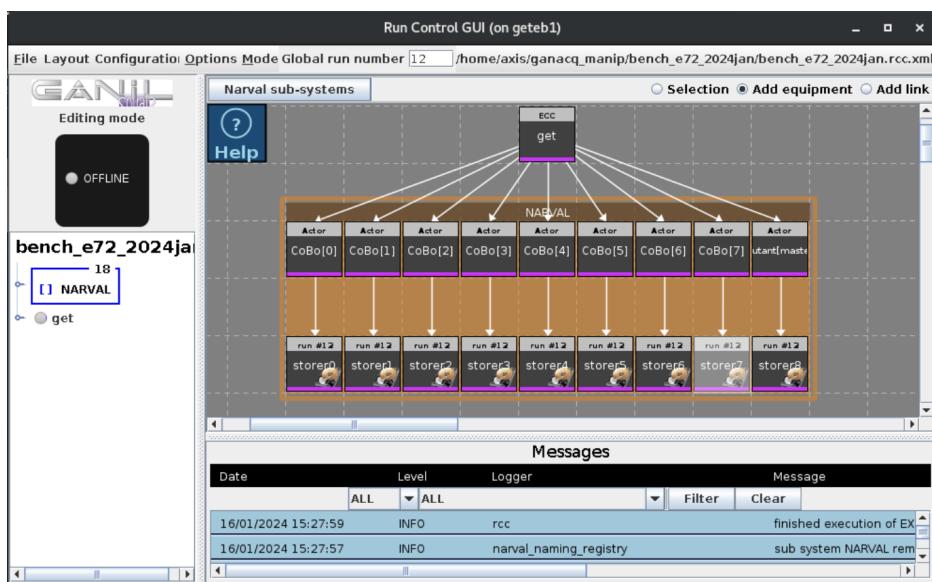


```
ACQUISITION GANIL version 20160112

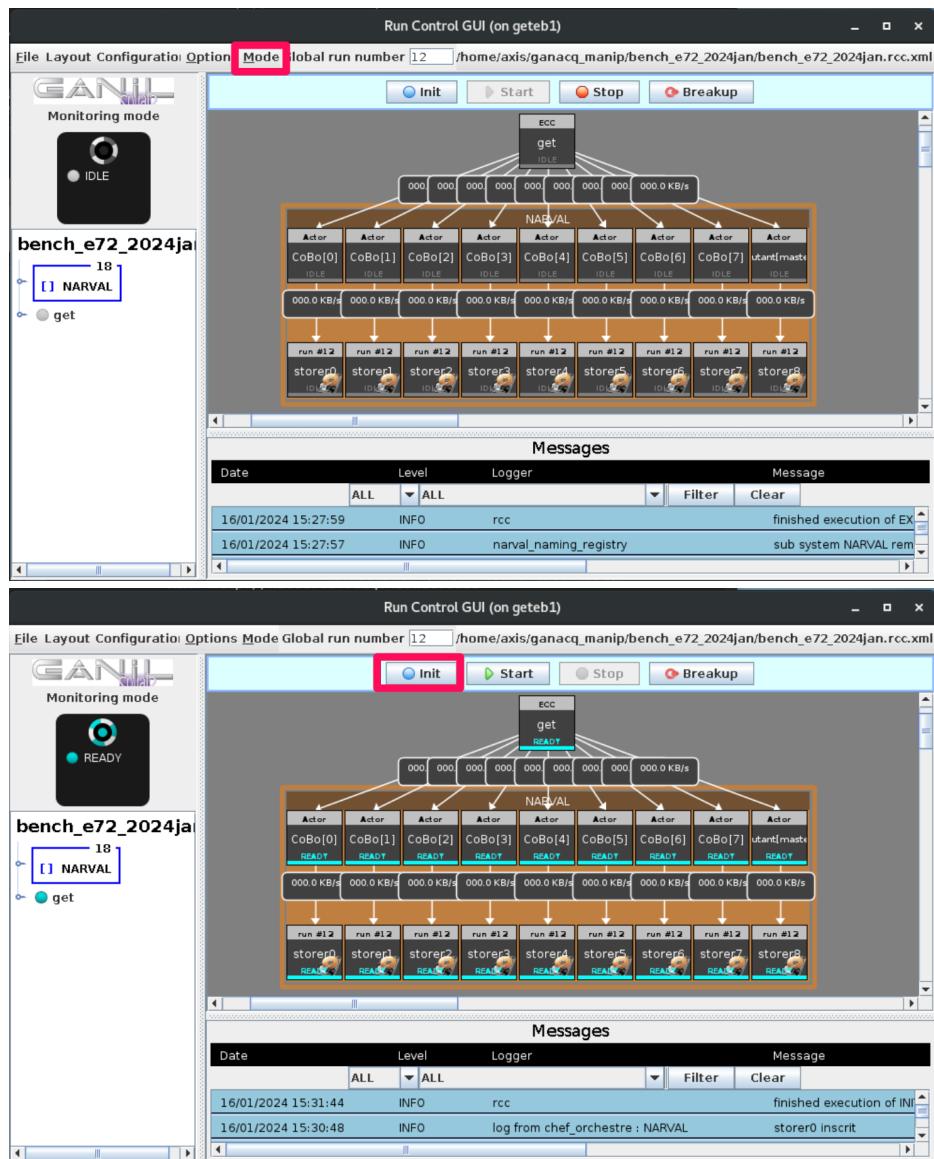
General menu for bench_e72_2024jan
server computer= geteb1

PA.....Acquisition context definition
AG.....Analysis with GRU (C++)
RC.....RunControl
TK.....Toolkit for RCC, Chainsaw, Narval, ...
XT.....Open Xterm terminal
Q.....Quit Acquisition menu
```

Enter command



2. Change the mode in the "Mode" tab: Editing mode -> Monitoring mode
3. Initialize the system with a single click on the "Init" button.
 - It takes ~1 min.



Get HDDAQ Ready

1. Start HDDAQ Launcher

```
$ ssh -Y axis@geteb1
$ cd daq
$ ./tmplauncher.py
```

2. Start GET frontend

```
$ cd hddaq/Frontend/get_node
$ ./script/fe_start.sh
```

3. Start HDDAQ

HDDAQ Launcher (geteb1)

Data Storage Path: ./tmpdata => /mnt/raid/hddaq/bench_e72_2024jan			
MSGD	DEAD	START	STOP
CMSGD	DEAD	START	STOP
BUILDER	DEAD	START	STOP
DISTRIBUTOR	DEAD	START	STOP
RECORDER	DEAD	START	STOP
CONTROLLER	DEAD	START	STOP

HDDAQ Launcher (geteb1)

Data Storage Path: ./tmpdata => /mnt/raid/hddaq/bench_e72_2024jan			
MSGD	RUNNING	START	STOP
CMSGD	RUNNING	START	STOP
BUILDER	RUNNING	START	STOP
DISTRIBUTOR	RUNNING	START	STOP
RECORDER	RUNNING	START	STOP
CONTROLLER	RUNNING	START	STOP

HDDAQ Controller (geteb1)

Control Comment Message DAQ mode Options Data Sync Force control

DAQ: Idle

Last Run Start Time: 2024 01/16 13:51:59 Data Storage Path: /mnt/raid/hddaq/bench_e72_2024jan
(run00011.dat: 127.9 GB) (Used: 58633/112012 GB 52.3%)

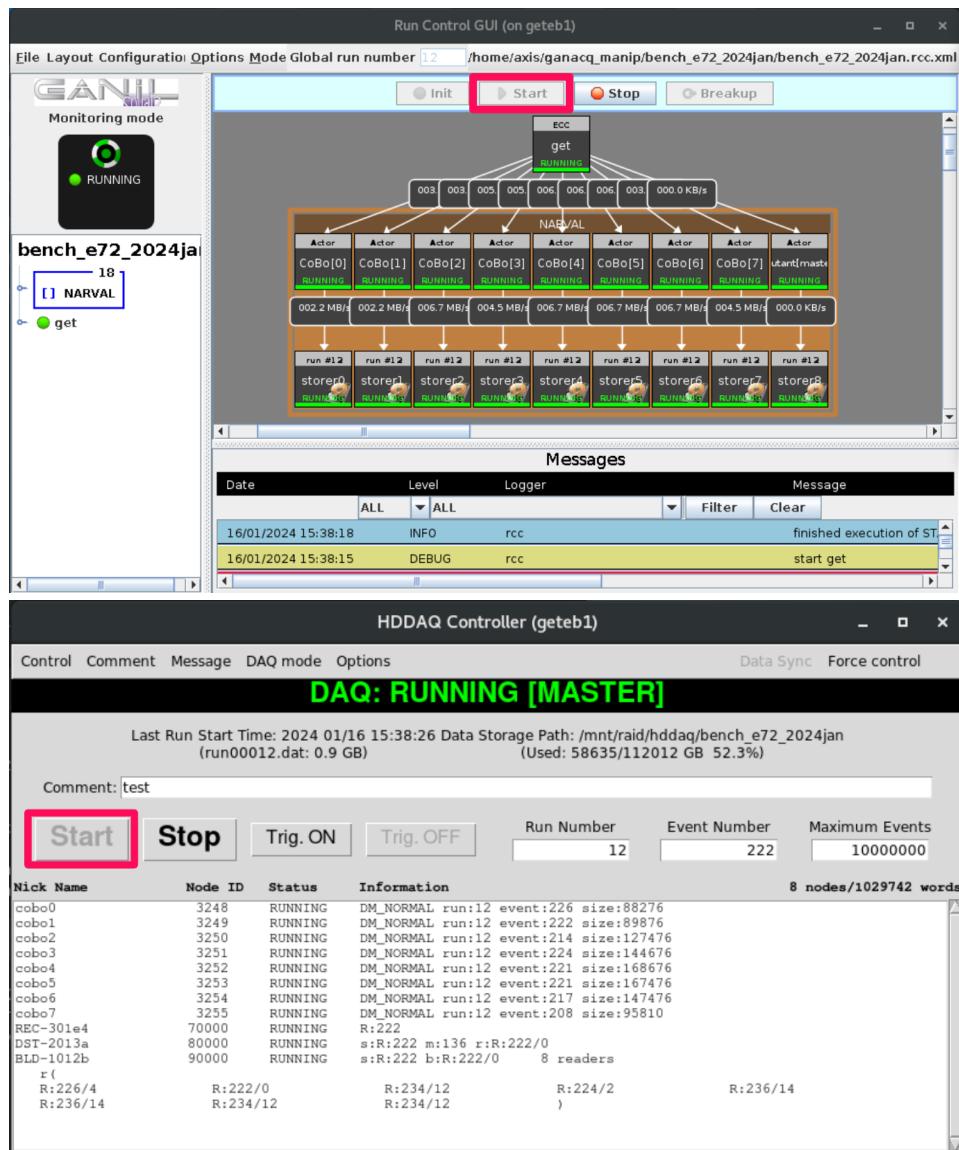
Comment: test

Start	Stop	Trig. ON	Trig. OFF	Run Number 11	Event Number 0	Maximum Events 10000000
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Nick Name	Node ID	Status	Information	8 nodes / 0 words
cobo0	3248	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo1	3249	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo2	3250	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo3	3251	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo4	3252	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo5	3253	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo6	3254	IDLE	DM_NORMAL run:0 event:0 size:0	
cobo7	3255	IDLE	DM_NORMAL run:0 event:0 size:0	
REC-301e4	70000	IDLE	I:0	
DST-2013a	80000	IDLE	s:I:0 m:0 r:I:0/0	
BLD-1012b	90000	IDLE	s:I:0 b:I:0/0 8 readers	
r(
I:0/0	I:0/0	I:0/0	I:0/0	I:0/0
I:0/0	I:0/0	I:0/0)	

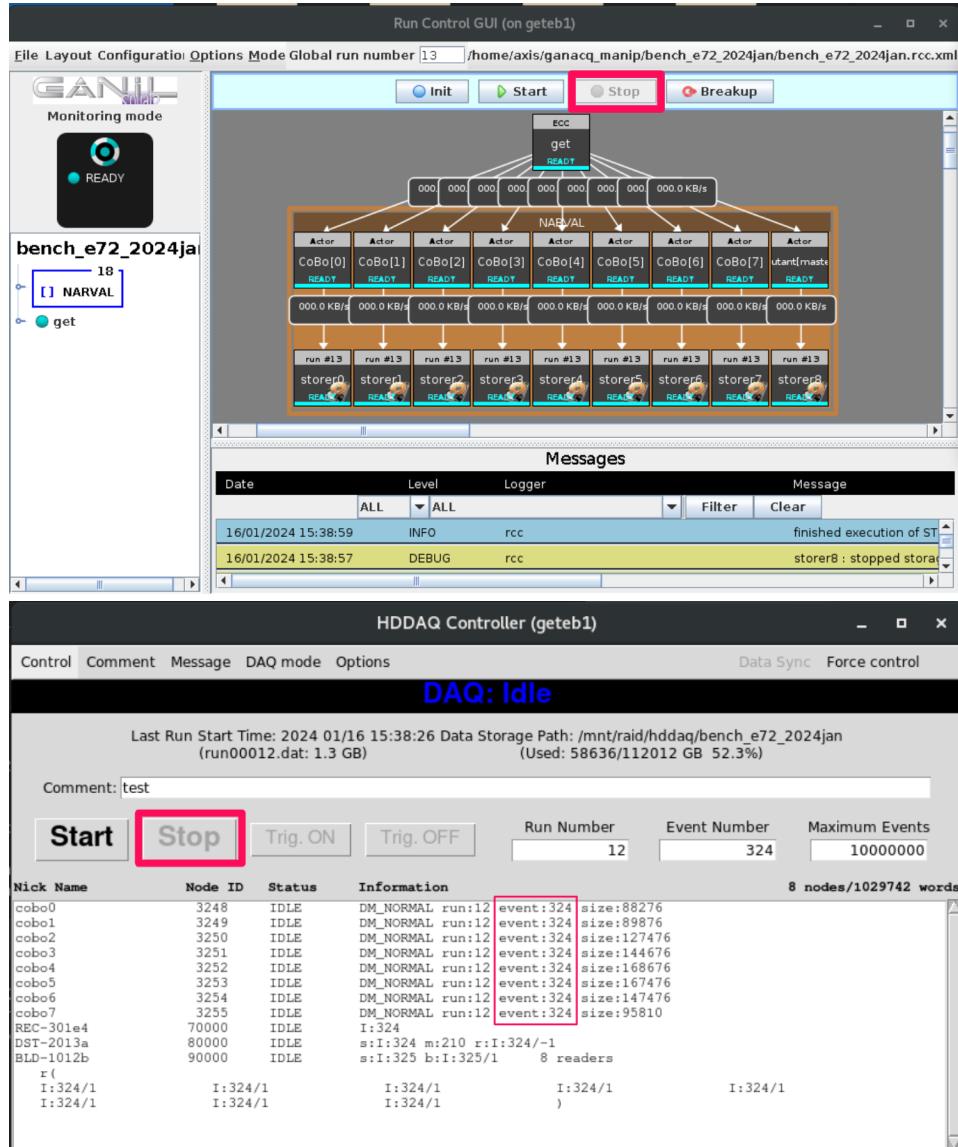
Run DAQ

- How to start
 - Push the "Start" button on Ganil Run Control
 - Push the "Start" button on HADDAQ Controller



2. How to stop

1. Push the "Stop" button on GANIL Run Control
 2. Check the event number match for cobos on HDDAQ Controller
 3. Push the "Stop" button on HADDAQ Controller



Check Data

1. Online monitor using JsRoot on nuc01 machine

```
$ cd software/online/pro
$ bin/jsroot_e72 /param/conf/analyzer_e72_20240115.conf 192.168.10.7:8901
```

- URL on the web browser

```
http://localhost:9090
```

2. Using the root macro (interactive mode) on geteb1 machine

```
$ cd work/shinhyung/online
$ root -l 'macro/online.C([run number], [event number])'
```