Accumulator and Dynamometer	
Experiment: EXP-02 Greg Flynn This document contains information about how to set up an experiment to drive the	
dynamometer with the accumulator.	
Lafayette College: Electrical and Computer Engineering	
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Desired objectives

This experiment should verify the packs can drive the motor. This test is not for data acquisition but it could be modified easily to record information for physics calculations.

In this experiment the load is modified to enable to motor to operate at different torques.

To run these test a safety plan must have already been agreed and accepted by the ECE Director of Laboratories.

Required Hardware

- 4 Packs in series
- Motor load
- Basic GLV safety loop
- PPE per safety plan
- Danger zone per safety plan
- Cables as specified in Appendix A
- Temperature Probe
- Multimeter
- Current probe

Required Software

TeamViewer

Hardware Setup

Full accumulator setup

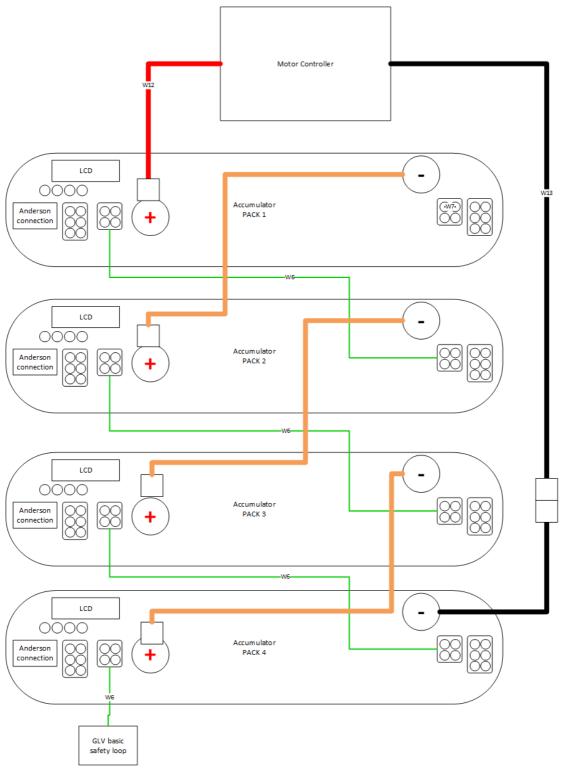


Figure 1 Full 4 cell test

Software Setup

- Turn Test Stand PC on and log in
- Leave the Dyno Room and login into the remote PC.
- Launch Teamviewer and enter the following Partner ID: 554547715.
- Enter the password: AEC401
- Once launched open Oracle VM Virtual Box
- Select openSUSE and press Start
- Once open, Click on the Dyno Icon located on the desktop.
- Enter the password AEC401

Now the GUIs will be displayed and you will be able to control your test from there

Data

Perform full stress test. Ramp the RPM with a given fixed load. Do not adjust the load while the motor is spinning, this could cause RUD of the motor.

Desired data

It is desired to get:

- Torque
- Current
- Cell temperature

Current

Note if the current gets over 200A for a sustained amount of time. The fuses are rated at 200A

Temperature

temperature.	the pack gets 40C above an	moient
Witness/examiner signature	 Date	Pass/Fail

Appendix A: Wiring requirements

1 2 3 4	WHT BRN RED BLK	SL1 SL2 AIRs+ AIRs-	P1 W6 DT06-4S	Safety Loop 16/4 Cable	P2 DT06-4S	1 2 3 4	WHT BRN RED BLK	SL1 SL2 AIRs+ AIRs-
1 2 3 4	WHT BRN RED BLK	SL1 SL2 AIRs+ AIRs-	P1 W7 DT06-4S	Safety Loop Term 16/1 Cable	ninator	1 2 3 4	Jump 1 and Leave 3 and	2 pin
1	RED	TSV HV	P1 W12 NLDFT-E-GN-L-S120-M40	Pack 1 + DA 2/0 Cable	Bare	1	RED	TSV HV
1	RED	TSV HV	P1 TW2 NLS-3-GY-S120-M40A	Pack 2/4 + 2/0 Cable	Bare	1	RED	TSV HV
1	RED	TSV HV	P1 TW3 NLS-N-BL-S120-M40A	Pack 3 + 2/0 Cable	Bare	1	RED	TSV HV
1	RED	TSV HV	P1 TW4 F	Pack 1 and 3 -	Bare	1	RED	TSV HV
1	RED	TSV HV	P1 W13 F	Pack 2 and 4 -	Bare	1	RED	TSV HV

Cable	What packs	Total count	
	use it	for full test	
W6	1,2,3,4	4	
W7	1,2,3,4	1	
W12	1	1	
TW2	2,4	0	
TW3	3	0	
TW4	1,3	0	
W13	2,4	1	

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