



**Alternative Technology Association
Geelong EV Branch
Minutes
November 1st, 2013**

1. Welcome and declare meeting open: Meeting opened at 7:03PM
2. Present: Peter R., Andrew V., Kevin L., Mick A., Doug R., Doug T., Janet M., Robert D., Leigh H., Tim J., Brad, Trevor, Ken, Ahmed, Rob B., Michael A., Russell S.
3. Apologies: Kevin W., Richard G., Ian U., Blake R.
4. Minutes of previous meeting: Accepted by the floor.
5. New Attendee Introductions: None.
6. Correspondence of Note: None.

7. Business Carried Forward:

7a. Conversion and Other Project Reports:

Peter Reeves – Holden Rodeo / Proton Jumbuck

Charger and BMS mounted, wiring run, but not terminated. Rear battery rack mounted. Battery clamps under construction. Taken rear battery rack out again to do further work, and hoping to have it on the road by Christmas. Andrew sourced some IP68 high voltage/current aviation quality connectors for electrical box - <http://tinyurl.com/q77vyp3>, will see how they look when they arrive from China.

Kevin Leach – BMW

It goes! Diff still complaining, but not more than usual – not getting any worse. Installed forced air cooling on motor, it wasn't getting hot but it won't hurt. Haven't made any progress with power steering pump shutoff over 60kmh, but will try a Jaycar kit which should be able to do the job and save some juice.

Doug Rolfe – Nissan EXA, Suzuki Vitara

Took vitara for another drive after tweaking controller, still far too sluggish. Maybe more tweaking required, as motor specs indicate it should draw 400A at 72v, but its running at 120v. Takes off fine, but won't go much faster than 45-50kmh. Did find a setting which was wrong – stall detection (cuts off drive if motor draws more than 50A and no movement for x seconds), this wasn't configured to use the right speed sensor. No progress on EXA.

Michael Axtens – Daihatsu Charade & Blade Electron

Blade has new vacuum pump mounted in a temporary way (replacing failed old one). Running fine, no difference in brake performance afterwards. Charade is running well, but battery pack is feeling a little bit sad. BMS beeps more than usual going up hills, etc.

Richard Gilbert – Citroen Berlingo

Doug spent Friday morning last week working out where it was at. Heater, BMS, DC-DC all need finishing. Fan switch is a bit funny for the heater due to computers complicating things.

Robert Doig – Suzuki Mighty Boy ute

In the last two workshops Kevin has done a lot of wiring for the controller. Have been working on BMS wiring in the back, and have had to get some clarification from supplier around that.

Leigh Hateley – Enfield

New controller installed, takes off a bit faster now. 600A replacing 500A Curtis. Came shipped with “torque” setting, was good for taking off but not good for cruising. Set to “balance”, which is a combination of speed and torque.

Doug Trigg – Mitsubishi Lancer

Just have to cover a few terminals and get a roadworthy. Got accelerator stuck a bit, controller wouldn't start and car wouldn't move, so had to trailer it home. Had to install vacuum tank and piping which after installation was fouling the accelerator cable slightly. After realising this was the issue it started and ran fine again. BMS has to be installed and working as a requirement for Frank. Frank queried lack of clutch, but it can take off in second and drop in to third above 60kmh easily.

Janet Massey – Blade Electron

No progress on car, but still looking for Nokia 3.7v phone chargers. Peter and Tim sourced some, have around 9-10 Nokia ones in total now.

Mick A – Mule

Have had it bogged a few times, so decided to put some weight back into it as after conversion to Lithium it's too light! Each old 6V battery used to weigh 85lbs. Installed some lead ingot boat ballasts in the rear end (300lbs) to get some more traction. Only EV'er who needs to put more weight into their vehicle!

Ahmed

Having a look on AEVA forums for a Blade Electron. Discussion with Janet and Michael re each of their experiences with the vehicles. Janet not having driven hers in the 6months she's owned it (due to buying it with a dead battery pack), Michael driving his daily with minimal issues (now).

Trevor – 1987 Honda Active

Currently drivable with trade plates, Frank came to assess it and handed out a list of things that need work. Everything that needed doing was relatively minor, which is very good. Main thing was a battery box is required (instead of just securing them without in the back), but working on this and other things at the moment. Frank knew what he was looking for, picked up on things that needed work and gave good suggestions.

Brad - Batpod update

Looked at parts – will be sourcing controller and custom 10kw cont. hub motor from Enertrac. Have someone lined up to fab custom 14” wheels when the motor arrives.

7b. EV Events/Vehicles of Interest:

There was a garage meet up at the ATA Melbourne EV group. Wasn't communicated out to all members (Leigh didn't get an email, but would have gone).

James Newman is still keen to sell his conversion, the 1990ish Barina. Has new batteries (we think), new charger, but needs new controller, windscreen wipers and heater core fixed. Could be converted to lithium at low cost for a decent range (60-70km+).

7c. Private Workshop Activity

Last month: Robert's Mighty Boy Ute

Tomorrow: Re-scheduled for a fortnight due to lack of helpers.

In a fortnight: Robert's Mighty Boy Ute, Doug Trigg's Lancer

Michael A is keen for a workshop in the early new year.

7d. Recent Events:

Was going to be a Hepburn Wind event, but this has been postponed until next year. The people who installed two wind turbines in Daylesford want to run an EV event.

7e. Upcoming Events:

Doug is going to Tasmania on the 15th, north Tassie branch of the ATA is having an "electric forum", talking about converting things to electric. Needs photos/media to show off.

7f. ATA developments:

Doug

Melbourne EV branch expo is supposedly happening again in the two weeks in Feb during the sustainability festival. Geelong will also be having an environmental thing during the same festival – dates TBA.

Malcolm, who got in contact with us from Melton regarding converting a Falcon. Not able to attend Friday meetings but still keen to get involved.

ATA is in good financial condition again after two hard years.

Unsure what is happening with Werribee December event.

7g. New developments:

vLine recharging stations: No progress to report

Battery Charger Progress:

Details of the model purchased – delivery early November

FMA Dual PowerLab 8x2

Just when you thought you'd seen it all, along comes the most powerful charger in the world: the all new Dual PowerLab 8x2, boasting an unparalleled 2688W of output potential.

You'll be able to charge at up to 40A on packs up to 8S on each of the two outputs simultaneously - if you've got the power on hand to satisfy this monster!

With FMA's free Charge Control Software it's easy to configure each channel to your heart's content, safe in the knowledge that the charger's built-in safeguards won't let you put a foot wrong.

Per-Channel Specifications

- **Maximum charge power capacity:** 1344W (@ >40V; 408W @ 12V)
- **Charge current range:** 0.01-40.0A
- **Discharge current range:** 0.01-40.0A



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- **Input voltage range:** 10-48V DC
- **Maximum discharge power capacity:** 100W / 10A
- **Maximum regenerative discharge:** 1344W / 40A
- **Current drain for balancing:** 1000mA
- **Balance accuracy:** 6mV
- **LiPo/LiIo/LiFe:** 1-8 series
- **NiCd/NiMH battery cell count:** 1-21 series
- **Pb battery cell count:** 3-12 series
- **Battery setup memories:** 25 user, 50 preset
- **Intelligent temperature control:** Yes
- **PC Connectivity:** USB port
- **Overall Weight:** TBA
- **Overall Dimensions (LxWxD):** 260x141x77mm

Ahmed has some grid connect inverters (2kw, 3kw) for solar which require minimal repair, if anyone is interested, get in touch as they are looking for a good home.

Kevin: See Kevin's latest newsletter, issue 55.

8. Guest Speakers: None.

9. New business from the floor:

Michael's architect from zero-c sent through an article for "supercharging your solar system", talking about running solar inverters at 300%-400% of their capacity instead of the usual ~130%. Article to be sent through.

Top gear last night pitted the electric Merc SLS AMG against the petrol version on the Nurnberg ring.

10. Meeting closed: Meeting declared closed at 8:25PM.

11. Next Meeting: 6th December 2013.

Please return all name tags as you leave.