JD5008-50
(http://www.atseries.net/PDFs/JD5008-50.pdf)

ATevo Series Battery Charger
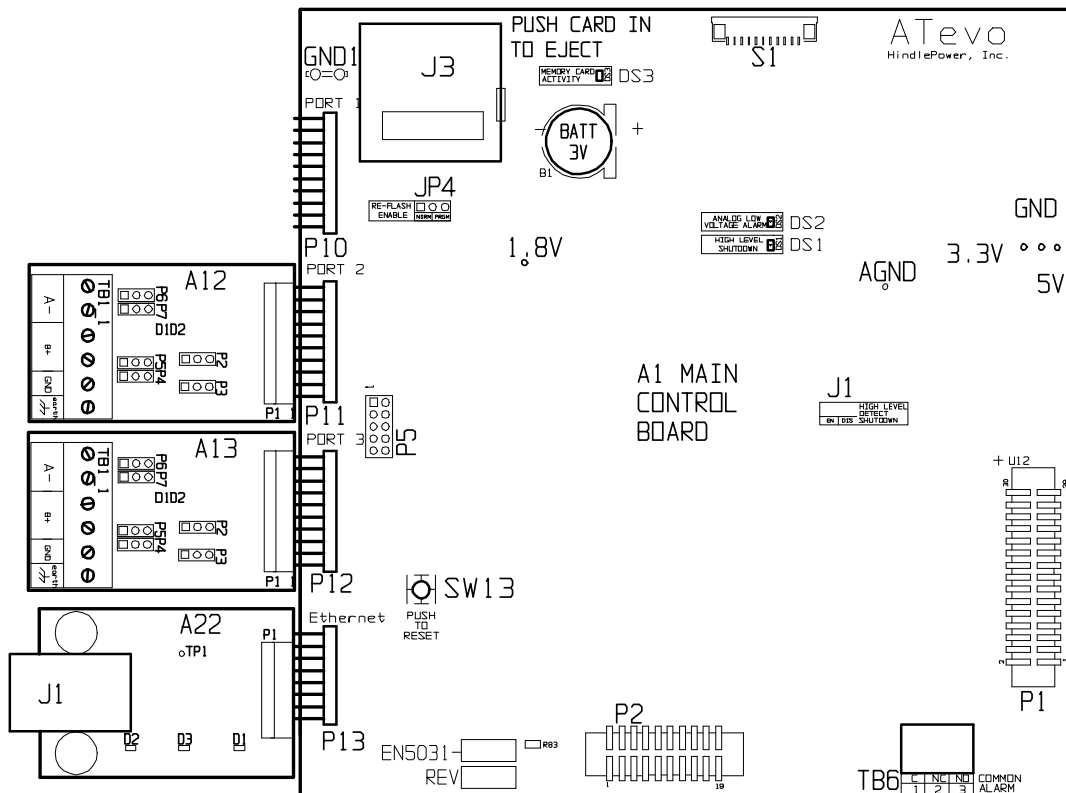### *Service Procedure*

FIELD INSTALLATION OF COMMUNICATIONS ADAPTERS

BACKGROUND

The ATevo Main Control Board (A1), mounted on the back side of the front panel door, can support up to three (3) Serial Communications Adapters, and one (1) Ethernet Adapter. Adapter hardware must be configured correctly. This instruction (**JD5008-50**) covers *field-installation* of these boards. For full ATevo Communications, via the installed adapters, refer to the separate Operating Instructions (**JA0102-54**).

REFERENCE IMAGE

All Adapters (**A12**, **A13** & **A22**) Installed onto ATevo Main Control Board (**A1**)

SAFETY

⚠ **WARNING** *DISCONNECT ALL **AC** AND **DC** POWER SOURCES FROM THE BATTERY CHARGER BEFORE PROCEEDING. ONLY QUALIFIED SERVICE TECHNICIANS SHOULD PERFORM THIS PROCEDURE. FOLLOW NEC, LOCAL, SITE, AND EMPLOYER'S STANDARD SAFETY PROCEDURES.*

⚠ **WARNING** *OPENING CIRCUIT BREAKERS DOES NOT REMOVE ALL DANGEROUS VOLTAGES FROM INSIDE THE CHARGER. AFTER AC AND DC POWER ARE REMOVED, VERIFY THAT ELECTROLYTIC DC FILTER CAPACITORS (**C1** AND/OR **C2**) ARE DISCHARGED BEFORE PROCEEDING.*

NOTICE *GROUND YOURSELF WITH A WRIST STRAP. STATIC ELECTRICITY MAY CAUSE DAMAGE TO PRINTED CIRCUIT BOARDS.*

PROCEDURE (Serial Communication Adapter **A12** or **A13**)

1. Turn off (*open*) both AC Input (CB1) and DC Output (CB2) Circuit Breakers.
2. Wait for ATevo dc voltage to ramp down (display will go blank and all LEDs will be off).
3. Open the ATevo front panel door.
4. Identify the large Main Control Board (A1) mounted to the inside surface of the door.
5. Remove the ***ground*** connection from lower-left corner of the Main Control Board (A1).
6. Carefully disengage the Main Control Board (A1) from standoffs on the left side.
7. Identify the Serial Communications Adapter connection ports (*P10*, **P11**, & **P12**) along the left side of Main Control Board (A1), and select one of the two (2) available ports:
   - the top 'PORT 1' (*P10*) is reserved for the factory, and ***cannot*** be used
   - for Modbus ***or*** DNP3 (A12), ***without*** load sharing, use 'PORT 3' (**P12**)
   - for Forced Load Sharing (A13), ***without*** Modbus or DNP, use 'PORT 3' (**P12**)
   - for Modbus ***or*** DNP3 (A12), ***with*** load sharing, use 'PORT 2' (**P11**) for serial communications and use use 'PORT 3' (**P12**) for forced load sharing
   - for Modbus ***and*** DNP3 (A12A/B), use 'PORT 2' (**P11**) & 'PORT 3' (**P12**), order of boards is ***not*** important
   -    **NOTICE**   a combination of three (3) serial boards for Modbus (A12A) ***and*** DNP3 (A12B) ***and*** Forced Load Sharing (A13) is ***not*** possible
   - the bottom port labeled 'Ethernet' (**P13**) is reserved for an Ethernet Adapter (**A22**)
8. See reference image on Page 1 of 4 to confirm selection.
9. Hold the Serial Communications Adapter at an ***angle***, to clear standoffs on front panel door.
10. Carefully slide socket (**P1**) of the Serial Communications Adapter (**A12** or **A13**) onto the pins of the connection port.
11. Once the Serial Communications Adapter socket is fully engaged on the Main Control Board header pins, line up the hole on the Serial Connection Board with the plastic standoff pins.
12. Press down on ***both*** the Serial Communications Adapter and the Main Control Board to lock them onto the standoffs.
13. Replace the ground connection on the bottom-left side of the Main Control Board.
14. Close the front panel door, and restart the ATevo.
15. Turn on (*close*) the AC Input Circuit Breaker (CB1) first.
16. Turn on (*close*) the DC Output Circuit Breaker (CB2) second.
17. The Serial Communications Adapter hardware is now installed.
18. Refer to the ATevo O&SI manual (**JA0102-51**, **JA0102-52**, or **JA0102-53**) Section 4 to assign a protocol and configure communications parameters (baud rate, parity, etc).
19. Refer to Communications manual (**JA0102-54**) for full operation of ATevo Serial Communications, and/or User Instructions (**JA5054-54**) for ATevo Forced Load Sharing.

PROCEDURE (Ethernet Adapter **A22**)

1. Turn off (*open*) both AC Input (CB1) and DC Output (CB2) Circuit Breakers.
2. Wait for ATevo dc voltage to ramp down (display will go blank and all LEDs will be off).
3. Open the ATevo front panel door.
4. Identify the large Main Control Board (A1) mounted to the inside surface of the door.
5. Remove the *ground* connection from lower-left corner of the board.
6. Carefully disengage the Main Control Board (A1) from standoffs on the left side.
7. Identify the Ethernet Adapter connection port (**P13**) at the bottom-left corner of the of Main Control Board (A1).
8. See reference image on Page 1 of 4 to confirm.
9. Hold the Ethernet Adapter at an *angle*, to clear standoffs on the front panel door.
10. Carefully slide socket (**P1**) of the Ethernet Communications Adapter (A22) onto the pins of the connection port.
11. Once the Ethernet Adapter socket is fully engaged on the Main Control Board header pins, line up the hole on the Ethernet Adapter Board (A22) with the plastic standoff pins.
12. Press down on *both* the Ethernet Communications Adapter and the Main Control Board, to lock them onto the standoffs.
13. Replace the ground connection on the bottom-left side of the Main Control Board.
14. Close the front panel door, and restart the ATevo.
15. Turn on (*close*) the AC Input Circuit Breaker (CB1) first.
16. Turn on (*close*) the DC Output Circuit Breaker (CB2) second.
17. The Ethernet Communications Adapter (A22) hardware is now installed.
18. Refer to the ATevo O&SI manual (**JA0102-51**, **JA0102-52**, or **JA0102-53**) Section 4.2 to assign a protocol and set communications parameters (IP address, Netmask, Gateway, etc).
19. Refer to Communications manual (**JA0102-54**) for full operation of ATevo Ethernet Communications.

SUPPLEMENTAL ONLINE DOCUMENTATION

A number of supplemental documents may be used in conjunction with this instruction:

Doc. No.	Online Hyperlink	Description
JA0102-51	http://www.ATSeries.net/PDFs/JA0102-51.pdf	ATevo chgr O&SI manual (1PH <=25Adc)
JA0102-52	http://www.ATSeries.net/PDFs/JA0102-52.pdf	ATevo chgr O&SI manual (1PH <=100Adc)
JA0102-53	http://www.ATSeries.net/PDFs/JA0102-53.pdf	ATevo chgr O&SI manual (3PH <=1000Adc)
JA0102-54	http://www.ATSeries.net/PDFs/JA0102-54.pdf	**ATevo Communications Manual**
JA5054-00	http://www.ATSeries.net/PDFs/JA5054-50.pdf	ATevo Forced Load Sharing
JD5008-50	http://www.ATSeries.net/PDFs/JD5008-50.pdf	ATevo Comm Field Install (*this sheet*)
JD5012-50	http://www.ATSeries.net/PDFs/JD5012-50.pdf	Main Control Board (A1) Replacement