INDIGO®

TECHNICAL MANUAL

NH-81-00005 Rev. B

CONTENTS

Replacement Parts 1

Required Tools 2-4

Serial COM Setup 5-8

Vaccine Carrier 9

Cooler Lid Assembly - Replacement 9

Tethering Outer Lid to Cooler..... 10-14

Battery Replacement - Cooler Lid..... 15-17

Cooler Lid Electronics Reset - Cooler Lid 18-20

ASER Update - Cooler Lid..... 21-24

Firmware Update - Cooler Lid..... 25-30

Cold Life Update - Cooler Lid..... 31-32

Vaccine Carrier - Troubleshooting..... 33-34

Charger 35

System Orientation 35

Charger - Electronics Enclosure Access..... 36-37

Charger Main PCBA - Replacement 38-43

Charger USB PCBA - Replacement..... 44-47

Charger UI PCBA - Replacement 48-52

Charger IR PCBA - Replacement..... 53-55

Charger Internal Fan - Replacement 56-57

Charger Power Cord - Replacement 58-61

ASER Update - Charger..... 62-65

Firmware Update - Charger..... 66-71

Charger - Troubleshooting 72-74

Disposal and Recycling Guidelines..... 75

Warranty Terms and Conditions 76

REPLACEMENT PARTS

Recommended Quantities of Indigo Chargers and Replacement Parts

For purchases of 10 and 50 vaccine carriers, the following quantities of chargers and replacement parts are generally recommended. Please consult the manufacturer for more specific recommendations based on intended use.

Purchase of 10 Indigo Vaccine Carriers

- Indigo Chargers: ~2, with exact quantities dependent on use case
- Replacement parts: 1 set of vaccine carrier parts (cooler, lid, and bag)

Purchase of 50 Indigo Vaccine Carriers

- Indigo Chargers: ~5, with exact quantities dependent on use case
- Replacement parts: 2 sets of vaccine carrier parts (cooler, lid, and bag) and 1 set of charger parts (main PCBA, UI PCBA, USB PCBA, IR PCBA, power board assembly, and internal fan).

Vaccine Carrier Replacement Parts

- Cooler, Vaccine Carrier, NH-30-00049
- Lid, Vaccine Carrier, NH-30-00146
- Bag, Vaccine Carrier, NH-30-00064

Charger Replacement Parts

- Main PCBA, Charger, NH-30-0127
- UI PCBA, Charger, NH-50-00010
- USB PCBA, Charger, NH-50-00011
- IR PCBA, Charger, NH-30-00012
- Power Cord Assembly, Charger, NH-54-00025
- Internal Fan, Charger, NH-54-00020

REQUIRED TOOLS

- 1/4" Nut Driver w/ 6" Long Shaft

- 7MM Nut Driver

- Adjustable Wrench

- Low Profile Ratchet and 1/4" Socket

NOTE: Combined ratchet head and socket height should not exceed 1 1/2"

- Micro USB to USB-A

- NO. 0, 1 & 2 Phillips Screwdrivers

- NON-MARRING Pliers

- Ratchet with 7MM Socket

- TTL-232R-3V3-AJ

- USB On-The-Go (OTG) Adapter

NOTE: VARO™ OTG CABLE SHOWN

Additional Required Tools

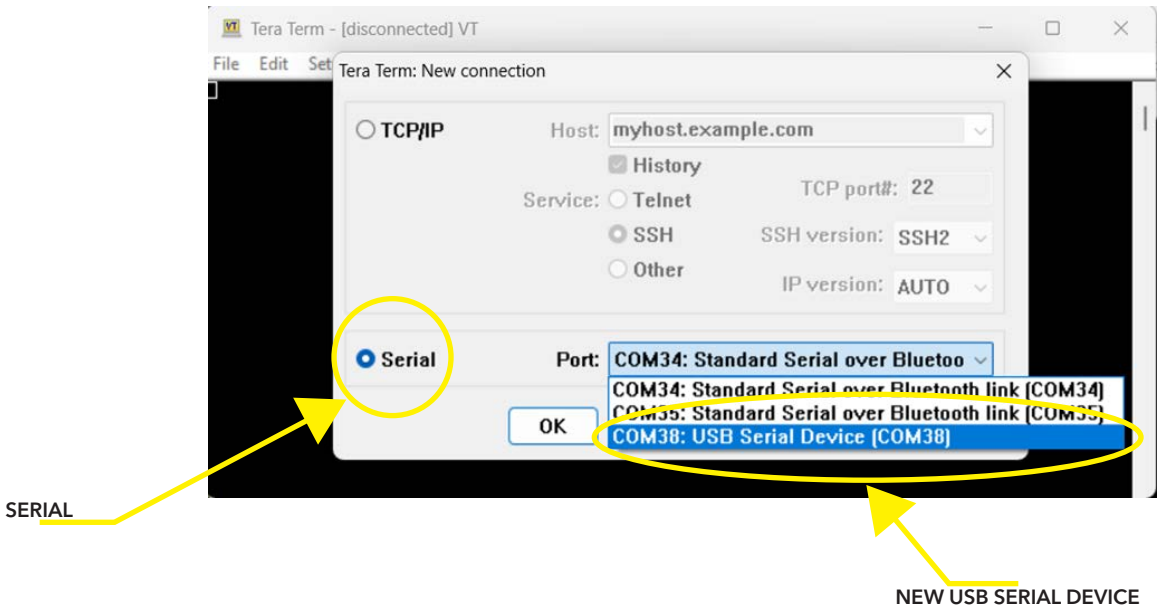
- Desktop Computer or Laptop Computer - Not Shown
- Android Phone - Not Shown

SERIAL COM SETUP

Instructions

1. Open TeraTerm application on desktop or laptop computer.

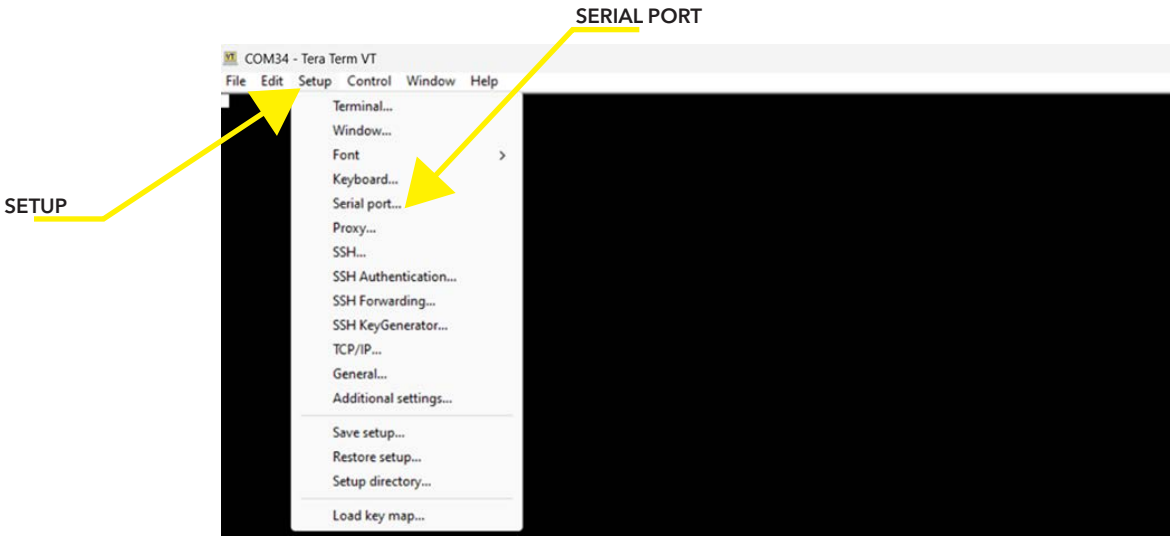
2. Select “Serial” and using dropdown selection, select COM port that shows a new USB device. This may have a different label then shown below. **NOTE: Record COM PORT enumeration, as this will be referenced at a later step.**



SERIAL COM SETUP

Instructions

3. Select “Setup” and “Serial port” in the dropdown menu.

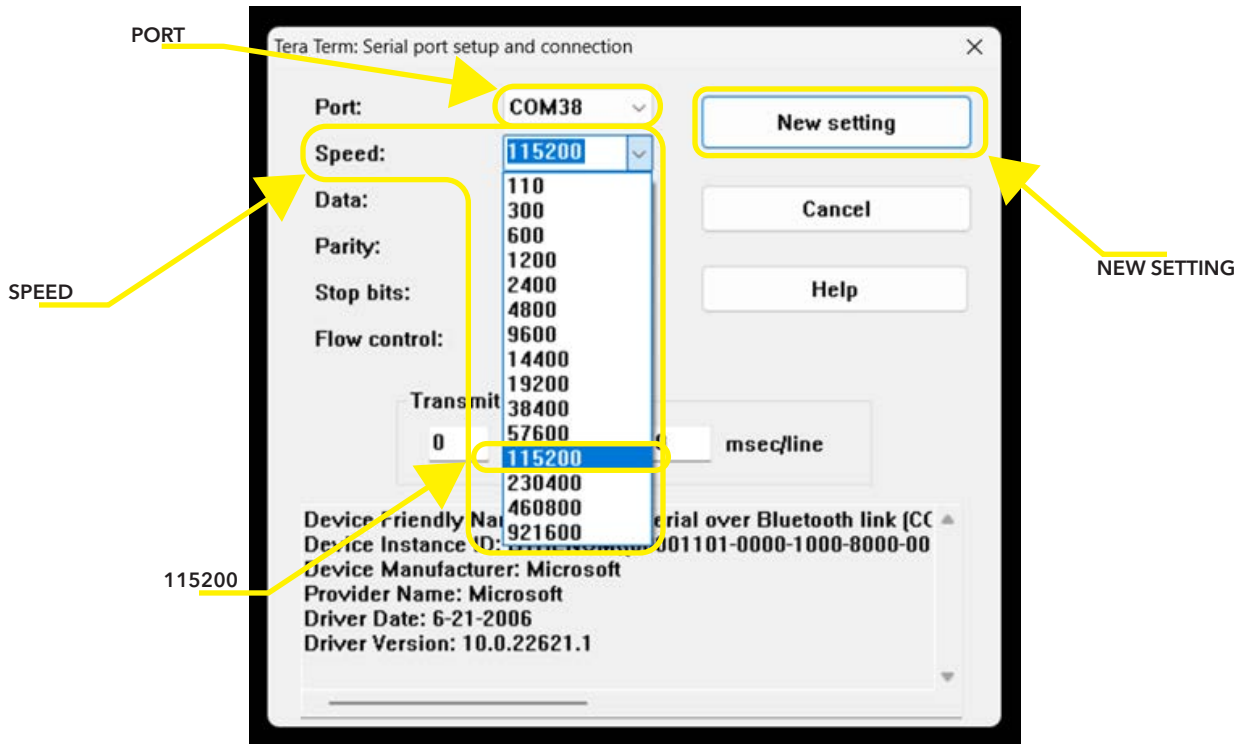


SERIAL COM SETUP

Instructions

4. Change “Speed” to “115200”.

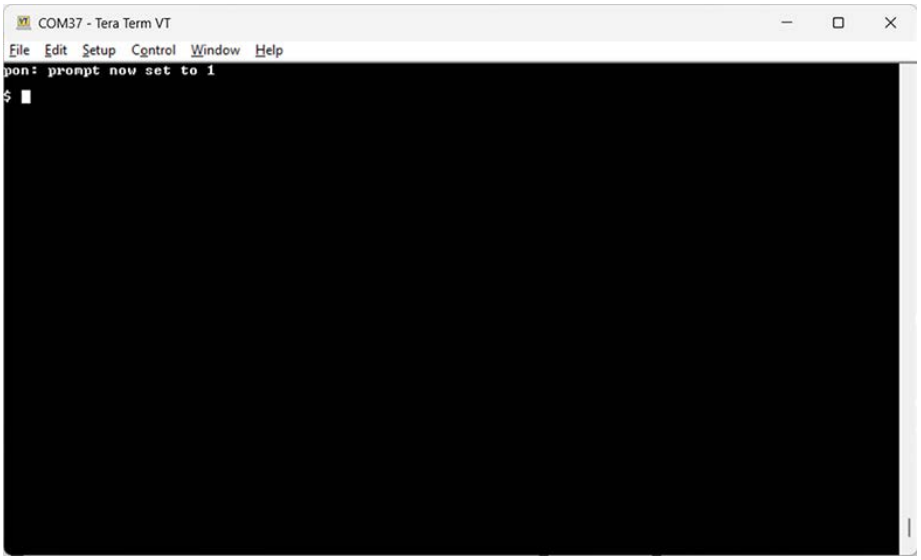
5. Review “Port” to confirm COM PORT, in this example, “COM38” (SEE STEP 2) and select “New Setting”.



SERIAL COM SETUP

Instructions

6. Type “pon” and press “ENTER” key. The cooler lid should immediately return “pon: prompt now set to 1.”



COOLER LID ASSEMBLY - REPLACEMENT

Instructions

1. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to replacing old cooler lid assembly.

2. Untie old cooler lid assembly from cooler.

3. Perform TETHERING OUTER LID TO COOLER procedure (Pages 10-14) using new cooler lid assembly.

4. Perform ASER UPDATE - COOLER LID procedure (Pages 21-24).

5. If applicable, perform FIRMWARE UPDATE - COOLER LID procedure (Pages 25-30).

TETHERING OUTER LID TO COOLER

Instructions

1. Place outer lid onto the cooler. Wrap USB cable around and place into the USB slot.

2. With the other, longer end of the 1/8" Technora cord, tie a Poacher's Knot around the cooler loop.

   A. For an alternative demonstration of this knot, refer to:https://www.animatedknots.com/poachers knot or refer to the following steps.

TETHERING OUTER LID TO COOLER

Instructions

3. Feed working end of cord into cooler loop.

4. With the working end of the cord, make a loop.

Feed working end of cord into Cooler loop

With the working end of the cord, make a loop.

TETHERING OUTER LID TO COOLER

Instructions

5. With the working end of the cord, make a turn at the beginning of the loop.

6. Make a 2nd turn.

With the working end of the cord, make a turn at the beginning of the loop.

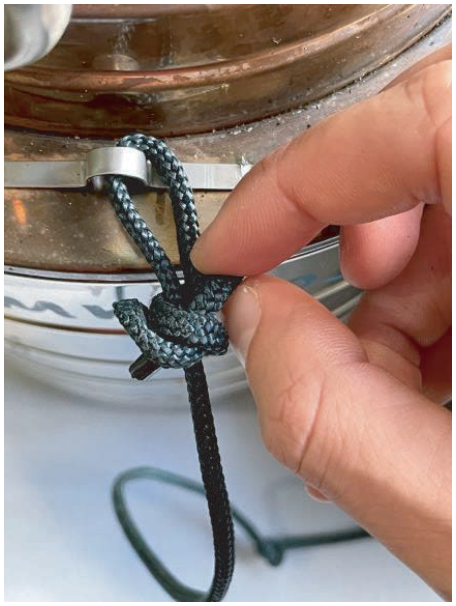
Make a 2nd turn.

TETHERING OUTER LID TO COOLER

Instructions

7. Feed the working end through both of the turns just made.

8. Tighten the knot.



Feed the working end through both of the turns just made.

Tighten the knot.

TETHERING OUTER LID TO COOLER

Instructions

9. Pull long end to cinch cord tight to cooler.

Pull long end to cinch cord tight to cooler.

BATTERY REPLACEMENT - COOLER LID

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- NO. 1 Phillips Screwdriver

2. Place the Vaccine Carrier - Foam Inner Lid to the side fully exposing the Cooler Lid Electronics.

3. Remove QTY: 5, M3 X 6, SS, Phillips Screws where indicated.

BATTERY REPLACEMENT - COOLER LID

Instructions

4. Carefully flip down the Cooler Lid Electronics Cover without excessively pulling away from the assembly, to prevent damaging the wires.

BATTERY REPLACEMENT - COOLER LID

Instructions

5. If this is the first time the battery is replaced, there will be a spare battery inside the enclosure. Otherwise, a new CR123A battery will need to be acquired.

6. Remove and safely dispose of the discharged CR123A battery and replace with a new battery. Insert batteries in the direction indicated by the plus (+) and minus (-) signs on the enclosure.

7. Carefully flip up the Cooler Lid Electronics Cover, ensure the wires are clear of pinching.

8. Reinstall the Phillips Screws removed during STEP 3.

9. Verify that the low battery icon is no longer shown on the display.

COOLER LID ELECTRONICS RESET - COOLER LID

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- NO. 1 Phillips Screwdriver

2. Place the Vaccine Carrier - Foam Inner Lid to the side fully exposing the Cooler Lid Electronics.

3. Remove QTY: 5, M3 X 6, SS, Phillips Screws where indicated.

COOLER LID ELECTRONICS RESET - COOLER LID

Instructions

4. Carefully flip down the Cooler Lid Electronics Cover without excessively pulling away from the assembly, to prevent damaging the wires.

COOLER LID ELECTRONICS RESET - COOLER LID

Instructions

5. Press the RST Button.
6. Carefully flip up the Cooler Lid Electronics Cover, ensure the wires are clear of pinching.
7. Reinstall the Phillips Screws removed during STEP 3.

ASER UPDATE - COOLER LID

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Desktop Computer or Laptop Computer
- Android Phone
- USB On-The-Go (OTG) Adapter

2. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to updating ASER.

3. Plug cooler lid USB-A into desktop or laptop computer.

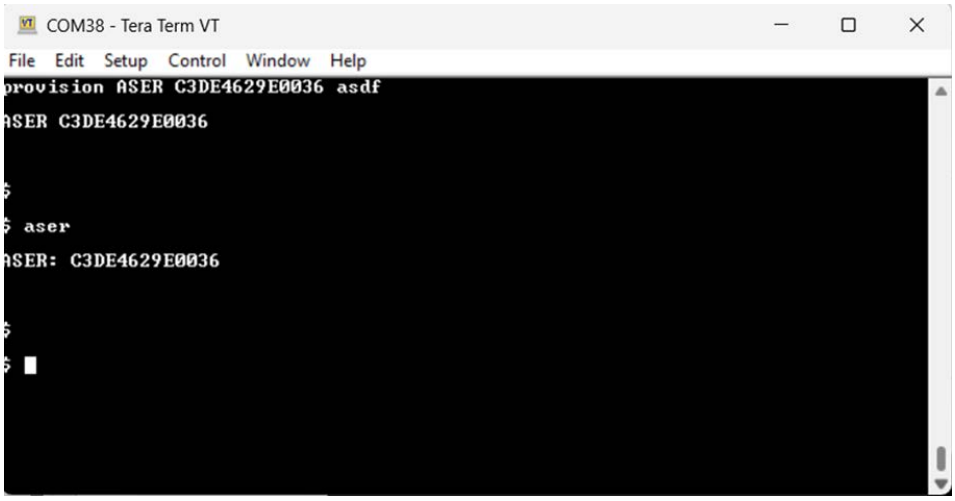
4. Establish a Serial COM Port connection by completing the SERIAL COM SETUP procedure (Pages 5-8).

ASER UPDATE - COOLER LID

Instructions

5. Type “provision ASER CXXXXXXXXXXXX asdf”, where CXXXXXXXXXXXX is the serial number of the vaccine carrier. Press enter.

6. The device should immediately return the ASER. To check the ASER, type “aser” and press enter.

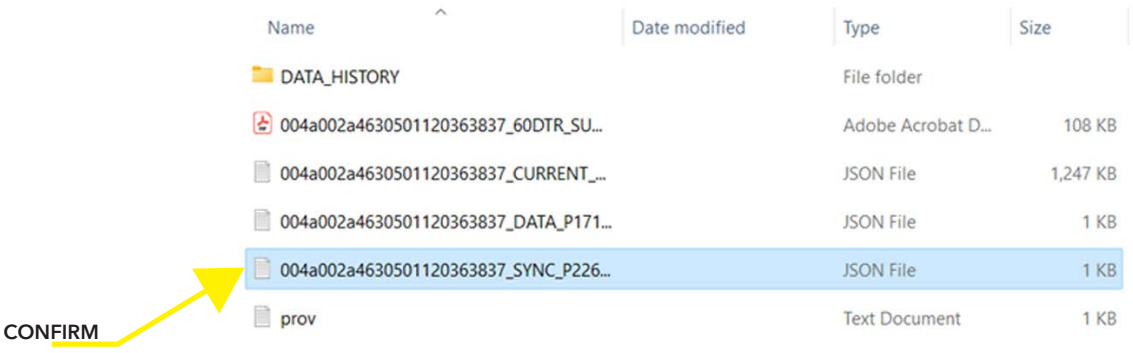


ASER UPDATE - COOLER LID

Instructions

7. To check that the ASER successfully updated, unplug and re-plug the cooler lid USB-A.

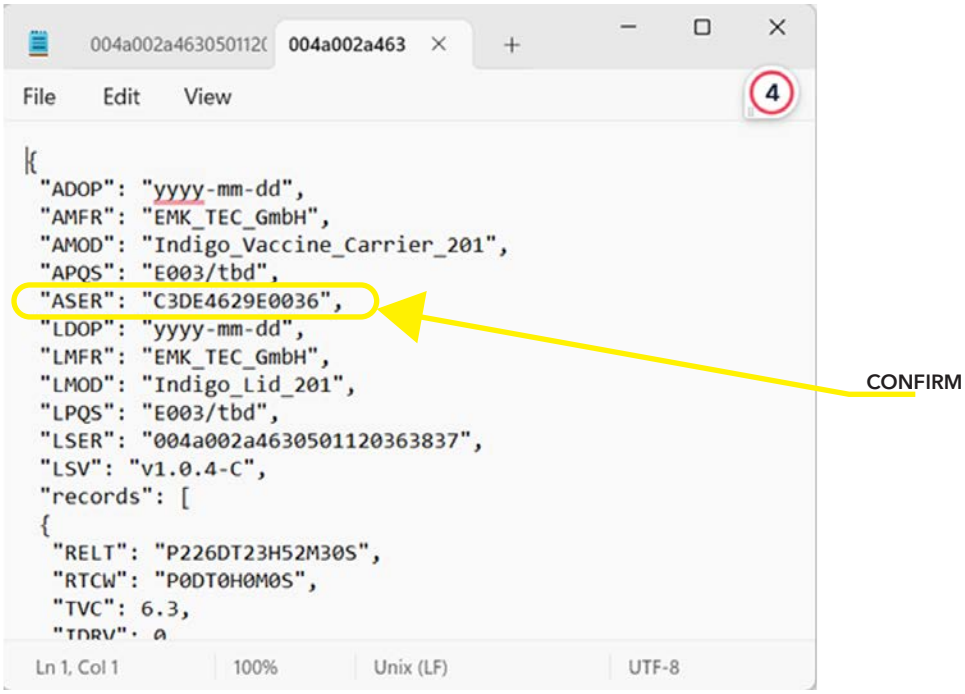
8. Open the file with “SYNC” in the title.



ASER UPDATE - COOLER LID

Instructions

9. Check that “ASER” was successfully updated.



FIRMWARE UPDATE - COOLER LID

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Desktop Computer or Laptop Computer
- Android Phone
- USB On-The-Go (OTG) Adapter

2. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to updating FIRMWARE.

3. Download the most recent cooler lid firmware version UF2 file. Cooler lid firmware versions will end in "-C", ex: 1.0.0-C.

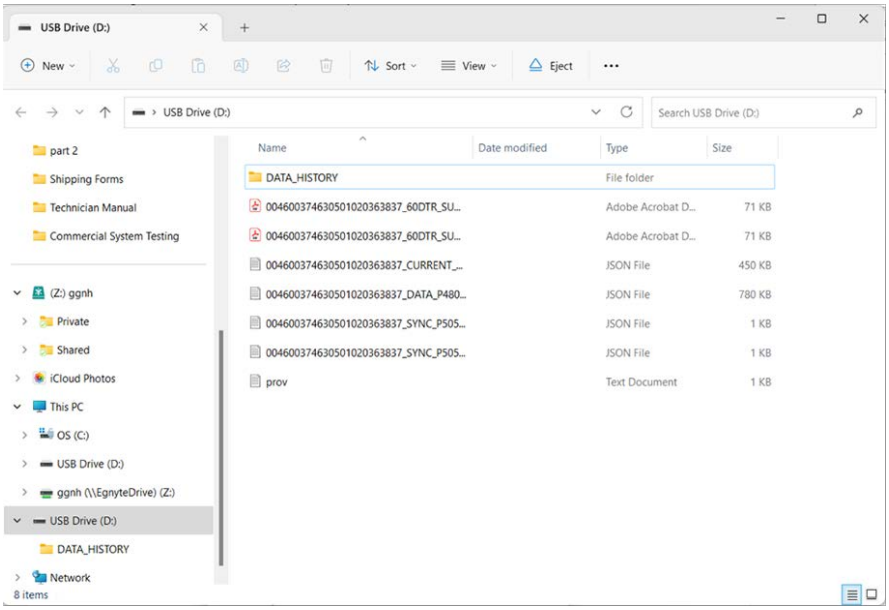
4. Connect the cooler lid USB-A cable to the computer.

FIRMWARE UPDATE - COOLER LID

Instructions

5. Wait until a file window pops up or a new “USB Drive” (For Example “D:” shown below) appearing under “This PC” while viewing File Explorer.

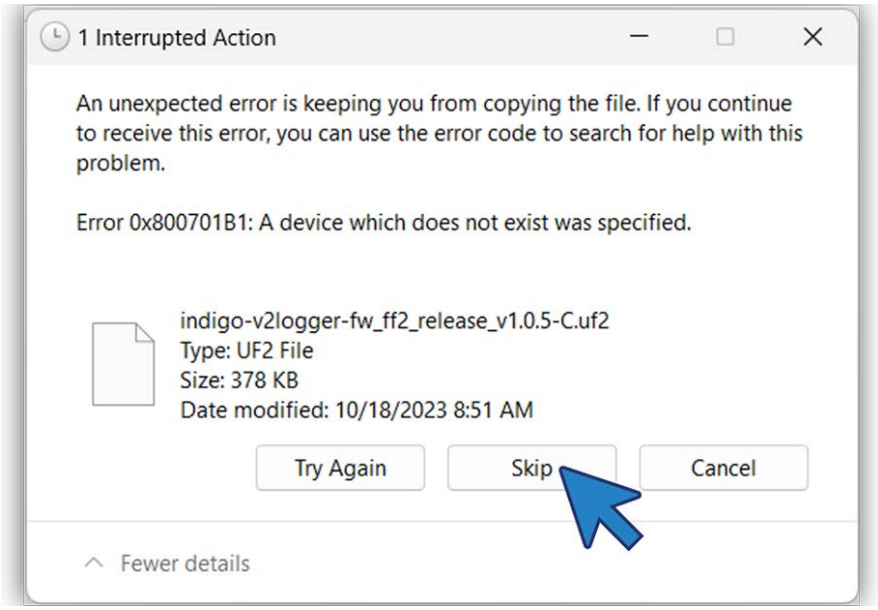
6. Drag or copy and paste the UF2 file onto the cooler lid’s file window.



FIRMWARE UPDATE - COOLER LID

Instructions

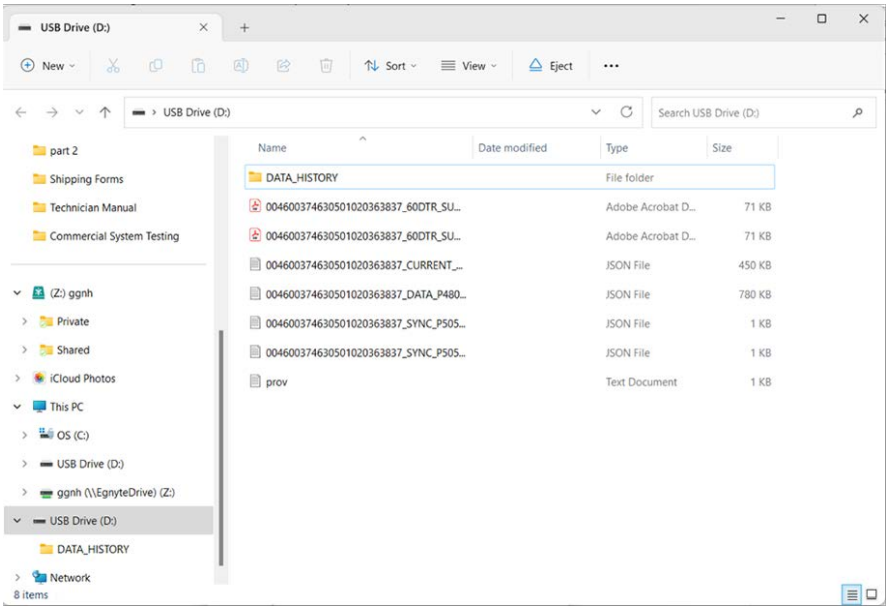
7. Dismiss the warning by pressing “Skip” or “Cancel”.



FIRMWARE UPDATE - COOLER LID

Instructions

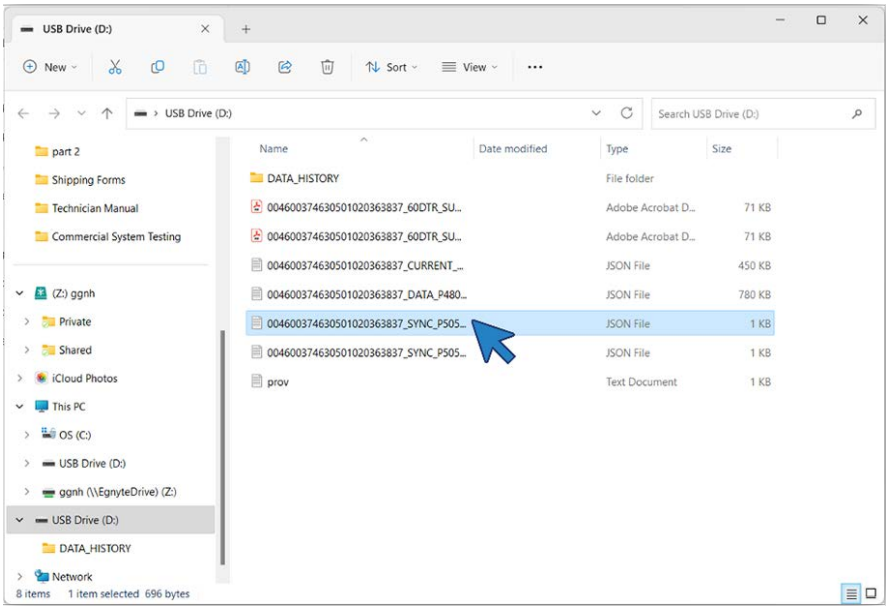
8. Wait until the file window pops up again or the “USB Drive” (For Example “D:” shown below) reappearing under “This PC” while viewing File Explorer.



FIRMWARE UPDATE - COOLER LID

Instructions

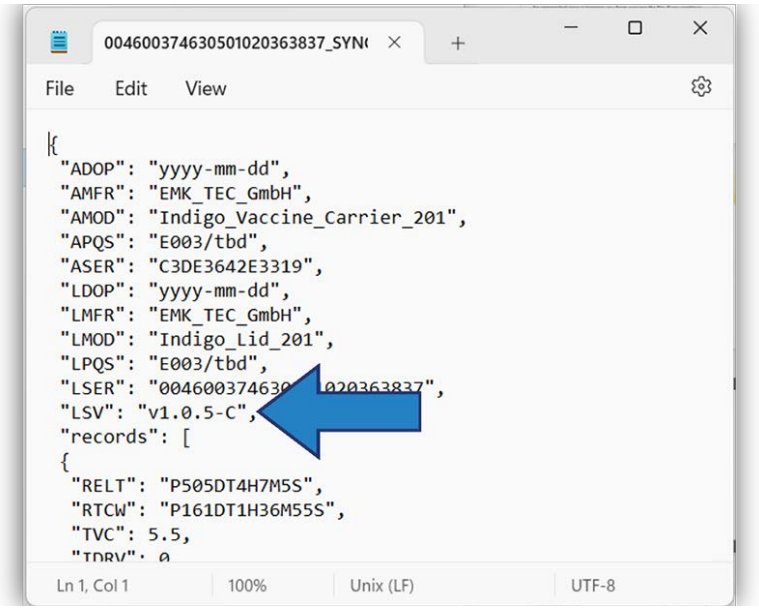
9. Check that the update was successful by opening the SYNC file.



FIRMWARE UPDATE - COOLER LID

Instructions

10. Check the firmware version in the “LSV” field.



COLD LIFE UPDATE - COOLER LID

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Desktop Computer or Laptop Computer

2. Plug cooler lid USB-A into desktop or laptop computer. Open TeraTerm application on desktop or laptop computer.

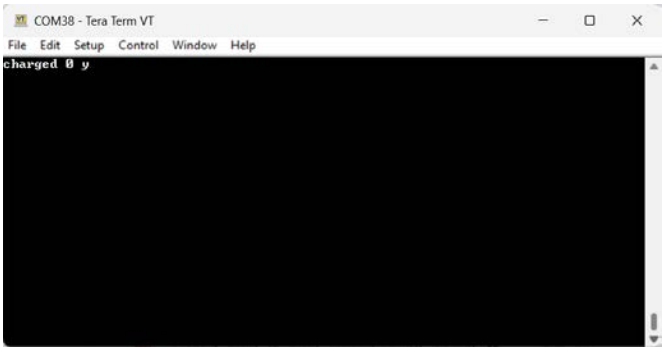
3. Establish a Serial COM Port connection by completing the SERIAL COM SETUP procedure (Pages 5-8).

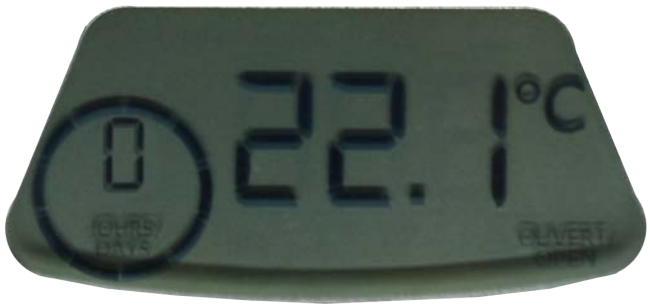
COLD LIFE UPDATE - COOLER LID

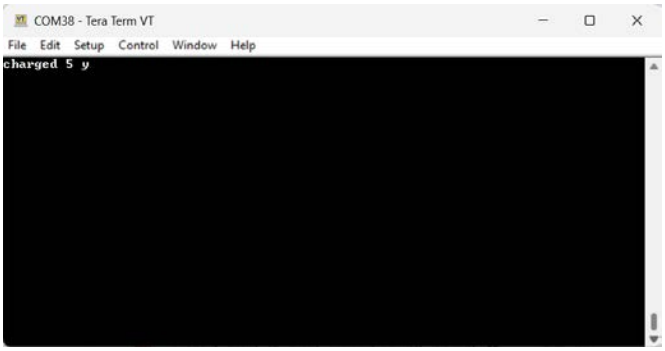
Instructions

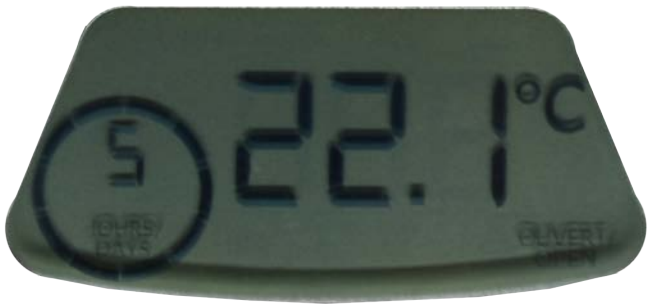
4. Type “charged 0 y” to update cold life to 0 (zero) days or “charged 5 y” to 5 (five) days. Press enter.

5. To check that the cold life was successfully updated, open and close the cooler inner lid. Check that the cold life has updated to “0 JOURS/DAYS” or “5 JOURS/DAYS” depending on intended result .









VACCINE CARRIER - TROUBLESHOOTING

Error Codes

Cooler lid error codes will show on screen when USB is connected and in the PDF report. Errors can be cleared by disconnecting USB, if error is no longer occurring.

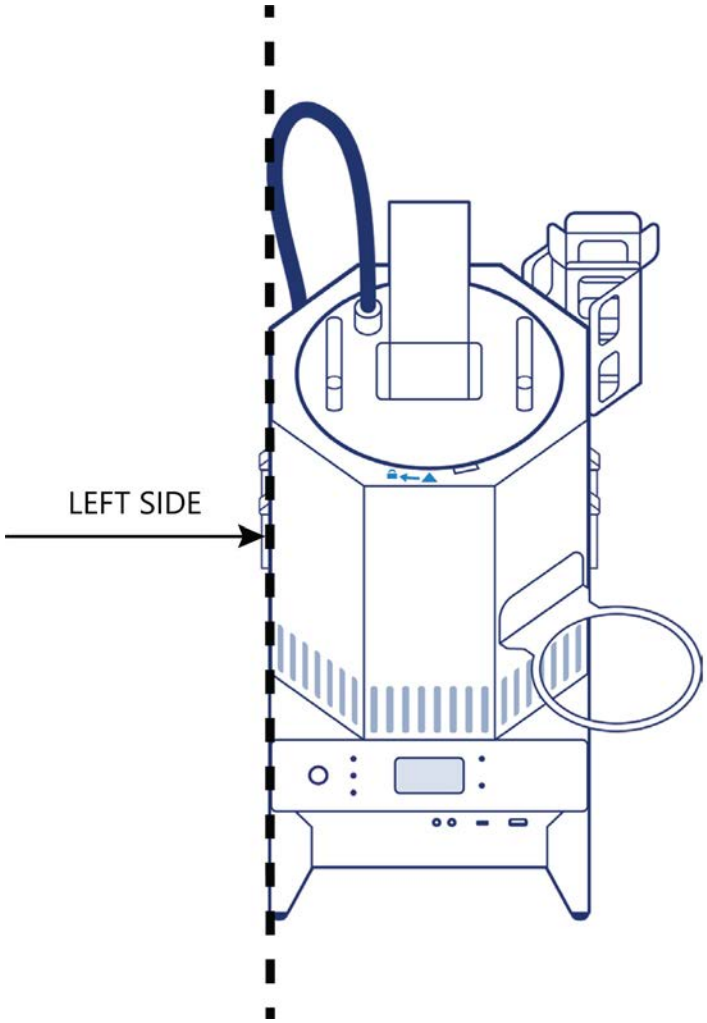
ERROR	MEANING	ACTION
Err	The vaccine chamber or ambient temperature sensor has failed.	Try clearing the error by connecting and disconnecting the cooler lid USB to Varo, a computer, or the Indigo Charger. If "Err" still shows, see "Cooler Lid Replacement" in Indigo Technician Manual.
1	The logger battery needs to be replaced.	Replace lid battery. See "Battery Replacement" in Indigo Manual.
2	The vaccine chamber temperature sensor has failed.	Check if "Err" is shown on-screen. If so, follow the action for "Err", listed above.
3	The ambient temperature sensor has failed.	Check if "Err" is shown on-screen. If so, follow the action" for "Err", listed above.
4	The file system has failed.	May be ignored unless the lid is also unable to connect to Varo, a computer, or the Indigo Charger. If the lid is having connectivity issues, see "Cooler Lid Reset" in Indigo Technician Manual. If the issue is not resolved, see "Cooler Lid Replacement" in Indigo Technician Manual.
5	The cooler has taken more than an hour to reach temperature.	Charge the cooler and retry cool-down. If the cooler will still not cool-down, mark as defective and replace.
6	A firmware bug was detected.	May be ignored unless other issues occur. If so, see "Cooler Lid Reset" in Indigo Technician Manual. If the issue is not resolved, see "Cooler Lid Replacement" in Indigo Technician Manual.
7	The appliance serial number is missing.	Plug lid into computer and open "PROV" file. Check "ASER" field. If "ASER" does not match cooler serial number, see "ASER Update Instructions" in Indigo technician manual.

VACCINE CARRIER - TROUBLESHOOTING

Other Issues

ISSUE	ACTION
The vaccine carrier is not cooling after the cold key has been placed on the valve.	Adjust the cold key on the valve to make sure it is seated correctly. The valve should make an audible “click” upon placement and should not be tilted. If the issue persists, charge the cooler and retry cool-down. If the cooler still will not cool-down, mark as defective and replace.
Nothing is shown on the cooler lid display when the cooler inner lid is removed or the cold key is on the valve.	Try opening and closing the cooler inner lid. If the issue persist, replace the cooler lid battery. See “Battery Replacement” section for instructions. If nothing is still shown on screen, see “Cooler Lid Replacement” in Indigo Technician Manual.
When the cooler lid USB is connected to an Android device with the Varo App, the Varo App does not show that the cooler lid has been connected.	Retry after restarting the Android device, then using an alternate OTG adaptor, and finally, using an alternate phone. If issue persists, try connecting lid USB to a computer. If lid file system does not show up on the computer, see “Cooler Lid Reset” in Indigo Technician Manual. If the issue is still not resolved, see “Cooler Lid Replacement” in Indigo Technician Manual.

SYSTEM ORIENTATION



CHARGER - ELECTRONICS ENCLOSURE ACCESS

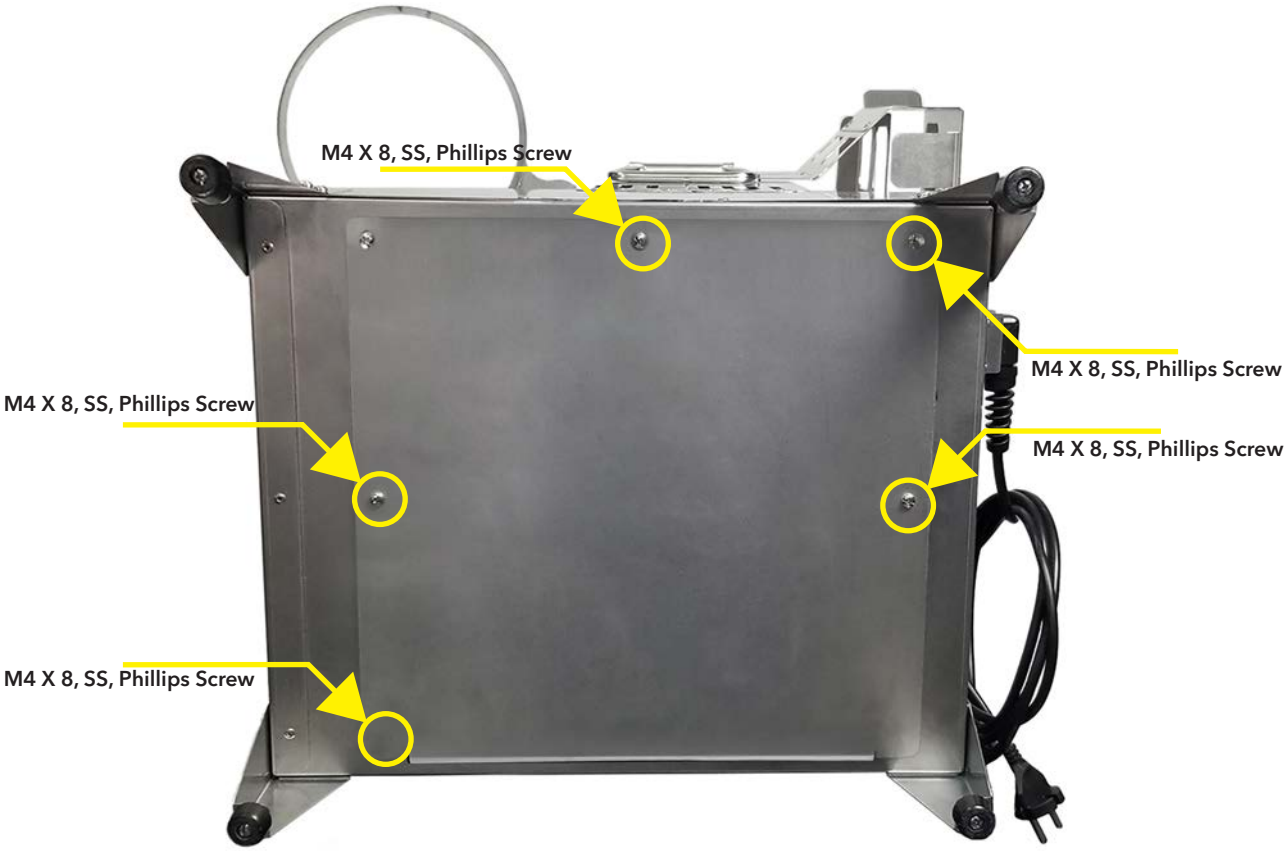
Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- NO. 2 Phillips Screwdriver

2. Ensure Charger system is at ambient room temperature and unplugged from power source.

3. Place Charger system on its left side with the bottom facing towards the technician.

4. Remove QTY:5, M4 X 8, SS, Phillips Screws where indicated.



CHARGER - ELECTRONICS ENCLOSURE ACCESS

Instructions

5. Supporting the Bottom Plate with both hands, carefully slide down until retention lip clears the bottom opening.

CHARGER MAIN PCBA - REPLACEMENT

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- NO. 2 Phillips Screwdriver
- NON-MARRING Pliers
- Desktop Computer or Laptop Computer
- Android Phone
- USB On-The-Go (OTG) Adapter

2. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to replacing CHARGER MAIN PCBA.

3. Follow the "Charger - Electronics Enclosure Access" instructions prior to the next step (Pages 36-37).

4. Disconnect J14, UI PCBA Cable, by disengaging the latches on both sides of the connector, **SEE Figure A**. Gently, pull the cable out of the connector.

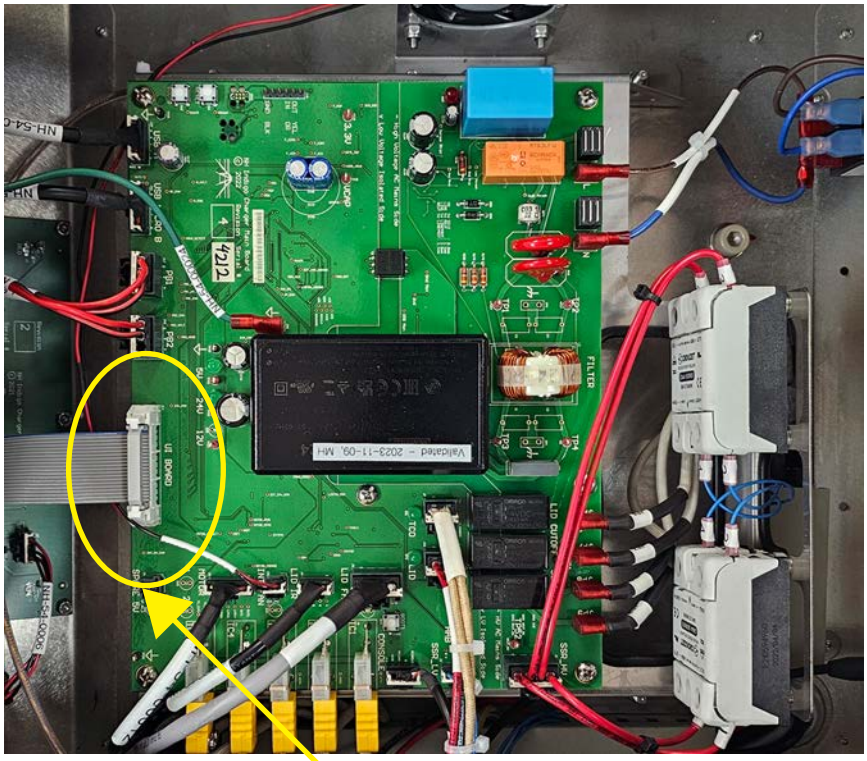
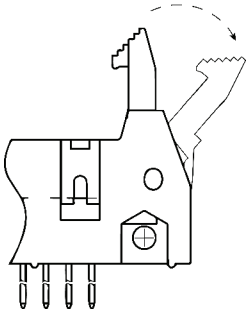


Figure A. – Push Out



CHARGER MAIN PCBA - REPLACEMENT

Instructions

5. Disconnect the below cables **Table A**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly from the PCBA. **SEE Figure B**

   A. **NOTE that the SSR_HV Cables (J1) are routed and formed where they DO NOT touch adjacent bodies.**

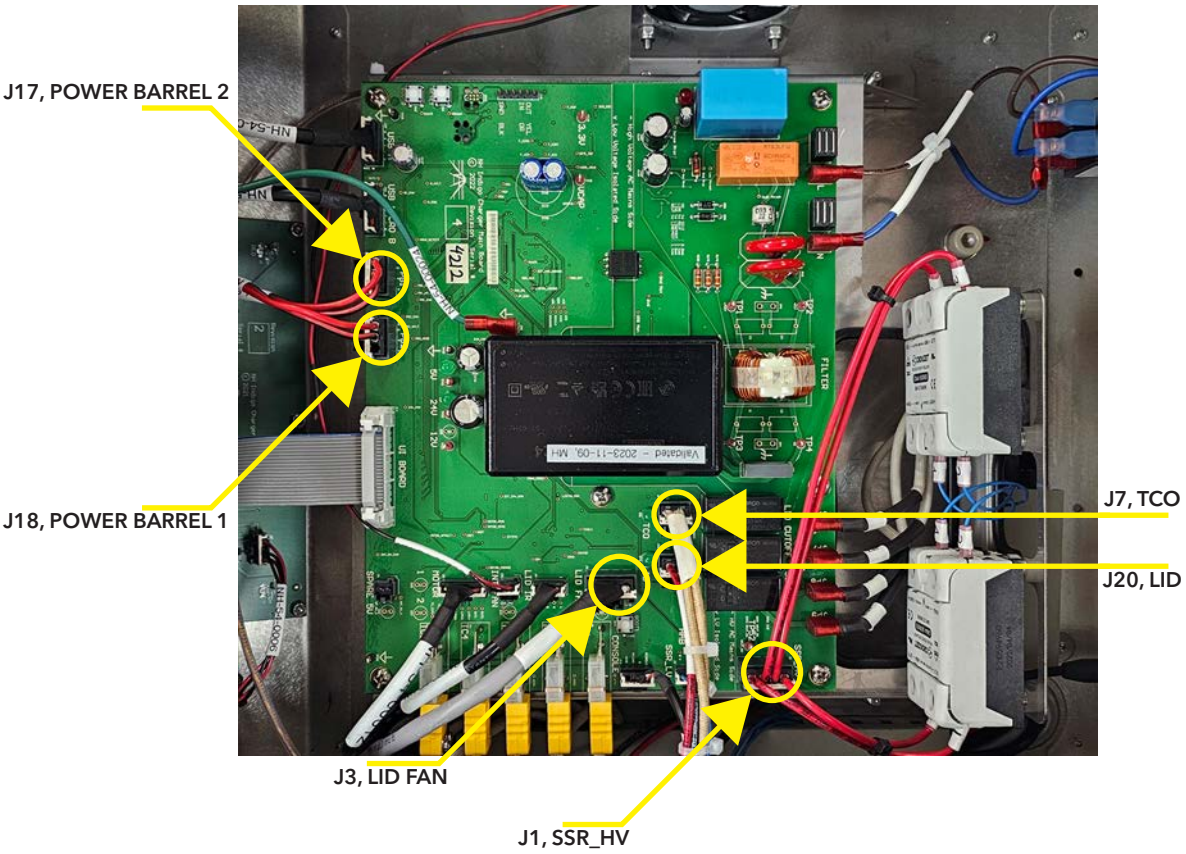
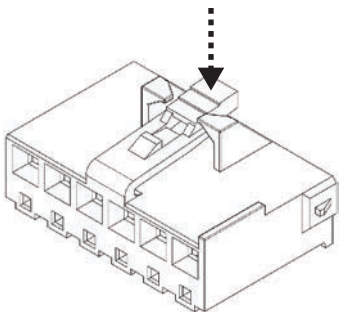


Table A.

REFERENCE DESIGNATOR	DESCRIPTION
J1	SSR_HV
J3	LID FAN
J7	TCO
J17	POWER BARREL 2
J18	POWER BARREL 1
J20	LID

Figure B. – Push in TAB



CHARGER MAIN PCBA - REPLACEMENT

Instructions

6. Disconnect the below cables **Table B**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly from the PCBA. **SEE Figure C**

   A. **NOTE the routing of INT FAN cable (J21) behind the other cables.**

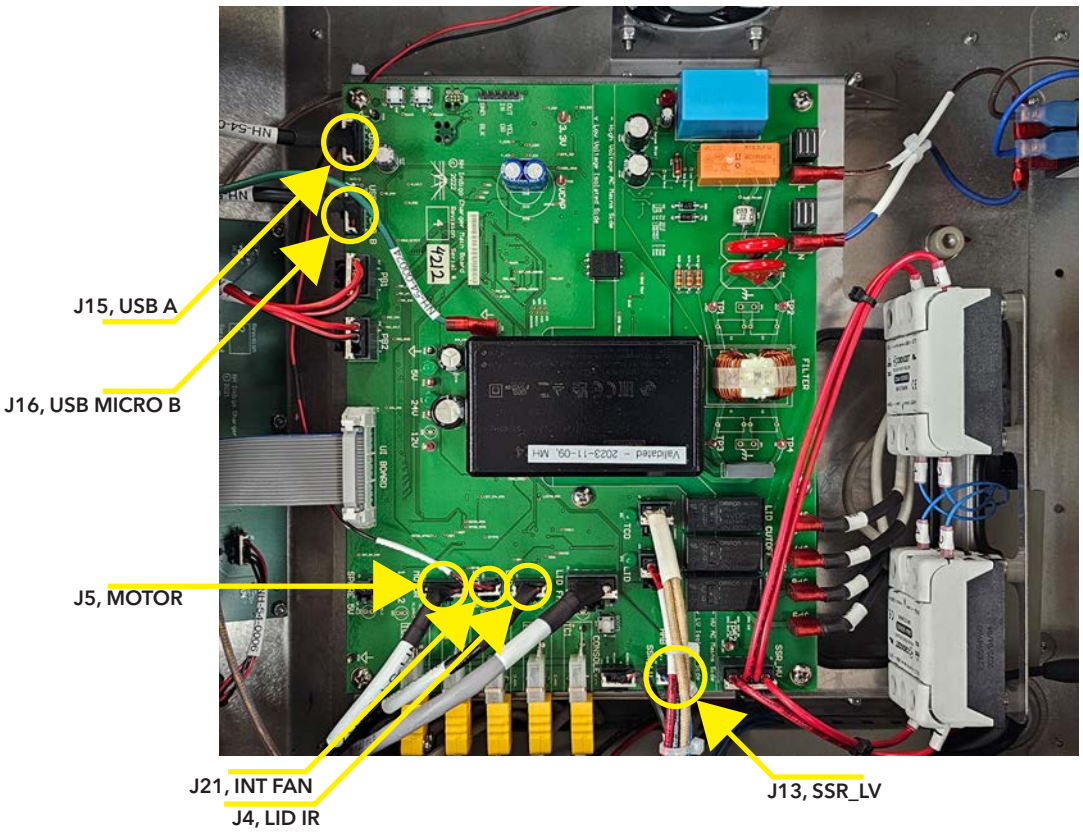
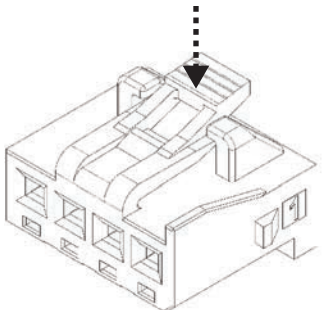


Table B.

REFERENCE DESIGNATOR	DESCRIPTION
J4	LID IR
J5	MOTOR
J13	SSR_LV
J15	USB A
J16	USB MICRO B
J21	INT FAN

Figure C. – Push in TAB



CHARGER MAIN PCBA - REPLACEMENT

Instructions

7. Disconnect the below thermocouples **Table C**, by gently unplugging them from their respective connectors. Take note of the polarity for the connections. **SEE Figure D**

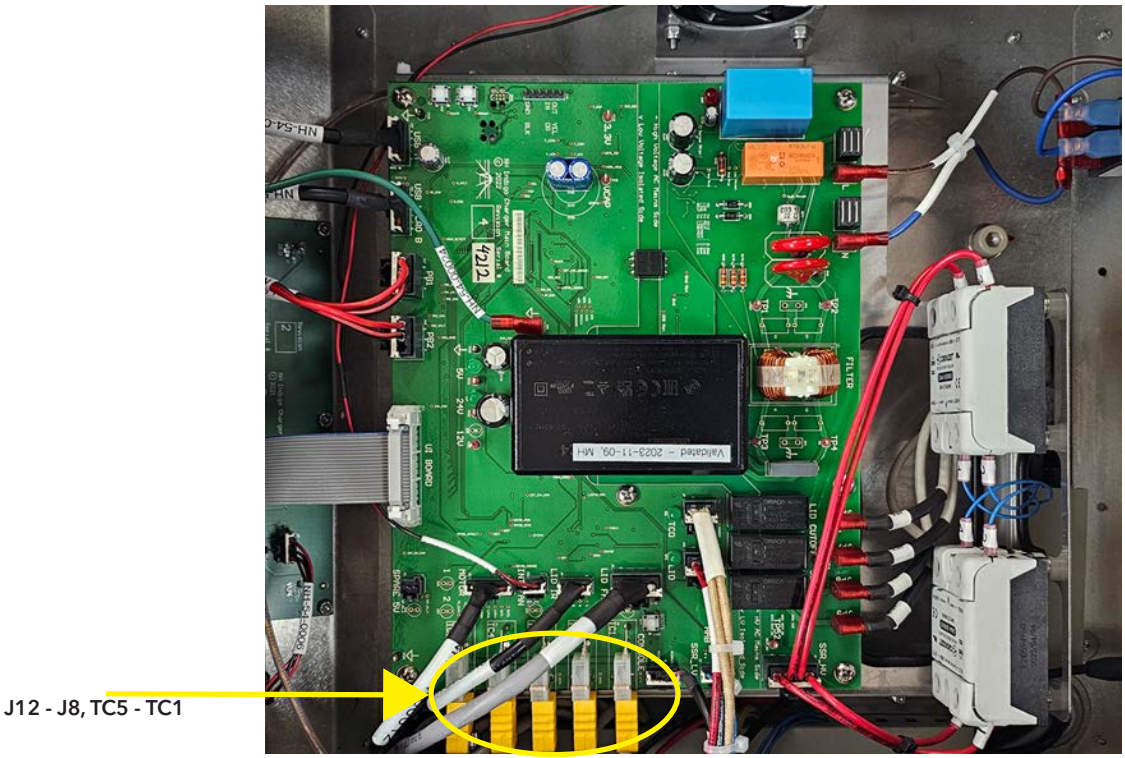
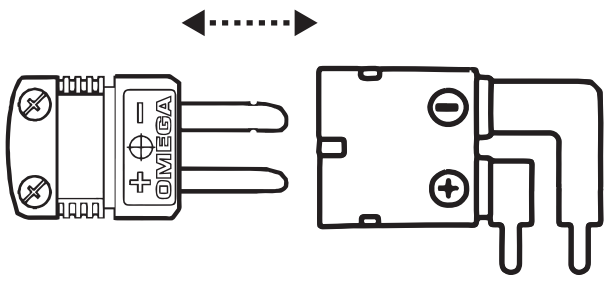


Table C.

REFERENCE DESIGNATOR	DESCRIPTION
J8	TC1
J9	TC2
J10	TC3
J11	TC4
J12	TC5

Figure D. – Polarity



CHARGER MAIN PCBA - REPLACEMENT

Instructions

8. Disconnect the fully insulated 90 degree flag quick-disconnect terminals **Table D**, by holding onto the terminal body and gently rocking back and forth as you are pulling away from the PCBA. Take care to not aggressively pull on the cables, doing so shall reduce bending the PCBA.

- **NOTE: The careful use of NON-MARRING needle nose pliers may be necessary.**

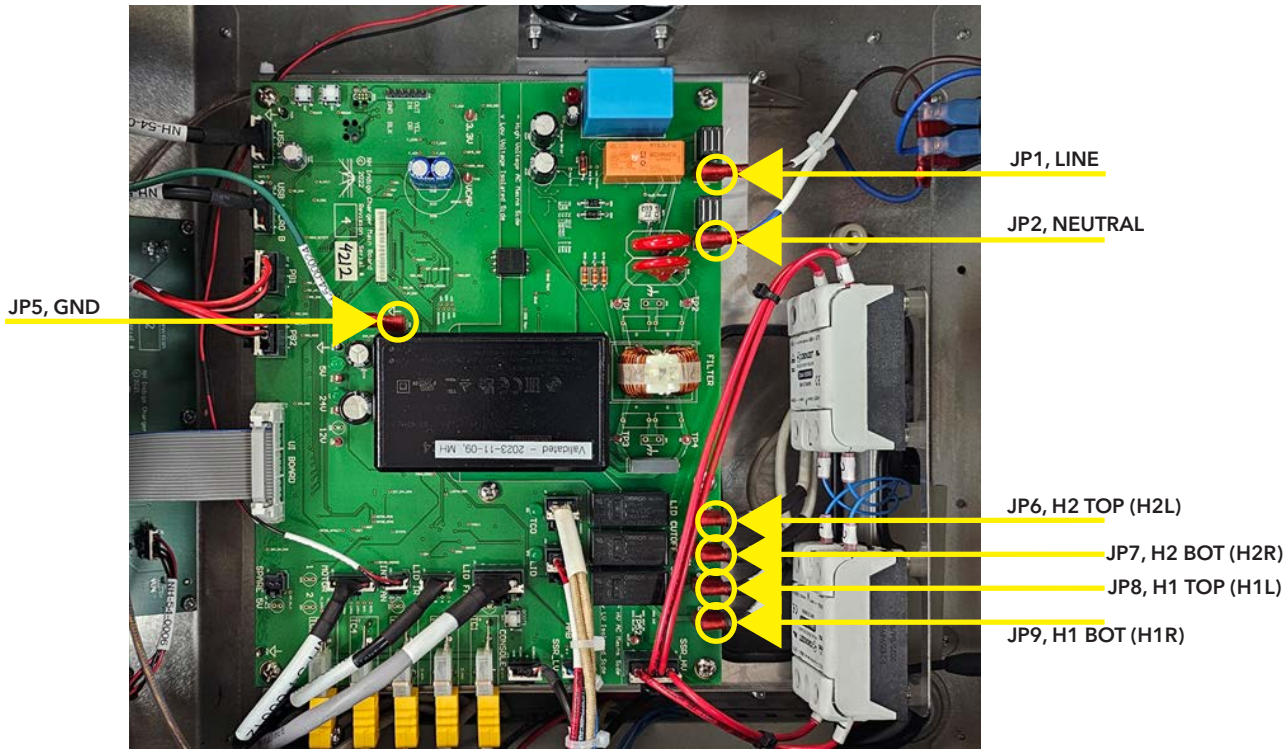


Table D.

REFERENCE DESIGNATOR	DESCRIPTION
JP1	LINE
JP2	NEUTRAL
JP6	H2 TOP (H2L)
JP7	H2 BOT (H2R)
JP8	H1 TOP (H1L)
JP9	**H1 BOT (H1R)**
JP5	GND

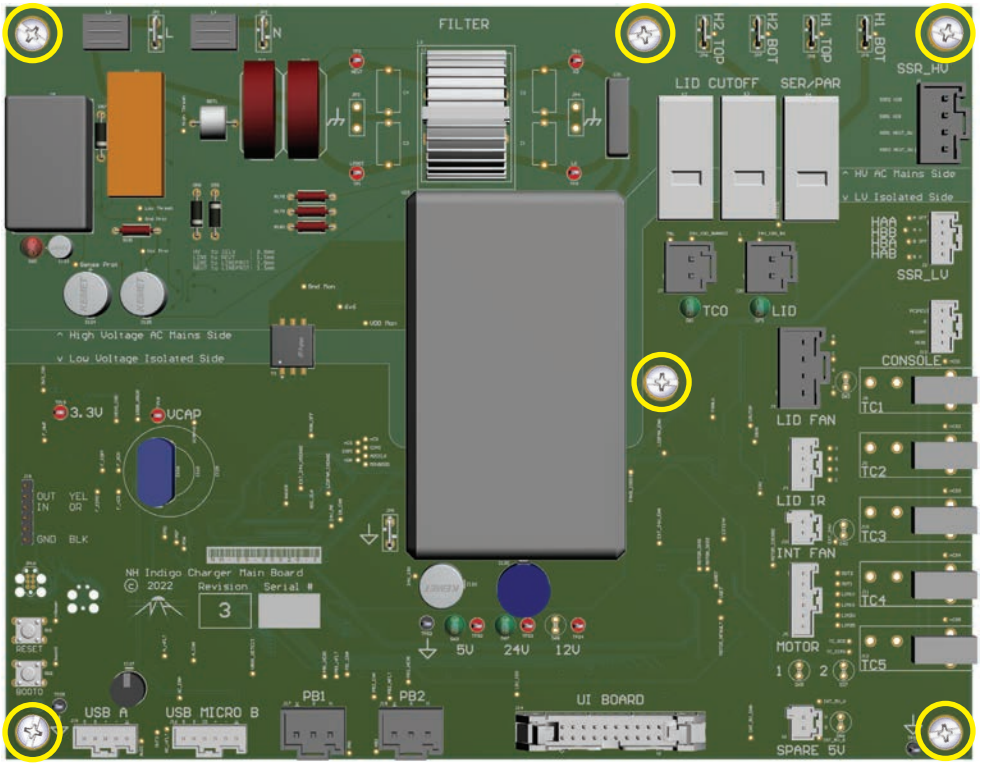
NOTE: The careful use of NON-MARRING needle nose pliers may be necessary.

CHARGER MAIN PCBA - REPLACEMENT

Instructions

9. After all cable assemblies have been disconnected from the PCBA, remove QTY: 6, M4 X 8, SS, Phillips Screws where indicated while securing the PCBA to be replaced by hand.

10. Remove the PCBA.



NEW PCBA INSTALLATION:

1. Place new PCBA and perform steps 9 to 4 in reverse order.

   A. **NOTE the routing of INT FAN cable (J21) behind the other cables. (SEE STEP 6A)**

   B. **NOTE that the SSR_HV Cables (J1) are routed and formed where they DO NOT touch adjacent bodies. (SEE STEP 5A)**

2. Update ASER information as per the "ASER UPDATE INSTRUCTION - CHARGER" section (Pages 62-65).

CHARGER USB PCBA - REPLACEMENT

Instructions

1. Required Tools: (See Pages 1-3 for visual reference, where applicable)
- NO. 0, NO.1 & NO. 2 Phillips Screwdriver

2. Follow the “Charger - Electronics Enclosure Access” instructions prior to the next step (Pages 36-37).

3. Disconnect the below cables **Table E**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly from the PCBA. **SEE Figure E**

A. This will allow for unimpeded access to the Connectors of the USB PCBA.

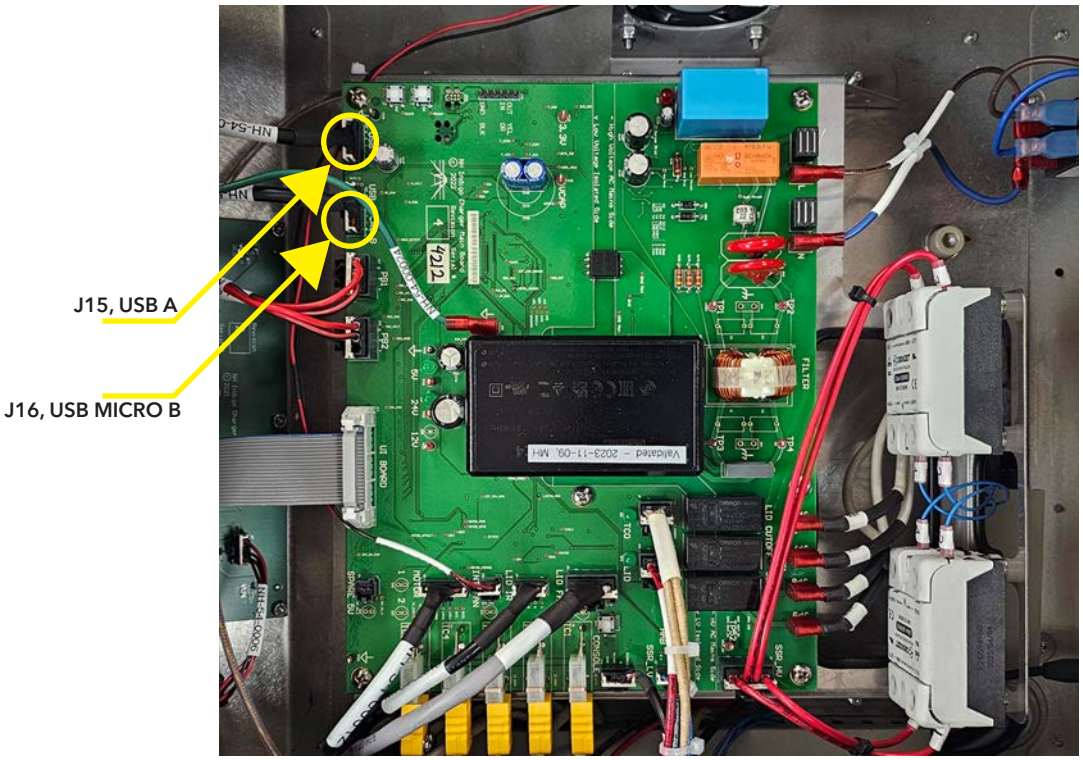
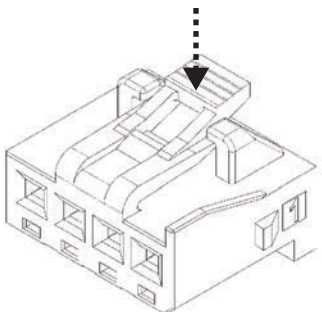


Figure E. – Push in TAB

Table E.

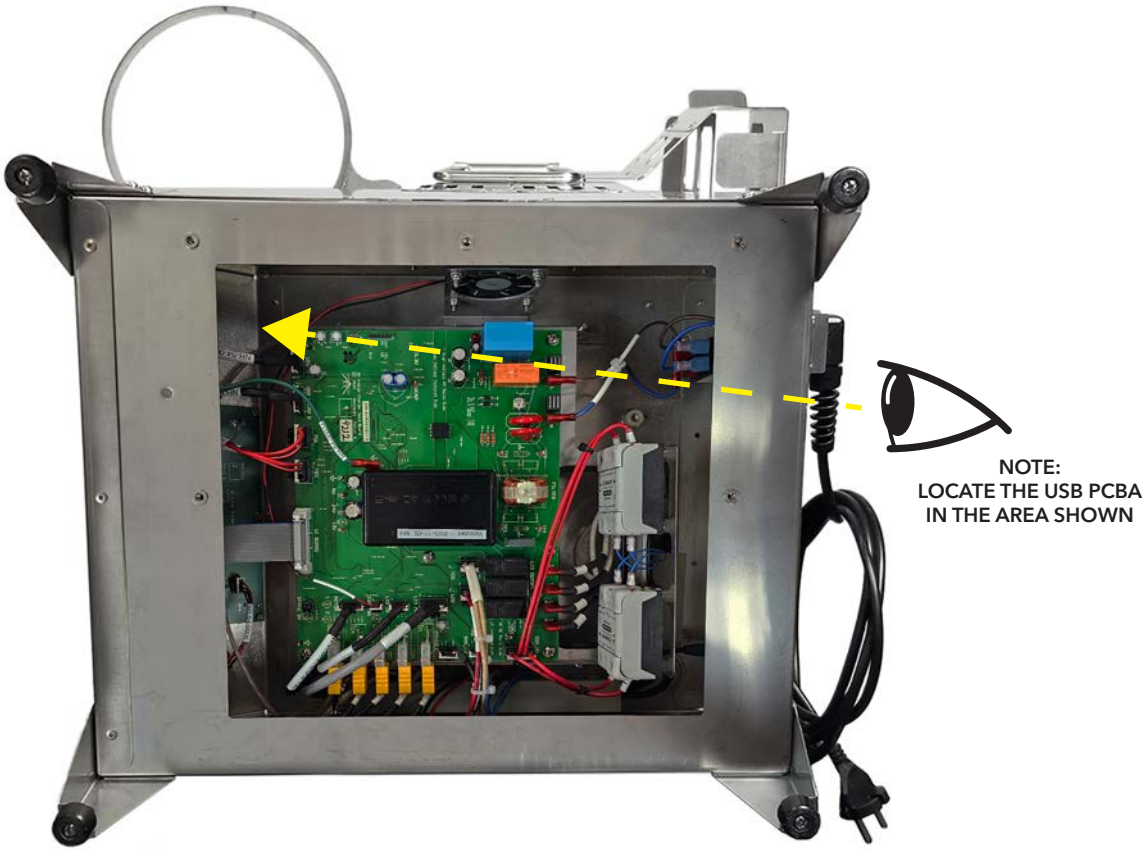
REFERENCE DESIGNATOR	DESCRIPTION
J15	USB A
J16	USB MICRO B



CHARGER USB PCBA - REPLACEMENT

Instructions

4. Locate the USB PCBA within the TOP Left Corner of the opening.



CHARGER USB PCBA - REPLACEMENT

Instructions

5. Disconnect the below cables **Table F**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly from the PCBA. **SEE Figure F**

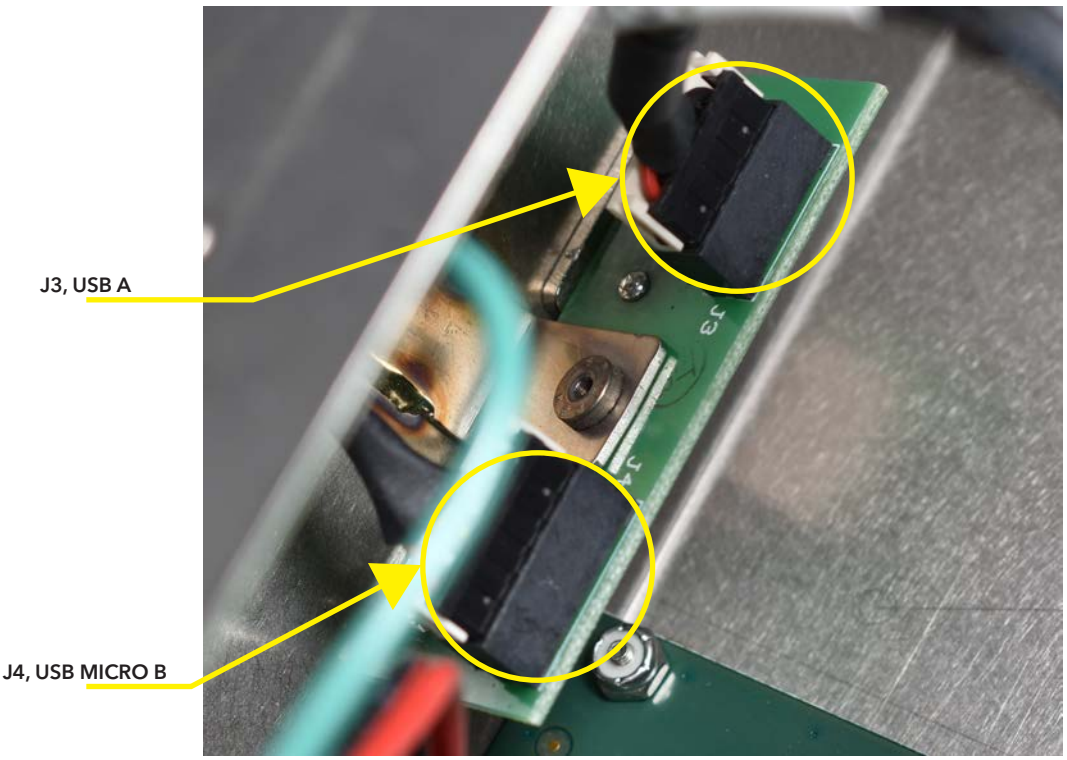
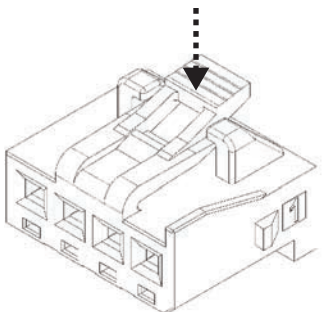


Table F.

REFERENCE DESIGNATOR	DESCRIPTION
J3	USB A
J4	USB MICRO B

Figure F. – Push in TAB



CHARGER USB PCBA - REPLACEMENT

Instructions

6. Remove the “DATA” (PH0) and “LID” (PH1) phillips screws from the FRONT Panel.

7. Remove the USB PCBA.

NEW PCBA INSTALLATION:

1. Place new PCBA and perform steps 6 to 3 in reverse order.

   A. **NOTE the routing of INT FAN cable (J21).**

CHARGER UI PCBA - REPLACEMENT

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- 1/4" Nut Driver w/ 6" Long Shaft

2. Follow the "Charger - Electronics Enclosure Access" instructions prior to the next step (Pages 36-37).

3. Disconnect J14, UI PCBA Cable, by disengaging the latches on both sides of the connector. **SEE Figure G**

4. Gently, pull the cable out of the connector.

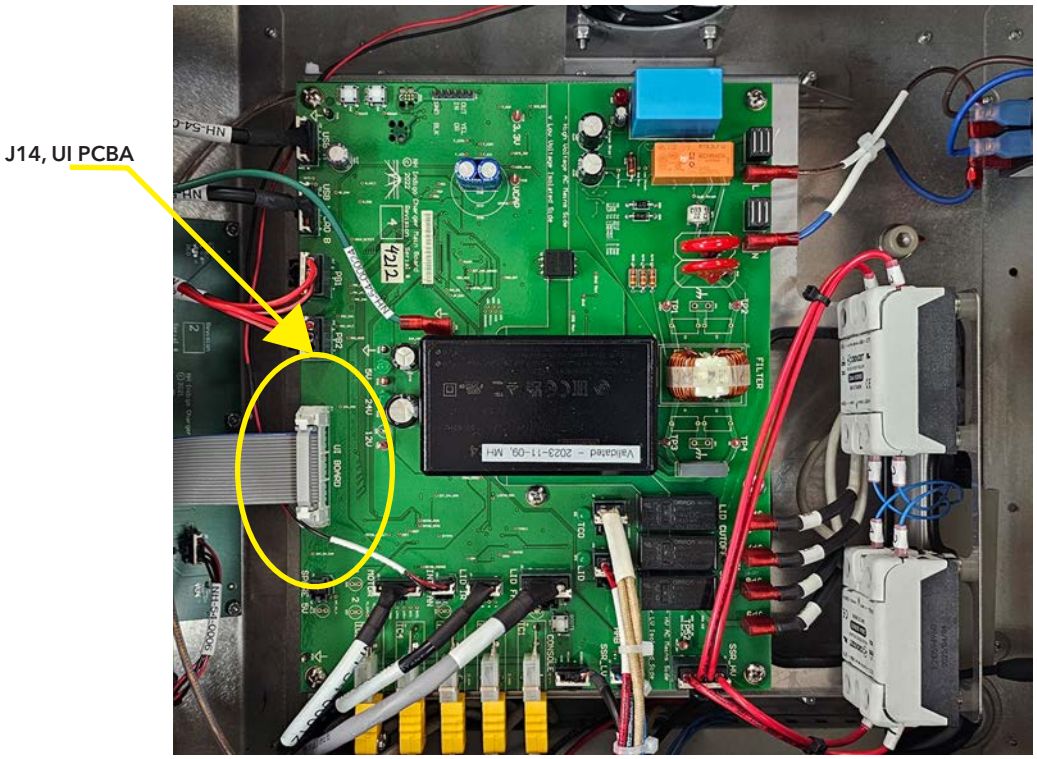
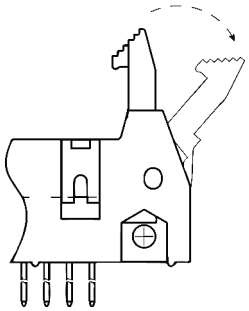


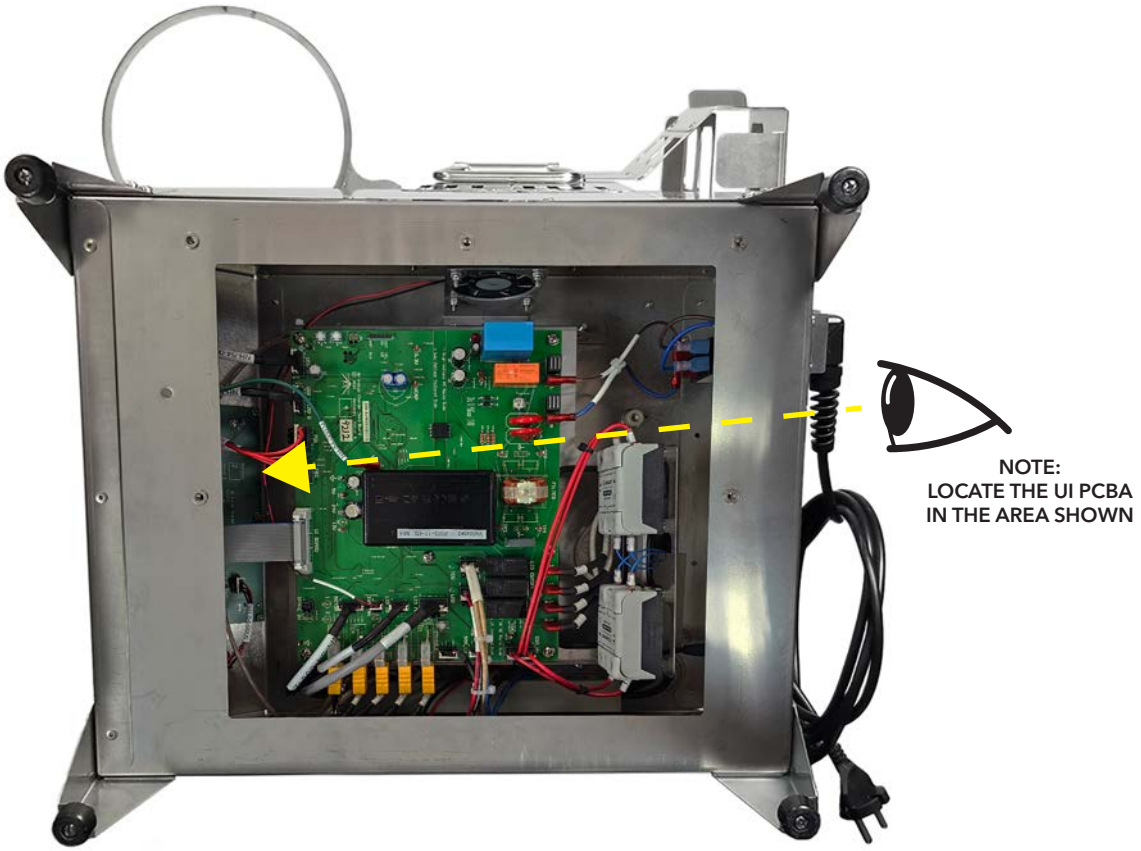
Figure G. – Push Out



CHARGER UI PCBA - REPLACEMENT

Instructions

5. Locate the UI PCBA at the CENTER LEFT of the system.



CHARGER UI PCBA - REPLACEMENT

Instructions

6. Disconnect J1, UI PCBA Cable, by disengaging the latches on both sides of the connector. **SEE Figure H**

7. Gently, pull the cable out of the connector.

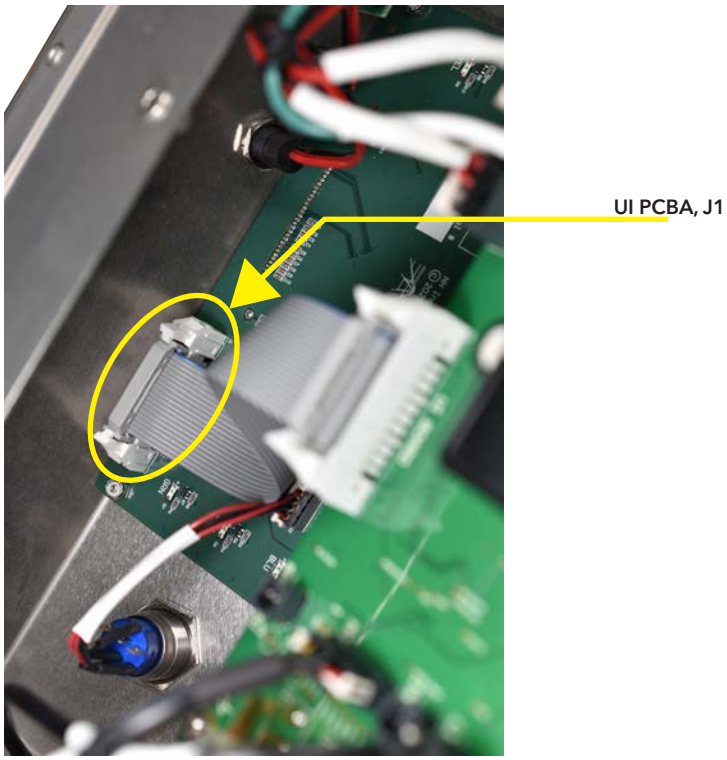
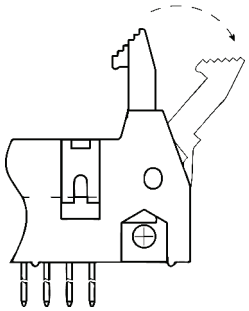


Figure H. – Push Out



CHARGER UI PCBA - REPLACEMENT

Instructions

8. Disconnect the below cables **Table G**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly away from the PCBA. **SEE Figure I**

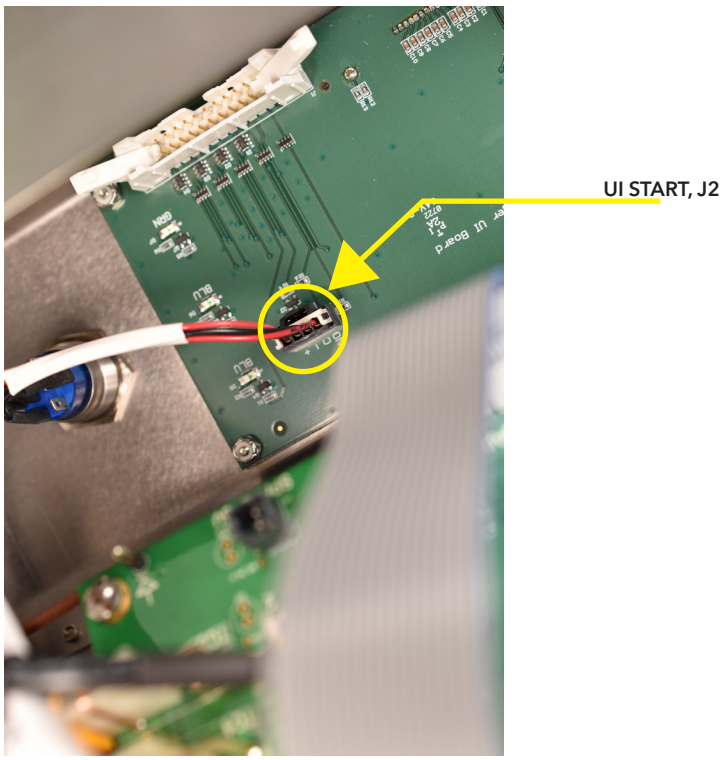
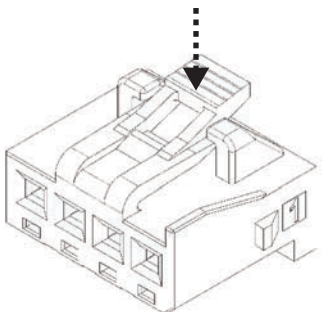


Table G.

REFERENCE DESIGNATOR	DESCRIPTION
J2	UI START

Figure I. – Push in TAB



CHARGER UI PCBA - REPLACEMENT

Instructions

9. After all cable assemblies have been disconnected from the PCBA, remove QTY: 5, 2-56, Nylon Insert Locknut where indicated using the 1/4" Nut Driver w/ 6" long shaft.

   A. NOTE: The removal of the CHARGER USB PCBA may be required to access a Nylon Insert Locknut (Pages 44-47).

10. Remove the PCBA.

NEW PCBA INSTALLATION:

1. Place new PCBA and perform steps 9 to 3 in reverse order.

CHARGER IR PCBA - REPLACEMENT

Instructions

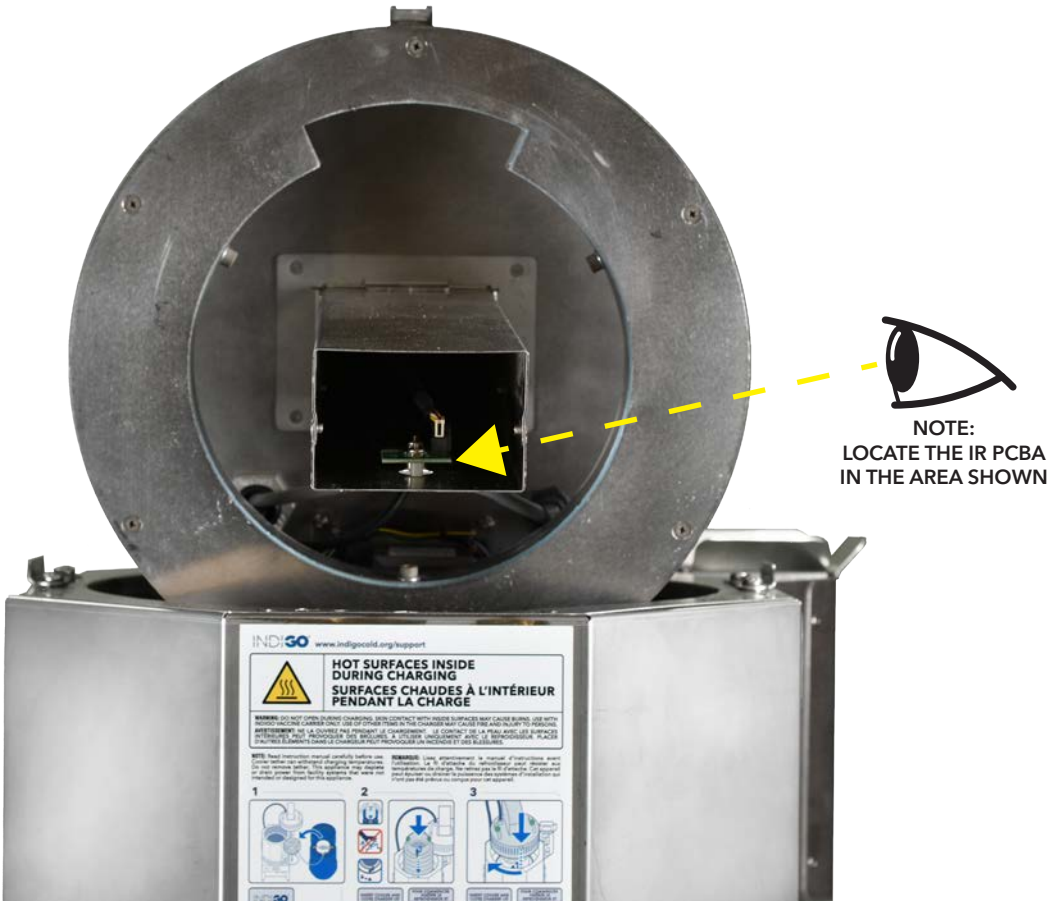
1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Low Profile Ratchet and 1/4" Socket

NOTE: Combined ratchet head and socket height should not exceed 1 1/2"

2. Ensure Charger system is at ambient room temperature and unplugged from power source.

3. Place Charger Lid into the Heater opening as shown below.

4. Locate the IR PCBA within the area shown.



CHARGER IR PCBA - REPLACEMENT

Instructions

5. Disconnect the below cables **Table H**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly away from the PCBA. **SEE Figure J**

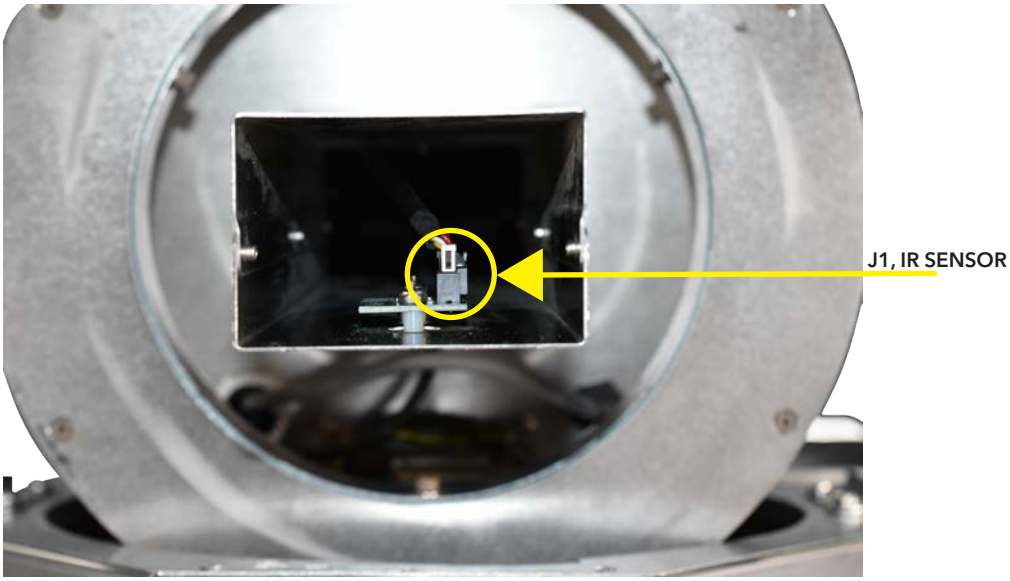
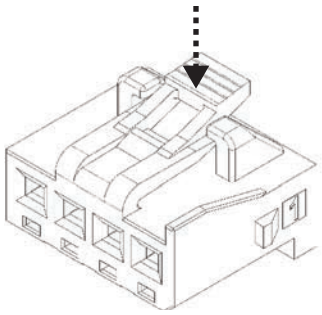


Table H.

REFERENCE DESIGNATOR	DESCRIPTION
J1	IR SENSOR

Figure J. – Push in TAB

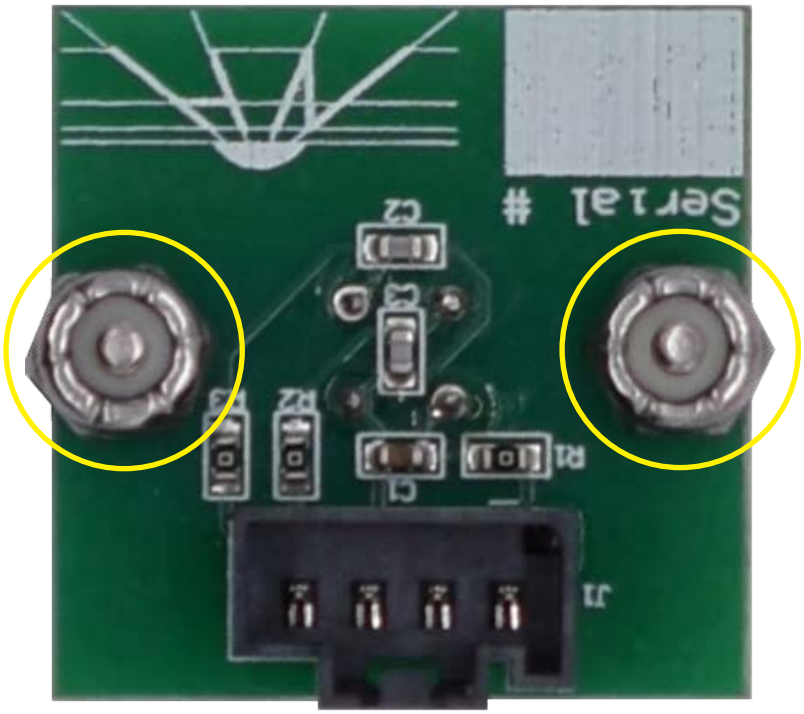


CHARGER IR PCBA - REPLACEMENT

Instructions

6. After all cable assemblies have been disconnected from the PCBA, remove QTY: 2, 2-56, Nylon Insert Locknut where indicated using the Low Profile Ratchet and 1/4" Socket.

7. Remove the PCBA.



NEW PCBA INSTALLATION:

1. Place new PCBA and perform steps 6 to 5 in reverse order.

CHARGER INTERNAL FAN - REPLACEMENT

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- 7MM Nut Driver or Ratchet with 7MM Socket
- NO. 1 Phillips Screwdriver

2. Follow the “Charger - Electronics Enclosure Access” instructions prior to the next step (Pages 36-37).

3. Disconnect the below cables **Table I**, by depressing the tabs at the top of each connector while gently pulling out the cable assembly from the PCBA. **SEE Figure K**

   A. **NOTE the routing of INT FAN cable (J21) behind the other cables.**

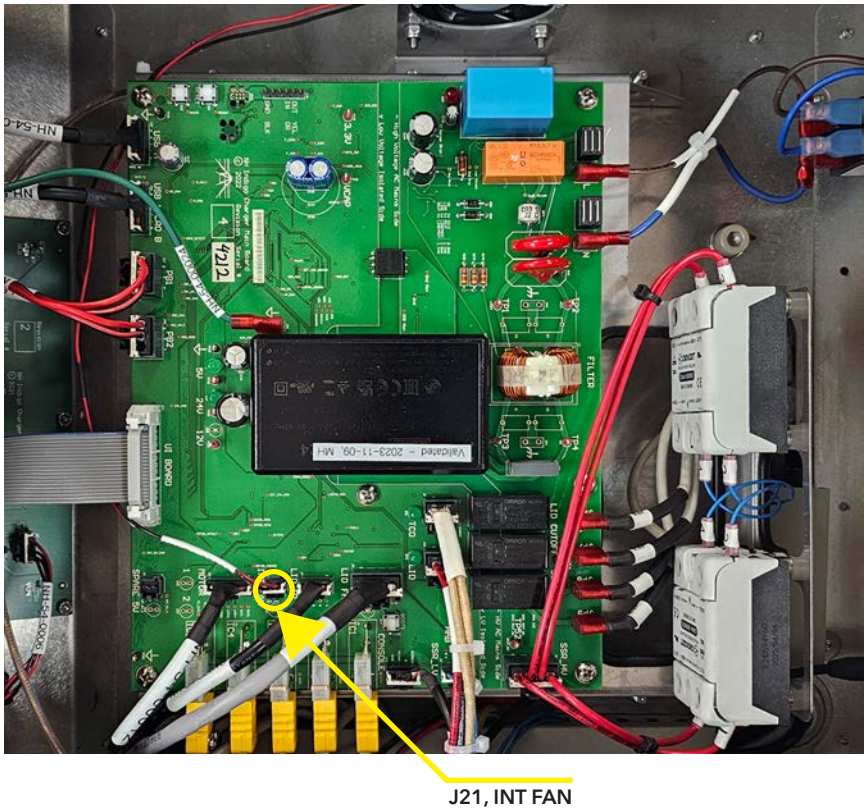
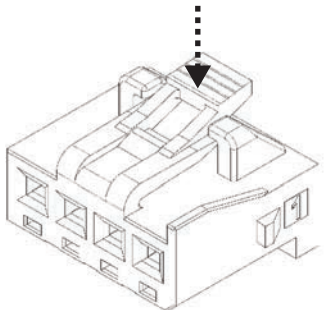


Table I.

REFERENCE DESIGNATOR	DESCRIPTION
J21	INT FAN

Figure K. – Push in TAB



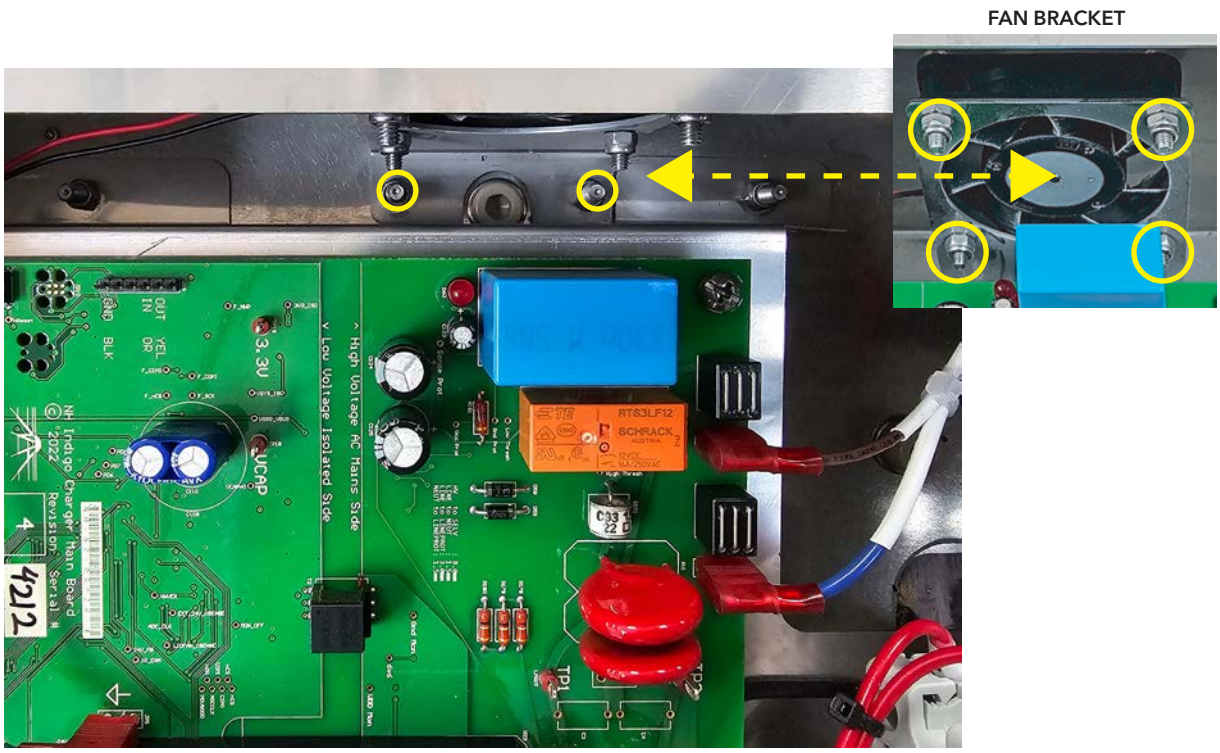
CHARGER INTERNAL FAN - REPLACEMENT

Instructions

4. Remove QTY: 2, M4, Nylon Insert Locknut securing the Fan Bracket to the Chassis where indicated.

5. Remove the Fan Bracket, then remove QTY: 4, M4, Nylon Insert Locknut while securing the M4 X 8 Phillips Screws on the opposite side.

6. Remove the Fan Assembly.



NEW PCBA INSTALLATION:

1. Place new Fan Assembly and perform steps 5 to 2 in reverse order.

   A. **NOTE the routing of INT FAN cable (J21) behind the other cables. (SEE STEP 3A)**

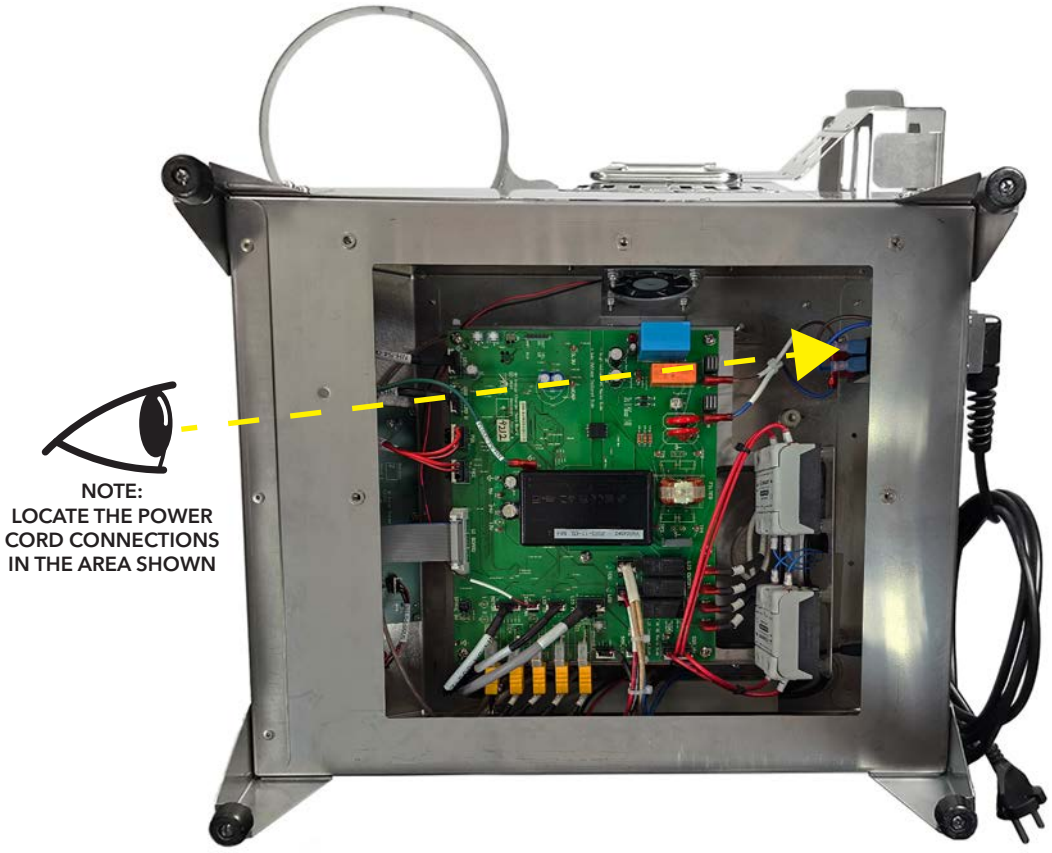
CHARGER POWER CORD - REPLACEMENT

Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Adjustable Wrench
- NON-MARRING Pliers

2. Follow the “Charger - Electronics Enclosure Access” instructions prior to the next step (Pages 36-37).

3. Locate the Power Cord connections within the area shown.



CHARGER POWER CORD - REPLACEMENT

Instructions

4. Disconnect the fully insulated spade terminals **Table J**, by holding onto the terminal body and gently rocking back and forth as you are pulling away from the Circuit Breaker. Take care to not aggressively pull on the cables.

- **NOTE: The careful use of NON-MARRING needle nose pliers may be necessary.**

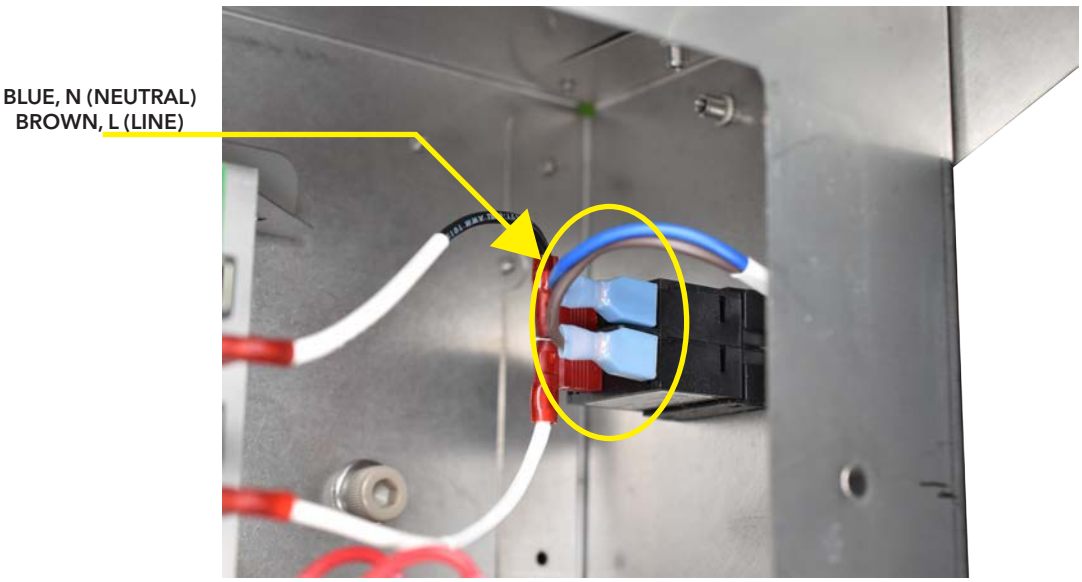


Table J.

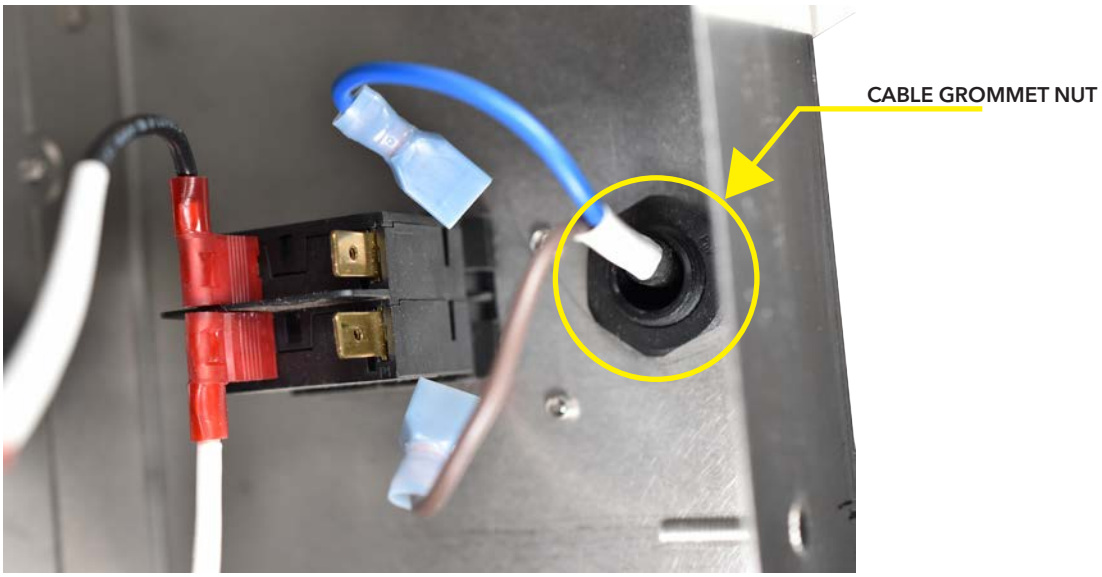
REFERENCE DESIGNATOR	DESCRIPTION
BROWN	LINE
BLUE	NEUTRAL

NOTE: If needed, carefully pry off fully insulated spade terminals using NON-MARRING needle nose pliers.

CHARGER POWER CORD - REPLACEMENT

Instructions

5. Use the adjustable wrench to remove the cable grommet nut.



NOTE: Use adjustable wrench to remove the cable grommet nut holding the Power Cord Assembly in place.

CHARGER POWER CORD - REPLACEMENT

Instructions

6. Remove the Power Cord Assembly from the rear.

NEW POWER CORD INSTALLATION:

1. Place new POWER CORD ASSEMBLY and perform steps 5 to 4 in reverse order.

ASER UPDATE - CHARGER

Instructions

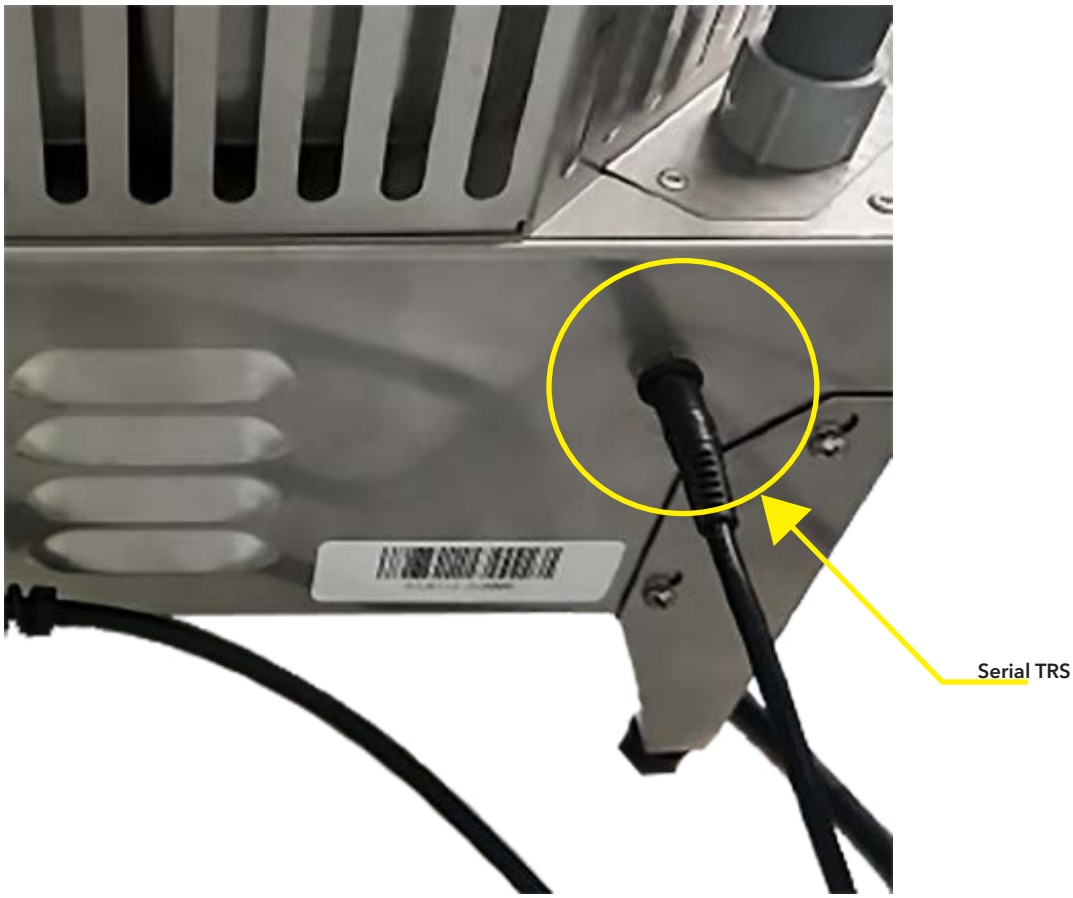
1. Required Tools: (See Pages 2-4 for visual reference, where applicable)

- TTL-232R-3V3-AJ
- Micro USB to USB-A
- Desktop Computer or Laptop Computer
- Android Phone
- USB On-The-Go (OTG) Adapter

2. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to updating ASER.

3. Plug TTL-232R-3V3-AJ (Serial Cable) USB-A into desktop or laptop computer and TRS connector end into charger where shown.

4. Establish a Serial COM Port connection by completing the SERIAL COM SETUP procedure (Pages 5-8).



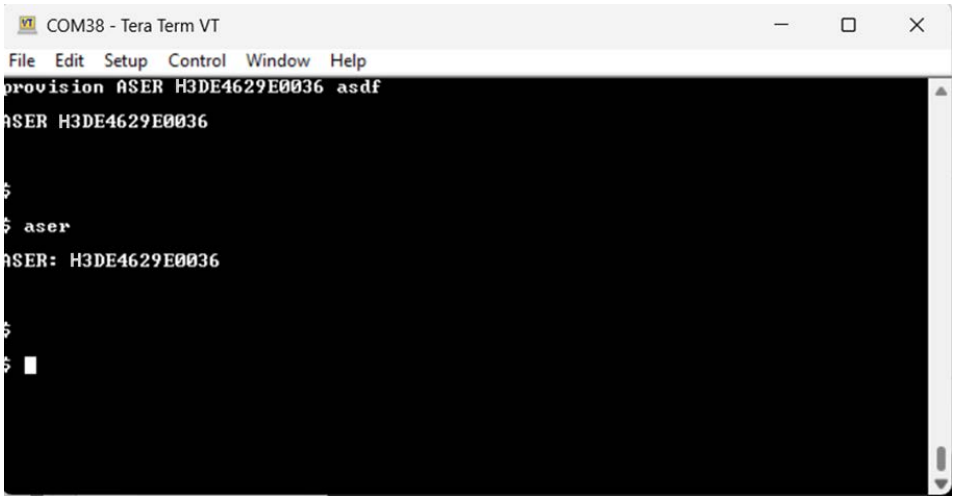
ASER UPDATE - CHARGER

Instructions

5. Type “provision ASER HXXXXXXXXXXXX asdf”, where HXXXXXXXXXXXX is the serial number of the charger. Press the “ENTER” key.

6. The device should immediately return the ASER.

7. To check the ASER, type “aser” and press enter.

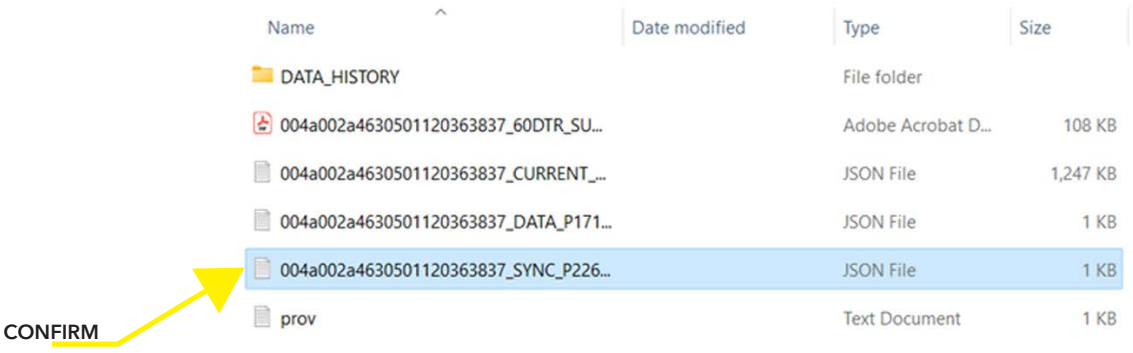


ASER UPDATE - CHARGER

Instructions

8. To check that the ASER successfully updated, plug the Micro USB cable end into the Charger DATA port and the USB-A end into desktop or laptop computer.

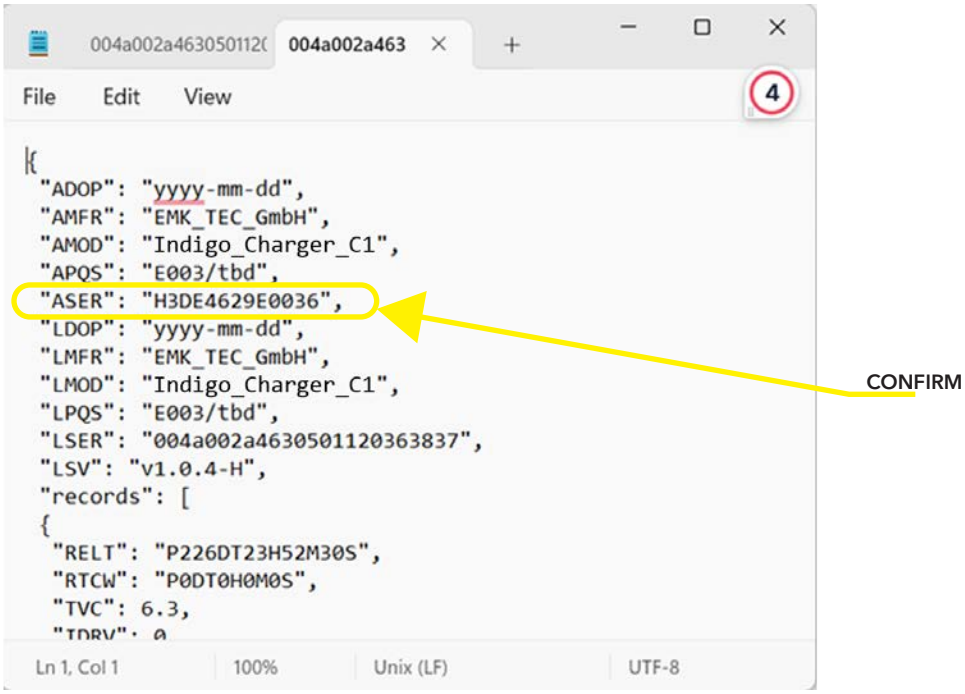
9. Open the file with “SYNC” in the title.



ASER UPDATE - CHARGER

Instructions

10. Check that “ASER” was successfully updated.



FIRMWARE UPDATE - CHARGER

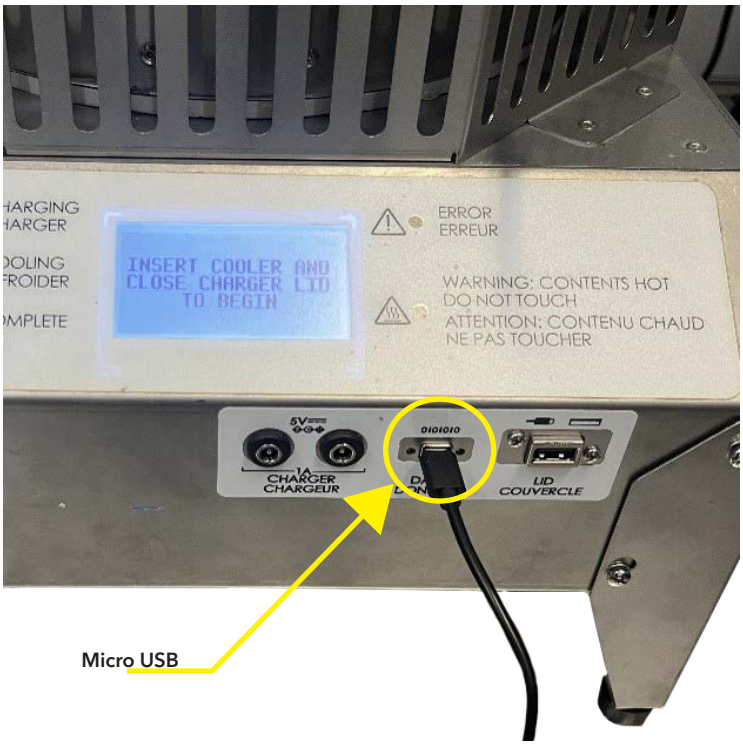
Instructions

1. Required Tools: (See Pages 2-4 for visual reference, where applicable)
- Micro USB to USB-A
- Desktop Computer or Laptop Computer
- Android Phone
- USB On-The-Go (OTG) Adapter

2. If able, perform DATA DOWNLOAD procedure found in the Indigo Instruction Manual using VARO™ app prior to updating FIRMWARE.

3. Download the most recent charger firmware version UF2 file. Charger firmware versions will end in "-H", ex: 1.0.0-H.

4. Using the micro-USB to USB-A cable, connect the computer to the charger micro-USB "DATA" port.

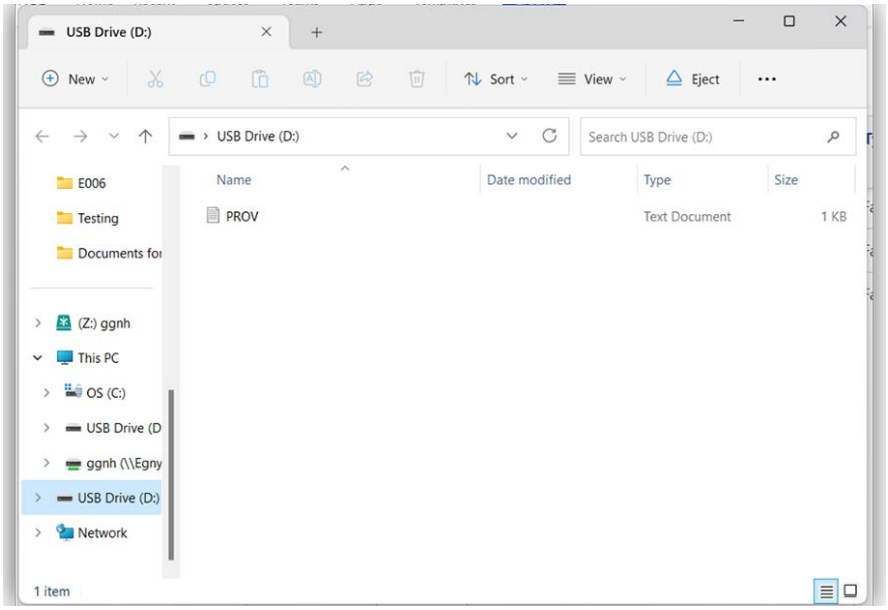


FIRMWARE UPDATE - CHARGER

Instructions

5. Wait until a file window pops up or a new “USB Drive” (For Example “D:” shown below) appearing under “This PC” while viewing File Explorer.

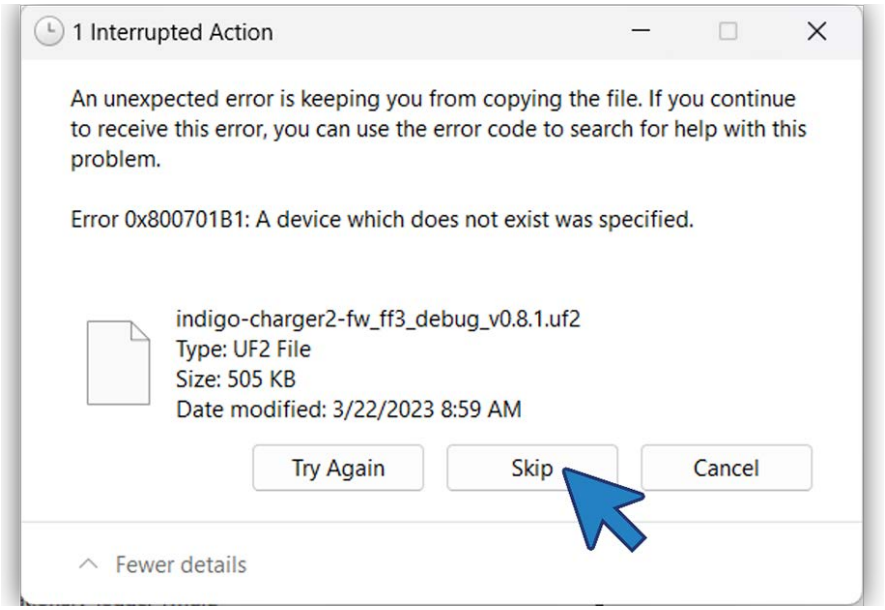
6. Drag or copy and paste the UF2 file onto the charger’s file window.



FIRMWARE UPDATE - CHARGER

Instructions

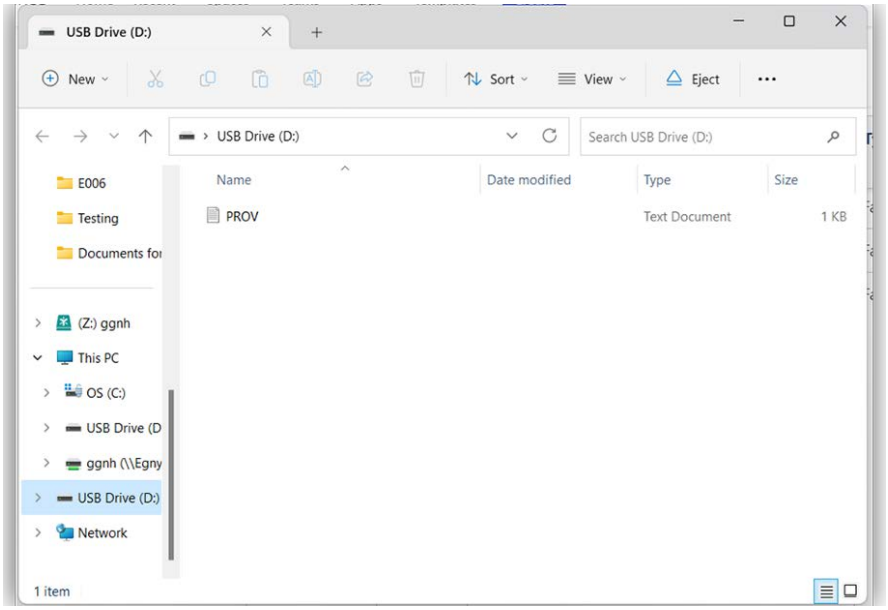
7. Dismiss the warning by pressing “Skip” or “Cancel”.



FIRMWARE UPDATE - CHARGER

Instructions

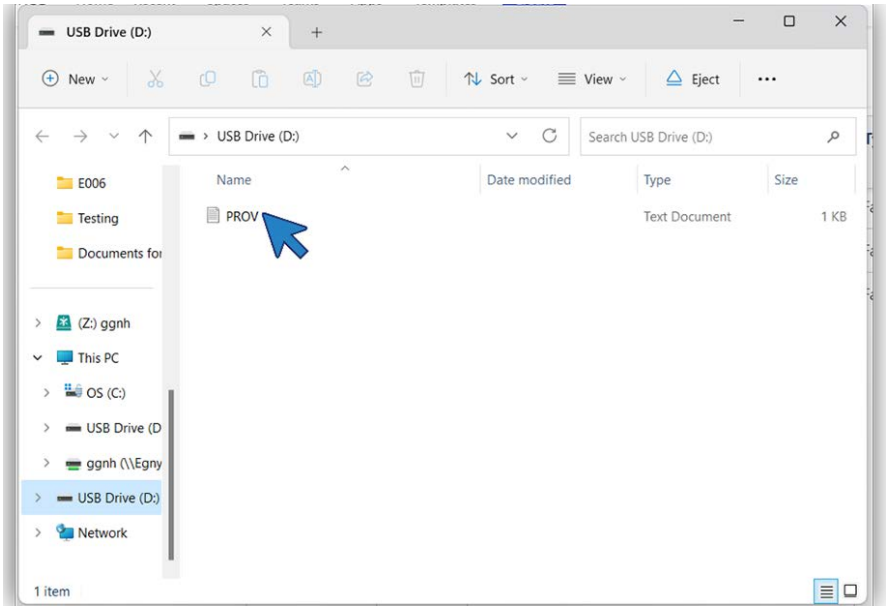
8. Wait until the file window pops up again or the “USB Drive” (For Example “D:” shown below) reappearing under “This PC” while viewing File Explorer.



FIRMWARE UPDATE - CHARGER

Instructions

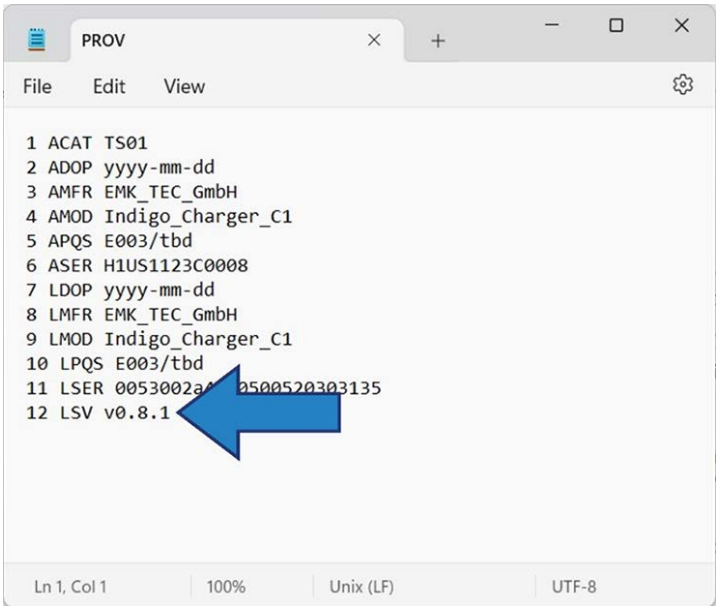
9. Check that the update was successful by opening the PROV file.



FIRMWARE UPDATE - CHARGER

Instructions

10. Check the firmware version in the “LSV” field.



CHARGER - TROUBLESHOOTING

Error Codes

If an error occurs, the charge will continue and the error will show on screen. Take actions listed below if errors occur.

ERROR	MEANING	ACTION
1101-1106	Charge interrupted, lid opened during charging	If lid was not opened during charge, try another charge. If error persists, use alternate charger.
1151-1155	Charge interrupted, long button press	No action required, caused by user intentionally ending charge.
1160	Charged interrupted, stopped by user	No action required, caused by user intentionally ending charge.
1201-1204	Charge interrupted, mains power out of range	Check power source to make sure that the power requirements are met.
15001-15005	Cooler lid USB communications issue	Check if cooler lid cold life was updated to “5 DAYS” after the charge. If not, try charging a different carrier. If error persist, use alternate charger.

CHARGER - TROUBLESHOOTING

Fault Codes

If a fault occurs, the charge will stop and show the error on screen. Press to clear the fault and restart charge. If the fault persists, use an alternate charger.

FAULT	MEANING
1001, 1003-1006	Mains power issue
1002	Heater over temperature
2001, 2002	Lid fan issue
2003	Internal fan issue
3001-3004	Lid vent issue
4001, 4011-4015	Board temperatures too hot
5001	USB issue
6001, 6002	Power barrel issue
11011-11045	Thermocouple issue
11051-11055	Spring thermocouple issue
12001-12003	IR sensor issue
16001	Heater communications issue

CHARGER - TROUBLESHOOTING

Other Issues

ISSUE	ACTION
Charger does not move past "CLOSE CHARGER LID TO BEGIN" screen when charger lid is placed on the charger.	Check that the charger lid is fully seated on the charger. If done correctly, the charger lid will drop into place so that it is flush with the charger body. The charger will not start if the charger lid is not in the charging position. If issue persists, disconnect charger from power, wait 2 minutes, then restart. If the screen still does not change, mark as defective and use alternate charger.
When the cooler lid USB is connected to the charger, the charger does not move past the "CONNECT COOLER LID USB TO BEGIN" screen or cooler lid cold life does not update to "5 DAYS" after charge.	Disconnect charger from power, wait 2 minutes, then restart. If issue persists, try charging a different carrier. If the issue is resolved using a different carrier, try connecting original cooler lid USB to a computer. If lid file system does not show up on the computer, see "Cooler Lid Reset" in Indigo Technician Manual. If the issue is still not resolved, see "Cooler Lid Replacement" in Indigo Technician Manual. If issue is not resolved using a different carrier, mark charger as defective and use alternate.
Charge successfully completed and screen shows "CHARGE COMPLETE" but cooler lid cold life indicator did not update to "5 DAYS".	Try disconnecting and reconnecting the cooler lid USB from the charger. If the cold life indicator still does not update to "5 DAYS", try connecting lid USB to a computer. If lid file system does not show up on the computer, see "Cooler Lid Reset" in Indigo Technician Manual. If the issue is still not resolved, see "Cooler Lid Replacement" in Indigo Technician Manual.

DISPOSAL AND RECYCLING GUIDELINES

When the Indigo Vaccine Carrier is no longer in use, to fully decommission, remove the cooler from the bag and cut the tether from the cooler lid to the cooler. Label the cooler as "Non-functioning" before discarding.

When an Indigo Charger is no longer in use, decommission it by unplugging it and labeling it "Non-functioning."

WARNING: Do not attempt to remove or modify the insulation within the charger heating enclosure. Doing so may result in irritation of the skin, eyes, and lungs.

WARNING: Do not attempt to remove or modify the electronics within the charger, as this is a high voltage electrical hazard. Doing so may result in electrical shock.

Disposal of the Indigo system must be made according to local appliance disposal and recycling regulations.

Major materials in the vaccine carrier include:

- **Stainless steel (cooler)**
- **Desiccant (cooler)**
- **Water (cooler)**
- **Lithium-ion battery (cooler lid)**
- **Polypropylene foam (cooler lid)**
- **Polycarbonate (cooler lid)**
- **Nylon fabric (bag)**
- **Polyethylene foam (bag)**

Major materials in the charger include:

- **Stainless steel**
- **Fiberglass insulation**
- **Mica insulation**

Contact your service provider for further information. See the service contract card in the card holder on the top inside panel of the bag or visit **indigocold.org/support** for service contact information.

WARRANTY TERMS AND CONDITIONS

Contact your service to make a warranty claim. See the service contact card in the card holder on the top inside panel of the bag or visit **indigocold.org/support** for service contact information. The following coverage will be provided:

Two-year warranty on the Indigo Vaccine Carrier and Charger, beginning at the date of shipment from manufacturer, included at no extra cost. Under warranty coverage, the manufacturer will repair or replace device components that have failed in the use of the device for its designed intent.

Free warranty coverage does not include the following cases:

- Damage caused by improper use or improper maintenance.
- Damaged caused by attempted repairs done by a non-designated repair department.
- Damaged caused by force majeure.
- Damaged occurring after the warranty period has expired.

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