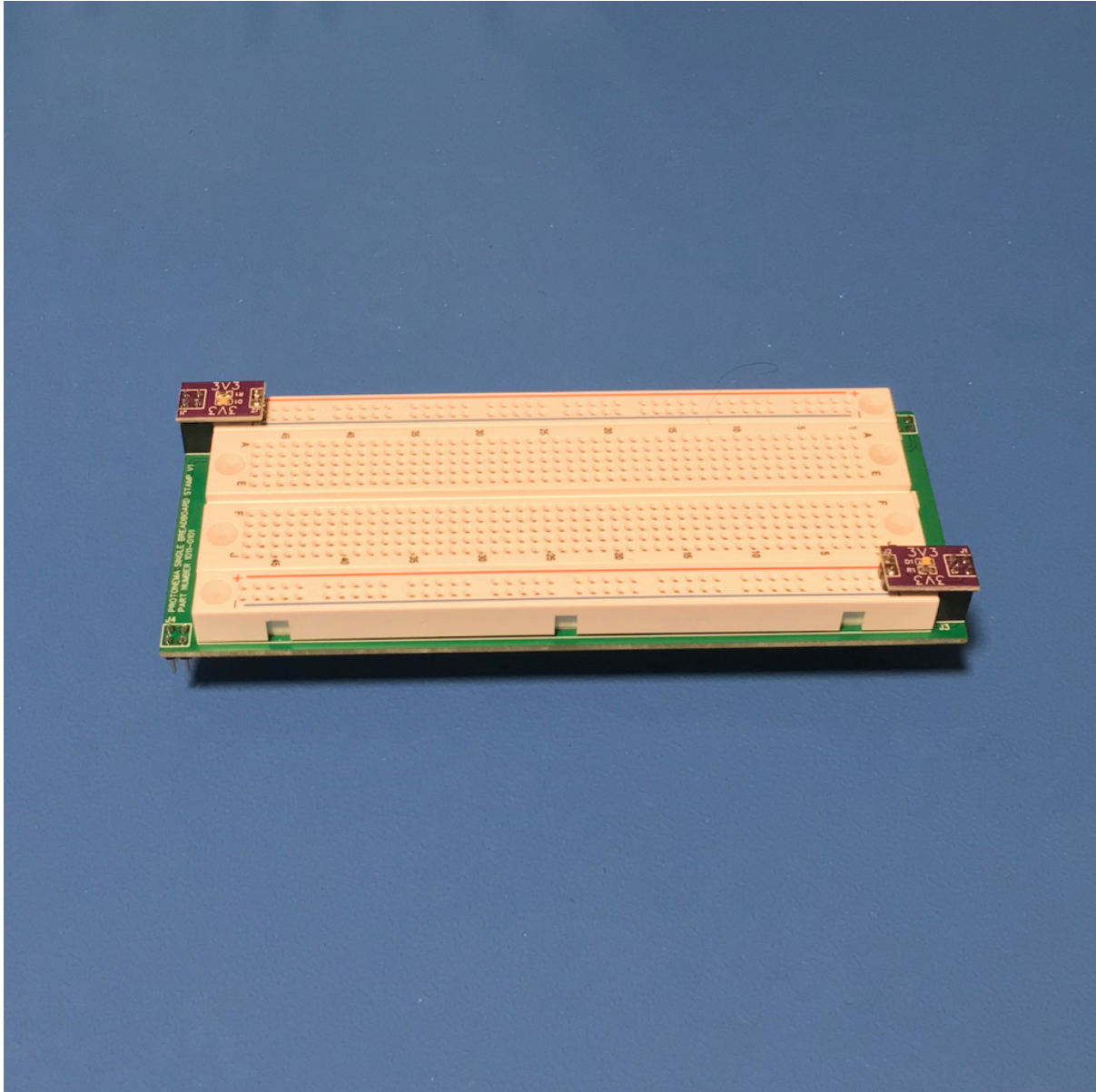


# ASSEMBLY INSTRUCTIONS

## 1011A Horizontal Breadboard Stamp



Document control number: 1011-8010

Document date: 2022-10-27

Document revision: v1.1

ABSTRACT: This document provides instructions on how to assembly and test a 1011A horizontal breadboard stamp. A complete bill of materials is included as an annex.

Suggestions and corrections should be directed to <http://www.github.com/dslik/protonema/issues>

Serial number: Assembly date: Assembled by:

## 12 USAGE

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51

## Revision history

Table 1: Document Revisions

Version	Date	Change	Approver
0.1	2022-10-10	Initial draft for internal review	D. Slik
0.2	2022-10-17	Template updates	D. Slik
1.1	2022-10-27	Upgrade of document build environment	D. Slik

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## Part I

# 1011A assembly instructions

# Section 1

## Overview

This document describes the materials, processes, outcomes and verifications required to successfully assemble and test a 1011A horizontal breadboard stamp, a sub-component of the Protonema electronics prototyping and learning system.

A first-time reader should carefully review section 2 - prerequisites, and section 3 - preparation before beginning the assembly process.

This document serves both as instructions and as a record of the assembly of the product. When you finish each step in this document, sign your name (or apply your stamp) in the "Signature/Stamp" box on the right to provide a record of completion.

When things go wrong, this document provides guidance for common issues that have been encountered in the past. When this document does not provide guidance, please contact your quality management representative, who will help you fill out an exception report. These reports help improve process quality and product quality, and these reports are incorporated into future revisions of this document.

Always remember: If you are unable to successfully complete these instructions, that means the processes supporting you (including this document) have failed you. Our processes are built for your success, and by improving our processes, we help everyone succeed.



## Section 2

# Prerequisites

### 2.1 Required safety training

The following safety training units must be completed before assembling this product.

By signing (or applying your stamp) on the right, you indicate that you have completed the following training:

Table 2: Safety training






Item #	Description	Signature/Stamp
1	0102-0100 - Safety reporting policies and procedures training Key topics: Understanding policies and procedures around how to identify, contain and report a safety-related issue in the workplace, including damaged or malfunctioning equipment, leaks, spills, and other occupational hazards.	Stamp or sign here
2	0102-0101 - Material safety data sheets training Key topics: Understanding how to read material safety data sheets (MSDS) for materials you will be handling during product assembly, how they can affect your health and the health of the environment, how to safely handle and dispose of them, and what to do if there is a spill or accidental exposure.	Stamp or sign here
3	0102-0102 - Solder handling and disposal policies and procedures training Key topics: Understanding policies and procedures related to handling solder and solder paste, stencil cleaning, and solder disposal.	Stamp or sign here
4	0102-0105 - Electro-static discharge controls policies and procedures training Key topics: Understanding policies and procedures related to protecting equipment and components from electro-static discharge, including clothing, protective equipment, material handling and labelling.	Stamp or sign here

## 2.2 Required skills training

The following skills training units must be completed before assembling this product.

By signing (or applying your stamp) on the right, you indicate that you have completed the following training:

Table 3: Skills training

Item #	Description	Signature/Stamp
1	0103-0202 - ANSI/ESD S20.20 Electro-static discharge controls Key topics: Understanding of ESD safety, the ESD control program, equipment and personnel grounding, EPAs, packaging and marking.	
2	0103-0203 - General components handling Key topics: Understanding of safe component handling, including reeled components, components in JEDEC trays, and loose components. Includes avoiding contamination, moisture control, and component inventory management.	
3	0103-0414 - 5040-XTS reflow station Key topics: Safe and effective use of the 5040-XTS reflow station, including use of the pre-heater, the hot air system, and the soldering iron. Covers inspection and verification, cleaning, preferred settings and best practice techniques.	
4	0103-0301 - IPC-A-610G - Acceptability of electronic assemblies Key topics: Covers visual acceptability requirements for electronic assemblies, including handling considerations, hardware installation, component placement, soldering, terminal connections, wiring, marking and cleanliness.	
5	0103-0302 - IPC-J-STD-001F - Soldered electrical connections Key topics: Covers soldering materials, general soldering and assembly requirements, wire and terminal connections, through-hole mounting, surface mounting of components, cleaning process requirements, PCB requirements, coatings and product assurance.	

Section 3

Preparation

3.1 Workspace

Before starting assembly, check out an assembly desk for a minimum of one hour. A single unit can be assembled in ten minutes, with an additional ten minutes per additional unit.

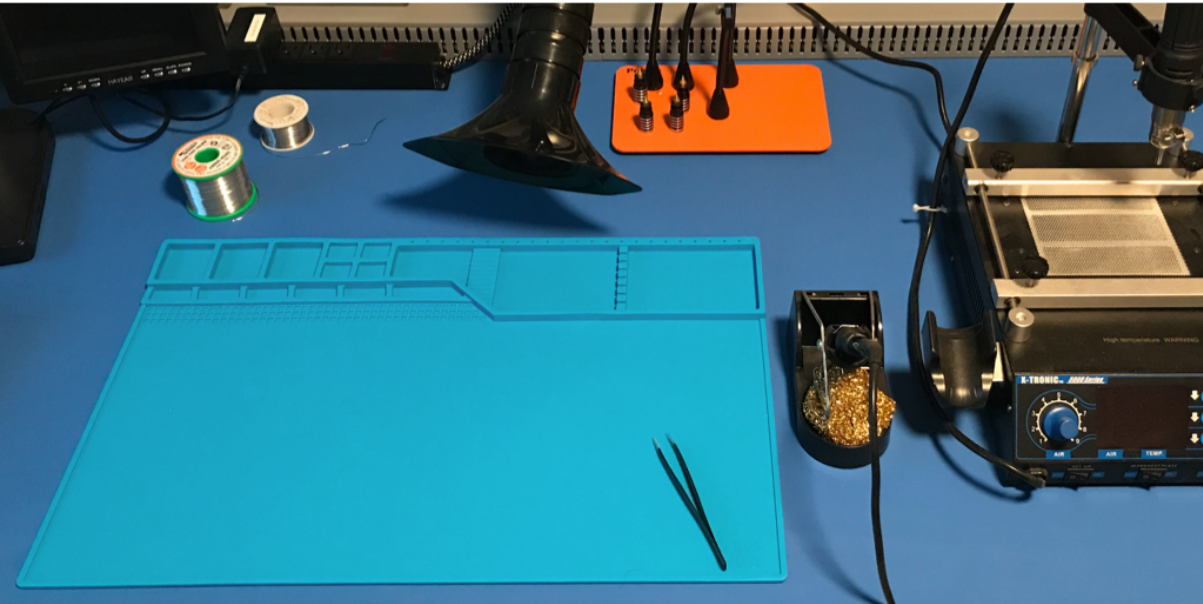


Fig. 1: Assembly Desk

Table 4: Prepare workspace

Step	Description	Signature/Stamp
3.1.1	Verify that the workspace has a clean assembly mat and anti-static mat, and that the cleaning record has been signed since last use.	Stamp or sign here
3.1.2	Verify that the HEPA fume extractor turns on, and you can feel air suction from the nozzle.	Stamp or sign here

continues on next page



Table 4 – continued from previous page

Step	Description	Signature/Stamp
3.1.3	Verify that the 5040-XTS rework station soldering iron tip is not worn down. If it is worn down, obtain a new 900M-T-I tip from the stores department.	<div>Stamp or sign here</div>

3.2 Project consumables

Obtain each of the below consumable items from the stores department:

Table 5: Assembly consumables

Item #	Description	Signature/Stamp
3.2.1	<div></div> <div>Fig. 2: 1 pair ESD gloves If you prefer to use your own pair of ESD gloves, make sure they are tested before use.</div>	<div>Stamp or sign here</div>
3.2.2	<div></div> <div>Fig. 3: 1 spool MG Chemicals 4900 Lead Free No-Clean Wire Solder Sn96.2Ag2.8Cu0.4 (96.2/2.8/0.4) 20 AWG</div>	<div>Stamp or sign here</div>

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3.3 Project tools

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Obtain a tools container labelled “1XXX Assembly Tools” from the 1XXX section of the stores supply shelf. At your assembly desk, use Table 6 to verify that all the required tools are present.

If any required tools are missing, return all tools and the tools container to the stores department, and obtain another tools container.

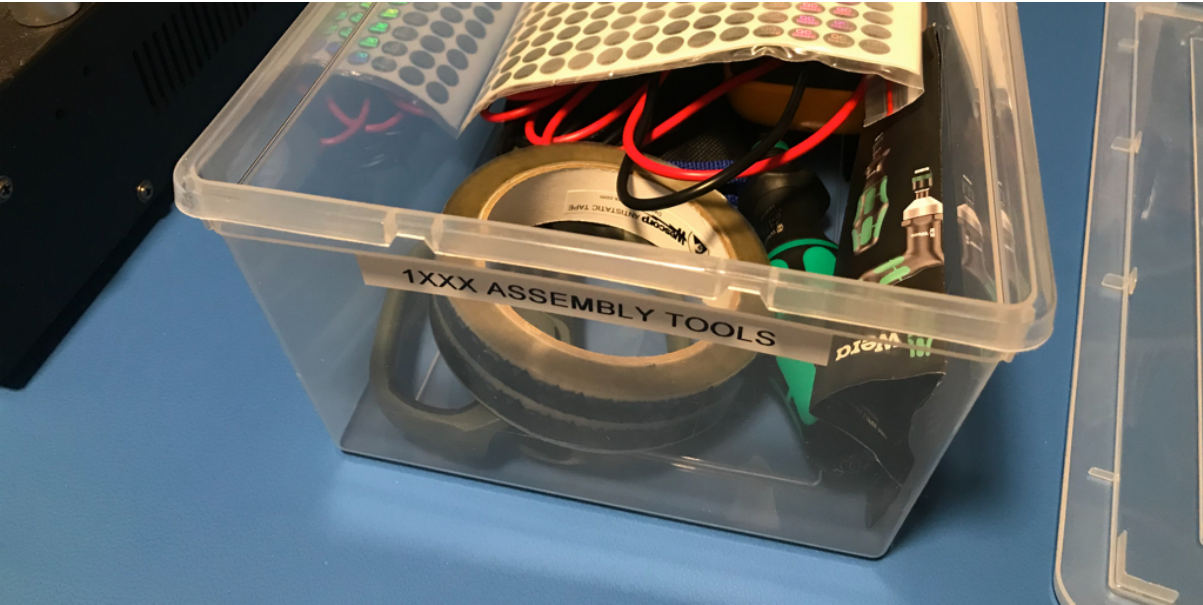



Fig. 4: Tools Container

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Remove each of the following tools from the tools container, and place them on the anti-static mat of the assembly desk:

Table 6: Assembly tools

Item #	Description	Signature/Stamp
3.3.1	<div></div> <div>Fig. 5: Hozan F-23 components tray</div>	<div>Stamp or sign here</div>

continues on next page

Table 6 – continued from previous page

Item #	Description	Signature/Stamp
3.3.2	 <p>Fig. 6: 1mm flat-head screwdriver</p>	
3.3.3	 <p>Fig. 7: 3mm Phillips adjustable torque screwdriver</p>	
3.3.4	 <p>Fig. 8: ESD tweezers</p>	

continues on next page



Table 6 – continued from previous page

Item #	Description	Signature/Stamp
3.3.5	 Fig. 9: Fine-tipped Sharpie marker	
3.3.6	 Fig. 10: Sissors	

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3.4 Parts preparation

221

3.4.1 PCBs and PCBAs

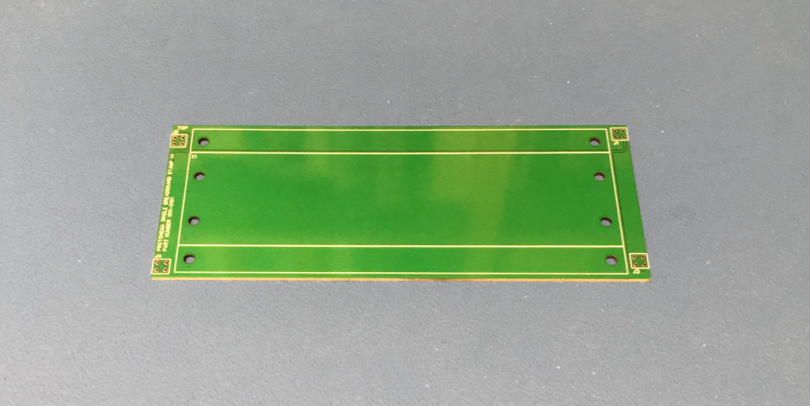
222

NOTICE: All PCBs and PCBAs must be handled with gloves to prevent marking with skin oils.

223

NOTICE: PCBs are removed from manufacturer packaging only when needed.

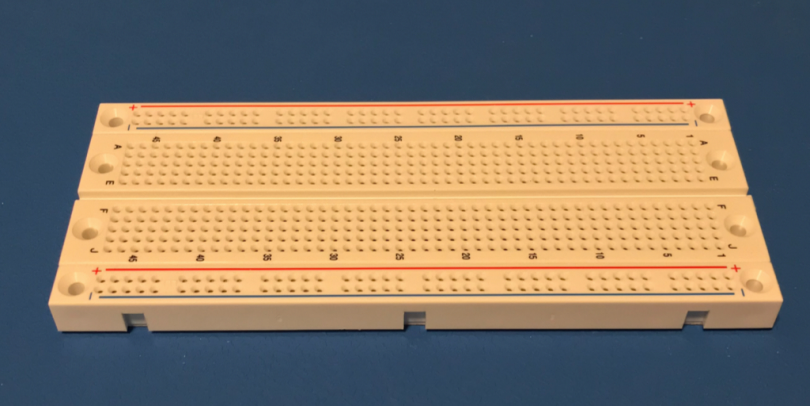


Table 7: PCBs and PCBAs

Item #	Description	Signature/Stamp
3.4.1.1	No marking required <div></div> <div>Fig. 11: 1x 1011-0101 v1.0 - Horizontal Breadboard Stamp PCB</div>	<div>Stamp or sign here</div>

3.4.2 Loose components

All loose components are stored on the shelf labelled “1XXX Components”. Take the components tray and obtain the following quantities of the following parts:

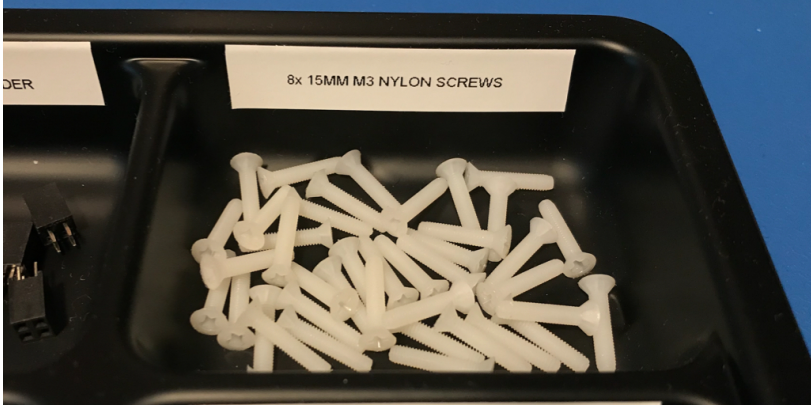


Table 8: Loose components

Item #	Description	Signature/Stamp
3.4.2.1	No marking required 	<div>Stamp or sign here</div>
3.4.2.2	No marking required 	<div>Stamp or sign here</div>
3.4.2.3	No marking required 	<div>Stamp or sign here</div>

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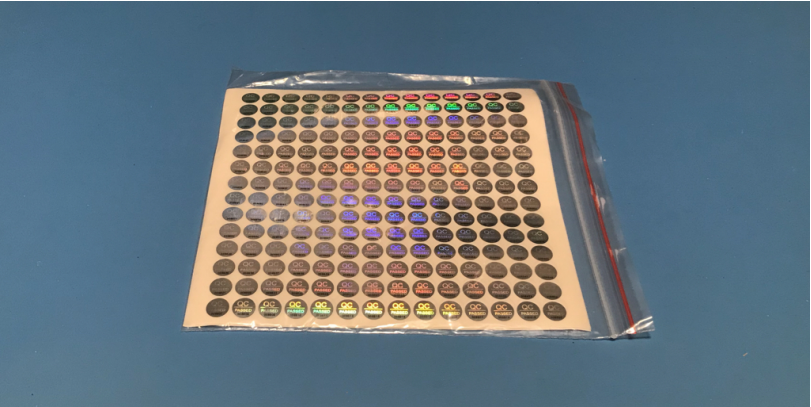





Table 8 – continued from previous page

Item #	Description	Signature/Stamp
3.4.2.4	<p data-bbox="328 248 549 277">No marking required</p>  <p data-bbox="371 701 1102 730">Fig. 15: 8x M3 15mm White Nylon Phillips Socket Flat Head Screws</p>	<p data-bbox="1246 315 1315 389">Stamp or sign here</p>
3.4.2.5	<p data-bbox="328 734 549 763">No marking required</p>  <p data-bbox="483 1187 987 1216">Fig. 16: 4x M3 11mm+6 Black Nylon Standoffs</p>	<p data-bbox="1246 801 1315 875">Stamp or sign here</p>
3.4.2.6	<p data-bbox="328 1220 549 1249">No marking required</p>  <p data-bbox="557 1673 914 1702">Fig. 17: 4x M3 Black Nylon Nuts</p>	<p data-bbox="1246 1288 1315 1361">Stamp or sign here</p>

3.4.3 Packaging materials

All packaging materials are stored on the shelf labelled “1XXX Components”. Take the packaging box and obtain the following quantities of the following materials:

Table 9: Packaging materials

Item #	Description	Signature/Stamp
3.4.3.1	No marking required 	
3.4.3.2	No marking required 	
3.4.3.3	No marking required 	

continues on next page

Table 9 – continued from previous page

Item #	Description	Signature/Stamp
3.4.3.4	<p data-bbox="328 246 549 273">No marking required</p>  <p data-bbox="512 701 959 728">Fig. 21: 1x Packing box with foam inserts</p>	
3.4.3.5	<p data-bbox="328 734 549 761">No marking required</p>  <p data-bbox="592 1189 879 1216">Fig. 22: 2x 1011A Stickers</p>	
3.4.3.6	<p data-bbox="328 1223 549 1249">No marking required</p>  <p data-bbox="584 1677 887 1704">Fig. 23: Roll of packing tape</p>	



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Section 4

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Assembly

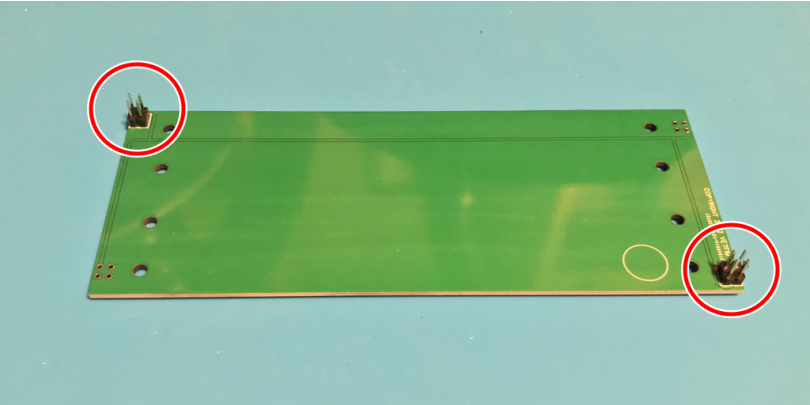

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4.1 1011A assembly

233

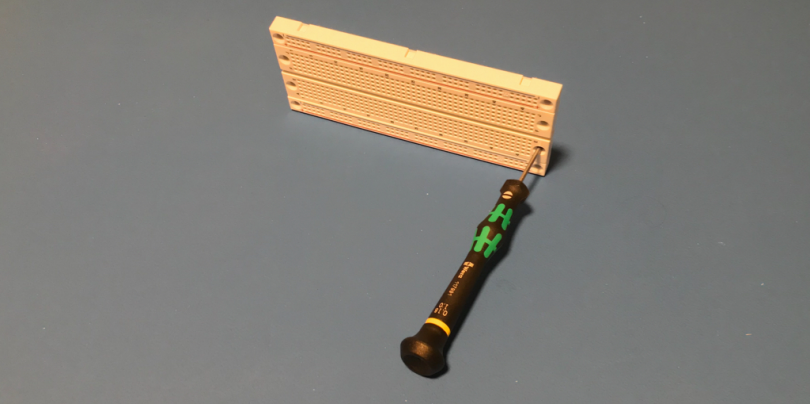

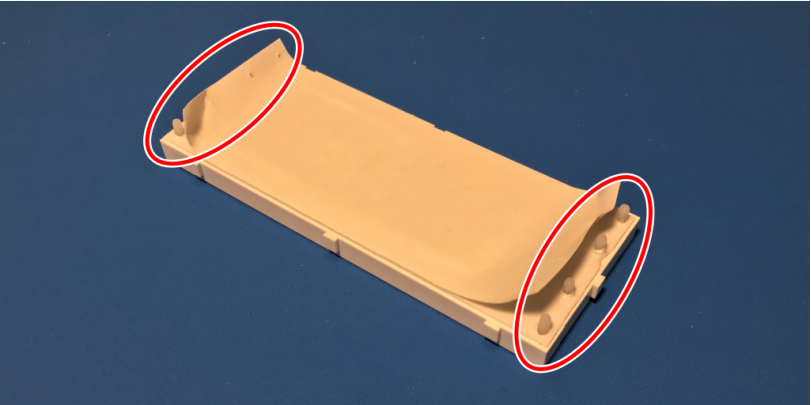

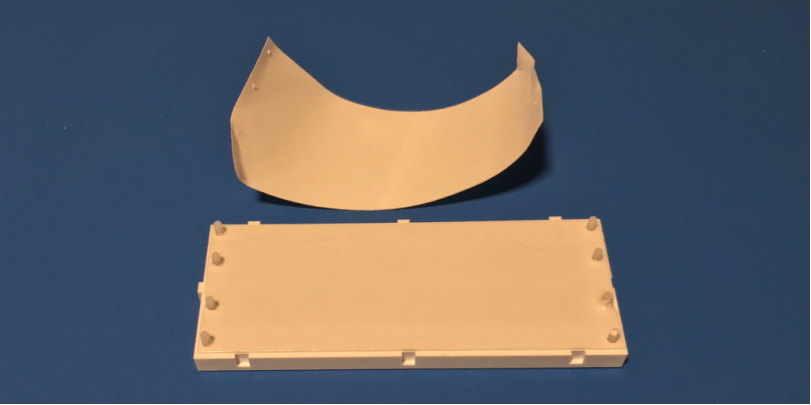

This assembly step takes 5 minutes.

Table 10: 1011A assembly steps

Step #	Description	Signature/Stamp
4.1	<div>Solder J1 and J4 onto the 1011-0101 PCB.</div> <div></div> <div>Fig. 24: 1011-0101 PCB with rear-mounted connectors soldered on.</div>	<div>Stamp or sign here</div>
4.2	<div>Solder J2 and J3 onto the 1011-0101 PCB. Note that if the connectors are rectangular, they should be aligned with the longer side facing the longer side of the PCB, as shown below.</div> <div></div> <div>Fig. 25: 1011-0101 PCB with front-mounted connectors soldered on.</div>	<div>Stamp or sign here</div>

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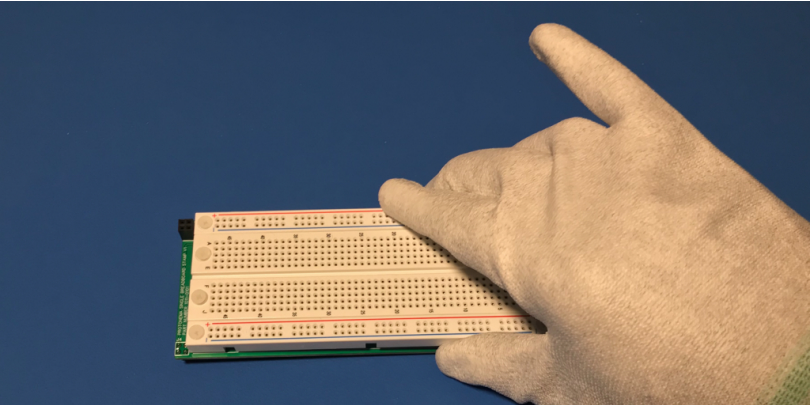
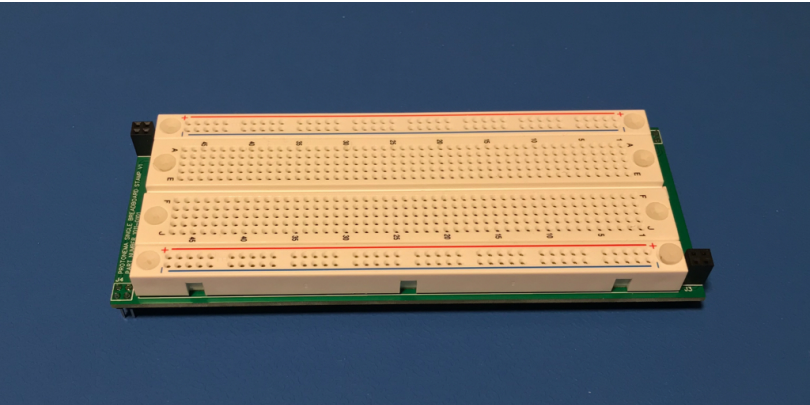

Table 10 – continued from previous page

Step #	Description	Signature/Stamp
4.3	<p>Using the slotted screwdriver, make eight holes in the adhesive backing of the breadboard.</p>  <p>Fig. 26: Breadboard with screwdriver used to make holes in the adhesive backing.</p>	
4.4	<p>Push the eight white screw through the adhesive layer from the front of the breadboard. While pushing the screw through, you may need to prevent the adhesive from peeling off by holding it with the screwdriver.</p>  <p>Fig. 27: Breadboard with eight screws.</p>	
4.5	<p>Remove the protective paper from the breadboard's adhesive layer.</p>  <p>Fig. 28: Breadboard with protective paper removed.</p>	

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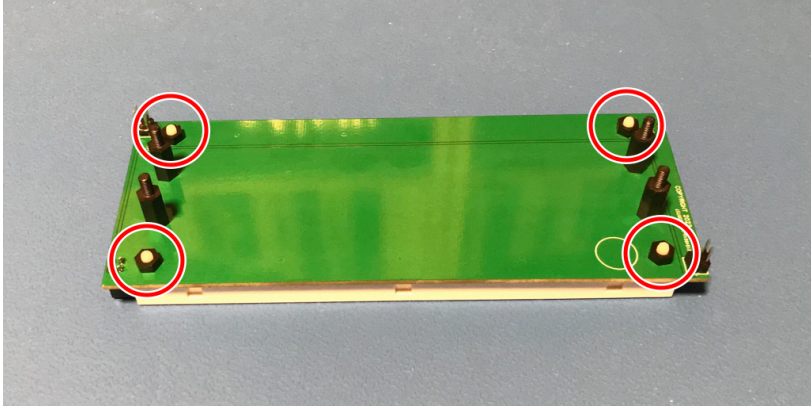


Table 10 – continued from previous page

Step #	Description	Signature/Stamp
4.6	<p>Align the eight screws with the 1011-0101 PCB, making sure that the top-most red line faces the top.</p>  <p>Fig. 29: 1011-0101 PCB with aligned breadboard.</p>	<div>Stamp or sign here</div>
4.7	<p>Attach the breadboard to the 1011-0101 PCB by pushing it evenly against the PCB.</p>  <p>Fig. 30: 1011-0101 PCB with attached breadboard.</p>	<div>Stamp or sign here</div>
4.8	<p>Screw four standoffs onto the rear of the four inner screws. Do not screw too tightly (finger-tight).</p>  <p>Fig. 31: 1011-0101 PCB with standoffs attached to inner screws.</p>	<div>Stamp or sign here</div>

continues on next page

Table 10 – continued from previous page

Step #	Description	Signature/Stamp
4.9	<p>Screw four nuts onto the rear of the four outer screws. Do not screw too tightly (finger-tight).</p>  <p>Fig. 32: 1011-0101 PCB with nuts attached to outer screws.</p>	<p>Stamp or sign here</p>

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Section 5

235

Test

236

5.1 Visual inspection

237

This test process takes 2 minutes.

Table 11: 1011A visual inspection

Step #	Description	Signature/Stamp
1	Verify that there are no loose parts.	<div>Stamp or sign here</div>
2	Verify that there are no visible fingerprints.	<div>Stamp or sign here</div>

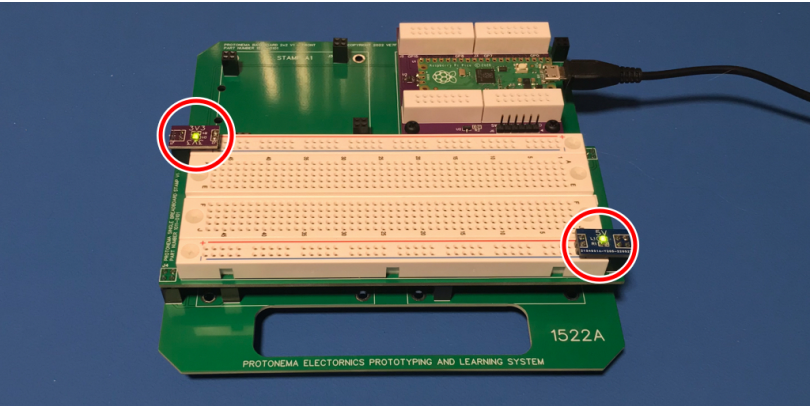
238

5.2 QC final check

239

This test process takes 2 minutes.

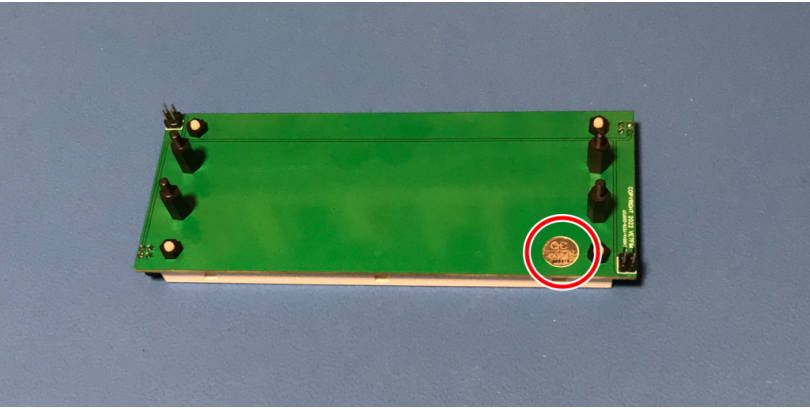
Table 12: 1011A QC final check

Step #	Description	Signature/Stamp
1	<div><p>Connect the 1011A to a baseboard, and connect power. Using a 1510-0201 and a 1510-0301 board, verify 5V and 3.3V for each breadboard power rail.</p><p>If test does not pass, write down the unexpected behaviour in the “Signature/Stamp” column on the right.</p></div> <div></div> <div><p>Fig. 33: Powered 1011-0101 PCB with illuminated 1510-0201 and 1510-0301 boards</p></div>	<div><p>Stamp or sign here</p></div>

5.3 QC PASS

Only perform these steps if all QC checks have passed.  
This test process takes 1 minutes.

Table 13: 1011A QC approval

Step #	Description	Signature/Stamp
1	<p>Using the tweezers, affix QC Passed sticker in location shown below, then write down the serial number from the QC sticker below the "Signature/Stamp" in the column to the right.</p>  <p>Fig. 34: 1011A with QC Passed sticker</p>	<p>Stamp or sign here</p>
2	<p>Take two photographs, one of the front of the 1011A, and one of the back of the 1011A.</p>	<p>Stamp or sign here</p>

5.4 QC FAIL

Only perform these steps if any QC check have failed.  
This test process takes 2 minutes.

Table 14: 1011A QC fail

Step #	Description	Signature/Stamp
1	<div>Place the 1011A module in the anti-static bag.</div> <div></div> <div>Fig. 35: 1011A in anti-static bag.</div>	<div>Stamp or sign here</div>
2	<div>Take an A4 plastic bag, and place the 1011A, along with this document, in the "QC Fail" bin</div> <div></div> <div>Fig. 36: 1011A in QC Fail bin.</div>	<div>Stamp or sign here</div>



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Section 6

247

Packaging

248

6.1 1011A packing

249

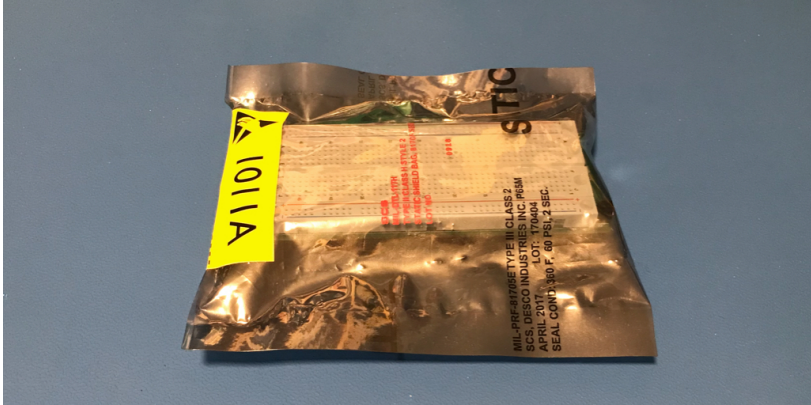



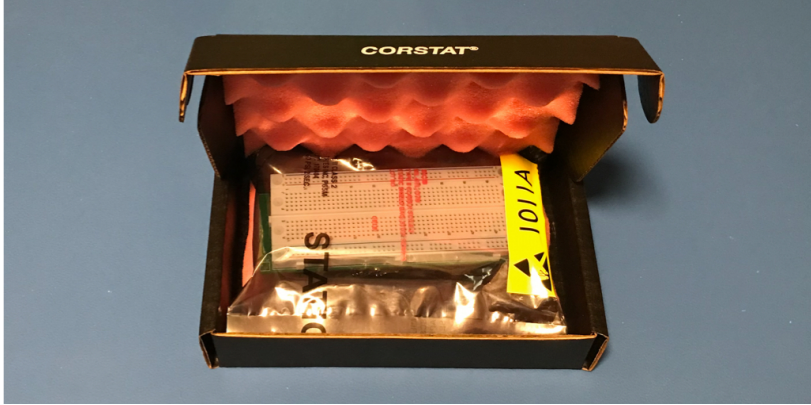


This packaging process takes 3 minutes.

Table 15: 1011A packaging

Step #	Description	Signature/Stamp
6.1.1	Place the 1011A module in the anti-static bag. <div></div> <div>Fig. 37: 1011A in anti-static bag.</div>	<div>Stamp or sign here</div>
6.1.2	Place four nylon nuts in a small anti-static bag, and add the bottom of the bag to the bag the 1011A module is in. <div></div> <div>Fig. 38: Anti-static bag with nylon nuts in the small anti-static bag.</div>	<div>Stamp or sign here</div>

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Table 15 – continued from previous page

Step #	Description	Signature/Stamp
6.1.3	Seal the anti-static bag with a 1011A sticker. 	
6.1.4	Using the Sharpie pen, Write down the serial number of the 1011A on the sticker, at the end of the line listing the 1011A. 	
6.1.5	Place 1011A bag in the box on top of the bottom foam padding. 	
6.1.6	Take a photograph of the 1011A in the box.	

continues on next page



Table 15 – continued from previous page

Step #	Description	Signature/Stamp
6.1.7	Using the ESD tape, secure the lid of the box. 	Stamp or sign here
6.1.8	Affix a 1011A sticker to the lid of the box. 	Stamp or sign here
6.1.9	Using the Sharpie pen, Write down the serial number of the 1011A on the sticker, at the end of the line listing the 1011A. 	Stamp or sign here
6.1.10	Take a photograph of the sealed 1011A box.	Stamp or sign here

Section 7

Clean-up

7.1 Consumables

This packaging process takes 5 minutes.

Table 16: Consumables cleanup

Step #	Description	Signature/Stamp
1	If the ESD gloves have contacted solder paste, or are soiled, they shall be disposed of in the standard waste bin.	<div>Stamp or sign here</div>
2	If there is unused solder wire on the spool, it shall be returned to stores.	<div>Stamp or sign here</div>
3	Loose component packaging shall be disposed of in the standard waste bin.	<div>Stamp or sign here</div>

7.2 Tools




This cleanup process takes 5 minutes.

Table 17: Tools cleanup

Step #	Description	Signature/Stamp
1	All tools shall be returned to the assembly tools container, and returned to the stores supply shelf.  If any tools are damaged or worn, return the container to stores, and let the manager know which tool is damaged or worn.	<div>Stamp or sign here</div>

continues on next page

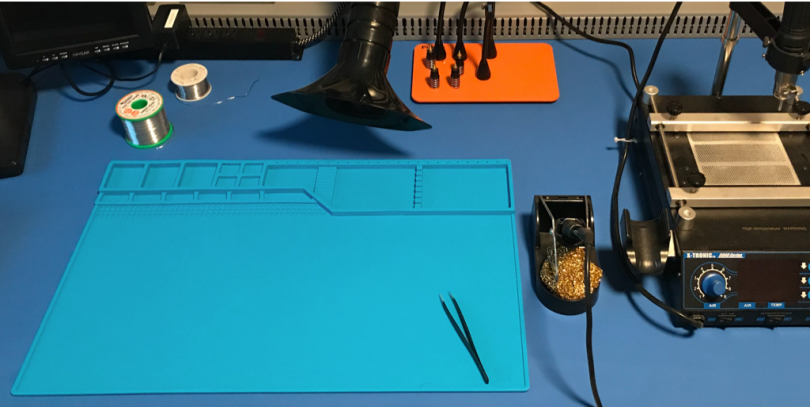
Table 17 – continued from previous page

Step #	Description	Signature/Stamp
2	Remove this document from the springback binder.	
3	Print a new copy of this document, and insert it into the springback binder that this document was originally in.	
4	Return the springback binder with the newly printed document to the 1011A section of the store supply shelf.	

7.3 Workspace

This packaging process takes 5 minutes.

Table 18: Workspace cleanup

Step #	Description	Signature/Stamp
1	<div>Make sure that the workspace is clean and as it was when you started the assembly.</div> <div></div> <div>Fig. 45: Clean assembly workstation</div>	<div>Stamp or sign here</div>






## Section 8

# Record keeping

### 8.1 1011A record keeping



This packaging process takes 5 minutes.

Table 19: 1011A record keeping

Step #	Description	Signature/Stamp
1	<p>Write the serial number, the date, and your first and last name in large print on the bottom of the front cover of this document.</p>  <p>Fig. 46: Example of serial number on document cover</p>	
2	Create a new folder under the 1011A folder, named with the serial number.	
3	Copy all photos taken during the assembly process into the newly created folder in step #2.	
4	Remove this document from the binding clamps, scan the document, and save the scanned PDF into the newly created folder in step #2, with the name "1011A-SNAAAAAA.pdf", where AAAAAA is replaced with the serial number.	

continues on next page

Table 19 – continued from previous page

Step #	Description	Signature/Stamp
5	Three-hole punch the document, then file it at the end of the current month's assembly records binder.	
6	Add an entry to the assembly records binder, "<Date> - 1011A - SN# AAAAAA - <Your Name>", where <Date> is replaced with today's date in ISO-8601 YYYY-MM-DD, where AAAAAA is replaced with the serial number of the 1011A, and where <Your Name> is replaced with your first and last name.	

## Section 9

# Process improvement

### 9.1 Feedback

Please submit an issue to the [Protonema Issue Repository](http://www.github.com/dslik/protonema/issues) (<http://www.github.com/dslik/protonema/issues>) if you encounter any of the below situations:

- Error in this document
- Unclear directions
- Suggested process improvements
- Results of QC failure investigations
- Tool change suggestions

Quality processes and documentation is a team effort. This document would not exist without the participation and contributions of the entire assembly team.

Thank you for reading this assembly instructions document.

End of document.

## Part II

# 1011A Annexes



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Section 10

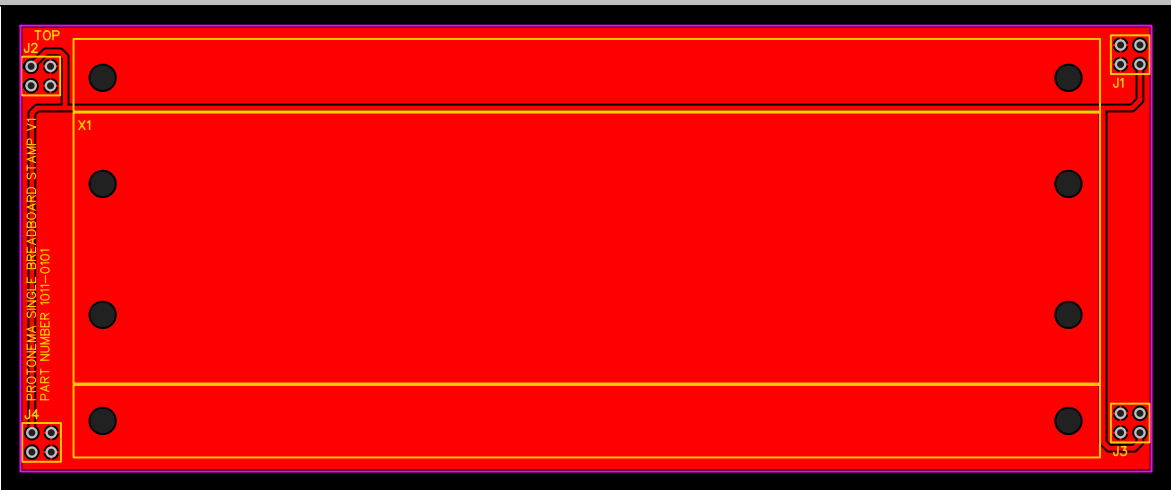
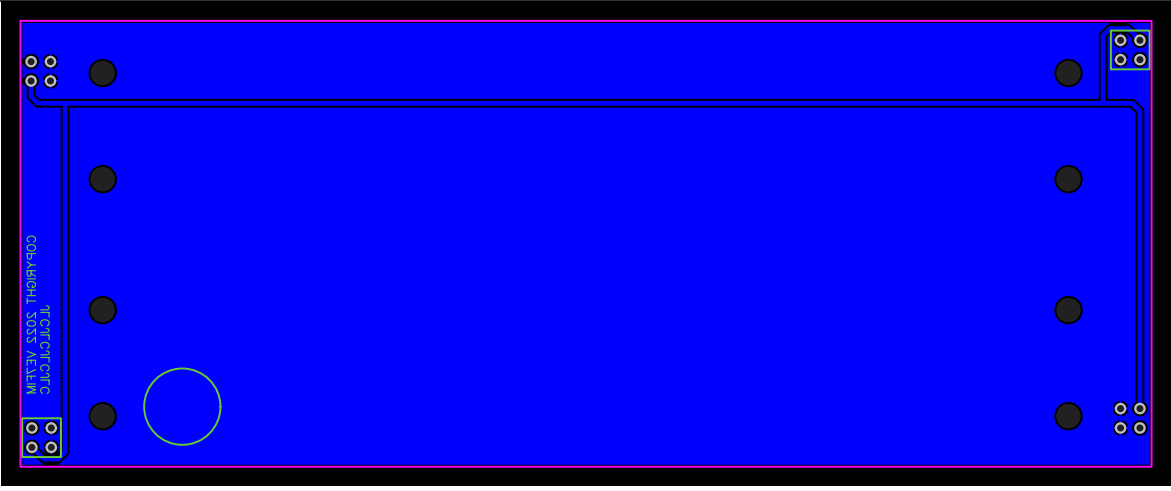
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Printed Circuit Boards

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10.1 1011-0101 PCB

Table 20: 1011-0101 PCB

<div>1011-0101 PCB</div> <div></div>
<div>Fig. 47: 1011-0101 PCB Front</div>
<div></div>
<div>Fig. 48: 1011-0101 PCB Rear</div>

## Section 11

## Bill of materials

### 11.1 1011A Horizontal Breadboard Stamp

The parts required to assemble a 1011A are listed in [Table 21](#).

Table 21: 1011A parts

Reference Designation	Qty	Description	Manufacturer	Manufacturer Part Number	Supplier	Cost
1011-0101	1	Stamp PCB	JLPCB	Y276-2154951A	JL-CPCB	\$1.26 CAD
X1	1	630 Tie-Point Solderless Breadboard	Global Specialties	GS-630A	Mouser	\$11.22
J1, J4	2	Straight 2x4 2.54mm Black Pin Headers	Molex	0010897041	Digikey	\$1.36 CAD
J2, J3	3	2.54mm by 2.54mm Straight 2x2P Female Header	CONNFly Elec	DS1023-2*2SF11	LCSC	\$0.23 CAD
MP1 - MP8	8	Screw - M3 15mm White Nylon Phillips Socket Flat Head	Order By Description			\$0.66 CAD
MP9 - MP12	4	Standoff - M3 11mm+6 Black Nylon	Order By Description			\$0.30 CAD
MP13 - MP16	4	Nut - M3 Black Nylon	Order By Description			\$0.35 CAD
SK1	1	QC Sticker	Order by Description			\$0.0094 CAD
Total						\$14.98 CAD

### 11.2 1011A Packaging

The parts required to package a 1011A are listed in [Table 22](#).

Table 22: 1011A packing parts

Reference Designation	Qty	Description	Manufacturer	Manufacturer Part Number	Supplier	Cost
N/A	1	Static Shielding Bag 5" X 7"	SCS	81757	Digikey	\$0.31 CAD
N/A	1	Static Shielding Bag 1.5" X 2.8" Ziplock	Order by Description			\$0.06 CAD
N/A	1	CORREC-PAK SHIPPER 7 X 5 X 1.5" ID	Conductive Containers, Inc.	3080-1	Digikey	\$8.67 CAD
1011-7001	2	1011A ESD Sticker	Jukebox Print			\$4.00 CAD

continues on next page

Table 22 – continued from previous page

Reference Designation	Qty	Description	Manufacturer	Manufacturer Part Number	Supplier	Cost
Total						\$13.04 CAD

## Section 12

# Reduction of Hazardous Materials

Compliance declarations, in BOM order.

## 12.1 MG Chemicals 4900

Table 23: MG Chemicals 4900 RoHS Compliance

Declaration for MG Chemicals 4900 -

<https://www.mgchemicals.com/downloads/msds/01%20English%20Can-USA%20SDS/sds-4900-4917.pdf>


ISO 9001:2015 Quality Management System

SAI Global File #004008

Burlington, Ontario, Canada

**SAC305 No CLEAN SOLDER WIRE****4900-4917**

**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, USA)

This product does not contain any of the listed substances.

### Europe

**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

**WEEE** (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

### Section 16: Other Information

**SDS Prepared by** MG Chemical's Regulatory Department

**Date of Review** 06 March 2020

**Supersedes** 09 July 2019

**Reason for Changes:** Update to the emergency phone number information.

### Reference

1) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).

2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

*Section continued on the next page*

Page **12** of **13**

Date of Revision: 06 March 2020 / Ver. 3.01

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## 12.2 JLC lead-free PCB

Table 24: JLC PCB RoHS Compliance

Declaration for JLCPCB lead-free PCBs - <https://s3.amazonaws.com/helpscout.net/docs/assets/59f1de7804286313cffb22c/images/5d4d09562c7d3a036965d6a3/ROHS-Certificate-of-Compliance.jpg>

ROHS-Certificate-of-Compliance.jpg 566x800 pixels

2022-08-16, 23:45



<https://s3.amazonaws.com/helpscout.net/docs/assets/59f1de7804286...ages/5d4d09562c7d3a036965d6a3/ROHS-Certificate-of-Compliance.jpg>

Page 1 of 1



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12.3 Global Specialties GS-630A

Table 25: Global Specialties GS-630A

Declaration for Global Specialties GS-630A - N/A	
GS-630A Global Specialties   Mouser Canada	2022-10-10, 18:06
<div><div><div>RoHS Information</div><div><div><div>RoHS 2011/65/EU amended by 2015/863 Compliant</div><div>According to the manufacturer, this product is RoHS Compliant with RoHS Directive 2011/65/EU and as amended by Directive 2015/863, and without material exemptions.</div><div>Please see the Environmental Documents section of this product for any Manufacturer information on RoHS.</div><div>The RoHS Compliance of any product so designated is based upon evidence from the producer (manufacturer) that the part number complies with the RoHS Directive. Mouser Electronics has taken all reasonable steps to confirm producers' statements and other evidence regarding the absence of the restricted substances to support the manufacturers' claim of compliance.</div><div>To the best of our knowledge, the below referenced product is RoHS compliant per the producer's documentation.</div><div><div>Date:2022-10-10</div><div>Mouser Part #:510-GS-630A</div><div>Mfr.'s Part #:GS-630A</div><div>Mfr.:Global Specialties</div><div>Description:PCBs &amp; Breadboards SOLDERLESS BREADBRD 630TIE-PTS BUS STRIP</div></div><div>This information is valid when RoHS Compliance is indicated on your packing list from Mouser Electronics, Inc.</div><div>Mouser Electronics, Inc.</div></div></div></div></div>	
<a href="https://www.mouser.ca/ProductDetail/Global-Specialties/GS-630A?qs=MLItCLRbWszNhHPpVHoSLw%3D%3D">https://www.mouser.ca/ProductDetail/Global-Specialties/GS-630A?qs=MLItCLRbWszNhHPpVHoSLw%3D%3D</a>	Page 1 of 1

## 12.4 Molex 0010897041

Table 26: Molex 0010897041 RoHS Compliance

Declaration for Molex 0010897041 - [https://www.molex.com/datasheets/rohspdf/0010897041\\_rohs.pdf](https://www.molex.com/datasheets/rohspdf/0010897041_rohs.pdf)**RoHS Certificate of Compliance**

07/11/2022

Molex is committed to managing the use of chemical substances in accordance with governmental regulations, industry standards, and customer-specific requirements in order to protect the environment. For each part listed, this document provides:

• **EU RoHS Compliance Status.** EU RoHS status is declared per Directive 2011/65/EU and its subsequent amendments, including the Directive EU 2015/863 which additionally prohibited four phthalates. Homogeneous materials of parts that are compliant to this legislation have less than 0.1% by weight each of lead, mercury, hexavalent chromium, PBB, PBDE, DBP, BBP, DIBP, DEHP, and 0.01% by weight of cadmium. In situations where an exemption applies, the preceding limits, corresponding to the exempted substance(s), may be higher.

Molex's sole liability for incorrectly certifying a product shall be either replacement of the Molex product or, alternatively and in the sole discretion of Molex, return of the purchase price paid for the relevant Molex product.

For additional information regarding Molex's environmental initiatives and further explanation of this information, please visit [www.molex.com](http://www.molex.com)

Haim Eliyahu  
Director, Global Product Stewardship

**Table A**

Molex Part Number	Part Description	RoHS Compliance Status
0010897041	2.54mm Pitch C-Grid Breakaway Header, Dual Row, Vertical, High Temperature, 4 Circuits, Tin (Sn) Plating, 2.72mm PC Tail Length	Compliant

## 12.5 Connfly DS1023-2\*2SF11

Table 27: Connfly DS1023-2\*2SF11 Compliance

Declaration for Connfly DS1023-2\*2SF11 -

<http://en.connfly.group/static/upload/image/ico/RoHS□□□Connectors□.jpg>


**ZCT**

## Verification of Conformity

Certificate No.: 19ZCTC0926005RC

**Applicant** : CONNFLY ELECTRONIC CO., LTD

**Address** : No. 125 ZhanTeng Road East Industry Zone KuangYan Town CiXi NingBo China P.C. 315333

**Manufacturer** : CONNFLY ELECTRONIC CO., LTD

**Address** : No. 125 ZhanTeng Road East Industry Zone KuangYan Town CiXi NingBo China P.C. 315333

**Product** : Connectors

**Brand Name** : CONNFLY

**Model No.** : DS Series

Requirement	Applied Standards	Document Evidence	Result
RoHS Directive	2011/65/EU 2015/863	Test Report: 19ZCTC0926005RR	Conform
RoHS Standards	IEC 62321:2013		

# RoHS

**Remark:** The Certificate of compliance is based on a test procedure or an evaluation of the above-mentioned product. This is to certify that the above-mentioned product is in compliance with the RoHS Directive (2011/65/EU) and its subsequent amendments EU No. (2015/863) of the European parliament on the Restriction of the use of certain Hazardous Substances (Lead (Pb); Mercury (Hg); cadmium (Cd); Hexavalent chromium (Cr); polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs); Hexabromocyclododecane (HBCDD); Bis-(2-ethylhexyl) Phthalate (DEHP); Benzylbutyl Phthalate (BBP); Dibutyl Phthalate (DBP)) in Electrical and Electronic equipment. This certificate can be checked for validity at [www.renzhengjiance.com](http://www.renzhengjiance.com)

**Shenzhen ZCT Technology Co., Ltd.**  
3/F., Building 5, Hongsheng Industrial Zone, Bao'an Road, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China.  
☎ : 400-869-8965 ☎ : 86-755-23702323, ✉ : admin@renzhengjiance.com, 🌐 : http://www.renzhengjiance.com

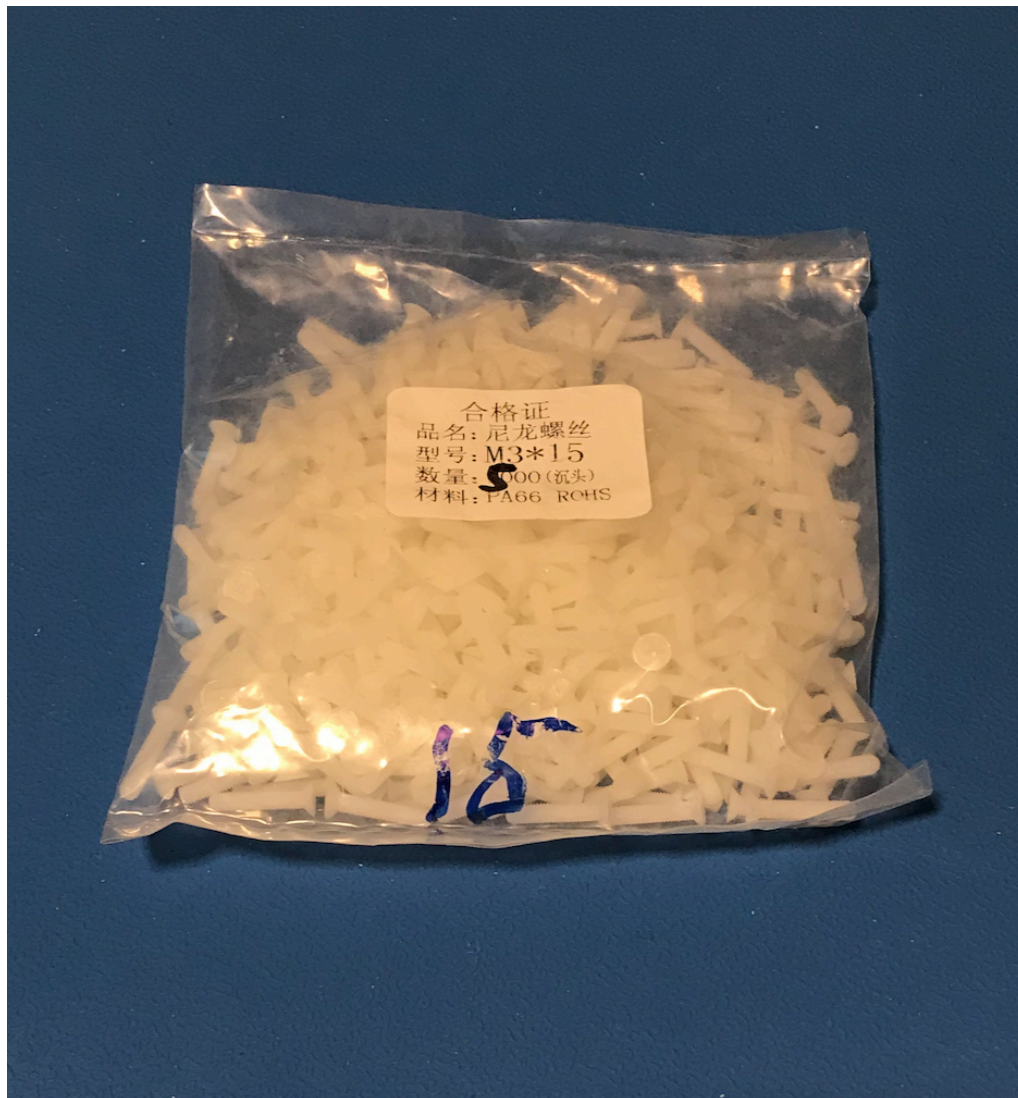


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## 12.6 M3 16mm Nylon Screw

Table 28: M3 15mm Nylon Screw RoHS Compliance

Declaration for M3 15mm Nylon Screw - N/A





12.7 M3 11mm Nylon Standoff

Table 29: M3 11mm Nylon Standoff RoHS Compliance

Declaration for M3 11mm Nylon Standoff - N/A


12.8 M3 Nylon Bolt

Table 30: M3 Nylon Bolt RoHS Compliance

Declaration for M3 Nylon Bolt - N/A
