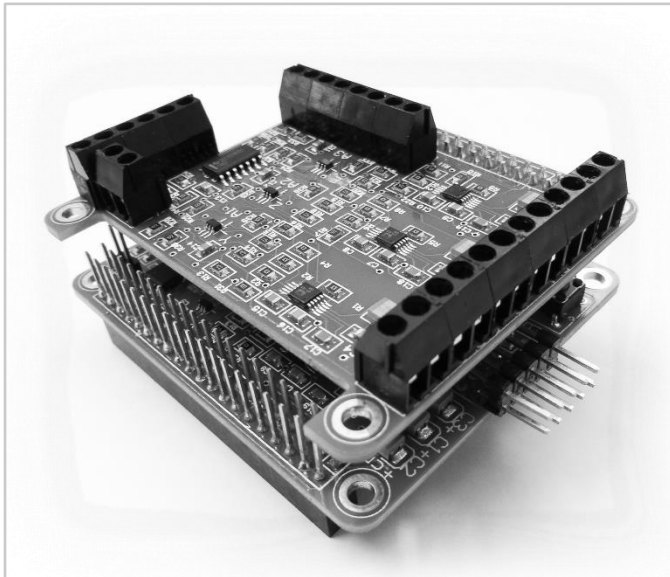


PULSE TRAIN HAT

INSTRUCTIONS

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS CIRCUIT BOARD.



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GENERAL INFORMATION

This manual has been compiled by CNC Design Ltd and is an integrated part of the product with which it is enclosed and should be kept with for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual it will ensure both the product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by CNC Design Ltd to help illustrate the operation of the product.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the CNC Design Ltd policy of continuous improvement determines the right to make modifications without prior warning.

DECLARATION OF CONFORMITY



CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

Company contact details:

CNC Design Limited
Unit 5S Lanvale Estate, St Columb Major Industrial Estate, Cornwall, TR9 6SF, England
Tel: +44 1637 881520 info@ukcnc.info

CNC Design Limited declares that their:
Pulse Train Hat V1.0

complies with the Essential Requirements of the following EU Directives:

Electromagnetic Compatibility Directive 2004/108/EC
EU RoHS 2 Directive 2011/65/EU

and further conforms with the following EU Harmonized Standards:

EN 61000-6-3:2007+A1:2011
EN 61000-6-1:2007

Dated: 30 March 2017

Position of signatory: Director

Name of Signatory: Sean Hegarty

Signed below:

on behalf of CNC Design Limited

SPECIFICATION

The CNC Design Ltd policy of continuous improvement determines the right to change specification without notice.

Dimensions (L x W)	65mm x 56mm
Combined Weight	50g
Voltage	3v, 5v

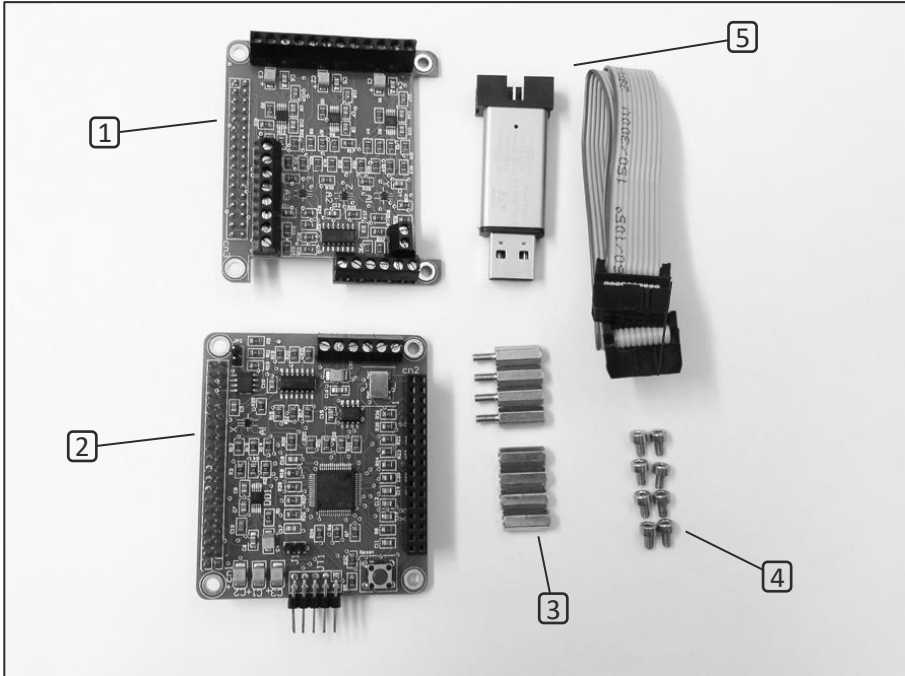
WARRANTY

1 month Return to Base warranty is offered for the Pulse Train HAT. This is on a Return to Base policy which means the customer will be liable to pay for the shipping of the faulty parts back to us and we will be liable for the cost of replacing and shipping back to the customer.

Each Pulse Train HAT is fully tested before dispatch. The warranty does not cover user error when connecting external devices in the incorrect manner. Please study all the wiring diagrams on our website <http://www.PTHAT.com> before using the Pulse Train HAT.

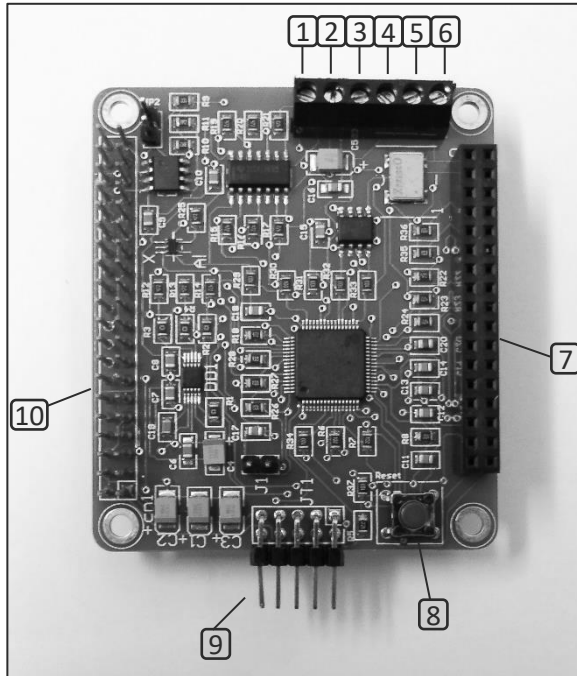
The Pulse Train HAT is a development system and is not designed for production use.

GETTING TO KNOW YOUR PULSE TRAIN HAT



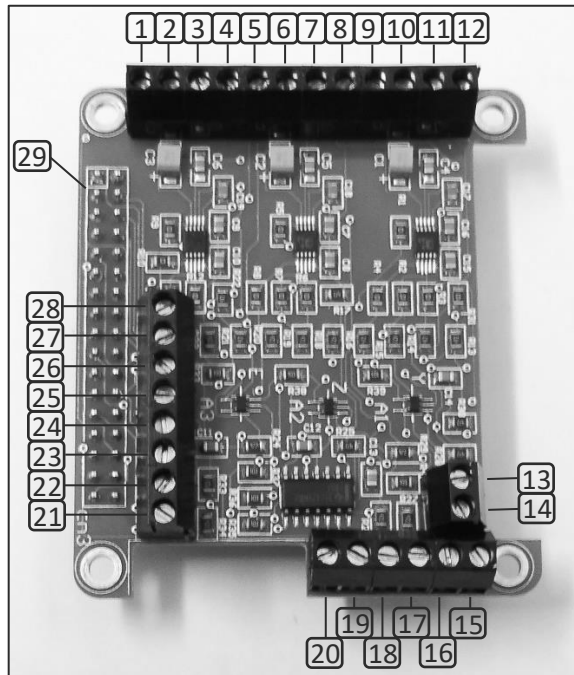
1	PTHAT Topboard	4	M2.5 x 4mm Bolts
2	PTHAT Mainboard	5	JTAG Programmer
3	12mm Spacers		

PTHAT MAINBOARD



1	X Enable	6	Ground
2	X Pulse	7	34 pin Block
3	X Direction	8	Reset Button
4	5v	9	JTAG Connector
5	X Limit	10	Extended 40 pin Connector Block

PTHAT TOPBOARD

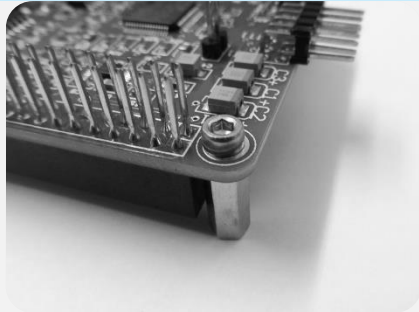


1	Ground	11	Z Pulse	21	Ground
2	E Limit	12	Z Enable	22	3.3v
3	E 5v	13	Emergency Stop	23	ADC 1
4	E Direction	14	Ground	24	ADC 2
5	E Pulse	15	Y Enable	25	5v1
6	E Enable	16	Y Pulse	26	5v2
7	Ground	17	Y Direction	27	5v3
8	Z Limit	18	Y 5v	28	Ground
9	Z 5v	19	Y Limit	29	34 Pin Connector
10	Z Direction	20	Ground		

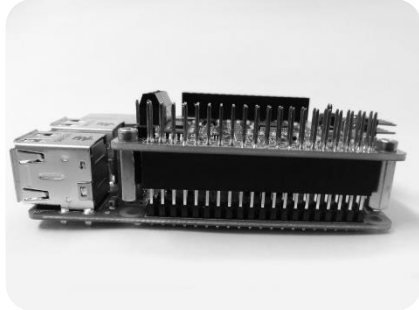
OPERATION AND USE

PULSE TRAIN HAT MAINBOARD

Secure the four female to female spacers onto the Mainboard using the bolts supplied.



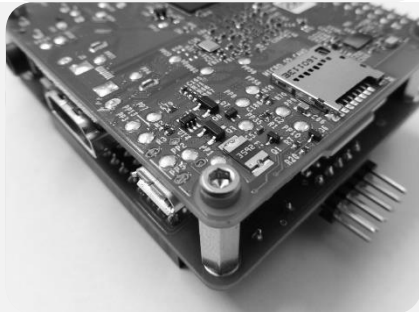
Align the Mainboard and Raspberry Pi making sure the 40 pin connector, lines up with the Mainboard block.



Use bolts to secure the two boards together.

Your PTHAT is now ready to be used with your Raspberry Pi.

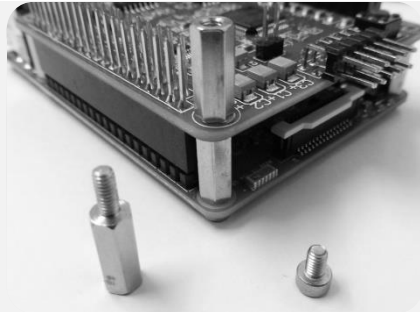
For further instructions on how to connect the Topboard See *Page 8*.



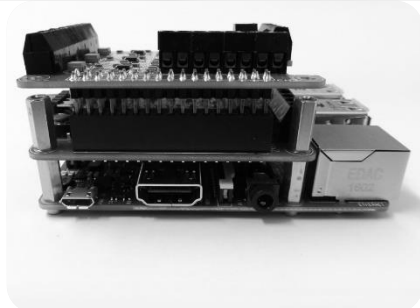
PULSE TRAIN HAT TOPBOARD

If you have purchased the PTHAT Topboard please follow these short steps.

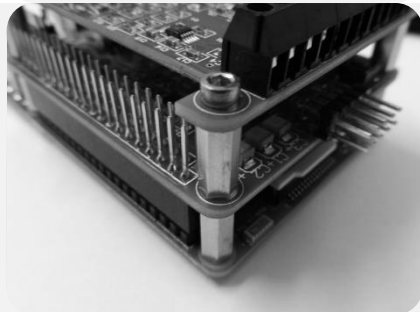
Replace the 4 previous bolts that attach the mainboard to the spacers and insert the male to female spacers.



Align the Mainboard and Topboard making sure the 34 pin connector line up with the Mainboard block.



Use Bolts to secure the Topboard.



GENERAL INFORMATION

For more information including Wiring Diagrams, Software Examples and the Command Set. Visit our website <http://www.PTHAT.com>

SAFETY WARNING

If used within a case, make sure there is proper ventilation to prevent overheating.

If water or a chemical is spilled onto equipment, shut off power immediately and unplug the equipment. Do not try to remove water or similar from the board while energized.

Do not expose to heat as this could potentially damage the components.



ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING

ELECTROSTATIC SENSITIVE DEVICES



CONTACT DETAILS

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