

**Libre Space  
Foundation**

# **PicoBus Deployer**

Handling and operating manual

Version	Date	Comments	Sign-off
1.0	2020-06-29	Initial version	Ilias Daradimos
1.1	2020-07-01	Minor formatting	Pierros Papadeas

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## 1. Components

#	Component
1.	Adaptor Plate
2.	Electrical Interface
3.	Door
4.	RBF
5.	Thermal Knife
6.	Door release pin
7.	Door release pin retainer line
8.	Controller

Table 1: PicoBus Components

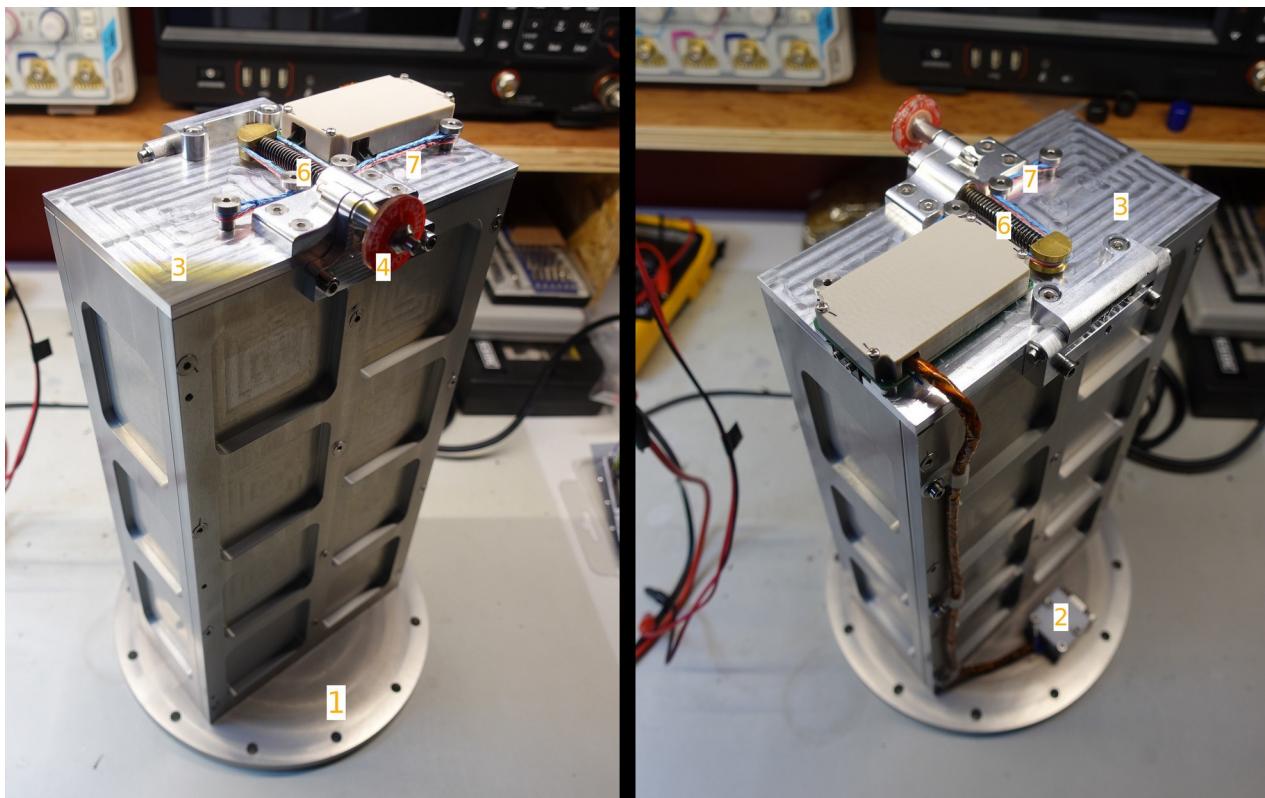
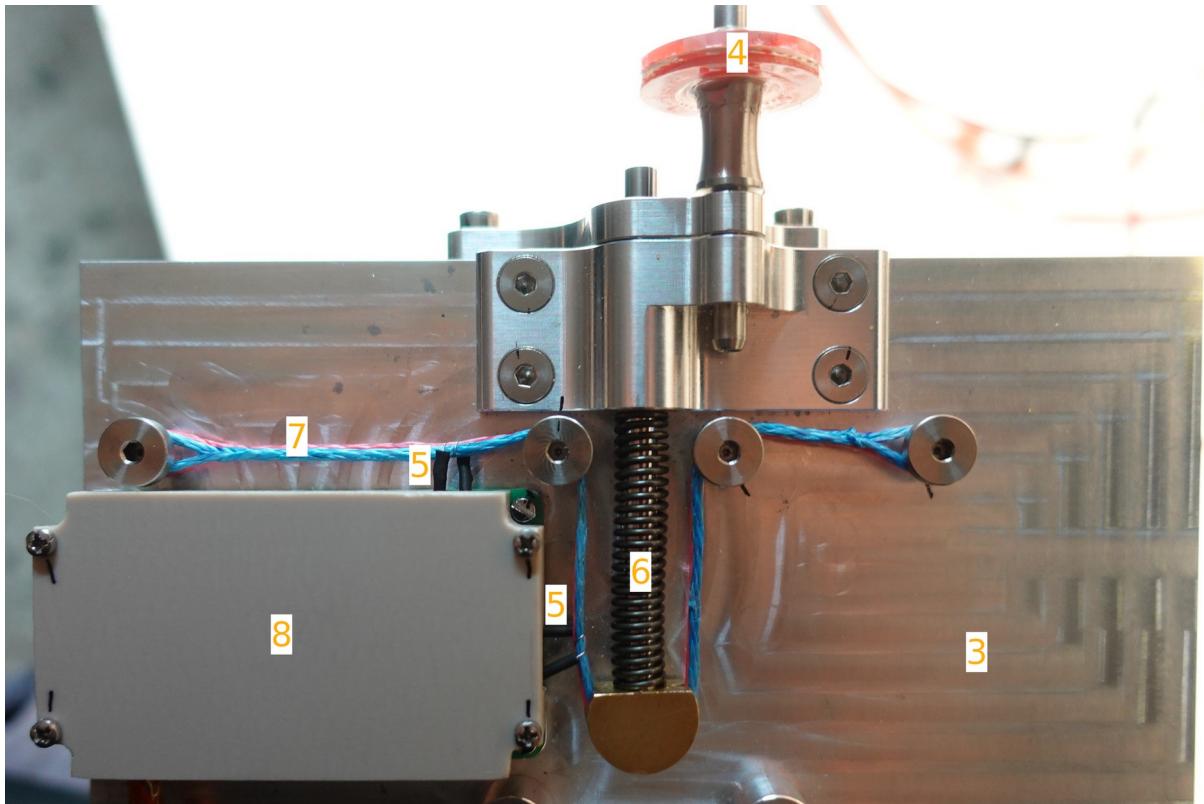


Illustration 1: PicoBus overview



*Illustration 2: PicoBus Door*

## 2. Handling

When handling PicoBus care should be taken not to exert any force on the door (3) mechanism as it contains the thermal knife controller (8) and door retaining pin(6).

Picobus can be manipulated from the adaptor plate (1) or the main body taking care not to damage the controller cable.

When preparing PicoBus adaptor plate (1) should face the work surface (table/bench etc) as shown in Illustration 1

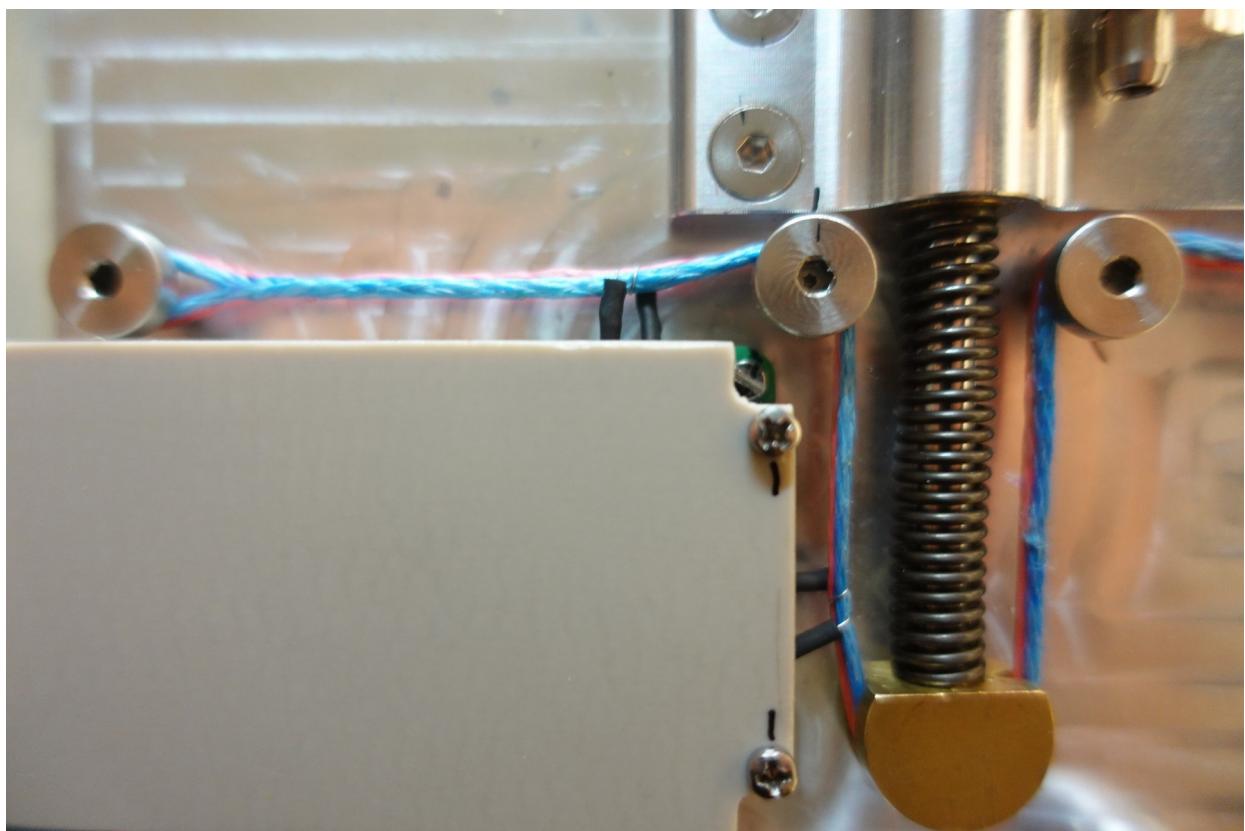
### 3. Unpacking

PicoBus is delivered packaged in an antistatic bag. For unpacking it must be placed on a firm surface with the adaptor plate (1) facing down.

Open the antistatic bag by removing the “Antistatic” stickers and pull the bag towards the adaptor plate.

## 4. Inspection

1. Inspect PicoBus for structural damages, dents or loose bolts.
2. Verify that the RBF (4) pin is in place
3. Inspect the release mechanism making sure that the door release pin line (4) is under tension (Illustration 3)
4. Inspect thermal knives (5). They should be wrapped around door release pin line (4) pulling it slightly towards the controller (Illustration 3)



*Illustration 3: Release mechanism*

## 5. Electrical Interface

PicoBus is interfaced via the DB-9 connector (2). It is used for operating the thermal knifes (5) and provide door state feedback.

Connector pinout is shown in Table 2

Pin	Function	Comment
1	Deploy Common	
2	Deploy +	9-24VDC / 19W max
3	Deploy +	9-24VDC / 19W max
4	Deploy +	9-24VDC / 19W max
5	Deploy Common	
6	Deploy Common	
7	Door switch NC	Continuity when door is open
8	Door switch NO	Continuity when door is closed
9	Door switch Common	

Table 2: Connector pinout

## 6. Deployment Test

1. Verify that the RBF pin (4) is in place
2. Mount PicoBus (if applicable)
3. Connect interface connector (2)
4. Verify Door closed signal (Pins 8-9)
5. Remove RBF Pin (4)
6. Perform Test
7. Close the door (3) and secure it using the RBF pin (4)

## 7. Packing

Place PicoBus in the provided antistatic bag with the adaptor plate (1) facing the closed end of the bag.

Secure the antistatic bag with the provided spare stickers

Place PicoBus in the wooden container