



**SEI**  
INDUSTRIES



**Bambi**  
**BUCKET®**  
Driven by Innovation

**BAMBI 28V POWER PACK**  
OPERATIONS MANUAL  
2023A

# **BAMBI 28V POWER PACK OPERATIONS MANUAL**

**Version 2023A**

**PLEASE READ BEFORE USING.**

**This manual is applicable to the following models:**

BBPP28 (# 015989)  
BBPP28-1 (# 015990)  
BBPP28-2 (# 016535)

Copies of this manual (#016739) are available from SEI.

This manual is available on the SEI website.

Register for manual update notifications at [bambiupdate@sei-ind.com](mailto:bambiupdate@sei-ind.com)

This manual is based on information that was available at the time it was printed and may not be applicable to products received before the issue date and customized items.

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# Revision Summary

Version	Release Date	Revision Description
2020A	10-Nov-2020	<ul style="list-style-type: none"><li>Initial release</li></ul>
2020B	04-Dec-2020	<ul style="list-style-type: none"><li>Added model BBPP28-2</li></ul>
2023A	03-Nov-2023	<ul style="list-style-type: none"><li>Added grounding harness note, and drawings section</li></ul>

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## Section 1: Overview

### Description

The Bambi Power Pack is a 28.8VDC, rechargeable power supply that allows the Bambi Bucket or Bambi MAX to be operated independently of the aircraft power.

The plastic case contains a NiMH battery pack and battery charger. The charger operates on either a 120V/60Hz or 240V/50Hz mains power supply. Two power cords are included. One has a NEMA 1-5P plug and the other has a CEE7/16 Europlug.

The Power Pack also includes a dump switch harness to operate the bucket valve, a bucket wiring harness to connect to the bucket, and a grounding harness to ground the system to the airframe to eliminate static charge buildup. All of the wiring harnesses and power cords are stowed inside of the case.

A manually operated circuit breaker located on the front of the case can be used to disconnect the battery power from the bucket harness.



## Section 2: Charging the Battery

# Section 2: Charging the Battery






## Battery Charging

1. Determine the mains supply voltage and select the appropriate charger cord.
2. Plug the charger cord into the receptacle on the battery charger.
3. Plug the charger cord into the AC mains receptacle.

### CAUTION

If an operational error occurs, the plug should be immediately removed from the receptacle.

4. The indicator will turn orange for 10 seconds.
5. The indicator will turn red during the fast charge cycle.
6. The indicator will flash green and orange during the top-up charge.
7. The indicator will remain green when the battery is fully charged.
8. Disconnect the charger cord from the charger and store in the case.

Charger Indicator		Status
	Orange	Battery Initialization
	Red	Fast Charge
	Green / Flashing Orange	Top-Off Charge
	Green	Trickle charge
	Flashing Red / Flashing Green	Error

### CAUTION

The charger contains dangerous voltages and the cover should not be removed.

This battery charger is only designed for indoor use and should not come into contact with water or dust. In order to avoid overheating, the charger should not be covered when it is in use.

Do not charge batteries at too high or too low temperatures.

Do not leave the charger cord connected to the charger for more than 12 hours when the charge indicator is green as the battery pack will be permanently damaged.

### NOTICE

The charger is protected against reverse polarity by an automatically resettable polyswitch fuse on the output.

## Section 3: Installation and Operation

# Section 3: Installation and Operation

### NOTICE

The Bambi Power Pack must be charged before use. It is not recommended to charge while in use.

## Installation

To install the Bambi Power Pack:

1. Open the case and remove the remote dump switch, grounding harness and bucket wiring harness.
2. Close and latch the case lid.
3. Secure the Bambi Power Pack to the aircraft using standard tie-down procedures.
4. Plug the remote dump switch wiring harness into the eight-pin receptacle on the case.
5. Plug the grounding harness into the three pin receptacle on the case.
6. Attach the clip of the grounding harness to a suitable grounding point on the airframe.
7. Plug the bucket wiring harness into the grounding harness.

### CAUTION

Failure to install grounding harness may result in personal injury.

8. Attach the bucket wiring harness strain relief to a tie-down point in the aircraft. Adjust the strain relief position so that there is no strain on the connection to the case.
9. Connect the other end of the bucket wiring harness to the Bambi Bucket head.

## Operation

### *Models BBPP28 & BBPP28-1*

1. Press the circuit breaker in. The green LED should illuminate.
2. Momentarily pull the trigger on the dump switch to open the Bambi Bucket or Bambi MAX valve.

### CAUTION

Holding the dump switch trigger will overheat the solenoid on a standard Bambi Bucket.

3. When finished using the Power Pack, pull out the circuit breaker. The LED should extinguish.

### NOTICE

Storing the Power Pack with the power on will drain the battery.

4. Charge the battery fully before storing the Power Pack.



### Section 3: Installation and Operation

#### CAUTION

The Power Pack should not be left for more than 6 months without being charged. Failure to do so could result in damage to the battery.

#### Model BBPP28-2

1. Press the circuit breaker in. The green LED should illuminate.
2. Open the (red) switch cover on the dump switch to expose the lock-out toggle switch (see diagram below).
3. Push up on the lock-out toggle switch to unlock the dump switch trigger (see diagram below).
4. Momentarily pull the trigger on the dump switch to open the Bambi Bucket or Bambi MAX valve.

#### CAUTION

Holding the dump switch trigger will overheat the solenoid on a standard Bambi Bucket.

5. Push down on the lock-out toggle switch or close the switch cover to lock the dump switch trigger (see diagram below).
6. When finished using the Power Pack, pull out the circuit breaker. The LED should extinguish.

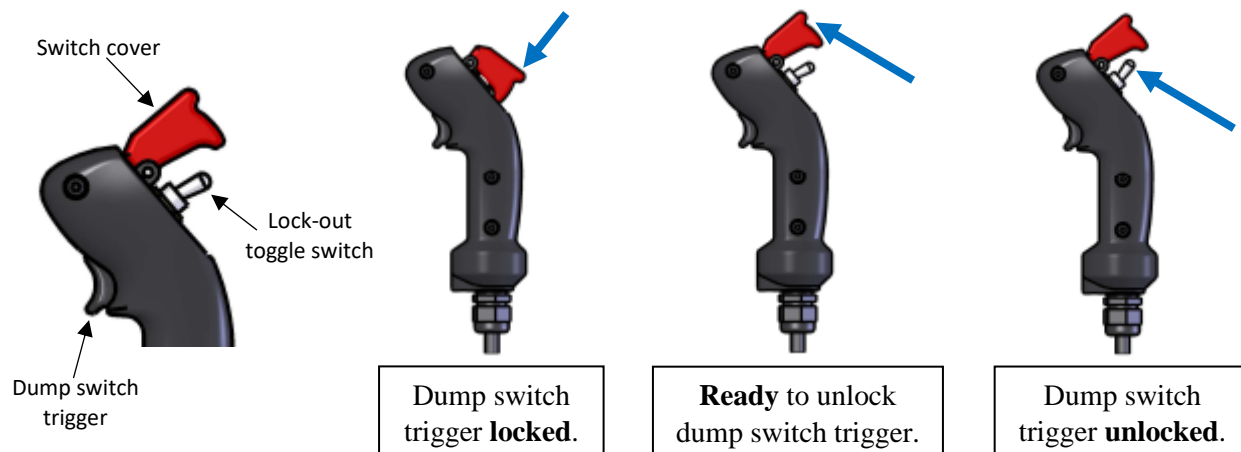
#### NOTICE

Storing the Power Pack with the power on will drain the battery.

7. Charge the battery fully before storing the Power Pack.

#### CAUTION

The Power Pack should not be left for more than 6 months without being charged. Failure to do so could result in damage to the battery.





## Section 4: Specifications

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## Electrical Specifications

Battery Type:	NiMH
Output Voltage:	28.8 VDC
Capacity:	3 AH
Recharge Time:	2 hours
Charger Voltage:	120VAC / 240VAC
Charger Socket:	IEC C8
Power Cords:	IEC C7 x NEMA 1-15P IEC C7 x CEE 7/16 Europlug

## Physical Specifications

Case Size:	16.5 x 13 x 7 inches (420 x 330 x 175 mm)
Weight:	16 lb (7 kg)

## Section 5: Parts

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### Section 5: Parts

ITEM	MODEL	PART NUMBER	DESCRIPTION	QTY
1	BBPP28	015986	BATTERY, 28.8VDC, NiMH, 3AH	1
	BBPP28-1			
	BBPP28-2			
2	BBPP28	011890	HARNESS, GROUNDING	1
	BBPP28-1			
	BBPP28-2			
3	BBPP28	008902	HARNESS, BUCKET <sup>1</sup>	1
	BBPP28-1	015666		
	BBPP28-2			
4	BBPP28	008900	SWITCH, DUMP <sup>2</sup>	1
	BBPP28-1	016548		
	BBPP28-2			
5	BBPP28	015966	CHARGER, NiMH, 28.8VDC	1
	BBPP28-1			
	BBPP28-2			
6	BBPP28	005693	CORD, 220VAC, CEE7/16 x IEC C7	1
	BBPP28-1			
	BBPP28-2			
7	BBPP28	005695	CORD, 110VAC, NEMA 1-15P x IEC C7	1
	BBPP28-1			
	BBPP28-2			

<sup>1</sup> 008902 is equipped with a non-waterproof NEMA connector.  
015666 is equipped with a waterproof (IP67) NEMA connector.

<sup>2</sup> 008900 is equipped with a dump switch trigger only.  
016548 is equipped with a dump switch trigger and a dump lock-out toggle switch.

# Section 6: Drawings

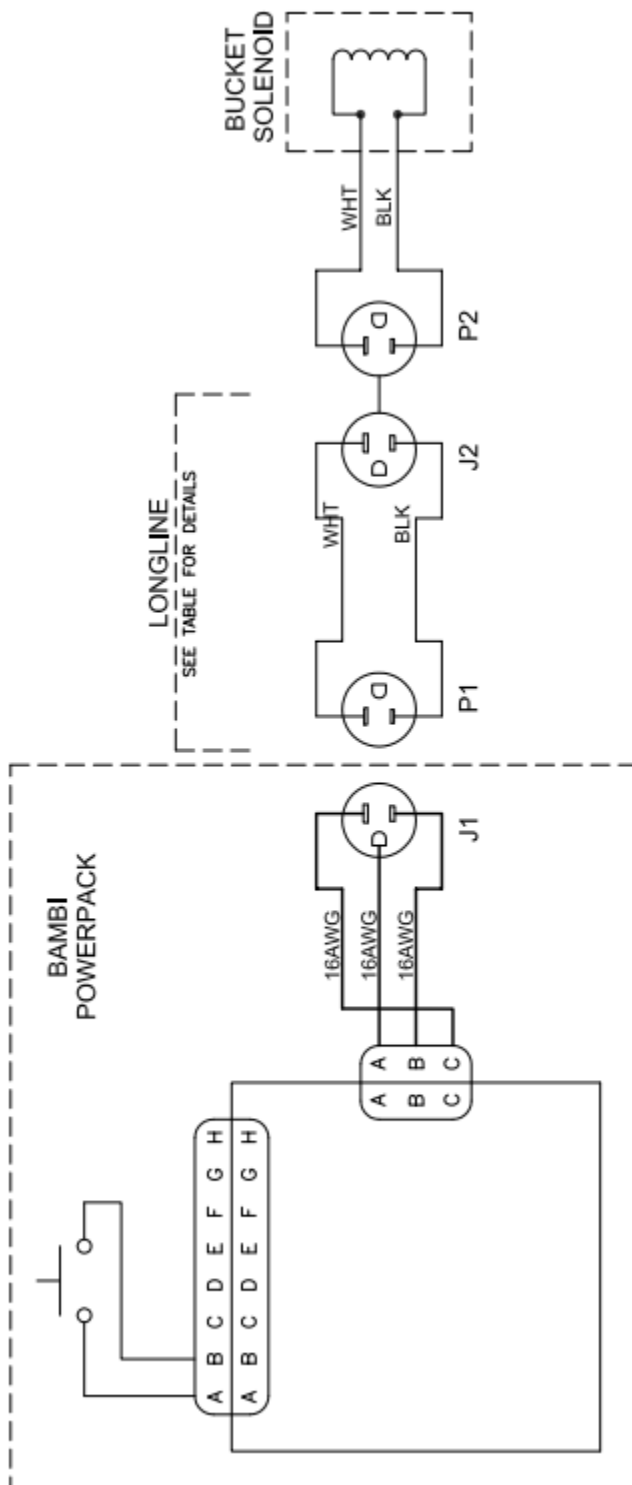
## Crew Controls – Bambi Bucket

RECOMMENDED COMPONENTS

ITEM	DESCRIPTION	SPECIFICATION
J1,J2	CONNECTOR, RECEPTACLE	NEMA 5-15R
P1,P2	CONNECTOR, PLUG	NEMA 5-15P
—	WIRE, #20 AWG	MS22759/16-20
—	WIRE, #16 AWG	MS22759/16-16

LONGLINE DETAILS

LENGTH	GAUGE	TYPE
50 FT	#14 AWG	14/2 SOW
75 FT	#14 AWG	14/2 SOW
100 FT	#14 AWG	14/2 SOW
125 FT	#12 AWG	12/2 SOW
150 FT	#12 AWG	12/2 SOW
200 FT	#12 AWG	12/2 SOW



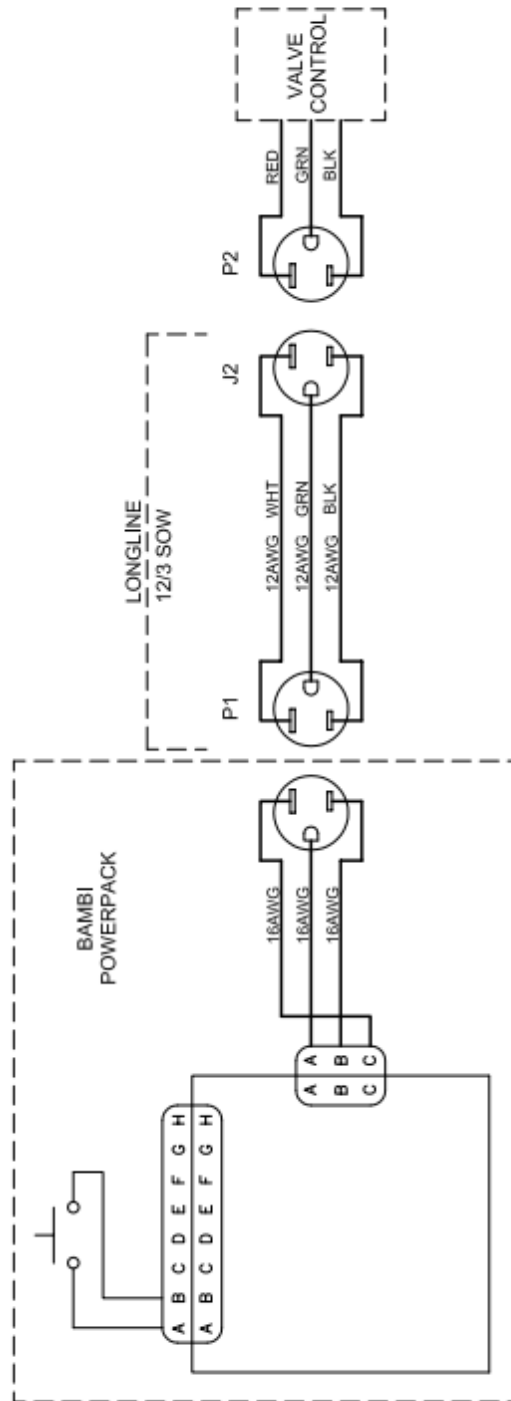
- NOTES:
1. THESE ARE RECOMMENDED INSTALLATION INSTRUCTIONS ONLY. ALL INSTALLATIONS TO BE DONE BY QUALIFIED PERSONNEL IN ACCORDANCE WITH APPLICABLE LOCAL REGULATIONS.
  2. ALL GROUNDS, SOLDERED TERMINALS, AND CRIMPED TERMINALS DONE IN ACCORDANCE WITH AIRCRAFT MANUFACTURERS INSTRUCTIONS.

## Section 6: Drawings

### Crew Controls – Bambi MAX

RECOMMENDED COMPONENTS

ITEM	DESCRIPTION	SPECIFICATION
P1	CONNECTOR, PLUG	NEMA 5-15P
J2	CONNECTOR, RECEPTACLE, IP67	NEMA 5-15R, IP67
P2	CONNECTOR, PLUG, IP67	NEMA 5-15P, IP67
—	WIRE, #20 AWG	MS22759/16-20
—	WIRE, #16 AWG	MS22759/16-16
—	WIRE, #12 AWG	MS22759/16-12



## Section 7: Warranty

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### Section 7: Warranty

SEI Industries Ltd. (the company) agrees to grant a warranty for a period of one year from the date of purchase of Bambi Bucket systems on the following conditions:

- a) The company's sole obligation under this warranty is limited to repairing or replacing, at the company's sole discretion, any product shown to be defective.
- b) The company's products are not guaranteed for any specific length of time or measure of service, but are warranted only to be free from defects in workmanship and material for a period of one year to the original purchaser.
- c) To the extent allowable under applicable law, the company's liability for consequential and incidental damages is expressly disclaimed. **The company's liability in all events is limited to and shall not exceed, the purchase price paid.**
- d) This warranty is granted to the original purchaser of Bambi Bucket systems and does not extend to a subsequent purchaser or assignee.
- e) The company must receive notification in writing of any claims of warranty from the original purchaser which must give details of the claimed defect in the product.
- f) Where the original purchaser is claiming under warranty, the product must be returned to the company for inspection with all transportation and duty charges prepaid.
- g) The warranty does not extend to any product that has been accidentally damaged, abraded, altered, punctured, abused, misused or used for a purpose which has not been approved by the company.
- h) This warranty does not apply to any accessories used with the product that are not supplied by the company and any warranty on such accessories must be requested from the manufacturer or dealer of the accessories.
- i) In the event the original purchaser does not give notice of a warranty claim, within one year of the original purchase of the product, it is understood that the purchaser has waived the claim for warranty and the purchaser and/or any subsequent purchaser must accept the condition of the product, without warranty.
- j) Any technical information supplied by the company regarding the product is not a condition of warranty but rather is information provided by the company to the best of its knowledge.
- k) There are no implied warranties nor is there any warranty that can be assumed from any representation of any person, except the company itself.

#### **Exclusions**

- l) This warranty is void if the product is not installed, used and/or maintained in accordance with the operations manual supplied by SEI.
- m) All Bambi Buckets are designed and manufactured with substantial safety margins. It is the responsibility of the user to ensure that the bucket is maintained to a safe standard.