Classic Power Pack SP-C
Operating Instructions

Classic Power Pack

5708 E Schaaf Road

Independence, Ohio 44131

Phone:

1-800-765-4131

(216) 524-0099

Fax:

(216) 524-6331

E-Mail:

info@sifcoasc.com

We're on the Web!

See us at:

www.sifcoasc.com

Table of Contents

Overview

Congratulation's you've purchased a brand new production power pack with a number of advanced features. We've designed this user friendly guide to walk you step-by-step through each feature of your new power pack. We'll show you what keys to press and what happens when you press them. Follow along section-by-section and you will quickly become proficient operating your power pack.

The SIFCO Classic Power Pack is a rectifier that will perform the selective (brush) plating process. The Classic Power Pack ranges in sizes from 15 Amps to 60 Amps. The size of the power pack is determined by the amperage and voltage of the unit.

Getting Started

From the beginning, we will help you unpack the unit, ensure all the contents are present and explain your new power pack. Turn to page 7 to get started.

The Basics

What do all the buttons on the control panel do? How do I get power out of the unit? In this section we will introduce you to the basic power pack operations. Turn to page 9 to get started.

Calibration

Your power pack was designed to easily and accurately be calibrated.

Calibration enables consistent performance, quality results and is regularly required by government and quality policies. Review the PE Manual for more information.

Do you need additional help?

Contact us at 1-800-765-4131 or www.sifcoasc.com

Unpacking

Inspect your box for damage. If any damage is present contact the shipping carrier as well as SIFCO ASC. The box should contain your Power Pack as well as the operating manual and calibration paperwork. If you need to contact SIFCO ASC please reference your model and serial number which is found on the back or top of the unit.

Safety

This power pack is designed for selective plating for industrial applications.

- The unit should be unplugged for installation, maintenance and cleaning.
- To avoid electrical shock and/or damage to the unit, do not immerse the unit, cord or plug in any liquid.
- This unit is not intended for outdoor use.
- Make sure unit is connected to the correct input voltage.
- Always plug unit into an outlet that is grounded.
- Do not use if the unit, cord or plug have been damaged or are malfunctioning.
- Always place the unit upright in the position it was intended to operate. Do not mount or operate the unit at an angle or on its side.
- Do not cover or block the output fan.
- Only an authorized SIFCO ASC service center should handle any repairs.
- Any tampering with, opening of, or abuse of the unit will void the warranty.

The power pack is temperature controlled. If the power pack exceeds temperatures of 104˚F, output will decrease and the unit will overload. Once the power pack is cooled down you may restart it.

If contaminated air (i.e.: vapors from the plating solution) gets into the power pack the internal components of the power pack can be damaged. Because of this, the solution should be kept 12 inches away from the power pack. Any solutions that get on the keypads or outside of the power pack should be immediately removed. If not, the solutions can damage the key pads over time.

Always disconnect the power pack before servicing. Never connect loads such as batteries or generators to the power pack. Inside the power pack there are components that have High Voltages and are marked as such. Only qualified personnel should service the power pack.

Different types of Classic Power Packs

SIFCO Process® Classic Power Packs

Part Number	Model	Amps Output	Volts Output	Weight Lb. (Kg)	Line Amps
90115201	SP-C 15-20-115-1	15	20	20 (9)	4
90115203	SP-C 15-20-230-1	15	20	20 (9)	2
90130201	SP-C 30-20-115-1	30	20	20 (9)	7
90130203	SP-C 30-20-230-1	30	20	20 (9)	4
Dimensions: (15" W x 8" H x 13" D)					
90160201	SP-C 60-20-115-1	60	20	46 (21)	14
90160203	SP-C 60-20-230-1	60	20	44 (20)	7
Dimensions: (15" W x 8" H x 12" D)					

Output leads for power packs must be purchased separately (see page 10)

- 100% constant voltage and current regulation
- Output ripple <1%
- Overload protection
- CE compliant
- Forward/reverse polarity switching
- LED displays for volts, amps, and ampere hours
- Camlock connections for plating leads
- 2-year manufacturer's warranty

Classic Power Pack

Output Leads

15 AMP

75 AMP

150 AMP

Output Leads

Description	Part Number
Lead Positive Red 15 Amp, 3m (9.8 ft.) (includes fork terminal and 75 amp female connector)	60352020
Lead Negative Black 15 Amp, 3m (9.8 ft.) (includes fork terminal and alligator clamp)	60352025
Lead Positive Red 75 Amp, 3m (9.8 ft.) (includes #8 modified ring, twistlock 150 amp plug, and 75 amp female connector)	60352030
Lead Negative Black 75 Amp, 3m (9.8 ft.) (includes #8 modified ring, twistlock 150 amp plug, and alligator clamp)	60352035
Lead Positive Red 150 Amp, 3m (9.8 ft.) (includes twistlock 150 amp plug and 150 amp female connector)	60352050

Adapters

Description	Part Number
Adapter for 15 Amp Lead to SP Power Pack - RED	20506105
Adapter for 15 Amp Lead to SP Power Pack - BLACK	20506106
AC-M8 Adapter for #75 Handle	12401250
FT adapter 90 degree handle	12401252
ID/PT adapter for 90 degree handle	12401253


Output Leads


Handles


FT & ID/PT 90 Degree Handle Adapters

TIP: The Output Leads are not supplied with the power pack and must be ordered separately.

Getting Started

Your power pack was designed and tested to be simple to use and error free. We will assist you from unpacking to production through a simple step by step process.

In this section we will explain how to:

- Inventory the package contents
- Familiarize yourself with the power pack
- Identify the controls
- Plug in your power pack

Inventory the Package Contents

Open the carton and remove entire contents. The following items are included with every power pack. After taking inventory, if you discover that an item is missing please contact us. If the part was damaged in transit please contact your carrier.

Power Pack

Calibration Certificate

hendor plating electronic

Calibration Certificate No. 2434 Page 1 of 2

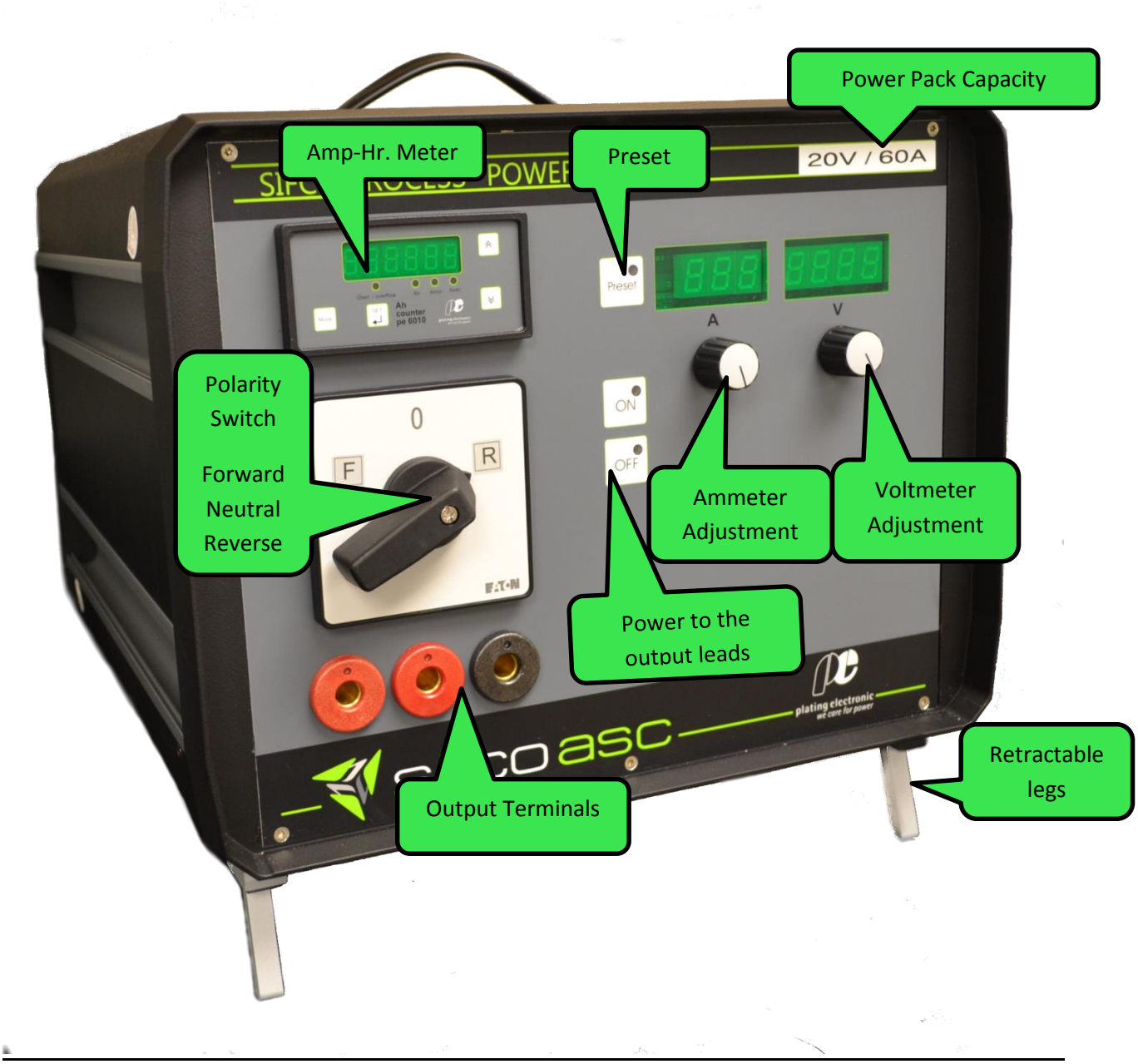
-Date Certification/Calibration: May 7, 2015
-Next Calibration Due: May 7, 2016
-Equipment Calibrated: **Electroplating Rectifier** – Power Pack
-Model Number: 61160201 pe1068
-Serial Number: pe1113/69.017
Owner/Operator: Sifo ASC

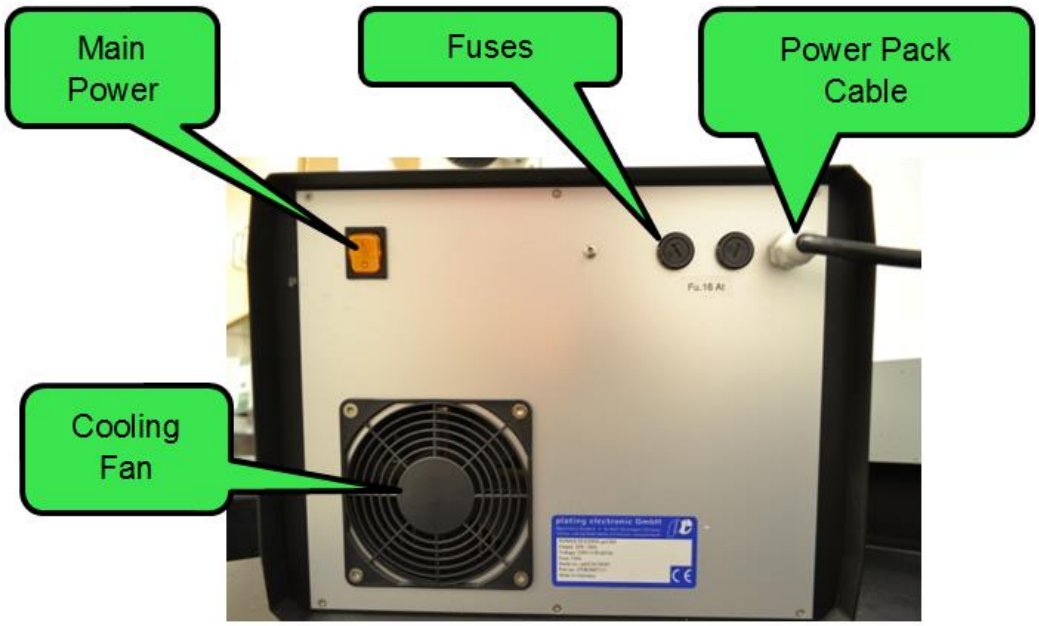
This is to certify that the SIFCO Power Pack (Electroplating Rectifier) listed on this document was calibrated on the date shown using the manufacturers Calibration Test Procedure and is within the limits and tolerances specified by the manufacturer which meet or exceed the standards set forth by MIL-STD 868 **.**

Operational Manual

Classic Power Pack SP-C

Getting Familiar with your Power Pack





Plugging in your Power Pack

TIP: It is strongly recommended that only a certified and experienced electrician perform any unit wiring.

Before using your power pack inspect the cord and plug for any damage.

The Basics

The next few pages will introduce you to the basic operation of your Power Pack. In the sections that follow, we will explain the features and operation of your power pack and calibration.

In this section we will explain:

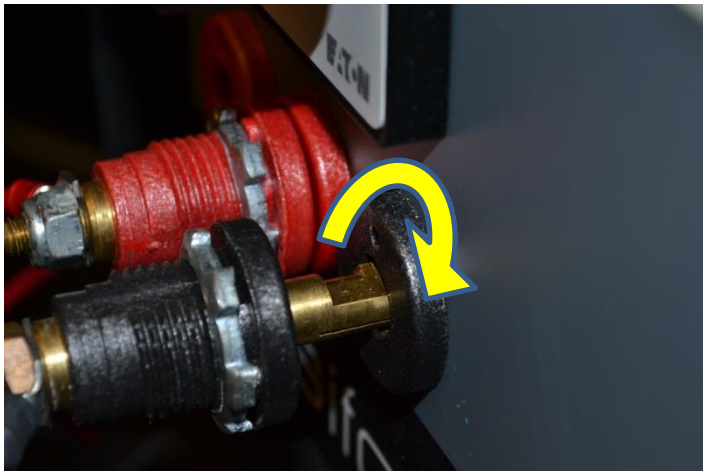
- Attaching a load
- Getting power out of your unit
- Voltage output
- Amp-hour meter
- Reading the amp-hour meter

Attaching a Load

TIP: To attach a load you will need the power pack and output leads (shown below.)

1. Insert the positive (red) male terminal into the positive (red) lead output terminal on the front of the power pack; this is the output terminal. Turn the lead adapter clockwise. Turn until it locks into place.
   The power pack has two positive output terminals. This allows you to have one lead to use for preparatory tools and a second lead attached to your plating tool. It also allows you to have connections to two handles to use on the larger plating tools.

2. Insert the negative (black) male terminal in the black output terminal on the front of the power pack.



Turning the Power Pack on

Once you have plugged your power pack into the correct AC voltage and are certain that nothing is blocking the cooling fan, follow these steps to turn your unit on.

TIP: If this is your first time operating the power pack, ensure your leads are not connected to each other or to a workpiece.

1. Turn on the main power on the 60 Amp Power Pack the switch is on the back of the unit. On the 15 and 30 Amp Power Packs the main power switch is on the front of the unit.
2. After the main power is on, turn on the power to the output terminal leads on the front of the unit.

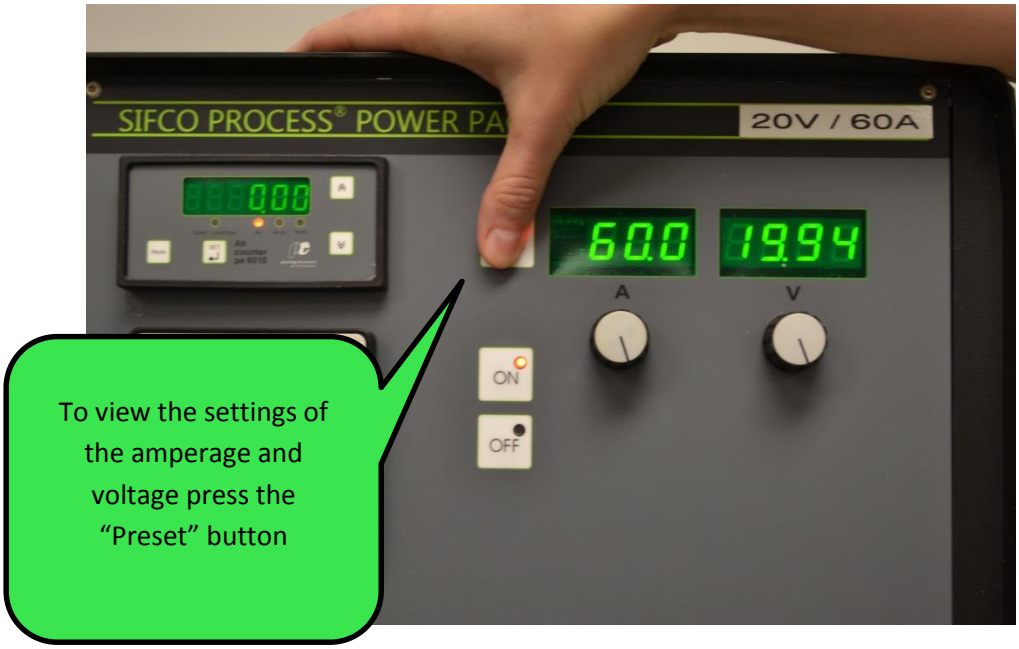
Adjusting the Voltmeter and Ammeter

The SIFCO Process Classic Power Pack can be operated using constant voltage or constant current. Selective brush plating operations are typicaly, carried out using constant voltage.

To operate the unit in constant voltage, turn the amperage adjustment knob fully to the right (clockwise) to ensure you can take advantage of the full amperage capacity of the unit.

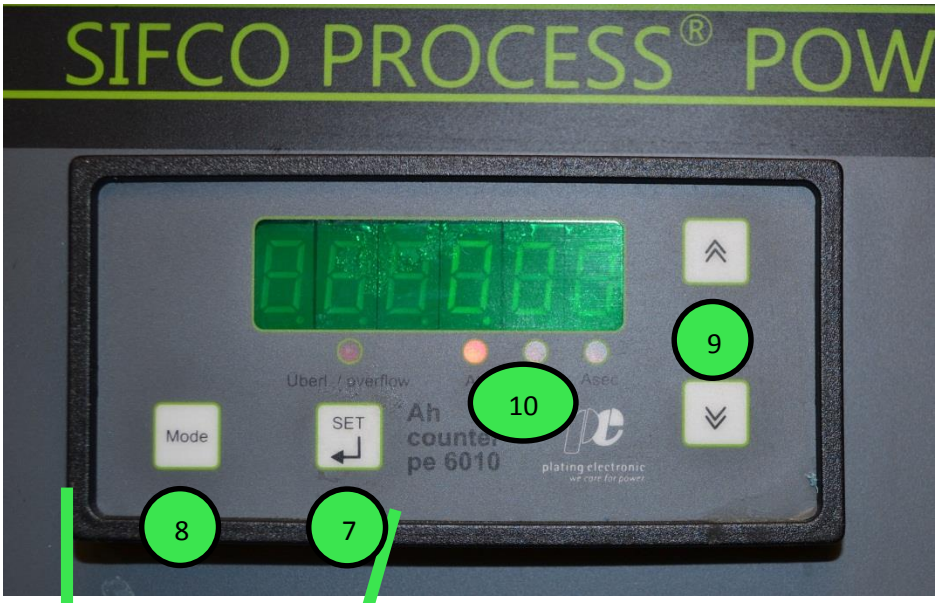
The voltage adjustment knob is used to control the prepatory and plating operations.

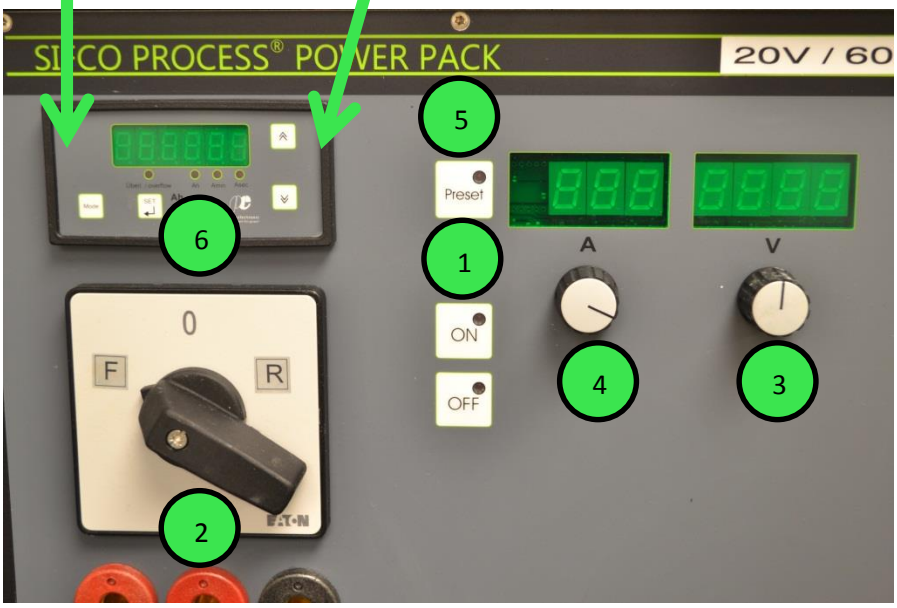
TIP: Check your power pack amperage and voltage settings using thre “Preset” button.
TIP: You can limit your plating amperage by using the amperage control knob to set the amperage to a desired level.
TIP: The response of the voltmeter to a voltage adjustment under no load will be slow. This is normal. The response under load is significantly faster.



Amp-Hr Meter

The Amp-hr meter measures the quantity of electricity passed through the dc circuit (amps & time) and allows the thickness of SIFCO Process deposits to be controlled. To set your Amp- hr meter to zero you need to hold the set button for about 5 seconds until the display reads 000.00. The Amp- hr meter can be changed to reflect Amp minute and Amp seconds. Turn to page 14 to see directions on how to complete this if desired.





7. Amp hour reset must be depressed for about 5 seconds

8. Mode

9. Arrows to change display

10. Lighted Display of Amp Hours

1. Power to the output leads

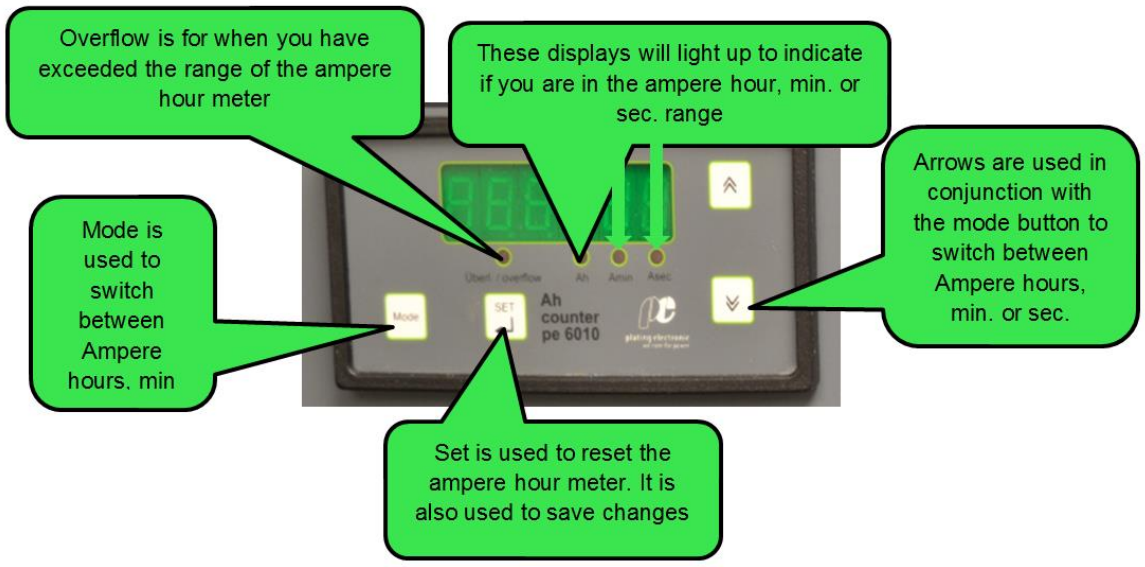
2. Forward/ Neutral/ Reverse

3. Voltage control

4. Amperage control

5. Preset views Amps and Volts setting

6. Amp-hour meter



To switch between ampere-hours, minutes and seconds, press and hold the mode button and use the up and down arrows to switch between the options.

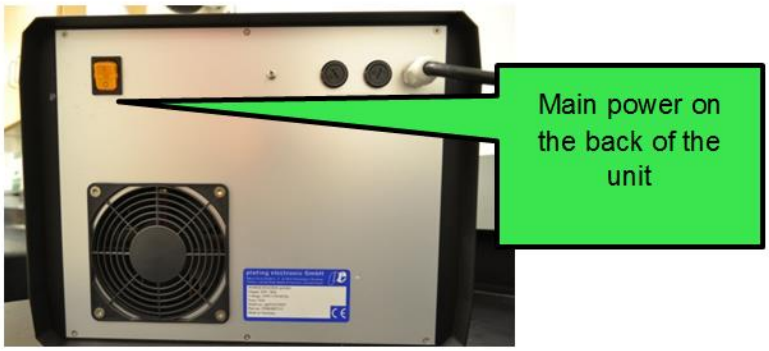
If the overflow lights up and the unit turns off this is because the machine has exceeded the total Amp-hr value that is readable i.e. if you pass 999.999 the overflow light comes on and the counter resets to 000.000

Typical Operation Cycle

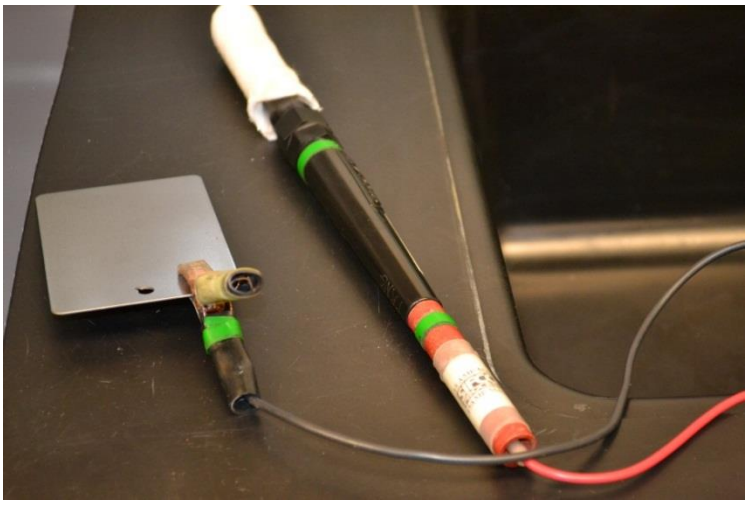
The following shows how the power pack is used in the operation of selective brush plating. This example is for Copper 2050 on Stainless Steel.

Step	Operation	Material	Volts	Polarity	Visual Test & Comments
1	Electroclean	Electro cleaning code 1010/4100	10	Forward	
2	Rinse	Clean Tap Water			No water breaks.
3	Prewet and Etch	No. 4 Etching 1024/4250	8	Reverse	Uniform, light gray etched surface. Color of solution in cover at first becomes yellow. Continue etching until color becomes green. Prewetting improves uniformity of etch.
4	Rinse	Clean Tap Water			
5	Prewet and Activate	No. 1 Activator 1021/4200	15	Forward	None: No change in appearance should be observed.
6	No Rinse				
7	Prewet and Preplate	Nickel Acid 2080/5600	10	Forward	Light gray and milky to matte deposit.
8	Rinse	Clean Tap Water			
9	Prewet and Plate	Copper 2050/5250	3 to 12	Forward	Clean copper colored and matte deposit.

1. Attach the leads to the power pack; turn the main power on, and then the power to the output leads must be turned on.



2. The black lead is then attached to the work piece (part) that you are plating. The red lead is attached to the tool that you will be plating with.



3. Set the polarity to “Forward” and adjust the voltage to 10 volts for the first step.

4. Saturate the anode with Electroclean solution and move the anode on the part. The Ammeter should indicate passage of current, and the ampere-hour meter will begin counting.

5. Rinse the part, change the polarity of the power pack to “Reverse” and adjust your voltage to 8 then use the Etch solution on the anode and prewet the part, then attach the anode to the power pack and move the anode on the part. The Ammeter should indicate passage of current, and the ampere-hour meter will begin counting.

6. Rinse the part, change the polarity of the power pack to ”Forward” and adjust your voltage to 15 and take the Activate solution on the anode and prewet the part, then attach the anode to the power pack and move the anode on the part. The Ammeter should indicate passage of current, and the ampere-hour meter will begin counting.

7. **Do Not** rinse the part, adjust your voltage to 10 and take the Preplate solution on the anode and prewet the part then attach the anode to the power pack and move the anode on the part. The Ammeter should indicate passage of current, and the ampere-hour meter will begin counting.

8. Rinse the part, adjust your voltage to 3-12 and take the Plating solution on the anode and prewet the part, then attach the anode and move the anode on the part. The Ammeter should indicate passage of current, and the ampere-hour meter will begin counting.

9. When the computed “Amp-Hours” are passed on the meter remove the anode from the part push the off switch on the Power Pack and rinse the part.

Care and Cleaning

The frequency of cleaning your power pack will depend on the environment in which you will be working.

After each use take a damp rag and wipe down the unit and leads to remove any solution. Just use water to clean the unit.

Additionally, we recommend every 6 months doing the following:

- Perform preventative maintenance at regular intervals (every 6 months is suggested).
- Check that the fans are functioning and noise free.
- Check fans and blow away dirt with compressed air.
- Clean contact surfaces of the DC connections.
- Check for loose connections or loose screws.

All cleaning should be done with the unit disconnected. With proper care and maintenance your power pack should last you many years.

5708 E Schaaf Road

Independence, Ohio 44131

Phone:

1-800-765-4131

(216) 524-0099

Fax:

(216) 524-6331

E-Mail:

info@sifcoasc.com

We're on the Web!

See us at:

www.sifcoasc.com

sifcoasc