Calibration procedure for PS 3635 Power supply.

The calibration is recommended to be done in following sequence.

1) Output voltage adjustment:
This is done using preset PR104 located on the control PCB (PS3635 CONTROL/02) mounted on the rear of the chassis.
Keep a calibrated voltmeter connected at the output terminals of the unit. Keep the Voltage potentiometer (Coarse and Fine Both) at their maximum position. Now check/adjust the output voltage at 37.5V(+/-.0.2V).

2) Adjusting the relay trip points. (Repeat this procedure for both the Heatsink modules left and right simultaneously, both the module PCBs are mirror images of each other)
Keep the calibrated voltmeter connected at the output. Slowly increase the output voltage. Check the output voltage when the first relay RL1 switches ON. (This has to be sensed by finger as the RL1 relays are on both the heatsink modules and both will operate together). This first relay changeover should take place between 5.5V to 7.5V output voltage. This can be adjusted using preset trimmer PR1 on each heatsink PCB module. This means at this voltage adjust the PR1 preset trimmers on both the modules such that RL1 on both the modules are just switched ON.
Now once the first relays (RL1) are operated you can further increase the output voltage. At output between 16V to 17V the second relays RL2 (on both the modules) should operate. RL2 operation can be adjusted with preset r'trimmer PR2. When RL2s switch ON, the circuitry switches OFF the relays RL1 on both the modules.
The RL1s again should operate 2nd time at output voltage between 21V to 22V. This is just a check, this tripping should not be adjusted with any of the presets as it automatically gets adjusted with earlier settings of PR1 and PR2.
Note: This relay tripping adjustment need not be adjusted unless the power supply is giving very high ripple at full load, or faults similar to this. For general calibration of the power supply this relay tripping adjustment procedure can be skipped.

3) Current tripping adjustments: Please refer the control PCB on the rear side of the chassis again. There is a three pin header (CNN1) near connector CN7. There will be a black header shorting link on two of the pins of this header CNN1.
If the shorting link is situated on the rightmost two pins of CNN1 then for adjusting Current tripping use preset trimmer PR101 on the same PCB. The tripping should be adjusted at 40.5 Amps.
For this keep around 36V at the output and connect load such that there is a current of around 40-41A flowing at the output of the power supply. Now the current tripping can be adjusted by slowly increasing the output current.
If the Shorting link is on the left most two pins of CNN1 then the current tripping can be adjusted using PR101A using the same method.

4) Internal LCD Voltmeter calibration:
Keep a calibrated voltmeter connected at the output terminals. Adjust the trimpot situated on the back side of the internal LCD voltmeter to match with the external calibrated voltmeter at maximum rated output voltage (36V). This time the coarse and fine voltage pot-meters should be at maximum positions. The calibration at various other output voltages between 0-36V, should be checked also.

5) Internal LCD Current meter calibration:
Connect calibrated external current meter in series with the load, with 36V at the output terminals.
Adjust the reading of internal LCD current meter to match with the external one with the help of the trimpot situated on the back side of the internal LCD meter at maximum rated current of 40A. This time the coarse and fine current pot-meters should be at maximum positions. The calibration for various other points between 0-40A, should be checked also.
6) Current limit indication calibration:
Adjust the output current and the position of the Current pots so that the power supply is in fully CC mode at 40.0A and the LCD current meter is showing 40.0A reading. Now make the output voltage zero by varying the voltage pots to minimum positions. Please note that this time the position of the current potmeters should not be touched. Now change the “output ON/OFF” switch to OFF position. Then keep the “C-limit” Toggle switch pressed down and adjust the LCD current meter reading to show 40.0 with the help of PR105 situated on the control PCB on the rear of the chassis. Now release the “C-limit” switch and change the “output ON/OFF” switch to ON position and make the voltage pot-meter position maximum and again the current meter should show the earlier reading of 40.0A which is the external flowing current. In the same manner the C-limit indication can be checked at different output currents.