CHARGE5000 Series Operating Instructions

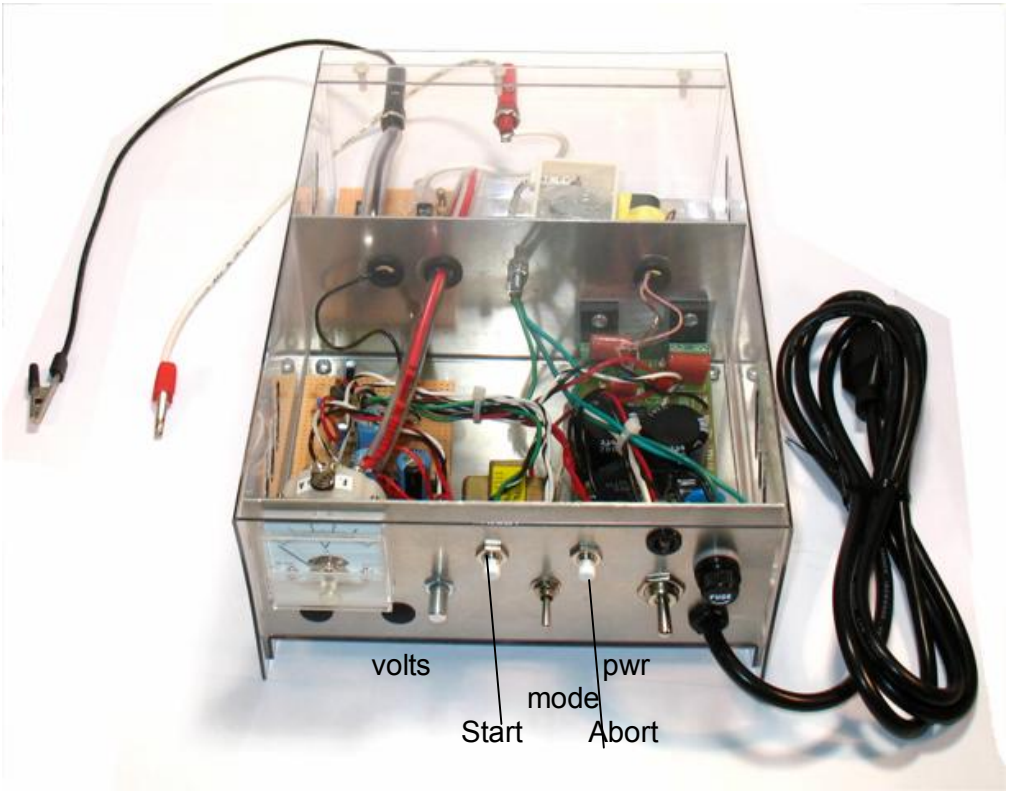
Available in 500volt/2000volt/5000volt Contact bob@amazing1.com for optional parameters

DANGER Do not use this unit unless you fully under stand high voltage and its hazards.

DANGER A SERIOUS DEADLY SHOCK HAZARD WILL EXIST WHEN USING WITH HIGH ENERGY CAPACITORS ABOVE 50 JOULES.

Calculate JOULES by squaring the charge voltage, then multiplying by ½ the capacitance in microfarads and dividing by 1 million. If over 50 JOULES use extreme caution as improper contact can electrocute or cause serious burns

Output Leads



Electronic circuit charges up high energy banks of electrolytic or photoflash capacitors from 500 to 5000 volts. Recommended capacities are between 100 to 10,000 mfd. This equates out to many thousands of joules! Note the kinetic energy of a 30-06 is 750 joules. Units are manually voltage controlled by an external front panel pot. The front panel meter indicates the charging voltage and allows presetting the target charging voltage. This feature helps prevents over charging and potentially dangerous explosions. Charging is current controlled by our unique circuitry and does not require power robbing resistor. Unit operates from direct 115 vac power. Charging rate is over 200 (watt-sec) joules but will depend on load impedance. Size is 10 x 7 x 3 ¾”

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OPERATION STEPS

Explanation of controls

The ***mode switch*** allows two settings where the capacitor will charge in the ***down*** position to its selected voltage with the unit turning off at that point. This setting in for larger capacitors that are scheduled to be

discharged before much of the charge leaks off. The other ***upper*** setting of the mode switch allows the capacitor to slightly discharge and then automatically turns on again to replenish any lost charge thus keeping the capacitor always charged up indefinitely.

The ***start switch*** is a push button that must be depressed to start the charging action1 independent of the mode switch setting. You may also repress this switch to restart the charge in either mode. This is convenient when charging a large storage capacitor and topping it off should it drop too far. The system still will go in the off mode once the preset target charge is reached.

The ***abort switch*** is a push button that can abort the charging action at any time and requires re-pushing the start switch

1. Select capacitor and use above formula to calculate the joules for determining if hazardous.
Always verify that the capacitor is discharged. You can use an insulated screwdriver for small electrolytic or a discharge resistor shorting wand. Larger capacitors will usually have a shorting wire across terminals

2. Connect a proper range voltmeter across capacitor to monitor charging voltage if you require higher accuracy

3. Verify all controls are in their "off" position and plug into a grounded 117 vac jack.

4. Turn unit on and rotate ***voltage control*** to required setting. **Turn off the unit**

Re-verify a positive earth ground. If in doubt run a separate heavy gauge #14 wire from the frame of the charger to a known earth ground. This very important for safety

5. Connect leads cross capacitor and observe polarity if any. Electrolytics are polarized

6. Push the start switch and note voltage starting to build up on capacitor. Do not allow to charge beyond the capacitor volt rating as indicated by the range voltmeter. Obviously larger values take longer charging time. You may increase or decrease the voltage with the control knob but must push the start switch for every change

7. There is no more data we can give as to the safety of handling the charged capacitors. We have no idea what your application is.

You are on your own and are assumed to understand the hazards of handling these very DANGEROUS and lethal amounts of electrical energy.

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