MitchElectronics Ltd.

AC-DC REGULATOR

Electronic Kit | Data Sheet

PRODUCT IMAGE	SCAN FOR INSTRUCTIONS PAGE	SCAN FOR RESOURCE PAGE
S. J. C. A. C. P. S. C.		

MANUFACTURER	MitchElectronics	
COUNTRY OF ORIGIN	United Kingdom	
ROHS / REACH COMPLIANT	Yes	
PRODUCT DESCRIPTION	Many circuits require a voltage supply that is constant and unchanging and such circuits would include radios, calculators, computers, monitors, phones, and even cars. Batteries are a good source of constant voltage but since they are usually limited in size, weight, and power capacity the mains electricity are often used. But this source of electricity is constantly changing as it is AC (alternating current), which is not suitable for DC (direct current) circuits.	
	Therefore, an AC-DC converter is needed to convert the alternating current into a direct current! This kit will not only do this but will also regulate this converted DC source so that it outputs a smooth constant 5V which can be used to power many projects.	

PRODUCT SPECIFICATION:

- Component Count: 18
- Battery Powered?: No
- Operating Voltage: 7Vpp to 16Vpp AC in
- Operating Frequency: AC Input up to 1KHz
- Output Voltage: 5V
- Output Current: 200mA Max
- Dimensions (PCB): 60mm x 31mm
- Mounting Holes: No
- Prebuilt: No Kit form
- Batteries Not Included

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PARTS INCLUDED:

- 2 x 100nF Capacitors
- 1 x 100uF Capacitor
- 1 x 470uF Capacitor
- 6 x 1N5817
- 1 x 7805

- 1 x Red Wire
- 2 x Green Wire
- 1 x Black Wire
- 1 x PCB

APPLICATIONS

The AC-DC Regulator Kit is highly ideal for teaching students about AC rectification at low voltages. The use of a regulator, capacitors, and rectifier show all stages of a basic power supply while the low component count allows for the kit to be constructed in under an hour. The kit is also useful in converting AC power from small motors into a DC source for experimentation with power generation as well as the rectification of AC voltages after being stepped down by a transformer. If a battery requires stepping down then the 5V source kit should be chosen instead. If a dual-rail supply is required from a single supply then the Simple Power Supply should be chosen instead.

KIT INSTRUCTIONS

https://mitchelectronics.co.uk/resources/ac-dc-kit-instructions/

ELECTRONICS CONSTRUCTION MANUAL

https://www.mitchelectronics.co.uk/documents/electronicsConstructionManual.pdf

NOTES

Note that product specifics such as output frequency depend on the tolerance of the components. The numbers provided here are an approximation only. Also take note that the estimated delivery is not guaranteed (unless special delivery is chosen) and free delivery has a maximum waiting time of two weeks. Any product that is returned which is built using lead solder is ineligible for a refund.

All parts sold by MitchElectronics are compliant with RoHS and REACH directives which ensure that they can be used in commercial environments as well as complying with environmental laws.