



# User Manual

## C Type Power Filter

Model C3 and C3BLK



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## Protect Your Investment

Congratulations and thank you for selecting and investing in APC's Model C5 Power Filter. At APC, we know you have made an intelligent choice sure to reward you for many years. To ensure you receive all the benefits and protection that accompany your purchase, please take a few minutes to fill out and mail the enclosed Warranty Registration Card, or complete the online form at: [www.apc.com](http://www.apc.com).

**Note:** Under California law, failure to register your purchase may not exclude you from provisions of the Warranty and Equipment Protection Policy. The benefits of warranty registration are outlined below.

### Registration

By registering your purchase now, it guarantees you will receive all the information and special offers you qualify for as the owner of this product.

### Verification

By registering your purchase now, it confirms your right to maximum protection under the terms and conditions of the Warranty, and Equipment Protection Policy.

### Confirmation

By registering your purchase now, you have a way to confirm yourself as the owner of the product in the event of fire, theft or loss.

## Safety Symbols



This “bolt of lightning” indicates uninsulated material within your unit that may cause an electrical shock. For the safety of everyone in your home, please do not remove the product cover.



This “exclamation point” calls attention to features for which you should read about in this Manual to prevent operating and maintenance problems.

## Warnings, Cautions and Notes

### Warnings

Warnings provide information about a procedure that, if not performed exactly as stated, may result in injury or death.

### Cautions

Cautions provide information about a procedure that, if not performed exactly as stated, may result in equipment damage.

### Notes

Notes provide information that is essential to highlight.

## Class B Labeling and Instruction Manual Requirements

Devices subject to Certification must be labeled with an FCC Identifier. Devices subject to Verification or Certification must be labeled with the following compliance statement:

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

In addition, for a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

***Warning:* Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

***NOTE:* This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the CC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:**

**Reorient or relocate the receiving antenna.**

- Increase the separation between the equipment and receiver.**
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- Consult the dealer or an experienced audio TV technician for help.**

If shielded cables or other specialized accessories are necessary for the unit to achieve compliance, a statement similar to the following should be added:

**Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.**

## Introduction

Congratulations on purchasing APC's C3 Power Filter, shown in Figure 1. The power filter comes in two models. The C3 is silver and the C3BLK is black. However, the C3 and C3BLK have the same performance, features and functionality.

The C3/C3BLK Power Filter will protect your high performance audio and video (AV) system from damage caused by power surges, spikes and lightning. Protection is guaranteed.

Isolated noise filter bank (INFB) technology eliminates electromagnetic interference and radio frequency interference (EMI/RFI) as sources of audio and video signal degradation.

Data line surge protection jacks stop surges from traveling over phone and ethernet lines. Digital Satellite System (DSS), cable modem (CM), and cable television (CATV) coaxial cable lines are equally protected. With APC, your entire home entertainment experience is protected from damage that might result from bad power conditions.



**Figure 1. C3 Power Filter - Front View**

## Proven Expertise... Proven Reliability

From corporate data centers to home offices, APC is regarded as an innovator, designer and manufacturer of high quality power protection solutions. With a proven reputation for Legendary Reliability™, leading companies depend on APC every day to protect and support many of the most critical networks in the world. Over the last 20 years, APC has been a pioneer in the development of new power protection technologies that have resulted in countless industry awards, design patents, and an installed-base numbering in the tens of millions of units. Multiple R&D centers, along with APC-owned and controlled factories ensure APC solutions are the safest, most advanced and reliable products available. When you buy APC, you buy "peace of mind".

## Safety Precautions

Please ensure that you have read and understand all of the safety information located in the front of this manual. If you have any questions about the safety information, or are concerned that your home may not be properly wired for this equipment, please contact APC Technical Support, or a qualified and licensed electrician.

## Package Checklist

**Note:** The C3 and C3BLK have the same performance, features and functionality. The only difference is color. In this manual, "C3" will be used to refer to both the silver and black models.

Check your C3 Power Conditioner package for the following items:

Item No.	Item Description	Quantity Shipped
1.	C3 Power Filter	1 ea.
2.	Coaxial Cables	1 ea.
3.	RJ11 Telephone Cables	1 ea.
4.	Model C3 User Manual	1 ea.
5.	Equipment Protection Policy Sheet	1 ea.
6.	Warranty Registration Card	1 ea.

## Unit Power Capacity

The C3 is rated for 15 Amps. The C3 is capable of supplying the dynamic peak current draws required by any component designed to work on a 15A circuit. Despite their nameplate power ratings, high performance AV equipment draw much less than their listed power ratings.

## **Features**

The following paragraphs describe the Model C3 Power Filter's major features.

### **Surge Protection**

The C3 Power Filter provides a high level of surge protection for the voltage going into the unit, and thus protects the devices connected to the unit. Additionally, the coax and radio frequency (RF) connectors are protected against surges traveling over coaxial lines to protect your digital satellite system (DSS), cable TV (CATV) box, or cable modem (CM). Similarly, the telephone line surge protection feature provides protection for telephone, modem, digital subscriber line (DSL) modem, fax, digital video recorder (DVR), DSS system, set-top internet service provider (such as WebTV), or pay-per-view cable TV function.

### **Isolated Noise Filter Banks**

The C3 also provides isolated noise filter bank (INFB) technology to eliminate electromagnetic (EMI) and radio frequency interference (RFI) that can negatively impact sound and video quality.

### **Full Outlet Coverage**

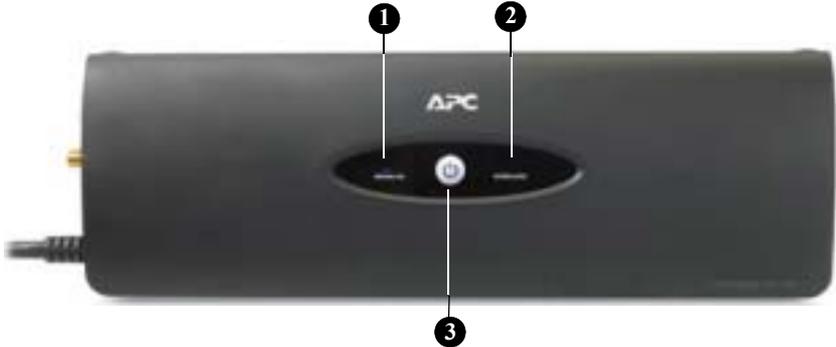
Surge protection and noise filtering are provided for all of the C3 unit's outlets.

# Top Panel

The following section describes the controls and indicators on the top panel.

## Top Panel Controls and Indicators

The top panel controls and indicators for the C3 Power Filter are detailed in Figure 2. Each numbered callout refers to a corresponding numbered description found immediately below the picture.



**Figure 2. C3 Front Panel Controls and Indicators**

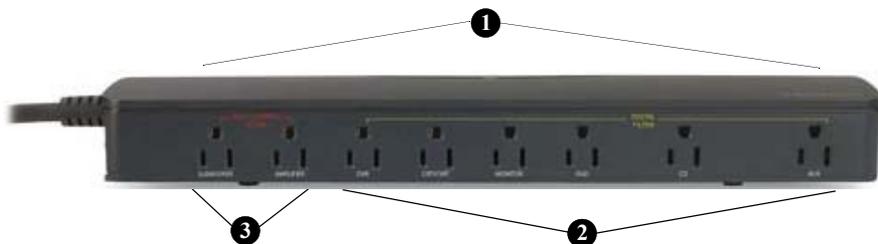
- 1 Wiring OK Status Indicator**  
When lit, the receptacle the C3 is plugged into is properly wired. If it is not lit, one of three wiring problems exists in the building wiring circuit: missing ground, overloaded neutral, or reversed polarity. An electrician should be consulted to resolve the problem.
- 2 Protection On Status Indicator**  
When lit, the C3 is functioning properly. If the light is off (not lit), the C3 has been hit by a surge and the protection circuitry may be damaged.
- 3 On/Off switch**  
Controls power to all the outlets. APC recommends that C3 be left ON at all times. When illuminated, power is ON at all outlets.

# Outlet Panel and Side Panel

This section describes outlet panel and side panel functionality.

## Outlet Panel Controls and Indicators

The outlet panel for the C3 Power Filter is shown in Figure 3. Each of the numbered callouts refers to the corresponding numbered description found below, and on the following pages.



**Figure 3. C3 Outlet Panel**

**1 AC-Powered Outlets**  
The C3 Power Filter provides connections for up to eight (8) AC-powered devices. The outlets are arranged according to the type of filtering protection provided for a given application. The isolated noise filter banks (INFBs) eliminate EMI/RFI that can negatively impact sound and video quality. APC recommends that you plug your devices into the outlets as marked, in order to assure optimum protection for your equipment. The outlets are further defined in the following paragraphs.

**2 Digital Filter Outlets** filter the incoming AC power to protect your most sensitive digital devices (CD, DVD, DVR, CATV/SAT, Monitor, and AUX (one auxiliary digital device)).

**Note:** Any digital device can be plugged into the digital outlets, and any high current device can be plugged into either of the high current outlets. For example, if you have a cable box and a satellite receiver, but no monitor, you can plug the cable box into the CATV/SAT outlet, and the satellite receiver into the MONITOR outlet.

**3 High Current Filter Outlets** provide filtering for all of your high-current devices (Subwoofer and Amplifier).

## Side Panel Controls and Indicators

The side panel connectors for the C3 Power Filter are detailed in Figure 4. Each numbered callout refers to a corresponding numbered description found in the following pages.



**Figure 4. C3 Side Panel Connectors**

### 1 Surge Protected COAX/RF Connectors

The C3 provides surge protection for your CATV system, cable modem, DSS, or antenna system. The surge protection feature prevents surges traveling over coaxial data lines from damaging the system.

Connect the coaxial cable from the CATV or Cable Modem provider to the connector marked **IN**.

Connect the other coaxial cable from the connector marked **OUT** to the device being protected (CATV box or cable modem).

### 2 Circuit Breaker

The C3 also provides a **PRESS-TO-RESET** circuit breaker. When this breaker is “tripped” due to an electrical surge or overload, the device pops out and shuts down output power to the outlets. To reset the circuit breaker, push the circuit breaker straight in.

**CAUTION:** When resetting the circuit breaker, push the button in quickly, and release the button. Do not hold the button in. Failure to comply with these instructions may result in equipment damage.

### **3 Surge Protected Telephone Jacks**

The C3 provides a telephone circuit with surge protection to protect components connected via telephone line. Connect the supplied RJ11 telephone cable from the wall jack (source) to the telephone line connector marked **IN**. Connect other telephone cables to the connector marked **OUT**, and then to the equipment to be protected (telephone, DVR, DSS, or DSL).

### **4 AC Input Power Cord**

The AC power cord connects to the nearest properly rated AC receptacle.

# Installation

C3/C3BLK installation consists of the following steps:

1. Make connections
2. Apply power

## Make Connections

Prior to connecting equipment to the C3 Power Filter, ensure the unit is functioning by connecting the AC Power Cord (provided) on the side panel, shown as ④, in Figure 4. When power is applied to the unit, and the unit is powered on, the front panel LEDs will illuminate. Turn the power switch off, and all LEDs extinguish.

**Note:** Due to the unique filtering and surge protection provided by the C3, APC recommends connecting AV components to the appropriate “labeled” connectors shown on the unit’s outlet panel, and in Figure 3.

## Apply Power

Apply power to the C3 by pressing the front panel power switch in (shown as ③, in Figure 2), and then releasing the switch. Once power is applied to the unit, the front panel LEDs will illuminate.

## FCC Compliance Information

This device complies with Part 68 and Part 15 of the Federal Communications Commission (FCC) rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. As required, the bottom of this equipment contains, among other information, the Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to the telephone company.

# Technical Specifications

The following table contains the specifications for the C3 and C3BLK Power Filters.

Item	Specification
<b>INPUT</b>	
Input Voltage Range for Operation (on utility)	92V to 140V
Nominal Voltage	120 Vac
Allowable Input Frequency for Operation (on utility)	40 to 70 Hz
Rated Input Current	15 Amps
Input Circuit Breaker Rating	15 Amps
<b>OUTPUT</b>	
Number of Outlets	Eight (all outlets are surge protected and conditioned)
Outlet type	NEMA 5-15R
Rated Output Current	15 Amps
<b>SURGE PROTECTION</b>	
Let-Through Voltage Rating	< 40 Volts
Peak Surge Current (NM + CM)	230 kA
Data Line Protection Jacks (splitter)	Single-line, 2-wire phoneline protection for phone, modem, or fax.
Coax	1 pair
<b>MISCELLANEOUS</b>	
EMI/RFI	50 dB @ 150 kHz to 1 MHz 40 dB @ 1 MHz to 30 MHz
Total Surge in Joules	2030
Physical Dimensions (H x W x D)	15.7 in. x 5.2 in. x 2.1 in.
Weight: Unpackaged / Shipping	2.9 lbs. / 3.8 lbs.
Safety Agency Approvals	cUL, FCC Part 15 Class B and FCC Part 68

# Troubleshooting

This section describes possible causes and solutions for the following problems:

- Unit will not turn on.
- **WIRING OK** indicator LED is not illuminated.

## Unit will not turn on

<b><i>Probable Cause:</i></b>	Input power cord is not connected properly.
<b><i>Solution:</i></b>	Ensure the supplied power cord is connected securely at both ends.
<b><i>Probable Cause:</i></b>	No power or insufficient power at wall outlet.
<b><i>Solution:</i></b>	Ensure the wall outlet has good power by checking it with a voltmeter, or by plugging in a known good device.
<b>Note: The unit will not turn on and accept incoming utility power if the power is outside the acceptable range.</b>	
<b><i>Probable Cause:</i></b>	Circuit breaker has tripped.
<b><i>Solution:</i></b>	Check both your home and C3 circuit breakers. If the circuit breaker located on the rear of the C3 has tripped, the center post will be extended outward 1/4 to 1/3 inch. Push it back in to reset it. If it trips again, unplug some of the equipment plugged into the unit, and try again. The unit's breaker is rated for 15 Amps; however, the National Electric Code (NEC) dictates that any home circuit should not be loaded more than 80% of its rating.
<b>Note: If the problem is not resolved, contact APC Technical Support at 888-88APCAV or visit: <a href="http://www.apcav.com">www.apcav.com</a>.</b>	
<b><i>Probable Cause:</i></b>	Unit is overloaded.
<b><i>Solution:</i></b>	If the Overload LED is illuminated, we recommend that the load be reduced by unplugging the connected devices on at a time.

## WIRING OK indicator LED is not illuminated

<b><i>Probable Cause:</i></b>	There are three reasons why this LED would not be illuminated: <ol style="list-style-type: none"><li>1. Reversed polarity exists at the wall outlet.</li><li>2. Neutral wire is overloaded.</li><li>3. Earth ground is missing at the wall outlet.</li></ol>
<b><i>Solution:</i></b>	Operating the unit under these conditions may affect its surge protection performance. Contact an electrician to inspect the building or your home wiring to fix the problem.
<b><i>Probable Cause:</i></b>	Unit is on, but the LEDs are turned off.
<b><i>Solution:</i></b>	Push the Power button, push the Select button twice (this turns the unit off and back on again). The LEDs should illuminate.

## APC Technical Support

If a problem cannot be resolved contact APC Technical Support.

Telephone: **1-888-88APCAV**, or visit: **[www.apcav.com](http://www.apcav.com)**





