



THE CITY OF SAN DIEGO

**FPB POLICY
E-08-11**

**ELECTRICAL EXTENSION CORDS AND
MULTI-PLUG ADAPTERS (CFC, Section 605)**

I. PURPOSE

The purpose of this policy is to clarify the use of extension cords and multi-plug adapters.

II. SCOPE

The requirements contained in this policy are applicable to all occupancies being inspected by the San Diego Fire-Rescue Department.

III. DEFINITIONS

AMPACITY is the current in amperes that a conductor can carry continuously under the conditions of use without exceeding its temperature rating.

APPROVED refers to approval by the chief or by reason of accepted principles or tests by national authorities, or technical or scientific organizations.

EXTENSION CORD is a portable flexible cord of any length, which has one male connector on one end, and one or more female connectors on the other, and no built-in over current protection.



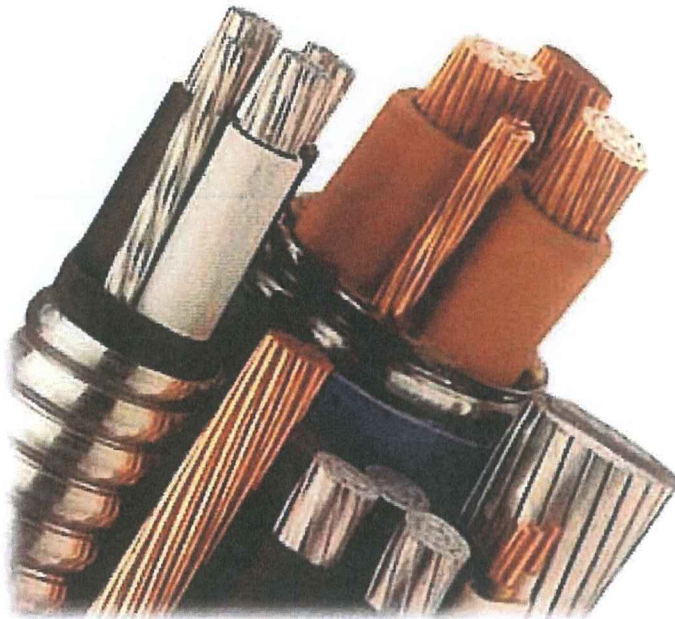
Fire Prevention Bureau

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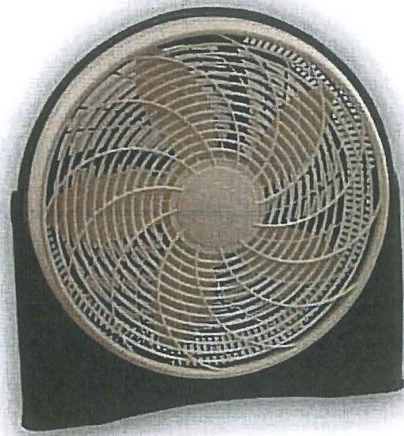
MULTIPLUG ADAPTER is a device that plugs into a receptacle and allows that receptacle to supply power to more appliances or fixtures than that for which it was originally designed, such as cube adapters, strip plugs and multi-plug extension cords (that does not incorporate over current protection).



PERMANENT WIRING is wiring affixed to a structure in accordance with the Electrical Codes, (e.g. from circuit breaker box to outlets.)



PORTABLE APPLIANCE is a device operated by electricity, which is capable of being hand-carried, or is easily moved from one place to another in normal use, (e.g., coffee makers, fans, radios, audio visual carts, etc.).



POWER TAP is a device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end, and has over current protection, (outlet strips or surge protectors which incorporate over current protection and a plug on one end of a flexible cord).

History: There is no mention of the term "power taps" in the National Electrical Code. The term "outlet strip" is commonly used in the trade and is the term used to describe these devices in most electrical supply catalogues. While the term may be commonly used, there are no listed or approved "outlet strips." The listing and approval standards refer to such devices as "power taps" per UL Standard 1363.



STATIONARY APPLIANCE is a device that is operated by electricity which is not affixed to a structure and which is not easily moved from one place to another, (e.g., vending machines, copy machines, etc.).

IV. APPLICATIONS

Extension cords shall not be used as a substitute for permanent wiring. (See Definitions above.) *This does not mean extension cords can only be used on a temporary basis. The vague term "in immediate use" was removed in the 1994 Fire Code. When precautions specified by the code are taken, there is no need for this limitation.* CFC 605.5

Extension cords shall be used only with portable appliances. CFC 605.5





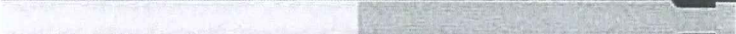












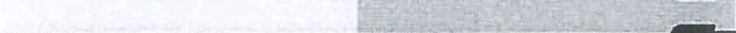











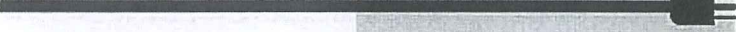









Power supply. Extension cords shall be plugged directly into an approved receptacle, power tap or multiplug adapter and shall, except for approved multiplug extension cords, serve only one portable appliance. CFC 605.5.1

Ampacity. The ampacity of the extension cord shall not be less than the rated capacity of the portable appliance supplied by the cord. CFC 605.5.2

The following is a guide that might be helpful in selecting the correct extension cord:

Extension Cord Ampere Rating	
Wire Size (Copper)	Single Phase, Two and Three Conductor Cords
16AWG	13 amps
14AWG	18 amps
12AWG	25 amps
10AWG	30 amps
8AWG	40 amps
6AWG	55 amps
4AWG	70 amps
2AWG	95 amps

The overall length of a cord also must be considered. The following guide might also be helpful:

		WIRE SIZE		50ft.	100ft.
HEDGE TRIMMER typ. 3 amp 	AWG12				
					
					
LAWN MOWER typ. 12 amp 	AWG14				
					
					
CIRCULAR SAW typ 15 amp 	AWG16				
					
					

HP

Maintenance. The extension cords shall be maintained in good condition without splices, deterioration or damage. CFC 605.5.3

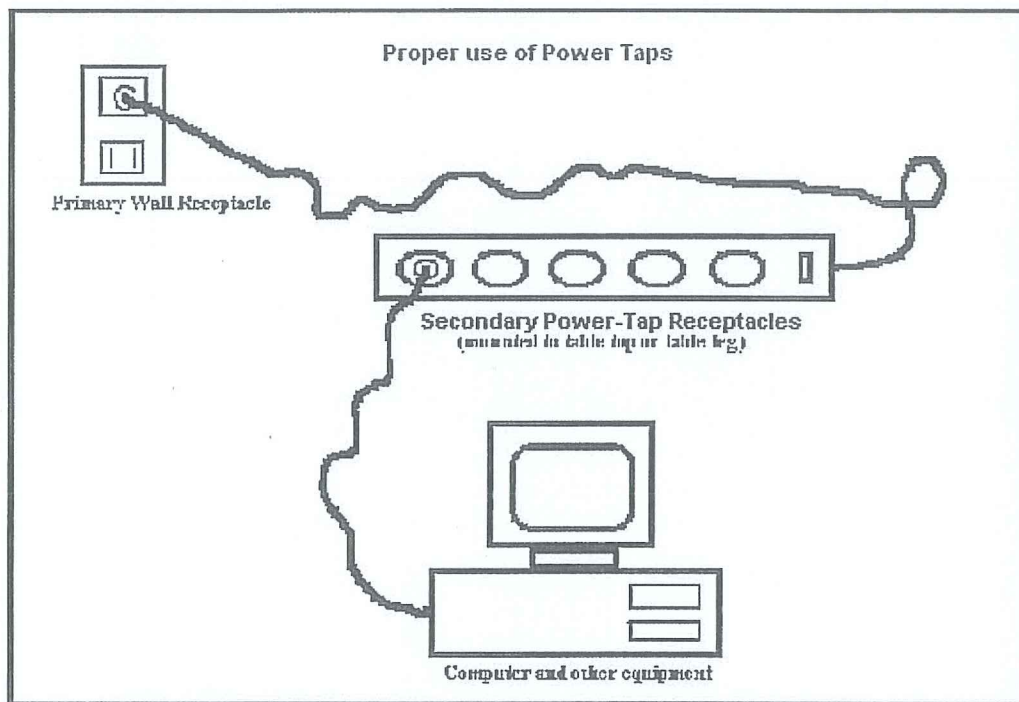
Grounding. Extension cords shall be grounded type when servicing grounded portable appliances. CFC 605.5.4



Installation. Extension cords and relocatable power taps shall not be affixed to structures; extend through walls, ceilings, floors, under doors or floor coverings; or be subject to environmental or physical damage. CFC 605.4.3 and CFC 605.5.

Multiplug Adapters, such as multiplug extension cords, cube adapters, strip plugs and other devices, which do not comply with this code or the Electrical Code, shall not be used. CFC 605.4

Power Taps shall be directly connected to a permanently installed receptacle. CFC 605.4.2



Does the Fire Code permit the use of multiplug adapters for permanent uses such as connecting computer peripherals to a single-wall outlet?

Yes, under certain conditions.

1. Multiplug adapters are considered by the UFC to be multiplug extension cords and must meet the requirements for extension cords.
2. Section 605.4 allows the use of multiplug adapters only when they are permitted via the Electrical Code.
3. Section 605.5 sets forth additional requirements regulating the use of any extension cord.
4. Section 605.5 states, "Extension cords shall not be used as a substitute for permanent wiring."
5. Section 605.5 allows the use of extension cords only with portable appliances.

Promulgated by: _____

[Handwritten signature]

Date: _____

5/13/08

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