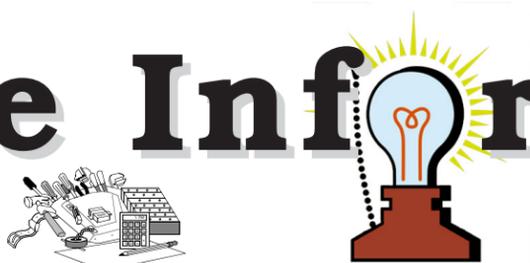


The Informer



a FREE newsletter for the electrician

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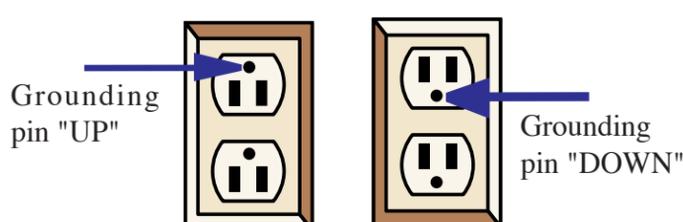


At age 82, I decided to bring back *The Informer* as I still want to educate the electrician and the teacher with my 64 years in the industry.

Having worked several years as an electrical expert in jury trials involving deaths, I want to share how important it is to *understand the behavior of electricity*.

The Informer newsletter will include my feelings on the everyday wireman and the basic fundamentals that one must acquire first.

Receptacles UP or DOWN?



Does the electrical receptacle ("wall plug") go with the equipment grounding connector "up" or "down"?

There is an age-old debate about whether an electrical outlet should be mounted with the ground pin up or down. Unfortunately, there is not a fully accepted answer. However, it is commonly accepted that the National Electrical Code (NEC) of the United States (NFPA 70), does not provide any specific direction for the orientation of the outlet.

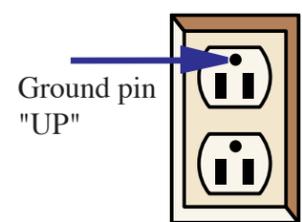
The Code book does NOT state which way, you can install the receptacle either way. Code standards do not require the grounding pin to be in any special orientation.

Some prefer to install the receptacle with the grounding pin "down." They say the receptacle looks as if it's smiling!

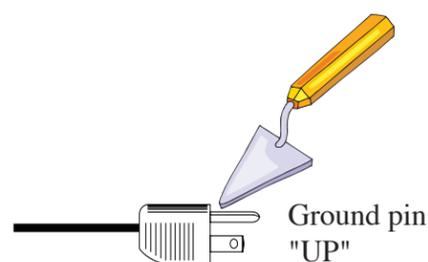
Some feel if the grounding pin is "down" an angle cord cap oriented *incorrectly* will put stress on the cord while in use. With the grounding pin "down," if a cord cap were to work loose in the receptacle, the grounding pin would be the last element to separate from the receptacle.

With the grounding pin installed in the "up" position, some feel there is a measure of protection to the "hot circuit." If conductive material were to fall on the receptacle, it would first come into contact with the grounding pin, if it were installed in the "up" position.

In some cases, specifications on the drawing will state how the receptacles are to be installed. **Hospital** specifications often require for Sensitive Patient areas, the receptacles be installed with the **grounding pin facing in the "UP" position**.



In my own experience, I have witnessed a painter stripping wallpaper with a broad-knife and as the broad-knife hit the receptacle the sparks flew when he made contact with the "hot" pin on the plug on the cord to his fan. If the grounding pin had been installed in the "UP" position, the broad-knife would have come into contact with the grounding pin rather than an energized pin.



There is more chance of making contact with the top of a receptacle than the bottom as most receptacles are located 12-16" off the floor. A person stripping wallpaper is bringing the broad-knife in a downward sweep towards the receptacle.

But again, there is no mention of which way to install the receptacle in the NEC. It would have to be written in a *local code* to be enforceable by an inspector.

I think I'd rather keep the "sparks from flying" than have it smiling!

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Reader's Comments

Tom Henry would like to hear from you. Please send your comments and suggestions to:
E-mail tomhenry@code-electrical.com

A Green Dot is provided on the receptacle face where it is visible after installation with a cover plate secured.

Hospital-grade receptacles are identified with a green dot on the face of the receptacle, and the words "hospital-grade" usually are stamped on the device's mounting strap.

Hospital facility managers are permitted to determine appropriate test intervals for hospital-grade receptacles based on 'documented performance data'. However, this paragraph requires that all non-hospital-grade receptacles within patient bed locations and anesthetizing locations must be tested at least every 12-months.

Hospital grade receptacles include the same markings that appear on general use receptacles, and also include "Hospital Grade" or "Hosp. Grade", typically on the back of the receptacle where visible during installation.

