

ELECTRICAL OUTLET AND PLUG SAFETY IN SWA

Dear Editor,

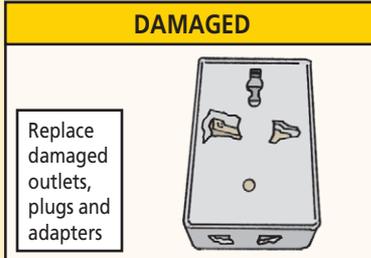
It's a must that Soldiers and civilian workers know the good, bad and ugly when it comes to electrical plugs, adapters and outlets in Southwest Asia (SWA). Injuries and damage are the result if a Soldier uses the wrong combination of plug-to-outlet.

Here are a few pointers which will help educate Soldiers and civilians who are already in SWA and those who are heading here:

1. Know the voltage! The electrical generation here on Camp Taji conforms to the International Electrical Code, which means that outlet in your wall is providing 220 volts. If you plug in a piece of equipment designed to run at 110 volts, go ahead and order a replacement, because the one you plugged in is now fried! To run at 110, you need an adapter or transformer that "steps down" the 220V to 110V. Other installations and countries may have different combinations of voltage and outlets. It is important to check what is used at each location when you arrive.

2. There's a good chance that the outlet on your wall is designed to British Standard (BS) 1363. That means it can carry 250 volts of AC at 50 Hz. These outlets are fused at 3, 5, 10 or 13 amps.

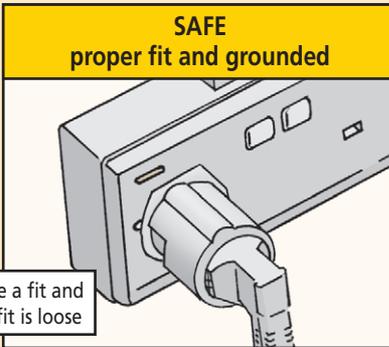
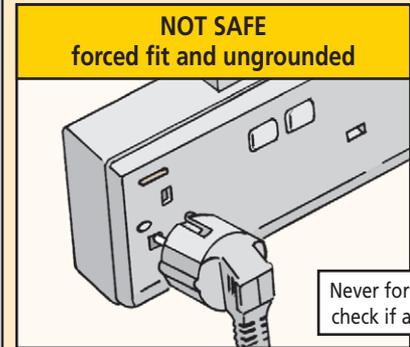
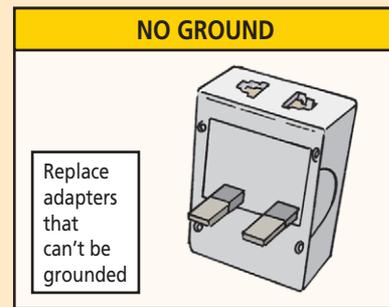
However, most of the equipment plugs are designed to European Standard CEE 7/7 or 7/16. This leads to a compatibility problem since the British outlet has a "safety gate" that must be triggered open by the plug before the outlet is hot. But the European plugs don't have a pole to open the gate! Forcing the plug into the outlet damages the outlet and makes it useless for different plugs and also makes it a safety hazard.



3. Adapters from the European plugs to the British outlets are available, but not all of them are created equal. Choosing the right adapter is critical.

Unlike US or British plugs, the European plugs don't have a male ground lead. The grounding on these plugs is provided by a small metal strip which must contact a corresponding ground in the adapter or outlet. If you're plugging a device into a power strip, the power strip must be properly grounded.

4. Universal adapters for US style plugs are not universally safe or universally designed and manufactured the same. One important difference is how well the adapter stays plugged in. Make sure the plug fits snugly into the outlet. A loose fit leads to arcing and overheating.



5. Finally, I've put together a chart that shows safe and unsafe plugs, outlets and adapters I have encountered here at Taji.

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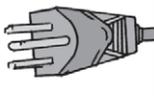
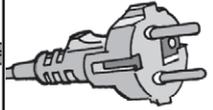
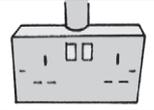
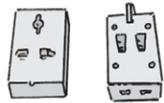
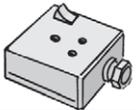


YOU'VE DONE A GREAT SERVICE TO ALL OF US WITH THIS CRITICAL ADVICE AND EXCELLENT CHART.

IF YOU HAVE INFORMATION TO ADD, WRITE US AND WE'LL PUT THE WORD OUT.

NOW TURN THE PAGE AND TAKE A LOOK AT THE CHART...

Plug Adapter Combinations — — Safe/Unsafe

Outlet or Adapter		Plugs							
		US (NEMA 5-15 or 1-15) Plug		European (CEE)	7/7 or 7/16 Plug	British Stand (BS 1363) Plug 13 amp		British Stand (BS 546) Round Pin Plug 15 amp	
		Grounded (Type B, 5-15)	Un-grounded (Type A, 1-15)	Grounded (7/7) (Type F or E/F hybrid)	Un-grounded (7/16) (Type C)	Grounded (Type G)	Un-grounded	Grounded (Type D)	Un-grounded
						Not illustrated		No known use or availability	
British BS 1363 Grounded outlet		N/A	N/A	UNSAFE Not grounded	UNSAFE	OK	OK	N/A	N/A
Universal to British Style BS 1363 13 amp grounded		OK	OK	UNSAFE Not grounded	OK	OK	OK	N/A	N/A
Universal to British Style BS 1363 13 amp un-grounded		UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Plastic tab Not grounded	N/A	N/A
European to British Style BS 1363 13 amp grounded		N/A	N/A	OK	OK	N/A	N/A	N/A	N/A
US/European combination to British Style BS 1363 13 amp un-grounded		N/A	UNSAFE No polarity	UNSAFE Not grounded Improper size	UNSAFE Improper size	N/A	N/A	N/A	N/A
Universal to Round Pin BS 546 15 amp grounded		OK	OK	UNSAFE Not grounded	OK	OK	OK	N/A	N/A
Round Pin BS 546 15 amp grounded		N/A	N/A	N/A	N/A	N/A	N/A	OK	UNSAFE
Round Pin BS 546 15 amp un-grounded	N/A	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE