

# The Micki

## Portable solutions for remote locations

There are many situations where it would be an advantage, and others a requirement, to have renewable electricity, water access, potable water, hot water and communications ranging from Internet, Television and Wireless access at the remote locations throughout the forests. The usage of such a technology will include a new generation of hosts, many employed in high-tech work-at-home jobs, many already in RVs, to the quickly expanding adventure events currently being filmed in our forests and the most important use, for fire-fighters in remote locations.

We are proposing two related units, the Micki and the Mini-Micki. The Mini-Micki is primarily a power station, yet its design will allow any accessories used by the Micki. It will be smaller and therefore easier to transport, and will have 50% of the solar capabilities of the Micki, and 33% of its power storage capabilities.

### Comparison Chart

	<b>Micki</b>	<b>Mini</b>
250 Watt 24 Volt Solar Panels	2	1
Batteries: 220 amp hr 12 volt batteries	6	2
Inverter/Charger/Generator Auto Start: 2000 Watt PSW 6000 Watt Surge	1	1
40 Amp MPPT charge controller	1	1
<b>Plugins Availability</b>		
3000 Watt PSW Inverter (generator)	√	√ External
HugesNet Satellite	√	x
HugesNet SatPhone Option (untested)	√	x
Wireless Router	√	x
Solar Hot Water	√	x
Water Pump W/Purification System	√	√ External
Cellular Repeater	√	√ External
DirecWay/Dish TV	√	x

Please note the when an “x” is displayed along side the Mini-Micki, it is in reference to having a mounting area built in. This does not prohibit the use of these plugins, but they will require appropriate mounting areas. Also note that additional solar panels and batteries can be integrated with both units. They can accommodate 720 watts of 24 volt panels and up to 8 or more batteries. Before doing this, it is assumed that you/they have a detailed knowledge of solar power.

### Transportation

The Mini-Micki is designed so that it can be picked up by two (strong) people. The Micki is designed to a) be installed on a wooden sled that will discourage it being stolen, or b) can be mounted on a trailer or pickup bed (4' x 8') so that it can easily be transported where it is needed, and c) both the Micki and Mini-Micki will have a transport ring in the center (balance) area so that it can be lifted by a wrecker or transported via helicopter for fire and emergency support.

## **Notes**

Both of these units use 2000 Watt (6000 watt surge) PSW inverters so they are safe for any type of electrical use, including battery charging of battery powered power tools, and are very quiet. The Inverter has a built in 3 stage charging system with an automatic generator start when battery voltage falls below a predetermined setting. The battery charger can fully charge the battery bank in minimum time ranging from 1 ½ hours to 3 hours. When connected to a generator that supports auto-start (we can make this work on any generator with an electric start) this allows for a continuous power supply in a variety of conditions. Note: there is a fuel dependency if generator charging is required. We believe this is a requirement for critical areas such as fires or hosts in limited sunlight areas, or under high demand. This also requires that the recommended generator, or a compatible generator such as the 3000 Watt PSW Inverter/Generator is brought along and connected. Note: Even without auto-start, any generator or standard electric can be used to recharge the batteries by simply plunging in from the Micki to a Standard 3 prong 110Vot plug.

## **Enhancements & Other Equipment**

As many times there may be limited sunlight available, other charging sources can and should be considered. In a high wind area, like a mountain for example, a small windmill can be added and used to keep the battery bank charged, as can a small hydro-electric generator if there is a fairly fast stream near by.

## **2<sup>nd</sup> Draft**

Please note that this document is a first draft of the Micki's capabilities and design. Note that this unit was not designed because it is mostly “green”, that is a great side effect, but rather to provide a reliable source of electricity, modern communications and a water supply where there are none, nor access to fossil fuels.