



**WORLD TOWER**

**COMPANY, INC.**

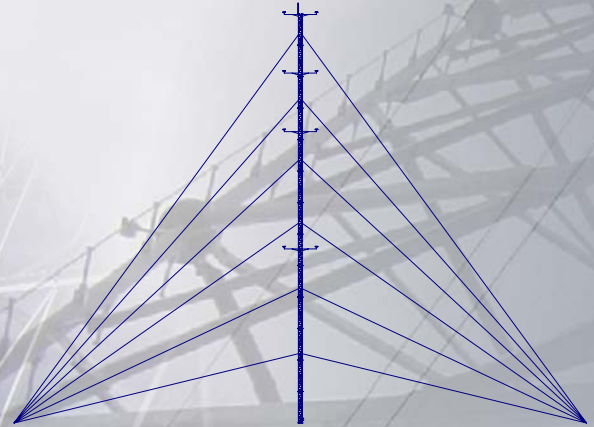
1213 Compressor Drive  
P.O. Box 508  
Mayfield, KY 42066

Phone: 270-247-3642  
Fax: 270-247-0909

**WWW.WORLDTOWER.COM**

# *OFF-GRID (SOLAR POWERED)*

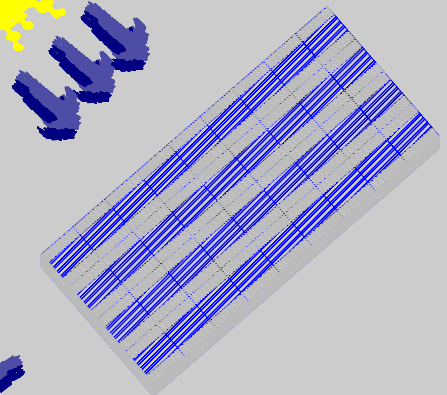
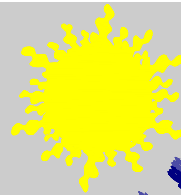
## *AVIATION OBSTRUCTION MARKING SYSTEM*



Marking is Required on Towers  
200' (61M) AGL and Above

### **A COMPLETE SYSTEM WILL CONSIST OF THE FOLLOWING COMPONENTS:**

- *FAA Approved Marking for Day and Night*
- *Properly Sized Solar System for the Location and loading*
  - *Solar Modules*
  - *Charge Controller*
  - *Battery (s)*
  - *Inverter*

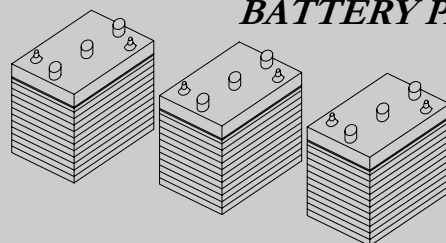


**SOLAR MODULE**

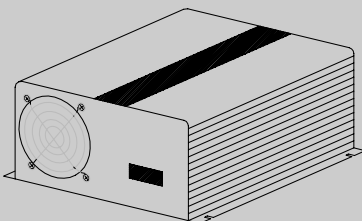
**CHARGE  
CONTROLLER**



**BATTERY PACK**



**INVERTER**





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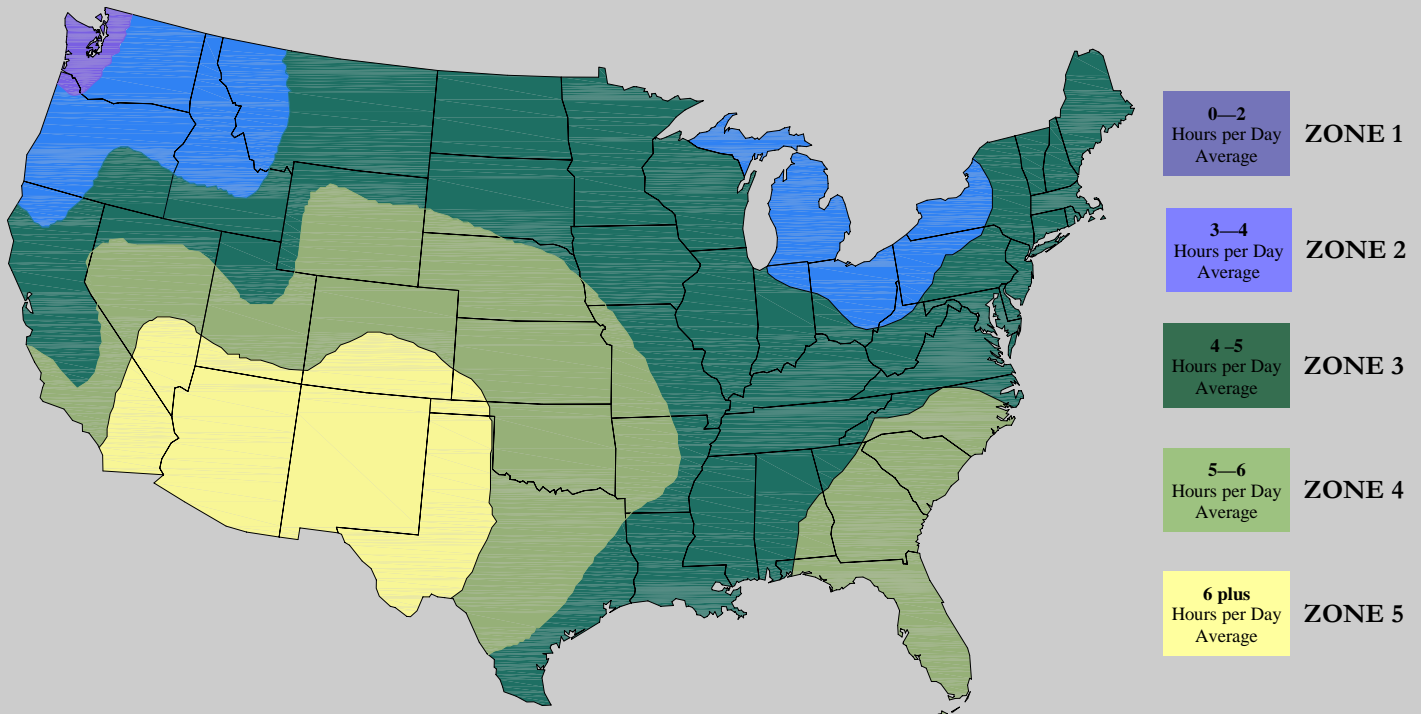
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**SOLAR POWER ACROSS THE USA:**

- **Irradiance** is a measure of the sun's power available at the surface of the earth and it averages about 1000 watts per square meter. This means with the current solar cells efficiencies about 140 watts to 160 watts can be generated per square meter of solar cells placed into full sun
- **Insolation** is a measure of the available energy from the sun and is expressed in terms of "full sun hours"
- The **Insolation** across the nation varies and has to be considered when sizing a solar system
- The **Insolation Zone Map** below offers a general idea of the Insolation levels for the nation
- Use the map to first determine the zone that your particular system will be installed

# ***INSOLATION ZONE MAP***

## ***Winter Months Average***





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## *Solar Panel Mounting Kits*

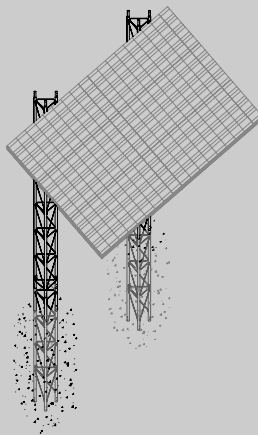
### MODEL WTC PMK202

#### KIT INCLUDES:

- *Two 10' Tower Sections*
- *Two 5' Tower Sections for Foundation*
- *Cross Bracing and associated Hardware*
- *Two Grounding Kits for Towers*

*\* Concrete not supplied with the kits*

*\*\* Up to Six (6) Solar Panels*



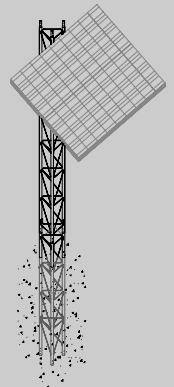
### MODEL WTC PMK201

#### KIT INCLUDES:

- *One 10' Tower Section*
- *One 5' Tower Section for Foundation*
- *Cross Bracing and associated Hardware*
- *One Grounding Kits for Towers*

*\* Concrete not supplied with the kits*

*\*\* Up to Two (2) Solar Panels*





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## FAA APPROVED OBSTRUCTION MARKING:

- Per the AC 70/7460-1K circular (or latest version) any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200' (61M) AGL must be marked for day and nighttime.
- Any failure that lasts more than thirty minutes and affects a top light should be reported immediately to the nearest flight service station.
- All aviation obstruction lighting should meet the standards laid out in the AC 150/5345-43 or latest version circular. Exterior Paint must meet the Federal Standard FED-STD-595.
- FAA Solar systems must be sized to power the system for at least 7 days during the winter. (FAA Solar Brief 1/14/08 EB 76 Page 10 Par 4.c)

## FAA Marking Option A

### Night Time Marking:

#### LED Flashing Red Beacon (L-864) -

One beacon is required on towers with appurtenances up to 350'. The intensity in candelas should be 2,000

#### LED Steady Burning Red Marker (L-810) -

Two Marker lights are required on towers with appurtenances up to 350'. The intensity in candelas should be 32

### Day Time Marking:

Alternating bands of Aviation Orange and White paint

### Power Consumption of the System:

Total of 54.6 watts (During the night)

### Zone 3

Model WTC  
SK201

### Zone 4

Model WTC  
SK202

### Zone 5

Model WTC  
SK203

## FAA Marking Option B

### Night Time Marking:

#### LED Flashing Red Beacon (L-864) -

One beacon is required on towers with appurtenances up to 350'. The intensity in candelas should be 2,000

### Day Time Marking:

#### Strobe Flashing White Beacon (L-865) -

One beacon is required on towers with appurtenances up to 350'. The intensity in candelas should be 20,000

### Power Consumption of the System:

Total of 54.6 watts (During the night)

Total of 144.4 watts (During the day)

### Zone 3

Model WTC  
SK204

### Zone 4

Model WTC  
SK205

### Zone 5

Model WTC  
SK205

\* Call for pricing on these kits. Other kits available for Zone 2 and Zone 1