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PRODUCT BROCHURE

2012

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ABOUT BBOXX

BBOXX is a global provider of integrated technology, consulting and transformation services dedicated solely to the electrification markets in developing countries. Our innovative products are designed to cater for a wide range of energy needs, from basic lighting to full AC electricity.

We aim to combine local knowledge, our history of successful electrification projects and our global research and logistical base to create a paradigm shift in electrification in the developing world.



BBOXX Solar Kit Systems



KEY PRODUCT FEATURES

- “Plug and Play Design”
- Robust Battery Box Casing
- Polycrystalline Solar Panels
- Sealed Lead Acid Batteries
- High Efficiency LED Lights
- Multiple USB Phone Charger
- Grid Charger

BB5

- 5Ah Battery
- 7W Solar Panel
- 1 x 2W LED Light
- DC & USB Outputs

BB7

- 7Ah Battery
- 15W Solar Panel
- 2 x 2W LED Lights
- DC & USB Outputs

BB12

- 12Ah Battery
- 30W Solar Panel
- 3 x 2W LED Lights
- DC & USB Outputs

BB17

- 17Ah Battery
- 50W Solar Panel
- 2 x 2W and 1 x 6W LED Lights
- DC & USB Outputs

BB38

- 38Ah Battery
- 120W Solar Panel
- 4 x 6W LED Tube Lights
- DC/AC/USB Outputs

BB120

- 120Ah Battery
- 180W Solar Panel
- 4 x 6W LED Tube Lights
- DC/AC/USB Outputs



BBOXX BB5 Solar Kit



KEY PRODUCT FEATURES

- **BB5 Battery Box**
- **7W Solar Panel**
- **Grid Charger**
- **1 x LED Lamp**
- **USB Phone Charger**

Our entry-level, affordable 12V DC battery box is capable of powering DC appliances including LED lights, phones, low power TV's and radios

Detailed Product Specification

Control Unit: Continuous DC Output Power: 60W. Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery State of Charge Display, Two USB Outputs, Four 12V DC Outputs.

Solar Panel: 7W Flexible Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 5Ah, 12V Sealed Lead Acid, Maintenance Free Battery

LED Lights: One 2W LED Light with 8m cable and Integrated Connector

Other Accessories: USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (2.6kg ex Accessories, 4kg Package Weight) **Dimensions:** (Control Box: 185mm x 85mm x 135mm)

See the next page for a breakdown of typical appliances that can be powered using the BB5 Solar Kit



On one complete charge you can use these appliances as follows:

Charge 11 phones

Or

Have 22h of 1 x 2W LED light

Or

Watch 9h of 5W TV

Or

Listen to 11h of 4W radio



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 4 phones

+

Have 7h of 1 x 2W LED light

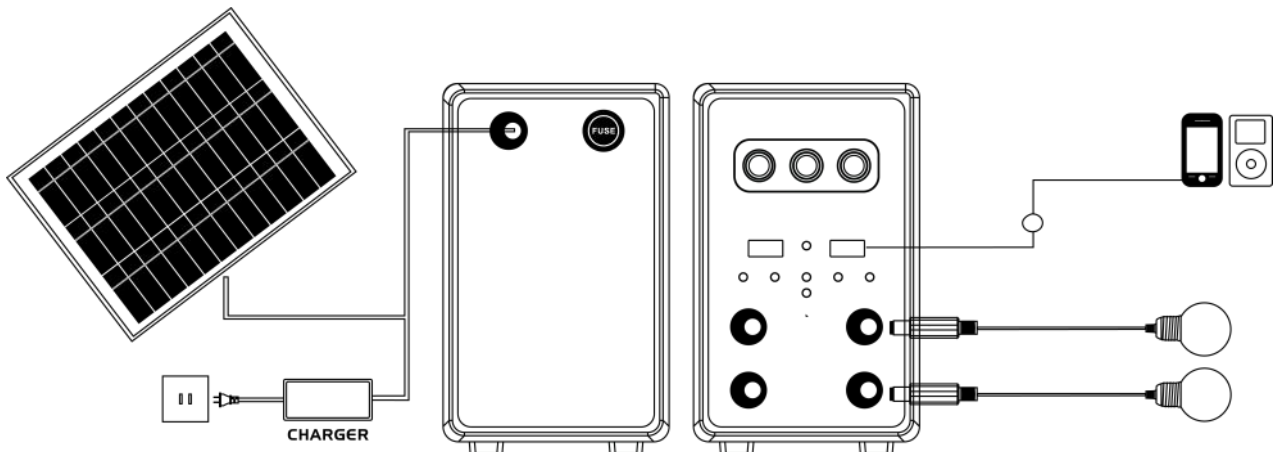
+

Watch 4h of 5W TV

+

Listen to 4h of 4W radio

BB5 Solar Kit Wiring Diagram



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BBOXX BB7 Solar Kit



KEY PRODUCT FEATURES

- **BB7 Battery Box**
- **15W Solar Panel**
- **Grid Charger**
- **2 x LED Lamps**
- **USB Phone Charger**

Our entry-level 12V DC battery box is capable of powering DC appliances including LED lights, phones, low power TV's and radios

Detailed Product Specification

Control Unit: Continuous DC Output Power: 60W. Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery State of Charge Display, Two USB Outputs, Four 12V DC Outputs.

Solar Panel: 15W Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 7Ah, 12V Sealed Lead Acid, Maintenance Free Battery

LED Lights: Two 2W LED Lights with 8m cable and Integrated Connector

Other Accessories: USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (3.68kg ex Accessories, 6.8kg Package Weight) **Dimensions:** (Control Box: 185mm x 80mm x 260mm)

See the next page for a breakdown of typical appliances that can be powered using the BB7 Solar Kit



On one complete charge you can use these appliances as follows:

Charge 17 phones

Or

Have 32h of 2W LED light

Or

Watch 13h of 5W TV

Or

Listen to 14h of 4W radio



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 5 phones

+

Have 12h of 2W LED light

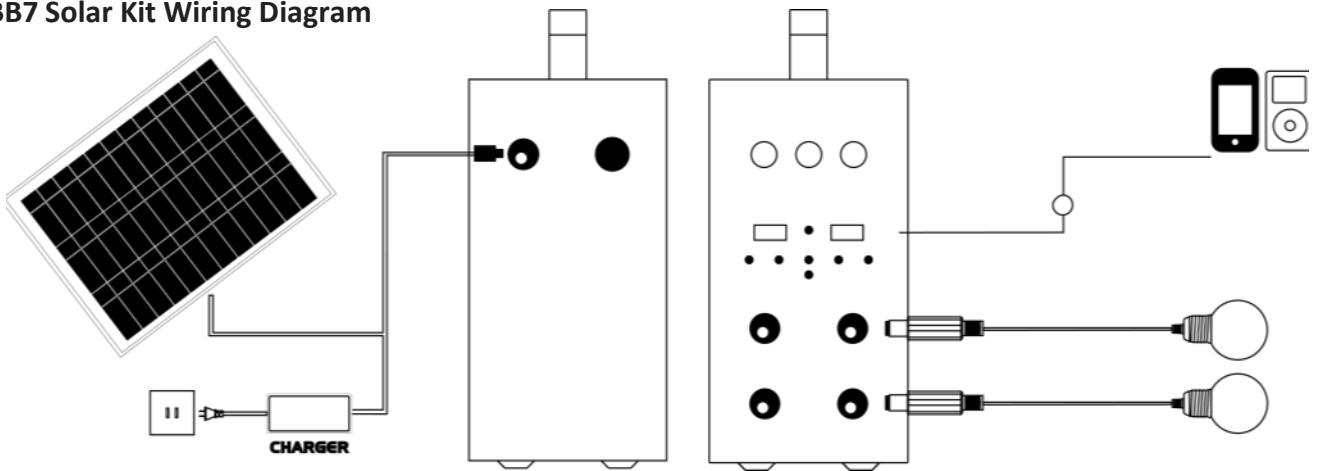
+

Watch 8h of 5W TV

+

Listen to 6h of 4W radio

BB7 Solar Kit Wiring Diagram



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BBOXX BB12 Solar Kit



KEY PRODUCT FEATURES

- **BB12 Battery Box**
- **30W Solar Panel**
- **Grid Charger**
- **3 x LED Lamps**
- **USB Phone Charger**

Our mid-range 12V DC battery box is capable of powering DC appliances including LED lights, phones, low power TV's and radios

Detailed Product Specification

Control Unit: Continuous DC Output Power: 100W, Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery State of Charge Display, Two USB Outputs, Four 12V DC Outputs.

Solar Panel: 30W Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 12Ah, 12V Sealed Lead Acid, Maintenance Free Battery

LED Lights: Three 2W LED Lights with 8m cable and Integrated Connector

Other Accessories: USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (5.4kg ex Accessories, 11.8kg Package Weight) **Dimensions:** (Control Box: 200mm x 108mm x 270mm)

See the next page for a breakdown of typical appliances that can be powered using the BB12 Solar Kit



On one complete charge you can use these appliances as follows:

Charge 26 phones

Or

Have 54h of 2W LED light

Or

Watch 22h of 5W TV

Or

Listen to 26h of 4W radio



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 12 phones

+

Have 24h of 2W LED light

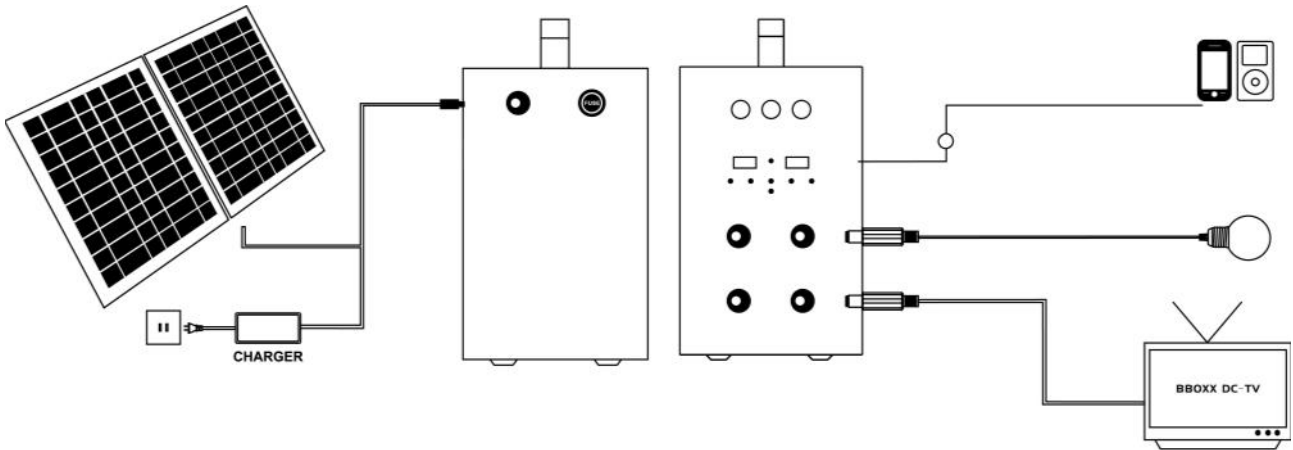
+

Watch 12h of 5W TV

+

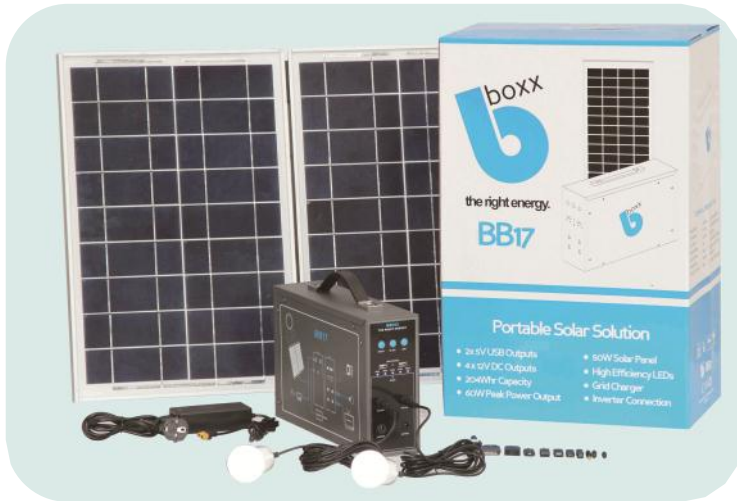
Listen to 12h of 4W radio

BB12 Solar Kit Wiring Diagram



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BBOXX BB17 Solar Kit



KEY PRODUCT FEATURES

- **BB17 Battery Box**
- **50W Solar Panel**
- **Grid Charger**
- **3 x LED Lamps**
- **USB Phone Charger**

**Our mid-range 12V DC battery box is capable of powering DC appliances
It is also capable of powering AC devices (max 120W) using an external inverter**

Detailed Product Specification

Control Unit: Continuous DC Output Power: 100W, Inverter Connection and Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery State of Charge Display, Two USB Outputs, Four 12V DC Outputs.

Solar Panel: 50W Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 17Ah, 12V Sealed Lead Acid, Maintenance Free Battery

LED Lights: Two 2W LED Lights with 8m cable AND One 6W LED Tube Light with 8m cable and Integrated Connector

Other Accessories: USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (7.02kg ex Accessories, 15kg Package Weight) **Dimensions:** (Control Box: 205mmx85mmx310mm)

See the next page for a breakdown of typical appliances that can be powered using the BB17 Solar Kit



On one complete charge you can use these appliances as follows:

Charge 38 phones

Or

Have 78h of 2W LED light

Or

Watch 31h of 5W TV

Or

Listen to 38h of 4W radio

Or

Shave for 15h



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 18 phones

+

Have 24h of 2W LED light

+

Watch 20h of 5W TV

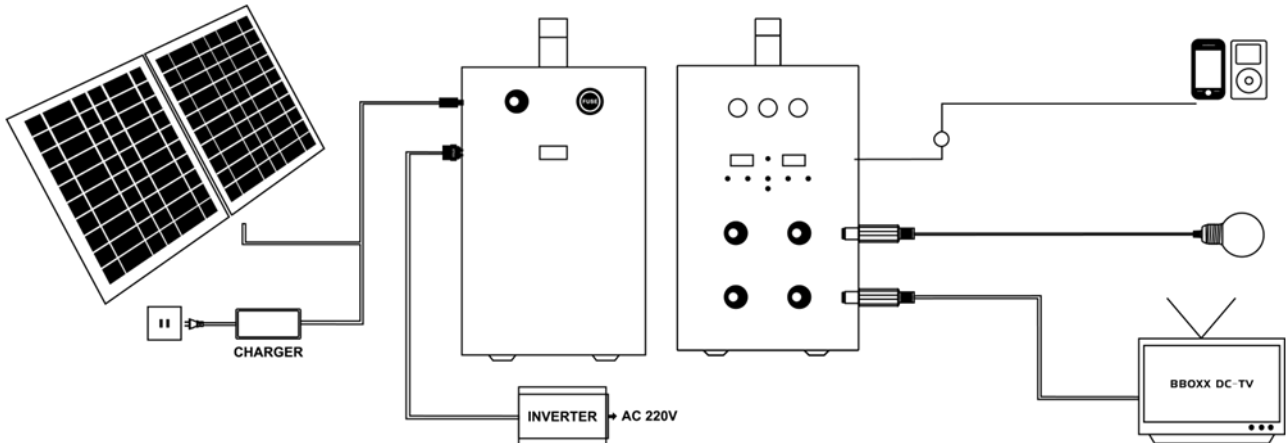
+

Listen to 20h of 4W radio

+

Shave for 8h

BB17 Solar Kit Wiring Diagram



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BBOXX BB38 Solar Kit



KEY PRODUCT FEATURES

- **BB38 Battery Box**
- **120W Solar Panel**
- **Grid & Laptop Charger**
- **4 x LED Lamps**
- **USB Phone Charger**

**Our high capacity 12V DC battery box is capable of powering DC appliances
It also includes an inbuilt inverter to power AC devices up to 300W**

Detailed Product Specification

Control Unit: Continuous Output Power: 300W, Modified Sine Wave Inverter and Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery, AC and Solar Panel State of Charge Display, Two USB Outputs, Six 12V DC Outputs.

Solar Panel: 120W Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 38Ah, 12V Sealed Lead Acid, Maintenance Free Battery

LED Lights: Four 6W LED Tube Lights with 8m cable and Integrated Connector

Other Accessories: DC Laptop Charger, USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (16.9kg ex Accessories, 19.5kg ex Solar Panel) **Dimensions:** (Control Box: 300mmx180mmx345mm)

See the next page for a breakdown of typical appliances that can be powered using the BB38 Solar Kit



On one complete charge you can use these appliances as follows:

Watch 68h of 5W 8" TV

Or

Watch 17h of 20W 15" TV

Or

Shave for 34h

Or

Run a Laptop for 11h

Or

More than 24h of LED lights, radio and charge more than 80 phones



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 15 phones

+

Have 24h of 2x2W LED light and a 5W LED

+

Watch 12h of 8" TV

+

Listen to 12h of 4W radio

+

Shave for 6h

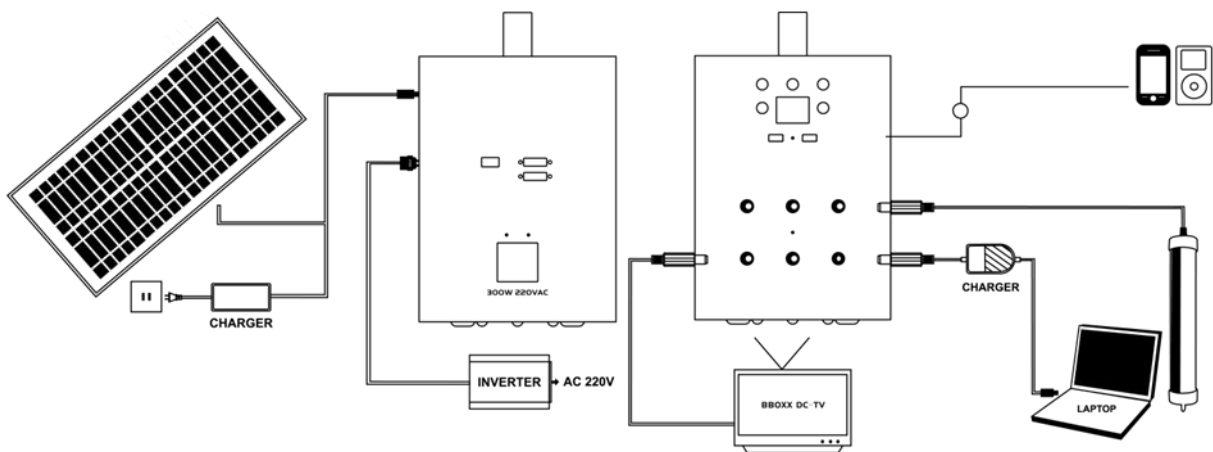
+

Watch 12h of 20W 15" TV

+

6h of laptop charging

BB38 Solar Kit Wiring Diagram



BBOXX BB120 Solar Kit



KEY PRODUCT FEATURES

- **BB120 Battery Box**
- **180W Solar Panel**
- **Grid & Laptop Charger**
- **4 x LED Lamps**
- **USB Phone Charger**

**Our top of the range 12V DC battery box is capable of powering DC appliances
It also includes an inbuilt inverter to power AC devices up to 600W**

Detailed Product Specification

Control Unit: Continuous Output Power: 600W, Modified Sine Wave Inverter and Removable Fuse. Low/High Voltage, Thermal, Overload and Short-circuit Protection, Battery, AC and Solar Panel State of Charge Display, Two USB Outputs, Four 12V DC Outputs.

Solar Panel: 180W Polycrystalline Solar Panel with 10m cable and Integrated Connector

Battery: 120Ah, 12V Sealed Lead Acid, Maintenance Free Battery. External Battery Connector.

LED Lights: Four 6W LED Tube Lights with 8m cable and Integrated Connector

Other Accessories: DC Laptop Charger, USB Multiple Phone Charger, Two Spare Fuses, User Manual, Grid Charger

Weight: (2.95kg Control Box Weight) **Dimensions:** (Control Box: 120mm x 105mm x 290mm)

See the next page for a breakdown of typical appliances that can be powered using the BB120 Solar Kit



On one complete charge you can use these appliances as follows:

Watch 216h of 5W 8"TV

Or

Watch 54h of 20W 15"TV

Or

Shave for 108h

Or

Run a Laptop for 36h

Or

More than 24h of LED lights, radio and charge more than 250 phones



On one complete charge and connected to the solar panel you can power all these appliances in 1 day:

Charge 22 phones

+

Have 24h of 4x2W LED light and 2 x 5W

LED

+

Watch 12h of 8"TV

+

Listen to 12h of 4W radio

+

Shave for 12h

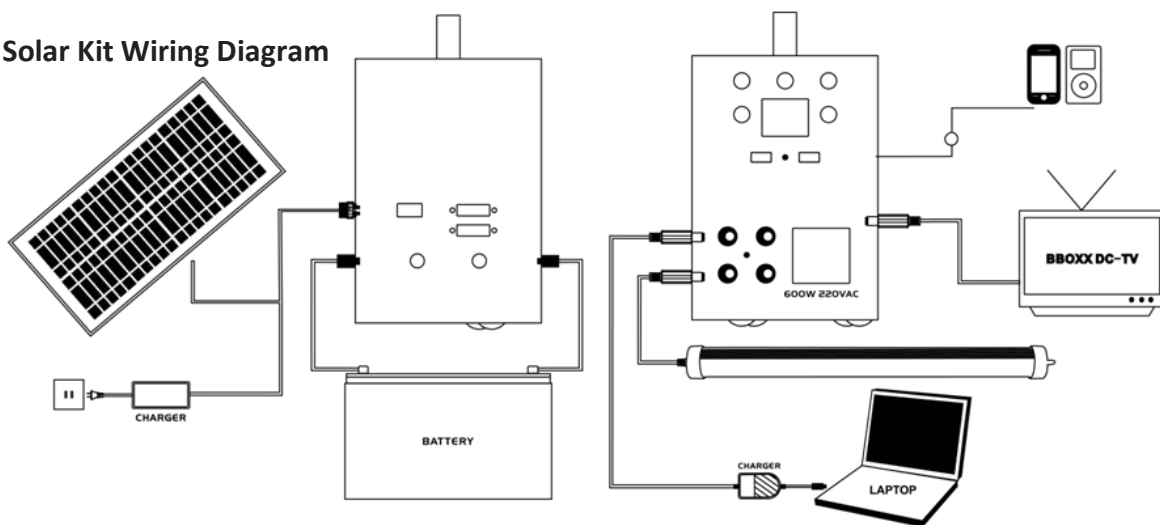
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24h of 20W 15"TV

+

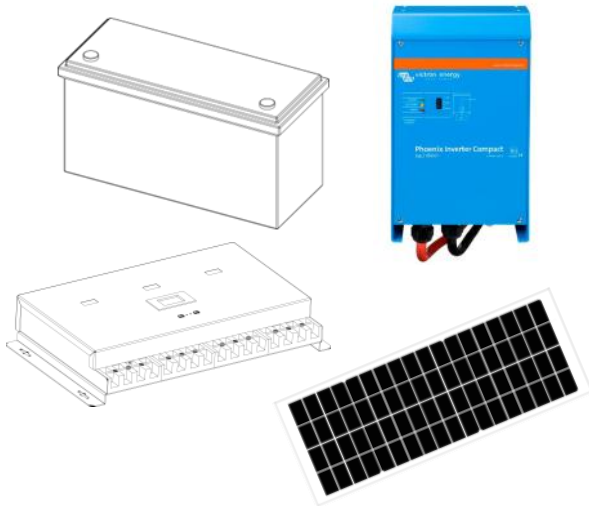
24h of laptop charging

BB120 Solar Kit Wiring Diagram



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BBOXX Off-Grid Solar Systems



KEY PRODUCT FEATURES

- BBOXX Developed Control Unit
- High Efficiency External Inverter
- Polycrystalline Solar Panels
- Sealed Lead Acid Batteries
- Solar Panel & Battery Mounting
- Solar Panel & Battery Wiring

BB400

- 500W of Solar Panels
- 400Ah SLA Batteries
- 1300W AC Output Power

BB800

- 1000W of Solar Panels
- 800Ah SLA Batteries
- 1300W AC Output Power

BB1200

- 1500W of Solar Panels
- 1200Ah SLA Batteries
- 1300W AC Output Power

BB2400

- 3000W of Solar Panels
- 2400Ah SLA Batteries
- 2500W AC Output Power

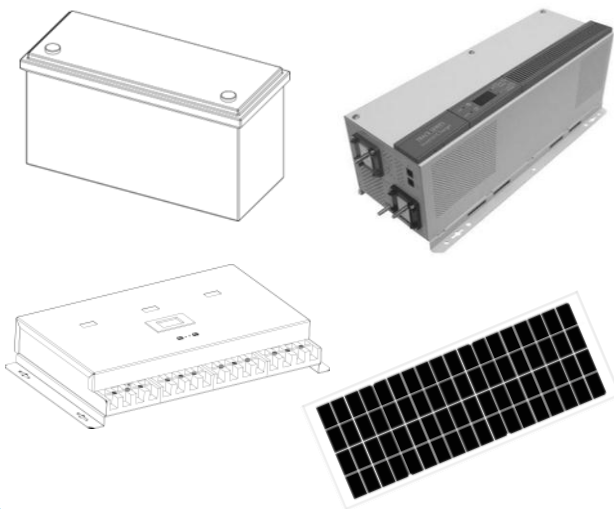
BB4000

- 5000W of Solar Panels
- 4000Ah SLA Batteries
- 2500W AC Output Power



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BBOXX On-Grid Backup Systems



KEY PRODUCT FEATURES

- BBOXX Developed Control Unit
- Grid Tied Solar/Non-Solar Backup Systems - Xantrex Controllers
- Polycrystalline Solar Panels
- Sealed Lead Acid Batteries
- Solar Panel & Battery Mounting

BB400 Solar Backup

- 250W of Solar Panels
- 400Ah SLA Batteries
- 2400W AC Output Power

BB800 Solar Backup

- 500W of Solar Panels
- 800Ah SLA Batteries
- 2400W AC Output Power

BB400 Backup

- 400Ah SLA Batteries
- 2400W AC Output Power
- Automatic Power Transfer Switch

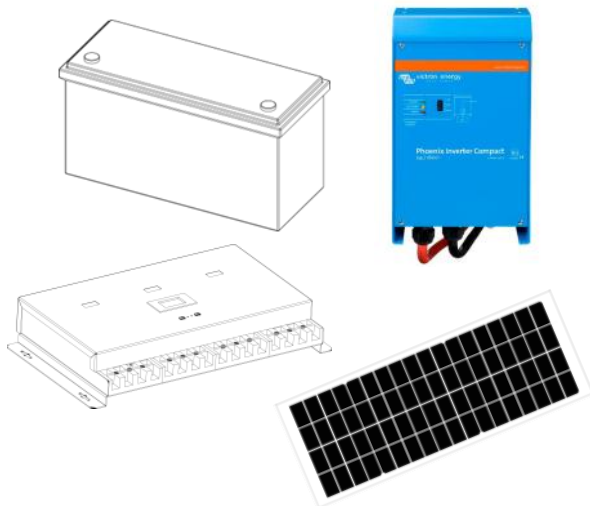
BB800 Backup

- 800Ah SLA Batteries
- 2400W AC Output Power
- Automatic Power Transfer Switch



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BB400 Off-Grid Solar System



KEY PRODUCT FEATURES

- Control Box & Charge Controller
- 500W of Solar Panels
- 400Ah of SLA Batteries
- 1300W Inverter Output Power
- Solar Panel & Battery Mounting
- Fusing, Protection & Wiring

Our entry level and affordable off-grid solar home system is capable of powering a wide range of AC electrical appliances in a typical small suburban home

Detailed Product Specifications

Inverter: Continuous Output Power: 1300W, Maximum Surge Output Power: 3000W, Pure Sine Wave 230V 50Hz Output, 94% Maximum Efficiency. Thermal, Overload, Short-circuit and Earth-fault Protection. Computer Interface.

Solar Charge Controller and Connection Box: 20A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply and household wiring system.

Battery: 2 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 2 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB400 Off-Grid Solar System





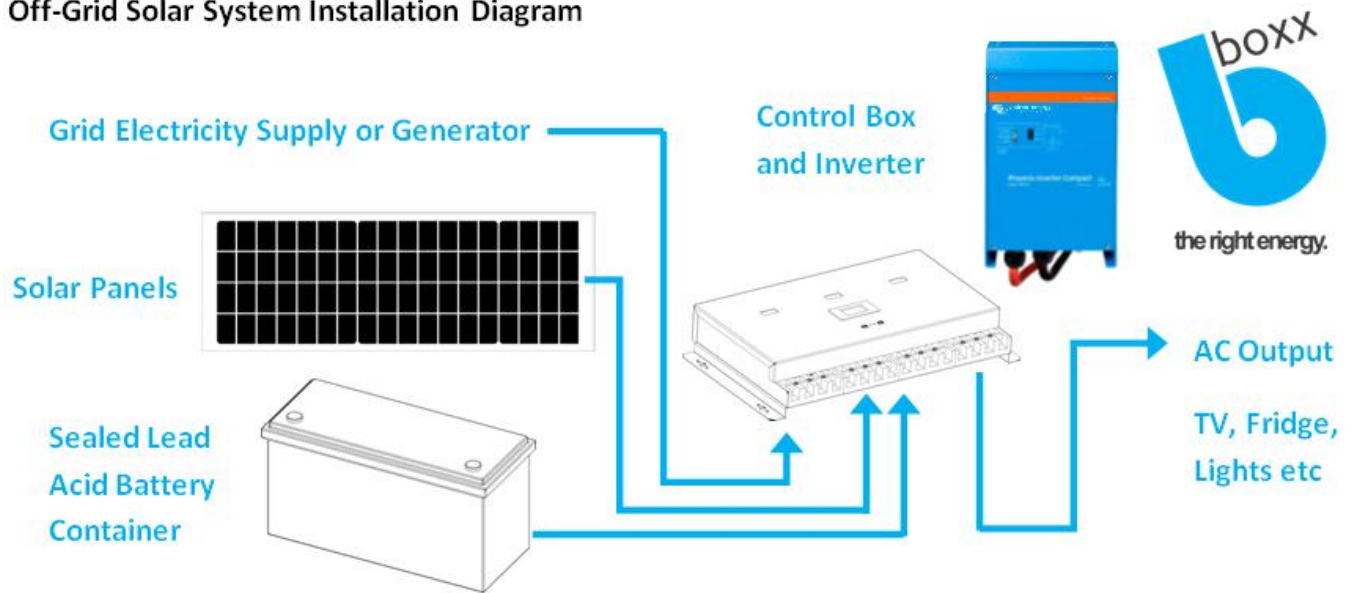
All these appliances can be used as follows every day:

- 1 plasma TV for 2 hours
- +
- 1 fridge for 24 hours
- +
- 8 lights for 4 hours
- +
- 1 computer for 2 hours
- +
- 1 sound system for 2 hours

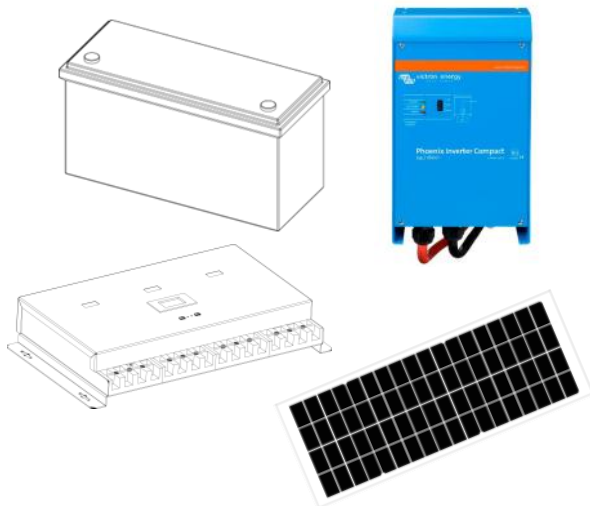


All appliances under 10W (phone charger, radio) can be used during the entire day

Off-Grid Solar System Installation Diagram



BB800 Off-Grid Solar System



KEY PRODUCT FEATURES

- Control Box & Charge Controller
- 1000W of Solar Panels
- 800Ah of SLA Batteries
- 1300W Inverter Output Power
- Solar Panel & Battery Mounting
- Fusing, Protection & Wiring

Our entry level and affordable off-grid solar home system is capable of powering a wide range of AC electrical appliances in a typical small suburban home

Detailed Product Specifications

Inverter: Continuous Output Power: 1300W, Maximum Surge Output Power: 3000W, Pure Sine Wave 230V 50Hz Output, 94% Maximum Efficiency. Thermal, Overload, Short-circuit and Earth-fault Protection. Computer Interface.

Solar Charge Controller and Connection Box: 30A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply and household wiring system.

Battery: 4 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 4 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB400 Off-Grid Solar System





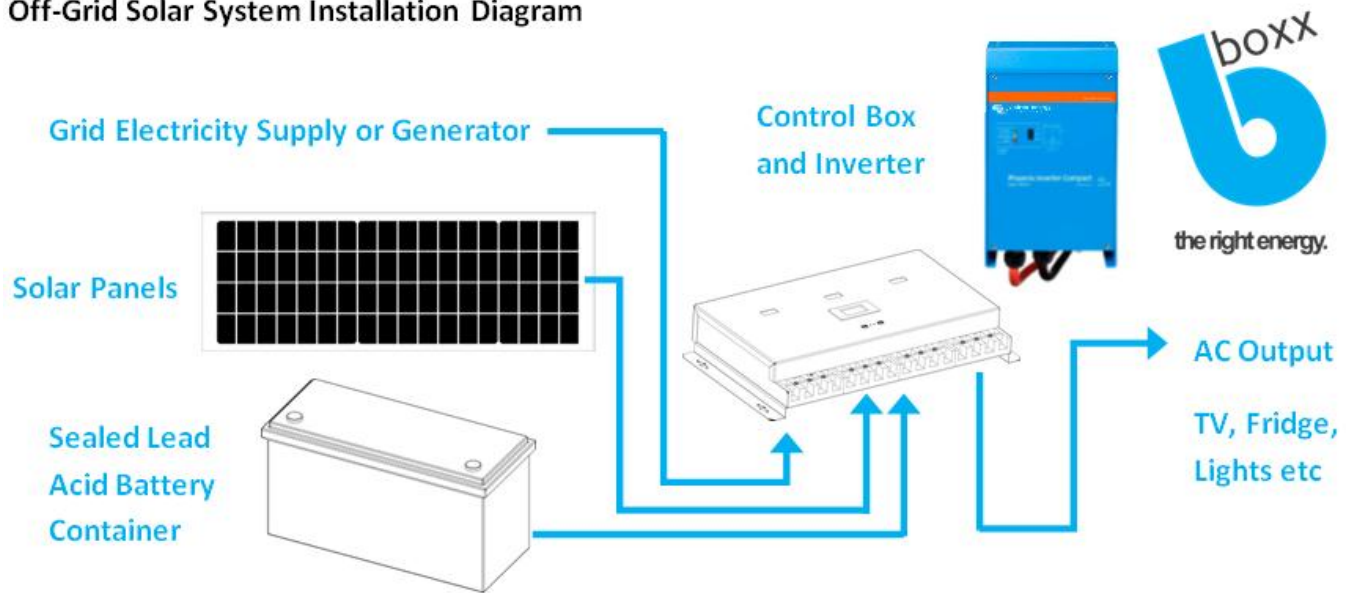
All these appliances can be used as follows every day:

- 1 plasma TV for 2 hours
- +
- 1 fridge for 24 hours
- +
- 8 lights for 4 hours
- +
- 1 computer for 2 hours
- +
- 1 sound system for 2 hours

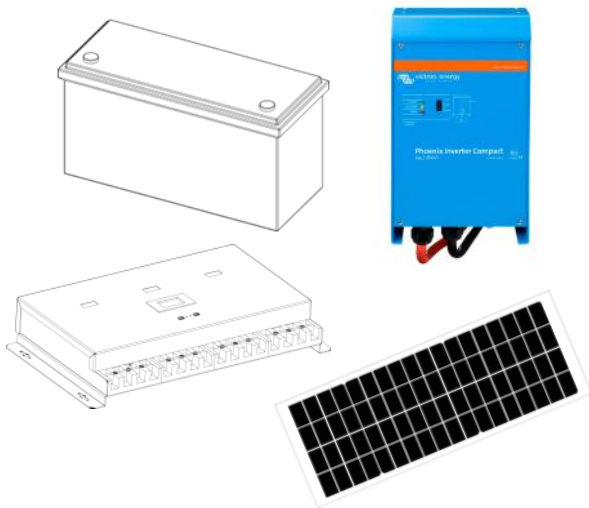


All appliances under 10W (phone charger, radio) can be used during the entire day

Off-Grid Solar System Installation Diagram



BB1200 Off-Grid Solar System



KEY PRODUCT FEATURES

- **Control Box & Charge Controller**
- **1500W of Solar Panels**
- **1200Ah of SLA Batteries**
- **1300W Inverter Output Power**
- **Solar Panel & Battery Mounting**
- **Fusing, Protection & Wiring**

Our medium sized and affordable off-grid solar home system is capable of powering a wide range of AC electrical appliances in a typical medium sized suburban home

Detailed Product Specifications

Inverter: Continuous Output Power: 1300W, Maximum Surge Output Power: 3000W, Pure Sine Wave 230V 50Hz Output, 94% Maximum Efficiency. Thermal, Overload, Short-circuit and Earth-fault Protection. Computer Interface.

Solar Charge Controller and Connection Box: 2 x 30A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply and household wiring system.

Battery: 6 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 6 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB1200 Off-Grid Solar System





All these appliances can be used as follows every day:

2 plasma TVs for 4 hours

+

1 fridge for 24 hours

+

20 lights for 8 hours

+

2 computers for 6 hours

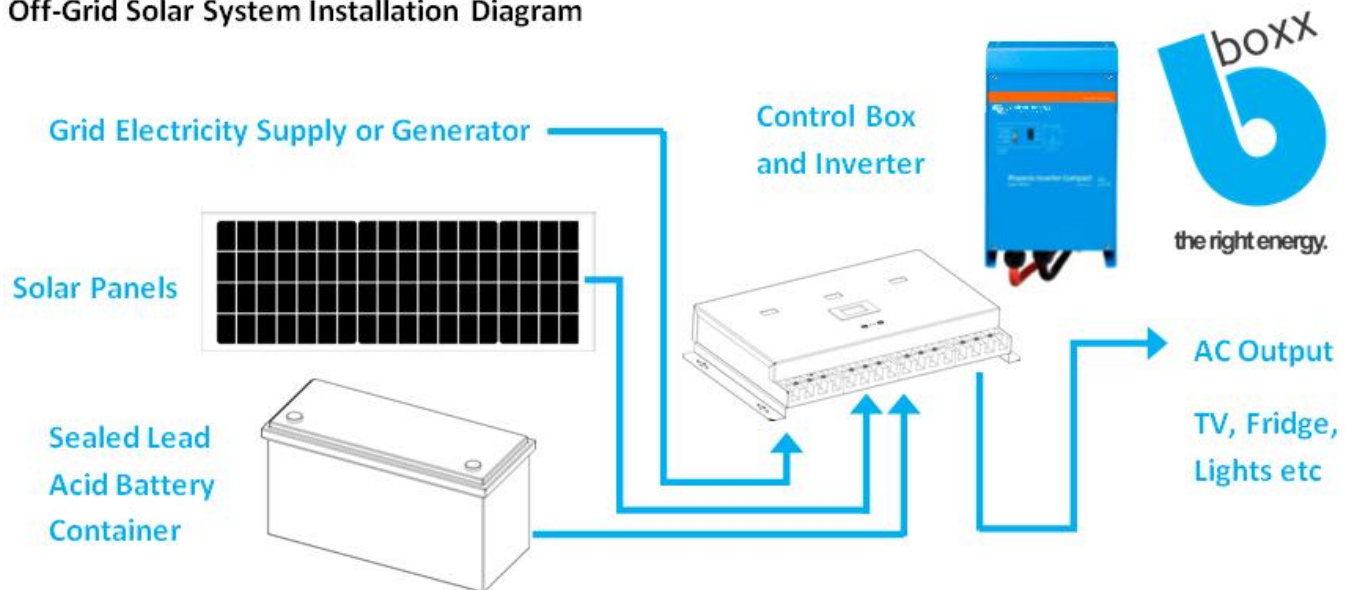
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2 sound systems for 6 hours

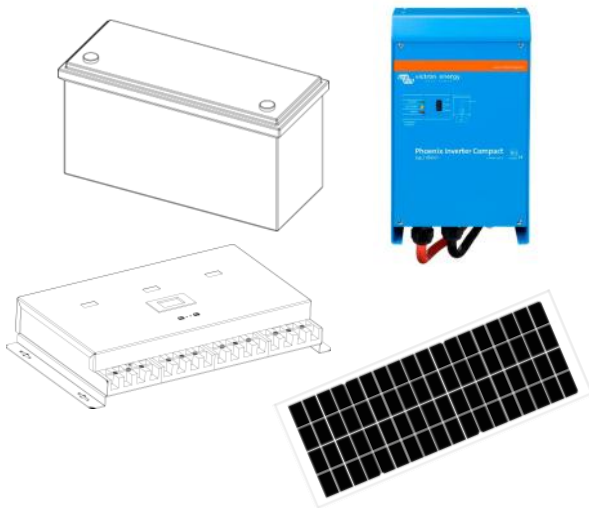


All appliances under 10W (phone charger, radio) can be used during the entire day

Off-Grid Solar System Installation Diagram



BB2400 Off-Grid Solar System



KEY PRODUCT FEATURES

- Control Box & Charge Controller
- 3000W of Solar Panels
- 2400Ah of SLA Batteries
- 2500W Inverter Output Power
- Solar Panel & Battery Mounting
- Fusing, Protection & Wiring

Our medium sized and affordable off-grid solar home system is capable of powering a wide range of AC electrical appliances in a typical medium sized suburban home

Detailed Product Specifications

Inverter: Continuous Output Power: 2500W, Maximum Surge Output Power: 6000W, Pure Sine Wave 230V 50Hz Output, 94% Maximum Efficiency. Thermal, Overload, Short-circuit and Earth-fault Protection. Computer Interface.

Solar Charge Controller and Connection Box: 4 x 30A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply and household wiring system.

Battery: 12 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 12 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB2400 Off-Grid Solar System





All these appliances can be used as follows every day:

2 plasma TVs for 4 hours

+

2 fridges for 24 hours

+

20 lights for 12 hours

+

8 computers for 6 hours

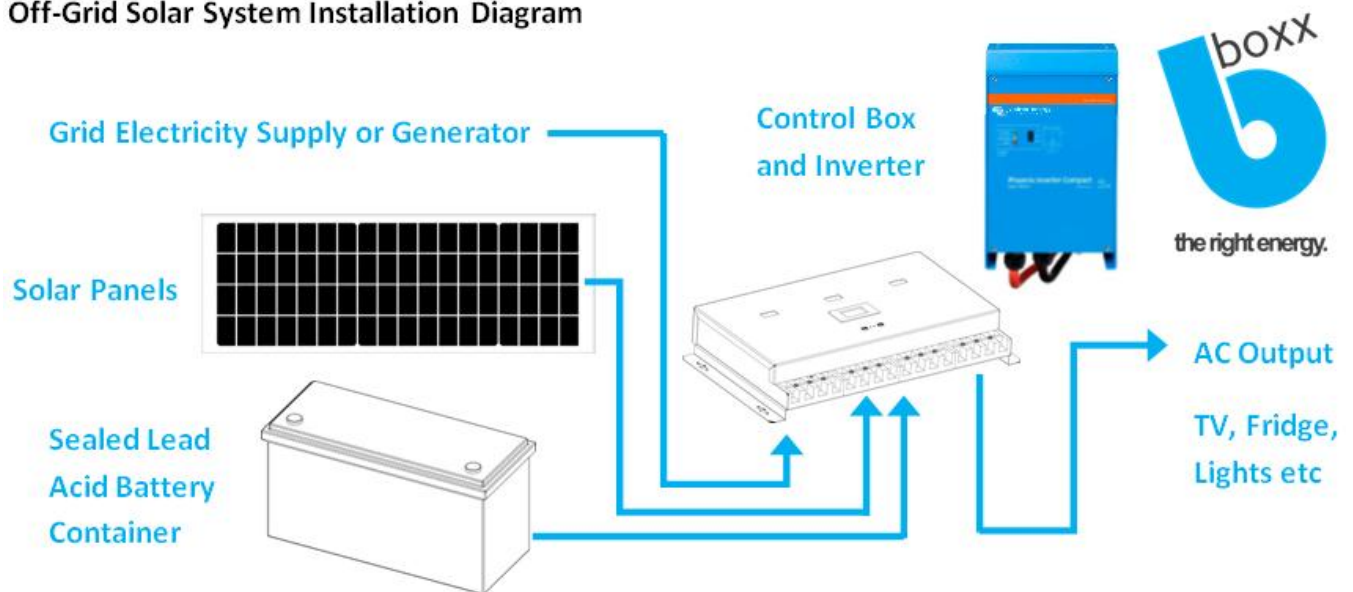
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4 sound systems for 6 hours



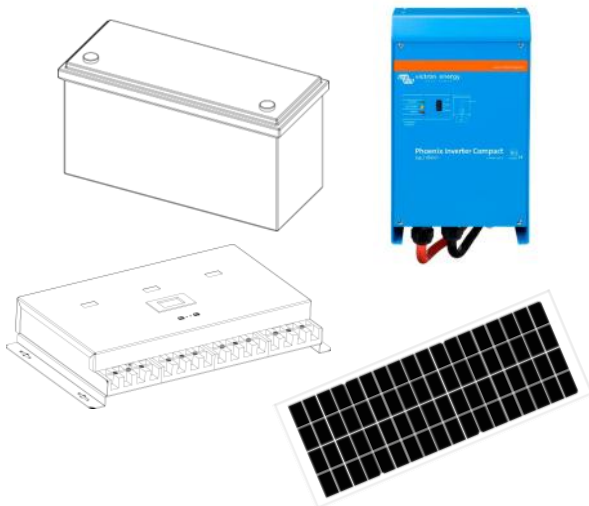
All appliances under 10W (phone charger, radio) can be used during the entire day

Off-Grid Solar System Installation Diagram



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BB4000 Off-Grid Solar System



KEY PRODUCT FEATURES

- Control Box & Charge Controller
- 5000W of Solar Panels
- 4000Ah of SLA Batteries
- 2500W Inverter Output Power
- Solar Panel & Battery Mounting
- Fusing, Protection & Wiring

Our top of the range off-grid solar home system is capable of powering a wide range of high powered AC electrical appliances in a large suburban home or business

Detailed Product Specifications

Inverter: Continuous Output Power: 2500W, Maximum Surge Output Power: 6000W, Pure Sine Wave 230V 50Hz Output, 94% Maximum Efficiency. Thermal, Overload, Short-circuit and Earth-fault Protection. Computer Interface.

Solar Charge Controller and Connection Box: 4 x 45A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply and household wiring system.

Battery: 20 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 20 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB4000 Off-Grid Solar System





All these appliances can be used as follows every day:

2 plasma TVs for 4 hours

+

2 fridges for 24 hours

+

25 lights for 12 hours

+

13 computers for 8 hours

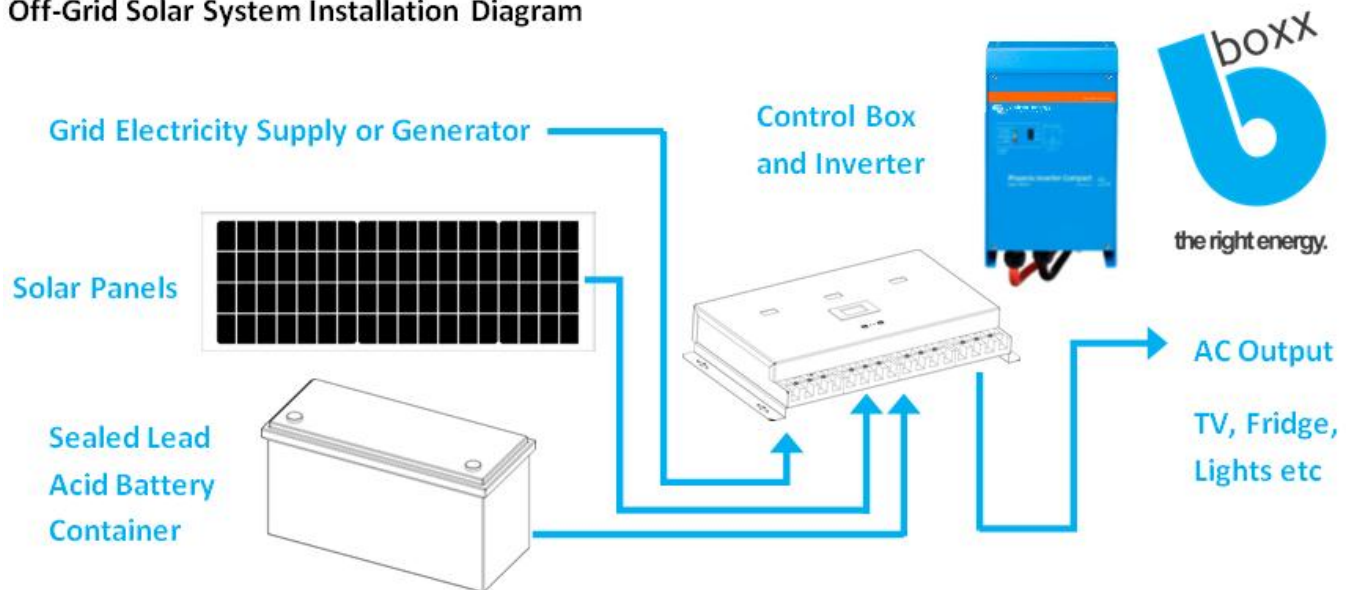
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4 sound systems for 8 hours



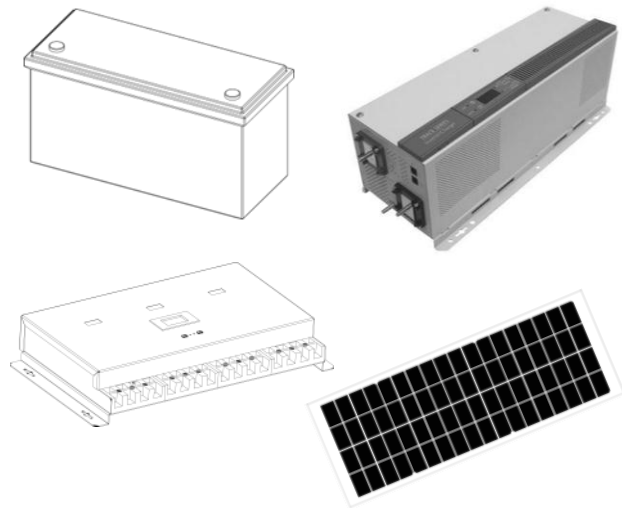
All appliances under 10W (phone charger, radio) can be used during the entire day

Off-Grid Solar System Installation Diagram



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BB400 On-Grid Solar Backup



KEY PRODUCT FEATURES

- Xantrex TR2424E Inverter Charger
- 250W of Solar Panels
- 400Ah of SLA Batteries
- 2400W Output Power
- Control Box & Charge Controller
- Solar Panel & Battery Mounting

Our mid-range on-grid solar home backup system is capable of powering a wide range of AC electrical appliances in a home or business with a very unstable or unreliable grid connection.

Detailed Product Specifications

Xantrex TR2424E Inverter/Charger: Continuous Output Power: 2400W, Maximum Surge Output Power: 4800W, Pure Sine Wave 230V 50Hz Output, 92% Maximum Efficiency, 120-253VAC and 41-68Hz Voltage Input Range, Thermal, Overload, Short-circuit and Earth-fault Protection. Digital Display.

Solar Charge Controller and Connection Box: 20A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply with automatic (<40ms) transfer relay rated at 15A AC

Battery: 2 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 1 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB400 On-Grid Solar Backup





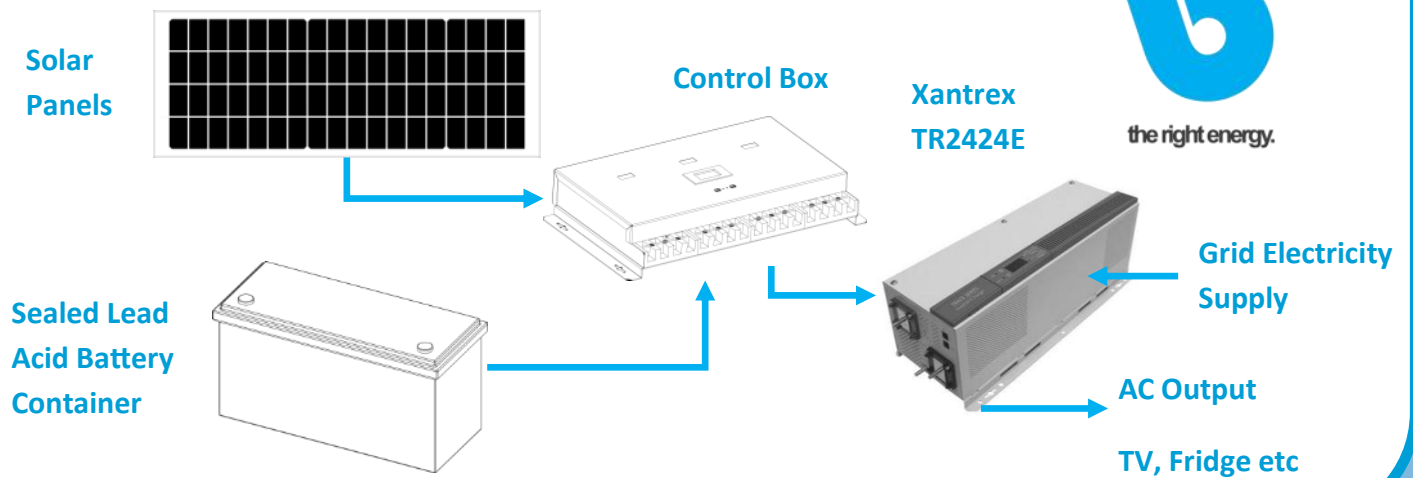
All these appliances can be used as follows every day:

- 1 plasma TVs for 4 hours
- +
- 1 fridge for 24 hours
- +
- 8 lights for 8 hours
- +
- 1 computers for 4 hours
- +
- 1 sound systems for 6 hours

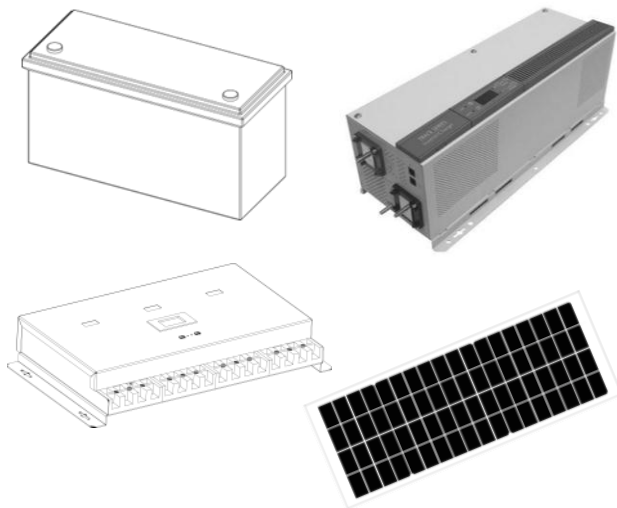
All appliances under 10W (phone charger, radio) can be used during the entire day



On-Grid Solar Backup System Installation Diagram



BB800 On-Grid Solar Backup



KEY PRODUCT FEATURES

- Xantrex TR2424E Inverter Charger
- 500W of Solar Panels
- 800Ah of SLA Batteries
- 2400W Output Power
- Control Box & Charge Controller
- Solar Panel & Battery Mounting

Our high end on-grid solar home backup system is capable of powering a wide range of AC electrical appliances in a home or business with a very unstable or unreliable grid connection.

Detailed Product Specifications

Xantrex TR2424E Inverter/Charger: Continuous Output Power: 2400W, Maximum Surge Output Power: 4800W, Pure Sine Wave 230V 50Hz Output, 92% Maximum Efficiency, 120-253VAC and 41-68Hz Voltage Input Range, Thermal, Overload, Short-circuit and Earth-fault Protection. Digital Display.

Solar Charge Controller and Connection Box: 30A Rating with PWM functionality. DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply with automatic (<40ms) transfer relay rated at 15A AC

Battery: 4 x 200Ah 12V Batteries with battery casing, fusing and wiring.

Solar Panels: 2 x 250W Polycrystalline Solar Panels with mounting and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB800 On-Grid Solar Backup





All these appliances can be used as follows every day:

1 plasma TVs for 4 hours

+

1 fridge for 24 hours

+

18 lights for 8 hours

+

5 computers for 5 hours

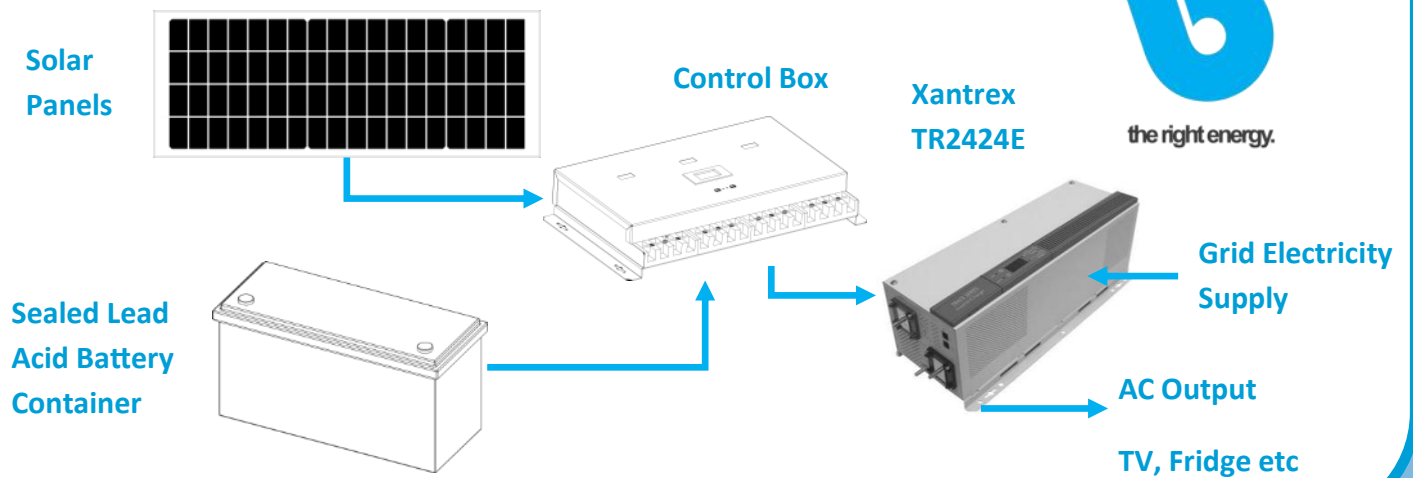
+

2 sound systems for 8 hours

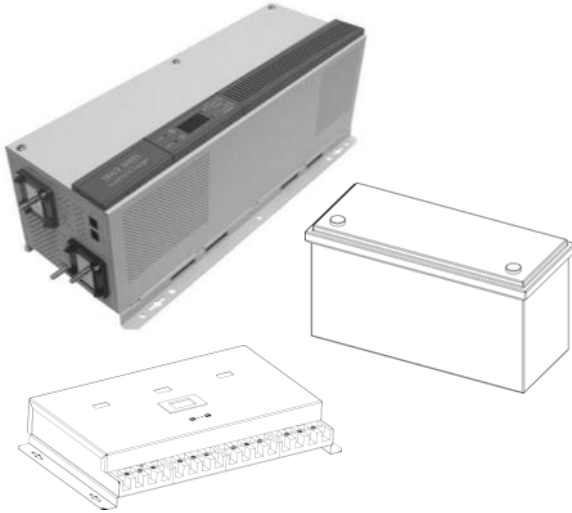
All appliances under 10W (phone charger, radio) can be used during the entire day



On-Grid Solar Backup System Installation Diagram



BB400 On-Grid Backup System



KEY PRODUCT FEATURES

- **Xantrex TR2424E Inverter Charger**
- **400Ah of SLA Batteries**
- **2400W Output Power**
- **Automatic Grid Transfer Switch**
- **Wiring, Fusing and Protection**
- **Control Box**

Our mid-range on-grid backup system is capable of powering a wide range of AC electrical appliances in a home or business with an unstable or unreliable grid connection.

Detailed Product Specifications

Xantrex TR2424E Inverter/Charger: Continuous Output Power: 2400W, Maximum Surge Output Power: 4800W, Pure Sine Wave 230V 50Hz Output, 92% Maximum Efficiency, 120-253VAC and 41-68Hz Voltage Input Range, Thermal, Overload, Short-circuit and Earth-fault Protection. Digital Display.

Connection Box: DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply with automatic (<40ms) transfer relay rated at 15A AC

Battery: 2 x 200Ah 12V Batteries with battery casing, fusing and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB400 On-Grid Backup





All these appliances can be used as follows every day:

2 plasma TVs for 4 hours

+

1 fridge for 24 hours

+

12 lights for 5 hours

+

4 computers for 2 hours

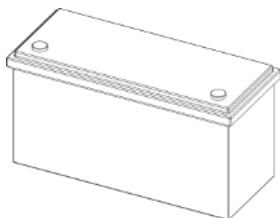
+

1 sound systems for 2 hours



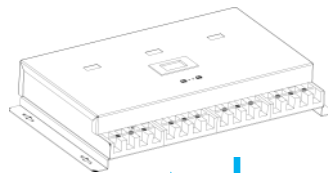
All appliances under 10W (phone charger, radio) can be used during the entire day

On-Grid Backup System Installation Diagram

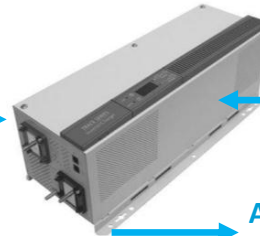


Sealed Lead Acid Battery Container

Control Box



Xantrex TR2424E



Grid Electricity Supply

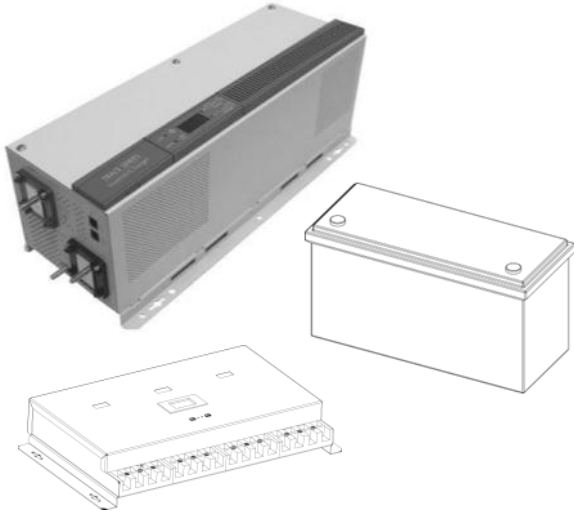
AC Output

TV, Fridge etc



the right energy.

BB800 On-Grid Backup System



KEY PRODUCT FEATURES

- **Xantrex TR2424E Inverter Charger**
- **800Ah of SLA Batteries**
- **2400W Output Power**
- **Automatic Grid Transfer Switch**
- **Wiring, Fusing and Protection**
- **Control Box**

Our high-end on-grid backup system is capable of powering a wide range of AC electrical appliances in a home or business with an unstable or unreliable grid connection.

Detailed Product Specifications

Xantrex TR2424E Inverter/Charger: Continuous Output Power: 2400W, Maximum Surge Output Power: 4800W, Pure Sine Wave 230V 50Hz Output, 92% Maximum Efficiency, 120-253VAC and 41-68Hz Voltage Input Range, Thermal, Overload, Short-circuit and Earth-fault Protection. Digital Display.

Connection Box: DC reverse polarity, low voltage and overcurrent protection. Integrated AC and DC fuses. DC outputs for low power lighting systems.

AC Input-Output: Connection to grid electricity supply with automatic (<40ms) transfer relay rated at 15A AC

Battery: 4 x 200Ah 12V Batteries with battery casing, fusing and wiring.

See the next page for a breakdown of typical appliances that can be powered using the BB800 On-Grid Backup





All these appliances can be used as follows every day:

2 plasma TVs for 6 hours

+

1 fridges for 24 hours

+

18 lights for 8 hours

+

5 computers for 6 hours

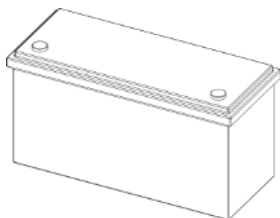
+

2 sound systems for 6 hours



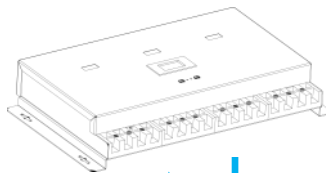
All appliances under 10W (phone charger, radio) can be used during the entire day

On-Grid Backup System Installation Diagram

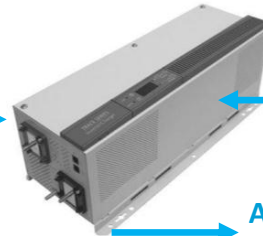


Sealed Lead Acid Battery Container

Control Box



Xantrex TR2424E



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Grid Electricity Supply

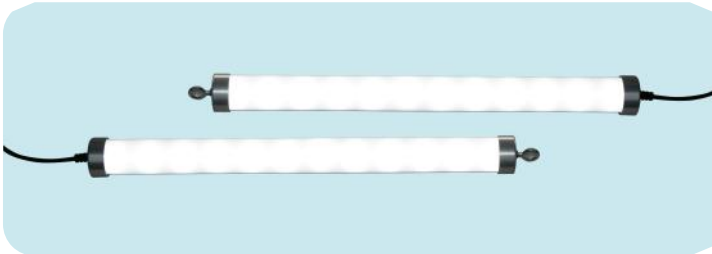
AC Output

TV, Fridge etc



the right energy.

BBOXX LED Lights



KEY PRODUCT FEATURES

- **Compatible with BBOXX Solar Kit Products**
- **Robust Casing**
- **8m Cable**
- **High Efficiency LED's**
- **Available in LED Tube or Bulb Varieties**

Power Ratings Available

All products come with 8m cable and include temperature, voltage and current protection features.

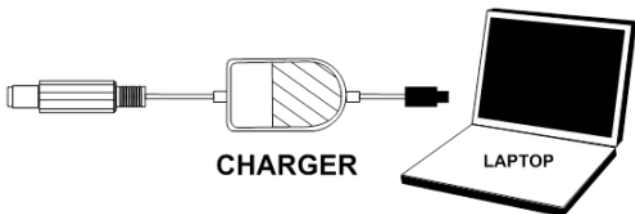


Spotlight, Tube and other AC LED's (suitable for use with our on-grid systems) are also available.

Contact: info@bbox.co.uk for more details

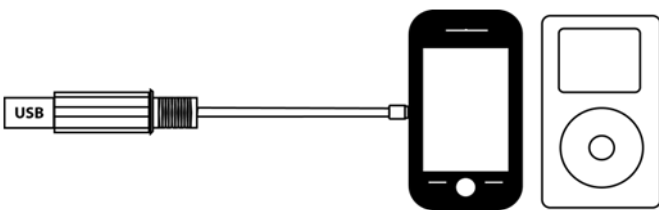


BBOXX Solar Kit Accessories



LAPTOP DC CHARGING KIT

- Multiple-Device Compatibility
- 15-24V Output Voltages
- 80W Max Power Output



USB MULTIPLE PHONE CHARGER

- Multiple-Device Compatibility
- Inter-Changeable Tips
- Voltage Output: 5V DC



120W BBOXX SOLAR KIT INVERTER

- Compatible with the BB17 Solar Kit
- 120W Maximum Power Output
- Inbuilt Cooling Fan



the right energy.

BBOXX TV Systems



KEY PRODUCT FEATURES

- **Compatible with BBOXX Solar Kits**
- **Low Power Consumption**
- **Multi-Language and Format Support**
- **Satellite and RF Antennas**

TV Technical Details:

- Screen Sizes: 8 inch, 15 inch & 22 inch
- Power Consumption from 5W (8 inch) to 45W (22 inch)
- 0-99 Analogue Channels
- NTSC and PAL Tuner Compatibility
- Supports External Aerial, VGA and Sound Connections
- For further details, contact: info@bbox.co.uk

TV Accessory Products:

- Low Power 12V DC Digital and Satellite Decoders and DVD Player
- External High Gain Antenna



BBOXX Batteries & Solar Panels



BBOXX SEALED LEAD ACID BATTERIES

- Battery Sizes from 5Ah to 500Ah
- 2V, 6V and 12V Types Available
- Maintenance Free AGM Type Battery
- Compatible with BBOXX Solar Kit and Home Installation Systems



BBOXX PHOTOVOLTAIC PANELS

- Power Ratings from 5W to 280W
- Mono or Poly Crystalline Types
- Anodized Aluminum Frames
- Full EU and Export Certifications
- High Quality Silicon Wafers



BBOXX Large PV Installations



KEY PRODUCT FEATURES

BBOXX is able to offer custom made, affordable solar systems to cater for intensive energy needs. We can design systems for both off-grid and on-grid use, in sizes from 500W to 5MW.

- **Professionally designed and tailored to meet your energy needs**
- **High quality batteries, inverters and solar panels for business and household use**
- **Installation services and training of local operation**
- **Integrated with grid electricity or existing generators**
- **Prices vary depending on installation size**
- **For further information contact: info@bbox.co.uk**



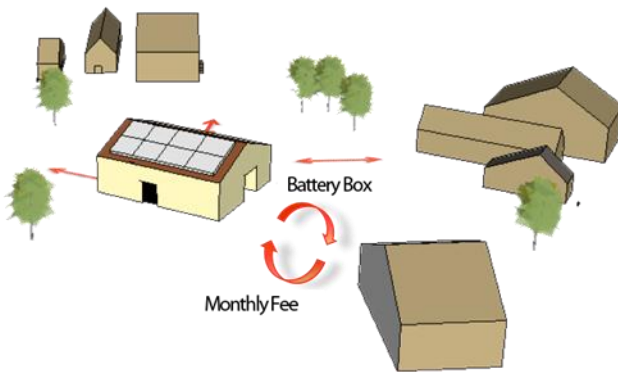
BBOXX Energy Kiosk Solution



KEY PRODUCT FEATURES

- Scalable & Affordable Rural Electrification Solution
- Attractive Financial Returns
- Central Power Generation
- BBOXX Battery Box Products & Accessories

1.6 billion people around the world do not have access to electricity. The Energy Kiosk concept designed by BBOXX's charitable arm, e.quinox, aims to resolve the issue of rural electrification in developing countries.

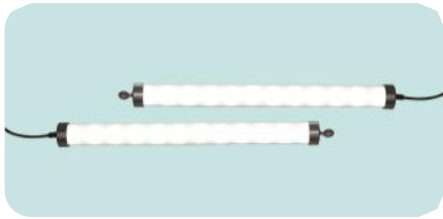


THE ENERGY KIOSK CONCEPT

- Central Power Generation through PV, Grid or Hydro
- Decentralized Distribution through BBOXX Battery Boxes



ENERGY KIOSK SET-UP PROCESS



- Uses BBOXX battery boxes & accessories
- Suitable for between 150 to 500 users
- Deposit paid by the user for insurance
- Recharge fees based on price of kerosene and existing energy services
- Maintenance, replacement of products & shopkeeper training paid for by kiosk revenue

ESTIMATED FINANCIAL FORECASTS

Number of Energy Kiosk Users

	200	300	400	500
Estimated Investment Cost	\$ 55,093	\$ 83,838	\$ 109,335	\$ 135,201
<i>Investment Cost/household</i>	\$ 275	\$ 279	\$ 273	\$ 270
Estimated Average Annual Maintenance Cost	\$ 16,079	\$ 21,929	\$ 27,665	\$ 33,612
<i>Annual Maintenance Cost/household</i>	\$ 80	\$ 73	\$ 69	\$ 67
Estimated Annual Revenues	\$ 33,479	\$ 50,218	\$ 66,958	\$ 83,697
Estimated Annual Operating Gross Profit	\$ 19,074	\$ 30,800	\$ 42,640	\$ 54,269

NOTE: The financial estimations given in this document are provided as a guide to be used for project estimation purposes. The forecasts are based on the best available data gathered from e.quinox and BBOXX projects during 2008 to 2011 in rural Rwanda and Tanzania. BBOXX will not accept liability for financial decisions taken as a result of statements in this document without prior consultation with BBOXX and/or evaluation of the local economic conditions prevalent in the planned kiosk area.

The Energy Kiosk solution has been developed and tested by e.quinox. See www.e.quinox.org.uk for more details.



BBOXX Marketing Material



KEY PRODUCTS OFFERED

- BBOXX Product Flyers
- BBOXX Advertising Tent
- BBOXX Advertising Flag
- BBOXX Banner
- BBOXX Brochure
- BBOXX Polo Shirts



BBOXX is proud of its brand and the value it represents and will endeavour to support our partners around the world through effective marketing material. BBOXX aims to offer our partners the knowledge, the tools and expertise to successfully reach customers around the world.



Product Shipping Details

The weight and volume of our products are given in the below table to help you calculate shipping costs to your chosen destination.

Item	Volume	Weight
SOLAR KITS		
BB5 kit	0.003	3
BB7 kit	0.027	8.1
BB12 kit	0.035	11.6
BB17 kit	0.044	14.6
BB38 kit	0.15	35
BB120 kit	0.25	55
BATTERY BOXES (NO SOLAR PANEL)		
BB5	0.003	2.5
BB7	0.004	5.3
BB12	0.01	7.4
BB17	0.01	9.2
BB38	0.04	19.5
BB120	0.1	37.5
OFF-GRID SOLAR SYSTEMS		
BB400-OFF	0.8	195
BB800-OFF	1.6	325
BB1200-OFF	2.2	455
BB2400-OFF	4	1100
BB4000-OFF	7	1600
ON-GRID BACKUP SOLAR SYSTEMS		
BB400-ON	0.7	160
BB800-ON	1.4	320
ON GRID BACKUP SYSTEMS		
BB400-BU	0.5	140
BB800-BU	1.2	280
12VDC LIGHTS		
2W < LED < 6W	contact BBOXX	
TVs		
8" 12VDC TV	0.006	1.1
15" 12VDC TV	0.01	2.4
21" 12VDC TV	0.085	5
12VDC satellite decoder	0.005	1.25
12VDC digital decoder	0.003	0.95
12VDC DVD player	0.005	1.23
SOLAR PANELS		
5W < PANEL < 250W	contact BBOXX	
SLA 12V BATTERIES		
5AH < SLA BATTERY < 200AH	contact BBOXX	

BBOXX General Warranty

GENERAL TERMS AND CONDITIONS

The warranty period will be NINE calendar months for all BBOXX UK products (the “Product”) from date of purchase, excluding sealed lead acid batteries. A warranty of 10 years will be provided on solar panel degradation below 80% of nominal value. Date of purchase is indicated on the validated receipt provided by the distributor or local BBOXX representative.

All BBOXX products sold through our shop or distributors are guaranteed to be free from defects in workmanship and parts in the warranty period. Defects that occur within this warranty period, under normal use and care will be repaired or replaced at our discretion, solely at our option with no charge for parts or labour.

BBOXX reserves the right to replace the Product or relevant part with the same or equivalent product or part, rather than repair it. Where a replacement is provided the Product or part replaced becomes the property of BBOXX. BBOXX may replace parts with refurbished parts. Replacement of the Product or a part does not extend or restart the Warranty period.

The benefits conferred by this warranty are in addition to all rights and remedies in respect of the product that the consumer has under the Trade Practices Act and similar state and territory laws.

The Warranty is transferable to a new owner, in the event of sale of the Product, provided the new owner has the receipt of purchase and the Product is still within the guaranteed period.

PROOF OF PURCHASE

All BBOXX products have been manufactured to the highest quality standards and are warranted to the original purchaser or gift recipient only. This warranty is not transferable.

Please keep your purchase docket or receipt as proof of purchase and as proof of the date on which the purchase was made. The purchase docket or receipt must be presented with the warranty when making a claim under this warranty. If in the event the receipt of purchase is not presented, then this warranty is invalid.

SERVICE OR REPLACEMENT DURING THE WARRANTY PERIOD

In the event that this product is Dead On Arrival (DOA), the owner has 14 days in which to return the Product to the retailer or place of purchase for a new replacement. If the owner does not return the product within 14 days then the Product will be treated under normal warranty conditions. Under normal warranty conditions the product must be returned to the Retailer, place of purchase, or any BBOXX branch closest to your location. Please ensure that the product is properly packaged so as to ensure that no damage occurs to the product during transit. Also make sure you have included an explanation of the problem.

In the event that the goods requiring repair under warranty, the owner is responsible for the cost of transportation to and from BBOXX branches. Whilst in transit the goods are at the owner's risk.

GENERAL EXCLUSIONS AND LIMITATIONS

In the event that no identical Product is available for service repair, BBOXX has the right to replace the Product with a device of equal capacity, or offer the customer the choice of a Product upgrade which may incur an extra cost.

This warranty is limited to defects in workmanship or parts. All defective products or parts will be repaired or replaced, including accessory products that have been used fairly and in accordance with the general criteria. This warranty does not cover manuals and packaging, line cords or wiring.

This warranty does not cover any defect caused by an accident, misuse, abuse, improper installation or operation, lack of reasonable care, unauthorized medication, loss of parts, tampering or attempted repair by a person not authorized by the distributor.

The warranty will not apply if damage, malfunction or failure resulting from alterations, accident, misuse, abuse, fire, liquid spillage, mis-adjustment of customer controls, use on an incorrect voltage, power surges and dips, thunderstorm activity, voltage supply problems, tampering or unauthorized repairs by any persons, use of defective or incompatible accessories, exposure to abnormally corrosive conditions, acts of God or entry by any insect, vermin or foreign object in the Product.

This warranty does not cover damage arising during transportation, installation or while moving the Product, or to any transportation costs of the Product or any parts thereof to and from the owner, unless otherwise specified in these warranty conditions.

BBOXX will not be liable for any loss, damage or alterations to (1) third party furniture, hardware or software; or (2) programs, data or information stored on any media or any part of the Product, no matter how occurring; or for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.

This warranty does not cover normal wear and tear of the Product or parts. BBOXX will not provide refund directly to end-user in any circumstances BBOXX excludes all other warranties, conditions, terms, representations and undertakings whether express or implied.

