

SOLAR HOME SYSTEMS AND ITS ADEQUATE DESIGN

(How it should { not } look like)

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Design Parameters of Solar Home Systems

■ Meet Users Expectations

Quality of light

Handling and Control

Availability of maintenance

Costs affordable

Availability of Warranty

Design Parameters of Solar Home Systems

■ Meet Environmental Challenge

Ambient Temperature

Humidity

Salinity

Insects

Users operation abilities

Design Parameters of Solar Home Systems

■ Meet Market Necessities

Distribution in the rural area

Easy installation by non-professionals

Guarantee aspects

Violation proof

Recycling

Design Parameters of Solar Home Systems

■ Meet Technical Standards

Strict DC-Design :

Lamp socket

Switches

Cables

Connectors, Terminals

Plugs

Design Parameters of Solar Home Systems

■ Meet Technical Standards

Standard housings

Electrical Norms

Installation Necessities

Safety

Manual

Solar Home System for Brazilian Rural Households

Solar Home System for Brazilian Rural Households

■ Meet Users Expectations

Quality of light :	min three lamps
Handling and Control :	not sophisticated
Maintenance :	next village
Costs affordable :	Revolving Fund
Warranty available :	local components

Solar Home System for Brazilian Rural Households

■ Meet Environmental Challenge

Ambient Temperature : 28 to 45 °C

Humidity : high; condensing

Salinity : high; condensing

Insects : aggressive; very small

Users operation abilities : low

Solar Home System for Brazilian Rural Households

■ Meet Market Necessities

Distribution in the rural area :

One package without battery;

Battery purchase at local distributor (voucher)

Solar Home System for Brazilian Rural Households

■ Meet Market Necessities

Easy, non-professional installation

No specialized Technician necessary;
Installation by local trained person or user

Solar Home System for Brazilian Rural Households

■ Meet Market Necessities

Warrantee

Components available on local market

No tools necessary for replacement

Solar Home System for Brazilian Rural Households

■ Meet Market Necessities

Violation proof

Battery terminals sealed

Solar Home System for Brazilian Rural Households

■ Meet Market Necessities

Recycling

Distribution of lamps and batteries only against return of old equipment

Solar Home System for Brazilian Rural Households

■ Meet Technical Standards

Strict DC-Design :

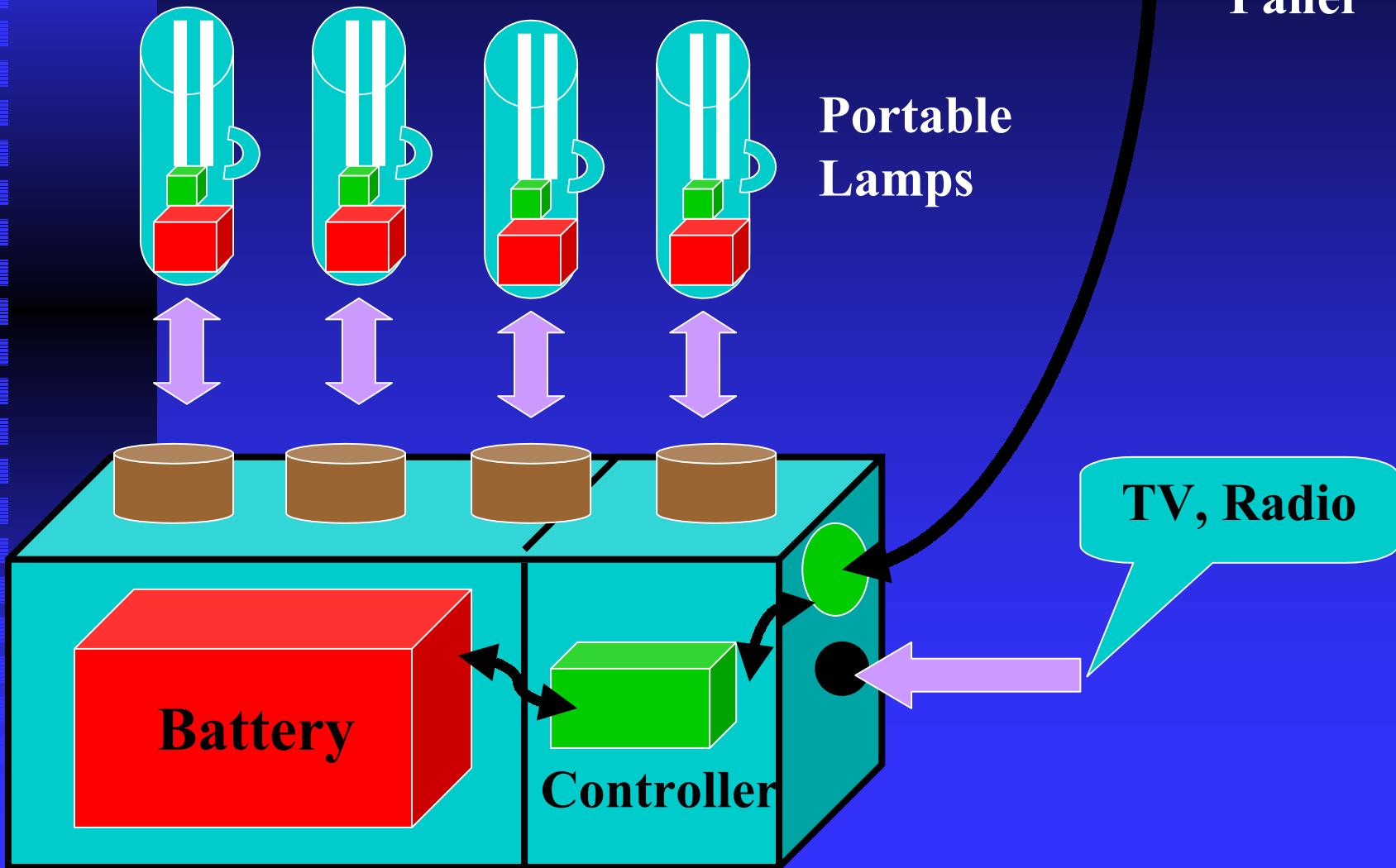
Lamp socket :	4 pin PL Standard
Switches :	DC approved
Cables :	two core 2.5 mm ²
Terminals :	Automotive Crimp
Plugs :	DC, non-ferrous metal

Solar Home System for Brazilian Rural Households

■ Meet Technical Standards

Standard housings :	ISO
Electrical Norms :	IP 62
Installation :	Plug and NO play
Safety :	No open terminals
Manuals :	Portuguese; Pictures

Proposal for a Brazilian Solar Home System



Advantages :

Solar panel roof-mounted;

No indoor cabling necessary;

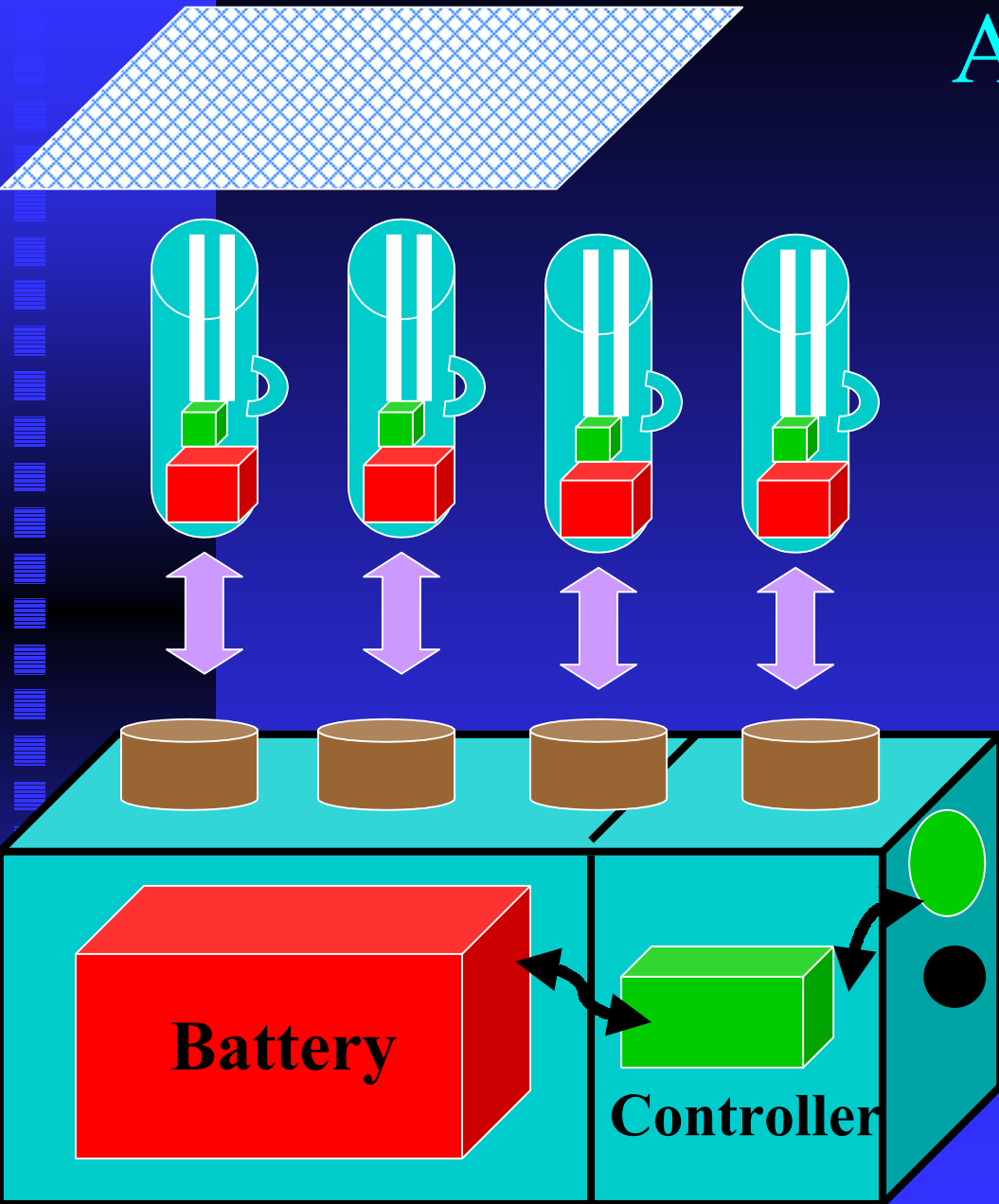
Easy installation;

**Lamps portable to hook up
anywhere in any position where
needed;**

Outdoor use of lamps possible;

Modular, expandable Design;

Components easy replaceable;



**END OF
PRESENTATION**