

# SPV POWER PACK FOR VHF RURAL RADIO SYSTEM

## INTRODUCTION

Solar Photovoltaic Power Pack Systems has been designed to power single channel VHF Rural Radio System continuously for 24 Hrs. The PV Modules charge the battery bank through an electronic charge Controller. The Charge Controller controls the charging well as indicates the battery status. The power generated is thus used for powering the VHF Rural Radio.

## DEPLOYMENT

REIL has supplied and installed around 9700 SPV power packs for VHF Rural radio Systems in various parts of the country. These systems are working satisfactorily under adverse climatic conditions of very high temperature, dust-storms, snow falls etc.

## FEATURES

- a) It automatically charges the battery during sun shine hours and simultaneously supplies the power to the load.
- b) Battery supplies power to the load automatically in the non-sun shine hours.
- c) Charge controller indicates the charging process through Green LED.
- d) Load gets automatically cut-off if battery voltage goes below a preset level. In this condition RED LED turns on and remains ON till the battery again gets charged and reaches a predetermined level.
- e) In case of overcharge the PV Modules gets disconnected from battery so that further charging stops, Yellow LED turns ON and remains ON till battery voltage reduces to a predetermined level.
- f) Lightning protection has been provided using MOV.
- g) Short circuit protection has been provided through MCB.
- h) Reverse polarity protection and indication has been provided.

## SYSTEM CONFIGURATION

REIL's Solar PV Power Source for Single Channel VHF Radio Telephone Equipment comprises of the following:

- Solar Photovoltaic Panel - 70 Wp
- Panel Mounting Structure
- SPV Charge Control Unit - 12 V, 5 Amp.
- Battery Bank - 12 V, 120 AH
- Wiring Set

## APPROVALS

REIL's SPV Power Pack for VHF Rural Radio System is approved by T.E.C., Deptt. of Telecom vide their T.A.C. No. TEC/NR/T/SPV-01/02/037 dated Mar 95.



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