SANCHAR
WIRELESS COMMUNICATIONS LTD.

SRLS

Sanchar Runway Lighting System

SDR (Receiver)

SCDT (Transmitter)

SANCHAR Intelligent ground lighting systems can be used to increase operational efficiency and safety for Permanent, temporary and emergency runway strips. Our wireless deployed runway lights requires no electrical infrastructure. This translates to ease of use and lower installation and maintenance costs.

MAKE IN INDIA

Introduction

The RF based Runway lighting system help guide Aeroplanes using the runways and taxiways 24*7 wirelessly through any weather conditions. The Sanchar Digital Runway Lighting System (SRLS) is a wireless communication platform which operates by broadcasting signals from the Sanchar Control Digital Transmitter (SCDT) to the Sanchar Digital Receiver (SDR) lights in the system via an encrypted network.

SDR (Receiver)

SCDT (Transmitter)

Features

- The controller use digitally encrypted codes to illuminate variably coloured lights as per requirement.
- Pre-set configurable modes which simulate different events at a landing strip like aircraft take-off or aircraft landing and adjust zonal lighting accordingly.
- Luminosity intensity at high, medium, low for each colour LED light in the zone can be configured by the SCDT.
- Password protection on the SCDT to avoid misuse or incorrect data input.
- There is a Master kill switch to hide the landing strip from surroundings in an emergency situation
- Light groups are used to cluster lights in a particular zone such as a taxiway so that they can be controlled independently from other light groups such as a runway shoulder.

Advantages

- Easy line replaceable unit-low down time.
- All SDR units function independently-one unit down does not affect other units' performance.
- Portable design increases mobility facilitating quick transit.
- Robust design which can withstand shocks and vibrations.
- Use of industrial grade elements makes it a maintenance free system.

Models

- **SRLS-01:** The SCDT control panel will control lighting using an RF communication system. The SDR receiver has an integrated battery and solar charging system with all night backup so that the user does not have to replace the portable units after every use. The SDR can be controlled to illuminate any light remotely.
- **SRLS-02:** The SCDT control panel will control lighting using an RF communication system. The SDR receiver has an integrated battery which is chargeable by AC mains power. The SDR can be controlled to illuminate any light remotely.
- **SRLS-03:** The SDR portable unit has multi coloured lights. That have to be individually controlled.

FEATURE/MODEL	SRLS-01	SRLS-02	SRLS-03
Multi Coloured Lights	Yes	Yes	Yes
Integrated Battery Backup	Yes	Yes	Yes
Control lights remotely with RF	Yes	Yes	No
Solar battery and charging backup	Yes	No	No

The System Consists of The Following Elements

- **SCDT:** Feeds the signal to a transmitting antenna by first encoding the data into RF waves (signals) to project the signal to the Sanchar Digital Receiver (SDR). The data communication can be configured on any license free/allotted licensed band. This unit will normally be installed in a control tower or Airforce Control Master's room. The output of the transmitter shall be connected through suitable RF cable to the mounted antenna or on a mast at a suitable height to get adequate coverage in the entire section. The SCDT broadcasts a command message to all SDR lights deployed in the airfield space.
- **SDR:** Accepts and decodes the RF signals that come through the receiving antenna and rejects unwanted ones via the use of a filter. This unit can be placed in the field at either ends or along the runway or the taxi zone.

Technical Specifications

SCDT TRANSMITTER	
Frequency Range	License Free 446 MHz/ 136-174 MHz/ 400-480 MHz
Input	DTMF keypad
Dimensions	300 x 210 x 210 mm
Battery	7 Ah
Weight	7.2 kg
Power	AC mains & 7 Ah battery
Intermodulation	60 dB
Adjacent Channel Selection	65 dB
Spurious Response	65 dB
Frequency Stability	2.5 ppm
RF Power Output	25W

SDR RECEIVER	
Frequency Range	136-174 MHz/ 400-480 MHz
Output	Aviation LED
Dimensions	300 x 290 x 280 mm
Solar Panel	10W
Battery	7 Ah
Weight	8.2 kg
Power	AC mains / battery
Intermodulation	60 dB
Adjacent Channel Selection	65 dB
Spurious Response	65 dB
Frequency Stability	2.5 ppm
Sensitivity	0.2µV @20/25kHz

Dome Lamp

Type	Omni Directional Light
Protection	Weather proof
Material of Construction	Cast Aluminum
Dome Type	Polycarbonate / Transparent Dome / Coloured Dome
Gasket	Silicone
Light Source	80 High Bright LED's mounted on glass epoxy Fire Retarded PCBs 4 High Bright Cree LED's mounted on MCPCB with lens & aluminum heat sink or as per user
Luminous Intensity	Upto 32 cd
Input Voltage	12V / Optional / User Defined
Wattage	4W
Paint	Aviation Yellow (Epoxy Powder Coated)
Lamp Unit Weight	750gm, 900gm with Heat Sink
Safety	Multiple light elements reduce changes of complete blackout due to any unlikely lamp failure Approx life of around 100000 hrs
Optional	Flashing / Inbuilt photo sensor for automatic control Luminous Intensity / Fault Alarm

Solar Box Assy

Type	Single Dome & Dual Dome
Protection	Weather proof IP 65
Material of Construction - Battery Box	Powder coated steel
Gasket	Silicone
Cable Gland	3
Battery used	SMF 12V 7Ah
Solar Module	12V / 12W
Solar charge controller	12V 6Amp with fuse
Approx unit weight	8.0 kg
Safety	Sturdy construction and high durability

Marketed: Dealer/Distributor