

Quick Start Guide

Deploying Airfield Lighting with AvMesh™

Introduction

The purpose of this Quick Start Guide is to present a brief summary of the steps involved in deploying your Avlite provided airfield system. Your system will consist of an Avlite wireless remote controller and/or Pilot Activated Lighting Control (PALC) and airfield lights that will be controlled wirelessly in 'Light Groups' or all at once.

» What Are Light Groups

The lights in an airfield system are typically clustered into 'Light Groups' which allow the lights in an area such as a taxiway to be controlled in unison. The airfield lights can be configured for up to 10 different light groups such as taxiways, runway edge or threshold and each light group is able to be controlled independently.

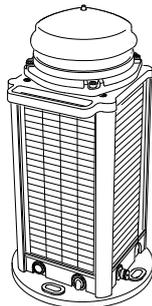
» Theory Of Operations

The AvMesh™ Communications System is a wireless communication platform which operates by broadcasting signals from the Avlite wireless controller/PALC to the lights in the system via a 2.4GHz encrypted mesh network. The lights are able to communicate with each other via the mesh network to determine whether they need to repeat commands and be 'nodes' or remain as 'listen only lights' to provide the airfield adequate coverage. The Avlite wireless remote controller/PALC broadcasts a command message to all lights within range. From here, the signal is resent by the nodes to the other lights within range until the signal has been sent to all of the lights throughout the entire mesh network. The AvMesh™ network is intended to be stationary and hence, moving a light while it is still ON will disrupt the network. The light must first be turned off before moving into a new position. Always cycle the power on the system after moving any individual components to ensure AvMesh™ calibration. The AvMesh™ network does have a self-healing feature meaning that if a light is moved while the system is ON, the system will eventually recalibrate, however, this can take a number of hours or even days to complete.

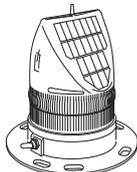
» Repeaters

In the event your runway is located in a noisy location for the 2.4GHz frequency, high gain Avlite repeaters may be used to enhance runway coverage. As each airfield location is different, either consult the AvMesh™ Installation and Troubleshooting Guide or your Avlite Sales representative.

Installation Parts

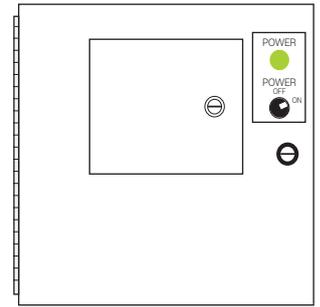
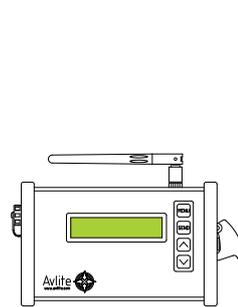


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AV-70

Airfield Lights

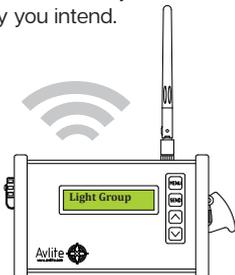
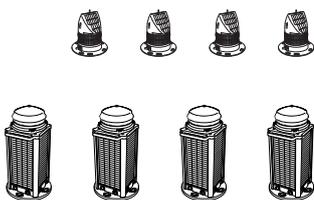


RF Controller and/or Pilot Activated Lighting Control (PALC)

1 Program Your Pre-Planned Light Groups

With your airfield layout planned and marked per applicable ICAO and FAA standards, program your pre-planned Light Groups accordingly.

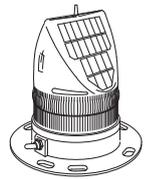
It is recommended you test your airfield lighting system for individual Light Groups, and then test the ALL Light Groups command to confirm your system is functioning in the way you intend.



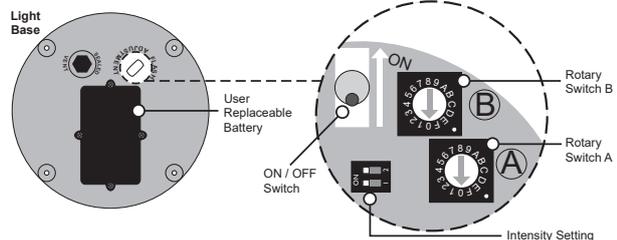
2 Turn Lights Off

Turn Lights Off

Turn your lights off using the internal or external switch (reference individual light manual).



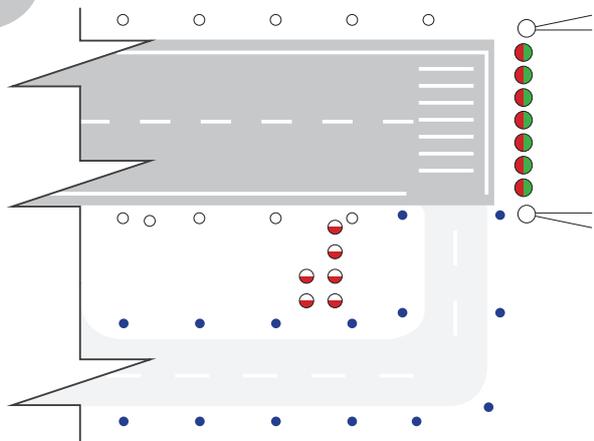
AV-70



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Deploy Lights

Place airfield lights into their final position on the runway and/or taxiway.



- AV-70
- AV-426
- LED APAPI
- LED PAPI
- LED REIL

Note: Do not turn lights ON until they are in their final installation location

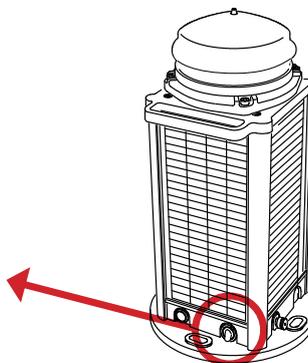
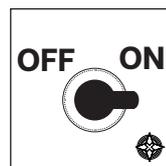
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Turn Lights On

Once all lights are deployed, manually switch all lights to ON position/reconnect all light heads to battery terminals.



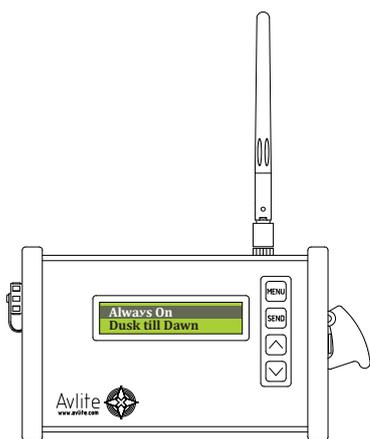
WAIT: AvMesh™ network takes approximately 15-30 minutes to synchronize.



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Cycle Power With RF Controller

Cycle power with the RF Controller between ALWAYS ON and STANDBY to confirm system is in working order.



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Issues?

You may need to deploy repeaters on alternating sides of the runway until your runway has full coverage.

RF repeaters are set to always be Nodes so you can leave them ON while being placed.

Consult the AvMesh™ RF Communication Installation and Service Manual for troubleshooting (section 9.0).

