



Flight Light Inc.



Flight Light PAPI (Precision Approach Path Indicators) ZA757 and ZA737



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Read the Right Glide Slope From Over Ten Miles Out!

The precision approach path indicator (PAPI) provides the pilot with a safe and accurate glide slope on final approach to the runway. A row of PAPI light housing assemblies (LHAs) placed perpendicular to the approach path are seen by the pilot in combinations of red and white to indicate a path that is too high, too low or correctly on slope.

Configuration Options

The four-box PAPI system consists of four LHAs that use either 2 lamps (ZA757) or 3 lamps (ZA737). The 3 lamp configuration permits normal operation with one lamp out.

The two-box PAPI system uses only two LHAs and provides simplified glide slope information. The PAPI can be configured to read white/green/red for use on heliports.

Power Options

Three energy styles are available:

Style A operates from a 240VAC (120V is also available), single phase, 60 Hz power supply. 120V and 50Hz are also available.

Style B is current powered and operates on 6.6 amp series circuits from an L828 constant current regulator. Lamp brightness is controlled by the output setting on the regulator.

Style C is a 48V system powered by auto batteries. This style is of particular value on remote airstrips where it would be uneconomical to bring in power lines.

Operating Conditions

PAPIs are manufactured to meet two temperature standards: Class I for normal operation to as low as -35° C, and Class II, with lens heaters, for temperatures to -55° C.

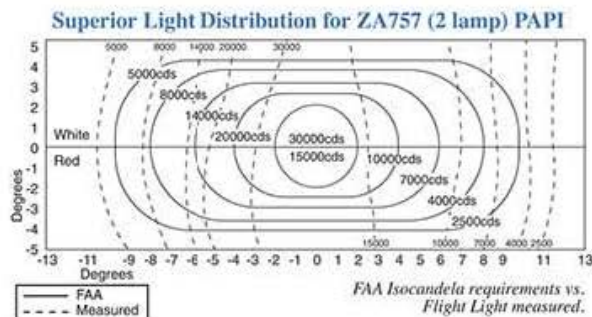
Photometrics

Flight Light PAPIs have the most reliable photometrics in the industry. On a normal day a 2-lamp PAPI unit is visible from over 10 miles out. Light distribution curves far exceed FAA requirements.

For FAA style units, a tilt-switch in each PAPI shuts down the entire system if any unit becomes misaligned.



Four legs equipped with frangible floor flanges provide extra stability.

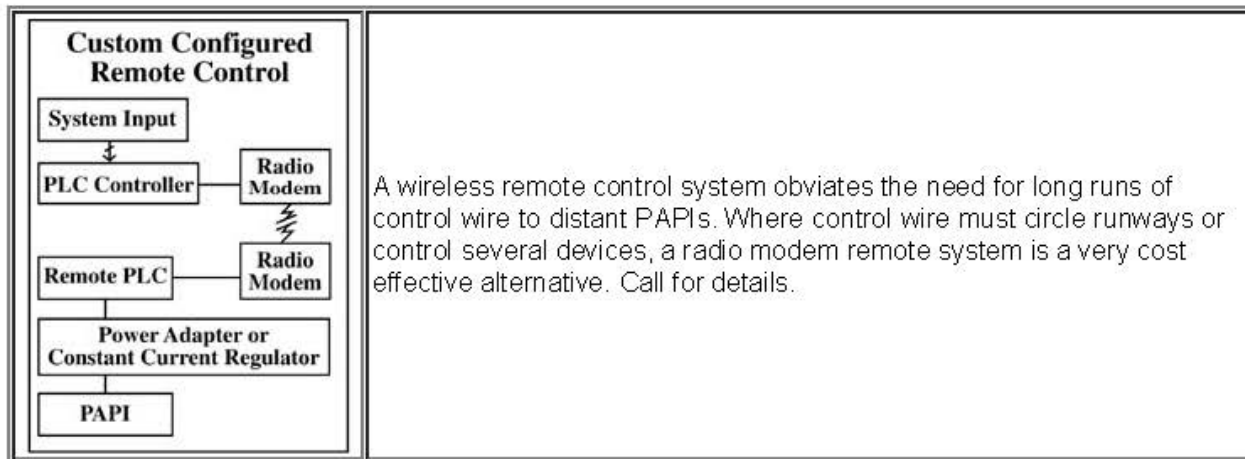


Optional Aiming Device

Lamps are adjusted to the correct glide slope angle ($\pm 3'$ of arc) by means of an optional aiming device kit equipped with a spirit level. The level is also used to adjust the tilt switch that is standard with both models.

Interlock Relay Option

The interlock relay option operates PAPI in conjunction with runway lights.



A 4-LHA installation.



Acquisition Range		
Clear Weather	ZA737 (3-lamp unit)	ZA757 (2-lamp unit)
Normal Day	11.8 miles (19 km)	10.6 miles (17 km)
Bright Day	5.4 miles (8.7 km)	4.6 miles (7.4 km)

The PAPI projects a distortion free beam of uniform intensity over ten degrees of azimuth

and is effective to within 1000 ft. of touchdown.

Installation and Maintenance

Manual: Style A (15-PAPI-AIM)

Style B (15-PAPI-BIM)

[Download Instruction Manuals](#)

[PAPI Troubleshooting](#)

PAPI Wiring Connections

PAPI/CHAPI: Tilt Switch Circuit



Tilt Switch Circuit
([WMV, 45MB](#))

PAPI/CHAPI: Powering LHA 1



Powering LHA 1
([WMV, 76MB](#))

PAPI/CHAPI: Powering LHA 2



Powering LHA 2
([WMV, 99MB](#))

PAPI/CHAPI: Interruptor de inclinación



Interruptor de inclinación (Español)
([WMV, 46MB](#))

PAPI/CHAPI: Alimentación de la caja LHA 1



Alimentación de la caja LHA 1 (Español)
([WMV, 77MB](#))

PAPI/CHAPI: Alimentación de la caja LHA 2



Alimentación de la caja LHA 2 (Español)
([WMV, 100MB](#))

PAPI Troubleshooting

PAPI/CHAPI Tilt Switch Circuit



PAPI/CHAPI LHA Alignment





Tilt Switch Circuit
([WMV, 15MB](#))



LHA Alignment
([WMV, 53MB](#))

Features

Performance Advantages

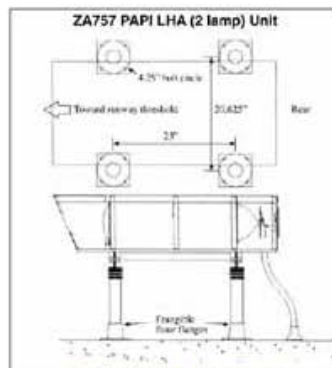
- Outstanding photometric performance. Pilots say they see this PAPI before they see any competing brand.
- Four-leg design makes each light housing assembly very stable, resulting in fewer shut-downs for realignment thereby reducing maintenance and increasing airfield utilization. (EMT legs not included with domestic orders.)
- LED indicator identifies tilt switch circuit fault.
- Quartz halogen average rated lamp life is 1200 hours! Competitor's lamps rated at only 1000 hours.

Maintenance Advantages

- Dust proof LHA is standard. Enhances lamp life, improves photometric performance and reduces maintenance cost.
- No optical bench or special tools required for servicing. Special access doors speed lamp changes in the field.
- Off-the-shelf lamps reduce life-cycle costs.
- Circuit breaker and on/off switch in power adapter (Style A) and in each LHA (Style B) protect equipment at all times.
- Extremely reliable power adapter features WAGO terminal blocks, gas-tight ferrelled connections and Teflon wire.

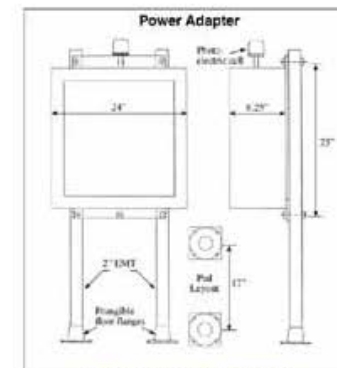
Options

- Custom configured remote control uses radio modems instead of hard wiring to control PAPIs.
- Aiming device simplifies setting tilt switch and azimuth angles.
- Interlock relay to operate PAPI in conjunction with runway lights.
- [CHAPI heliport system](#)
- ICAO version (no tilt switch)
- Field setup and alignment training by Flight Light technicians.
- International packing - four 2" EMT legs per LHA with all units and hardware double boxed.



[Click image to enlarge](#)

The PAPI light housing assembly (LHA) is supported by 2" EMT legs (not included). Flexible, water tight conduit and wiring (48"), frangible floor flanges

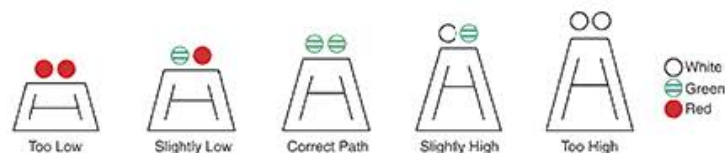


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The power adapter is mounted on 2" EMT legs (not supplied) or wall mounted. A photoelectric control sensor adjusts the PAPI's brightness in

and mounting hardware are provided. L867 bases and baseplates are sold separately.

response to ambient light conditions. Frangible floor flanges are included.



The CHAPI Heliport System

The CHAPI system is similar to the two-unit PAPI but with a filter inserted between the white and red filters of each lens to provide a 2° wide green sector that, when visible from both units, signals the proper glide slope angle of 6°. Angle deviations that are too high show one or two white lights, and those that are too low show one or two red lights. [Read more...](#)

Features and Characteristics

- Fully gasketed dust proof light housing assembly (LHA) improves performance and reduces maintenance (standard feature).
- Large lens overhang and optional heaters forward of the lenses allow continuous operation under severe arctic conditions.
- Input power:
 - 4-Box PAPI 1,800 VA
 - 2-Box PAPI 1,000 VA
- Standard input voltage: 240 VAC, $\pm 10\%$
- Lamps: 200 watts, 6.6 amp quartz halogen
- Rated lamp life: 1,200 hours
- Environmental operating conditions:
 - Class I: +55° to -35° C (+131° to -31° F)
 - Class II: +55° to -55° C (+131° to -67° F).
- Humidity: 0% to 100%
- Wind: 100 mph (161 km/hr).
- Easy to maintain and relamp.

Common Renewal Parts

Part Description	Part Number
Lamps: 200 W 6.6A quartz	LA-6373
Frangible cast aluminum floor flange	15-FFF2X425
Tilt switch assembly	15-201TSA
Photo control 208-277 VAC	77-104FAANTD
Filter glass, red - ZA757/4	80-019035
Filter spring - ZA757/4	80-021253
Reflector assembly - ZA757/4	80-021254
Resistor - 25 W, 0.47 ohm (lens heater Class 2 only)	77-RH25.47
Relay, contactor - 30 amp DPDT, 240 VAC	77-W199AX-15

Tool for WAGO terminal blocks	77-777-310
Timer, D-O-B adjustable - 24 VAC/DC	77-RTE-P21
Photo control base	77-TB20199
Precision spirit level, 6"	77-#98-6

Packing Specifications

Description	ZA757	ZA737
Number of lamps	2	3
Net weight in lb.	42	55
Gross weight in lb.	53	75
Length in inches	48	48
Width in inches	22	32
Height in inches	15	15
Volume in cubic yd.	0.34	0.50
Lamp	2x200W/6.6A	3x200W/6.6A
Type	LA-6373	LA-6373
Transformer	2x200W/6.6A	3x200W/6.6A

Ordering Codes

Num. of Systems	Num. of Aiming Dev.	Designation	Unit	Style	Voltage (Style A only)	Interlock Option (Style A only)	Class	Aiming Device Glide Slope
Specify	Specify	FL880: (4 LHAs) FL881: (2 LHAs)	ZA757: (2 lamps) ZA737: (3 lamps)	A: (voltage) B: (6.6 Amp) C: (48VDC)	1: (240V, 60Hz) 2: (120V, 60Hz) 3: (220V, 50Hz)	Y: Yes N: No	1: (-35°C) 2: (-55°C)	3': Standard Specify

8/8/2012

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