

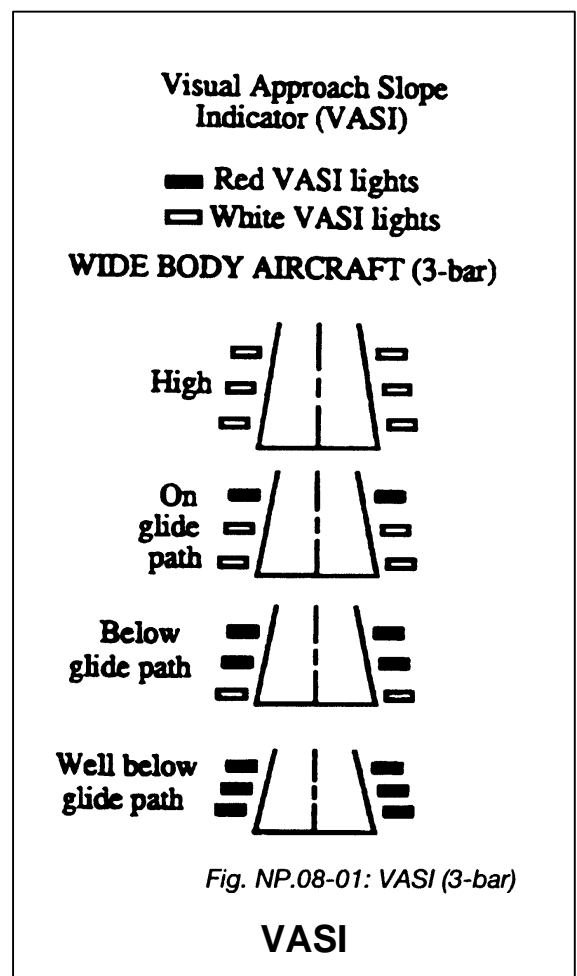
# Use of VASIS - TVASIS - PAPI

## VASI

- VASI systems are especially designed to assist the pilot during the transition from cloud break to runway.
- It is important to be aware of the VASI system installed at the airport of intended landing. Therefore, always include the type of VASI system in the approach briefing.

## 2/3- bar VASI

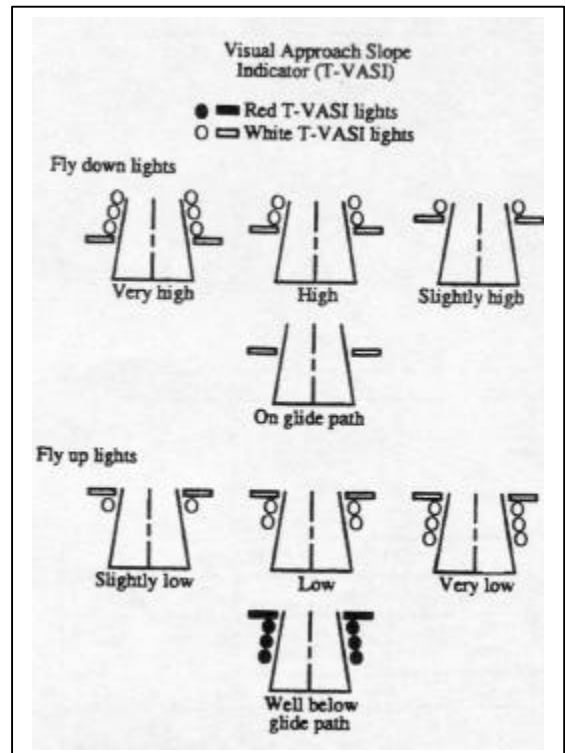
- All VASI systems are visual projections of the approach path normally aligned to intersect the runway at a point 1,000 to 1,500 feet beyond the threshold. Flying the VASI glide slope to touchdown is the same as selecting a visual aim point on the runway adjacent to the VASI installation when using 2-bar VASI. The difference between the eye reference path and the gear path of the Boeing 767 results in a low approach with marginal threshold height. Therefore, the two bar VASI system should not be used to determine proper approach profiles, but may provide useful information in alerting the crew to low profile situations.
- Most airports have 3-bar VASI which provide two visual glide paths. The second glide path is about  $\frac{1}{2}$  higher than the first and is for long bodied airplanes. The additional light bar is located equidistant upwind from a standard 2-bar installation.
- When the airplane is on the upwind glide path, the pilot will see the two downwind bars white and the upwind bar red. 3-bar VASI may be safely used with respect to the threshold height, but may result in landing further down the runway than desirable.
- The VASI chart shows examples of the indications of the 3-bar VASI.



# Use of VASIS - TVASIS - PAPI

## T-VASI

- The T-VASI is designed so that with only the cross-bar lights visible, the glide slope is 3° and the pilot's eye-height over the threshold is approximately 47 feet.
- If increased eye-height over the threshold is required (e.g. long / wide bodied aircraft) this can be achieved by flying the approach with a cross-bar and one or more of the "fly-down" lights visible as required.
- In this manner variable vertical distances between the pilot's eyes and the threshold can be obtained.
- On glide slope gives you an eye-height > threshold of 49 ft
- One "fly down" light gives you an eye height > threshold of 57 to 75 ft (required for B767)
- Two "fly-down" lights gives you an eye height > threshold of 75 to 94 ft.



The above dimensions may vary by 15 feet depending on the location of the system as dictated by seating requirements.

### Caution :

*The T-VASI system has two disadvantages :*

- 1) *The cross-bar of the T-VASI installation is constructed of up to four adjacent lights which may be very similar in appearance and may be confused with a PAPI system indicating high.*
- 2) *The single fly up and fly down light of a T-VASI may hardly be visible and therefore there could be the impression to be on glide slope when already flying well below the intended flight path.*

## PAPI

- The PAPI uses lights which are normally on the left side of the runway. They are similar to the VASI, but are installed in a single row of lights.
- When the airplane is on a normal 3° glide path, the pilot will see two white lights and two red lights. The PAPI may be safely used with respect to threshold height, but may result in landing further down the runway.

