

FAA Instrument Landing Systems

VHF LOCALIZER

Provide Horizontal Guidance
 108.10 to 111.95 MHz radiates about 100 watts horizontal polarization.
 Modulation frequencies 90 to 150 Hz. Modulation depth on course 20%
 for each frequency. Code identification (1020 Hz, 5%) and voice
 communication (modulated 50%) provided on same channel.

1000 ft typical. Localizer transmitter building is
 offset 250 ft minimum from center of antenna
 array and within 90° +/- 30° from approach end.
 Antenna is on centerline and normally is under
 50:1 clearance plane.

Runway length
 7000 ft (typical)

250 to 600 ft from
 centerline of runway

Sited to provide 55 ft
 (+/- 5 ft) runway
 threshold crossing height

Point of intersection
 runway and glide slope
 extended.

3000' to 6000'
 from threshold

*200'

UHF GLIDE SLOPE TRANSMITTER

Provides Vertical Guidance
 329.3 to 335.0 MHz. Radiated about 5
 watts. Horizontal polarization, modulation
 on path 40% for 90 Hz and 150 Hz. The
 standard glide slope angle is 3.0 degrees. It
 may be higher depending on local terrain.

ILS

(FAA INSTRUMENT LANDING SYSTEMS)
 STANDARD CHARACTERISTICS AND
 TERMINOLOGY

ILS approach charts should be consulted
 to obtain variations of individual systems.

MIDDLE MARKER
 Indicates Approximate Decision
 Height Point Modulation 1300 Hz
 95% Keying: 95 Alternate
 Dot and Dash

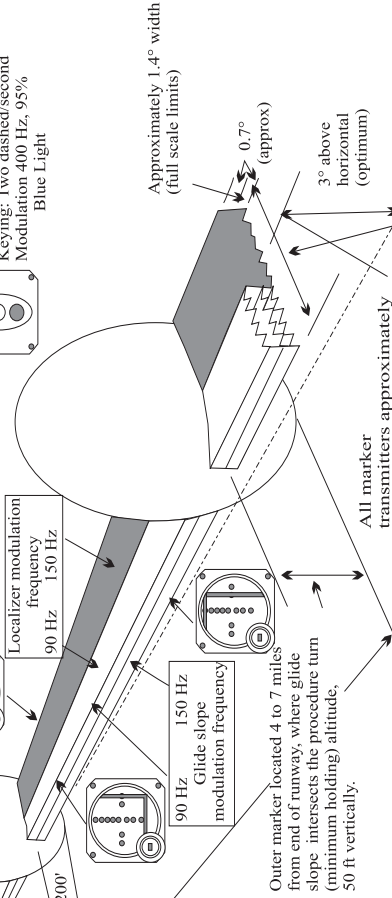


Flag indicates if
 facility not on the
 air or receiver
 malfunctioning

Combinations/Minute
 Amber Light



OUTER MARKER
 Provides Final Approach
 Fix For Nonprecision
 Approach
 Keying: Two dashed/second
 Modulation 400 Hz, 95%
 Blue Light



Compass locators, rated at 25 watts
 output 190 to 535 KHz, are installed
 at many outer and some middle
 markers. A 400 Hz or a 1020 Hz tone,
 modulating the carrier about 95%, is
 keyed with the first two letters of the
 ILS identification on the outer locator
 and the last two letters on the middle
 locator. At some locations,
 simultaneous voice transmissions
 from the control tower are provided,
 with appropriate reduction in
 identification percentage.

RATE OF DESCENT CHART
 (feet per minute)

Speed (Knots)	Angle	
	2.5°	3°
90	400	440
110	485	535
130	575	630
150	665	730
160	707	778
		849

* Figures marked with asterisk are typical.
 Actual figures vary with deviations in
 distances to markers, glide angles and
 localizer widths.

FIG 1-1-7

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