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4/27/2017

HUD BRIEF

Deferred System Load (DSL) Pilot Training

T-6B

NAS Whiting Field, FL

May 2010

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Contract Number: FA8617-07-D-6151

Contractor Name: Hawker Beechcraft Corporation

Contractor Address: 10511 E. Central, Wichita, Kansas 67201-0085

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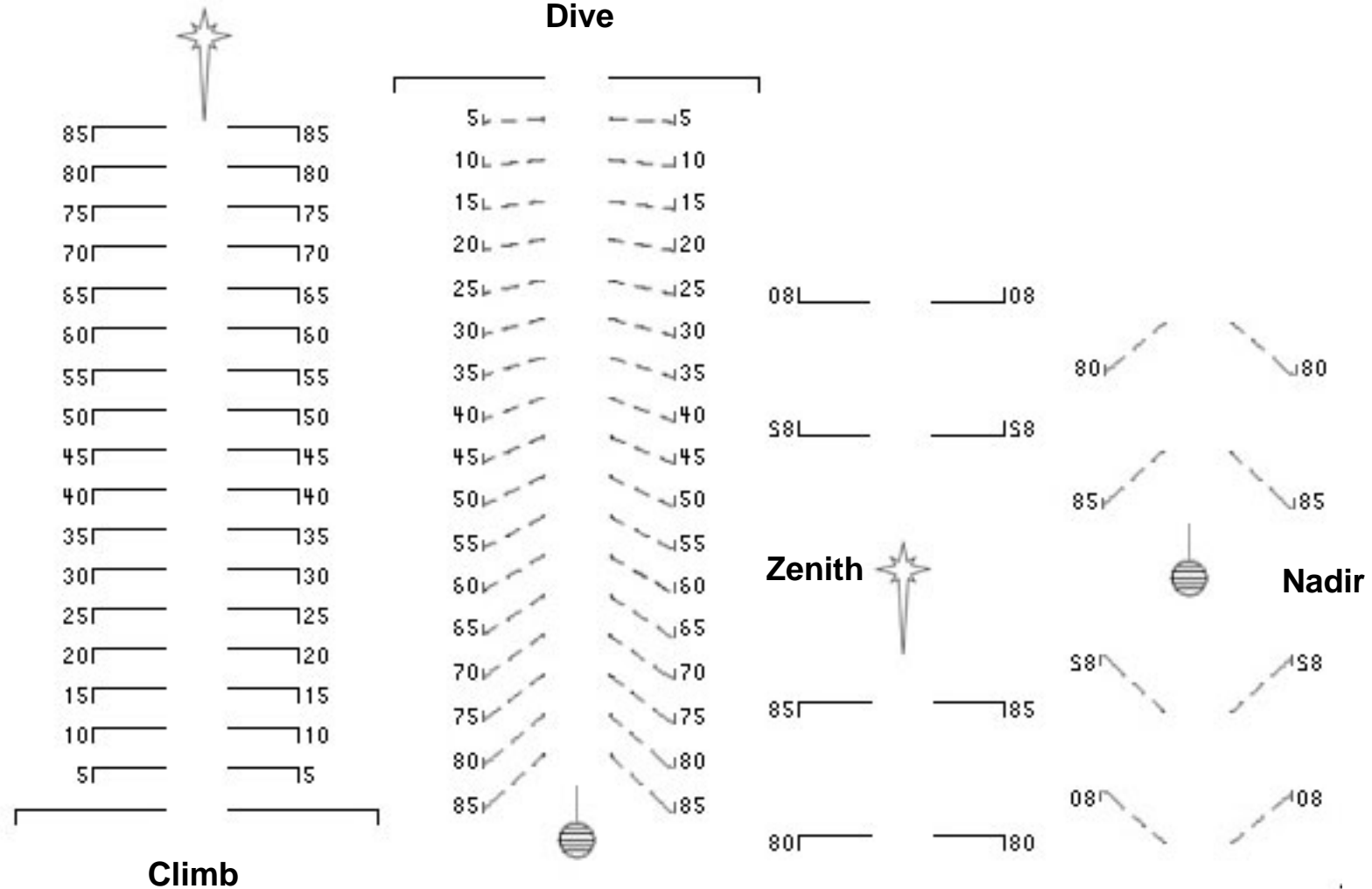
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Objective 4

Head Up Display (HUD) and HUD Repeater

Interpret and correlate to primary flight display both the HUD common and HUD unique symbology in navigation, explain F-18 and F-16 displays

HUD Symbols 1 – Pitch Reference



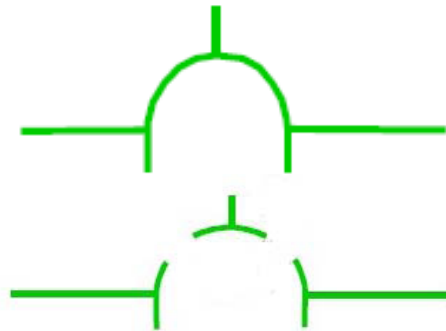
HUD Symbols 2 – CDM and FPM References

**Water
Line**



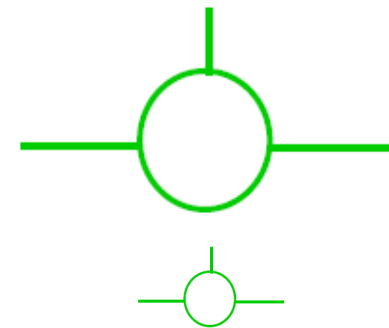
**Boresight
Cross**

CDM



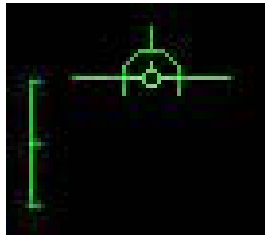
**CDM out
of range**

FPM

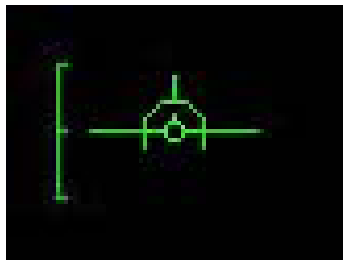


**FPM
(when
CDM
present)**

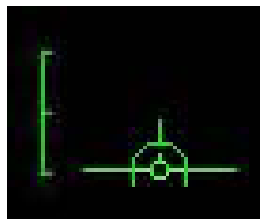
HUD Symbols 3 – E-bracket and Roll Scales



Slow
 α 12.0

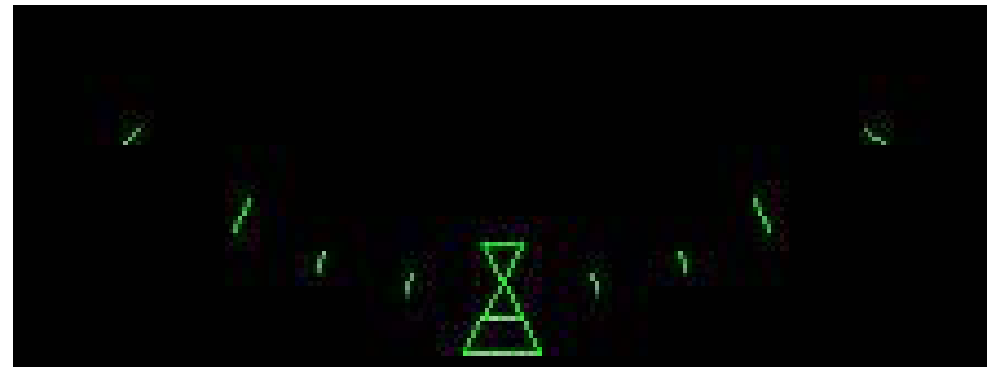


On-speed
 α 10.5



Fast
 α 9.0

Roll
Scale



Sideslip
(Yaw)

HUD Symbols 4 – Heading Scale



Mag Heading Mode



Mag Heading Mode
With Target



True Heading Mode



Mag Heading Mode
Target off-scale left



Mag Heading Mode
Waypoint off-scale left

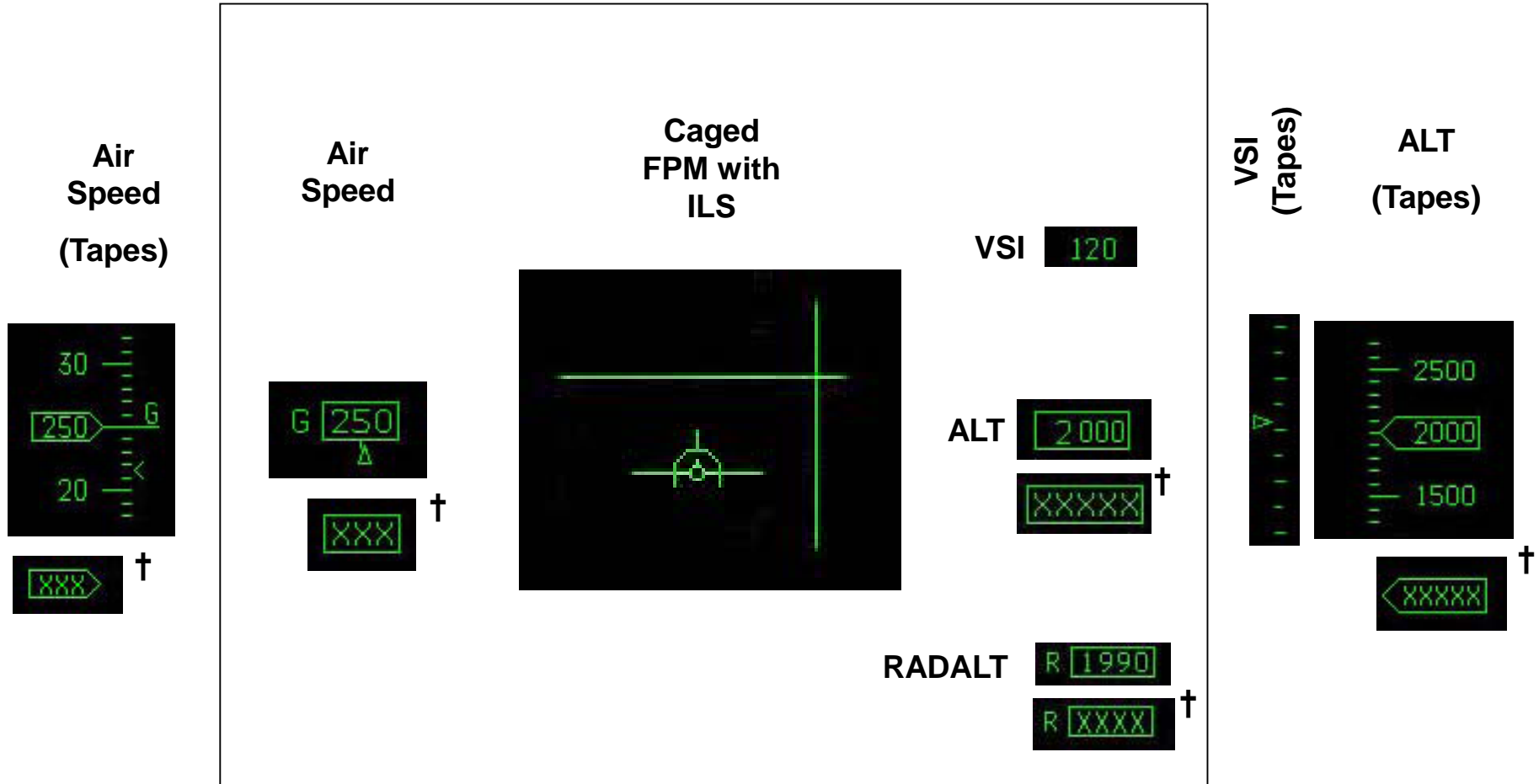


Mag Heading Mode
Target off-scale right



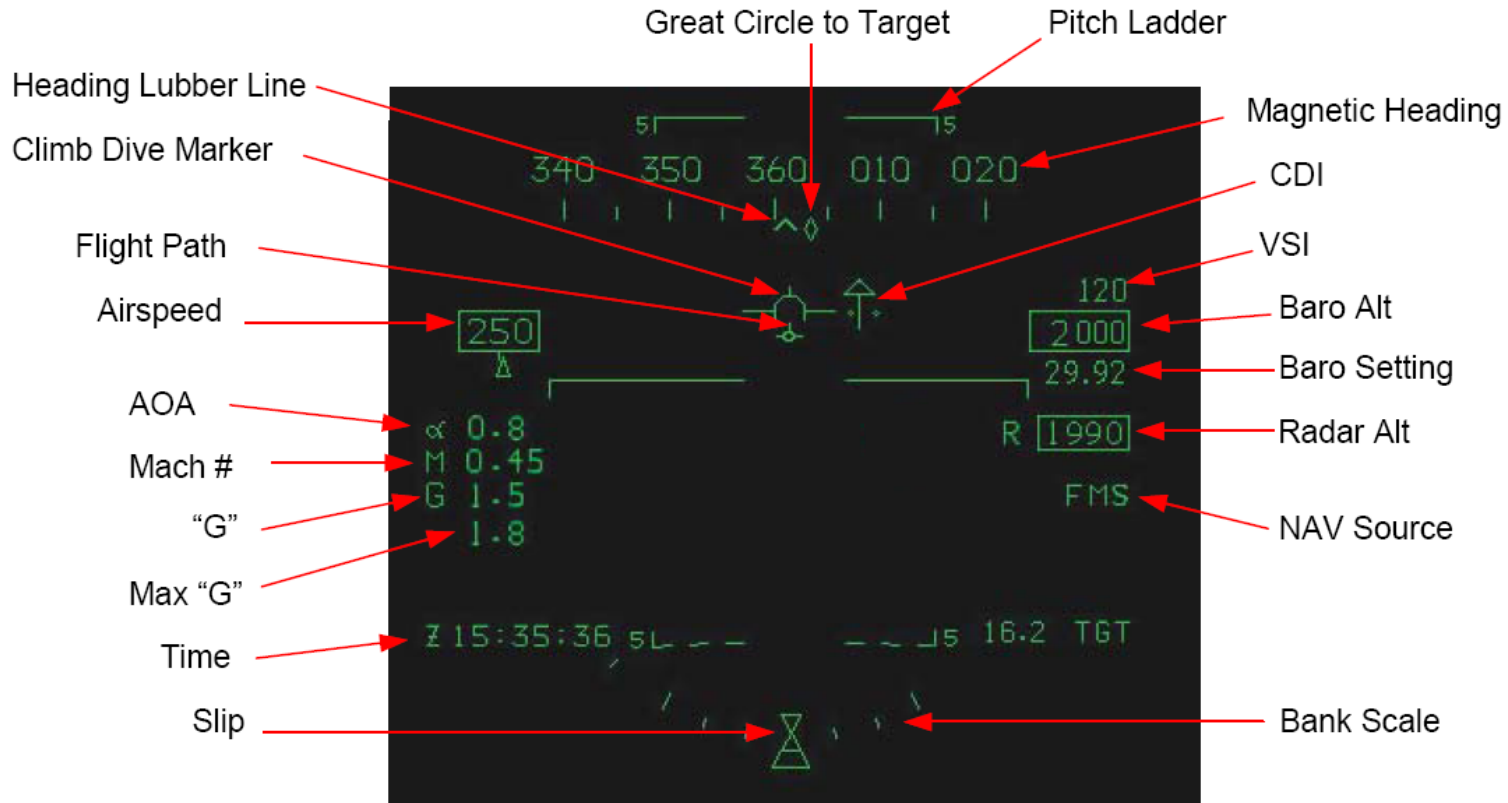
Mag Heading Mode
Waypoint off-scale right

HUD Symbols 5 – Altitude and Airspeed Scales



† = Invalid data presentation (XXX)

HUD Symbol Summary



DSL Capabilities – HUD in NAV mode

Nav symbology referenced to CDM

- CDI “Dots” displayed if $>1/2$ dot off course
- Cage/Uncage Centers FPM on CDM



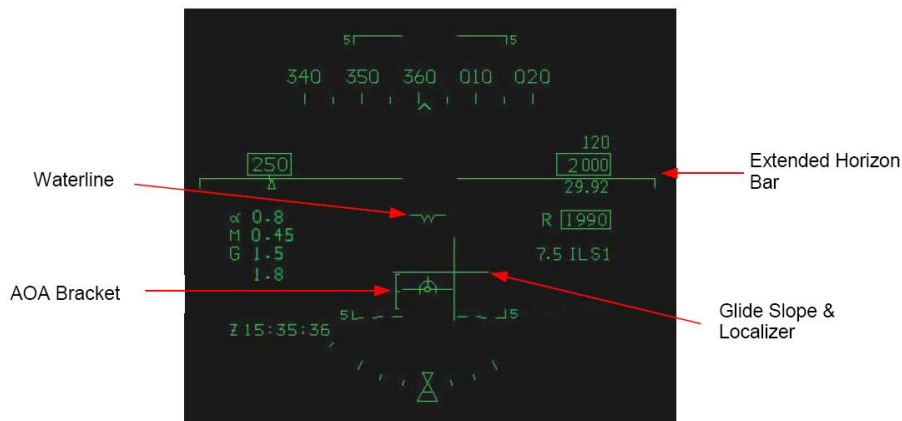
HUD ILS

Gear Down

Extends horizon line

WL is displayed (regardless of HUD WL/CDM mode)

AOA reference "E bracket"



Climb-dive vs. Waterline

- Climb-Dive Marker Mode
 - Pitch Ladder referenced to MIL-STD-1787 (CDM)
 - FPM is “small size”
 - Can exceed FOV with significant drift
 - If CDM is limited, WL will be displayed

- Waterline Mode
 - Pitch Ladder referenced to Aircraft WL
 - System displays WL if CDM fails, if gear down, or if WL selected on UFCP
 - FPM is “full size” when CDM not present

- FPM/CDM will be segmented and/or flash if FOV limited



HUD Declutter Modes



HUD Declutter 0
(default)

HUD Declutter 1

CDI, Mach, G,
TAS, A/S Bug



HUD Declutter 2

Time, VVI,
RADALT

NAV Souce

Dist to WPT/TGT

HDG Scale

Roll Scale



HUD Repeater Selection

- Right MFD, both cockpits
- Works in Basic and Advanced

