



**FAA
Air Traffic Organization, Technical Operations
Boston Logan Navigation/Comm System Support Center**

RE: NTSB Request concerning the Localizer and Glide Slope for runway 4R


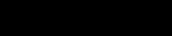
June 22, 2009

Timothy W. Monville
Senior Air Safety Investigator
National Transportation Safety Board
8240 NW 52nd Terrace, Suite 418
Doral, Florida 33166-7765

Dear Mr. Monville:

In response to your request for information regarding the operational status of the Boston Runway 4R ILS Localizer and Glide Slope components on 8/12/2008 and system performance for the prior 12 month period.

1. There were no abnormalities with either the 4R Localizer or Glide Slope facilities on/or about 08/12/08. The ILS was in full operational status.
2. The Localizer and Glide Slope successfully completed a Periodic with monitor's flight inspection on 03/19/08. There was also a special flight inspection on the Localizer on 04/28/08 for and Expanded Service Volume authorization. (03/19/08 flight inspection report attached)
3. There were no unscheduled outages or abnormalities for the Glide Slope in the prior 12 month period. Scheduled periodic maintenance activities were the only service interruptions to the facility. The Localizer had two unscheduled service interruptions; neither an equipment performance abnormality. On 1/14/08 specialist removed heavy snow from the Localizer antenna's to restore the system. On 10/12/07, Verizon restored the T-1 line from the Boston ATCT to the Boston Localizer (in Winthrop, MA) restoring the interlock signal to the facility.


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FLIGHT INSPECTION REPORT INSTRUMENT LANDING SYSTEM

1. FLIGHT INSPECTION REPORT HEADER

IDENT	OWNER	STATE	CTRY	REGION	INSPECTION DATE(S)
BOS	F	MA	US	ANE	03/19/08
LOCATION			RUNWAY	CATEGORY	INSP TYPE
BOSTON			04R	III	S/PROC

2. CREW INFORMATION

PIC	SIC	MS	A/C NO
VN109	VN262	VN106	N73
ACM			FIFO
			ACY

3. FACILITY INFORMATION

LOCALIZER	Inspected	DME	Inspected/Sat	FACILITY STATUS
OFFSET		COMPASS LOCATOR	Inspected/Sat	
GLIDE SLOPE	Inspected	LIGHTING SYSTEM	Inspected/Sat	
LDA		75 mHz MARKERS	Inspected/Sat	
SDF		SIAP	Sat	
TLS		PUBLICATIONS	Sat	
OTHER*		COMD WIDTH	3.67	
		COMD ANGLE	3.00	
		GLIDE SLOPE TYPE	CE - Capture Effect	

4. NOTAMs

5. REMARKS

Special - Y-02-027-8 ATC request to establish a 30nm Localizer/DME ESV.
 Periodic with monitors requirements met on localizer and glideslope.
 ILS -2 level runs flown at 2000' MSL (Minimum Vectoring Altitude) due to weather. (OK'd Debra Loveland)
 Maintenance satisfied with results.
 ESV: ILS/L / 7000' - 3000' / 30nm / Original - SAT.
 ESV: ILS/D / 7000' - 3000' / 30nm / Original - SAT.
 After this flight check established the ESV, Air Traffic put in a request to have the ESV raised to 10,000 ft.
 The -20 to update the Data sheet will not be sent for this ESV since it will be changing in the near future.

* Remarks are required for fields marked with an asterisk

6. INSTRUMENT LANDING SYSTEM DATA - AZIMUTH (PART I)

A. FRONT COURSE

 ILS-1 ALTITUDE

B. BACK COURSE

 ILS-1 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width			3.72			3.75
Symmetry			49.6			50.0
Modulation			39.9			39.7
Clearance 150			252/13.4			248/12.9
Clearance 90			243/12.9			247/12.2
Structure-Z 1			1/4.15			1/4.16
Structure-Z 2			1/0.59			0/0.58
Structure-Z 3			2/0.30			1/0.16
Structure-Z 4			4/0.12			2/0.47
Structure-Z 5			2/0.51			2/0.51
Vert. Polar.			S			
Alignment			CL			1L
Identification			S			S
Power Ratio						
Loc Only Structure						

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width						
Symmetry						
Modulation						
Clearance 150						
Clearance 90						
Structure-Z 1						
Structure-Z 2						
Structure-Z 3						
Vert. Polar.						
Alignment						
Identification						

7. INSTRUMENT LANDING SYSTEM DATA - GLIDE SLOPE (PART I)

 ILS-2 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Angle			2.97			2.96
Modulation			79.9			80.2
Width			0.71			0.73
Structure Below Path			2.28			2.27
Symmetry			52.0			49.2
Structure-Z 1			2/7.25			1/5.00
Structure-Z 2			11/0.59			11/0.58
Structure-Z 3			14/0.01			14/0.00
Angle Alignment "B-C"			19/0.57			17/0.57
Angle Alignment "C-T"			24/0.15			48/0.01
Angle Alignment "T"			48/11'			48/11'

8. INSTRUMENT LANDING SYSTEM DATA - MARKER WIDTH(s)

A. OM
 B. MM
 C. IM

* Remarks are required for fields marked with an asterisk

9. INSTRUMENT LANDING SYSTEM DATA - AZIMUTH (PART II)

A. FRONT COURSE MONITOR	TX1 CD	TX 1 INITIAL	TX 1 FINAL	TX 2 CD	TX 2 INITIAL	TX 2 FINAL	B. BACK COURSE MONITOR	TX1 CD	TX 1 INITIAL	TX 1 FINAL	TX 2 CD	TX 2 INITIAL	TX 2 FINAL
Usable Dis./Pwr Setting		30NM/ 10.0 / 5.3					Usable Dis./Pwr Setting						
Course Width (Wide)			4.04				Course Width (Wide)						
Clearance 150			225/13.4				Clearance 150						
Clearance 90			218/13.2				Clearance 90						
Course Width (Narrow)							Course Width (Narrow)						
Clearance 150							Clearance 150						
Clearance 90							Clearance 90						
Alignment R													
Alignment L													

10. INSTRUMENT LANDING SYSTEM DATA - GLIDE SLOPE (PART II)

		TX 1	TX 2	PATH ANGLE				PATH WIDTH				STRUCTURE BELOW PATH			
				TX 1 INITIAL	TX 1 FINAL	TX 2 INITIAL	TX 2 FINAL	TX1 INITIAL	TX1 FINAL	TX2 INITIAL	TX2 FINAL	TX1 INITIAL	TX1 FINAL	TX2 INITIAL	TX2 FINAL
A. ANTENNA DEPHASE	ADVANCE		19°				2.95				0.78				2.00
	RETARD		19°				3.04				0.70				1.62
B. MAIN SIDEBAND DEPHASE	ADVANCE														
	RETARD														
C. PATH ANGLE LOWERED TO LIMIT															
D. PATH ANGLE RAISED TO LIMIT															
E. PATH WIDTH NARROWED TO LIMIT															
F. PATH WIDTH WIDENED TO LIMIT							2.97				0.84				2.15
G. ATTEN. MIDDLE ANT TO LIMIT															
H. ATTEN. UPPER ANT TO LIMIT			1.8DB				2.92				0.77				2.29
		TX 1		TX 2		N. MEAN WIDTH/SYMMETRY									
I. USABLE DISTANCE / PWR SET.						TX		ANGLE ABOVE							
J. CLEARANCE BELOW PATH								ANGLE BELOW							
K. MODULATION EQUALITY								WIDTH							
L. PHASING								SYMMETRY							
M. Front Course Area Where Phasing Was Conducted								O. TILT							
NM			MSL			TX		150 Hz			90 Hz				
P. BEST FIT STRAIGHT LINE						R. TRANSVERSE STRUCTURE				TX1 uA	TX1 Hz	TX2 uA	TX2 Hz		
ARDH	GPI/TH DIS.	RDH	AIM PT ELEV	OFFSET	RADIUS	ALT	LEFT OF CL								
							RIGHT OF CL								
Q. GLIDE SLOPE AIMING POINT						S. RADIO ALTIMETER									
LATITUDE			LONGITUDE												

* Remarks are required for fields marked with an asterisk