Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605712F: Initial Operational Test & Evaluation

BA 6: RDT&E Management Support

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	25.368	20.665	17.767	-	17.767	16.167	14.790	13.311	12.879	Continuing	Continuing
660191: Initial Operational Test & Eval	25.368	20.665	17.767	-	17.767	16.167	14.790	13.311	12.879	Continuing	Continuing

#### A. Mission Description and Budget Item Justification

Initial Operational Test and Evaluation (IOT&E) is conducted to determine the operational effectiveness and suitability and resolve overall mission capability of systems undergoing research and development (R&D) efforts. It is an evaluation of a system's performance when the complete system is tested and evaluated against operational criteria by personnel with the same qualifications as those who will operate, maintain and support the system when deployed. In general, IOT&E is performed on new systems in development, major modifications, and other systems as directed. This PE funds Congressionally mandated IOT&E to support major weapon system acquisition decisions beyond Low-Rate Initial Production (LRIP), Milestone C, full rate production, fielding, and declaration of Initial Operational Capability (IOC). For major systems designated for use in combat, the law requires IOT&E be completed under realistic field conditions before proceeding beyond LRIP. IOT&E will be planned to completely and unambiguously answer all critical operational issues (COI) as thoroughly as possible. This PE funds the OT participation in Integrated Developmental Test/Operational Test (IDT/OT), the Air Force participation in Multiservice Operational Test and Evaluation (MOT&E), and Follow-on Operational Test and Evaluation (FOT&E) when it is the continuation of IOT&E activities past the full rate production decision. FOT&E answers specific questions about unresolved COIs and test issues, or completes areas not finished during the IOT&E. This PE also funds related operational test and evaluation (OT&E) activities such as Operational Utility Evaluations (OUE), Early Operational Assessments (EOA), Operational Assessments (OA), and independent IOT&E which support major milestones and decision points prior to Milestone C, full rate production, fielding, or declaration of IOC. IOT&E programs are identified in several system categories: Air; Space; Weapons; Command, Control, Communications, Computers, and Intelligence (C4I); and Combat Support.

Budget Activity Justification: This program is in Budget Activity 6, RDT&E Management Support because it funds weapon system IOT&E tests conducted to evaluate a system's operational effectiveness and suitability and to identify any operational deficiencies or need for modifications in support of the acquisition process.

Air Force Page 1 of 10 R-1 Line Item #96

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

BA 6: RDT&E Management Support

PE 0605712F: Initial Operational Test & Evaluation

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	25.833	20.665	17.826	-	17.826
Current President's Budget	25.368	20.665	17.767	-	17.767
Total Adjustments	-0.465	-	-0.059	-	-0.059
<ul> <li>Congressional General Reductions</li> </ul>		-			
<ul> <li>Congressional Directed Reductions</li> </ul>		-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>		-			
<ul> <li>Congressional Directed Transfers</li> </ul>		-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.357	-			
Other Adjustments	-0.108	-	-0.059	-	-0.059

# **Change Summary Explanation**

No significant changes

DATE: February 2011

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Exhibit it-2A, Itb rat i roject dast	ilication. 1 L	2012 71111	7100					DATE: 1 Coldary 2011				
APPROPRIATION/BUDGET ACTIV		R-1 ITEM N	IOMENCLAT	TURE		PROJECT						
3600: Research, Development, Test	PE 0605712F: Initial Operational Test &				660191: Initial Operational Test & Eval							
BA 6: RDT&E Management Support		Evaluation										
COST (\$ in Millions)			FY 2012	FY 2012	FY 2012					Cost To		
COST (\$ III WIIIIOTIS)	FY 2010	FY 2011	Base	oco	Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost	
660191: Initial Operational Test &	25.368	20.665	17.767	-	17.767	16.167	14.790	13.311	12.879	Continuing	Continuing	

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# A. Mission Description and Budget Item Justification

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Quantity of RDT&E Articles

Exhibit R-24 RDT&F Project Justification: PR 2012 Air Force

Initial Operational Test and Evaluation (IOT&E) is conducted to determine the operational effectiveness and suitability and resolve overall mission capability of systems undergoing research and development (R&D) efforts. It is an evaluation of a system's performance when the complete system is tested and evaluated against operational criteria by personnel with the same qualifications as those who will operate, maintain and support the system when deployed. In general, IOT&E is performed on new systems in development, major modifications, and other systems as directed. This PE funds Congressionally mandated IOT&E to support major weapon system acquisition decisions beyond Low-Rate Initial Production (LRIP), Milestone C, full rate production, fielding, and declaration of Initial Operational Capability (IOC). For major systems designated for use in combat, the law requires IOT&E be completed under realistic field conditions before proceeding beyond LRIP. IOT&E will be planned to completely and unambiguously answer all critical operational issues (COI) as thoroughly as possible. This PE funds the OT participation in Integrated Developmental Test/Operational Test (IDT/OT), the Air Force participation in Multiservice Operational Test and Evaluation (MOT&E), and Follow-on Operational Test and Evaluation (FOT&E) when it is the continuation of IOT&E activities past the full rate production decision. FOT&E answers specific questions about unresolved COIs and test issues, or completes areas not finished during the IOT&E. This PE also funds related operational test and evaluation (OT&E) activities such as Operational Utility Evaluations (OUE), Early Operational Assessments (EOA), Operational Assessments (OA), and independent IOT&E which support major milestones and decision points prior to Milestone C, full rate production, fielding, or declaration of IOC. IOT&E programs are identified in several system categories: Air; Space; Weapons; Command, Control, Communications, Computers, and Intelligence (C4I); and Combat Support.

Budget Activity Justification: This program is in Budget Activity 6, RDT&E Management Support because it funds weapon system IOT&E tests conducted to evaluate a system's operational effectiveness and suitability and to identify any operational deficiencies or need for modifications in support of the acquisition process.

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
	FY 2010	FY 2011	Base	oco	Total
Title: OT&E	16.801	15.344	10.657	-	10.657
<b>Description:</b> Plan, execute, and report IOT&E activities of Air Systems.					
FY 2010 Accomplishments:					
- ALR-69A Radar Warning Receiver (ALR-69A): Plan for IOT&E					
- B-2 Defensive Management System (DMS): Early Influence					

Air Force Page 3 of 10 R-1 Line Item #96

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation		PROJECT 660191: Initial Operational Test & Eval				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
<ul> <li>B-2 Radar Modernization Program (RMP): Conduct FOT&amp;E</li> <li>B-52 COmbat NEtwork Communications Technology (CONECT):</li> <li>C-130 Avionics Modernization Program (AMP): Early Influence</li> <li>Common Vertical Lift Support Platform (CVLSP): Early Influence</li> <li>Diminishing Manufacturing Sources Replacement of Avionics Glob Plan for OA-1</li> <li>E-XX National Airborne Operations Center (NAOC): Plan for EOA-5-15 Mark XIIA Mode 5 (F-15 Mode 5): Plan for OA-5-15E Radar Modernization Program (F-15E RMP): Plan for IOT&amp;5-7-22A: Plan for FOT&amp;E Inc 3.1</li> <li>HC/MC-130 Recapitalization (HC/MC-130 RECAP): Conduct IDT-7-10 Joint Cargo Aircraft (JCA): Conduct MOT&amp;E</li> <li>Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: Plan-10 Modular Aircrew Helmet (MACH): Plan for OA-10 MQ-9: Plan for OA-10 MQ-9:</li></ul>	oal Operations and Navigation (DRAGON):  A  BE  /OT						
FY 2011 Plans:  - ALR-69A Radar Warning Receiver (ALR-69A): Conduct IOT&E  - AWACS Block 40/45 (AWACS Block 40/45): Plan for IOT&E  - B-2 Defensive Management System (DMS): Early Influence  - B-52 COmbat NEtwork Communications Technology (CONECT):  - C-130 Avionics Modernization Program (AMP): Plan for IOT&E  - Common Vertical Lift Support Platform (CVLSP): Early Influence  - Diminishing Manufacturing Sources Replacement of Avionics Glol Plan for OA-1  - E-XX National Airborne Operations Center (NAOC): Plan for EOA  - F-15 Mark XIIA Mode 5 (F-15 Mode 5): Conduct IOT&E  - F-15E Radar Modernization Program (F-15E RMP): Conduct OA  - F-22A: Conduct FOT&E Incr 3.1  - HC/MC-130 Recapitalization (HC/MC-130 RECAP): Conduct IDT  - Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: Cor	oal Operations and Navigation (DRAGON):						

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			С	ATE: Febru	ary 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test Evaluation		PROJECT 660191: Initial Operational Test & Eva				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 201	0 FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
<ul> <li>- Modular Aircrew Helmet (MACH): Conduct OA</li> <li>- Miniature Air Launched Decoy (MALD): Plan for OA</li> <li>- Miniature Air Launched Decoy-Jammer (MALD-J): Conduct IOT&amp;E</li> <li>- MQ-9: Conduct OA</li> <li>- QF-16: Plan for OA</li> </ul>							
FY 2012 Base Plans:  - Advanced Pilot Training System (T-X): Conduct EOA  - ALR-69A Radar Warning Receiver (ALR-69A): Publish Final Report  - AWACS Block 40/45 (AWACS Block 40/45): Conduct IOT&E  - B-2 Defensive Management System (DMS): Early Influence  - B-52 COmbat NEtwork Communications Technology (CONECT): P  - C-130 Avionics Modernization Program (AMP): Conduct IOT&E  - Common Vertical Lift Support Platform (CVLSP): Early Influence  - Diminishing Manufacturing Sources Replacement of Avionics Global Conduct OA -1  - E-XX National Airborne Operations Center (NAOC): Conduct EOA  - F-15 Mark XIIA Mode 5 (F-15 Mode 5): Publish Final Report  - F-15E Radar Modernization Program (F-15E RMP): Conduct IOT&I  - F-22A: Conduct IDT/OT Incr 3.2  - HC/MC-130 Recapitalization (HC/MC-130 RECAP): Conduct IOT&I  - Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: Publish Modular Aircrew Helmet (MACH): Conduct OA  - Miniature Air Launched Decoy-Jammer (MALD-J): Complete IOT&I  - MQ-9: Plan for IOT&E  - QF-16: Conduct OA  - Synthetic Aperture Radar/Ground Movement Terrain Radar Electro-Command and Control (SAR/GMT EO/IR BMC2): Plan for IOT&E  - FY 2012 OCO Plans:	Publish Final Report  I Operations and Navigation (DRAGON):  E  Sh Final Report						
Not applicable.  Title: OT&E (1)		2.17	77 1.142	0.861	_	0.861	
nue. Otal (1)		2.17	1.142	0.001		0.001	

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation	PROJECT 660191: Initial Operational Test & E				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Plan, execute, and report IOT&E activities for Space	Systems:					
FY 2010 Accomplishments:  - Advanced EHF Satellite Communications (Advanced EHF): Con - Enhanced Polar System (EPS): Plan for OA-1  - Global Positioning System (GPS): Conduct multiple OAs - Joint Space Operations Center Mission System (JMS): Plan for I  - Mobile User Objective System (MUOS): Conduct OA-1  - Space Based Infrared System (SBIRS): Plan for OUE  - Space Based Space Surveillance (SBSS): Plan for IOT&E  - Space Fence: Plan for EOA						
FY 2011 Plans:  - Advanced EHF Satellite Communications (Advanced EHF): Con - Enhanced Polar System (EPS): Conduct OA-1 - Global Positioning System (GPS): Conduct MOT&E - Joint Space Operations Center Mission System (JMS): Conduct - Mobile User Objective System (MUOS): Conduct OA-2 - Space Based Infrared System (SBIRS): Plan for OUE - Spaced Based Space Surveillance (SBSS): Conduct IOT&E - Space Fence: Plan for EOA						
FY 2012 Base Plans: - Advanced EHF Satellite Communications (Advanced EHF): Con Enhanced Polar System (EPS): Conduct OA-1 - Global Positioning System (GPS): Conduct EOA - Joint Space Operations Center Mission System (JMS): Plan for I - Mobile User Objective System (MUOS): Conduct MOT&E-1 - Space Based Infrared System (SBIRS): Conduct OUE - Space Fence: Conduct EOA						
FY 2012 OCO Plans: Not applicable.						
Title: OT&E (2)		1.717	1.001	2.242	-	2.242

Air Force Page 6 of 10 R-1 Line Item #96

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation	PROJECT 660191: Initial Operational Test & Eval						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
Description: Plan, execute, and report IOT&E activities for Weap	on Systems:							
FY 2010 Accomplishments: - AIM-9X Block II: Conduct OT-3C - Joint Air-to-Surface Standoff Missile – Anti-Surface Warfare (JAS-Joint Air-to-Surface Standoff Missile Extended Range (JASSM-E-Small Diameter Bomb Increment II (SDB II): Plan for OA								
FY 2011 Plans: - AIM-9X Block II: Conduct OA - Joint Air-to-Surface Standoff Missile – Anti-Surface Warfare (JAS-Joint Air-to-Surface Standoff Missile Extended Range (JASSM-E-Small Diameter Bomb Increment II (SDB II): Conduct OA	, •							
FY 2012 Base Plans: - AIM-9X Block II: Conduct OT-3D - B-61 Life Extension Program (B-61 LEP): Plan for EOA - Joint Air-to-Surface Standoff Missile – Anti-Surface Warfare (JAS-Joint Air-to-Surface Standoff Missile Extended Range (JASSM-E-Small Diameter Bomb Increment II (SDB II): Complete OA	, •							
FY 2012 OCO Plans: Not applicable.								
Title: OT&E (3)		3.042	2.935	3.866	-	3.866		
<b>Description:</b> Plan, execute, and report IOT&E activities for Command Intelligence (C4I) Programs	nand, Control, Communications, Computer,							
FY 2010 Accomplishments:  - Three Dimensional Expeditionary Long Range Radar (3DELRR):  - Air Operations Center as a Weapon System (AOC): Early Influe:  - B-1 Fully Integrated Data Link (B-1 FIDL): Conduct OA  - B-2 Extremely High Frequency Satellite Communications and Construction SATCOM: Conduct IDT/OT	nce							

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Air Force Page 7 of 10 R-1 Line Item #96

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
- Battle Control System – Fixed (BCS-F): Plan IOT&E - Command and Control Air Operation Suite (C2AOS): Early Influer - Command and Control Information Services (C2IS): Early Influer - Expeditionary Combat Support System (ECSS): Conduct EOA - Global Hawk 4 Multiple Platform-Radar Technology Insertion Pro - Integrated Broadcast Service (IBS): Plan for OUE - Joint Precision Approach & Landing System (JPALS): Early Influer - Key Management Infrastructure (KMI): Plan for MOT&E  FY 2011 Plans: - Three Dimensional Expeditionary Long Range Radar (3DELRR): - Air Operations Center as a Weapon System (AOC): Plan for OA - Airborne Signals Intelligence Payload 2C (ASIP 2C): Conduct OA - B-1 Fully Integrated Data Link (B-1 FIDL): Conduct OA - B-2 Extremely High Frequency Satellite Communications and Co SATCOM): Conduct IOT&E Incr 1 - Battle Control System – Fixed (BCS-F): Plan for IOT&E - Command and Control Air Operation Suite (C2AOS): Early Influer - Expeditionary Combat Support System (ECSS): Conduct OA - Family of Advanced Beyond Line Of Sight Terminals (FAB T): Co - Global Hawk 4 Multiple Platform-Radar Technology Insertion Pro - Integrated Broadcast Service (IBS): Plan for OUE - Joint Precision Approach & Landing System (JPALS): Early Influer - Key Management Infrastructure (KMI): Conduct MOT&E  FY 2012 Base Plans: - Three Dimensional Expeditionary Long Range Radar (3DELRR): - Air Egree Integrated Personnel and Pay System (AF-IPPS): Con-	gram (GH 4 MP-RTIP): Conduct IDT/OT ence  Plan for EOA  A mputer Upgrade Program (B-2 EHF ence nce onduct OA gram (GH 4 MP-RTIP): Conduct OA ence  Plan for EOA					
<ul> <li>- Family of Advanced Beyond Line Of Sight Terminals (FAB T): Corollar - Global Hawk 4 Multiple Platform-Radar Technology Insertion Pro-Integrated Broadcast Service (IBS): Plan for OUE</li> <li>- Joint Precision Approach &amp; Landing System (JPALS): Early Influence - Key Management Infrastructure (KMI): Conduct MOT&amp;E</li> <li>FY 2012 Base Plans:</li> </ul>	gram (GH 4 MP-RTIP): Conduct OA ence  Plan for EOA duct EOA					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation	PROJECT est & 660191: Initial Operational Test & Eval						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
- B-2 Extremely High Frequency Satellite Communications and Comp SATCOM): Complete IOT&E Incr 1 - Battle Control System – Fixed (BCS-F): Conduct IOT&E - Command and Control Air Operation Suite (C2AOS): Conduct OA - Command and Control Information Services (C2IS): Conduct OA - Expeditionary Combat Support System (ECSS): Conduct IOT&E - Family of Advanced Beyond Line Of Sight Terminals (FAB T): Conc - Global Hawk 4 Multiple Platform-Radar Technology Insertion Progra - Integrated Broadcast Service (IBS): Conduct OUE - Joint Precision Approach & Landing System (JPALS): Early Influen - Wide Area Airborne Surveillance System (WAAS): Plan for IOT&E  FY 2012 OCO Plans:	duct IOT&E am (GH 4 MP-RTIP): Conduct IOT&E							
Not applicable.								
Title: OT&E (4)	Summark Dua sussus	1.631	0.243	0.141	-	0.141		
<ul> <li>Plan, execute, and report IOT&amp;E activities for Combat S</li> <li>FY 2010 Accomplishments:</li> <li>Combat Survivor Evader Locator (CSEL): Conduct MOT&amp;E</li> <li>Joint Mission Planning System (JMPS): Plan for IOT&amp;E</li> <li>FY 2011 Plans:</li> <li>Joint Counter Radio-Controlled Improvised Explosive Device EW (J</li> <li>Joint Mission Planning System (JMPS): Conduct E-8 IOT&amp;E</li> </ul>								
FY 2012 Base Plans: - Joint Counter Radio-Controlled Improvised Explosive Device EW (J - Joint Mission Planning System (JMPS): Conduct Global Hawk IOT	,							
FY 2012 OCO Plans: Not applicable.								
Accon	plishments/Planned Programs Subtotals	25.368	20.665	17.767	-	17.767		

Air Force Page 9 of 10 R-1 Line Item #96

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force
BA 6: RDT&E Management Support

PE 0605712F: Initial Operational Test & Evaluation

Evaluation

FE 0605712F: Initial Operational Test & Evaluation

C. Other Program Funding Summary (\$ in Millions)

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<b>Base</b>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
• O&M AF PE 0207426: <i>AFOTEC</i>	33.432	37.351	37.542	0.000	37.542	38.276	40.085	40.892	41.801	Continuing	Continuing
O&M											

### **D. Acquisition Strategy**

N/A

#### **E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Air Force Page 10 of 10 R-1 Line Item #96