

**AD-A251 735**



**92-15956**



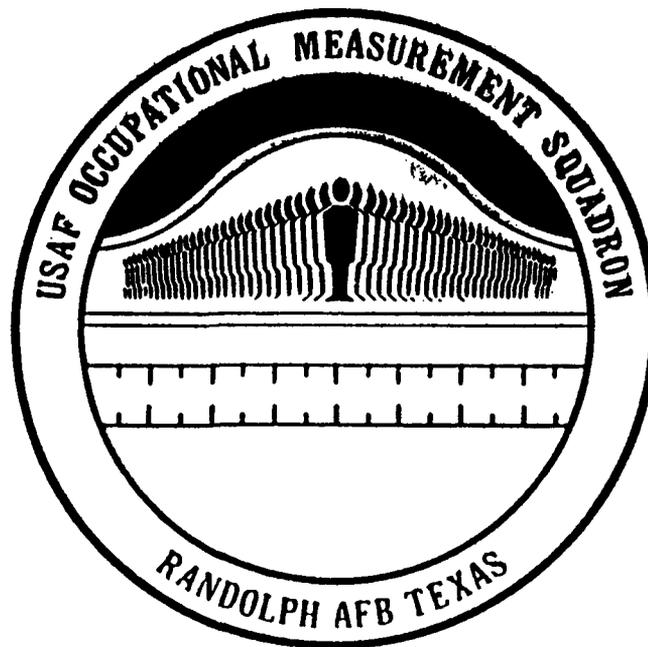
Nellis AFB	NV	37 CRS	3
Nellis AFB	NV	57 FWW/MA	1
Nellis AFB	NV	57 CRS/MACAI	3
* Randolph AFB	TX	AFMPC/DPMRAD5	1
Randolph AFB	TX	HQ ATC/TTOA	1
Randolph AFB	TX	USAFOMS/OMYO/OMD/OMR	6/1/1
Robins AFB	GA	HQ AFRES/DPTS	1
Shaw AFB	SC	363 TFW/MA	1
Shaw AFB	SC	363 CRS	3
Sheppard AFB	TX	3700 TSS/TTOM	1
Sheppard AFB	TX	3785 FLDTW	2
* Washington DC		HQ USAF/LGMM/DPPT	1/1
* Washington DC		NGB/TEM	1
* Washington DC		NODAC	1
Wright Patterson AFB OH		HQ AFLC/DPUE	1

\* TRA delivered without Volume II (Task Analysis)

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A SPECIAL THANKS TO THE MANY HARD-WORKING F-16/A-10 AVIONICS  
TEST STATION AND COMPONENT PERSONNEL AND SUPERVISORS FOR  
THEIR EXPERTISE AND OUTSTANDING SUPPORT ON THIS PROJECT.



**F-16/A-10 AVIONICS TEST STATION AND COMPONENT  
SPECIALIST/TECHNICIAN (AFSC 451X5)**

**TRAINING REQUIREMENTS ANALYSIS  
PREPARED BY**

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**QUALITY ASSURANCE**

## PREFACE

The United States Air Force Occupational Measurement Squadron (USAFOMS), Occupational Analysis Flight (OMY), is assigned primary responsibility for developing occupational survey reports (OSRs) and training requirements analyses (TRAs) for Air Force specialties. OSRs summarize the results of occupational surveys and identify the structure of the career ladder in terms of jobs performed. TRAs identify the activity, skill, and knowledge needed to perform those jobs, as well as specific training needs for each specialty. Together, OSRs and TRAs provide a basis for revision or development of specialty training standards (STSS), course training standards (CTSS), initial skills training, on-the-job training (OJT), and career development courses (CDCs). TRAs fulfill most requirements of steps 1 and 2 of the Instructional System Development (ISD) model prescribed in AFR 50-8, Policy and Guidance for Instructional System Development (ISD).

The Air Training Command Training Staff Officer (HQ ATC/TTOA) requested this TRA, in conjunction with an OSR, to provide task analysis data for use in updating initial skills and follow-on courses for the 451X5 career ladder. Copies of this report are available to Air Staff sections, MAJCOMs, the OJT community, and other interested training and management officials upon request. Address requests to USAFOMS/OMY, Randolph AFB TX 78150-5000 or 3400 TSS/OMS, Lowry AFB CO 80230-5000.

This volume consists of three sections: Specialty Overview, TRA Development Procedures, and Results. In addition, the task analysis volume contains a detailed examination of all AFSC 451X5 specialty-unique tasks.

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## EXECUTIVE SUMMARY

### Purpose

The purpose of this training requirements analysis (TRA) is to assist in determining training requirements for F-16/A-10 Avionics Test Station and Component personnel in light of recent RIVET WORKFORCE (RWF) restructuring efforts. The information may be used to evaluate the adequacy, feasibility, and efficiency of the training provided within this rapidly changing specialty.

### Procedures

Data for this TRA were gathered by means of field interviews with F-16/A-10 Avionics Test Station and Component personnel. The TRA task list was extracted from the February 1989 451X5 USAF Job Inventory (JI). A total of 35 subject-matter experts (SMEs) at 4 TAC bases were interviewed to gather task data and other training decision data. In addition, system overview information was gathered from HQ USAF, the TAC functional manager, and members of Lowry Technical Training Center (LTTC).

### Results

The analysis of collected data resulted in both general and specific training recommendations. These recommendations are designed to create the best possible training environment, given realistic constraints in the areas of manpower and resources. The general recommendations are:

1. Consider the common skill and knowledge requirements identified in the task analysis when designing or revising training. Training should emphasize similarities within and across different weapon systems. This approach may help graduates understand the broader applicability of their skills and knowledge.
2. Evaluate the need to increase emphasis on using TOs in resident training. Analysis reveals the ability to apply information contained in TOs is critical to job performance. Since all job requirements are TO driven, successful task accomplishment depends on how well technicians can locate, cross-reference, and apply the information.
3. Consider restructuring the F-16/A-10 Avionics Test Station and Component initial skills courses to shift emphasis from "testing LRUs" to "isolating basic malfunctions" through standard test procedures.
4. Consider using career development courses (CDCs) to cover the knowledge requirements that differ among major functional areas for 5-skill-level upgrade. Because of the experience gained by this point in an airman's career, CDCs can cover the differences between specific equipment items.

Specific training recommendations are presented in STS format in Appendix C. They include numerous proposals for content and proficiency code changes, which indicate what to train, where to train, and to what level. For correlation purposes, TRA tasks are cross-referenced with applicable STS items. These specific training recommendations can assist training managers and curriculum developers in revising the STS at the next utilization and training workshop (U&TW).

## SPECIALTY OVERVIEW

### Background

On 30 October 1986, AFSC 326X4C (F-16) and 326X0D (A-10) were combined into the 326X4C career ladder. Under RWF, the AFSC became 451X5.

There are no shredouts for this career field, but personnel were originally assigned using Special Experience Identifiers (SEIs). Upon completion of the 3-year transition period, the SEIs were dropped, allowing personnel to be assigned to either weapon system. This has caused numerous changes in training requirements for resident, CDC, and OJT programs. This TRA will help Air Force officials assess the impact of the RWF restructure.

### Mission Description

F-16/A-10 Avionics Test Station and Component personnel perform a variety of tasks based upon the missions of their major command. They inspect, troubleshoot, repair, modify, program, calibrate, and certify computerized and manual test stations, consoles, electronic warfare (EW) components, and system components. They use shop avionics test stations, support equipment (SE), and specialized precision-measuring equipment. Personnel also inspect, calibrate, identify malfunctions, and perform maintenance on avionics test stations, consoles, and SE using calibration standards.

### Manning

As of 31 May 1991, the F-16/A-10 Avionics Test Station and Component specialty had 614 personnel authorized and 645 assigned. Currently, the specialty is approximately 105 percent manned.

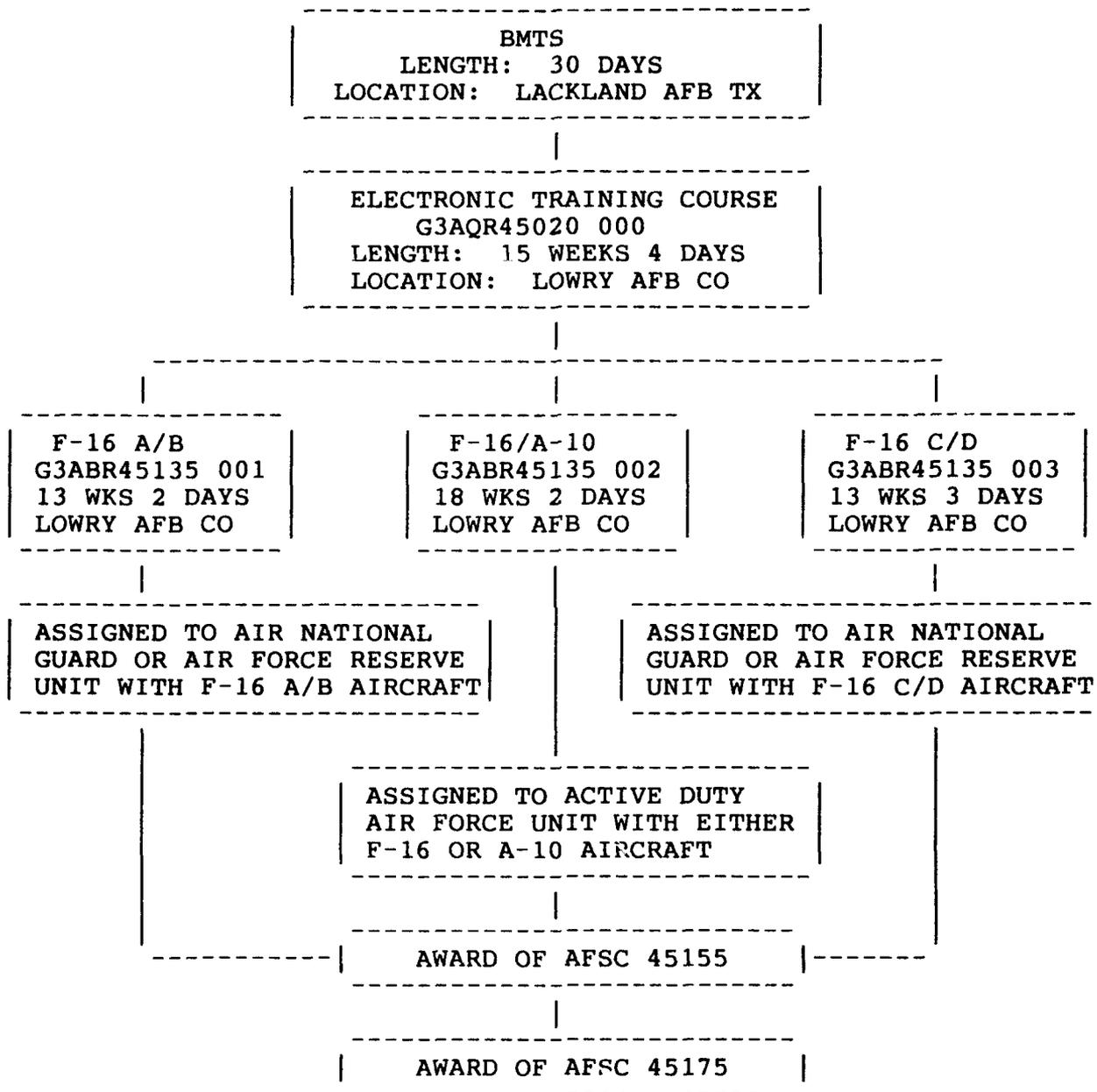
The manning situation is not stable. According to HQ TAC/LGMF, the cuts projected by RWF restructuring efforts have not yet been made. Part of the agreement under RWF was to make no reductions until completion of the 3-year transition period. Since the transition period was completed in October 1990, manning levels are being reevaluated, and additional cuts are anticipated. It is unknown at this time whether the anticipated cuts will be sufficient to meet overall Air Force manning requirements. Since every unit visited during TRA development felt "undermanned," these future cuts emphasize the need for effective training.

### Training Currently Available

Formal courses for AFSC 451X5 are currently offered by the 3450th Technical Training Squadron, Lowry AFB, Colorado. A complete description of course prerequisites and content can be found in AFR 50-5, USAF Formal Schools.

All enlisted personnel assigned to the F-16/A-10 Avionics Test Station and Component Air Force specialty must attend and complete the Electronic Training Course after graduation from Basic Military

Training School (BMTS). The next step is the F-16/A-10 Avionics Test Station and Component course for award of the 3-skill level. Upon completion, they are assigned to F-16 and A-10 Avionics Test Station and Component units throughout the Air Force. The following illustration describes AFSC 451X5 training from BMTS to the 7-skill level.



## Specialty Concerns

This section provides a summary of specialty concerns identified during task analysis. These concerns were consolidated during months of interviews with technicians at all levels. A few of these concerns are addressed indirectly in the Recommendations section.

1. Loss of expertise. Personnel feel the RWF initiatives are having a negative impact upon morale and job satisfaction. The most common complaint is that technicians are required to work on too many different systems and cannot become proficient on all. Many people expressed a desire for even more specialization than existed before RWF.
2. Lack of training in troubleshooting. Technicians feel more time should be spent teaching troubleshooting test stations and LRUs. Increasing the understanding of Abbreviated Test Language for All Systems (ATLAS) programming, the continued use of the LT-2 trainer, and more "hands-on" training is their solution to the problem.
3. Course too detailed. Many feel the course contains too much theory of operation, and students are not able to retain the amount of information presented in the classroom. Those interviewed suggest teaching detailed theory in a CDC. This would allow students to apply the information as they learn.

## Advanced Technology Training Delivery (ATTD) Systems

During the initiation of the 451X5 TRA, the TSO asked USAFOMS to analyze the possibility of satisfying training with some form of ATTD such as Interactive Video Disk (IVD) or computer-based training. HQ ATC/TTOA was specifically interested in determining if a job requirement coded "2b" (partially proficient on step-by-step procedures) could be satisfied with media other than face-to-face and hands-on instruction.

Because there is currently no validated training delivery system employing ATTD in ATC for the 45XXX career field, it was not possible to do a systematic analysis. A previous "4-skill-level" study in the 451XX arena showed graduates who used trainers were more proficient upon completion of initial skills training and required less time for 5-skill-level upgrade than the graduates that did not use trainers. In addition, the "Manager's Guide to New Training Technologies," published in August 1989, showed all ATTD systems have greater potential than conventional training for characteristics such as interactivity, standardization of instruction, and fewer instructor requirements. Other benefits of ATTD include greater range of instructional strategies, long-term reduced costs, and increased reliability.

Having looked at several applications of IVD for weapons systems, there is no reason why IVD or another form of ATTD cannot be used to teach certain job requirements. Good job candidates to use for implementing an ATTD system are the troubleshooting tasks, because

the branching or logic process used during troubleshooting is well suited to ATTD systems.

A major problem facing resident training is the inability to insert malfunctions in equipment because this practice often involves "breaking" operational equipment. This restriction makes the use of operational equipment to teach troubleshooting virtually impossible. ATTD systems can fill the gap. It can give graduates an increased understanding of troubleshooting logic and better prepare them to tackle troubleshooting situations in an OJT environment. Although using this approach is not the same as troubleshooting on an actual test station or LRU, the multitude of scenarios and level of difficulty that can be achieved far exceed the current training capabilities.

#### Future Plans

Numerous equipment changes are anticipated in this continually evolving technological arena. The Improved Avionics Intermediate Station (AIS) is scheduled to replace the four automatic test stations in the F-16 community for Block 50 aircraft. The Improved AIS is supposed to test approximately 70 percent of the LRUs for Block 40 aircraft and 50 to 65 percent of the LRUs for Blocks 25 and 30 aircraft.

These changes also include implementing regional support centers, starting programs such as Deployed Aircraft Repair Techniques (DART), and moving toward a two-level maintenance concept. The increasing demands on job performance will require innovation, flexibility, and above all, quality in all areas of training design and delivery.

## TRA DEVELOPMENT PROCEDURES

### Planning

Training analysts from 3400 TSS/OMS, formed the project team for this TRA. Work began with a thorough review of the specialty documentation, including duties in AFR 39-1, the existing STS, course descriptions in AFR 50-5, resident course documents, and CDCs. The analysts interviewed functional managers, shop chiefs, and course management personnel for help in determining bases to visit and existing training issues. This information gave the team a solid foundation for planning the project.

### TRA Task List Development

Analysis of any specialty starts with a task list which describes each separate work function performed by technicians in the career ladder. The February 1989 451X5 USAF Job Inventory (JI) was used as the starting point for development of the TRA Task List. Supervisory, additional duty, and nonspecialty-specific tasks were removed, and the remaining JI statements were clustered into TRA tasks to be analyzed. During interviews with SMEs, many of these tasks were deleted or revised, and several tasks were added to better define duties performed. This process resulted in 99 TRA tasks; 22 for the F-16, 42 for the A-10, and 35 tasks common to both weapon systems.

### Data Collection

Interviews were conducted with well-qualified SMEs selected by branch and shop chiefs at Luke, Nellis, Davis-Monthan, and England AFBs. The interviews matched qualified personnel with the tasks identified for analysis. The support provided by MAJCOM representatives was essential to the success of task analysis.

The task-level information provided by SMEs formed the basis of the TRA descriptive data base. SME interviews continued until project analysts received consistently duplicate information. Although the number of SMEs needed to analyze a task varied, careful SME selection for interview, followed by validation with SMEs assigned to different areas, helped assure a thorough, reliable data base.

The data were recorded on task analysis worksheets (TAWs). The following is an explanation of the TAW headings.

**TASK NUMBER:** TRA task number.

**TASK STATEMENT:** The task to be performed.

**TASK NOTES:** Contains brief comments or explanations to enhance understanding of the task statement.

**EQUIPMENT, TOOLS, SUPPLIES:** Equipment, tools, supplies, etc., required to perform the task.

**REFERENCES:** Lists the TOs, AFOSH Standards, Regulations, and any other references required to perform the task.

**CONDITIONS:** Environment in which a task is performed. Includes consideration of the actual physical environment. A condition for all tasks is "In a secured area." If no condition is listed, it is understood that this is the only condition for that task.

**CUES:** Actions or directives that initiate, signal, or prompt performance of the task.

**STANDARDS:** Specifies the job performance evaluation standards for performing the task accurately and expediently.

**ACTIVITIES:** Significant steps required to perform the task.

**SKILLS:** Skills involve physical or manipulative activities, often requiring knowledge and special requirements for speed, accuracy, or coordination for task execution.

**KNOWLEDGE:** Knowledge, not directly observable, involves the use of mental processes enabling recall of facts, identification of concepts, application of rules or principles, solving of problems, or creative thinking, etc.

**RELATED OCCUPATIONAL SURVEY DATA:** Occupational survey data are used with the Training Decisions Logic Table (ATCR 52-22, Occupational Analysis Program, Attachment 1) to determine where tasks should be trained and to what level. The following explains the data columns listed within this report.

AFSC	DUTY/ TASK	TNG EMP	1ST JOB	1ST ENL	5 LVL	7 LVL	TSK DIF	ATI
								Automated Training Indicator (Not available for entire AFSC)
								Task Difficulty Rating (4.00-6.00 = average difficulty)
								Percentage of 7-skill-level survey respondents who perform the task
								Percentage of 5-skill-level survey respondents who perform the task
								Percentage of 1- to 48-month TAFMS survey respondents who perform the task
								Percentage of 1- to 24-month TAFMS survey respondents who perform the task
								Training Emphasis Rating (For the F-16, 3.08 and above is considered high) (For the A-10, 3.20 and above is considered high) (Not available for entire AFSC)
								USAF Job Inventory Duty code and task number

Identifies data for each weapon system individually as well as for entire AFSC

**USAF JOB INVENTORY TASK STATEMENTS:** A listing of job inventory statements applicable to the task. Some job inventory tasks are related to TRA tasks, but they cannot be classified as activity, skill, or knowledge behaviors. These are normally equipment-specific statements and are included because they will provide additional information about the task.

## RESULTS

This section consists of common skills and knowledge, general recommendations for specialty training, and specific training content recommendations. The recommendations are designed to create the best possible training environment, given realistic constraints in the areas of manpower and resources. The priority and feasibility for implementation of the recommendations will be determined by Air Staff, MAJCOM, and the F-16/A-10 Avionics Test Station and Component School personnel.

### Common Skills and Knowledge

Once the task data were collected from SMEs, they were analyzed by USAFOMS training analysts. Skills and knowledge required to perform each of the tasks were identified. A complete listing of these skill and knowledge requirements is presented in Volume II of this TRA in the form of task analysis worksheets.

After identification of the skills and knowledge required to perform each task was completed, training analysts then compared the requirements for each weapon system. This comparison showed the number of times a skill or knowledge was required for each weapon system (see Appendix A).

All skill and knowledge requirements were then grouped into four categories: 1) those which apply to all functions; 2) those which apply to performing operational checkouts; 3) those which apply to isolating malfunctions; and 4) those which apply to repair of systems. From this list, the common skill and knowledge requirements were identified. For an item to have been considered common, it had to appear in 10 percent or more of the tasks within one of the four major areas. Appendix B lists all the common skill and knowledge requirements identified in this manner.

### General Training Recommendations

1. Consider the common skill and knowledge requirements identified in the task analysis when designing or revising training.

Training should enable personnel to transfer what they know about one piece of equipment to the next. Analysis results indicate areas of commonality in the skill and knowledge requirements within and across the different weapon systems. Training could emphasize these commonalities by teaching technicians how to perform operational checkouts, troubleshoot malfunctions, and make repairs independent of specific equipment. Although training must be conducted using specific pieces of equipment, it should be approached in a manner that points out the broader applicability of their skills and knowledge.

2. Evaluate the need to increase emphasis on using TOs in resident training.

Analysis shows that the ability to apply TO information is critical to job performance. Since all job requirements are TO driven, successful completion depends upon how well a technician can locate, cross-reference, and apply the information. Although the types of TOs and their uses are covered in current courses, analysis has shown that graduates could benefit substantially from an increase in "hands-on" TO usage. This will not be an easy job, since this will require increased course time and larger TO libraries. Suggestions for improving the "hands-on" time include having students find the actual TOs they will need, making students research TOs to solve problems, and eliminating the use of extracts. No matter how TO usage is approached, this knowledge should be reinforced throughout the course.

3. Consider restructuring the F-16/A-10 Avionics Test Station and Component courses to shift training emphasis from "testing LRUs" to "isolating basic malfunctions."

Although LRUs and test stations may differ in their function and operational characteristics, analysis results have proven that the steps a technician must take to operationally test a unit are virtually the same. The cables, adapters, and test equipment involved may vary, but the same skills and knowledge are required for each one. Operational testing is considered by technicians to be the "easy" task of this specialty, and training time could be reduced considerably. The more difficult task and the one requiring the larger portion of training is troubleshooting. The ability to determine the cause of a malfunction is the most valuable skill technicians need to master. Troubleshooting, however, has separate and distinct levels. One level involves using the subroutines (diagnostics) of an operational checkout to find the problem or at least narrow it to several alternatives. The more difficult level of troubleshooting is encountered when the subroutines incorrectly identify or fail to identify the cause of the problem. At this point, technicians must be extremely skilled in troubleshooting techniques to isolate the problem. Although these in-depth procedures should not be taught to 3-skill-level personnel, there is a definite need to teach basic troubleshooting to apprentices. They need experience in finding malfunctions through automated testing. They also need to understand why the automated procedures are not always effective. The earlier personnel learn the essential logic of troubleshooting, the more productive they are going to be. Going beyond this understanding and actually finding the cause of the malfunction should be reserved for advanced skill levels. The more sophisticated application of troubleshooting requires a greater experience base than an apprentice can be expected to achieve.

4. Consider using CDCs to cover the knowledge requirements that differ among test stations and LRUs for 5-skill-level upgrade.

Because of the experience being gained during upgrade training to the 5-skill level, CDCs can cover the material, such as theory of operation and differences in characteristics among various pieces of equipment. Teaching this detailed knowledge in an initial skills course is unnecessary, since it will not be required until advanced skill levels. The areas recommended for inclusion are annotated as specific training recommendations in the CDC column of the STS.

#### **Specific Training Recommendations**

Specific training recommendations are provided in the form of recommended STS changes (Appendix C). These recommended changes are based primarily on the task analysis data, guidelines set forth in AFR 8-13, Air Force Specialty Training Standards and Air Force Job Qualification Standards, and ATCR 52-22, Occupational Analysis Program.

Some recommendations may appear to be unjustified due to small percentage performing as identified in occupational survey data. This is due in part to the way personnel are utilized throughout the AFSC. Normally, first job and first enlistment personnel are assigned to only one test station. A person will perform a task in their assigned area, while other personnel will perform similar tasks for other test stations. An example is "Perform ITA wraparound test." Personnel perform ITA wraparound tests on each the test stations. The task has a low percent performing for each individual area, but collectively, it has a high percent performing rating. In other instances, the percent performing is considered low, but the training emphasis is high accounting for the recommended 3-level course training. Lastly, in some cases the ATI is high, and no 3-level training is recommended. This is due to recommending the use of representative systems for 3-level course training.

**APPENDIX A  
COMPARISON OF SKILL AND KNOWLEDGE REQUIREMENTS**

Listed below are all the skill and knowledge requirements for both weapon systems. The numbers shown under each column are the number of times that skill or knowledge appeared in the task analysis for that aircraft.

F-16	A-10	SKILLS
1	-	S ADJUST BENCH
-	1	S ADJUST POTENTIOMETERS
-	2	S ADJUST VOLTAGES
5	1	S ASSEMBLE SOLDERLESS COAXIAL CONNECTORS
3	-	S ASSEMBLE SOLDERLESS CRIMP CONNECTORS
6	1	S ASSEMBLE SOLDERLESS MULTIPIN CONNECTORS
1	-	S ATTACH CABLES
1	2	S CHECK CIRCUIT CONTINUITY AND RESISTANCE
-	1	S CHECK FOR PROPER VOLTAGES
1	1	S CODE TRANSPONDER
1	-	S COMPILE BACKGROUND DATA
4	-	S CONNECT ITA
1	-	S EDIT SOFTWARE
-	1	S INSPECT ETTR
-	1	S INSPECT HARS LRUs
6	-	S INSTALL DISK
1	1	S INSTALL TACAN LRUs
7	2	S LOAD PROGRAM
1	-	S NORMALIZE BENCH
1	1	S OPERATE EMERGENCY RADIO
1	1	S OPERATE FORKLIFT
-	3	S OPERATE MOCK-UP
1	1	S OPERATE TACAN LRUs
1	-	S OPERATE TANDBERG DIGITAL CARTRIDGE RECORDER
22	12	S OPERATE TEST STATION
-	1	S PERFORM ADJUSTMENTS
1	7	S PERFORM ALIGNMENTS
1	-	S PERFORM DIAGNOSTIC TESTS OF EPVs
1	1	S PERFORM MANUAL INTERVENTION
-	1	S PERFORM RESISTANCE CHECK
43	56	S PERFORM VISUAL INSPECTIONS
-	1	S PERFORM VOLTAGE SETTINGS
3	6	S REMOVE AND REPLACE COMPONENTS
1	1	S REMOVE AND REPLACE FUSES
2	2	S REMOVE AND REPLACE HARDWARE
-	3	S REMOVE AND REPLACE MINOR HARDWARE
5	14	S REMOVE AND REPLACE SRUs
1	1	S REMOVE OR REPLACE HIGH SPEED DATA BUSS CABLE CONNECTORS
1	1	S REMOVE OR REPLACE SOLDERED CONNECTORS
1	1	S REMOVE OR REPLACE SOLDERLESS PINS OR CONNECTORS
-	1	S REPAIR COMPONENTS
-	8	S REPAIR WIRING
1	-	S SECURE BOTTLES
5	-	S SOLDER OR DESOLDER COAXIAL CONNECTORS

F-16    A-10    SKILLS

6	-	S	SOLDER OR DESOLDER MULTIPIN CONNECTORS
2	1	S	SOLDER OR DESOLDER PC BOARDS
9	2	S	SOLDER OR DESOLDER TERMINAL CONNECTIONS
-	1	S	SOLDER OR DESOLDER TEST STATION COMPONENTS
1	1	S	USE AC RMS VOLTMETER
-	1	S	USE AC/DC CALIBRATOR
1	2	S	USE ADF TEST SET
-	1	S	USE ADI TEST SET
-	2	S	USE ALPHA MACH COMPUTER TESTER
3	3	S	USE AN/ARM-135(A) TEST SET
-	1	S	USE AN/ASM-184 TEST SET
-	2	S	USE ANGLE POSITION INDICATOR
-	1	S	USE ANTENNA
2	2	S	USE APM-406 (IFF CONTROL UNIT)
4	4	S	USE ARM-173 TEST ADAPTER
3	2	S	USE ARM-173 TEST SET
5	5	S	USE ATTENUATORS
8	8	S	USE AUDIO OSCILLATOR
-	1	S	USE BORESIGHT REFERENCE TOOL
2	3	S	USE BREAKOUT BOX
-	2	S	USE CALCULATOR
1	-	S	USE CAMS FOR HISTORY INQUIRES
48	63	S	USE COMMON HANDTOOLS
5	1	S	USE COMPRESSED GAS BOTTLE
1	1	S	USE DC POWER METER
-	1	S	USE DC POWER SUPPLY
2	3	S	USE DECADE RESISTOR
1	-	S	USE DIGITAL LOGIC PROBE
3	1	S	USE DISC DRIVE ALIGNMENT
7	3	S	USE DISTORTION ANALYZER
-	1	S	USE DUAL POWER SUPPLY
-	1	S	USE ECA
2	3	S	USE ELECTRONIC COUNTER
1	1	S	USE EMERGENCY RADIO TEST SET
-	1	S	USE EXTENDER CARD
4	2	S	USE EXTRACTOR TOOLS
-	2	S	USE FDC TEST SET
-	1	S	USE FLIGHTLINE TESTER
12	10	S	USE FREQUENCY COUNTER
3	2	S	USE FREQUENCY OSCILLATOR
-	2	S	USE FREQUENCY RESPONSE ANALYZER
-	1	S	USE FUEL QUANTITY TEST SET
-	1	S	USE GTF-6 TEST SET
1	1	S	USE HAND SETS
-	1	S	USE HARS TEST SET
-	1	S	USE HSI TESTER
-	1	S	USE HUD TEST SET
-	2	S	USE IMPEDANCE BRIDGE
2	2	S	USE INTERFACE TEST SET
1	1	S	USE KIK
3	3	S	USE MODE 4 COMPUTER
1	1	S	USE KOI-18
1	1	S	USE KYK-13

F-16	A-10	SKILLS
1	1	S USE KY58
1	1	S USE KY58 TEST FIXTURE
-	1	S USE LOAD AND SIGNAL TEST UNIT
-	1	S USE LOAD RESISTOR
-	1	S USE LOCAL MANUFACTURED TEST BOX
1	-	S USE MAGNETIC TAPE
5	2	S USE MODULATION METER
1	1	S USE MODULATORS
-	1	S USE MONITOR TEST SET
31	30	S USE MULTIMETER
1	1	S USE NORTH SEEKING GYRO TEST SETS
-	1	S USE OPERATING SOFTWARE
23	21	S USE OSCILLOSCOPE
2	2	S USE OUTPUT METER
2	2	S USE PATEC
-	1	S USE PHASE GENERATOR
-	3	S USE PHASE-ANGLE VOLTMETER
3	-	S USE POWER HEADS
3	1	S USE POWER MEASURING DEVICE
8	11	S USE POWER SUPPLY
2	1	S USE PRESSURE REGULATOR
3	3	S USE PULSE GENERATOR
-	2	S USE RATE TABLE
1	1	S USE RESISTORS
4	4	S USE RF MIXER
1	1	S USE RF VOLTMETER
1	-	S USE SAFETY EQUIPMENT
-	1	S USE SAI TESTER
-	2	S USE SAS TEST SET
-	1	S USE SCORSBY TABLE
1	1	S USE SD44
-	2	S USE SERVO-CONTROLLER
10	9	S USE SIGNAL GENERATOR
1	-	S USE SOAPY WATER TO CHECK FOR LEAKS
2	-	S USE SOFTWARE PROGRAM WORKAROUNDS
17	21	S USE SOLDERING STATION
11	14	S USE SOLDERLESS CONNECTOR KIT
1	1	S USE SPECTRUM ANALYZER
1	1	S USE ST21 TEST SET
1	-	S USE SYNCHRO BRIDGES
2	1	S USE SYNCHRO STANDARDS
1	1	S USE TEST ADAPTER TO HOOK UP POWER SUPPLY
2	2	S USE TEST SET
2	2	S USE TEST STATION 10-246 TEST ADAPTER
2	2	S USE THEODOLITES
-	1	S USE THREE-AXIS TABLE
-	6	S USE TIMER
6	-	S USE TORQUE WRENCH
-	1	S USE TRANSFORMER
-	3	S USE TTU-205 TEST SET
-	1	S USE TTU-23E SYNCHRO TEST SET
-	1	S USE TV
-	1	S USE TV CONTROL UNIT

**F-16 A-10 SKILLS**

-	1	S	USE TV MONITOR CABLE SET
1	2	S	USE UHF R/T
2	2	S	USE UPM-137 (IFF TEST SET)
-	1	S	USE VACUUM TUBE VOLTMETER
-	1	S	USE VARIAC TRANSFORMER
2	-	S	USE VOLTAGE STANDING WAVE RATIO TO RUN ANTENNA
4	4	S	USE WATTMETER
2	-	S	USE 10DB COUPLER TO RUN AMP DETECTOR
1	-	S	USE 400 Hz FREQUENCY CONVERTER
3	3	S	USE 972V-1 TACAN TEST SET

**F-16 A-10 KNOWLEDGE**

1	3	K	ANALYZE ATLAS PROGRAM/SYSTEM SOFTWARE
56	74	K	ANNOTATE FORMS
3	5	K	APPLY AC CIRCUIT THEORY OF OPERATION
-	1	K	APPLY AC GENERATOR THEORY OF OPERATION
4	3	K	APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION
3	3	K	APPLY AM RECEIVER THEORY OF OPERATION
4	4	K	APPLY ANTENNA THEORY OF OPERATION
1	1	K	APPLY BASIC ATLAS PROGRAMMING
-	1	K	APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION
3	3	K	APPLY CAPACITOR THEORY OF OPERATION
-	1	K	APPLY CLAMPER CIRCUIT THEORY OF OPERATION
1	-	K	APPLY CMOS THEORY OF OPERATION
2	2	K	APPLY CRT THEORY OF OPERATION
3	5	K	APPLY DC CIRCUIT THEORY OF OPERATION
-	1	K	APPLY DC GENERATOR THEORY OF OPERATION
27	27	K	APPLY ESD PRECAUTIONS
1	1	K	APPLY FLIP-FLOP THEORY OF OPERATION
1	1	K	APPLY FM RECEIVER THEORY OF OPERATION
2	1	K	APPLY FM TRANSMITTER THEORY OF OPERATION
-	1	K	APPLY INTEGRATED CIRCUIT THEORY OF OPERATION
1	1	K	APPLY LED THEORY OF OPERATION
1	-	K	APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATIONS
1	-	K	APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION
1	-	K	APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION
2	1	K	APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION
1	-	K	APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION
1	1	K	APPLY MAIN LOGIC GATE THEORY OF OPERATION
1	-	K	APPLY MICROPROCESSOR THEORY OF OPERATION
57	77	K	APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS
1	-	K	APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION
1	-	K	APPLY POWER SUPPLY FILTER THEORY OF OPERATION
1	-	K	APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION
5	6	K	APPLY POWER SUPPLY THEORY OF OPERATION

F-16	A-10	KNOWLEDGE
2	2	K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION
3	2	K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION
-	1	K APPLY RAMP A/D CONVERTER THEORY OF OPERATION
1	-	K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION
1	2	K APPLY RELAY THEORY OF OPERATION
6	5	K APPLY RESISTOR THEORY OF OPERATION
-	1	K APPLY RESONANT CAVITY THEORY OF OPERATION
56	74	K APPLY SHOP SAFETY PROCEDURES
1	1	K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION
1	-	K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION
1	-	K APPLY SOFTWARE INFORMATION
2	4	K APPLY SOLID STATE DIODE THEORY OF OPERATION
1	3	K APPLY SYNCHRO-SERVO THEORY OF OPERATION
57	77	K APPLY TECHNICAL DATA
2	2	K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES
1	-	K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION
1	1	K APPLY TRANSFORMER THEORY OF OPERATION
3	2	K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION
2	2	K APPLY TRANSMISSION LINE THEORY OF OPERATION
1	-	K APPLY TTL THEORY OF OPERATION
-	1	K APPLY VOLTAGE READINGS
1	-	K APPLY WAVEGUIDE THEORY OF OPERATION
1	1	K APPLY ZENER DIODE THEORY OF OPERATION
1	1	K DETERMINE CABLE REQUIREMENTS
1	-	K IDENTIFY ADAPTERS
1	-	K INTERPRET BIT ASSIGNMENTS FOR ELECTRONIC COMPONENT
1	-	K INTERPRET RESISTOR COLOR CODES
1	-	K INTREPRET HEADINGS, VELOCITY, AND TOLERANCE CONDITIONS
2	3	K ISOLATE FAULTY AC CIRCUITS
-	1	K ISOLATE FAULTY AC GENERATORS
3	3	K ISOLATE FAULTY AM RECEIVERS
4	3	K ISOLATE FAULTY AM TRANSMITTERS
3	3	K ISOLATE FAULTY ANTENNAS
-	1	K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS
3	3	K ISOLATE FAULTY CAPACITORS
-	1	K ISOLATE FAULTY CLAMPER CIRCUITS
2	2	K ISOLATE FAULTY COMPUTER MEMORIES
2	2	K ISOLATE FAULTY CRTs
2	3	K ISOLATE FAULTY DC CIRCUITS
-	1	K ISOLATE FAULTY DC GENERATORS
-	1	K ISOLATE FAULTY FLIP-FLOPS
2	1	K ISOLATE FAULTY FM MODULATION TRANSMITTERS
1	1	K ISOLATE FAULTY FM RECEIVERS
-	1	K ISOLATE FAULTY INTEGRATED CIRCUITS
1	1	K ISOLATE FAULTY LEDs
1	1	K ISOLATE FAULTY LOGIC COUNTERS
-	1	K ISOLATE FAULTY MAIN LOGIC GATES
1	-	K ISOLATE FAULTY MICROPROCESSORS

F-16    A-10    KNOWLEDGE

1	-	K	ISOLATE FAULTY PHOTSENSITIVE DEVICES
5	6	K	ISOLATE FAULTY POWER SUPPLIES
1	-	K	ISOLATE FAULTY POWER SUPPLY FILTERS
1	-	K	ISOLATE FAULTY POWER SUPPLY RECTIFIERS
2	2	K	ISOLATE FAULTY PULSE MODULATION RECEIVERS
3	2	K	ISOLATE FAULTY PULSE MODULATION TRANSMITTERS
-	1	K	ISOLATE FAULTY RAMP A/D CONVERTERS
-	1	K	ISOLATE FAULTY RCL CIRCUITS
2	2	K	ISOLATE FAULTY RELAYS
4	4	K	ISOLATE FAULTY RESISTORS
-	1	K	ISOLATE FAULTY RESONANT CAVITIES
1	1	K	ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS
-	1	K	ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS
2	4	K	ISOLATE FAULTY SOLID STATE DIODES
-	3	K	ISOLATE FAULTY SYNCHROS-SERVOS
-	1	K	ISOLATE FAULTY TRANSFORMERS
2	2	K	ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS
2	2	K	ISOLATE FAULTY TRANSMISSION LINES
-	1	K	ISOLATE FAULTY WAVEGUIDES
1	1	K	ISOLATE FAULTY ZENER DIODES
-	1	K	PERFORM BASIC AC CIRCUIT CALCULATIONS
-	1	K	PERFORM BASIC DC CIRCUIT CALCULATIONS
1	-	K	PERFORM BASIC MATH OPERATIONS
2	2	K	PERFORM BINARY CONVERSIONS
1	1	K	PERFORM HEXADECIMAL CONVERSIONS
1	1	K	PERFORM OCTAL CONVERSIONS
9	12	K	TRACE SIGNALS THROUGH INTERCONNECTS
1	-	K	TROUBLESHOOT AC CIRCUITS
1	-	K	TROUBLESHOOT DC CIRCUITS
1	-	K	TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS
1	-	K	TROUBLESHOOT POWER SUPPLY CIRCUITS
1	-	K	TROUBLESHOOT POWER SUPPLY FILTERS
1	-	K	TROUBLESHOOT POWER SUPPLY RECTIFIERS
1	-	K	USE COMPUTER PROGRAMMING LANGUAGE
11	13	K	UTILIZE SCHEMATIC DIAGRAMS
1	-	K	VERIFY AC/DC MEASUREMENTS
2	-	K	VERIFY OFP
1	-	K	VERIFY PROGRAM
1	-	K	VERIFY STATION MEASUREMENT POINT LOCATIONS

**APPENDIX B  
COMMON SKILL AND KNOWLEDGE REQUIREMENTS**

All of the following skill and knowledge requirements are grouped into one of the four major areas and meet the established cutoff for commonality of 10 percent. The actual number of times the requirement was listed is the total of both F-16 and A-10 aircraft. These numbers correspond with the totals in Appendix A.

<b>SKILLS APPLICABLE TO ALL TASKS</b>	<b># OF TIMES</b>
S USE COMMON HANDTOOLS	111
S PERFORM VISUAL INSPECTIONS	99
S USE MULTIMETER	60
S USE OSCILLOSCOPE	44
S OPERATE TEST STATION	34
<b>SKILLS FOR OPERATIONAL CHECK</b>	<b># OF TIMES</b>
S LOAD PROGRAM	9
S INSTALL DISK	6
<b>SKILLS FOR ISOLATING MALFUNCTIONS</b>	<b># OF TIMES</b>
S USE FREQUENCY COUNTER	22
S USE POWER SUPPLY	19
S USE SIGNAL GENERATOR	19
S USE AUDIO OSCILLATOR	16
S USE ATTENUATORS	10
S USE DISTORTION ANALYZER	10
S USE ARM-173 TEST ADAPTER	8
S USE RF MIXER	8
S USE WATTMETER	8
S USE MODULATION METER	7
S USE AN/ARM-135(A) TEST SET	6
S USE COMPRESSED GAS BOTTLE	6
S USE MODE 4 COMPUTERS	6
S USE PULSE GENERATOR	6
S USE TIMER	6
S USE 972V-1 TACAN TEST SET	6
S USE ARM-173 TEST SET	5
S USE BREAKOUT BOX	5
S USE DECADE RESISTOR	5
S USE ELECTRONIC COUNTER	5
S USE FREQUENCY OSCILLATOR	5

SKILLS FOR REPAIR	# OF TIMES
S USE SOLDERING STATION	38
S USE SOLDERLESS CONNECTOR KIT	35
S REMOVE AND REPLACE SRUs	19
S SOLDER OR DESOLDER TERMINAL CONNECTIONS	11
S REMOVE AND REPLACE COMPONENTS	9
S PERFORM ALIGNMENTS	8
S REPAIR WIRING	8
S ASSEMBLE SOLDERLESS MULTIPIN CONNECTORS	7
S ASSEMBLE SOLDERLESS COAXIAL CONNECTORS	6
S SOLDER OR DESOLDER MULTIPIN CONNECTORS	6
S USE EXTRACTOR TOOLS	6
S USE TORQUE WRENCH	6
S SOLDER OR DESOLDER COAXIAL CONNECTORS	5

KNOWLEDGE APPLICABLE TO ALL TASKS	# OF TIMES
K APPLY OPSEC, COMSEC, AND PHYSICAL SECURITY PRECAUTIONS	134
K APPLY TECHNICAL DATA	134
K APPLY SHOP SAFETY PROCEDURES	130
K ANNOTATE FORMS	130
K APPLY ESD PRECAUTIONS	54

KNOWLEDGE FOR ISOLATING MALFUNCTIONS	# OF TIMES
K UTILIZE SCHEMATIC DIAGRAMS	24
K TRACE SIGNALS THROUGH INTERCONNECTS	21
K APPLY POWER SUPPLY THEORY OF OPERATION	11
K APPLY RESISTOR THEORY OF OPERATION	11
K ISOLATE FAULTY POWER SUPPLIES	11
K APPLY AC CIRCUIT THEORY OF OPERATION	8
K APPLY ANTENNA THEORY OF OPERATION	8
K APPLY DC CIRCUIT THEORY OF OPERATION	8
K ISOLATE FAULTY RESISTORS	8
K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION	7
K ISOLATE FAULTY AM TRANSMITTERS	7
K APPLY AM RECEIVER THEORY OF OPERATION	6
K APPLY CAPACITOR THEORY OF OPERATION	6
K APPLY SOLID STATE DIODE THEORY OF OPERATION	6
K ISOLATE FAULTY AM RECEIVERS	6
K ISOLATE FAULTY ANTENNAS	6
K ISOLATE FAULTY CAPACITORS	6
K ISOLATE FAULTY SOLID STATE DIODES	6
K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION	5
K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION	5
K ISOLATE FAULTY AC CIRCUITS	5
K ISOLATE FAULTY DC CIRCUITS	5
K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS	5

## APPENDIX C SPECIFIC TRAINING RECOMMENDATIONS

Many of the recommended changes are proficiency code changes. There are three major reasons these codes were changed. The first reason deals with current guidance provided in AFR 8-13, Air Force Specialty Training Standards and Air Force Job Qualification Standards. AFR 8-13 states that a CDC requirement can exist only when there is an upgrade requirement (e.g., from "A" to "B" or a "2b" to "B") or a need to review material to support an upgrade requirement. As a result, many CDC requirements were changed or eliminated entirely. Several STS elements were also changed to align with recommended entries outlined in the same regulation. All changes made as a result of guidance in AFR 8-13 are marked by a single asterisk (\*).

The second major reason for proficiency code changes results from the need to reflect STS elements that do not depend on psychomotor skills as subject knowledge. This means that numerous items previously coded as tasks (2b) or task knowledge (b) have been changed to subject knowledge (B). Also, elements that fall into this category, but were previously dashed (-), have been coded as subject knowledge. Many of these items may have performance skills inherent in their accomplishment, but the final result is concerned strictly with cognitive application. The completed analysis supports coding these items as subject knowledge. Such changes in the specific recommendations are identified with double asterisks (\*\*).

The last major reason the proficiency codes were changed is the need to code representative systems. Proficiency codes may have been added or deleted to allow the recommended representative equipment, station, or LRU to be identified. These changes are marked with triple asterisks (\*\*\*). This code is also used to show the inclusion of "theory of operation" in the CDC.

Additional changes to the STS are recommended for standardization. These include rewording elements and reformatting paragraphs to make them standard throughout the STS. These changes are identified with triple dollar signs (\$\$\$).

All remaining changes are identified using triple plus signs (+++). The specific reasons for each of these changes are explained in the Summary of Proposed Changes which follows the specific training recommendations.

The format for the specific recommendations is based on the current STS, but only the recommended changes are included. Because recommendations have been made for the 3-skill-level course and a 5-skill-level CDC only, the other columns usually seen in an STS have been deleted. A column has been added to cross-reference STS elements with TRA tasks. For ease of understanding, only the coded STS elements have been referenced to specific TRA task(s). Several TRA TASK references are too lengthy to include in the body of the changes and are provided as notes following the STS.

These recommendations were developed with assistance from the 3450th Technical Training Squadron.

Proposed STS

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
3.	AIR FORCE OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM (45XXX Common)	ALL		
+++ a.	Hazards of AFSC 451X5		A	B
+++ b.	AFOSH Standards for AFSC 451X5		A	B
+++ d.	Apply Safety Precautions when Working With or Around:			
*** (4)	Cleaning Agents		2b	-
*** (6)	Cathode-ray Tube (CRT)		2b	-
+++ (9)	Hazardous Liquids		b	-
*** (10)	High Intensity Sound		2b	-
** f.	Report Suspected RF Overexposure		B	-
4.	TECHNICAL PUBLICATIONS (45XXX Common)			
* a.	Function and Application	ALL	A	B
* b.	Technical Order (TO) Indexes	ALL	A	B
c.	Use TOs to Perform:	ALL		
** (1)	Maintenance		B	-
** (2)	Inspections		B	-
+++ d.	Report TO Deficiencies		-	-
5.	AIR FORCE SUPPLY DISCIPLINE (45XXX Common)			
* a.	Property Responsibility	ALL	A	B
** c.	Use Condition Tags	NOTE 1	A	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
5.	AIR FORCE SUPPLY DISCIPLINE (continued)			
** d.	Use Issue/Turn-in Requests	NOTE 2	A	-
+++ e.	Use Microfiche		-	-
8.	MAINTENANCE MANAGEMENT (451X5 Common)			
* f.	Core Automated Maintenance System (CAMS)	ALL	A	B
* 9.	MAINTENANCE AND INSPECTION (45XXX Common)			
* a.	Maintenance Systems	NONE	A	B
* b.	Inspection Systems	NONE	A	B
** c.	Use Maintenance Data Collection Forms	ALL	A	B
+++ e.	Complete Deficiency Reports		-	-
** f.	Use CAMS	ALL	A	B
10.	GENERAL MAINTENANCE PRACTICES			
+++ a.	Use Common Handtools	NOTE 2	2b	-
*** f.	Follow CTK Procedures	NOTE 2	B	-
+++ r.	Trace Signals through Interconnects	NOTE 3	B	-
+++ s.	Utilize Schematic Diagrams	NOTE 4	B	-
+++ t.	Use Electronic Counter	NOTE 5	2b	-
+++ u.	Use Frequency Oscillator	NOTE 6	2b	-
+++ v.	Use Extractor Tools	NOTE 7	2b	-
+++ w.	Use Pulse Generator	NOTE 8	2b	-
+++ x.	Use Timer	NOTE 9	2b	-
+++ y.	Use Modulation Meter	NOTE 10	2b	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
10. GENERAL MAINTENANCE PRACTICES (continued)				
+++ z.	Use RF Mixer	NOTE 11	2b	-
+++ aa.	Use Wattmeter	NOTE 12	2b	-
+++ ab.	Use Attenuators	NOTE 13	2b	-
+++ ac.	Use Distortion Analyzer	NOTE 14	2b	-
+++ ad.	Use Audio Oscillator	NOTE 15	2b	-
+++ ae.	Use Power Supply	NOTE 16	2b	-
+++ af.	Perform Visual Inspections	NOTE 17	2b	-
+++ ag.	Use Compressed Air Bottles	NOTE 18	2b	-
+++ ah.	Use PATEC	NOTE 19	2b	-
* 12. AIRCRAFT SYSTEM THEORY				
a. Radar Systems				
	(1) AN/APG-66		A	B
	(2) AN/APG-68		A	B
b. Navigation Systems				
	(1) F-16			
	(a) Inertial Navigation		A	B
	(b) Tactical Air Navigation		A	B
	(c) Global Positioning		A	B
	(2) A-10			
	(a) Inertial Navigation		A	B
	(b) Tactical Air Navigation		A	B
	(c) Heading Attitude Reference System		A	B
	(d) Instrument Landing System		A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC		
12. AIRCRAFT SYSTEM THEORY (continued)						
c. Flight Control Systems						
(1) F-16						
(a) Analog					A	B
(b) Digital					A	B
(2) A-10						
(a) Stability Augmentation					A	B
(b) Low Altitude Safety Targeting Enhancement					A	B
d. Weapons Delivery Systems						
(1) Stores Management System					A	B
(2) Fire Control					A	B
(3) Displays						
(a) F-16					A	B
(b) A-10					A	B
e. Communication Systems						
(1) UHF					A	B
(2) VHF					A	B
(3) IFF					A	B
f. Instrument Systems						
(1) A-10 Fuel Quantity					A	B
(2) A-10 Stall Warning					A	B
g. Air Data Systems						
(1) F-16					A	B
(2) A-10					A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
12. AIRCRAFT SYSTEM THEORY (continued)				
	h. Electronic Countermeasures			
	(1) ALR-69		A	B
	(2) ALR-56M		A	B
	i. Engine Monitoring System			
	(1) F-16			
	(a) General Electric		A	B
	(b) Pratt and Whitney		A	B
	(2) A-10 Turbine Engine Monitoring Equipment		A	B
	j. Data Transfer Equipment		A	B
* 13. ABBREVIATED TEST LANGUAGE FOR ALL SYSTEMS (ATLAS)		NOTE 20		
	a. Statement Syntax		A	B
	b. Non-Test Statements			
	(1) Data Declaration		A	B
	(2) Calculate/Compare		A	B
	(3) Decision/Branching		A	B
	(4) Input/Output/Delay		A	B
	c. Test Statements			
	(1) Analog Stimulus		A	B
	(2) Analog Measurement		A	B
	(3) Digital Test		A	B
	(4) Protocols		A	B
	e. Program Structure		A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
***14.	F-16 COMMON TEST STATION COMPONENTS	50020		
	a. Theory of Operation			
	* (1) Computer Subsystem and Peripherals CFE C0649			
	(a) Computer		A	B
	(b) Disc Drive		A	B
	(c) I/O Extender		A	B
	(d) Disc Controller		A	B
	(f) Station Control Panel		A	B
	(g) Station Printer		A	B
	(h) Tandberg Digital Cartridge Recorder		A	B
	* (2) Test Station			
	(a) Power/Cooling		A	B
	* (3) SUMSS			
	(a) Power		A	B
	(b) Cooling		A	B
	(c) Switching		A	B
	(d) Station Standards		A	B
	(e) Analog Stimulus		A	B
	(f) Analog Interface Unit (AIU)		A	B
	(g) Measurement Sub-system (MSS)		A	B
	(h) Synchro/Resolver		A	B
	(i) Digital Interface Unit (DIU)		A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
14. F-16 COMMON TEST STATION COMPONENTS (continued)				
	* b. Troubleshoot			
	\$\$\$ (1) Computer Subsystem and Peripherals		-	-
	(2) Test Station			
	(a) Power/Cooling		-	-
	(b) Air Bearings		-	-
	(3) SUMSS		-	-
	(4) LRU Power Supplies		-	-
	* c. Repair			
	\$\$\$ (1) Computer Subsystem and Peripherals		-	-
	(2) Test Station			
	(a) Power/Cooling		-	-
	(b) Air Bearings		-	-
	(3) SUMSS		-	-
	(4) LRU Power Supplies		-	-
	d. Test Station/ITA/LRU Interface		A	B
15. COMMON TEST STATION PROCEDURES		50010 50020 50030		
	\$\$\$ b. Perform Manual Alignment/Adjustment		2b	-
	* e. Test Station/ITA/LRU Interface		A	B
16. AIS PECULIAR SOFTWARE SYSTEM		50040		
	a. Theory of System Software Functions			
	* (1) On-Line Compiler		A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
16. AIS PECULIAR SOFTWARE SYSTEM (continued)				
	* (2) Test Executive		A	B
	* (5) File Manager		A	B
	(7) Application Software			
	* (a) LRU Programs		A	B
	* (b) Self-Test Programs		A	B
	c. Perform Troubleshooting Procedures Using			
	** (1) Application Software		B	-
	** (2) Test Executive Modes		B	-
***17. DISPLAYS/INDICATORS (D/I) TEST STATION \$\$\$				
	a. Peculiar Subsystems			
	(1) Theory of Operation		-	-
	(2) Perform Periodic Inspections		-	-
	* (3) Troubleshoot		-	-
	* (4) Repair		-	-
	b. Peculiar ATLAS Statements		-	-
	* c. F-16 D/I LRU Maintenance			
	(1) Head-Up Display Pilot's Display Unit (HUD PDU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
17.	DISPLAYS/INDICATORS (D/I) TEST STATION (continued)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
(2)	Head-Up Display Electronics Unit (HUD EU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
(3)	Radar Electro Optical Indicator Unit (REO IU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
17. DISPLAYS/INDICATORS (D/I) TEST STATION (continued)				
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(4) Radar Electro Optical Electronic Unit (REO EU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(5) Attitude Director Indicator (ADI)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(6) Horizontal Situation Indicator			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
17.	DISPLAYS/INDICATORS (D/I) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(7) Azimuth Indicator (ALR-69)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(8) Programmable Display Generator (PDG)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(9) Multifunction Display (MFD)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
17.	DISPLAYS/INDICATORS (D/I) TEST STATION (continued)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(10) Wide Angle Conventional Head-Up Display Unit (WAC HUD)			
	(b) Test			
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(11) WAC Display Electronic Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
17.	DISPLAYS/INDICATORS (D/I) TEST STATION (continued)			
	(12) Diffractive Optics Electronics Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(13) Diffractive Optics Head-Up Display Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
\$\$\$18.	COMPUTER/INERTIAL (C/I) TEST STATION			
***	a. Peculiar Subsystems			
	* (1) Theory of Operation	50020	A	B
	(2) Perform Periodic Inspections		-	-
	* (3) Troubleshoot	50020	B	-
	* (4) Repair	50030	2b	-
	* b. Peculiar ATLAS Statements	50020	A	B

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
18.	COMPUTER/INERTIAL (C/I) TEST STATION (continued)			
	* c. C/I LRU Maintenance			
	(1) Singer Inertial Navigation Unit (INU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(2) Fire Control Navigation Panel (FCNP)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(3) Expanded Fire Control Computer (XFCC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
18.	COMPUTER/INERTIAL (C/I) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(4) Data Transfer Unit (DTU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(5) Data Transfer Cartridge (DTC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(6) Flight Control Panel (FLCP)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	18. COMPUTER/INERTIAL (C/I) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(7) Rate Gyro Assembly (RGA)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(8) Accelerometer Assembly			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
18.	COMPUTER/INERTIAL (C/I) TEST STATION (continued)			
	(9) Flight Control Computer (FLCC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(10) Electronic Component Assembly (ECA)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(11) Data Entry Electronics Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
18. COMPUTER/INERTIAL (C/I) TEST STATION (continued)				
	(12) Data Entry Display			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(13) Enhanced Fire Control Computer			
	(a) Theory of Operation	50080	A	B
	(c) Troubleshoot	50080		
	1. ITA		B	-
	2. LRU		B	-
	(d) Repair	50090		
	1. ITA		2b	-
	2. LRU		2b	-
	(14) Litton Inertial Navigation Unit (INU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
18.	COMPUTER/INERTIAL (C/I) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(15) Digital Flight Control Computer			
	(a) Theory of Operation	50080	A	B
	(b) Test	50070		
	1. ITA		2b	-
	2. LRU		2b	-
	(c) Troubleshoot	50080		
	1. ITA		B	-
	2. LRU		B	-
	(d) Repair	50090		
	1. ITA		2b	-
	2. LRU		2b	-
	(16) General Avionics Computer (GAC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
\$\$\$19. ***	PROCESSOR/PNEUMATICS (P/P) TEST STATION			
	a. Peculiar Subsystems			
	* (1) Theory of Operation	50020	A	B
	(2) Perform Periodic Inspections		-	-
	(3) Troubleshoot	50020	B	-
	(4) Repair	50030	2b	-
	* b. Peculiar ATLAS Statements	50020	A	B
	* c. F-16 P/P LRU Maintenance			
	(1) Radar Digital Signal Processor (AN/APG-66)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(2) Expanded Radar Computer (AN/APG-66)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(3) Stores Control Panel			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(4) Missile Remote Interface Unit (MRIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(5) Expanded Central Interface Unit (XCIU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(6) Jettison/Release Remote Interface Unit (J/R RIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(7) Conventional Remote Interface Unit (CRIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(8) Special Weapons Remote Interface Unit (SWRIU)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
(9)	Ruggedized Expanded Remote Interface Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
(10)	Pneumatic Sensor Assembly (Rosemount)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
(11)	Pneumatic Sensor Assembly (Airesearch)			

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	19. PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(12) Central Air Data Computer			
	(a) Theory of Operation	50140	A	B
	(c) Troubleshoot	50140		
	1. ITA		B	-
	2. LRU		B	-
	(d) Repair	50150		
	1. ITA		2b	-
	2. LRU		2b	-
	(13) Transmission Line Coupler (TLC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19. PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)				
(14) Signal Processor (AN/ALR-69)				
(b) Test				
1. ITA				
2. LRU				
(c) Troubleshoot				
1. ITA				
2. LRU				
(d) Repair				
1. ITA				
2. LRU				
(15) Advanced Central Interface Unit (ACIU)				
(b) Test				
1. ITA				
2. LRU				
(c) Troubleshoot				
1. ITA				
2. LRU				
(d) Repair				
1. ITA				
2. LRU				

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(16) Enhanced Central Interface Unit (ECIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(17) Advanced Missile Remote Interface Unit (AMRIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(18) Enhanced Missile Remote Interface Unit (AMRIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(19) Advanced Conventional Remote Interface Unit (ACRIU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(20) Programmable Signal Processor (AN/APG-68)			
	(a) Theory of Operation	50140	A	B
	(b) Test	50130		
	1. ITA		2b	-
	2. LRU		2b	-
	(c) Troubleshoot	50140		
	1. ITA		B	-
	2. LRU		B	-
	(d) Repair	50150		
	1. ITA		2b	-
	2. LRU		2b	-
	(21) Advanced Programmable Signal Processor			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
19.	PROCESSOR/PNEUMATICS (P/P) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
\$\$\$20.	RADIO FREQUENCY (RF) TEST STATION			
***				
	a. Peculiar Subsystems			
	(1) Theory of Operation		-	-
	(2) Perform Periodic Inspections		-	-
	(3) Troubleshoot		-	-
	(4) Repair		-	-
	b. Peculiar ATLAS Statements		-	-
*	c. F-16 RF LRU Maintenance			
	(1) Radar Transmitter (AN/APG-66)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	20. RADIO FREQUENCY (RF) TEST STATION (continued)			
	(2) Radar Low Power RF (LPRF) (AN/APG-66)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(3) Radar Antenna (AN/APG-66)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(4) Identification Friend or Foe (IFF) R/T (AN/APX-101)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	20. RADIO FREQUENCY (RF) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(5) E-J Amplifier Detector (AM-6639/ALR-46)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(6) C-D Amplifier Detector (AM-6971/ALR-69)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(7) FSRS Receiver/Controller (ALR-69)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-



STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
20.	RADIO FREQUENCY (RF) TEST STATION (continued)			
	(10) Radar Modular Low Power RF (MLPRF) (AN/APG-68)			
	(b) Test			
	1. ITA		-	-
	2. LRU		-	-
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(11) Radar Antenna (AN/APG-68)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(12) Advanced Identification Friend or Foe (AIFF) R/T			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
20.	RADIO FREQUENCY (RF) TEST STATION (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
*	21. F-16 PECULIAR SUPPORT EQUIPMENT			
	c. Troubleshoot			
	(1) Memory Loader Verfier		-	-
	(2) ASM 660 Memory Loader Verfier		-	-
	(3) EPROM Programmer/Verfier		-	-
	(4) EPROM Programmer/Verfier ITA		-	-
	(5) PROM Programmer		-	-
	(6) Punch Tape Reader		-	-
	(7) Time Signal Set		-	-
	d. Repair			
	(1) Memory Loader Verfier		-	-
	(2) ASM 660 Memory Loader Verfier		-	-
	(3) EPROM Programmer/Verfier		-	-
	(4) EPROM Programmer/Verfier ITA		-	-
	(5) PROM Programmer		-	-
	(6) Punch Tape Reader		-	-
	(7) Time Signal Set		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
***22.	F-16 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE			
	a. Tactical Air Navigation (TACAN) System (AN/ARN-118)			
	(1) TACAN Test Set (AN/ARM-135, 135A)			
	(a) Operate		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) TACAN Test Set (972V-1)			
	(a) Operate		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) Control Box			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) R/T (RT-1159)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(5) Adapter (MX-9577/A)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
22.	F-16 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(6) Mounting Base			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	b. Mode 4 System (K1-1A)			
	(1) Mode 4 Computer Test Set		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Transponder Computer (KIT)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Interrogator Computer (KIR)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	c. UHF System (AN/ARC164(C))			
	(1) Radio Test Set		-	-
	(a) Operate		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) UHF R/T			
	(b) Test		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
22.	F-16 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Radio Set Control			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Channel-Frequency Indicator			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	d. VHF System (AN/ARC186(V))			
	(1) Radio Test Set		-	-
	(a) Operate		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) R/T			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Radio Set Control			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
22.	F-16 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	i. Secure Voice Communication System			
	(1) Secure Voice Test Set		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) R/T (KY-58/28)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Adapter Unit (KY-58)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Control Panel (KY-58/28)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	f. HF Radio System (AN/ARC-200)			
	(1) HF Radio Test Set		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) R/T (RT-1449)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
22.	F-16 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	* (d) Repair		-	-
	(3) Antenna Coupler (CU-2312)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) RF Interface (RU-461)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(5) Control Panel (CP-200)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
23.	IATS PECULIAR SOFTWARE SYSTEM (A-10)	50230 50250		
	a. Software Theory			
	* (1) MATE Operating System (MOS)		A	B
	* (2) MATE On-Line Editor (MOLE)		A	B
	* (4) MATE Test Executive (MTE)		A	B
\$\$\$24.	A-10 INERTIAL NAVIGATION SYSTEM (INS)			
***	Intermediate Automatic Test System (IATS)			
	* a. Theory of Operation	50240	A	B
	b. Perform Required Inspections		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	24. A-10 INERTIAL NAVIGATION SYSTEM (continued)			
** e.	Troubleshoot	50240	B	-
f.	Repair	50250	2b	-
* g.	Test Station/ITA/LRU Interface	50240	B	-
* h.	IATS LRU Maintenance			
	(1) Central Air Data Computer (CADC)			
	(a) Theory of Operation	50290	A	B
	(c) Troubleshoot			
	1. ITA		-	-
	** 2. LRU	50290	B	-
	(d) Repair			
	1. ITA		-	-
	2. LRU	50300	2b	-
	(2) Control Display Unit (CDU)			
	(a) Theory of Operation	50290	A	B
	(c) Troubleshoot			
	1. ITA		-	-
	** 2. LRU	50290	B	-
	(d) Repair			
	1. ITA		-	-
	2. LRU	50300	2b	-
	(3) Master Bus Controller (MBC)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	24. A-10 INERTIAL NAVIGATION SYSTEM (continued)			
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(4) Inertial Navigation Unit (INU)			
	(a) Theory of Operation	50290 50320	A	B
	(b) Test			
	1. ITA	50260	2b	-
	2. LRU	50280 50310	2b	-
	(c) Troubleshoot			
	1. ITA		-	-
	** 2. LRU	50290 50320	B	-
	(d) Repair			
	1. ITA		-	-
	2. LRU	50300 50330	2b	-
	(5) HUD Computer Symbol Generator			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
24. A-10 INERTIAL NAVIGATION SYSTEM (continued)				
	(6) HUD Control Unit (CU)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(7) Turbine Engine Monitoring System (TEMS) Electronic Processor Unit			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-
	(8) TEMS Data Collection Unit (MM-718)			
	(c) Troubleshoot			
	1. ITA		-	-
	2. LRU		-	-
	(d) Repair			
	1. ITA		-	-
	2. LRU		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	<p>24. A-10 INERTIAL NAVIGATION SYSTEM (continued)</p> <p>(9) TEMS Diagnostic Display Unit (DDU)</p> <p>(c) Troubleshoot</p> <p>1. ITA</p> <p>2. LRU</p> <p>(d) Repair</p> <p>1. ITA</p> <p>2. LRU</p> <p>(10) TEMS Umbilical Display Unit (UDU)</p> <p>(c) Troubleshoot</p> <p>1. ITA</p> <p>2. LRU</p> <p>(d) Repair</p> <p>1. ITA</p> <p>2. LRU</p>		<p>-</p>	<p>-</p>
	<p>***25. A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE</p> <p>a. Weapons Control System</p> <p>(1) HUD System LRU Test Set</p> <p>(a) Operate</p> <p>* (b) Troubleshoot</p> <p>* (c) Repair</p> <p>(2) HUD Boresight Fixture</p> <p>(a) Operate</p> <p>(b) Align</p>		<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>	<p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(3) TV Monitor Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(4) Weapons Control Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(5) Projection Unit			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(6) Television Monitor (Hartman)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(7) Television Monitor (Cardion)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(8) TV Control Unit (Hartman)	50530		
	(a) Theory of Operation		A	B
	(b) Test		2b	-
	* (c) Troubleshoot		B	-
	* (d) Repair		2b	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(9) TV Control Unit (Cardion)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	b. Identification Friend or Foe (IFF) System			
	(2) IFF Interface Test set			
	(a) Operate		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) R/T (RT-1063 B/C)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Control Panel			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	c. Mode 4 System (K1-1A)			
	(1) Mode 4 Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(2) Transponder Computer (KIT)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Interrogator Computer (KIR)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	d. UHF System			
	(1) Radio Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Direction Finder Group Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) UHF R/T			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Channel Frequency Indicator			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(5) Direction Finder Antenna			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	e. VHF System			
	(1) Radio Test Set		-	-
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Antenna Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) R/T (RT-1063 B/C)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Radio Set Control			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(5) FM Antenna			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(6) FM Signal Data Comparator			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	f. Secure Voice Communication System			
	(1) Secure Voice Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) R/T			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Adapter Kit			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Control Panel			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	g. Emergency Equipment			
	(1) Emergency Radio Test Set			
	* (b) Troubleshoot		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	25. A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	* (c) Repair		-	-
	(2) Personal Radio			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Survival Beacon			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	h. Tactical Air Navigation (TACAN) System			
	(1) TACAN Test Set (AN/ARM-135, 135A)			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) TACAN Test Set (972V-1)			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) Control Box			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) R/T			
	(b) Test		-	-
	* (c) Troubleshoot		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	* (d) Repair		-	-
	(5) Adapter			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(6) Mountion Base			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	i. Instrument Landing System			
	(2) Interface Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) Receiver			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) Control Panel			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	j. Stability Augmentation System			
	(1) SAS Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Rate Table			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) SAS Computer			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) SAS Control Panel			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	k. Low Altitude Safety and Targeting Enhancement (LASTE) System			
	(1) LASTE Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) LASTE SAS Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(3) LASTE Computer			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(4) LASTE SAS Computer			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(5) LASTE Control Boxuter (KIR)			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
1.	Fuel Quantity Indication System			
	(1) Fuel Quantity Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Fuel Quantity Intermediate Device			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(3) Fuel Quantity Indicator			
	(b) Test		-	-
	* (c) Troubleshoot		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	* (d) Repair		-	-
	m. Air Data and Instrument Systems			
	(2) Altitude Encoder Test set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) HSI Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(4) Universal Attitude Indicator Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(5) Alpha-Mach Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(6) Standby Attitude Indicator Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(7) Altimeter			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(8) Vertival Velocity indicator			
	(b) Test		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(9) Airspeed Indicator			
	(b) Test		-	-
	(10) Triple Airspeed Switch			
	(b) Test		-	-
	(11) Standby Attitude Indicator			
	(b) Test		-	-
	(12) Alpha-Mach Computer			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(13) Attitude Director Indicator			
	(b) Test		-	-
	(14) Horizontal Situation Indicator			
	(b) Test		-	-
	n. Heading Attitude Reference System (HARS)			
	(1) HARS Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Scorsby Test Stand			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
	25. A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(4) Displacement Gyro			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(5) Electronic Control Amplifier			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	(6) Compass System Controller			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-
	o. Flight Director System			
	(1) Flight Director Computer Test Set			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(b) Test		-	-
	(2) Flight Director Computer			
	(b) Test		-	-
	* (c) Troubleshoot		-	-
	* (d) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	p. A-10 General Avionics Components			
	(1) Navigation Mode Select Panel			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(2) Navigation Mode Select Relay Panel			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(3) Avionics Relay Box			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(4) Antenna Select Control Panel Assembly			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(5) "G" Meter			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(6) Intercommunication Panel			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(7) Time Signal Set Select Panel			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
25.	A-10 MANUAL SUPPORT EQUIPMENT/LRU MAINTENANCE (continued)			
	(8) Magnetic Azimuth Detector			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-
	(9) Tensiometer			
	* (b) Troubleshoot		-	-
	* (c) Repair		-	-

ELECTRONIC FUNDAMENTALS/APPLICATIONS (EFA)

TRA TASK and 5-LVL CDC columns are not coded. The EFA/TRA TASK correlation is too lengthy to be included in the body of the STS and has been provided in Appendix D. There are no 5-skill-level CDC requirements

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
1.	BASIC TERMS			
+++ a.	Metric notation		-	-
+++ b.	DC terms		-	-
+++ c.	AC terms		-	-
2.	BASIC CIRCUITS			
+++ b.	Troubleshoot circuits		-	-
3.	BASIC CIRCUIT CALCULATIONS			
+++ a.	DC		-	-
+++ b.	AC		-	-
4.	RESISTORS			
+++ c.	Color code		-	-
5.	RELAYS/SOLENOIDS			
* a.	Relay theory of operation		B	-
+++ c.	Solenoid theory of operation		-	-
6.	INDUCTORS			
+++ a.	Theory of operation		-	-
7.	CAPACITORS			
+++ b.	Isolate faulty capacitors		2b	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
9.	THREE PHASE TRANSFORMERS			
+++ a.	Theory of operation		-	-
11.	AC MOTORS			
+++ a.	Theory of operation		-	-
15.	SYNCHROS/SERVOS			
* a.	Theory of operation		B	-
17.	TRANSDUCERS			
+++ a.	Theory of operation		-	-
19.	SOLID STATE DIODES			
* a.	Theory of operation		B	-
20.	BIPOLAR JUNCTION TRANSISTORS			
+++ a.	Theory of operation		-	-
21.	INTEGRATED CIRCUITS			
+++ a.	Familiarization		-	-
+++ b.	Isolate faulty integrated circuits		-	-
22.	SOLID STATE SPECIAL PURPOSE DEVICES			
+++ a.	Theory of operation		-	-
+++ b.	Isolate faulty special purpose devices		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
24.	CATHODE-RAY TUBES (CRTs)			
+++ b.	Isolate faulty CRTs		2b	-
27.	USE TEST EQUIPMENT			
e.	Spectrum analyzer		2b	-
f.	Field strength tester		-	-
+++ n.	Logic pulser		-	-
+++ p.	Signature analyzer		-	-
+++ q.	Reflectometer		-	-
* 28.	TRANSISTOR AMPLIFIER CIRCUITS			
a.	Theory of operation			
+++ (2)	Stabilization circuits		-	-
+++ (3)	Coupling circuits		-	-
30.	OPERATIONAL AMPLIFIERS			
+++ a.	Theory of operation		-	-
33.	POWER SUPPLY CIRCUITS			
a.	Theory of operation			
* (1)	Rectifiers (half-wave, full-wave, full-wave bridge)		B	-
* (2)	Filters (Capacitive, Inductive, L-section, Pi-section)		B	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
34.	Voltage Regulators			
+++ a.	Theory of operation		-	-
+++ b.	Isolate faulty voltage regulators		-	-
35.	RESISTIVE/CAPACITIVE/INDUCTIVE (RCL) CIRCUITS			
+++ b.	Resonant operation		-	-
36.	FREQUENCY SENSITIVE FILTERS			
+++ a.	Theory of operation		-	-
+++ b.	Isolate faulty frequency sensitive filters		-	-
37.	WAVE GENERATING CIRCUITS			
a.	Theory of operation			
+++ (1)	Oscillators (LC, RC, Crystal)		-	-
+++ (2)	Multivibrators (Astable, Bistable, Monostable)		-	-
+++ (3)	Waveshaping Circuits (Schmitt Trigger, Sawtooth, RC Integ/Diff)		-	-
+++ b.	Isolate faulty wave generating circuits		-	-
38.	LIMITER CIRCUITS			
+++ a.	Theory of operation		-	-
39.	CLAMPER CIRCUITS			
+++ a.	Theory of operation		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
40.	DIGITAL NUMBERING SYSTEMS (Binary, Octal, Hexadecimal)			
+++ a.	Conversions		B	-
+++ b.	Math operations		-	-
+++ c.	Binary Code Systems		-	-
41.	DIGITAL LOGIC FUNCTIONS (Main Logic Gates and Flip-Flops)			
+++ a.	Theory of operation		B	-
+++ b.	Isolate faulty logic function circuits		-	-
+++ c.	Troubleshoot circuits		-	-
+++ d.	Logic families (TTL and CMOS)		-	-
42.	BOOLEAN EQUATIONS			
+++ a.	Diagram to equation		-	-
+++ b.	Equation to diagram		-	-
43.	COMPUTERS			
* a.	Operation principles		B	-
+++ d.	Isolate faults		-	-
* f.	Types of memories		B	-
+++ g.	Peripheral devices		-	-
+++ h.	Programming languages		-	-
44.	MICROPROCESSOR CONTROLLED SYSTEMS			
+++ a.	Theory of operation		-	-
+++ b.	Isolate faulty microprocessors		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
45.	LOGIC CIRCUITS a. Theory of operation * (1) Counters (Synchronous/ Asynchronous-Up/Down counters) +++ (2) Registers (Shift and Storage) +++ (3) Combinational Logic Circuits (Half-adder, Full-adder, Encoder, Decoder, Multiplexer, Demultiplexer, Count Detect) +++ c. Troubleshoot circuits		B	-
46.	D/A, A/D CONVERTERS (Approx D/A and Ramp A/D) +++ a. Theory of operation		-	-
47.	TRANSMISSION LINES +++ d. Isolate faulty transmission lines		2b	-
48.	WAVEGUIDES +++ a. Theory of operation		-	-
49.	MICROWAVE OSCILLATORS & AMPLIFIERS +++ a. Theory of operation		-	-
50.	RESONANT CAVITIES +++ a. Theory of operation		-	-

STS #	STS ITEM	TRA TASK	3 LVL CRS	5 LVL CDC
52.	RECEIVERS			
	a. Theory of operation			
	+++ (2) Frequency modulation		-	-
	+++ (3) Single side band		-	-
54.	ANTENNAS			
	+++ c. Isolate faulty antennas		2b	-
57.	PHOTOSENSITIVE DEVICES			
	+++ a. Theory of operation		-	-
59.	SUPPORT SUBJECTS			
	* c. Electrostatic sensitive device (ESD) control		B	-

## Summary of Proposed Changes

### STS

The following items in the published STS are recommended for deletion. The item number is followed by the rationale for removal.

1. 10k - Duplicate entry with item 59c in EFA.
2. 22a - Knowledge not found in analysis.

The following items were changed or added in the specific recommendations.

1. 3a and 3b - Changed codes to "A" in the course and "B" in the CDC. Since students are in a highly supervised environment, it will allow training to continue in the CDC when it will be most useful.
2. 3d - added "or around" to ensure safety consciousness at all times.
3. 3d(9) - changed statement to include all hazardous liquids.
4. 4d - deleted codes. Not performed by 3-levels.
5. 5e - deleted codes, skill not found in analysis.
6. 9e - rewritten to include all deficiency reports. Codes removed - skill not found in analysis.
7. 10a - rewritten to match wording in analysis.
8. 10r thru 10ah - added to include common skills and knowledge identified in the task analysis
9. 17 thru 20 - Changed "Perform maintenance testing" to "Test." More closely matches the analysis.
10. 29 - rewritten to identify knowledge required.

### EFA

All changes, except those identified as AFR 8-13 changes, are to the proficiency codes. These changes reflect the difference in current training requirements and the requirements recommended by the analysis.

STS Notes for TRA Task Correlation

NOTE 1: 50030, 50050, 50060, 50090, 50120, 50150, 50180, 50190,  
50200, 50250, 50270, 50300, 50330, 50350, 50390, 50400,  
50410, 50450, 50460, 50490, 50500, 50520, 50530, 50540,  
50570, 50580, 50610, 50620, 50710, 50750, 50780, 50810,  
50840, 50850, 50860, 50900, 50930, 50940, 50950, 50970

NOTE 2: 50020, 50030, 50050, 50060, 50080, 50090, 50100, 50120,  
50130, 50140, 50150, 50160, 50170, 50180, 50190, 50200,  
50210, 50220, 50240, 50250, 50260, 50270, 50290, 50300,  
50310, 50320, 50330, 50350, 50370, 50380, 50390, 50410,  
50440, 50450, 50460, 50470, 50480, 50490, 50500, 50510,  
50520, 50530, 50540, 50550, 50560, 50570, 50580, 50590,  
50600, 50610, 50620, 50640, 50650, 50670, 50690, 50700,  
50710, 50720, 50730, 50740, 50750, 50760, 50770, 50780,  
50810, 50830, 50840, 50850, 50860, 50870, 50880, 50890,  
50900, 50930, 50940, 50950, 50960, 50970, 50980, 50990

NOTE 3: 50020, 50080, 50090, 50140, 50150, 50240, 50250, 50290,  
50390, 50400, 50410, 50530, 50610, 50770, 50850, 50860,  
50870, 50950

NOTE 4: 50020, 50060, 50080, 50140, 50150, 50200, 50240, 50250,  
50290, 50390, 50400, 50410, 50530, 50610, 50770, 50850,  
50860, 50870, 50950

NOTE 5: 50190, 50550, 50560, 50650

NOTE 6: 50190, 50690, 50700

NOTE 7: 50060, 50120, 50140, 50150, 50320, 50330

NOTE 8: 50670, 50680, 50850

NOTE 9: 50430, 50440, 50510, 50550, 50560

NOTE 10: 50160, 50170, 50190, 50730, 50740

NOTE 11: 50190, 50600, 50690, 50700, 50870

NOTE 12: 50190, 50600, 50730, 50740, 50870

NOTE 13: 50190, 50600, 50650, 50690, 50700, 50870

NOTE 14: 50160, 50170, 50730, 50740, 50940

NOTE 15: 50190, 50600, 50690, 50700, 50730, 50740, 50820, 50870,  
50940

NOTE 16: 50190, 50200, 50410, 50530, 50550, 50560, 50600, 50610,  
50760, 50850, 50860, 50870, 50940, 50950

NOTE 17: 50020, 50030, 50050, 50060, 50070, 50080, 50090, 50100,  
50110, 50120, 50130, 50140, 50160, 50170, 50180, 50190,  
50200, 50210, 50220, 50240, 50260, 50280, 50290, 50300,  
50310, 50320, 50330, 50340, 50350, 50360, 50370, 50380,  
50390, 50410, 50430, 50440, 50450, 50460, 50470, 50480,  
50490, 50500, 50510, 50520, 50530, 50540, 50550, 50560,  
50570, 50580, 50590, 50600, 50610, 50620, 50630, 50640,  
50650, 50670, 50680, 50690, 50700, 50720, 50730, 50740,  
50750, 50760, 50770, 50780, 50790, 50800, 50810, 50820,  
50830, 50840, 50850, 50860, 50870, 50880, 50890, 50900,  
50910, 50920, 50930, 50940, 50950, 50990

NOTE 18: 50120, 50130, 50160, 50170, 50650

NOTE 19: 50020, 50250, 50650

NOTE 20: 50020, 50080, 50110, 50140, 50240, 50260, 50290, 50660

**APPENDIX D**  
**ELECTRONIC FUNDAMENTALS/APPLICATIONS (EFA) TRA TASK CORRELATION**

The numbers in the EFA No. column, for the most part, relate to the element numbers in the EFA. In places, the numbers end in an "x," "y," or "z." On these occasions, the numbers do not relate directly to the EFA line items, but do relate to the EFA major fundamental requirements. Beside each EFA number is the activity (A), skill (S), or knowledge (K) statement used in the TRA. The numbers below the statements refer to the TRA tasks where the activity, skill, or knowledge is required.

<b>EFA No.</b>	<b>TRA TASK STATEMENT AND NUMBERS</b>
2A	K APPLY DC CIRCUIT THEORY OF OPERATION 50020, 50080, 50240, 50260, 50460, 50540, 50720
2A	K APPLY AC CIRCUIT THEORY OF OPERATION 50020, 50080, 50240, 50260, 50460, 50540, 50720
2B	K TROUBLESHOOT DC CIRCUITS 50020
2B	K TROUBLESHOOT AC CIRCUITS 50020
4A	K APPLY RESISTOR THEORY OF OPERATION 50020, 50080, 50160, 50260, 50530, 50720, 50940, 50950
4B	K ISOLATE FAULTY RESISTORS 50020, 50530, 50720, 50940, 50950
4C	K INTERPRET RESISTOR COLOR CODES 50080
5A	K APPLY RELAY THEORY OF OPERATION 50240, 50890
5B	K ISOLATE FAULTY RELAYS 50080, 50240, 50890
7A	K APPLY CAPACITOR THEORY OF OPERATION 50890, 50940, 50950
7B	K ISOLATE FAULTY CAPACITORS 50890, 50940, 50950
8A	K APPLY TRANSFORMER THEORY OF OPERATION 50080, 50460
8B	K ISOLATE FAULTY TRANSFORMERS 50460
9A	K APPLY THREE-PHASE TRANSFORMER THEORY OF OPERATION 50080

EFA No.	TRA TASK STATEMENT AND NUMBERS (continued)
12A	K APPLY DC GENERATOR THEORY OF OPERATION 50460
12B	K ISOLATE FAULTY DC GENERATORS 50460
13A	K APPLY AC GENERATOR THEORY OF OPERATION 50460
13B	K ISOLATE FAULTY AC GENERATORS 50460
15A	K APPLY SYNCHRO/SERVO THEORY OF OPERATION 50080, 50400, 50410, 50580
15B	K ISOLATE FAULTY SYNCHROS/SERVOS 50400, 50410, 50580
19A	K APPLY SOLID STATE DIODE THEORY OF OPERATION 50530, 50540, 50720, 50890
19B	K ISOLATE FAULTY SOLID STATE DIODES 50530, 50540, 50720, 50890
20A	K APPLY BIPOLAR JUNCTION TRANSISTOR THEORY OF OPERATION 50530
20B	K ISOLATE FAULTY BIPOLAR JUNCTION TRANSISTORS 50530
21A	K APPLY INTEGRATED CIRCUIT THEORY OF OPERATION 50460
21B	K ISOLATE FAULTY INTEGRATED CIRCUITS 50460
22A	K APPLY ZENER DIODE THEORY OF OPERATION 50940
22A	K APPLY LED THEORY OF OPERATION 50720
22B	K ISOLATE FAULTY ZENER DIODES 50940
22B	K ISOLATE FAULTY LEDS 50720
24A	K APPLY CRT THEORY OF OPERATION 50020, 50530, 50720
24B	K ISOLATE FAULTY CRT 50020, 50530, 50720

EFA No.      TRA TASK STATEMENT AND NUMBERS (continued)

25A      S    SOLDER/DESOLDER TERMINAL CONNECTIONS  
50020, 50030, 50060, 50080, 50120, 50180, 50200, 50710,  
50980

25B      S    SOLDER/DESOLDER PC BOARDS  
50020, 50720

25C      S    SOLDER/DESOLDER MULTIPIN CONNECTORS  
50020, 50030, 50120, 50150, 50180, 50200

25D      S    SOLDER/DESOLDER COAXIAL CONNECTORS  
50020, 50030, 50120, 50150, 50180

26A      S    ASSEMBLE SOLDERLESS CRIMP CONNECTORS  
50020, 50150, 50180

26B      S    ASSEMBLE SOLDERLESS COAXIAL CONNECTORS  
50020, 50030, 50150, 50180, 50980

26C      S    ASSEMBLE SOLDERLESS MULTIPIN CONNECTORS  
50020, 50030, 50150, 50180, 50200, 50980

27A      S    USE ANALOG MULTIMETER  
50020, 50060, 50190, 50200, 50350, 50390, 50420, 50440,  
50460, 50500, 50520, 50530, 50540, 50550, 50560, 50580,  
50600, 50610, 50630, 50640, 50690, 50700, 50720, 50730,  
50740, 50790, 50800, 50820, 50830, 50840, 50850, 50860,  
50870, 50880, 50890, 50910, 50920, 50940, 50950

27B      S    USE OSCILLOSCOPE  
50020, 50060, 50080, 50140, 50160, 50160, 50180, 50190,  
50200, 50240, 50350, 50410, 50460, 50530, 50540, 50590,  
50650, 50670, 50680, 50690, 50700, 50720, 50730, 50740,  
50770, 50820, 50850, 50870, 50940

27C      S    USE SIGNAL GENERATOR  
50020, 50190, 50600, 50690, 50700, 50730, 50740, 50770,  
50870

27D      S    USE FREQUENCY COUNTER  
50020, 50190, 50410, 50650, 50690, 50700, 50730, 50740,  
50770, 50800, 50880, 50890

27E      S    USE SPECTRUM ANALYZER  
50020, 50460

27G      S    USE DIGITAL MULTIMETER  
50020, 50060, 50080, 50090, 50110, 50140, 50170, 50190,  
50200, 50220, 50240, 50260, 50350, 50390, 50410, 50420,  
50440, 50460, 50500, 50520, 50530, 50540, 50550, 50560,  
50580, 50600, 50610, 50630, 50640, 50650, 50690, 50700,  
50720, 50730, 50740, 50790, 50800, 50820, 50830, 50840,  
50850, 50860, 50870, 50880, 50890, 50910, 50920, 50940,  
50950

EFA No.	TRA TASK STATEMENT AND NUMBERS (continued)
27H	S USE DIGITAL LOGIC PROBE 50020
28A1	K APPLY TRANSISTOR AMPLIFIER CIRCUIT THEORY OF OPERATION 50080, 50940, 50950
28B	K ISOLATE FAULTY TRANSISTOR AMPLIFIER CIRCUITS 50940, 50950
33A	K APPLY POWER SUPPLY THEORY OF OPERATION 50020, 50530, 50540, 50740, 50800, 50890, 50920
33A1	K APPLY POWER SUPPLY RECTIFIER THEORY OF OPERATION 50020
33A2	K APPLY POWER SUPPLY FILTER THEORY OF OPERATION 50020
33B	K ISOLATE FAULTY POWER SUPPLIES 50020, 50530, 50540, 50740, 50800, 50890, 50920
33B	K ISOLATE FAULTY POWER SUPPLY RECTIFIERS 50020
33B	K ISOLATE FAULTY POWER SUPPLY FILTERS 50020
33C	K TROUBLESHOOT POWER SUPPLY CIRCUITS 50020
33C	K TROUBLESHOOT POWER SUPPLY RECTIFIERS 50020
33C	K TROUBLESHOOT POWER SUPPLY FILTERS 50020
35A	K APPLY RCL CIRCUIT THEORY OF BASIC OPERATION 50080, 50610
35X	K ISOLATE FAULTY RCL CIRCUITS 50390
38A	K APPLY LIMITER CIRCUIT DIODE THEORY OF OPERATIONS 50020
38A	K APPLY LIMITER CIRCUIT ZENER DIODE THEORY OF OPERATION 50020
38A	K APPLY LIMITER CIRCUIT TRANSISTOR THEORY OF OPERATION 50020
39A	K APPLY CLAMPER CIRCUIT THEORY OF OPERATION 50460

EFA No.	TRA TASK STATEMENT AND NUMBERS (continued)
39B	K ISOLATE FAULTY CLAMPER CIRCUITS 50460
40A	K PERFORM BINARY CONVERSIONS 50020, 50320, 50890
40A	K PERFORM OCTAL CONVERSIONS 50020, 50320
40A	K PERFORM HEXADECIMAL CONVERSIONS 50020, 50320
41A	K APPLY MAIN LOGIC GATE THEORY OF OPERATION 50020, 50460
41A	K APPLY FLIP-FLOP THEORY OF OPERATION 50020, 50460
41B	K ISOLATE FAULTY MAIN LOGIC GATES 50460
41B	K ISOLATE FAULTY FLIP-FLOPS 50460
41W3	K APPLY TTL THEORY OF OPERATION 50020
41W4	K APPLY CMOS THEORY OF OPERATION 50020
43B	K LOAD COMPUTER PROGRAMS 50010, 50040, 50070, 50080, 50100, 50140, 50160, 50170
43FW	K APPLY THEORY OF OPERATION OF COMPUTER MEMORIES 50700, 50740
43FX	K ISOLATE FAULTY COMPUTER MEMORIES 50700, 50740
43H	K USE COMPUTER PROGRAMMING LANGUAGE 50140
44B	K ISOLATE FAULTY MICROPROCESSORS 50020
44Y	K TROUBLESHOOT MICROPROCESSOR-CONTROLLED SYSTEMS 50020
45A1	K APPLY LOGIC CIRCUIT COUNTER THEORY OF OPERATION 50020, 50890
45A2	K APPLY LOGIC CIRCUIT REGISTER THEORY OF OPERATION 50020

EFA No.	TRA TASK STATEMENT AND NUMBERS (continued)
45A3	K APPLY COMBINATIONAL LOGIC CIRCUIT THEORY OF OPERATION 50020
45B	K ISOLATE FAULTY LOGIC COUNTERS 50890
45B	K ISOLATE FAULTY REGISTER LOGIC CIRCUITS 50020, 50530, 50720, 50940, 50950
46A	K APPLY RAMP A/D CONVERTER THEORY OF OPERATION 50460
46B	K ISOLATE FAULTY RAMP A/D CONVERTERS 50460
47A	K APPLY TRANSMISSION LINE THEORY OF OPERATION 50800, 50890
47D	K ISOLATE FAULTY TRANSMISSION LINES 50800, 50890
48A	K APPLY WAVEGUIDE THEORY OF OPERATION 50020
48B	K ISOLATE FAULTY WAVEGUIDES 50020
50A	K APPLY RESONANT CAVITY THEORY OF OPERATION 50460
50B	K ISOLATE FAULTY RESONANT CAVITIES 50460
51A1	K APPLY AM MODULATION TRANSMITTER THEORY OF OPERATION 50020, 50700, 50740, 50920
51A2	K APPLY FM TRANSMITTER THEORY OF OPERATION 50020, 50740
51A3	K APPLY SINGLE SIDEBAND TRANSMITTER THEORY OF OPERATION 50020
51A4	K APPLY PULSE MODULATION TRANSMITTER THEORY OF OPERATION 50800, 50890
51B	K ISOLATE FAULTY AM TRANSMITTERS 50020, 50700, 50740, 50920
51B	K ISOLATE FAULTY FM MODULATION TRANSMITTERS 50020, 50740
51B	K ISOLATE FAULTY SINGLE SIDEBAND TRANSMITTERS 50020

EFA No.	TRA TASK STATEMENT AND NUMBERS (continued)
51B	K ISOLATE FAULTY PULSE MODULATION TRANSMITTERS 50020, 50800, 50890
52A1	K APPLY AM RECEIVER THEORY OF OPERATION 50700, 50740, 50920
52A2	K APPLY FM RECEIVER THEORY OF OPERATION 50740
52A3	K APPLY SINGLE SIDEBAND RECEIVER THEORY OF OPERATION 50740
52A4	K APPLY PULSE MODULATION RECEIVER THEORY OF OPERATION 50020, 50800, 50890
52B	K ISOLATE FAULTY AM RECEIVERS 50700, 50740, 50920
52B	K ISOLATE FAULTY FM RECEIVERS 50740
52B	K ISOLATE FAULTY SINGLE SIDEBAND RECEIVERS 50740
52B	K ISOLATE FAULTY PULSE MODULATION RECEIVERS 50800, 50890
54A	K APPLY ANTENNA THEORY OF OPERATION 50740, 50800, 50890, 50920
54C	K ISOLATE FAULTY ANTENNAS 50740, 50890, 50920
57A	K APPLY PHOTSENSITIVE DEVICE THEORY OF OPERATION 50020
57B	K ISOLATE FAULTY PHOTSENSITIVE DEVICES 50020
59C	K APPLY ESD PRECAUTIONS 50010, 50020, 50030, 50060, 50080, 50090, 50110, 50120, 50140, 50150, 50160, 50170, 50180, 50190, 50220, 50240, 50250, 50270, 50310, 50320, 50330, 50400, 50410, 50450, 50460, 50490, 50500, 50540, 50550, 50560, 50650, 50670, 50690, 50700, 50710, 50720, 50750, 50800, 50810, 50820, 50850, 50860

APPENDIX E  
ACRONYM LIST

ACRONYM	DEFINITION
A/D	ANALOG-TO-DIGITAL
AC	ALTERNATING CURRENT
ACIU	ADVANCED CENTRAL INTERFACE UNIT
ACRIU	ADVANCED CONVENTIONAL REMOTE INTERFACE UNIT
ADF	AUTOMATIC DIRECTION FINDER
ADI	ATTITUDE DIRECTION INDICATOR
AIFF	ADVANCED IDENTIFICATION FRIEND OR FOE
AIS	AVIONICS INTERMEDIATE STATION
AIU	AVIONICS INTERFACE UNIT
AM	AMPLITUDE MODULATION
AMRIU	ADVANCED MISSILE REMOTE INTERFACE UNIT
API	ANGLE POSITION INDICATOR
AMP	AMPLIFIER
ARIU	ADVANCED REMOTE INTERFACE UNIT
ATE	AUTOMATIC TEST EQUIPMENT
ATI	AUTOMATED TRAINING INDICATOR
ATLAS	ABBREVIATED TEST LANGUAGE FOR ALL SYSTEMS
ATTD	ADVANCED TECHNOLOGY TRAINING DELIVERY
BIT	BUILT-IN-TEST
BMTS	BASIC MILITARY TRAINING SCHOOL
CADC	CENTRAL AIR DATA COMPUTER
CAL	CALIBRATION
CAMS	CORE AUTOMATED MAINTENANCE SYSTEM
CARA	COMBINED ALTITUDE RADAR ATTIMETER
CDC	CAREER DEVELOPMENT COURSE
CDU	CONTROL DISPLAY UNIT
CFTMP	CAREER FIELD TRAINING MANAGEMENT PLAN
C/I	COMPUTER INERTIAL
CIU	CENTRAL INTERFACE UNIT
CMOS	COMPLEMENTARY METAL OXIDE SEMICONDUCTOR
CNF	CONFIDENCE
COMSEC	COMMUNICATION SECURITY
CPIN	COMPUTER PROGRAM IDENTIFICATION NUMBER
CRIU	CONVENTIONAL REMOTE INTERFACE UNIT
CRT	CATHODE RAY TUBE
CSG	COMPUTER SIGNAL GENERATOR
CST	COMPUTER SELF TEST
CTK	CONSOLIDATED TOOL KIT
CTS	COURSE TRAINING STANDARD
CU	CONTROL UNIT
DART	DEPLOYED AIRCRAFT REPAIR TECHNIQUES
D/I	DISPLAY/INDICATOR
DC	DIRECT CURRENT
DCU	DATA COLLECTION UNIT
DDU	DIAGNOSTIC DISPLAY UNIT
DECIS	DATA ENTRY COCKPIT INTERFACE SYSTEM
DED	DATA ENTRY DISPLAY
DEEU	DATA ENTRY ELECTRONIC UNIT
DFLCC	DIGITAL FLIGHT CONTROL COMPUTER
DIU	DIGITAL INTERFACE UNIT

ACRONYM	DEFINITION
DSP	DIGITAL SIGNAL PROCESSOR
DTC	DATA TRANSFER CARTRIDGE
DTE	DATA TRANSFER EQUIPMENT
DTU	DATA TRANSFER UNIT
DV	DISPLAY VALUE
ECA	ELECTRONIC CONTROL ASSEMBLY
ECIU	ENHANCED CENTRAL INTERFACE UNIT
EDEEU	ENHANCED DATA ENTRY ELECTRONIC UNIT
EFCC	ENHANCED FIRE CONTROL COMPUTER
EPDG	ENHANCED PROGRAMMABLE DISPLAY GENERATOR
EPROM	ERASABLE PROGRAMMABLE READ ONLY MEMORY
EPU	ELECTRIC PROCESSING UNIT
EPV	EPROM PROGRAMMER VERIFIER
ER	EMERGENCY RADIO
ESD	ELECTROSTATIC DISCHARGE
ETTR	ENGINE TIME/TEMPERATURE RECORDER
EU	ELECTRONIC UNIT
EW	ELECTRONIC WARFARE
EWAR	ELECTRONIC WARFARE ACCOUNTABILITY/RELIABILITY
FCC	FIRE CONTROL COMPUTER
FCNP	FIRE CONTROL NAVIGATION PANEL
FRC	FIRE CONTROL RADAR
FCS	FIRE CONTROL SYSTEM
FDC	FLIGHT DIRECTIONAL COMPUTER
FLCC	FLIGHT CONTROL COMPUTER
FLCP	FLIGHT CONTROL PANEL
FM	FREQUENCY MODULATION
FSRS	FREQUENCY SELECTIVE RECEIVER SYSTEM
GAC	GENERAL AVIONICS COMPUTER
HARS	HEADING ATTITUDE REFERENCE SYSTEM
HF	HIGH FREQUENCY
HSI	HORIZONTAL SITUATION INDICATOR
HUD	HEAD UP DISPLAY
IATS	INTERMEDIATE AUTOMATIC TEST STATION
IFF	IDENTIFICATION FRIEND OR FOE
ILS	INSTRUMENT LANDING SYSTEM
INS	INERTIAL NAVIGATION SYSTEM
INU	INERTIAL NAVIGATION UNIT
I/O	INPUT/OUTPUT
IPB	ILLUSTRATED PARTS BREAKDOWN
ISD	INSTRUCTIONAL SYSTEM DEVELOPMENT
IST	INTERNAL SELF TEST
ITA	INTERFACE TEST ADAPTER
ITS	INTERFACE TEST SET
IU	INDICATOR UNIT
JFET	JUNCTION FIELD EFFECT TRANSISTOR
J/R	JETTISON/RELEASE
LCD	LIQUID CRYSTAL DIODE
LED	LIGHT EMITTING DIODE
LPRF	LOW POWER RADIO FREQUENCY
LRU	LINE REPLACEABLE UNIT
LTTC	LOWRY TECHNICAL TRAINING CENTER
MAC	MATE ATLAS COMPILER

ACRONYM	DEFINITION
MBC	MASTER BUS CONTROLLER
MFD	MULTI-FUNCTION DISPLAY
MITS	MISSILE INTERFACE TEST SET
MLPRF	MODULAR LOW POWER RADIO FREQUENCY
MMU	MICROWAVE MEASUREMENT UNIT
MOLE	MATE ON-LINE EDITOR
MON	MONITOR
MOS	MATE OPERATING SYSTEM
MOSFET	METAL OXIDE SEMICONDUCTOR FIELD EFFECT TRANSISTOR
MRIU	MISSILE REMOTE INTERFACE UNIT
MSI	MICROWAVE STIMULUS INTERFACE
MSS	MEASUREMENT SUB-SYSTEM
MTE	MATE TEST EXECUTIVE
NAV	NAVIGATION
NRIU	NUCLEAR REMOTE INTERFACE UNIT
ONP	OPERATIONAL FLIGHT PROGRAM
OJT	ON-THE-JOB TRAINING
OPSEC	OPERATIONS SECURITY
OSR	OCCUPATIONAL SURVEY REPORT
P/P	PROCESSOR/PNEUMATIC
PATEC	PORTABLE AUTOMATIC TEST EQUIPMENT CALIBRATOR
PC	PRINTED CIRCUIT
PCM	POWER CONTROL MONITOR
PDG	PROGRAMMABLE DISPLAY GENERATOR
PDU	PILOT DISPLAY UNIT
PME	PRECISION MEASUREMENT EQUIPMENT
PROM	PROGRAMMABLE READ ONLY MEMORY
PSA	PNEUMATIC SENSOR ASSEMBLY
PSP	PROGRAMMABLE SIGNAL PROCESSOR
PU	PROJECTION UNIT
QA	QUALITY ASSURANCE
RADC	RADAR COMPUTER
RCL	RESISTIVE/CAPACITIVE/INDUCTIVE
REO	RADAR ELECTRO-OPTICAL
RF	RADIO FREQUENCY
RGA	RATE GYRO ASSEMBLY
RIU	REMOTE INTERFACE UNIT
RMS	ROOT MEAN SQUARE
R/T	RECEIVER TRANSMITTER
RWF	RIVET WORKFORCE
SAI	STANDBY ATTITUDE INDICATOR
SAS	STABILITY AUGMENTATION SYSTEM
SCP	STORES CONTROL PANEL
SCR	SILICONE CONTROLLED RECTIFIER
SE	SUPPORT EQUIPMENT
SEI	SPECIAL EXPERIENCE IDENTIFIER
SME	SUBJECT MATTER EXPERT
SRS	SERVICE REPORT SOFTWARE
SRU	SHOP REPLACEABLE UNIT
STS	SPECIALTY TRAINING STANDARD
SUMSS	SWITCHING UNIT, MEASUREMENT, AND STIMULUS SUB-SYSTEM
SW	SPECIAL WEAPON

**ACRONYM****DEFINITION**

SWRIU	SPECIAL WEAPON REMOTE INTERFACE UNIT
TACAN	TACTICAL AIR NAVIGATION
TEMS	TURBINE ENGINE MONITORING SYSTEM
TLC	TRANSMISSION LINE COUPLER
TMDE	TEST MEASUREMENT DIAGNOSTIC EQUIPMENT
TO	TECHNICAL ORDER
TR	TRACE
TRA	TRAINING REQUIREMENTS ANALYSIS
TRU	TESTER REPLACEABLE UNIT
TSO	TRAINING STAFF OFFICER
TTL	TRANSISTOR TRANSISTOR LOGIC
TV	TELEVISION
UDU	UMBILICAL DISPLAY UNIT
UHF	ULTRA HIGH FREQUENCY
UJT	UNI-JUNCTION TRANSISTOR
U&TW	UTILIZATION AND TRAINING WORKSHOP
VHF	VERY HIGH FREQUENCY
VVI	VERTICAL VELOCITY INDICATOR
WAC	WIDE ANGLE CONVENTIONAL
WCS	WEAPONS CONTROL SYSTEM
XCIU	EXPANDED CENTRAL INTERFACE UNIT
XFCC	EXPANDED FIRE CONTROL COMPUTER
XRIU	EXPANDED REMOTE INTERFACE UNIT
3-LVL CRS	3-SKILL LEVEL COURSE