

Department of the Army  
Pamphlet 621-102

EDUCATION

**THE US ARMY  
SIGNAL SCHOOL  
APPRENTICESHIP  
PROGRAM FOR  
THE TRADE OF  
PHOTOGRAPHIC  
EQUIPMENT  
MAINTENANCE  
TECHNICIAN**

Headquarters  
Department of the Army  
Washington, DC  
15 July 1981

**UNCLASSIFIED**

# ***SUMMARY of CHANGE***

DA PAM 621-102

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF PHOTOGRAPHIC  
EQUIPMENT MAINTENANCE TECHNICIAN

Not applicable

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EDUCATION

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF  
PHOTOGRAPHIC EQUIPMENT MAINTENANCE TECHNICIAN

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**By Order of the Secretary of the Army:**

**E. C. MEYER**  
*General, United States Army*  
*Chief of Staff*

**Official:**

**ROBERT M. JOYCE**  
*Brigadier General, United States Army*  
*The Adjutant General*

**Summary.** Not applicable.

**Applicability.** This pamphlet applies to all elements of the active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

**Proponent and exception authority.** The proponent agency of this pamphlet is The Adjutant General's Office.

**Interim changes.** Interim changes are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

**Suggested Improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, US Army

Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905.

**Distribution.** To be distributed in accordance with DA Form 12-9A requirements for DA Pamphlets, Education plus 5 copies each to All Education Centers and Sub-centers.

Active Army: B  
ARNG: None  
USAR: None

**History.** This publication has been organized to make it compatible with the Army electronic publishing database. No content has been changed.

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\*This pamphlet supersedes DA Pam 621-102, 1 May 1979.

**RESERVED**

## **1. Purpose.**

The purpose of this pamphlet is to announce the US Army Signal School Apprenticeship Program for the Trade of Photographic Equipment Maintenance Technician (DOT Code 714.281-026).

## **2. Applicability.**

This pamphlet applies to all elements of the active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

## **3. General.**

Policies and procedures for participation in the program are contained in AR 621-5. This pamphlet is designed to be used in conjunction with that regulation.

## **4. Apprenticeship Program Number and Occupational Skill Code.**

*a.* The following apprenticeship program number and occupational skill code are used to identify the US Army Signal School Apprenticeship Program for the Trade of Photographic Equipment Maintenance Technician.

(1) Apprenticeship Program Number: 99904.

(2) Occupational Skill Code: 13.

*b.* The apprenticeship program number and occupational skill code must be entered on DA Form 4409-R (Apprenticeship Application) to identify the program for which the soldier is making application.

## **5. Eligibility for Participation in the Program.**

Soldiers holding as primary or secondary the MOS indicated below and serving in that MOS may participate in the program: MOS 41E: Audio Visual Equipment Repairer.

## **6. The Photographic Equipment Maintenance Technician Apprenticeship Program.**

This is a 6,000-hour program which leads to certification as journeyworker in the trade of Photographic Equipment Maintenance Technician. Participation in the program is voluntary, and no membership in labor unions or professional associations is required. The work process schedule and schedule of related instruction for the trade are attached (appendixes B and C). The purposes of the work process schedule and the schedule of related instruction are as indicated below:

*a.* The work process schedule reflects categories of work experience required by soldier-apprentices to qualify as journeyworker and hours of work experience required in each category.

*b.* The schedule of related instruction identifies courses which may be taken by soldier-apprentices to satisfy the 432 hours of related instruction required for completion of the program.

## **7. Enrollment in the Program.**

Soldiers may enroll in the program by contacting their installation education services officer (ESOs) who will explain requirements of the program and assist in the preparation of the apprenticeship application form (DA Form 4409-R).

## **8. Apprenticeship Log Forms.**

Apprenticeship log forms and instructions on use of the forms will be issued to soldiers by installation ESOs at the time of registration in the program. Log instruction sheets will be maintained by soldiers in the three ring binder. Soldier-apprentices will be required to annotate their work experience on log sheets on a daily basis. The standard for the amount of work experience logged will be 132 hours per month. Hours logged above this standard amount must be justified in the remarks section of the daily work experience record and attested to by the signature and rank of the shop craft supervisor or an individual holding a comparable position. Log entries must be verified by the soldier-apprentice's immediate supervisor on a weekly basis.

## **9. Credit for Previous Experience.**

*a.* Newly enrolled soldier-apprentices who have partially completed an approved Federal or State registered civilian apprenticeship in the trade of Photographic Equipment Maintenance Technician or a related trade will, upon presentation of documentation, be awarded credit for all experience related to categories of work contained in the work process schedule at appendix B.

*b.* Up to 3,000 hours of credit for previous military work experience may be awarded upon presentation of authenticated documentation of satisfactory performance. Such experience must be directly related to the occupation in which the apprenticeship is being performed. Statements from previous supervisors or other such documentation which certify category of work, number of hours by category and quality of performance will be submitted by soldier apprentices to their installation ESOs for consideration. ESOs will forward these documents to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905, for final determination.

**10. Related Instruction Credit for Previous Military and Civilian Education.**

Credit for previous military and civilian education may be awarded to satisfy related instruction requirements by presenting certificates of course completion or other such documentation from official military records or other sources. The installation ESO will determine the amount of credit to be awarded. The ESO will consult sponsor Service schools, as required, in order to determine the appropriate amount of credit for each course not listed in appendix C of this pamphlet.

**11. Completion of the Program.**

Upon successful completion of the program, a Certificate of Completion of Apprenticeship will be awarded by the US Department of Labor. While the award of a Certificate of Completion of Apprenticeship will not guarantee a job, it will certify that journeyworker status has been attained, and should enable completers of the program to be more competitive with civilians in the trade.

**12. Partial Completers.**

Soldiers leaving the service prior to completion of the program will receive documented credit for that portion of the program which they did complete. This documentation may be presented for satisfaction of requirements of civilian apprenticeship programs in the trade of Photographic Equipment Maintenance Technician or a related trade. (See app D).

## **Appendix A REFERENCES**

### **Section I Required Publications**

This section contains no entries.

### **Section II Related Publications**

This section contains no entries.

### **Section III Prescribed Forms**

This section contains no entries.

### **Section IV Referenced Forms**

This section contains no entries.

**Appendix B**  
**WORK PROCESS SCHEDULE FOR THE TRADE OF PHOTOGRAPHIC EQUIPMENT**  
**MAINTENANCE TECHNICIAN (DOT CODE 714.281-026)**

**Table B-1**  
**WORK PROCESS SCHEDULE FOR THE TRADE OF PHOTOGRAPHIC EQUIPMENT MAINTENANCE TECHNICIAN**

		<i>Hours</i>
A.	Utilization and Care of Photographic Laboratory Equipment . . . . . Troubleshoot and repair photographic printers and print driers. Detect malfunctions, repair and adjust photographic print washers and print straighteners. Service, troubleshoot and repair photographic dark rooms. Apply shop safety procedures. Practice first aid measures.	500
B.	Repair Press-Type Cameras . . . . . Remove, repair and replace camera front and camera back assemblies. Diagnose malfunctions, disassemble and repair the lens and shutter mechanism. Reassemble, adjust and final test the shutter assembly.	750
C.	Repair Multiple Format Cameras . . . . . Disassemble, troubleshoot and repair camera body to include the rangefinder. Disassemble, troubleshoot and repair the lens and shutter mechanism. Reassemble, adjust and final test the shutter assembly. Disassemble, repair and reassemble camera components.	750
D.	Repair Focal-Type Cameras . . . . . Remove and repair the camera housing to include the range-finder. Repair and adjust film transport and escapement assemblies. Repair and adjust the shutter controlling mechanism to include the curtain assembly.	750
E.	Repair Motion Picture Cameras . . . . . Disassemble, repair and adjust the camera head. Remove, disassemble and repair the camera driving mechanism and spring. Final test and adjust components using special tools and test equipment.	1,300
F.	Apply Techniques in the Utilization and Care of Lenses . . . . . Physical optics. Fixed focus. Front cell focusing. Helical mounts. Zooms.	200
G.	Test and Adjust Electrical/Electronics Systems . . . . . Flash synchronization. Electronic flash.	500
H.	Repair Projectors and Audio Visual Systems . . . . . Troubleshoot, repair and adjust the following: Hand/Manual and theater projectors. Slide projectors and automatic focus systems. Sound systems to include microphones.	1,250
<b>TOTAL</b>		<b>6,000</b>

This paragraph contains no entries.

## Appendix C

### SCHEDULE OF RELATED INSTRUCTION FOR THE TRADE OF PHOTOGRAPHIC EQUIPMENT MAINTENANCE TECHNICIAN (DOT CODE 714.281-026)

A total of 432 hours of related instruction is required to complete this program. Completion of any one or a combination of the below listed courses which equals 432 hours of related instruction or more may be taken to satisfy this requirement. Credit for courses not listed below may be awarded upon presentation of authenticated documentation of satisfactory completion. A synopsis of the course must be submitted with documentation. Documentation and synopsis of courses not listed below will be forwarded by ESOs to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905, for final determination.

**Table C-1**  
**SCHEDULE OF RELATED INSTRUCTION FOR THE TRADE OF PHOTOGRAPHIC EQUIPMENT MAINTENANCE TECHNICIAN**

Course Number	Course Title	School	Resident	Non-resident	Credit Hours
A. G3ABR4043000141E10	Audio Visual Equipment Repair (After 1 June 1980)	Lowery AFB, CO	X		525
B. G3ABR40430001	Camera Equipment Repair (Before 1 June 1980)	Lowery AFB, CO	X		475
C. SSO 301	Electrical Fundamentals-DC	USASC		X	12
D. SSO 302	Magnetism and Electromagnetism	USASC		X	10
E. SSO 303	Electrical Fundamentals-AC	USASC		X	9
F. SSO 304	Electrical Networks	USASC		X	11
G. SSO 311	Electron-Tubes	USASC		X	10
H. SSO 312	Electron-Tubes Applications	USASC		X	12
I. SSO 462	Basic Test Equipment-Operation	USASC		X	12
J. SSO 463	Operation of Electron-Tube Test set TV-7U	USASC		X	2
K. SSO 500	Principles of Photography	USASC		X	9
L. SSO651	Shop Practice and safety	USASC		X	3
M. ORD 424	Machine Shop Practice	USAOC&S		X	19
N. SSO 501	Still Photography	USASC		X	10

This paragraph contains no entries.

**Appendix D  
EXAMPLE OF A PARTIAL COMPLETION LETTER**

(Enter Office Symbol)

(Enter Date)

TO WHOM IT MAY CONCERN:

This is to certify that \_\_\_\_\_ was enrolled in the Army  
(Name)

Apprenticeship Program for \_\_\_\_\_  
(Name of Occupational Skill Area)

\_\_\_\_\_ During this period \_\_\_\_\_ to \_\_\_\_\_. During that period  
(Registration Number) (Date) (Date)

he successfully completed the following hours:

<i>Work Process</i>	<i>Hours</i>
A	_____
B	_____
_____	_____
_____	_____

Army Apprentice Programs are registered with the US Department of Labor and the fact that this individual did participate can be verified with the Bureau of Apprenticeship and Training, Patrick Henry Building, Washington, DC 20213, or by contacting Headquarters, TRADOC, ATTN: ATPL-AGE, Fort Monroe, VA, 23651.

Sincerely,

ESO's SIGNATURE BLOCK

**Figure D. EXAMPLE OF A PARTIAL COMPLETION LETTER**

This paragraph contains no entries.

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DOC STATUS: NEW PUBLICATION