

Department of the Army  
Pamphlet 621-59

EDUCATION

**THE US ARMY  
SIGNAL SCHOOL  
APPRENTICESHIP  
PROGRAM FOR  
THE TRADE OF  
RADIO  
COMMUNICATIONS  
TECHNICIAN**

Headquarters  
Department of the Army  
Washington, DC  
15 July 1981

**UNCLASSIFIED**

# ***SUMMARY of CHANGE***

DA PAM 621-59

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF RADIO  
COMMUNICATIONS TECHNICIAN

Not applicable.

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EDUCATION

THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF  
RADIO COMMUNICATIONS 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*

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

**Summary.** The purpose of this pamphlet

is to announce the US Army Signal School Apprenticeship Program for the Trade of Radio Communications Technician (DOT Code 823.281-014).

**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 regulation 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 Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.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) direct to Commander, US Army Signal School, and Fort Gordon, ATTN: ATZPA-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

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\*This pamphlet supersedes DA Pam 621-59, 1 May 1978.

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## **1. Purpose.**

The purpose of this pamphlet is to announce the US Army Signal School Apprenticeship Program for the Trade of Radio Communications Technician (DOT Code 823.281-014).

## **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 program registration number and occupational skill code are used to identify the Army apprenticeship program for the trade of radio communications technician.

(1) Apprenticeship Program Number: 99904

(2) Occupational Skill Code: 01

*b.* The program registration 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 one of the MOSs indicated below and serving in that MOS may participate in the program.

*a.* MOS 26L. Tactical Microwave Systems Repairer.

*b.* MOS 26V. Strategic Microwave Systems Repairer.

*c.* MOS 26Y. Satellite Communications Ground Station Equipment Repairer.

*d.* MOS 31E. Field Radio Repairer.

*e.* MOS 32H. Fixed Station Radio Repairer.

## **6. The Radio Communications Technician Apprenticeship Program.**

This is an 8,000 hour program which leads to certification as journeyworker in the trade of Radio Communications 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 (app B and C). The purpose of the work process schedule and the schedule of related instructions 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 576 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 officers (ESOs) who will explain requirements of the program and assist in the preparation of the apprenticeship application form (DA Form 4409-R).

## **8. Apprentice Log Forms.**

Apprentice log forms and instruction on use of 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 a 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-apprentices 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 Radio Communications 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 scheduled at appendix B.

*b.* Up to 4,000 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 Schooling.**

Credit for previous military and civilian schooling 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 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 will complete. This documentation may be presented for satisfaction of requirements of civilian apprenticeship programs in the trade of Radio Communications 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 RADIO COMMUNICATIONS TECHNICIAN**  
**(DOT CODE 823.281-014)**

**B-1. Work Process Schedule for the Trade of Radio Communications Technician**

Paragraph not used.

**Table B-1**  
**WORK PROCESS SCHEDULE FOR THE TRADE OF RADIO COMMUNICATIONS TECHNICIAN (DOT CODE 823.281-014)**

<i>Work Processes</i>	<i>Hours</i>
A. Orientation to Radio Equipment Repair Techniques and Processes 1. Apply shop practices to include proper use, maintenance, care and storage of required tools. 2. Develop radio repair workshop cleaning techniques. 3. Develop skills and apply proper procedures in dismantling, inspecting and cleaning electrical/electronic equipment common to radio repair processes. 4. Develop skills in use of shop safety practices as outlined in established shop procedures pertaining to high voltages and precautions necessary in radio repair.	400
B. Install Radio Equipment Using Required Tools and Equipment Install amplitude and frequency modulated radio equipment, single sideband radio equipment and radio teletype equipment in vehicles, vans and semi permanent radio complexes using proper tools and equipment, following prescribed specifications and safety practices and inter-connecting components.	1200
C. Perform Preventive Maintenance on Radio Equipment Performs preventive maintenance on amplitude and frequency modulated radio equipment, single sideband radio equipment, and radio teletype equipment to include fungiproofing or waterproofing of field radio equipment and using proper tools conforming to safety practices and following prescribed procedures.	1600
D. Troubleshooting Radio Equipment to Include AM, FM, and Single Sideband Using the Following Test Equipment 1. Single generators 2. Oscilloscopes 3. Spectrum analyzers 4. Frequency counters 5. Multimeters 6. Wattmeters 7. Tube testers 8. Spectrum analyzers 9. Transistor testers 10. Audio oscillators 11. Frequency meters	1600
E. Repair Radio Equipment Under the Supervision of an Experienced Repairer to Include AM, FM, and Single sideband Equipment Using: 1. Small hand tools 2. Soldering gun 3. Soldering iron 4. Cleaning compound 5. Insulation tape and sandpaper	1600
F. Final Test and Align Radio Equipment Under the Supervision of an Experienced Repairer to Include AM, FM, and Single Sideband Equipment Using: 1. AF Signal generators 2. RF Signal generators 3. Frequency meters 4. Wattmeters 5. Oscilloscopes 6. Other associated test equipment	1600
TOTAL <u>8000 Hrs</u>	

**B-2. Title not used.**

Paragraph not used.

## Appendix C

### SCHEDULE OF RELATED INSTRUCTION FOR THE TRADE OF RADIO COMMUNICATION TECHNICIAN (DOT CODE 823.281-014)

#### C-1. Schedule of Related Instruction for the Trade of Radio Communication Technician (DOT CODE 823.281-014)

A total of 576 hours of related instruction is required to complete this program. Completion of any one or a combination of the below listed courses which equals 576 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 for courses not listed below will be forwarded by ESOs to the 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 Radio Communication Technician**

Course Number	Course Title	School	Resident	Non-resident	Hours	Credit
A. 101-26L10	Tactical Microwave Systems Repair Course (after 1 May 1978)	USASC	X		1363	
B.101-26L10	Tactical Microwave Systems Operation and Maintenance (Prior to 1 May 1978)	USASC	X		575	
C. 101-26L20	Tactical Microwave Systems (Prior to 1 May 1978)	USASC	X		1060	
D. 101-26V10	Strategic Microwave Systems Repairer (after 1 May 1978)	USASC	X		1260	
E. 101-26V10	Strategic Microwave Systems Operation and Maintenance (Prior to 1 May 1978)	USASC	X		650	
F. 101-26V20	Strategic Microwave Systems Repair (Prior to 1 May 1978)	USASC	X		110	
G. 102-26Y10	Satellite Communication Ground Station Equipment Repairer	USASC	X		1370	
H. 102-F26	SATCOM Controller	USASC	X		179	
I. 102-F6	ANTSC-54 Course	USASC	X		392	
J. 102-F3	AN/MS-46 Course	USASC	X		400	
K. 102-F39	SATCOM Communication Fundamentals	USASC	X		736	
L. 102-F40	Digital Communications Subsystem	USASC	X		296	
M. 102-F42	AN/FSC 78-79 Terminal Course	USASC	X		336	
N. 102-F43	Navy SATCOM Operator	USASC	X		320	
O.102-26Y20	Satellite Communication Terminal Repair	USASC	X		1375	
P. 101-31E10	Field Radio Repair (after 1 June 1978)	USASC	X		771	
Q. 101-31E20	Field Radio Repairer Course (prior to 1 June 1978)	USASC	X		1580	
R. 101-32H10/20	Fixed Station Radio Repair (after 1 June 1978)	USASC	X		1223	
S. 101-32H20	Fixed Station Radio Repair (Prior to 1 June 1978)	USASC	X		1300	
T. 4-3	Tactical Microwave Systems Repair Course (26L10) (Prior to 1 February 1979)	USASC		X	71	
U. 4-4	Tactical Microwave System Repair Course (26L20) (Prior to 1 February 1979)	USASC		X	163	
V. 5-3	Tactical Microwave Systems Repair Course (26L10) (after 1 February 1979)	USASC		X	150	
W. 4-6	Strategic Microwave Systems Repair Course (26V20) (Prior to 1 February 1979)	USASC		X	172	
X. 6-13	Strategic Microwave Systems Repair Course (26V10) (after 1 February 1979)	USASC		X	170	
Y. 5-25	Satellite Communication Ground Station Equipment Repairer Course (26Y20) (Prior to 1 February 1979)	USASC		X	249	
Z. 6-14	Satellite Communication Ground Station Equipment Repairer Course (26Y10) (after 1 February 1979)	USASC		X	259	
AA. 4-8	Field Radio Repairer (31E20)	USASC		X	148	
BB. 5-6	Field Radio Repair Course (31E10)	USASC		X	63	
CC. 4-16	Fixed-Station Radio Repairer Course (32H20)	USASC		X	179	
DD. 5-13	Fixed Station Radio Repair Course (32H10)	USASC		X	45	
EE. 6-2	Basic Electricity (Prior to 1 February 1979)	USASC		X	47	
FF. 7-1	Basic Electricity (after 1 February 1979)	USASC		X	56	
GG. 6-3	Basic Electronics (Prior to 1 February 1979)	USASC		X	47	
HH. 7-2	Basic Electronics (after 1 February 1979)	USASC		X	47	
II. SSO-301	Electrical Fundamentals-DC	USASC		X	12	
JJ. SSO-303	Electrical Fundamentals-AC	USASC		X	9	
KK. SSO-304	Electrical Networks	USASC		X	11	
LL. SSO-308	Introduction to Electricity	USASC		X	6	
MM. SSO-309	Introduction to Electronics	USASC		X	10	
NN. SSO-313	Semiconductor Devices	USASC		X	7	
OO. SSO-314	Semiconductor Applications	USASC		X	10	
PP. SSO-315	Power Transistors	USASC		X	8	
QQ. SSO-320	Communication Fundamentals	USASC		X	5	
RR. SSO-391	Digital Circuit Fundamentals	USASC		X	11	

**Table C-1**  
**Schedule of Related Instruction for the Trade of Radio Communication Technician—Continued**

Course Number	Course Title	School	Resident	Non-resident	Hours	Credit
SS. SS9-448	Operation of Multimeter TS-352()/U (SOJT)	USASC		X		3
TT. SS9-449	Operation of Multimeter ME-26/U (SOJT)	USASC		X		2
UU. SS9-462	Basic Test Equipment—Operation (SOJT)	USASC		X		12
VV. SSO-462	Basic Test Equipment—Operation (SOJT)	USASC		X		9
WW. SSO-463	Operation of Electronic Tube Test Set TV-7/U	USASC		X		2
XX. SSO-650	Safety and Preventive Maintenance	USASC		X		3
YY. None	Common Basic Electronic Training ATS FT. Jackson (COBET)	USASC		X		120
ZZ. None	Basic Electronic Training (BET)	USASC		X		320

**C-2. Title not used.**

Paragraph not used.

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

**D-1. Example Of A Partial Completion Letter**

Paragraph not used.

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(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**

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**D-2. Title not used.**

Paragraph not used.

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