161

TRANSMISSION SECURITY TRAINING

Somewhere in North Africa a pilot returning from a bombing mission grows careless and idly "chats" away the security of an airbase. Does the enemy take advantage of this opportunity? Here is an extract from a report on the resulting enemy raid:

"_____ Airbase suffered surprise bombing. Severe loss of life and bombing planes sustained."

How important is that vital security element called RADIO SILENCE? Like a protective mantle of invisibility it affords a security upon which might depend success or failure of a mission.

Visualize a tank destroyer battalion moving swiftly into position for attack. Radio silence has been ordered. On the left flank of the movement a tank detachment becomes lost in rough and wooded country. The tempo of the attack is fast, and the utmost coordination is required. The officer in charge of the detachment tosses his security to the wind by sending a call to headquarters for bearings. Receiving no answer, he becomes panicky and calls repeatedly. While frantically appealing for help the detachment wanders aimlessly, but not for long. Enemy planes are informed by their radio intelligence of the detachment's whereabouts and lose no time in eliminating the Shermans.

Violations such as these are inexcusable. A low degree of radio transmission security soon takes a high toll in the loss of lives and equipment.

Radio, when properly operated, furnishes a quick and valuable means of communication. It is sometimes the only available means of

communication and is highly essential for control of fast moving operations. Radio is the least secure means of communication because it is highly vulnerable to enemy interception. Every time a transmitter is placed in operation it must be assumed that enemy interception takes place. Recognition of this fact alone should make every radio operator SECURITY CONSCIOUS.

An analytical study of Consolidated Reports from all theaters and commands has made evident the fact that the training of personnel in Transmission Security has not been sufficient to meet the current security needs of present-day communication systems.

Radio intelligence is one of the enemy's best organized means of obtaining information concerning our plans, troop dispositions, and operations. In order to utilize Transmission Security as an effective countermeasure, a high degree of training for all communication personnel is required. This training must be continuous in order that personnel will be well informed on current procedure and alert to "leaks" provided by deviations from prescribed procedure.

The following outline is a suggested training course on Radio Transmission Security. Since the reference material available is limited, it is suggested that the instructor use practical demonstrations as much as possible. Suggestions as to how practical demonstrations may be carried out are listed at the end of the course outline. The instructor will determine the type of demonstrations on the basis of equipment available.

COURSE Radio Transmission Security

TOTAL HOURS ALLOTTED 11

SUBJECT	SCOPE	TEXT REFERENCE	METHOD PRESENTATION	TOTAL HOURS
Introduction to Radio Transmission Security	1. Definition of Radio Transmission Security.	TM 11-454 Paragraph 129	Lecture	1 1/2
	2. Importance of Radio Transmission Security.	TM 11-454 Paragraphs 130 and 136		
	3. How Radio Transmission Security is achieved.	TM 11-454 Paragraph 131		
	4. Relation of security to other communication requirements.	TM 11-454 Paragraph 132		
(Training Film)	"Radio Transmission Security" (Demonstrates results of failure to observe measures prescribed for security.)	TF 11-2044	Showing of film	3/4
Personal Censorship	1. Importance of personal censorship.	TM 11-454 Paragraph 137	Lecture	1/4
	2. Radio operator's part.	TM 11-454 Paragraph 133		
	3. Illustrations of personal censorship.			
Radio as a Means of Communication	1. When and why radio is used.	FM 24-5 Paragraph 96	Lecture	1/4
	2. Security of radio as a means of signal communication.	FM 24-5 Paragraph 96c		
Monitoring Stations	1. Purposes of monitoring stations.		Lecture Demonstration	2 1/4
	2. Purpose of discrepancy reports.	TM 11-454 Paragraph 144		
	3. Practical demonstrations.	See suggestion 3		
Net Control Station	1. Responsibility of NCS.	TM 11-454 Paragraphs 30, 32, and 33	Lecture Demonstration	1
	a. To insure correct procedure.	FM 24-10 Paragraph 88		

COURSE Radio Transmission Security

TOTAL HOURS ALLOTTED 11

SUBJECT	SCOPE	TEXT REFERENCE	METHOD PRESENTATION	TOTAL HOURS
	b. To enforce security rules.	FM 24-5 Paragraph 118		
Violations and Their Results.	1. Violations listed. 2. Dangers of violations illustrated.	TB SIG 2	Lecture Demonstration	3 1/2
Conclusion	1. Emphasis on importance of Radio Transmission Security. 2. Review of all material given in course.	TB SIG 2 All references listed	Lecture	1/2
*Examination	Examination on all material studied in course.		Examination	1

*Sample examination forms are available and upon request will be furnished in the desired amounts by the Chief Signal Officer.

Suggestion 1

Set up at different points in the classroom two radiotelegraph sets. Select at random from the class two operators, each of whom should be given a batch of dummy messages and a schedule, with no instructions other than to send the traffic. Silence must be observed in the classroom so that students may hear the transmissions. As the messages are sent back and forth, violations are likely to occur. The members of the class should be instructed to take notes on the transmissions, particularly observing any deviations from prescribed procedure and any violations in security. When all the messages have been sent, a class discussion should be held to criticize the methods of the operators. The instructor should then discuss with the class the serious consequences that would have resulted from the violations had the transmissions occurred in actual tactical operations. In this way the students are impressed with the fact that violations frequently occur and that operators should be constantly on the alert to avoid discrepancies in procedure and security.

Suggestion 2

Set up one radio telegraph set screened from view of the class, with a loud-speaker to amplify sounds of code. Appoint three students, A, B, and C, to act as radiotelegraph operators. One operator will be instructed to manifest peculiarities in sending. The other two will be instructed to transmit rhythmically and uniformly in order to emphasize the difficulty of recognizing an operator with a "mechanical fist." The class will be informed that each operator will send the same message

containing letters which, if transmitted carelessly, would cause confusion, A transmitting first, B second, and C third. The students will listen attentively to each operator and note any peculiarities in transmitting habits. Then the class will be informed that the three operators will repeat the message, but in a different order. The operators will be instructed to transmit in a different order, i.e., B might transmit first, C second, and A third. The members of the class will then attempt to identify each of the operators. Thus it will be illustrated that the operator with characteristic transmitting habits is easily recognized and may jeopardize the safety of his entire unit.

Suggestion 3

In one room, set up a radio net with a net control station and four subordinate stations. In another room, out of earshot of the radio net, set up an intercept station. Students should be assigned as follows:

One to the net control station.
One to each of the subordinate stations.
Two to the intercept station.

The remaining members of the class will be divided into two sections, each section to observe the operations in both the radio net room and the intercept room for a specified period of time. The radio net is given dummy traffic and schedules, with instructions for the operators of two subordinate stations to follow prescribed procedure, i.e., report into the net control station in correct order, authenticate when net is opened, etc., while the other two stations are instructed to deviate somewhat from prescribed procedure. The intercept station will be instructed to intercept all traffic emanating from the radio net. Observers will note

discrepancies in sending and receiving, and the valuable information which enemy intercept stations can obtain from such discrepancies as the following: breaking radio silence when not authorized, transmitting unnecessarily or excessively, sending in a controlled net without permission. This demonstration provides good practice for radio operators, is a practical means of illustrating all types of violations, and shows the necessity for Army monitoring stations.