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TM 11-459

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INTERNATIONAL MORSE CODE (INSTRUCTIONS)

HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1968

TECHNICAL MANUAL }

No. 11-459 }

INTERNATIONAL MORSE CODE

(Instructions)

PART ONE

INFORMATION FOR THE STUDENT

CHAPTER 2

CODE INSTRUCTION

2–1. General

When someone speaks of learning a new language, we usually visualize months of pronunciation practice and the building of a vocabulary of at least a thousand words. In the International Morse Code language, you only have to build a vocabulary of 26 letters and 10 numbers to have an entire method of communication available to you.

2–2. Code Language

a. The International Morse Code is a unique language that will enable you to get the message through when other means of communication fail. It is a language that consists of short and long sounds that can penetrate interference with greater clarity than spoken words.

b. The sounds in code are expressed as *dits* and *dahs;* a short sound is *dit,* and a long sound is *dah.* Combination of dits and dahs are used to form the 26 letters of the alphabet and the 10 numbers. When listening to combinations of dits and dahs, you must hear the particular character as a whole sound with a distinct rhythm. The code phonic sound of each letter of the alphabet and each number is shown in figure 2–1. Notice that a dit is contracted to *di* (the *t* is lost in the *d* of the syllable that follows) except when a dit forms the final syllable of a character. For example, the letter L expressed phonically is *di dah di dit.*

2–3. Military Lettering

a. To copy code quickly and accurately, use the military method of printing letters and numbers as shown in figure 2–2. Notice that this figure also indicates the phonetic name for each letter of the alphabet and the pronunciation of the names and numbers.

b. Observe the following rules in military lettering. These rules are illustrated in figure 2–2.

(1) Make U's with square corners to prevent them from looking like V's.

(2) Place a short line through Z to prevent confusion with the numbers 2 or 7.

(3) Place a slanted stroke through the number 0 (zero) to distinguish it from the letter O.

(4) Underscore the number 1 to avoid confusion with the letter I.

(5) Make the letter E with two strokes, not three or four. This saves time.

(6) Print the number 5 carefully to prevent confusion with the letter S.

(7) When you use ruled paper or message blanks, print slightly above the line (fig. 2–3). If the horizontal base stroke is made on the ruling on the paper, the letter U might be confused with the number 11, or the letter I with the number 1, or F with E.

c. When you do not have to struggle with the problem of printing, you can concentrate better on your code reception. The faster you can print, the easier it will be for you to copy code. But remember, your printing *must be legible and neat.*

LETTER	PHONIC SOUND	LETTER	PHONIC SOUND
A	di DAH	N	DAH dit
B	DAH di di dit	O	DAH DAH DAH
C	DAH di DAH dit	P	di DAH DAH dit
D	DAH di dit	Q	DAH DAH di DAH
E	dit	R	di DAH dit
F	di di DAH dit	S	di di dit
G	DAH DAH dit	T	DAH
H	di di di dit	U	di di DAH
I	di dit	V	di di di DAH
J	di DAH DAH DAH	W	di DAH DAH
K	DAH di DAH	X	DAH di di DAH
L	di DAH di dit	Y	DAH di DAH DAH
M	DAH DAH	Z	DAH DAH di dit

NUMBER	PHONIC SOUND	NUMBER	PHONIC SOUND
1	di DAH DAH DAH DAH	6	DAH di di di dit
2	di di DAH DAH DAH	7	DAH DAH di di dit
3	di di di DAH DAH	8	DAH DAH DAH di dit
4	di di di di DAH	9	DAH DAH DAH DAH dit
5	di di di di dit	Ø	DAH DAH DAH DAH DAH

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Figure 2-1. Phonic sound of International Morse Code.

2-4. Learning the Code Characters

a. The 36 code characters will be presented to you in 4 tape-recorded lessons. Each lesson will teach you nine code characters in several recorded versions. The different versions are designed to make the instruction as interesting as possible. Additional series of recorded lessons provide even greater variety.

b. In each of the tape-recorded lessons, you will first be introduced to each code character and then be given basic code practice in each character. The code characters are first introduced by their phonetic names. This is followed by a vocal imitation of the code sound and then by the code signal as you will hear it on the radio. During actual practice you will hear a code signal or a group of signals; then a voice will call back the signal by its phonetic name. This is the *code-voice* method which has proved to be the most effective method for teaching IMC.

2-5. Code Practice Sheet

a. The code practice sheet (fig. 2-4) is designed to make recording code groups easy for you. It lets you practice printing in groups of five characters (the most commonly used code group) and provides a continuous record of your progress.
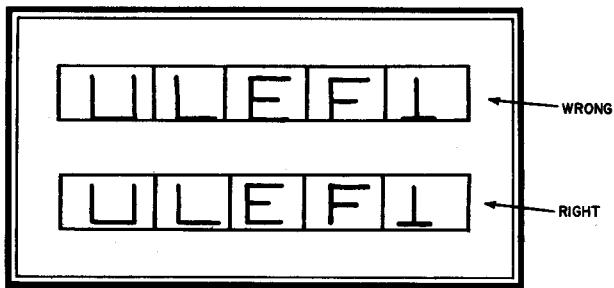
b. When using the code practice sheet, follow the instructions listed below and illustrated in figure 2-4. The numbered arrows in figure 2-4 correspond to the subparagraph numbers below.

(1) Fill in the heading on each sheet before the code practice begins.

A ALFA (AL FAH)	B BRAVO (BRAH VOH)	C CHARLIE (CHAR LEE)	D DELTA (DELL TAH)
E ECHO (ECK OH)	F FOXTROT (FOKS TROT)	G GOLF (GOLF)	H HOTEL (HOH TELL)
I INDIA (IN DEE AH)	J JULIETT (JEW LEE ETT)	K KILO (KEY LOH)	L LIMA (LEE MAH)
M MIKE (MIKE)	N NOVEMBER (NO VEM BER)	O OSCAR (OSS CAH)	P PAPA (PAH PAH)
Q QUEBEC (KEH BECK)	R ROMEO (ROW ME OH)	S SIERRA (SEE AIR RAH)	T TANGO (TANG GO)
U UNIFORM (YOU NEE FORM)	V VICTOR (VIK TAH)	W WHISKEY (WISS KEY)	X XRAY (ECKS RAY)
Y YANKEE (YANG KEE)	Z ZULU (ZOO LOO)	1 WUN	2 TOO
3 THUH-REE	4 FO-WER	5 FI-YIV	6 SIX
7 SEVEN	8 ATE	9 NINER	0 ZERO

THE UNDERLINED PORTION OF THE ALPHABET DE-
NOTES ACCENTED SYLLABLE(S).   TM459-2

Figure 2-2. Military lettering and phonetic alphabet.

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Figure 2-3. Right and wrong lettering on ruled paper.

(2) As you hear each code signal, print the character it represents in the bottom row of squares. Start at the first block.

(3) If you have recorded any characters incorrectly, print the correction in the top square above the error on callback.

(4) Leave the top square blank if the character in the bottom square is correct.

(5) If you do not know the code character, leave the space blank. Print the correct character in the top square when it is identified later. By leaving the space blank and listening for the next character, you avoid pondering too long over one particular signal, which might cause you to miss the next two or three characters.

c. On the back of the code practice sheet there is a place for plain language exercise and a section you will use for progress checks.

2-6. Code Standards

a. To standardize IMC speeds, the five-letter word PARIS is used to establish a nominal speed in groups per minute (gpm) at all speed levels. For example, a speed of 20 groups per minute is established by setting tape equipment or regulating hand-sent transmission to a speed that will send the work PARIS exactly 20 times in 1 minute. The actual number of groups transmitted per minute depends on the frequency appearance of code characters and on the timing standard used.

(1) Some instructional tapes use the CODEZ standard. The word CODEZ is a typical five-letter *code group*. This standard was originally used to time IMC transmissions consisting of five-character code groups containing letters of the alphabet appearing at equal frequency. The actual number of groups transmitted in 1 minute is the same as the nominal speed of transmission.

(2) The word PARIS was used originally to time *clear text* or *plain language* transmissions. This standard is used to determine the number of five-letter plain language words transmitted per minute.

(3) A change in timing standard or in frequency appearance of code characters will change the actual speed of transmission accordingly.

(Last Name)   (First Name)   (M. I.) (Grade)   (GPM)   (Date-Time)

C A O L S	5 C Y P X	R T W 2 I (P)	W 9 E 4 B	V K G 6 Ø
H A Z M L	O A O Ø (3)	O 4 F 4 M	Q 5 Z O M (7)	D N 3 V W
B Q N H H	W S E 4 O	D O 3 P V (B)	L K 2 O L	5 B Y N X
G Z 3 G Y	K D L Z Ø	F Ø 5 9 Q (H)	S V R E M (L)	F 7 T A C
S Z F V C	2 W L 9 R	Y T W E R (L)	2 V 8 I J	S _ H J P (X)
X 3 U H S	B C N N 4	L A K J C	D Ø B E V	2 R N L 7

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Figure 2-4. Code practice sheet.

(4) When measuring the IMC receiving or sending ability of students or operators, consider the content of the IMC material as well as to the actual speed of transmission in words or groups per minute.

(5) Most IMC training material consists of both letter and number code groups. When using material weighted to include three alphabets to ten numbers, the relationship between the PARIS (nominal) speed and CODEZ (actual) speed in groups per minute is as follows:

PARIS (gpm)	CODEZ (gpm)
7	6.43
10	8.82
13	10.94
15	12.59

b. At a speed of 20 gpm the signal is heard as one sound unit and not as separate dits and dahs. The elements of the code characters have this relationship:

(1) The dit is the unit of length.

(2) The dah is equal to 3 dits.

(3) The space between the dits and dahs within the character is equal to 1 dit.

(4) The space between characters is equal to 3 dits.

(5) The space between groups is equal to 7 dits.

c. Basic code lessons are presented at 5 gpm; however, each character is sent at a rate of 20 gpm (tone speed) with the space between characters and groups of characters increased to result in a lower speed. As your skill in copying code increases, the space between characters will be decreased for each speed level.

2-7. Receiving Practice

When you learn the 36 code characters and pass the 5-gpm code test, the next step will be

to increase your code reception speed. This is accomplished by the tape-recorded 7-gpm through 18-gpm receiving practice program. The progressively faster code speeds in each lesson in appendix D provide prompt reinforce-ment of your response to the code signals. You will also be able to determine your exact code receiving speed as you progress and note improvements by checking the highest gpm you have copied correctly.

CHAPTER 3

SENDING CODE

Section I. USING HAND KEY

3-1. General

No doubt you are anxious to start sending code. Before sending, however, you should be able to receive all letters and numbers at 5 gpm. Approximately one third of the code practice time will be spent transmitting, however, the time may vary according to your ability to develop a good sending *fist*. You must keep in mind the importance of good sending as well as accurate receiving so that you will become the best possible radio operator.

3-2. Hand Key Adjustment

a. Before you attempt to use the hand key, you must learn the function of each of its parts and be able to adjust it properly. Figure 3-1 is a detailed drawing of a hand key indicating the parts referred to below.

b. Mounted on each side of the key are the *lateral blocks*, which house the *trunnion screws*. A *locknut* on each trunnion screw is used to secure the trunnion screws in place once the correct adjustment is made. The *key lever* extends along the main axis of the key and is held in place by the trunnion screws. At the far end of the key lever is the *space adjusting screw*. Its purpose is to adjust the space between the *contacts*. The *key button*, made of insulating material, screws into the key lever. A *spring tension screw* provides a means of setting the spring tension for the desired amount of upward movement (lift) of the key lever. Notice that all screw adjustments are secured by locknuts. The circuit to be keyed is connected to the hand key by *binding posts*.

c. To adjust the hand key properly follow the instructions described below.
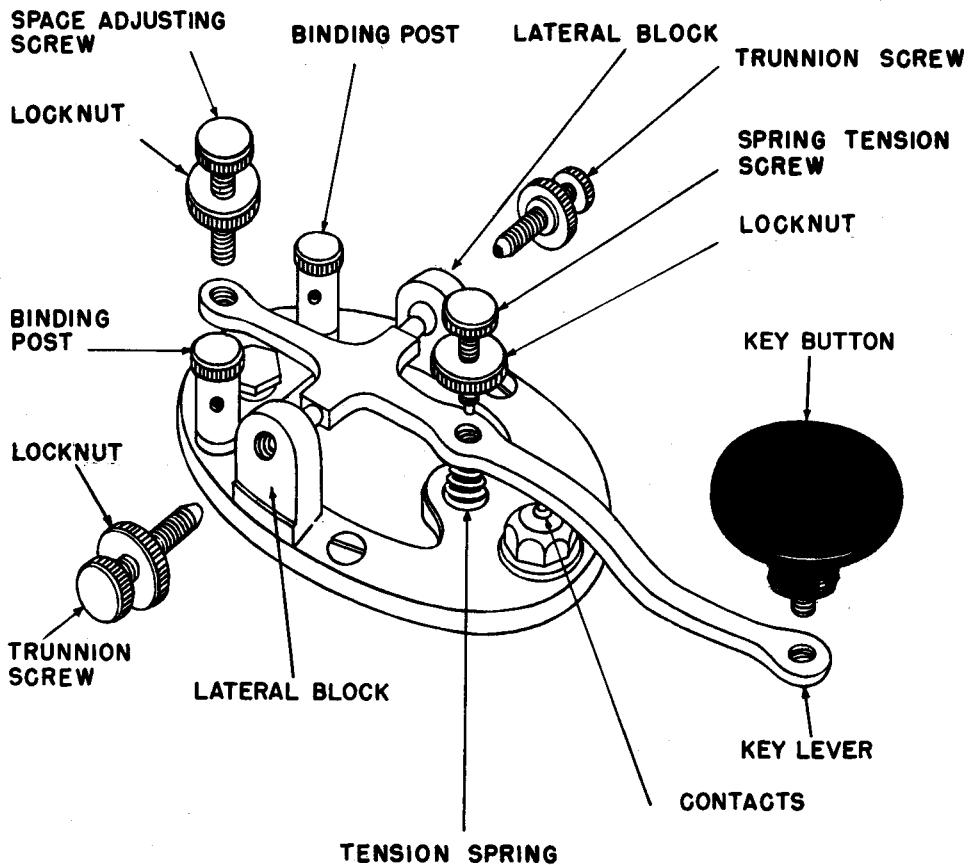
(1) Loosen the locknut on the space adjusting screw and turn the screw counterclockwise until there is approximately ¼-inch of space between the contacts.

(2) Loosen the locknut on the spring tension screw and turn the screw counterclockwise until all spring tension is released.

(3) Loosen the locknut on each trunnion screw. Adjust the two trunnion screws until the contacts are aligned. The contact on the key lever should be directly above the contact mounted on the key base. Tighten both trunnion screws simultaneously until the key lever remains up or in an open contact position. Loosen each trunnion screw slightly until the key lever falls freely. Grasp the trunnion screws firmly with one hand to prevent them from turning and tighten the locknuts with the other hand.

(4) Fold a sheet of ordinary paper twice (four thicknesses) and place this paper between the two contacts. Tighten the space adjusting screw until the contacts begin to exert pressure as you move the paper. Grasp the space adjusting screw with one hand and tighten the locknut with the other hand. Remove the paper. The space between the contacts should be approximately 1/32 of an inch. This setting applies to all keys. It is not a matter of individual preference.

(5) Turn the spring tension screw clockwise until the spring begins to exert pressure and raises the key lever. Turn the spring tension screw one and one-half turns clockwise. Tighten the locknut. A pencil mark on the spring tension screw will help you to measure the amount of turn. The amount of spring tension required depends on you. However, it

SPACE ADJUSTING SCREW
LOCKNUT
BINDING POST
LATERAL BLOCK
TRUNNION SCREW
SPRING TENSION SCREW
LOCKNUT
BINDING POST
LOCKNUT
KEY BUTTON
TRUNNION SCREW
LATERAL BLOCK
KEY LEVER
CONTACTS
TENSION SPRING

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Figure 3–1. Hand key.

should never be more than the minimum amount necessary to form clear and distinct IMC characters.

d. Improper adjustment of the hand key can result in one or more of the following conditions:

(1) *Too much spring tension* forces the key lever up before the elements are completely formed, causing short dits and dahs. In addition, you will be required to expend more effort while sending and will become tired after a short period of time.

(2) *Not enough spring tension* causes the elements of the code characters to run together or the space between elements to be irregular.

(3) *Too much space between the contacts* has the same effect on sending as too much spring tension. *Too little space* between the contacts has an effect similar to weak spring tension.

(4) *Trunnion screws that are too tight* cause the key lever to bind. *Trunnion screws that are too loose* might keep the contacts from meeting in proper alignment.

(5) *Dirty contacts* cause scratchy or intermittent keying. Keep the contacts clean at all times. Contacts may be cleaned by sliding paper between them while exerting slight pressure on the key button.

(6) *Locknuts that have not been tightened* cause the key to get out of adjustment while sending. Insure that all locknuts are secure after adjusting the trunnion, space adjusting, and spring tension screws.

3–3. Hand Position at Key

a. Take a natural and comfortable sitting position at the key. Sit erect with your body parallel to the table and your feet flat on the floor, one slightly ahead of the other. Place

your arm on the table at a comfortable angle with your fingers curved naturally above the key button.
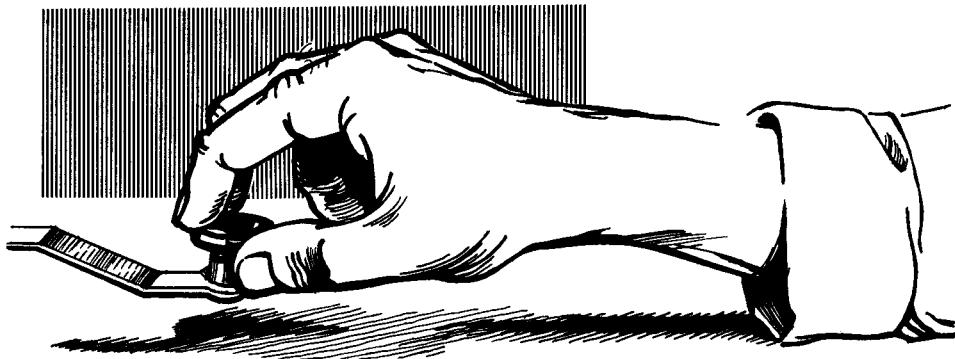
b. Place your first and second fingers on the top of the key button (fig. 3–2) with the tips slightly overlapping the back edge so that your first finger is to the left of the key lever and your second finger is to the right. Your third and fourth fingers should curve naturally under the palm of your hand.

c. Place your thumb along the edge of the key button. It will act as a pivot for your wrist.

d. Press down lightly on the key, using a straight downward motion of your forearm for each element of each character. Your wrist should be 1-inch to 1½-inches above the table top and act as a hinge.

> *Note.* This is one technique. The other is to press down lightly on the key while moving your forearm upward to form each element of each code character.

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Figure 3–2. Position of hand at key button.

3–4. Sending Practice

a. When you are in a comfortable position at the key, you can start sending a series of dits. Do not try to send the dits rapidly; try to develop a relaxed hand that will enable you to send smoothly. The dits should be evenly spaced, and each should be the same duration. Be sure to put wrist and forearm movement into each dit. If you emphasize the wrist motion your timing will be more accurate and your hand and arm muscles will be more relaxed. Check yourself by sending a series of E I S H 5 in random order.

b. After you have sent a number of dit characters, you can start sending dahs. Remember that the wrist and forearm movement will help to develop you timing. Practice dah characters T M O Ø in any order.

c. When you have completed the dit and dah exercise, you can combine dits and dahs in the simple characters and then in the longer characters and numbers. The relationship that exists between the elements of the code characters is—

(1) The dit is the unit of length.

(2) The dah is equal to three dits.

(3) The space between the dits and dahs within the character is equal to one dit.

(4) The space between characters and groups of characters changes as code speed increases.

d. Do not become anxious about increasing your speed. If you concentrate on clarity and accuracy, your progress will be satisfactory. A good practice to follow is not to send faster than you can receive. The exercises in appendix E include a majority of the more difficult characters for additional sending practice. Remember the wrist and forearm movement for each dit and each dah.

3–5. Testing

a. You will find sending tests are less demanding than receiving tests. During your

sending practice you will be able to record your sending or have someone monitor it so you can check your timing and character formation.

b. Prepare for a sending test by taking your place at the sending key and making any necessary adjustments to it. Send a few characters before the test so that you can get the feel of the key and also can relax.

c. It is especially important to realize that

Example:
Here is the series you are to send:

KRGBV	PLKED	QZXSW
1	*2*	*3*

Suppose in group 6 you make a mistake in the third letter and you send an "H" instead

KRGBV	PLKED	QZXSW
1	*2*	*3*

To correct your mistake, send a series of 8 E's (EEEEEEEE) immediately after the error, and then repeat the preceding group (group 5 in this example). Next send group 6 correctly and continue with your transmission. Your transmission will look like this.

KRGBV PLKED QZXSW RGSMI PJAXC
FKH EEEEEEEE PJAXC FKSRD

When copying back your tape draw a line through the group with the error. The transmission should read as shown below:

KRGBV PLKED QZXSW RGSMI PJAXC
~~FKH~~ FKSRD

sending speed must be achieved gradually. Through systematic sending practice your speed will increase as your timing improves.

3–6. Method of Correcting Errors

If you make an error during the sending test, you must know how to correct it. Use the procedures in the following example to correct your errors.

RGSMI	PJAXC	FKSRD
4	*5*	*6*

of an "S". (See below.)

RGSMI	PJAXC	FKH
4	*5*	*6*

3–7. Grading

To qualify at a given speed you must send continuously for 3 minutes, then receive and record your own transmission. You should be able to copy at least 2 consecutive minutes out of 3. At the conclusion of a test, your instructor will inform you if you passed or failed the sending requirement. If you pass the test, you can increase your sending speed to the next test level. If you failed, your instructor will assign remedial exercises to correct your sending or timing mistakes.

Section II. USING THE SEMIAUTOMATIC AND AUTOMATIC KEYS

3–7. General
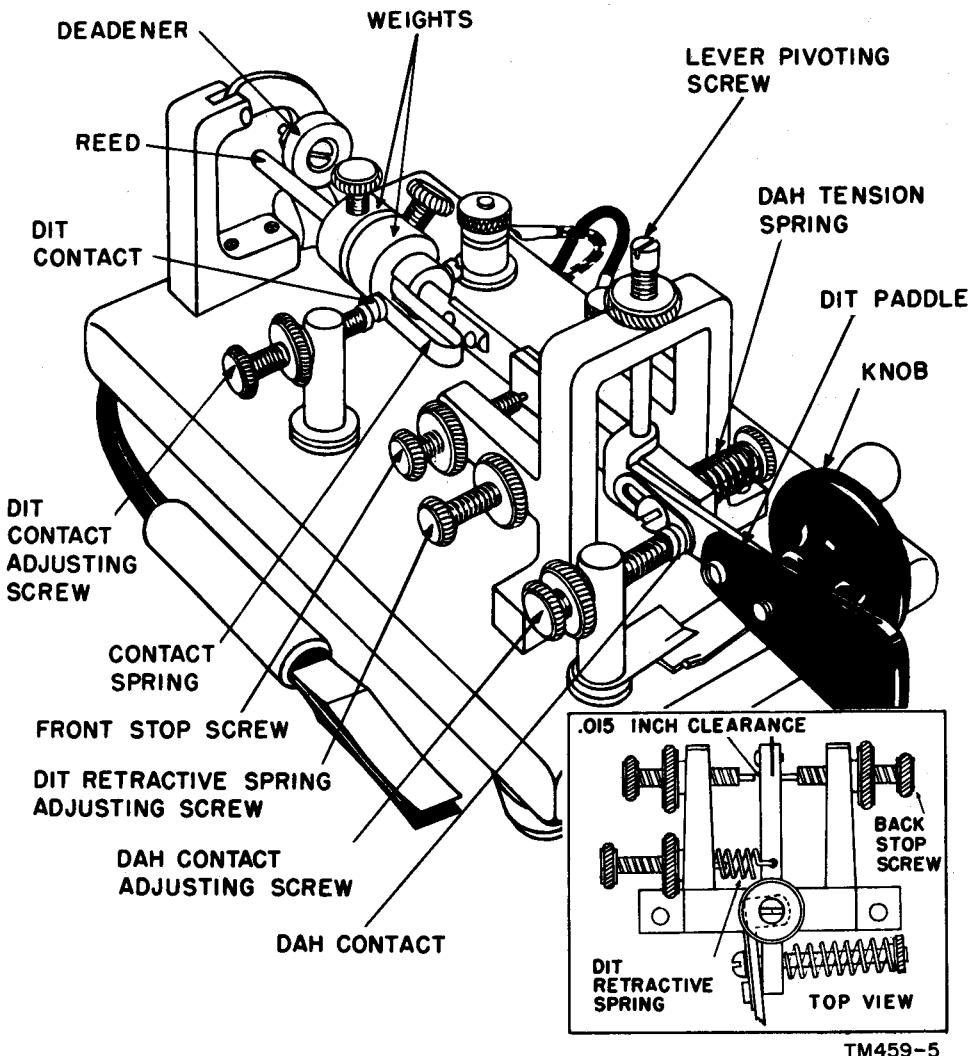
A semiautomatic (mechanical) or automatic (electronic) key may be used when code has to be sent for long periods of time. The semiautomatic and automatic keys are designed to make code sending easier rather than faster. When you use either of these keys, the hand and wrist motion is horizontal rather than vertical. Perfect control is far more important than speed. You must be especially careful to send dits accurately, because careless sending will not be understood.

3–8. Semiautomatic Key

To send code with the semiautomatic key (fig. 3–3), move the *knob* to the left for dahs and move the *dit paddle* to the right for dits. When the dit paddle is moved to the right it causes the vibrating reed to make and break the *dit contact*. The number of dits sent is determined by the length of time the dit paddle is held to the right.

3–9. Adjusting Semiautomatic Key

a. Examine the key for mechanical and electrical defects in the following manner:

Figure 3-3. Semiautomatic key.

(1) Make certain that both *dit contacts* and *dah contacts* are clean and aligned.

(2) Be sure that the *level pivoting screw* is loose enough to permit the lever to move freely.

(3) Be sure that all supporting parts are secure.

(4) Inspect the cord and plug for broken insulation or loose connections.

b. Follow the instructions below for adjusting the semiautomatic key.

(1) Place the key (fig. 3-3) on a level surface.

(2) Loosen the *locknut* on the *back stop screw* and adjust the screw until the *reed* lightly touches the *deadener*. Tighten the *locknut*.

(3) Loosen the *locknut* on the *front stop screw*. Adjust the screw until the separation between it and the *reed* is approximately 0.015 inch. Insert ten pages of this manual between the screw and lever to serve as a convenient gage. A greater separation is permissible if you prefer more lever movement. Tighten the locknut.

(4) Press the dit paddle to the right. Hold the lever in this position and stop the vibration of the reed. Adjust the *dit contact adjusting screw* until the dit contacts just

meet. This important adjustment determines whether the dits will be too heavy or too light. Make the adjustment without flexing the *contact spring*. Tighten the locknut on the *dit contact adjusting screw* without disturbing the adjustment.

(5) If the dits are too fast, move the weights located on the reed in the direction of the deadener. If the dits are too slow, move the weights in the opposite direction.
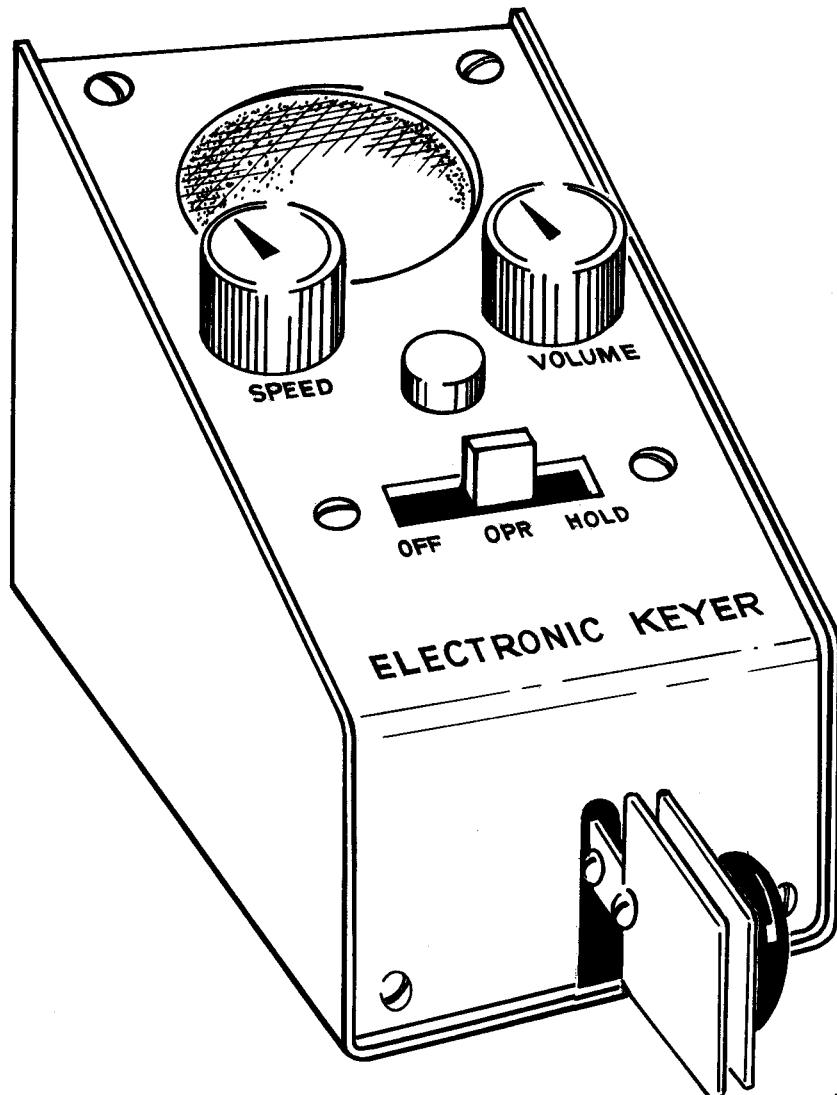
(6) Adjust the *dit retractive spring* and the *dah tension spring* for ease of operation.

(7) The key is adjusted correctly when a series of dits and the space between the dits are of equal duration.

c. No further adjustment should be required unless you are certain the code elements are not being formed properly. If any of the locknuts become loose, readjust the key if necessary.

d. Repositioning the weights to change the speed of the dits or to change the tension of the dit retractive spring and dah tension spring will not effect the adjustment of the semiautomatic key. Make these changes to suit your requirements.

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Figure 3-4. Automatic (electronic) key.

3–10. Automatic Key

The automatic key (fig. 3–4) forms self-completing dits and dahs with a constant *dit-to-space-to-dah* ratio. This is accomplished electronically rather than mechanically as in the semiautomatic key. The automatic key sends dahs when the key is moved to the left and dits when it is moved to the right. Only simple adjustments of the *speed* (control) knob and the *volume* (control) knob are necessary before sending code.

CHAPTER 4

STUDENT PROGRESS

4–1. General

a. No other student will progress in quite the same way as you do. Your success in receiving and sending code is an individual accomplishment that depends on your concentration, patience, and self-confidence. Ideally, a multichannel code system will provide a large variety of practice lessons that will permit you to progress at your own speed.

b. Think subconsciously in code language when you read newspapers, letters, signs, or posters. This spare time practice is one of the most important factors in your progress. Whistle or voice the code in di-dah form and learn to recognize all characters by their sound pattern, not by separate elements. Remember that code characters are sent so that they are heard as a complete sound.

4–2. Receiving Errors

a. A common type of receiving error is called *dotting*. This occurs when you confuse characters that differ from one another by the number of dits contained in the signal. For example, if you record S instead of H, or D instead of B, etc., you have made dotting errors. Special remedial lessons that emphasize the dit characters will help you correct these errors.

b. Another common receiving error is called *copying too close*. This is the tendency to copy the character too quickly before you have heard all of the signal. Examples would be copying an A for a W, a J for a 1, or an R for an L. If you make this mistake, you will have to practice delaying your response to the code signal. Remedial lessons for correcting these errors require you to listen carefully for two or three code signals before writing any-

thing on your practice sheet. One of the requirements for improving accuracy and increasing recording speed is copying behind the characters being sent. This delayed response allows you time to hear the whole character before you record it.

c. As with any skill, confidence is required to pass progress tests and to relieve tension. The way to gain this confidence is by participating in the code practice program which was prepared for that purpose.

4–3. Cumulative Code Practice Records

a. The graph (fig. 4–1) provides a basis for comparing your performance through the course with other students' performances under similar training conditions. The family of curves represents a cumulative record of code learning based on the records of many trainees through 15-gpm code speed.

b. The graph shows you or your instructor where you stand in relation to the group. For example, if you had 50 hours of code practice and just passed the 12-gpm test, you are doing as well as 38 percent of the students in your class. In the same number of paractice hours, 14 percent have passed 15 gpm and 67 percent have passed 10 gpm.

c. Frequently your instructor is interested in knowing how far you should progress in a given number of hours. Assuming that you are doing as well as 38 percent of the students, you should qualify on 15 gpm after 67 hours of practice. The graph shows what can be done with accurate records.

d. The figures on the graph have a high degree of accuracy for a typical instructional situation, but may not apply to every situation because of different teaching methods or stu-
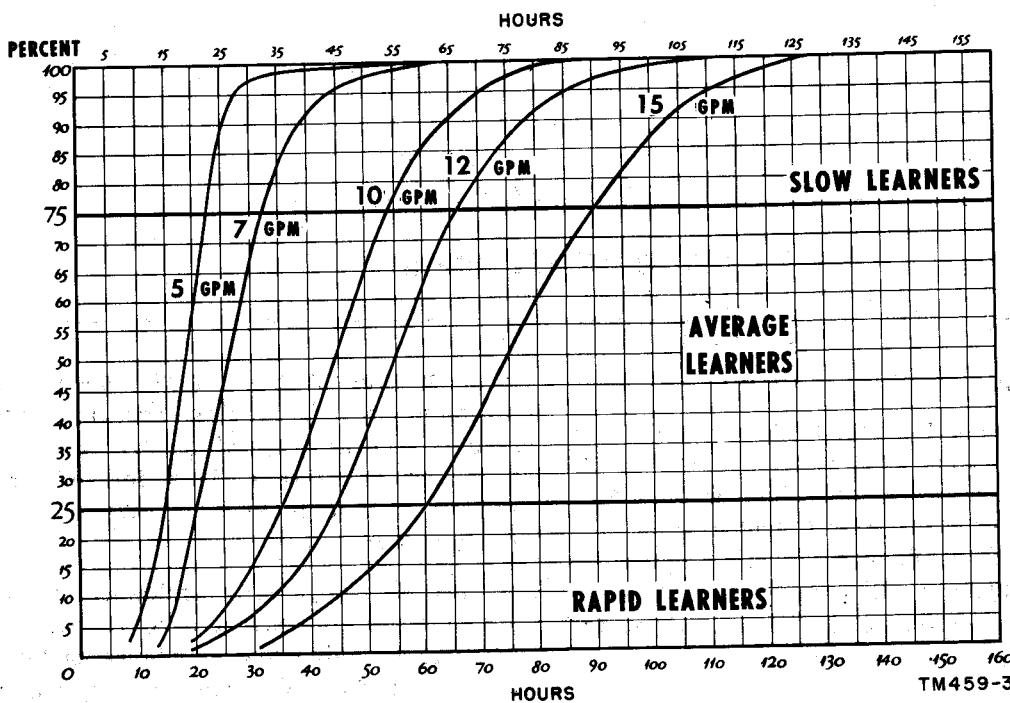
Figure 4–1. Cumulative hours required to pass 5 to 15 gpm.

dent aptitude. Your instructor may devise similar graphs for his own classes. The requirements for making such a graph are a record of practice hours and the number of groups per minute your class can copy correctly.

4–4. Retention of Code Skills

a. Once you have thoroughly learned IMC, retention is assured, regardless of the time interval between practice sessions. If you have learned to receive code without error at 5 or 7 gpm you will probably be able to recognize individual code signals 10 or 15 years later.

b. While the retention of IMC as a language is assured, your speed of code recognition can be adversely effected in a very short period of time. You should strive to reach the highest level of speed in receiving code in the allotted time because there may be several weeks between the time you leave school and the time you begin actual code operation. Some operators may regress as much as 5 gpm in code

receiving speed in a week without practice. Graduates of code operator schools who have an IMC receiving speed of 15 gpm may be unable to operate in a continuous wave (CW) net at 10 gpm if practice is not maintained.

c. It is absolutely essential that you follow a schedule of code practice or CW operation to retain proficeincy. Your IMC receiving speeds will increase and your ability to communicate by code will improve proportionately to the amount of practice you do.

d. Only after years of code operation and achieving a code receiving speed of 25 gpm or higher will you then be able to go without practice with little, if any, effect on your code copying ability.

e. When you use other means of communication, you should spend some off-duty time copying IMC. Radio receivers, which are components of the radio communication system, may be utilized for this practice.

PART TWO

INFORMATION FOR INSTRUCTOR

CHAPTER 5

TEACHING METHODS

5–1. The Code-Voice Method

a. The code-voice method is the most effective method devised to teach International Morse Code. Its name is derived from the method of identifying a code signal by voice, giving the student immediate knowledge of his correct or incorrect response to a code signal.

b. Each of the four lessons shown below contains nine code characters. The least difficult characters appear in lesson 1. The code characters rated next in order of complexity appear in lesson 2. Lesson 3 contains the remaining nine letters of the alphabet, and lesson 4 presents the numbers one through nine. Lessons 2, 3, and 4 contain a relatively high percentage of characters learned in previous lessons.

(1)	Lesson 1	E I S T M O A N W
(2)	Lesson 2	B C D G Q X Y Z Ø
(3)	Lesson 3	F H J K L P R U V
(4)	Lesson 4	1 2 3 4 5 6 7 8 9

c. Another version of the basic lessons contains only concentrated practice on the new signals. This reduces monotony casued by over-learning and provides practice on segments of the alphabet with which the student may have difficulty.

d. An alternate basic program has all 36 code characters appearing in each lesson. It is useful as a refresher program for students who have received previous training in IMC and as a way to expedite advancement of fast learners. It can also be used as an alternate method of presentation in conjunction with the basic IMC series.

5–2. Receiving Practice

a. The most recent method devised to increase the speed of code reception is based on an extensive experiment conducted in IMC training. The practice material is presented in progressively faster code speeds at 1-gpm speed increments. The practical exercise in appendix D contains all of the practice material used in the program. This exercise provides prompt reinforcement for student response. He corrects his own paper to determine his code receiving speed.

b. In the traditional IMC receiving program, code speeds from 7 to 25 gpm are presented in 2- or 3-gpm increments. Progress from one speed to the next may cause periods of practice which produce little improvement, but this effect is reduced by using the receiving practice suggested in a above. However, the traditional program can be used to provide variety in code practice.

5–3. Remedial IMC Program

a. A remedial IMC receiving program may be necessary due to persistent inaccuracies by some trainees. The two most common types of errors in receiving are *dotting* and *copying too close*.

(1) The most difficlt characters in teaching IMC are the dot signals for 6, 5, 4, H, and V. The students confuse the 6 with B, the 5 with H, the H with S, and the 4 with V. Students also have a tendency to hear code signals shorter than they actually are which would, for example, substitute and S for an H more often than an H for an S.

(2) Teach students to delay their response to a code signal. Instruct them to copy one or two characters behind the signal to avoid those errors produced by copying too close.

b. A series of magnetic tape recordings prepared for each of the receiving speeds (7, 10, and 13 gpm) will help the student to increase speed of character recognition. One series is a completion exercise which requires the use of a special exercise sheet.

5–4. Program Implementation

a. For optimum results the IMC program should be reproduced from ¼-inch by 3,600-foot magnetic tape on 10½-inch reels with tape speed set at 7½-inches per second. This provides four periods of instruction per tape and eliminates winding or rewinding, keeping tape breakage at a minimum. If possible, place the magnetic tape reproducers in a central control room and transmit the code over cables to switchboard facilities in the classroom.

b. Enough reproducers should be available to channel all code necessary to meet the trainee requirements. Separate channels can be used for each part of the IMC program listed below.

(1) Basic IMC Series.

(2) IMC Receiving Practice.

(3) IMC Receiving Test Program (7-25 groups per minute).

(4) Remedial IMC Receiving Program.

(5) IMC Sending.

5–5. Proficiency Standards

a. *Receiving.* Qualification requirements for a given speed in receiving IMC are 3 out of 5 consecutive minutes of copy. Some errors may be allowed during code speed progression to the qualifying code speed.

b. *Sending.* Trainees are required to transmit IMC at each speed for 3 minutes. A tape recording is made of their transmission or the students' sending can be monitored. They will qualify if they are able to transmit the required number of groups and *copy back* their own transmission for 2 consecutive minutes out of 3.

5–6. Instruction Aids and Techniques

a. As an instructor you play a vital role in the success of the IMC course. You must be constantly aware of the difficulties of each student in your class and to take prompt remedial action. The tape-recorded code program alone cannot teach code. You have to keep the students interested and motivated at all times. As an instructor ask youself—

(1) How can I assure each student of my sincere interest in his progress?

(2) How can I make the learning process easier for him?

b. As an instructor of IMC, you are responsible for stimulating your students' interest and attentiveness. Careful observance of student progress will keep you aware of the need for corrective action.

c. Here are some procedures and techniques that you can use to supplement the tape-recorded instructional material.

(1) Place a list of the code characters of each basic lesson in some prominent place in the code room.

(2) Rehearse the code sounds with the students using both vocal imitation and audio oscillator with a hand key.

(3) Emphasize the importance of learning code by the *sound* of each character. Point out the difference in the sound of code signals that appear to be similar to the student.

(4) Maintain an active interest in the problems students may have with IMC.

(5) Observe each student carefully during the tape-recorded practice portion of the class.

(6) Summarize each code receiving period and have progress test papers available as soon as they have been graded.

(7) Make constructive criticism when criticism is needed.

d. After a few hours of code instruction, you will be able to pick out those students who will require a personalized remedial program.

When you have determined a student's specific difficulty, give him individual instruction. In remedial programs, vocal imitation practice on the difficult characters used in conjunction with a hand key and code oscillator have proved very successful. When code sounds have been learned, follow the same general procedure as recorded on the tape lessons. Encourage student participation in identifying the hand sent signals. Discourage students from mentally repeating or echoing the IMC sound in vocal imitation prior to recording the character. When this happens, it is an indication that the student does not know the code sound, which will limit his ability to copy code at higher speeds. When you feel that the student is on the right track, return him to his class.

CHAPTER 6

FIELD TRAINING PROGRAM

6–1. General

You may be asked to establish a code training program in your field unit or to organize code practice sessions to maintain code proficiency in your unit. The information below suggests training devices and practice systems for a code-voice program for beginners as well as a group of characters for increasing speed of code recognition.

6–2. Teaching Basic Code

a. The sample script and code practice groups in appendix B may be used in whole or part to serve as a guide for teaching basic IMC. The program is divided into four lessons starting with the easier characters and progressing to the more difficult ones. Introduce each new character by its phonetic name, call out its phonic sound in dit dah form, and then transmit the code character. After the characters are introduced send them in random order in groups of five followed by immediate identification of the character. During the next exercise transmit the code character but do not identify it for 3 or 4 seconds; this delay allows the student time to print the character he thinks it is. Continue through the four lessons following this procedure.

b. You can implement this program with a code oscillator and a hand key if more elaborate code practice equipment is not available.

6–3. Advanced Code Program

a. Appendix C contains 20 lessons with all 36 code characters in each lesson. These lessons can be used as a guide to advance speed of code recognition after your students pass the 5-gpm code test or as basic code practice material in addition to that mentioned in paragraph 6–2.

b. These lessons are presented in doubles, singles, and 5-gpm runs. The additional lessons available in appendix D, Receiving Practice, and appendix E, Sending Practice, will provide you with a variety of code practice exercises that will give you a flexibility to meet your students' individual needs.

6–4. Code Training Devices

a. When elaborate code equipment and distribution systems used in service schools are not available or are impractical, you can use a number of substitute devices that are in Army supply. You can start a code program in your field unit with as little equipment as a code oscillator and a hand key.

b. The tape method of instruction involves using equipment that automatically reproduces audible code practice signals previously recorded in ink on paper tape. Code signals may be presented at varying speeds depending on the teaching pattern being followed. The tape method is particularly good for teaching large groups. Code practice tapes are made of 3/8-inch-wide rolls of paper with inked lines which produce IMC signals when used with appropriate equipment. The tapes are prepared for beginners and advanced students. Loudspeakers or headsets are used for student reception of the code signals.

c. The recorder-reproducer method uses equipment that records code, voice, music, noise, or combinations thereof on metallic wire, magnetic tape, or phonograph records. Code signals are reproduced through speakers or headsets. This method is useful not only for receiving but also for recording students sending so that they can see where they need practice.

d. The items described in a, b, and c above

are stock items available through normal supply channels. Refer to appendix A for information on specific items.

6–5. Code Practice System

a. One type of a newly developed code practice system consists of two parts, the *recorder-reproducer* for the student and the *control device* for the instructor. This tape recorder-reproducer provides 5½ hours of code instruction recorded on 22 channels which are selected by means of a dial. The self-instruction system operates from batteries or line voltage so the student can practice code anywhere. The prerecorded tape can be used to teach IMC or as practice exercises to maintain code proficiency. In addition to receiving practice, it also provides for sending practice. The student can send code with the hand key and record it on the drill tape. Then he can play back both the master track and the drill track for comparison of his sending with the master track.

b. The instructor control device completes the code practice system when group instructions are required. You can transmit your voice, code exercises, or recorded instructions from any audio source with the special instructor headset through the instructor control. This is accomplished by wireless communication to the student. The instructor headset can also be used to monitor individual student progress by simply plugging into the recorder-reproducer.

APPENDIX A

REFERENCES

1. Department of the Army publications

AR 320–50	Authorized Abbreviations.
FM 21–6	Techniques of Military Instruction.
FM 24–18	Field Radio Techniques.
DA Pam 108–1	Index of Army Films, Transparencies, GTA Charts, and Recordings.
DA Pam 301–1	Index of Administrative Publications.
DA Pam 310–3	Index of Doctrinal Training and Organizational Publications.
DA Pam 310–4	Index of Technical Manuals, Technical Bulletins, Supply Manuals, (Types 7, 8 and 9), Supply Bulletins, and Lubrication Orders.
DA Pam 310–5	Military Publications Index of Graphic Training Aids and Devices.
AR 320–5	Dictionary of United States Army Terms.
TM 11–437A	Code Training Set AN/GSC–T1A.
TM 11–2093–10	Operator's Manual Code Practice Equipments EE–94–F, EE–95–F, EE–96–D, EE–96–E, and EE–96–F, and Telegraphic Code Trainers AN/FGC–T1, AN/FGC–T2, AN/FGC–T3, and AN/FGC–T4.
TM 11–2548	Recorder-Reproducers RD–31/U and RD–31A/U.
TM 11–2583A	Sound Recorder-Reproducer Sets AN/TNH–2A and AN/TNH–2B.
TM 11–2584	Sound Recorder-Reproducer RD–87A/U.
TM 11–5533	Code Recorder RD–60/U.
TM 11–5835–212–15	Operator, Organizational, Field and Depot Maintenance Manual Recorder-Reproducer, Sound. RD–173/UN and RD–173A/UN.
TM 11–5835–223–15	Operator, Organizational, DS, GS, and Depot Maintenance Manual, Including Repair Parts and Special Tool Lists Recorder-Reproducer RD–173B/UN.
TM 11–6940–201–10	Operator's Manual Oscillators VO–3–D, VO–3–E and VO–3–F.

2. Training Film

TF 11–3697	International Morse Code, Hand Sending.

APPENDIX B

BASIC IMC LESSONS 1 THROUGH 4

Note to the Instructor:

The following Basic IMC Lessons will serve as a guide for you to implement a code program in your unit. These lessons require no more equipment than a code oscillator and a hand key.

Basic IMC Lesson 1

When someone speaks of learning a new language, we usually visualize months of pronunciation practice and building a vocabulary of at least a thousand words. In the International Morse Code language you are about to learn, you have only to build a vocabulary of 26 letters and 10 numerals, and an entire method of communication is available to you. Do you know of any learning process where you can get so much for so little? If you remain in the military service, you will find 05B or 05C to be an excellent MOS. In civilian life, electronic communication offers almost unlimited opportunities. Or you may wish to join the thousands who find radio to be a fascinating hobby.

This first lesson in International Morse Code contains nine letters. There will be a number of presentations, varied so that the learning process will be as pleasant as possible. First you will hear each letter and its phonetic name, followed by the International Morse Code voice imitation, then the code signal transmitted five times.

Have pencil and paper ready. Print each letter as it is transmitted.

Now you will hear double transmissions of each letter, followed by immediate identifica-

E or Echo. Dit. (E E E E E)
I or India. Didit. (I I I I I)
S or Sierra. Dididit. (S S S S S)
T or Tango. Dah. (T T T T T)
M or Mike. Dahdah. (M M M M M)
O or Oscar. Dahdahdah. (O O O O O)
A or Alfa. Didah. (A A A A A)
N or November. Dahdit. (N N N N N)
W or Whiskey. Didahdah. (W W W W W)

We will repeat these characters now, calling each letter by its phonetic name, giving the vocal imitation, and then the International Morse Code, or IMC, signal transmitted five times.

Continue to print each letter as it is transmitted.

Echo. Dit. (E E E E E)
India. Didit. (I I I I I)
Sierra. Dididit. (S S S S S)
Tango. Dah. (T T T T T)
Mike. Dahdah. (M M M M M)
Oscar. Dahdahdah. (O O O O O)
Alfa. Didah. (A A A A A)
November. Dahdit. (N N N N N)
Whiskey. Didahdah. (W W W W W)

tion. Print each letter as it is identified.

E E I I S	S T T M M	O O A A N	N W W E E	I I S S T
T M M O O	A A N N W	W O O S S	T T I I A	A N N M M
A A E E T	T N N W W	O O I I M	M E E S S	O O A A E
E M M I I	N N T T S	S O O T T	N N A A M	M W W I I

In the exercise just completed, you were told immediately which letter the signal represented. In the following exercise, you will have approximately 3 seconds to see if you can identify and print the correct letter. If you do not recognize the code signal, leave the space blank, and then print the correct letter in the top square when the phonetic callback is given. (3 second delay)

T S M I A	O E N W I	O T S I M	E A W N A	W O T S I
A N M T E	A N I O M	T I E W S	W O N A E	T O N A I
W M M S A	I T M E O	M T S E W	N A O E W	S I N W E
N O A M S	I A N E T	S M E O I	O T N A W	A W O M S

How many of these 100 code characters were you able to recognize and record correctly? Look over your paper for a moment and take note of any characters that were difficult for you to identify.

Due to the similarity of construction of some IMC characters, students sometimes confuse one letter with another. Remember, you are concerned only with sound patterns. Listen to a review of the first nine characters and try to hear them as the letters they represent.

E or Echo. Dit. (E E E E E)

T or Tango. Dah. (T T T T T)
I or India. Didit. (I I I I I)
M or Mike. Dahdah. (M M M M M)
S or Sierra. Dididit. (S S S S S)
O or Oscar. Dahdahdah. (O O O O O)
A or Alfa. Didah. (A A A A A)
N or November. Dahdit. (N N N N N)
W or Whiskey. Didahdah. (W W W W W)

You will now receive an exercise consisting of five-letter code groups, with a callback following each group. The characters most often confused will appear within the same group. (3 second delay)

E T T E T	S O S S O	A A N N A	I M I M I	T E E T T
W O S W S	N N A A A	M O I M I	S O O S O	N N A A N

(Call back)

In the exercise just completed you had 3 seconds to identify and record each letter. Now you will receive an exercise of lesson 1 characters, in random order, with the time shortened to 2 second intervals between characters, and 5 seconds between groups.

Have pencils ready. Record each letter as soon as you recognize it. If you miss a letter, leave the square blank and get the next one.

O M E I T	W S A E M	S A N T I	E W O W T	S I A O M

(Call back)

Each lesson concludes with a progress check at a speed of 5 groups per minute. You will now receive 5 practice groups at this speed, followed by a callback so you can check your accuracy.

M E T A W	N O A S I	O M E T I	T S W I E	A N O S T

(Call back)

Now turn to the progress portion of your paper. During the remainder of the period you will receive a progress check on the nine letters of this lesson.

Stand by.
(Progress test No. 3)
(Approximately 600-cycle tone)

The second lesson or unit of International Morse Code consists of eight letters and one numeral.

Your practice this period will be devoted almost entirely to learning these nine new code characters. You will have only a brief review of the characters of lesson 1 immediately prior to the progress check.

Let's begin practice by learning the code sounds of the characters of lesson 2.

B or Bravo...Dahdididit...(B B B B B)
C or Charlie...Dahdidahdit...(C C C C C)

(Call back 1 second after third repetition)

D or Delta...Dahdidit...(D D D D D)
G or Golf...Dahdahdit...(G G G G G)
Q or Quebec...Dahdahdidah...(Q Q Q Q Q)
X or X-ray...Dahdididah...(X X X X X)
Y or Yankee...Dahdidahdah...(Y Y Y Y Y)
Z or Zulu...Dahdahdidit...(Z Z Z Z Z)
And the numeral Ø . . . Dahdahdahdahdah . . . (ØØØØØ)

Each of these code characters will now be sounded three times followed by its phonetic name. Listen to the signal as it is being repeated and then print the letter or numeral as the phonetic callback is given.

BBB   CCC   DDD   GGG   QQQ   XXX   YYY   ZZZ   ØØØ

Once more:

(Repeat as above)

This is the sound of B or Bravo. Dahdididit. (B B B B B)

This is C or Charlie. Dahdidahdit. (CCCCC)
This is D or Delta. Dahdidit. (D D D D D)
This is G or Golf. Dahdahdit. (G G G G G)
This is Q or Quebec. Dahdahdidah. (Q Q Q Q-Q)
This is X or X-ray. Dahdididah. (X X X X X)
This is Y or Yankee. Dahdidahdah. (Y Y Y-Y Y)
This is Z or Zulu. Dahdahdidit. (Z Z Z Z Z)

And this is Ø. Dahdahdahdahdah. (Ø Ø Ø Ø Ø)

The more often you respond correctly to individual code signals at slow speeds, the easier it will be for you to increase your speed of recognition. The following code signals will be sounded and identified immediately after being sent. Listen closely to the sound of the signal and then print the letter or numeral as the phonetic callback is given. Each signal will be sounded again after first being sent and identified.

...Ready...

B B C C B	B C C D D	C C D D G	G D D G G	Q Q G G Q
Q G G Q Q	X X Q Q X	X Y Y X X	Y Y Q Q B	B Y Y Z Z
Y Y Z Z X	X C C Z Z	Ø Ø D D Z	Z Ø Ø Y Y	G G Q Q Ø
Ø X X Y Y	Z Z C C B	B D D G G	Q Q X X Y	Y Z Z Ø Ø

In your next exercise, you will be given a short period of time to see if you can recognize any of these code characters before their phonetic names are announced. If you do not recognize a signal, leave a blank space on your paper, then enter the letter or numeral in the top row of squares as the phonetic callback is given.

(Call back singles) (2-second reinforcement)

Ø B D Z Ø	B Ø C B Ø	C B Z G C	Q D Ø B X	G D B Q Y
Ø X Z C B	Z Ø G D Y	C D Ø X G	C G C Q X	Ø Y X Ø B
D Y B G Z	Q B Z C X	D Ø G C Q	X B Ø Z B	D Y Q D Z
G X D C B	Ø C Y Q X	Y Z G Ø X	Q G Ø C D	Z Y B C Z

Take a few moments and review your paper. You have just received 100 code characters. How many did you copy correctly? (Pause 30 seconds)

If all code characters were as easy to learn as the numeral 0, IMC would not be a challenge. What makes code difficult for some people to learn is, first, poor concentration resulting in not hearing the code character correctly, and second, confusion between characters because the code sounds have not been thoroughly learned.

During your next exercise, you will hear and record code characters in groups of five. The characters most often confused will be appearing within the same group.

... Ready ...

(Call back after each group) (3 seconds after each group)

(3-second spacing between characters)

Y C B D B	G Z G Z G	C Y C Y C	Q Z Q Z Q	X B X B X
Z B Z B Z	D G D G D	Q X Q X Q	Y C Y C Y	D B D B D
G G Z Z G	X Y X Y X	Q Y Q Q Y	D D B B D	C C Y Y C
D G D G D	Z Q Z Q Z	X X Y Y X	B B D D B	C Y C C Y

To qualify on each of the 4 basic lessons, you must be able to copy at least 15 consecutive groups with a maximum of 4 errors. The speed of the progress check is 5 groups per minute. This means that during the practice portion of each period you must not only learn each signal, but you must be able to recognize each one in a very short period of time.

To assist you in increasing your speed of recognition, the following 5-character code groups will be transmitted at progressively faster speeds. You will hear and record five groups. Then you will be given a phonetic callback so that you may check your reception.

You will have a time interval of approximately 2 seconds between characters, and approximately 4 seconds between each group during the transmission of the first five groups.

... Ready ...

(Call back after fifth group)

Z G Q C C   X G Q 0 B   G X 0 G C   Z Y X B C   Z B D Y Q

See if you can recognize the nine code characters of lesson 2 transmitted at 5 groups per minute.

(Call back after fifth group)

Y Z B G Q   C X D 0 Q   D G Z Y B   X Q B G D   Y Z D X Q

All progress checks on basic code contain characters from the previous lesson. Don't forget the nine code characters learned on lesson 1.

(Call back one phonetic for both characters)

E E   I I   S S   T T   M M   O O   A A   N N   W W

Turn to the progress check portion of your paper. For the remainder of the period, you will receive 5-character code groups at the speed of 5 groups per minute.
(Progress test No. 3)
(Approximately 600-cycle tone)

Basic IMC Lesson 3

You have learned to readily recognize 18 International Morse Code characters and are now ready to advance to lesson 3. In lesson 3 you will learn nine new characters. Upon comple-

tion of this lesson you will have learned all of the 26 letters and 1 numeral. You are already more than halfway to your basic goal, since the numerals are easier to learn than the letters.

First you will hear the phonetic name of each letter, followed by the IMC sound transmitted five times. Following the presentation of the nine lesson 3 characters, you will be given a brief review of lessons 1 and 2. Finally you will be given a progress test of the entire alphabet and the numeral zero.

Ready with paper and pencil?

Print each letter properly as it is transmitted in IMC:

Foxtrot. Dididahdit. (F F F F F)
Hotel. Didididit. (H H H H H)
Juliet. Didahdahdah. (J J J J J)
Kilo. Dahdidah. (K K K K K)
Lima. Didahdidit. (L L L L L)
Papa. Didahdahdit. (P P P P P)

(1–second reinforcement)

F F H H J	J K K L L	P P R R U	U V V F F	H H J J K
K L L P P	R R U U V	V U U V V	F F J J L	L K K H H
P P R R K	K P P F F	H H J J K	K R R H H	U U F F V
V J J K K	P P L L R	R V V U U	F F J J H	H K K L L

In the previous exercise you were told immediately which letter the signal represented. In the following exercise you will have approximately 3 seconds to see if you can identiy the letter and the signal it represents.

F J F J H	K H G K P	L P R U R	U V F V F	H J H J L
K L K P R	P U R V U	V F H F J	H K J L P	K L P U R
V R U V R	J K F J L	H F H U F	V R P U P	R K K V H
J F H L K	K P K L R	P U R V U	F V H F J	H K L P K

You have just received 1∅∅ code characters. Take a few moments and review your paper. How many code characters were you able to recognize?
(Pause for students to look over papers)

On each of the four basic lessons most of the similar sounding characters appear as new characters to be learned. Here are the nine code characters of lesson 3, presented in the order of their similarity.

Romeo. Didahdit. (R R R R R)
Uniform. Dididah. (U U U U U)
Victor. Didididah. (V V V V V)

We will repeat these nine characters in the same manner. Listen carefully and associate each letter with its IMC sound pattern.

Foxtrot. Dididahdit. (F F F F F)
Hotel. Didididit. (H H H H H)
Juliet. Didahdahdah. (J J J J J)
Kilo. Dahdidah. (K K K K K)
Lima. Didahdidit. (L L L L L)
Papa. Didahdahdit. (P P P P P)
Romeo. Didahdit. (R R R R R)
Uniform. Dididah. (U U U U U)
Victor. Didididah. (V V V V V)

Now you will hear these same code characters with a callback after each transmission. Print the letter as the phonetic callback is given. The same signal will be sounded again after first being sent and identified phonetically.

If you do not recognize the code signal, leave the space blank, and then print the letter representing the code character in the square directly above when the phonetic callback is given.

F or Foxtrot. Dididahdit. (F F F F F)
L or Lima. Didahdidit. (L L L L L)
H or Hotel. Didididit. (H H H H H)
V or Victor. Didididah. (V V V V V)
U or Uniform. Dididah. (U U U U U)
K or Kilo. Dahdidah. (K K K K K)
R or Romeo. Didahdit. (R R R R R)
P or Papa. Didahdahdit. (P P P P P)
J or Juliet. Didahdahdah. (J J J J J)

For your next exercise you will hear and

record code characters in groups of five with a phonetic callback after each group. The similar sounding characters will appear within the same group.

U V U V U	F L L F L	K R R K K	V H H V U	H V U H V
J P P J J	R R K K R	F F L L L	U U V V U	J P J P P
F L F L F	H H V H V	P J P J P	J J J P P	R R K R K
H H V H V	F L L F F	K K R R K	U V V U U	J P P J H

To qualify on a progress check you must be able to recognize code characters within 1½ seconds. In the previous exercise the code characters were separated by an interval of 3 seconds. To assist you in increasing your speed of character recognition, in the following exercise you will hear and record five 5-character code groups with a 2-second interval between characters, and a 5-second interval between groups.

U H L R L	K R H U F	F R P J K	H V H L F	K L J P U

(Call back these five groups)

The next five groups will be at the speed of 5 groups per minute.

F V U R J	H F L K P	R L H U V	P U R K J	V H F K H

(Call back the above)

In review, here are the code characters of lessons 1 and 2. Each character will be sounded twice followed by its phonetic name.

E E	I I	S S	T T	M M	O O	A A	N N	W W
B B	C C	D D	G G	Q Q	X X	Y Y	Z Z	Ø Ø

· Turn to the progress check portion of your paper. During the remainder of the period you will receive a test on the 26 letters and 1 numeral contained in lessons 1, 2, and 3.

Stand by.
(Progress Test No. 3)
(Approx 6ØØ-cycle tone)

Basic IMC Lesson 4

This is the fourth and last basic lesson in International Morse Code. It introduces nine new characters which are the numerals one through nine (niner). You will find that these characters are quite easily learned. Numerals one through five all begin with a dit and have a progressive pattern, while six through niner begin with a dah and contain a dah progression.

Listen attentively as the numerals are introduced to you. You will hear each numeral spoken, followed by its vocal imitation, then five transmissions of that numeral in International Morse Code.

After the numerals have been presented, you will receive exercises to reinforce your recognition of these new characters. Near the end of the period, you will receive a review of all characters previously learned and finally you will receive a progress check.

Now, let's learn the nine numerals. Have pencil and paper ready and print each character as it it transmitted.

One ... Didahdahdahdah ... (1 1 1 1 1)
Two ... Dididahdahdah ... (2 2 2 2 2)
Three ... Didididahdah ... (2 2 2 2 2)
Four ... Didididdidah ... (4 4 4 4 4)
Five ... Dididididit ... (5 5 5 5 5)
Six ... Dahdidididit ... (6 6 6 6 6)
Seven ... Dahdahdididit ... (7 7 7 7 7)
Eight ... Dahdahdahdidit ... (8 8 8 8 8)
Niner ... Dahdahdahdahdit ... (9 9 9 9 9)

Now listen to these numerals again. Con-

tinue to print each number as it is transmitted. (Repeat as above)

You will now hear double transmissions of each numeral. Each transmission will be followed by a short pause and its identification. Listen closely as the signal is sounded, then print the numeral representing the code character as the phonetic name is given.

(1-second reinforcement)

1 1 9 9 5	5 7 7 4 4	3 3 2 2 4	4 7 7 1 1	9 9 3 3 6
6 2 2 5 5	4 4 2 2 1	1 6 6 5 5	8 8 3 3 7	7 1 1 9 9
6 6 4 4 2	2 7 7 8 8	4 4 2 2 9	9 5 5 7 7	6 6 8 8 5
5 1 1 2 2	7 7 9 9 3	3 6 6 4 4	2 2 5 5 7	7 6 6 8 8

Here is another exercise with single transmissions of the new characters; however, there will be 3-second pauses between transmissions for you to recognize and print the characters.

If you do not recognize a singal or record it incorrectly, print the correct numeral in the top block as the callback is given at the end of the pause.

9 3 6 1 2	8 7 4 3 9	2 5 7 1 4	6 3 9 8 6	4 2 5 3 8
1 9 8 5 7	2 8 9 4 3	6 7 5 2 4	1 9 3 6 8	4 1 6 5 2
4 5 6 8 1	2 9 1 3 3	2 7 8 5 4	9 6 7 4 5	8 1 3 9 7
6 2 7 4 1	2 5 8 9 6	8 6 4 5 9	3 7 4 1 5	8 9 2 3 4

Let's go back now and review these nine new characters. Don't anticipate and don't try to count the dits and dahs. Listen to the entire sound patterns and hear them as the numerals they represent.

One ... Didahdahdahdah ... (1 1 1 1 1)
Two ... Dididahdahdah ... (2 2 2 2 2)
Three ... Didididahdah ... (3 3 3 3 3)
Four ... Didididadah ... (4 4 4 4 4)
Five ... Dididididit ... (5 5 5 5 5)
Six ... Dahdidididit ... (6 6 6 6 6)
Seven ... Dahdahdididit ... (7 7 7 7 7)
Eight ... Dahdahdahdidit ... (8 8 8 8 8)
Niner ... Dahdahdahdahdit ... (9 9 9 9 9)

In the next exercise you will hear and record numerals in groups of five with a callback after each group.

3 9 4 2 7	9 1 8 6 5	4 6 5 8 7	1 2 3 9 5	7 2 4 1 3

Now, try to increase your speed of response in an exercise with 2 seconds between characters and 5 seconds between groups.

5 4 7 5 2	8 1 3 4 6	9 7 1 3 2	7 5 4 2 9	6 1 6 4 2

The next five groups of numerals will be sent at a speed of 5 groups per minute.

7 7 4 1 9	5 6 3 2 8	4 7 6 1 2	9 5 8 2 1	8 5 6 4 9

Here is a review of lessons 1, 2, and 3. Each character will be sounded twice, followed by its phonetic name.

E E	I I	S S	T T	M M	O O	A A	N N	W W
B B	C C	D D	G G	Q Q	X X	Y Y	Z Z	Ø Ø
F F	H H	J J	K K	L L	P P	R R	U U	V V

Now turn to the progress check protion of your paper. During the remainder of the period you will receive a test on the 26 letters and 1Ø numerals. The letters and numerals will not be mixed within a group.

Stand by.
(Progress test No. 3)

APPENDIX C

LESSONS CONTAINING ALL 36 CODE CHARACTERS

These 20 lessons may be used for advancing speed of code recognition or for basic code practice.

LESSON 1

Doubles
```
5   5   D   D   N      N   4   4   G   G      S   S   7   7   Z      Z   1   1   M   M      Ø   Ø   U   U   T
T   P   P   H   H      3   3   9   9   Y      Y   X   X   V   V      W   W   R   R   I      I   F   F   A   A
K   K   B   B   C      C   J   J   L   L      Y   O   O   8   8      2   W   E   Q   Q      6   6   D   D   J
J   4   4   8   8      Q   Q   7   7   B      B   F   F   2   2      U   U   1   1   G      G   L   L   Ø   Ø
```

Singles
```
W   O   K   D   L      Z   Ø   F   S   N      O   1   K   D   O      B   Ø   6   L   L      S   7   9   Q   S
C   9   4   A   G      P   G   J   U   1      G   Z   3   Y   U      I   S   F   E   9      W   N   U   G   E
Ø   R   X   O   7      8   G   2   U   T      6   I   H   P   4      N   P   E   C   W      9   7   M   V   B
6   2   6   U   3      Ø   4   Z   U   Ø      J   V   T   J   B      I   7   F   A   8      J   W   A   5   2
```

5 GPM
```
B   O   W   9   C      B   A   7   J   O      C   D   8   A   O      J   7   X   8   P      9   Y   T   2   M
Ø   D   N   E   9      V   G   O   V   U      G   D   L   D   W      Q   5   Q   5   E      S   4   L   K   1
6   K   U   F   4      M   2   X   T   Z      2   G   Y   Q   X      G   3   H   Y   S      H   B   V   Z   N
L   1   G   S   A      7   U   R   J   4      3   8   J   C   R      H   Z   F   5   A      I   R   I   P   K
```

LESSON 2

Doubles
```
9   9   Y   Y   P      P   A   A   M   M      S   S   R   R   Z      Z   I   I   V   V      W   W   C   C   6
6   X   X   O   O      5   5   H   H   T      T   E   E   K   K      3   3   N   N   8      8   2   2   C   C
1   1   N   N   6      6   9   9   T   T      O   O   A   A   B      B   M   M   4   4      K   K   U   U   L
L   X   X   E   E      H   H   Ø   Ø   P      P   3   3   F   F      Y   Y   R   R   I      I   Q   Q   J   J
```

Singles
```
X   K   4   Q   J      5   9   U   M   3      K   8   G   D   D      C   G   2   3   1      V   B   D   T   T
O   W   X   R   F      P   G   C   Ø   6      M   X   9   8   5      8   C   Q   D   A      8   L   Y   J   M
C   F   H   Q   X      7   5   3   Z   1      E   R   1   R   7      W   V   I   3   4      R   H   G   Q   J
B   5   1   O   L      M   A   S   E   P      8   5   Y   5   K      7   L   X   N   Y      2   Y   X   Z   Y
```

5 GPM
```
L   O   E   I   G      9   T   Ø   B   Ø      1   K   M   8   F      R   1   C   K   M      N   F   T   Z   H
S   N   W   U   P      W   6   2   I   3      V   3   X   5   P      4   E   Y   7   L      2   K   E   S   T
7   S   Ø   Y   G      C   I   5   7   U      B   M   K   8   G      3   R   Z   1   O      L   4   W   A   F
9   F   K   3   J      E   H   8   F   6      D   U   4   9   C      I   L   X   X   1      V   O   H   C   M
```

LESSON 3

Doubles
```
V   V   S   S   Z      Z   G   G   7   7      W   W   D   D   5      5   1   1   H   H      Z   Z   6   6   R
R   G   G   4   4      Q   Q   P   P   9      9   B   B   I   I      K   K   V   V   8      8   3   3   W   W
M   M   F   F   D      D   2   2   L   L      5   5   X   X   E      E   S   S   Ø   Ø      U   U   O   O   Y
Y   A   A   C   C      7   7   T   T   J      J   N   N   R   R      L   L   F   F   G      G   A   A   1   1
```

Singles
```
E   W   H   H   N      O   D   O   4   K      F   R   B   4   Y      9   S   H   I   N      2   1   V   P   3
M   1   N   K   H      T   F   M   E   A      Q   B   C   A   S      Z   P   Z   K   2      T   L   V   I   T
J   2   Y   X   Z      1   X   N   Y   9      Ø   Y   N   A   Q      6   1   A   1   G      X   B   5   1   O
7   8   Z   7   B      Y   W   V   I   3      R   1   R   7   4      P   X   C   R   F      Ø   L   E   M   A
```

5 GPM
```
Q   Ø   D   Z   U      P   P   W   A   2      T   9   Q   X   Ø      V   R   Y   N   5      P   D   H   B   E
S   Z   L   G   I      N   4   J   8   6      T   5   J   M   6      W   7   2   Y   B      3   O   N   Q   A
6   Q   Ø   F   7      9   8   G   1   I      3   5   H   R   K      Ø   Q   H   U   W      E   4   W   X   G
1   N   L   R   8      D   V   E   A   8      Ø   P   4   J   Z      T   K   C   K   U      M   O   I   R   Y
```

Doubles

```
6  6  E  E  8     8  4  4  3  3     P  P  2  2  T     T  7  7  V  V     Y  Y  Z  Z  X
X  H  H  S  S     O  O  9  9  I     P  I  5  5  Ø     Ø  K  K  U  C     C  B  B  W  I
D  D  J  J  Q     Q  N  N  M  M     Q  Q  A  A  7     7  R  R  G  G     L  L  K  K  I
I  X  X  H  H     F  F  1  1  6     6  9  9  Ø  Ø     W  W  Z  Z  P     P  M  M  C  C
```

Singles

```
Y  2  5  E  G     S  V  N  O  L     D  M  X  9  8     G  C  Ø  6  L     B  3  T  D  9
B  D  T  T  E     B  S  G  8  I     1  A  M  B  W     M  5  9  U  M     K  4  Q  J  Z
O  J  W  8  5     7  F  A  8  F     V  8  D  P  H     3  Ø  6  D  7     H  6  2  6  U
K  Z  9  F  2     5  N  P  E  I     A  H  P  4  6     U  O  I  J  R     5  4  2  J  J
```

5 GPM

```
A  N  E  C  Z     T  N  5  M  G     6  D  2  I  9     H  S  8  4  K     N  Q  V  5  T
1  Y  M  X  7     3  O  2  B  S     D  8  J  O  F     L  7  3  U  I     P  V  A  P  3
G  Ø  A  P  B     B  L  Y  W  B     7  V  J  U  2     C  R  Z  9  1     F  X  2  T  W
X  9  J  4  Y     L  D  Z  M  E     H  F  O  6  5     G  Q  S  C  V     R  Q  N  O  3
```

Doubles

```
D  D  T  T  J     J  3  3  5  5     Y  Y  8  8  E     E  S  S  V  V     N  N  O  O  2
2  B  B  U  U     4  4  M  M  4     4  1  1  L  L     G  G  Z  Z  I     I  J  J  U  U
V  V  D  D  9     9  6  6  H  H     C  C  A  A  Q     Q  W  W  8  8     P  P  3  3  2
2  X  X  T  T     S  S  B  B  5     5  R  R  7  7     N  N  E  E  F     F  Ø  Ø  K  K
```

Singles

```
Z  3  8  C  H     Q  K  S  7  R     Q  G  Ø  3  G     C  J  U  I  G     C  L  H  T  Ø
S  9  Q  S  V     1  I  K  U  W     U  K  4  U  9     C  Z  Ø  F  Z     Y  K  D  L  S
N  H  H  W  S     T  A  C  B  Q     X  V  Q  O  4     R  M  N  P  F     R  E  M  F  7
G  Y  T  3  W     3  P  V  L  K     E  4  O  D  O     T  P  5  E  X     W  I  V  A  2
```

5 GPM

```
B  Y  2  7  W     6  M  J  5  T     6  8  J  4  N     I  G  L  Z  S     E  B  H  D  P
5  N  Y  R  V     Ø  X  Q  9  T     2  A  W  P  P     U  Ø  D  Ø  Q     M  C  H  O  V
1  X  X  1  I     C  9  4  U  D     6  F  8  H  E     J  3  K  F  9     F  A  W  4  L
O  1  Z  R  3     G  8  K  M  B     U  7  5  A  I     C  G  Y  Z  S     7  T  S  E  K
```

Doubles

```
O  O  Y  Y  P     P  8  8  I  I     1  1  O  O  6     6  R  R  F  F     L  L  Y  Y  V
V  C  C  D  D     S  S  2  2  K     K  9  9  T  T     E  E  W  W  Ø     Ø  N  N  B  B
J  J  H  H  Q     Q  4  4  M  M     3  3  Z  Z  X     X  U  U  7  7     G  G  5  5  A
A  F  F  9  9     R  R  X  X  8     S  W  W  Q  Q     6  6  J  J  N     N  I  I  L  L
```

Singles

```
P  H  J  2  O     G  8  R  K  5     T  P  1  U  7     A  C  Y  F  7     6  5  N  V  7
U  2  H  9  N     J  G  C  Q  W     Y  G  I  U  T     Z  5  V  M  6     E  4  E  A  I
N  B  3  Q  I     1  6  J  4  K     C  J  W  K  3     I  7  S  4  8     8  K  L  Ø  R
M  O  B  5  X     B  T  M  Ø  W     2  S  1  Ø  F     L  H  C  9  L     1  2  4  P  8
```

5 GPM

```
B  5  3  E  Q     4  S  Ø  K  1     A  W  C  W  4     3  7  O  8  L     P  Ø  8  P  N
X  1  2  Z  O     2  Q  6  N  T     7  5  Q  B  I     A  N  Ø  S  L     A  D  R  9  7
F  Q  S  R  6     O  F  D  Z  T     L  9  T  C  5     2  H  U  Z  G     H  E  M  Ø  G
J  R  K  B  C     X  I  N  W  D     K  U  G  2  9     S  H  6  F  9     V  E  1  Y  M
```

8

LESSON 7

Doubles
```
D D V V 1   1 Ø Ø K K   7 7 S S U   U Z Z 3 3   Y Y 5 5 O
O 4 4 P P   C C E E 2   2 B B A A   M G G P H   H T T K E
J J 6 6 P   O 8 8 X X   4 4 U U B   C G G P P   F T W W E
E Q Q 3 3   O D D V V   L M M B B   A A N N 7   7 Y Y Ø Ø
```

Singles
```
U Q D F S   F H D W R   Y 5 9 P O   X V E L Z   S Z Y 3 R
1 R Z X Y   2 3 D Z G   Q V Ø M X   N 9 E D A   T E X 0 B
T D B M U   9 5 J Q 4   K 8 9 X M   6 0 C G 3   I V W 7 R
I U J C I   E P N 4 P   H A 5 8 W   J 8 A F 7   U 6 2 6 T
```

5 GPM
```
X 1 J 3 P   K V R V Z   E I O U 3   D 4 G 6 J   8 W P A A   M
Y U 8 T L   T 7 5 B H   C X 4 F V   M Y I J 1   I 7 U A A   O
D Q G 5 O   4 P Ø 6 B   P 3 M E 8   6 O 5 Y Ø   A F 3 G K   9
U H I D F   T M 5 G 7   T Q W 9 Z   X L Z 6 8   Q K M K 4   4
```

LESSON 8

Doubles
```
5 5 9 9 R   R H H T T   S S I I 2   2 Z Z 1 1   3 3 U U W
W R R T T   7 7 4 4 Q   Q J J O O   9 9 1 1 K   K M M H H
Z Z C C B   B Y Y 2 2   I I X X A   A P P E E   5 5 8 8 V
V L L S S   Ø Ø G G D   D 6 6 N N   F F E E J   J R R M M
```

Singles
```
C A T 7 F   M E R V S   Q 9 S Ø F   Ø Z L D K   Y G 3 Z G
X N Y B 5   1 O 2 K L   V P 3 O D   O 4 E S W   H H N Q B
H A Z M 1   3 O A O Ø   O 4 F 4 M   Q 5 7 D M   D N 3 V W
Ø 6 G K V   B 4 E 9 W   I 2 W T R   X P Y C 5   S L O A C
```

5 GPM
```
8 Z F V C   2 W 1 9 R   Y T W E R   2 V 8 I J   S X H J P
X 3 U H S   B C N N 4   1 A K J C   D Ø B E V   2 R N L 7
C X 6 Ø X   K Z T L U   5 P L 7 T   S I I 3 T   Y A Ø U K
L Ø N 2 S   4 B O 1 6   C W H W A   G 7 D X 9   Q 1 I D P
```

LESSON 9

Doubles
```
N N P P V   V G G F F   W W A A Y   Y U U Q Q   4 4 O O 6
6 8 8 3 3   T T 7 7 D   D 8 S I I   X X 9 9 2   2 K K B B
C C Z Z 5   5 Ø Ø H H   1 1 L L C   C U U 9 9   L L Ø Ø G
G H H F F   P P Q Q S   S 4 4 7 7   E E 3 3 D   D I I N N
```

Singles
```
T 8 N 6 J   9 N 4 H W   E F P X T   B 8 G 1 6   5 I 2 G Y
Z B 9 U S   L V 7 E K   X G J P Y   M T 9 A U   3 U C 4 5
Z Ø 2 7 H   5 Q I Y 7   6 8 J Q F   N Ø L Z C   D L X V 1
2 L 1 X N   Y D H R 8   K 1 B P S   S Q K I E   R J U 2 R
```

5 GPM
```
X 4 B M A   P N D 7 6   5 V 4 E N   Y B 2 Y M   R 8 O 8 H
8 S M Q 9   2 L J Z E   K 9 M T R   O E U 7 U   C 1 B V F
2 F W E Ø   I W J 9 4   I H 6 R 3   V K C 8 Y   G S Q V F
5 3 P R J   N G Z G F   3 H O 5 Q   Q S J Z Y   5 O 6 8 E
```

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LESSON 10

Doubles

J J 2 2 R R Y Y 5 5 A A W W O O 8 8 K K B B T T M
M 1 1 Z Z 6 6 X X V A V M M W L O Y Y A A K D D N
I I 7 7 P P Z Z 2 2 3 3 Ø Ø 4 4 J J B B H N X X W
W 9 9 R R Q Q 8 8 D D K K 1 1 U U O O C H C 6 6 T

Singles

R Q B C A T S W H H N O D O 4 E K L V P 3 B 5 1 O
I U J C G 3 Z G L D K Y Ø F Ø Z V S Q 9 S 7 F M E
5 T T D B U 6 2 6 8 A F 7 5 8 W J 4 H P A I P U N
Y 2 7 R 1 R 3 I V W 6 Ø C G 8 9 X M J Q 4 K M U 9

5 GPM

M 3 P B 6 Ø P 4 O 5 G Q D O A U 7 I 1 6 Z L X Z 9
W A T 7 G 5 M T F D I H U 9 G 3 F Q Ø I 8 V 2 R E
W T Y R 9 1 W 2 C V F Z S 4 K M K Q 8 E B Ø D C J
K A 1 4 N N C B S H U 3 X P J H X S J L Y 7 L N R

LESSON 11

Doubles

E E V V G G F F M M K K B B H H 5 5 L L S S J J R
R 9 9 X X C C Z Z W W U U Q Q 8 8 E E 7 7 6 6 V V
1 1 T T N N O O D D 2 2 A A 4 4 Ø Ø P P F F 3 3 I
I Y Y G G A A H H X X M M E E 7 7 P P N N Q Q R R

Singles

8 G I F U 3 Z H Q U 1 R Q 1 5 B X F J X Y D U S X
Q O J C P L O F C S H V D 5 T 3 B R Z E 2 3 S K J
R N D 6 Ø S Q F I V 7 P M W C B 2 T 4 Y K X O 2 4
4 R 7 B H Z D T T 1 K N Z W V B 6 G 9 N N 1 5 Ø 5

5 GPM

X S U D Y X J F X B 5 1 Q R 1 U Q H Z 3 U F I G 8
1 Y T P C E K L 7 A W 5 9 U I X 3 Q T A K W W M 4
3 A 2 S D M 6 X 2 D Ø V L O Y 4 H H N 7 O Ø U 6 G
I 5 Z 8 B E I 6 Y J 6 F Z S 8 L L G 9 J 1 Ø 8 J V

LESSON 12

Doubles

K K 2 2 Y Y 8 8 B B L L C C 3 3 G G 6 6 1 1 W W I
I V V D D O O T T 4 4 F F 9 9 S S Z Z Ø Ø J J 5 5
U U J J U U A A 1 1 Y Y F F M M K K 2 2 L L D D B
B C C O O X X 8 8 4 4 9 9 S S 6 6 Z Z E E 3 3 Ø Ø

Singles

4 M W W K A T Q 3 X I U 9 5 W A 7 L K E C P T Y 1
4 I 5 9 3 V 8 Z R C J E 9 E F U 2 C B W C Q T G O
G 6 U Ø O 7 N H H 4 Y O L V Ø D 2 X 6 M D S 2 A 3
V J 8 Ø 1 J 9 G L L 8 S Z F 6 J Y 6 I E B 8 Z 5 I

5 GPM

2 S Q A 1 8 V H A P Ø D E E W 7 F K X R N H M 3 U
P 1 M A R 8 P 9 Ø Y A G K J L 7 P 4 9 O M M G 7 N P
K W W M 5 2 8 X Y L X Ø 4 S F 3 3 Q T A 1 Y T P X
W M B N 6 Ø 2 M Q E R B 7 R 4 N 9 G 6 J Ø 9 A S X

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LESSON 13

Doubles
```
I  I  G  G  P    P  7  7  R  R    Q  Q  N  N  W    W  V  V  H  H    T  T  5  5  L
L  N  N  T  T  F  W  W  8  8  R  R  J  I  I  O  W  Y  P  Q  Q  H  C  T  C  K  K  9  L
S  S  3  3  T  F  F  U  U  5  5  A  J  Ø  Ø  Y  Y  G  X  X  Q  D  D  C  2  2  B  B  9  7
7  M  M  Z  Z  F  E  U  H  H  A  A  J  1  1  6  6  G  V  V  D  5  5  E  E  L  L  7  L
```

Singles
```
U  3  M  H  N    R  X  K  F  7    W  E  E  D  Ø    P  A  H  V  8    1  A  Q  S  2
N  7  G  M  M    O  9  4  P  7    L  J  K  G  A    Y  Ø  9  P  2    8  R  M  S  1  P
P  T  Y  1  A    T  Q  3  3  F    S  4  Ø  A  X    C  L  X  8  2    5  M  W  B  W  K
X  S  A  9  Ø    J  6  G  9  N    4  R  7  B  X    R  E  Q  M  2    Ø  6  N  B  M
```

5 GPM
```
K  4  P  2  I    N  Ø  5  1  N    G  C  W  M  P    G  W  L  N  B    Z  T  O  D  J  J
Z  4  T  2  B    S  C  F  O  C    G  9  Z  7  L    H  U  6  6  E    Z  F  5  D  U  V  A
U  F  I  G  3    I  K  5  C  5    P  W  V  9  L    P  H  Q  H  Z    A  X  S  D  U  N  H  O  T
6  M  4  H  L    7  W  E  T  R    5  O  9  4  P    J  K  G  A  A    3  R  N  D  A
```

LESSON 14

Doubles
```
7  7  1  1  R    R  S  S  Y  Y    N  N  9  9  F    E  A  A  O  O    K  K  B  B  H
H  V  V  4  4    I  I  T  T  W    W  C  C  X  X    M  2  2  Q  Q  P    P  Z  Z  B  G    G
U  U  3  3  8    8  6  6  J  J    D  D  Ø  Ø  M    P  2  K  K  M    M  C  3  3  8    8  L
G  5  5  J  J    F  F  Ø  Ø  4    4  T  T  P  P    M  2  2  3  3    C  C  U  U  L    L
```

Singles
```
J  J  D  O  T    Z  B  N  L  W    G  P  M  W  C    N  1  5  Ø  N    1  2  P  4  K
H  V  D  5  F    4  E  6  6  U    L  1  7  Z  9    G  O  F  C  S    B  3  T  I  4  Z  U
O  D  U  S  X    3  Z  H  Q  U    H  P  9  V  W  P  5  C  5  K  W    3  G  I  4  F  U
T  A  N  R  3    A  A  G  K  J    P  4  9  Ø  5    R  T  E  W  7    L  H  4  M  6
```

5 GPM
```
S  G  Y  O  H    Q  U  3  M  H    X  K  F  7  D    K  E  B  7  I    1  D  2  U  C
J  I  A  Q  S    J  8  Ø  1  Z    8  7  Y  X  3    T  9  M  U  Y    Y  6  I  2  X  L  6
Y  B  8  Z  I    G  C  R  Q  Y    A  1  8  1  S    O  L  V  Ø  7    L  D  F  2  P  K
Q  B  O  I  Ø    U  D  8  V  V    8  Z  R  C  N    R  J  E  9  E    F  D  F  H  P
```

LESSON 15

Doubles
```
1  1  D  D  R    R  6  6  B  B    H  H  9  9  S    S  O  O  Y  Y    N  N  I  I  7
7  A  A  V  R  V  W  W  E  E  Q  Q  X  X  E  E  2  2  S  S  9  9  N  T  A  T  C  4  4  P
M  M  A  R  R  V  W  F  N  U  E  G  G  D  K  K  7  7  Ø  Ø  J  J  3  3  A  A  T  Y  C  Y  B  B
P  8  8  5  5    X  X  U  U  D    D  Z  Z  Q  Q    L  L  V  V  H    H  C  C  Y  B  B
```

Singles
```
C  U  2  D  1    I  7  B  E  K    D  7  F  K  X    H  M  3  U  Q    V  O  Y  G  S
L  E  I  6  Y    Y  U  M  9  T    3  X  Y  7  8    Z  1  Ø  8  J    S  Q  A  I  B  J
6  X  2  Y  L    7  Ø  V  E  L    S  1  8  1  A    Y  Q  R  C  D    G  U  5  Z  8  B  Y
K  P  H  F  F    E  9  E  R  N    C  R  Z  8  V    V  8  D  U  Ø    I  O  B  Q
```

5 GPM
```
J  K  S  3  2    E  Z  R  B  3    T  5  D  V  H    S  C  F  O  L    P  C  6  O  Q
4  2  O  X  K    E  Y  4  T  2    C  W  M  P  7    V  I  T  Q  D    Ø  6  D  7  R  4
5  Ø  5  1  N    Y  N  9  G  6    V  W  Z  N  K    1  T  F  Z  S    H  B  7  N  I  4
O  G  T  W  C    Q  B  C  2  U    F  E  9  E  J    C  R  Z  8  V    3  9  5  I  4
```

11

TM 459-98

Doubles

```
1 1 O O 9   9 I I W W   8 8 J J 9   9 3 3 2 2   Q Q S S C
C 4 4 V V   6 6 T T Z   Z W W O O   M M L P P   G H H U F
K K N N 1   1 I I D D   Ø Ø Y Y N   R L L 8 7   E M U M 5
5 A A B B   X X 4 4 3   3 K K N •   C C 8 8 9   9 M M T T
```

Singles

```
X W 2 3 N   Q Z 6 7 Ø   3 P Ø A V   7 I R 8 R   B R T G B
6 E 8 1 S   T I U Y H   H G 6 V E   Z 2 K 4 5   N E L 4 Y
E C S V Y   F M 4 9 L   A G F D S   W K 7 3 6   Z L 8 6 7
O Ø J 6 N   X L I Z A   C 5 7 V V   9 Ø 8 Z 4   E L A C D
```

5 GPM

```
B G T R B   R 8 R I 7   V A Ø P 3   O 7 6 Z Q   N 3 2 W X
Y 4 L E N   5 4 K 2 Z   E V 6 G H   H Y U I T   S 1 8 E 6
7 6 8 L Z   6 3 7 K W   S D F G A   L 9 4 M F   Y V S C E
D C A L E   4 Z 8 Ø 9   V H 7 5 C   A Z I L X   N 6 J Ø O
```

Doubles

```
W W Q Q 2   2 5 5 J J   V V E E S   S L L U U   A A G G Ø
Ø 7 7 R R   H H 1 1 P   P D D Z Z   I I F F 6   6 B B O O
X X Y Y N   N 5 5 H H   S S G G Ø   Ø 7 7 O 6   9 9 1 1 K
K I I J J   3 3 R R W   W Q Q A A   P P D D Z   Z L L 6 6
```

Singles

```
Ø 9 5 S 3   O Ø 8 X M   P Ø K U U   7 T 3 F O   X M W F D
T Y C 2 Y   Q K H Q V   P 9 A 8 V   A L S J G   1 I W 1 9
D M J C R   K Q 4 Ø W   Z Q 4 V K   L S J P O   R W K W 5
1 M E 9 2   F B 1 J G   8 G 6 T H   3 5 P E O   2 R N J D
```

5 GPM

```
D F W M X   O F 3 T 7   U U K Ø P   M X 8 Ø P   3 S 5 9 Ø
9 1 W I 1   P G J S A   V 8 A 9 P   V Q H K Q   Y 2 C Y T
5 W K W R   G 4 P S L   K V 4 Q Z   W Ø 4 Q K   R C J M D
D J N R 2   O E P 5 3   H T 6 G 8   G J 1 B F   2 9 E M 1
```

Doubles

```
X X 4 4 F   F E E U U   2 2 B B C   C M M 8 8   Y Y V V T
T M M K K   C C 2 2 J   J Ø Ø 1 1   3 3 U U 7   7 Y Y A A
9 9 6 6 N   N D D T T   4 4 Z Z V   V O O R R   P P 5 5 Q
Q F F G G   8 8 I I E   E X X S S   W W H H B   B L L N N
```

Singles

```
Z B J T Y   B 7 C M X   F 5 Q 9 2   O N I X S   Y U I F 5
H U N M U   1 T I C X   N A U D R   Q N B 2 P   J H 3 B D
U 5 F E M   U P M 1 2   V 4 G A V   W C Y 5 1   R O E N 9
D S 5 3 D   K N K A 6   Ø F Y O 1   8 G F 2 4   F W P J J
```

5 GPM

```
5 F I U Y   S X I N O   2 9 Q 5 F   X M C 7 B   Y T J B Z
D B 3 H J   P 2 B O Q   R D U A N   X C I T 1   U M N U H
9 N E O R   1 5 Y C W   V A G 4 V   2 1 M P U   M E F 5 U
X C 2 O 3   N L I U L   J B 7 I K   4 A S 3 R   D 3 5 S D
```

12

Doubles

```
8   8   U   U   O     O   L   L   B   B     3   3   D   D   J     J   V   V   S   S     M   M   G   G   E
E   X   X   1   I     P   P   Y   Y   W     W   Z   Z   6   6     7   7   5   5   Ø     Ø   F   F   4   4
1   1   T   T   Q     Q   2   2   A   A     9   9   R   R   H     H   C   C   K   K     9   9   4   4   G
G   V   V   D   D     P   P   7   7   A     A   N   N   S   S     8   8   Ø   Ø   W     W   E   E   Q   Q
```

Singles

```
L   9   G   Y   7     D   C   1   A   Z     I   V   Q   P   J     Q   H   9   P   E     C   U   6   5   M
9   W   Z   E   S     N   M   B   X   Q     5   P   8   T   Ø     Q   K   V   J   X     M   4   S   L   K
B   D   Ø   7   C     G   5   F   O   P     Q   P   X   T   3     M   R   T   Y   F     S   4   Ø   8   8
O   I   E   X   6     K   N   K   A   6     Ø   F   Y   O   1     8   G   F   2   4     F   W   P   J   J
```

5 GPM

```
M   5   6   U   C     E   P   9   H   Q     J   P   Q   V   I     Z   A   1   C   D     6   Y   G   9   L
K   L   S   4   M     X   J   V   K   Q     Ø   T   8   P   Q     Q   X   B   M   N     S   E   Z   W   9
8   8   Ø   4   S     F   Y   T   R   M     3   T   X   P   Q     P   O   F   5   G     C   7   Ø   1   O
J   J   P   W   F     4   2   F   G   8     1   O   Y   F   Ø     6   A   K   N   K     6   X   E   I   O
```

Doubles

```
X   X   H   H   R     R   J   J   I   I     M   M   U   U   B     B   3   3   2   2     K   K   Z   Z   T
T   6   6   1   1     5   5   F   F   O     O   L   L   Y   Y     C   C   W   W   D     D   7   7   1   1
8   8   2   2   T     T   Q   Q   C   C     V   V   3   3   Y     Y   I   I   5   5     H   H   R   R   P
B   F   F   U   U     Z   Z   K   K   X     X   6   6   M   M     J   J   G   G   A     A   L   L   P   P
```

Singles

```
I   7   4   E   A     O   9   H   E   Y     R   H   L   6   V     8   W   D   H   8     7   K   W   W   Ø
R   U   3   T   Y     5   L   9   B   3     O   4   N   V   Q     D   S   Z   6   3     I   2   G   W   H
1   B   J   T   7     R   D   C   C   X     7   U   6   K   M     1   V   J   S   H     N   A   G   B   1
H   Ø   T   Z   Z     2   R   I   5   Y     2   T   U   Q   L     Ø   B   8   G   A     Z   G   N   9   2
```

5 GPM

```
Ø   W   W   K   7     8   H   D   8   W     V   6   L   H   R     Y   E   H   9   O     A   E   4   7   I
H   W   G   2   I     3   6   Z   S   D     Q   V   N   4   O     3   B   9   L   5     T   Y   3   U   R
1   B   G   A   N     H   S   J   V   1     M   K   6   U   7     X   C   C   D   R     7   T   J   B   I
2   9   N   G   Z     A   G   8   B   Ø     L   Q   U   T   2     Y   5   I   R   2     Z   Z   T   Ø   H
```

13

APPENDIX D

RECEIVING PRACTICE, 7 THROUGH 18 GPM

Use the following lessons to correct your code practice exercises. This will give you prompt reinforcement of your response so that you will be able to determine your progress.

7 GPM RECEIVING PRACTICE

SERIES 1

5 GPM

W4B DE 7YS NR3 310124R GR 23 BT

JKNRB GSDBQ CEHLT IMXUK QJRSO   ZPVAF RNMJX QACYU LBVNH 91847

ZTGVF YADGE KTWSI FIDPW HYOEZ   31560 QLHFC RADPJ GWVKS YDZPH

ENZOF GRGKO NVBJN BT K

6 GPM

XT6 DE D7C NR5 242301R GR28 BT

WHKTR IJIFQ UUYME IOAXE 91842   VZAJO STNKH CGWPB KLNJX MUVSR

67305 GEBDR QQFGZ STLHF CEUMY   AQVMO ILADN PIXUW ROEKY FDHBY

TZJWI WOKBG FMCKL 49536 ZJPNH   TCVXU EGDBS NVMOQ BT K

7 GPM

RK4 DE S2Q NR8 311827R GR31 BT

GJNOQ RZTHE FIUYA KXLWI AUMYJ   TLRSK IHEFV 27108 PBWZR YSADD

HWSDK BGKOR WCFMV 54971 AZVPG   NQLFM CUNBZ DGRKI JLKYU LNSTZ

HEIUX 06823 AFESW DJYRB OJYTH   IKAEP VTXOM DJNSZ EMXAW PGOLF

MCUNV BT K

1

7 GPM RECEIVING PRACTICE

SERIES 1

7 GPM

5BU DE VE2 NR9 190723R GR31 BT

BGWHC KLOQR 34072 VRJBN QIKEO   XIKRG PHYZS BZADT UVAIF HWTDS

JLMQU YETFY DGQCV WRBTH MCUPA   FRKWX 59186 WFMXA SVPGN YHBJS

EOHKQ MULTZ ODBNJ ZKVLR GDFIA   YOLES ZNTUY IQEIJ WRNEK GDKAD

28136 BT K

8 GPM

WYG4 DE HS12 NR13 312358R GR35 BT

JKLST HCFIM VYAZP DGOQL FWEUM   XITKE 57904 HNPBV ZGNOR WBYUM

OQCXU RZSHW JILYB 20817 FVSJT   WSPGB OTHIM CYVMF CWTSO LJDHP

VAFES TWXOM QEAKF LQNDJ RVZBY   GKNQR ZHEIU XAUNB ZDGRK 46593

JOTCU AYWPD 52941 QLFMU PZFGY   BT K

2

7 GPM RECEIVING PRACTICE

SERIES 2

5 GPM

J3N DE 8SY NR1 Ø1Ø231R GR23 BT

NBRKJ SBDQG HTLEC MKUXI JSORQ   AVFZP MXJRN AUCYQ BNVHL 14789

GEVZT AEGDY TISWK DWPIF OZZYH   17536 HCFLQ DJPAR VSKWG DHPZY

ZFOEN GOKRG BNJNV BT K

6 GPM

6TX DE 7DC NR4 131415R GR28 BT

WRKTH IJQFI UMEYU IOXEA 91842   ZAJOV TKHNS CWGPB KNLXJ ISRVM

673Ø5 GERBD GZFQQ SHFLT CMYUE   QMOVA NUDAL WUIPX KYOER FHYBD

WUZJT GKOWB MCKFL 49536 HNPJZ   TVXUC BSGDE NMVOQ BT K

7 GPM

1ZO DE 5U8 NR22 Ø12112R GR31 BT

GQOMJ REHZT FAJIU KIWXL AMYYU   KSRLT VIFHE 271Ø8 RZWBP YDSAD

DSKWH GROKG VWMFC 54971 AGPVZ   NMFLQ BZNCU DKIRG UYKJL LZNST

HXUET Ø6823 AWFES BRDJY HTYJO   IPEAK MOVTX ZDJSN WAXME FGOLP

MCVNE BT K

3

7 GPM RECEIVING PRACTICE

SERIES 2

7 GPM

5BU DE VE2 NR9 190723R GR31 BT

BGWHC KLOQR 34072 VRJBN QIKEO   XIKRG PHYZS BAZDT UVIFA TDSWH

JQULM ETYFY DVCQD WRHTB MAPUC   RKWXF 86915 FWXAM GNPVS YJSHB

KQOHE MLTZU JBDON KVZLR AIGDF   ESLOY ZTUYN IQJIE WLREN KADGD

13862 BT K

8 GPM

DCJ2 DE COW9 NR8 212356R GR35 BT

JSLKT GFIMC VYAPZ LQODG FWUME   TKEIX 09475 HVBPN RONZG YUMBW

UXCOQ WHSZR LYBIJ 71802 FTJSV   BGPSW MIOHT CVMFY CWTOS LJDPH

ESFVA MOWTX UEFKE LDJNQ RZVBY   GRQNK UIZHE XBNUA KGRDZ 59364

CUTJO ADPWY 41952 QUMFL GYZFP   BT K

4

SERIES 3

5 GPM

J3N DE 8SY NR1 Ø1Ø231R GR23 BT

NBRKJ SBDQG HTLEC UIXKM SQORJ   VAZPF NJRXM CUYQA VLHNB 84197

VETZG GEDAY SIKWT FIPDW ZOEYH   31576 LCFHQ PADJR SGWKV HYZPD

FOEZN OKGGR BNJNV BT K

6 GPM

6TX DE 7DC NR4 131415R GR28 BT

WRKTH IJQFI UMEYU OAEIX 12498   JAVOZ STNHK WBPGC NJLXK SIMVR

7Ø356 REBDG FAQQZ HTLFS YUMEC   MAQOV DUNAL PIXWU YOREK HDBYF

JUWZT KOBWG CLFKM 93654 NZJPH   CUXVT SEDGB NMVOQ BT K

7 GPM

1ZO DE 5U8 NR22 Ø12112R GR31 BT

GQOMJ REHZT FAJIU WILXK YUMYA   STLRK HIVFE 7Ø182 BRWPZ SAYDD

HKSWD ROGGK WCFMV 41795 GAZPV   NLFMQ CUBZN KIDRG YUJLK NLZST

HUTEX 3Ø628 WEFSA RYJDB JOTYH   PAKIE TOMVX DSNJZ XEMAW GOPLF

MCVNE BT K

5

7 GPM RECEIVING PRACTICE

SERIES 3

7 GPM

5BU DE VE2 NR9 190723R GR31 BT

BGWHC KLOQR 34072 RNJBV KOIEQ   KIGRX ZYSHP DATZB HIUAV TDSWF

UMLJQ YETYF VDCQD RTBHW PACUM   WRFKW 18956 MAFWX PSVNG JHSBY

HEQKO LUZTM DOBNJ VRZLK DIGAF   SOLYE NUTZY JIGIE RELNW DAGDK

13862 BT K

8 GPM

DCJ2 DE COW9 NR8 212356R GR35 BT

JSLXT GFIMC VYAPZ OGDLQ WEMUF   KITEX 70459 VNBPH ZOGNR MUWBY

QUCOX HRSWZ BIYJL 12708 JVTSF   GWSPB HOTIM FYMVC WOTSC JHDPL

FASEV WXTOM FEKEU DQNJL BYVRZ   RKNQG HEIHU BANUX GDRZK 39465

TOJUC DAWYP 12549 FUQML GYZFP   BT K

6

7 GPM RECEIVING PRACTICE

SERIES 4

8 GPM

KNO2 DE TAO3 NR1Ø 3Ø1257R GR35 BT

JKLST HCFIM VYAZP DGOQL FWEUM   XITKE 579Ø4 HNPBV ZGNOR WBYUM

OQCXU RZSHW JILYB 2Ø817 FVSJT   WSPGB OTHIM GYVMF CWTSO LJDHP

41879 HNBZA GKIWX LOQCS BDGJW   ZOTIX PDOTF KUVFE RTYLW AFTJM

QCXAU LCTWQ NJGBH VDGRS KIWXL   BT K

7 GPM

KLM3 DE TOA8 NR3 28Ø724R GR31 BT

KYWJL XIOMU 3Ø687 SQLGB WHERS   FVXIM SRVYZ JNOBG TKACI EHNBV

AKRED TNKDY PSJMD JUSRB ILAYC   HZQME 93256 RWFNK VUMAE HNVJG

89714 ZABHN XWIKG LOCSQ WJGBD   TIXZO FTODP KUBFE RTLWY FTJMA

XAUCQ BT K

7 GPM

5ZU DE 1ZO NR6 131623R GR31 BT

SKLTJ ICMFG YPZAV DLGOQ MUEWF   TXIEK Ø5479 BHPNV GROZG WYBUM

COUXQ RZSWH YILJB 78Ø21 VSFTJ   WBPSG TMOIH MVYCF TOSCW HLPHJ

SAFEV TXOMW KUEFE NLJQD VZRYB   HEIQU NABXU RDGZK 54639 KNRQG

JOUTC BT K

7

SERIES 4

6 GPM

GL5 DE R3X NR1 Ø7Ø514R GR28 BT

ZAKJF ZWBHE OBMPR UIBLJ DUNTN   QAYNG DQSEI BIAOG LRFKM TWCYV

679Ø8 RADDM XNGPM VRZFW Ø7328   LCMVP KOIEY QUDMS CEHTQ DRKIW

XYZGF CJTHG HBRAB UJLFZ XITZB   SUKNP WSOJN VEAOY BT K

5 GPM

6BX DE CV5 NR8 312345Z GR23 BT

YOBNM ULPXG ZWTEW CRQGT RFMEL   YDLDA SUKRM GNCKH BJNIZ BQSIT

ODAEH VAFOQ 12789 CIYVK 3645Ø   XZJVF IHUVD OCQVU CZIWE GREQG

BIPZY SLJUK PFAMH BT K

8

6

7 CPM RECEIVING PRACTICE

SERIES 5

5 CPM

8WS DE X25 NR7 18183ØR GR23 BT

MOTOR AFTER HOURS UNDER LIGHT   INPUT METER AUDIO POUND CORPS

SPRAY WHICH TOTAL AREAS BARRED   METAL STEEL ENTER CAUSE PARTS

TOUCH PAINT APPLY BT K

6 CPM

X92 DE RL4 NR8 26Ø936R GR28 BT

SENSE HUMOR MINDS WOMEN THOSE   OUGHT OFTEN NIGHT PHONE MADAM

ALONG SHALL FRONT THINK WHERE   AWOKE WOULD ASKED DOING WORLD

GIRLS DRESS REELS TAKES GOING   STAND SILLY SOUND BT K

7 CPM

IC6 DE J4A NR12 Ø7Ø329R GR31 BT

SWEAR SWUNG PLACE EARLY HOUSE   DOORS SMELL SCARF LEAPS STOOD

FRANK BLANK SPRIG THERE ALERT   EVERY NIGHT RIGHT STORY BOOKS

BEING SHIFT MIGHT ASIDE COULD   ENTER TAKEN SWEET YOUNG THING

HELLO BT K

7 GPM

7GY DE B9K NR11 131757R GR31 BT

NIECE KITTY FREAK CHAIR LUCKY   CRAZY KNOWS THREE OFFER EXACT

COUNT PARTY YEARS SILLY THANK   MAYBE ITALY HELPS DRINK TIGHT

LITHE WHOLE HOURS WATCH WHILE   READY LYING DRAWN WRONG NEVER

AGAIN BT K

8 GPM

T5X DE 6PL NR4 190216R GR35 BT

CRAZY SPINE SMALL STOVE STAIR   WOMAN FIGHT BRIEF FIRST YEARS

READY ASKED FINAL SCORE WATCH   OTHER PARTY SKIRT ALLEY BREAK

FRAME ABOUT STAND MIGHT RACED   WIDER FRONT STOLE PANTS EARLY

DRESS HURRY AWAIT ORDER FOUND   BT K

10

SERIES 6

8 GPM

TB3 DE 1YO NR12 212223R GR35 BT

KMRGB LDFGX WITTE 26174 HUMCD   NVLOJ FMVYL WRBRQ CYPTY AVFZO

QXKCG Ø3958 UJDEP ARHFL NTDMZ   SBPGH SAEWQ BSJOZ XIUKN RVIKX

23154 RMOGT VEWFZ DGKGW CMYLJ   QUMFC VLATO BEYPM ICXMH YEDGK

FTXUJ GBMRK DXGDL LOVNJ MYLFV   BT K

7 GPM

F3S DE V4M NR2 Ø21454R GR31 BT

PHASP SROBO DZLBI WZNNS 9786Ø   JUZAK WOQAX PDACH BIZLJ DNSJN

IMEUK HSPJB UKSBJ EGXRT CLYYN   TVORW 4Ø369 VZMAU TQCPF 28147

YXIVH WGVEQ LFRDG IZWMK PUCBJ   OHMFR IEQVN Ø6451 TQOAB YXFDC

IVKGH BT K

7 GPM

PH7 DE 19C NR7 1121Ø7R GR31 BT

29783 LYXGK EYGCW LHPMR JDNMU   ATIQS LZFER BWUSP ZXBOD SKNAJ

MEBRP UESTL MJNDY HCWXY GLRID   KVGFM WRZOC VFOTV VOIUA XCLHK

68Ø24 57913 GHECT AFBSZ NIZKJ   OQBJO XNSWB QDFUP QSEUA LPAON

TCQWZ BT K

11

7 GPM RECEIVING PRACTICE

SERIES 6

6 GPM

BA1 DE 4KZ NR9 Ø9Ø859R GR28 BT

ICDHG ZADFJ RPHEO MULMK WTRBZ   WGICQ HDGUC 96384 YRFXL 75Ø12

VQEMK FOATV VNYPL CIKYX SEDGH   OPTSQ XZABW NSJBI UAZNK MRFXL

34Ø96 KVHGY DQGIC TWAWC LUMZP   OPERJ 21857 TVFGE BT K

5 GPM

8WS DE X5S NR4 3Ø1926R GR23 BT

DFJLU MPHRS AOPBT ZBNWX NJUIS   URFKM 34896 VKMDC IWGGH XLYRF

421Ø7 VWZQT POACE OBEQT VEOYL   URPZX KUJDZ FKIDA YXGJN MAPCH

SQWJL SBITB SNZHN BT K

12

10 GPM RECEIVING PRACTICE

SERIES 1

8 GPM

SR2 DE WGH NR12 232102R GR35 BT

YZVRP JGDBN OTQHF IKAEN PBZEO   MYUGK 58670 ZJTMV FKXYB ORHPA

DWVYS 04872 JLAPH NQTZW ECMFU   JOQME YXFZO VRPGD BNQHI KUNBZ

61953 GDERS ULWIT BJOZC IXAZP   NTICU HVDEK OKXMU EFJWH KKVGS

DWNPB 79248 NKSGJ DBKWH LTRMA   BT K

9 GPM

NZ4 DE 7FG NR4 212157R GR39 BT

RTVYE UYMLK IFOSG AXRFY ZSJNT   GLQZC FMEXM NVDEK JOYUA BJORW

EIVCA 53061 DYPNV KWHBA SGORD   ZPTBQ GFRSH LTHKX LIWQU IMFUV

29403 BQWIM XAEUQ JHTSB FJPZA   NYWGD HZBLO TNREG TFWCL KQODS

NKVGS IREUF MKLXO VAMYI RZHYU   58716 GZJNQ LWUAC GRNVH BT K

10 GPM

8HS DE ZXS NR8 161114R GR32 BT

KQZHF MXAZR DFKEU PVAFS TJLQY   98013 DJYLW SBNPO DGSBE RTOWK

CTEIH EMIVO 54726 MYIBZ GBSDP   VJNYH LDWCF IMXAQ TFAEU OJKRG

VSKBW GPRNZ BAOJQ FDREO TNHTL   IWEXK MYUQV ILMUC YHVGD 72348

BERSW 56923 BT K

13

1Ø GPM RECEIVING PRACTICE

SERIES 1

1Ø GPM

P2B DE Q9H NR11 241Ø28R GR42 BT

HONTC ITEFK UAYCX MLIHU MUGOQ   BSMYW NIEUL ISFVH YPBHA Ø4817

DQZEU XAVJT 21947 KTCVZ RLCUN   PAEKW XQYIT JLNOR WHFSG DFKMB

ZDGRJ OMDKQ ISQAN RQBSM RTCPS   6358Ø MGLRU PLEBK YJNTV GHUVT

UOZED 6Ø593 WYJFZ IHABK MWDZV   CEFYN WOIHA FGEJX 84172 YTZFL

DWVZJ LAHGO BT K

11 GPM

MAC4 DE JWE9 NR6 3Ø2158R GR46 BT

JBHXW GHCNE 34962 GKCYV DFIEP   RQLEA SBKUB SMNFM OIROM VKYKU

5Ø718 RSPQZ TUMWI TADJX YIZTQ   NBHOA DOMZQ CNAIM GQUWT EPDWY

JSVLU BFJKR XVGHE LTYSD FVRXU   Ø4734 98126 ZARBI SLWPN JKOCH

EKFMN JUOCE XYZUS BKWVZ RQERP   LSHXW PTUBS OLCYV JLHVK QNEGA

RZTMY 5Ø418 GOKFD FAIWJ SIBKD   29673 BT K

14

8 GPM

R2S DE G5M NR6 Ø41317R GR35 BT

VPRZY DNBGJ TFHOQ KINEA BOEZP   YKGUM 6Ø785 TMJZV KBXYF HAORP

WYSVD 278Ø4 LHPAJ QWTNZ CUMFE   QEOMJ XOZFY PDRVD NIHBQ BZNUK

93615 REGGS LITWU OCZBJ XPZAI   TUCIN VEKHD XUMKO FWHJE VSGKK

WPBND 94387 KJGSN BHDWK RAMLT   BT K

9 GPM

Z4N DE FG7 NR5 161827R GR39 BT

VEYTR UKLMU FGSOI FRYZA STNJZ   LCQGZ MMXEF VKDEN YAUOJ ROJWB

VACIE 316Ø5 DVNPY WABHK GDROS   TQPZB FHSRG XKHTL WUQIL FVUIM

4Ø392 QMIWB AUQEX HBSTJ ZAFJP   YDGWN ZOLBH NGERT FLWCT QSDOK

KVSGN RFEUI KOXLM MIYAV ZUYHR   61785 ZNQJG WCAUL RHVNG BT K

1Ø GPM

H8S DE 5ZU NR1Ø 12Ø425R GR42 BT

ZFQKH XRZAM FUEKD VSFAP LYJQT   1Ø839 WYLJD BOPSN SEGGD OKTWR

THEIC MOVIE 26475 BZIMY SPBDG   NHYJV DFLCW MAQXI FUAET JRKGO

SBKWV PZNRG OQABJ DOREF HLTTN   WKEXI YVUQM LCUMI GVDHY 24378

NFZSJ VSZYM BTLPQ HEPAI FKRAG   JQXWO 195Ø6 WNDBY GRLVK JQODZ

RWBES 25963 BT K

15

10 GPM RECEIVING PRACTICE

SERIES 2

10 GPM

B2P DE H9Q NR3 250947R GR42 BT

NCTHO TKEFI YXCUA LHIMU GUMQO   SWMYB LEIUN SHFIV PABHY 17804

ZUQED AJVTX 42197 VTCZK CNLUR   AWKEP QTIYX LRONJ HSFGW FBKDB

GJRDZ OMKQD SANIQ RMMSQ TSPCR   30856 GULRM LKBEP JTNVY HUTGV

ZODEU 36095 JYFZW HKABI WVZDM   FNYEC HAWIO GXJEF 21784 LTZFY

VJWDZ HOGAL BT K

11 GPM

1N8 DE S43 NR17 081812R GR46 BT

XWHJB NECGH 23649 KVYCG FPIED   LAERQ BBUKS MNFMS RMOOI KKUYV

18057 PZQRS WIMUT DXJAT TIYZQ   BOHAN MQZOD AMNIC QTWUG PYDWE

LUVSJ KFJRB VEHGX SYDTL VUXRF   35704 16298 RIABZ LNWPS KHOCJ

KMFEN COEUJ SXYUZ WZVBK QPRER   SXHWL BUTSP CVLOC HKVLJ NAGEQ

TYMZH 14508 DOGKF WIFAJ BDISK   63297 BT K

16

SERIES 3

8 GPM

R2S DE G5M NR6 041317R GR35 BT

VPRZY DNBGJ TFHOQ NAKEI BPZOE   GYMUK 86750 MVZTJ BFXYK OHARP

SDVYW 70420 HJAPL WZNTQ MEFUC   MEJOQ FOXYZ DRPVD HIBNQ NBUKZ

19536 RSERG TULIW DJBOZ PIZAX   CITUN DEHVK MOXUK JEFHW KVGKS

NWBDP 37489 SJNGK WHDKB MATLR   BT K

9 GPM

Z4N DE FG7 NR5 161827R GR39 BT

VEYTR UKLMU FGSOI FAYRZ JSTZN   LZGQC XEMMF KEDNV YJAYO JOBRW

ACIVE 15036 PDYNV BKHAW DORGS   QBZPT HGRFS KLTHX ULIQW MUFIV

94023 MIBWQ XAQUE TBSHJ FAJZP   WDNGY BOLHZ RENGT LTCWF SODKQ

GKNSV FIREU OLMXK YAIVM HUZRY   81567 NGQJZ CAWUL HGNVR BT K

10 GPM

H8S DE 5ZU NR10 120425R GR42 BT

ZFQKH XRZAM FUEKD SAPVF YTJLQ   30918 KYDLW SOBPN GEDGS KRWOT

CETIH VEOIM 72456 NIBYZ BDGPS   HVJYN DWLCF MXIAQ TEFUA KORGJ

WBKSV ZGRPN QOJBA REODF LNTHT   KIXEW MVYUQ CILMU HVDGY 38274

SNJZF YSMVZ PBQLT AHPEI RFGAK   QOXWJ 96015 NYDBW GKRVL DJOZQ

RWBES 25963 BT K

17

SERIES 3

10 GPM

B2P DE H9Q NR3 250947R GR42 BT

NCTHO TKEFI YXCUA HIUML MOGQU   WBMSY NELUI HIFSV BAHYP 01847

ZEDUQ TAJVX 94172 ZVCTK NRLUC   WPKEA TXYIQ ROJNL SGFHS BBDKF

OGRZJ MDKOQ NQAIS MSMRQ SRPCT   36538 LRGUM KPBEL VJNYT GUVHT

DUEOZ 53690 YJWZF KIHAB VDMZW   NCEFY WOAIH XFJEG 14827 FLYZT

VJWDZ HOGAL BT K

11 GPM

1N8 DE S43 NR17 081812R GR46 BT

XWHJB NECGH 23649 VGCYK PEDIF   RELAQ BKUSB NSMFM OROMI KVYUK

51807 RPZSQ TIWUM JTXDA ZITQY   HONAB DMOZQ MINCA WGUTQ YEWDP

SULVJ RKJBF GEXHV TYDLS RUFXV   45037 21869 IZBAR NSWPL HJCOK

EMNFK UOCJE ZSUYX BWVZK PRERQ   SLHSX TUPSB VOCCL KJHLV GAQEN

ZTMHY 48015 GFDOK FWAJI DKSIB   63297 BT K

18

11 GPM

5ZU DE JW9 NR2 291827R GR46 BT

RMNIF TAGMB NZMYV 24659 317Ø8   DOWUS TEZKX GQHVA RLUAT LJSCX

YPHDH IOKRE ZJFNW QLTFW GIPGJ   DIBVR KNEOS BFMAY UMQWZ 5183Ø

BDICO IANDQ EVRBK PDWMG SFXVP   QMBFS JYKNR JLTIY JNLAY CVHGZ

EROWH SKTLX AUEMO QUHFT UDKZF   29476 BSWIZ YPNHC BDTLY GRHMW

XVJOF 743Ø1 HVFIO UMJTC VYSGQ   UTEAD BT K

1Ø GPM

L12 DE JW7 NR14 1512Ø1R GR42 BT

FRNIM GBMAT MVYZN 64259 18Ø73   SWUOD ZXKET VQHAG LAUTR JXCSL

HDPYH KIREO JWFNZ LFTWQ PGJIG   BRVID NOSEK MYAFB MZWQU 1Ø385

DOCIB NQDAI VBKRE DMWGP FPVSX   BSFMQ KRNYJ LIYTJ LAYJN VGHZC

HOREW SXLTS UMOEA FHUTQ UFDZK   46729 SIWBZ PHNCY DLTYB HWRMG

FVJOX Ø1374 BT K

1Ø GPM

LO9 DE P3D NR7 121Ø5ØR GR42 BT

KNSBX BEHMP YCXGI 2157Ø VMFRK   LYWGX DHKIS JUMRY PORTW NUZIS

LROJA VETQF 69438 RMHBK ORPLV   HKIOD DZKAJ LFSNJ BUNIC MUPTJ

WBQOZ SPUYA EGXCS 87564 KMLXB   FYGHR CIQOD WCTWB VZFVT 9Ø321

NAYEK VOBEN BTZCQ DQYXK Ø6324   LAPXY NFNLK UIJVU MWURJ GHKVM

YLXRF CWGTH BT K

19

TM459-33

SERIES 4

9 GPM

T5X DE 6PL NR5 310956R GR39 BT

DHSEO 75198 QPRUT WASJZ XBMUP   COAFY EDFBG ARMPL JNIBK NAIZW

XJUPT OQBSB HESHK GBIXE YCONJ   32789 MUAPY LVZFO 15640 TVTCE

GWIQW QRCDH GKMYV FSXRL JSBXN   ASPAP IDIHO OMNYU DICGW YLJKG

XGECX QOBWS LTJFZ IDTKU UHMVR   LAYJP TWRTZ VFECQ FRQNM BT K

8 GPM

1ZR DE YX3 NR3 071615R GR35 BT

JERKD ARTSE XEYSA RPYFL GYUXD   NJBOZ AOVQC HWMRD ZNSJD LTBIB

HKHOQ CGLYI 89543 KMVTC 72896   QUWIV XGLFN PZQXH HRALS MOXGR

SWQKL CHWGW YXLIQ 97865 15275   UMFKV GDTZR NMYVO YBGCJ MSKDD

OUBPS VOFWQ XFJBL NUKJZ NEDPZ   BT K

20

TM459-34

SERIES 5

8 GPM

F5L DE DC6 NR4 Ø9Ø8Ø7R GR35 BT

STATE THREW SOUTH SHORT LIVED   PRIME UNITE BRING WHITE HOUSE

RIGHT ALONG COULD POWER RIVAL   LARGE FORCE OTHER GOING UNDER

HOPES STORM COAST FLOOD DEATH   MILES GUARD WAVES TAKEN MINOR

NORTH HEAVY THEIR HOMES WATER   BT K

9 GPM

7ZK DE V4Ø NR8 131645R GR39 BT

THERE SWING BEACH THREE WHILE   ETHEL ABOUT POINT FORCE DRAMA

MIDST WINDS ROUTE HOURS THROW   REBEL AFTER MARCH UNITY FIRED

NIGHT BUDGE CLOSE CORPS PLANS   AMONG PLANE PLAIN LOYAL TROOP

UNDER JOINT GATES STAFF YEARS   WROTE WORKS QUOTE SMITH BT K

1Ø GPM

KW9 DE 3BA NR3 192325R GR42 BT

VOTED OFFER SENSE CENTS BEING   USUAL EVENT WORSE HORSE GROUP

GUARD CHECK PRIDE AIDES FALLS   QUINT BLOWS FIRST WARTS MAGIC

MEDIC STORE EVERY TODAY BIRTH   PARTY UNITE STATE JAMES WORLD

WHICH TOWNS SHARE LIVED QUIET   LEAST SUNNY READY DEATH OTHER

UNTIL WOUND BT K

21

TM459-35

SERIES 5

1∅ GPM

R8T DE E12 NR1 311837R GR42 BT

TRUCK	ALIKE	ROOST	GLASS	STEAD	PRESS	FIGHT	RUMOR	WEEKS	STUDY
GREEK	ROOMS	PAPER	CLERK	WHOLE	LIKES	SHORT	NEVER	PLANS	STUCK
MILES	STEPS	BROWN	MONEY	LEASE	KNOWN	BLOWN	RADIO	FLOAT	RAISE
STOCK	YOUNG	DROVE	SEVEN	EIGHT	POWER	LOUIS	SCORE	LEWIS	ERROR

FLOOD GAMES BT K

11 GPM

OX6 DE 9LB NR9 1∅1957R GR46 BT

HOMER	FIFTH	WATCH	RIVER	MILES	BELOW	FOUND	SMALL	BRING	SHIRT
MIGHT	METAL	WHEEL	MEDAL	BLOCK	QUART	SIXTH	THIRD	TENTH	BASIC
BASES	NINTH	WHITE	GREEN	COLOR	TIGER	BEARS	START	PINCH	MOVED
FORCE	PITCH	DELTA	DRUMS	STICK	THING	MOTOR	CARRY	SARGE	SHOES
SMOKE	PEPSI	RIGHT	WRITE	FIELD	SHORT	BT	K		

22

TM459-36

11 GPM

LO9 DE P3D NR7 121050R GR46 BT

KNSBX BEHMP YCXGI 70215 MFRKV   XYWGL DIKHS MYURJ TBWVO ZUZJN

JLARO TVEFQ 60348 VLOPR EMBRH   KIODH ZKADJ SFJLN IXUBN UPJMT

BQOWZ PYSAU EXCGS 57846 MXKLV   FGHYR DQIXQ WTCWG VFZTV 30192

MXEYA NBOEV BXQTZ YDQIK 34602   SPLAB FLKNN IVJUZ UWJMR VKMHF

YLXRF CWGTH BXSNK HEMPB XIGCY   FKRMV BT K

10 GPM

T5X DE 6PL NR5 310956R GR42 BT

HSEOD QPRUT 75198 SJWAZ XMUBP   CFAYO DFBGE PRAML BINKJ IWZNA

TUPJX BQESO HEKHS EBXGI JYONC   39728 YPUMA LZOFV 10546 TVCTE

GWQIW CHDQR KYVMG XSRLF JSBXN   PPASA DIEHO UNYOM CDIWG YKLHG

CXEGX BQOWS FZJLT UIKZD RUVMH   YJPLA ZTRWT FVQEC RFNQM 37912

50486 BVKMP BT K

10 GPM

1ZR DE YX3 NR3 071615R GR42 BT

JOBNZ CQVAO DWMRH SZDNJ ITBLB   JERKF ARTSE XEYSA YUFPP XUYGD

IQVWU XNGLF PQHXZ LCRAH TAMQZ   OHKQH GCYLI 40135 TVKMC 96827

UFVMK DXTGR VYOMN YBGCJ MSPDK   RISAT WHCGW XLYIQ 31509 46782

SUBPO VWFOQ FJBXL UZNKJ ZDPNE   13405 JLFOX GDSOH ITZNX FJDZS

LURPM KNSBA BT K

23

TM459-37

9 GPM

B6D DE 5HR NR9 222129R GR39 BT

TVKVE CYQAP YVKIN WGBES 67829   HEBMO RWTZU CQWGI DGHYC LMXFR

JIUNZ WOZBQ XCEGS LHPBU CTWHQ   FNVOO RJUMW IKOYH MSAED TVGEQ

DLICY MVKXF YRGLP 24706 ZDFRA   35198 TBXPJ XZECG QBOSW IZNJU

RDBOH UPRPA FJDXL RKSBN ZEHAM   YJNIS UMLVY PROFA 79364 BT K

8 GPM

A3J DE KL7 NR12 080148R GR35 BT

ROJEA YXRMK UZYZF ABSWA EYUZW   KILSL VMSDK GDICH YLXRF 15208

GHIXH PMODQ 50712 CHDVG TPJXF   MVBLE TQGCW OTFVO 34986 RLCNP

PRAOB SDSQM PBEHO IEKGH CXJYN   KUHNN ZBXLI JNIAN FUSJD WUZKT

GYXLJ VTOPF 94368 UTZWR MLVYA   BT K

24

13 GPM RECEIVING PRACTICE

SERIES 1

11 GPM

D3H DE 5AB NR1 192300R GR46 BT

GJKDB NLOTC FIMVX AZSPB 32579   OLMEZ HPDGR SWHIM QGFLO YUCQJ

XEBRS JAWVB NYRVH ZWQKT QAUIE   UITFN BGKNO ZHTIU YZVRJ Ø1486

NTHIM CURPB AGRKI JOMYU DJLOS   RTWCF MVXAY WSPGD BOQLF AENVZ

DFEST 35918 27Ø46 WXLQK HZGVZ   AJQDE ROWTI WFIKO QCYUA YDWBS

LPDGS BRNSK HLCHJ FILMV 73168   YEMAU BT K

12 GPM

7HJ DE Q6B NR13 20073ØR GR5Ø BT

BJKNO TZEMU RNPVF GKTEX YNWJS   ZPOGE NZQTL EFXKU AMEAU BHZDG

PVKRA 4Ø952 DSBRO WTIHF BVLNJ   39821 FDRGQ TSKHW CIJOL QCYXY

UMIVD BWVNJ GTOKC FXUMY HNJSP   OAGDE ZQTLE HWIKA 57Ø46 YZGPV

BKLRZ DFTIL UVOJH RBFSQ NWSMQ   UYECX MIRDY HCSBQ ZSWNK ULFTO

XAIJB Ø7428 39165 BZHJO IWJXO   QCYEU MKETZ GFDAP VRLNS DEGRW

BT K

25

SERIES 1

13 GPM

A4MO DE PZ9K NR14 Ø71453R GR52 BT

GVRNT QHKLF IUVMY AMPSQ ZTLSR   OWHIF RBEND 853Ø1 29476 UAMVO

LXFEI MUKYC OPZVW BDJHN YGPJA   BZVLR KNQDS TGFKC MWTIJ GQUAX

29413 EYHWN GPSLN DQREZ 658Ø7   NQGBD TWHIK UAEYM WJUAZ BVJUQ

OXVLF HSGOJ FRBGP HZYDS KROTC   IFEMO CLITM YXVYN HKFZW UYALE

KRGNB DECOY UVXFT SZGNR 147Ø5   OPLKI UCAOQ DBTGH BJLKW 98263

IMEXJ IRASV BT K

13 GPM

WH8 DE OXZ NR4 23Ø6Ø5R GR52 BT

ZWVDS THFMP 34962 QMBGK DOHIA   PROAD HWNSB HTFLU MYEAX JILCS

RGFQN ZDVJP UYCXU MKIFW 157Ø8   OQMUE Ø3654 ZRBSG WQKNE TJZVY

LTJZB TMUXO CWIFZ PMBHD GCUYA   HOROL RVZWB VGQDS YSNKP JFDAN

GRETK 18927 HLITW NEFJI XKULV   AQMYE KGDQM UVBZA 7Ø648 PBNCH

FMYAV ILTRG DTNLJ VOQGF DRSKZ   HWPJN SBETR SOZWK HTLIE WFJMU

12539 ECYXQ BT K

26

TM459-40

14 GPM

PY3 DE GFD8 NR9 312219R GR55 BT

OKUIX DWVDN WIFUV ACEUQ ITSQR   HBPSJ ARSEO TZKLW XLMYA IECHQ

ONPZL GKVJZ 63195 RBGFB DGNYH   FJKMO XYMUT 74Ø28 JTMCU HPWNA

GRNKH BRPCJ XAYUK OLITF 258Ø1   67394 GNZFS EORZH DJKLO QTEVX

AYVSG BDKSL FMKIE UYUWI DZVBN   TPKWQ AULJI ECRBG OLVDY BZQGE

KTLIW 1537Ø RDFKM QCIXY EUMFT   YAOMU XFHHS OZNSJ DANRS 69482

VJWGP ZHBRD PVAGS 28Ø71 CIVAM   BT K

27

13 GPM RECEIVING PRACTICE

SERIES 2

11 GPM

H7D DE A2D NR1 182221R GR46 BT

KDJGB LTOCN MIVXF ZSPDA 57932   OLZEM DGRPH HWSIM FLOGQ CQJUY

BRSEX WJAVB YRHVN KTQZW AUIEQ   TFNIU BKONG ZHTIU VRZYJ Ø1864

MIHTN HPBCU GRKIA OMYUJ LOJDS   WCFTR VXYHA PSWGD QBLFO NVZEA

ESIFD 35981 7Ø642 XLQKW HZVZG   JQAED OWTIR KIOWF YUACQ YDBSW

PKGSL BRNSK CHJLJ LMVIF 73618   EYAUM BT K

12 GPM

JH7 DE Q18 NR12 2ØØ73ØR GR5Ø BT

KNOJB TZEMU RVFPN KGTEX YWJSN   POGZE NZQTL FXUKE MEAUA HBDGZ

KRAVP 9Ø542 DBROS WIHTF BVLNJ   39218 RFDQG SKWHT CIOLJ QYXYC

MIVDU VNJWB TOKCG XYUMF JSPNH   GDEAO ZQTLE WIKAH 5764Ø VPGZY

ZRLBK TIFDL UOJHV FSQRB WNSMQ   UEYCX IRMDY SBCQH SNKWZ FTOUL

XAIBJ Ø7482 56139 HJZBO JXOWI   QCYEU KETZM FDAPG VRLNS GRWED

BT K

28

SERIES 2

13 GPM

M49A DE P9ZK NR14 Ø6215ØR GR52 BT

RGVTN KHFLQ MIUVY PSQAM STZLR   WOHFI 8Ø135 ERBND 47692 UMVOA

RTGVN QKHLF YMTVI BJHND PYGJA   RZVLB DKNQS FKCTG MTJIW XUGAQ

49312 HEYNW PLGSN ZERQD 5786Ø   BGNQD HTKIW YUAEM UHAWZ JUQBV

XVFOL GJHSO FRGPB ZYHSD KCTOR   MIFEO TCLIM YXYVN HWKZF EUYLA

BNGRK COYDE FUVXT SZNRG 7514Ø   OKILP UCOQA GBHTD WBJLK 63928

JXMEI IRSAV BT K

13 GPM

1ZO2 DE 1ZO3 NR11 Ø21549R GR52 BT

DSWVZ HPMFT 42369 GBMKQ IOAHD   RDAOP WSNBH TULFH YAXEM LSCIJ

GNQFR JDVZP XVYCU KWFIM 185Ø7   MEUQO 4653Ø BGSRZ KENQW JYVZT

ZTLJB UOXMT WZFIC HMBDP CAYUG   OLROH VBZWR GSQDV KPNYS FANDJ

KETRG 97281 LWTIH JIEFN KLUVX   QEMYA GQMDK AZUBV 684Ø7 BHNCP

MVAYF LGTRI JNTLD GOFVQ RKSZD   NWPHJ BERTS WOKSZ TIHLE JUMWF

29351 CQYXE BT K

29

SERIES 2

14 GPM

VPY3 DE GFGI NR13 27Ø612R GR55 BT

YXIKO WNDDV VUFWI CQUEA TRQSI   BJSPH REOSA ZLWKT SAYMX CQEIH

PLZON VJZKG YOQET BBGFR GHYND   JOMKF MYETX 482Ø7 MUTCJ PAWNH

NHKRG RJCPB KYAXU LIFTO 51Ø82   FZNSG 34796 REOZH KLOJD VEXTQ

SAYVG DLSKB MIKEF YIWUU ABVZD   KWPQT UIJLA CBGRE LYDVO ZEGQO

TIWLK 53Ø71 DKMFR CXYIQ FTUME   OUMAY FHSHX ZSJNO NSARD 42896

JPGWV HRDBZ VGASP Ø7182 VMAIC   BT K

30

SERIES 3

11 GPM

D3H DE 5AB NR1 192300R GR46 BT

GJKDB NLOTC FIMVX SAPDZ 29735 MZLOE DRGHP WIMHS FOLGQ JUYQC

BEXSR AWVJB YRHVN ZQWTK QIEAQ UTNIF GNKOB HTUZI RJVYZ 68041

THNIM UPHCB GTAIK OMYUJ JDSLO TWRFC XAVMY SWGDP OQFBL NVZAE

DEFTS 98153 20674 XLQKW ZVZGH DQEAJ TIRWO FKOIW YCQAU WYSBD

GLPSD RSKBN JHLCH FILMV 73165 YEMAU BT K

12 GPM

7HJ DE Q6B NR13 200739R GR50 BT

BJKNO TZEMU RNPVF KEXTC NWSJY GOPEZ NTLZQ FUKXE NUEAA DZNBG

RAPKV 90524 SORBD TFHIW NJLBV 23819 DGQRF SWHKT JLOIC XYYCQ

MDVIU WJNVB TCKOG FYXUM NSPJH GEDAO TELZQ WIKAH 06574 ZGVPY

RKLZB FLITD JHOUV SFBRQ MNWSQ CEXYU RIDMY CQSBN NSWKZ LOTFU

JIBAX 28470 63195 HOJBZ XOIWJ CUYEQ TZKEM DPAFG NLSRV GWRED

BT K

31

13 GPM RECEIVING PRACTICE

SERIES 3

13 GPM

A4MO DE PZ9K NR14 Ø71453R GR52 BT

GVRNT QHKLF IUVMY PQSAM TRLSZ   FIOWH NEDBR Ø5318 46792 VOAMU

XEIFL YUMKC POVZW DHNJB GAJPY   LVZBR NDQSK CTFKG WITJM XGUAQ

12493 WEHNY LPGSN REDQZ Ø7865   GDBQN HITWK YEUAM JAZUW JUBVQ

LOXVF SOGJH RPGBF SDYSH ROTCK   MOFEI LITMC SNVYY KWFZH YAUEL

NKGBR CODEY XTFUV RGZNS Ø5714   POLKI COQUA BGTHD JLWKB 36289

IMEXJ IRASV BT K

13 GPM

WH8 DE OXZ NR4 23Ø6Ø5R GR52 BT

ZWVDS THFMP 34962 MGKBQ HIOAD   RADPO WSBNH FULHT EXYMA LJSCI

FQMGR VZDPJ CUXYV IKWMF 51Ø87   UOMQE 63Ø54 SZBGR NQWEK YZTJV

ZLTJB OTXMU IWCZF BDMPH YCGUA   ROHOL WVRZB GSDQV KYSNP DNAFJ

TRGEK 91728 IHLTW INFJE UVXKL   MAEQY DMKQG VZBAU 4Ø867 CPHBN

YVMAF GIRLT LDNTJ QFGVO RZKSD   HJPWN ESBTR WOSZK IHLET MWFJU

12539 ECYXQ BT K

32

14 GPM

PY3 DE GFD8 NR9 312219R GR55 BT

OKUIX DWVDN WPFUV UAECQ QIRST   PJSBH EASRO WZLTK LYAMX ECQHI

ZOPNL JGKVZ 39165 FRBGB YNDHG   MJFKO YUXTM 40827 TUCMJ NHWPA

NHGKR PRJCB AUKYX IOTLF 50128   37496 NFGSZ OZHRE JLKOD EQVXT

VGSAY KBSDL IFEMK YIUWU BNVZD   KWPQT ILJUA RECGB DOYVL QEZGB

ITLWK 37150 KRDFM CXIYQ METUF   AMUOY HSHXF NLJZD RANDS 98264

JGPWV ZHBRD PVAGS 28071 CIVAM   BT K

33

SERIES 4

14 GPM

TI2 DE G7H NR3 -Y- Ø8Ø937R GR55 BT

YLXVK MFRKN NSDAZ IJUFB XULJZ   TWAPR SOBQP SMHDH KXEGI YBCIO

NVMYJ ALRUP ZWTFO 96348 TQCEV   WICQG 1Ø275 HLGYD MRKFV YGCXX

BAUHJ CGTVQ WHICD RAPUT SFDIB   JANUN WKJCX LOZBQ PDMSS KIEHE

2475Ø ROBFZ NOWYM VKETQ MLYFG   39168 BPDZL HKQIO NLRAM 274Ø6

CHYIW LQDGX CGWET JYCOU HMGSE   DXSAP JLUNB XSMTF PUZYA RQJEK

81593 VFTZR ATFKL BCDIX ZLOUJ   BT K

13 GPM

D5B DE 8CW NR9 -Z- 271938R GR52 BT

KFPVM VQOIW CEOFQ WGBIC LHXGY   FRKVM 54Ø72 69318 ZVRTW PULAT

OMJBE IVYKN YECXG DSOQM SHPHQ   AWTUB PNZLR UNSIB XJDZF YAKPH

UZCOA TFEQB EDKPB RXGPW SDZNJ   IKUBN LTAJU AZOBQ 54128 CFLKX

YVMGR DHWIQ GCWTY EOVMA MSGXS   3Ø976 INJRH LASOQ WVFOT MIFKC

LUBSX 8Ø624 WQGHG OETDC CEYGX   EBHMP ZXWBT SKDAF ZINUJ HRNPJ

RZUJK VLYNI BT K

34

13 GPM

2BQ DE O9R NR13 -P- Ø31323R GR52 BT

PDAYM 95317 QVLFR QKABU MJUNV   QGECW DTICZ VKRWM HVRXA SDHMH

YOIEC PYLXE ZFDBX INSNJ ZBUKA   ROPSP TLWGJ QFYGL 75Ø12 86349

AIOQT OZNOL GEHKX SCYPQ USNJK   79614 FLYXR VCHGK TWCGD TWEVR

BZWOI MVUFJ EIYBH DPASM BDXLF   ZQNAM 29358 36457 MVOPJ EOXCS

JRIWX MLKFY VCHGD QEWIG BTWCT   NRAFU YOIQY KEBJL HMGDS RQPAH

APHQR BTUPL BT K

12 GPM

O1K DE 3WB NR8 -M- 3Ø2146R GR5Ø BT

SBZXJ NFAKU ZNDCK 19Ø83 LXHRT   VRCQA XIYBK JONMC EGQSH MDEHS

57230 GMDVY WQFIG FWVOT PLUZY   PAROU JTZXL IWNPB BJASF UKNDZ

17948 WQTEG AKNZD INSFB UXJLZ   BJWTU ARSPQ ODPSM KBEHG XCIEO

NYMJV RPULY OWFAZ TVCEQ CHDIG   VYKXL 2Ø517 49368 FRMHX MGYLK

VHRFD WGCIQ CZETV RUWQO JNMAV   YCLPO YXIBE EMKGH PRSDQ 5271Ø

BT K

35

11 GPM

9SD DE C4P NR2 -O- Ø81317R GR46 BT

XZIBF DAZKN 36489 TNHSJ ZAUFD   NJUKS BIFNJ LTZXW RBPUA SQPOM

HESDK EIHGB JYXON YMVLC 98463   URAPO VTWZF QTECG 25Ø71 QCIWD

GKVHY FXLMR AUKZN NFDSJ ZIXJB   WPTLB ASRUP QDSOM KBEHG OXIEH

YNCYJ 63894 ULVAM FRZOP TCEWV   QWGTI 725Ø1 DCHGQ XKLYV FRLXM

YMRGG HCVKD 5172Ø CWGQI WVETQ   FROZA BT K

36

11 GPM

CD5 DE R1L NR3 -R- 232136R GR46 BT

MAJOR DOING GOALS TOUCH LIONS   POINT GOING BUILT DRIVE THREW

AGAIN GAMMA DRIFT LEAVE QUEST   PIPED ROUTE NIGHT STRIP FORCE

SQUAD STACK GRASS DRUGS NEVER   WEIGH SPEAK FLOOR FLAIR BOBBY

HANDY RULES RANKS ARMED VERBS   FINAL FORMS EQUAL LISTS URBAN

TABLE REACH ARISE ENTRY GIVEN   USUAL BT K

12 GPM

X60 DE ØBY NR7 -O- 17Ø929R GR5Ø BT

SLAIN SAITH GLUEY STAID GRAND   GOOSE WILLY PRINT CHAIR SPOON

KNIFE SILLY ADDED GLASS MOLAR   BRAIN WATCH WRIST PANTS SOCKS

BLACK ALARM BOGIE CHOCK BEBOP   BOOBY BRASS CYCLE BRIEF VOWEL

SHALL ICILY MERCY FOGGY WINDY   BRIDE GROOM MARRY NEVER WOFUL

TRULY DRYLY SHILY GAYER GAINS   DAILY NOUNS GLAND GREEK OCEAN

BT K

37

13 GPM RECEIVING PRACTICE

SERIES 5

13 GPM

9PU DE P9K NR4 -Z- Ø12348R GR52 BT

BILLY TOOTH HEART SUCKS NOTES   WHITE BAKED HEARD SIGHT ADMIT

STAFF DANCE CHAOS LABOR EATEN   VOTED ALERT CARRY CLOCK DRONE

GERMS ARMOR AUDIO LIGHT LASER   LORAN WHEEL GRIPE NISEI NYLON

TRACK HEDGE IDEAL MESON PILOT   PURGE SNAFU SCOPE REEVE RACON

ROTOR VIDEO TOTAL ABASH TOKEN   SONIC ABHOR ABEAM DAILY DAIRY

LOVER MATCH BT K

13 GPM

O2D DE WX3 NR9 -M- 3Ø1846R GR52 BT

USHER LIKEN FLUID POOCH CLASS   PIANO MUSIC MOUNT TEXAS UNCLE

TUBER JEWEL HELLO LURID NAKED   ORBIT PERIL SINEW ALLOY SWIPE

YUCCA JOULE ROBOT RAZER SONAR   ABBEY ADDER DAISY DAVIT CYNIC

CURSE LUNGE LUCID MATIN SLATE   URBAN FLOSS SHOVE URINE IMAGE

HONEY SWEET FORTY DOILY CHANT   BALKY POUCH SHRUB PRUDE TERSE

PENNY PENCE BT K

38

SERIES 5

14 GPM

GJ7 DE 8RM NR11 -P- Ø91123R GR55 BT

FOLIO CHIEF CROSS CHINA EXTRA   POWER ORDER NAVAL TIGER RAVEN

SCREW HERON LUNAR NUDGE ODIUM   JETTY OPTIC BOOZE KODAK DOUGH

UNDUE SUMAC PRISM PRIVY FAULT   FLIER COBRA POSSE KNAVE LABEL

DIPSY HYMEN DONOR SPECK UPSET   CANAL SHALL DINGY BRICK ACTOR

TIMID OASIS LOATH TAUNT NERVE   TALLY REACH KNOLL ETHER PETRO

MANGE WITCH WHISK ZEBRA DOGMA   BT K

39

14 GPM

1EZ DE Q4B NR5 -Y- 13Ø255R GR55 BT

ZOFRU MASPV JNYOC YXBKI EHGED HSPMS AROQB ULWTP JBZXF NIASD

JULNZ KJAUA ZFSDN JZXIB ARWTL PSBOR PSQDM BHGKE IEOXH NMOCY

LVJAU 9Ø572 ZROPF VCWET 81346 TGQWQ CFIVK GYDHM XRLFL MGXRY

148Ø2 HVIKC GWDQC TEFQV WRTOZ PNULM JVAOY 95736 YICXB EKGSH

DPHEM PRUAS BLQTO JXWZF BSSIN NJAKU KJSZN ANUDI FZJBX WKTIU

ZOTPO QSMRD FITLC MTLWA CHFNM BT K

13 GPM

T12 DE H7H NR3 -Y- Ø8Ø937R GR52 BT

YLXVK MFRKN NSDAZ BIUJF ZJXLU RTPWA PSQOB MSHHD EKIXG IYBOC

JNMYV PURLA OZTFW 64389 ETQVC GCIQW 1257Ø GYDHL VKFRM XCYXG

JAUBH TQCGV ICHWD UAPRT BSIDF NJUAN KCXJW BLQZO MSPSD EKEHI

5472Ø FZROB MNWOY TQVKE GMLFY 19368 LZBPD HQKIO MARLN 2674Ø

IWYCH LXGDQ CTEGW OJCYU EHGMS PADSX BULJN TXFMS UYAZP JBKER

51839 RZVTF BT K

40

13 GPM

D5B DE 8CW NR9 -Z- 271938R GR52 BT

MVKFP IWVQO OFCEQ WBGIC YLHXG   FRVKM Ø2754 36981 TZRVW PTAUL

MJEBO IKVYN XYEGC QDSOM HSHPQ   BTWAU RPNZL BUSIN FXJZD AKYPJ

OCUAZ EFBTQ BDPEK WRXPG JSZND   IKUBN LTUJA BAZQO 82415 LFXCK

MVGYR IDHQW TGCYW MEOHV SMSXG   6739Ø INJHR QAOLS TVFWO CIFMK

ZBULS 2684Ø HQGWG COEDT XEGCY   BEMHP TZXBW SDKAF ZUINJ JHRPN

KURZJ IYVLN BT K

12 GPM

2BQ DE 09R NR13 -P- Ø31323R GR5Ø BT

MAPDY 15937 RLQVF QKBAU MJNVU   QWGEC DZTIC WVKRM XHVAR MSDHH

EYOIC XPYEL BZFXD NIJSN KZBAU   POPRS GTLJW QGLFY 1275Ø 98634

TAIQO LOZON GEHKX YCQPS UKSJN   49617 YFLRX VCKGH TDGWC EWTRV

WBZIO FVJUM EIYEH SPDAM LXBDF   NQAZM 83952 57643 MVZPO COESX

JRXIW FKMYL GCDHG QEWIG TBTWC   NAURF YOUIQ LJKEB DMGSH PQHRA

BT K

41

11 GPM

O1K DE 3WB NR8 -M- 3Ø2146R GR46 BT

SBZXJ NFAKU ZNDCK 38Ø19 LXTHR   CVRAQ YXKIB MJOCN SGHEQ HMSDE

Ø2357 DGMYV WQGFI FTOVW ZLYPU   UPROA JTLZX PIWNB SJFBA DKUNZ

14789 WQGTE NZAKD IBSFN LJUXZ   BWJUT PRAQS PDMOS BGHEK ICOXE

YNMVJ UPRYL FWOZA TCVQE DHGIC   VYXLX Ø1257 34689 FRMXH LMGKY

VDHRF WGOIC ECZVT ROUWQ MJNVA   LYCOP BT K

15 GPM RECEIVING PRACTICE

SERIES 1

14 GPM

8WFM DE U6C NR7 3Ø15Ø2R GR55 BT

PJGBN WHTEC IUMLJ HTSEG LSVWD   79486 RQKGB NSZFM VYZVR YTFAC

EMQHO XKWIR KFDAP NWVLN JOGKL   FMUVY UQXJI SREBR DQPZB DHYNZ

156Ø3 JKGPB ADGSF SNTOZ WKTCH   WHETF 87429 ILKMO CZXAI XYAMD

POZFX YZVDT KEBFS JKUBQ WIYSB   LMUVG XKMGS HMZRN HAHZA 6Ø279

ETLYJ RCUWP OFCND RIOKL TEVJI   WXQGS CVZJQ ICPFK LYJRE XWGDK

ERGTO 81453 UBKTF YVDLM UVEIQ   BT K

15 GPM

KY2 DE 7YBD NR8 312159R GR59 BT

DLNOQ ZWHIM UAHNZ ADRSW JXMBD   GJKLN OQSRT ZWHCE 32519 FIMUV

XYAYZ WVSRP JGDBN OQTLH Ø1486   HFIKM ACEUH NPBVZ ADFGE RSKTI

WJXLO QMYUB DGJKL NOQSR TZWHC   EFIMU VXYAY ZWVSR PJGDB NOQTL

HFIKM 32518 97463 ACEUH NPBVZ   ADFGE RSKTI WJXLO QMYUB DGJKL

NOQSR TZWHC UYMQO LZJWI TKRSE   GFDAZ VBPNH UECAM KIFHL TQONB

DGJPS RVWZY AYXVU MIFEL Ø9362   BADYG XJVKU LMNIO 57648 BT K

43

15 GPM

8PQ DE R35 NR5 221435R GR59 BT

FQECH WYHZN 68403 WPVBS VRZPA   JDGFG DBENR OSQKT LITHW JFICK

LMOQA CMEYU UTZRS UHNYP MBVQZ   AOLDF GCXER UAEYC XVAMU KMFIH

LECTH QWZON BYDZG WJVKS LRNPO   92572 12584 JQGDS RBTWI KSTHC

BWXIL OMYUR AHYNX PVBUM ZAIDF   GECRK WTRJX LONMY UEMAO KXFWL

KORBG 79364 DJLOS TWDFM VYZSP   GBOTH IMCUN BZDGR KIJLQ MUPJA

10279 HTKRF AKPDY BVZUM FIKVZ   DBKHC EFBPH 52648 GPQFR BT K

16 GPM

RS2Y DE K7CL NR3 181946R GR62 BT

GEDAB XPSRH HXNVO 56482 UQOMK   JFCEY PWTRN IHFEL BKDJL ZVSTQ

ZCMWU 17903 WGTGZ CABQY ZOJSX   USJDM BPFWG GMVWK 14173 VQENA

TRLFT OTIJH CLRYB ZORCY ZSCQA   MEXRJ HDOHU WEVWP FRISH PKKMD

VNTGA LQTNG 61193 CIXVL FYZOY   JAABU 40473 RMMZE FEVYQ HTODD

RSKJT KFIWO HWLVU CPGXN LBQBN   FZUIX 61725 QHAXP YRBHV TOLCL

CUNEZ SVJIF EJBWW OUYGK TPGQA   ZIMXK JPTRK NMQWD UCBDG EYBQN

07143 OVAFL BT K

44

SERIES 1.

17 GPM

JW6 DE D2N NR11 Ø81614R GR66 BT

NIFMP OSQSL PAUHN 249Ø3 PSYLE   JRXEB GVPIM VCAMC GILLH YFZEC

OSTDA TSRRU HVAZO ADRQF GWTSQ   ZWYXU NFKOP XSJCD 2468Ø JKUVM

WGEBS 43124 AZXWY MAUGO TOMRQ   VDJHU XQZAD PUKFO ZAVDY FASCO

IQDAN DCKOS IWFQA KDMNG UWZJT   OMHHR PJPLX Ø9218 BVELX NYOXZ

TAIKW TARBE GDVUK BFVET ERFQM   JHGIL RSXDU NCACD GNHOJ 6789Ø

LWMZC XPWUV PYRYV XHKRZ 13457   FPRTZ EDCVA QPONM FGHRQ PZYBC

UPJIL KNMXW GFHIJ SSOLD EAXWV   UTYNV BT K

45

SERIES 2

14 GPM

8WF DE U6C NR13 1421Ø6R GR55 BT

PJGBN TCHEW UJLMI GETSH WVSLD   76498 GBKRQ FNMSZ VYVRZ FATCY

HOMEQ RIWKX PADKF WNVLN OKLGJ   VUFYM QIJXU REBSR BZQDP NHYZD

3Ø165 KPGBF DAGFD TONZS KHTCW   TEFHW 29487 LOMKI XIAZC MADYX

FOXPZ DATVY FEBSK BUJKQ SIBWY   MUGVL GKMSX ZNRMH HAZAH 2Ø796

TELJY PUWCR FODNC LOKIR JETVI   GXWQS VQZJC DIPFK JELRY DWXKD

TOEBG 13548 FBTKU VMLDY VEQIU BT K

15 GPM

KY2 DE 7YB NR9 26Ø719R GR59 BT

DLNOQ WIMHZ HANZU DARWS XBDMJ   JNLKG ROTSQ HEZWC 75293 MUFIV

ZAYYX VPSRW DNBGJ HOTLQ 6Ø814   HIMKF HACEU PZBVN GADEF SITKR

LOWJX MUBYQ GLKJD SONQR HWZTC   JUFIE XAYVY WRSVZ JDBGP NOTLQ

KIMFH 21853 CEAUH 43697 PZVBN   FEGDA SIKTR LOJXW MUBYQ DLJKD

QRSON HTCWZ MOYQU JIZLW REKST   DAFZG PHNBV CAMEU FILHK NOBTQ

JSGPD VYZWR YUAXV FIMEL 32Ø69   DAGYB VUKJX NILMO 68574 BT K

46

15 GPM

8PQ DE R25 NR4 Ø91733R GR59 BT

CEHQF HYNZW Ø8436 BVSPW RAPVZ   GGDFJ NEDBR SOTKQ HITWL CIKFJ

LAMQO YECMU RUTZS HYNPY BZVMQ   LODFA XRECG CEYAU MAXUV HIMFK

THECL NOWZQ DGYZB VSKJQ ROPNL   22759 GDSQJ 41528 BITWR SCTHK

LIBXW YOURM HANXY MUPVB DAZIF   REGCK TXJRW MONLY MUQAE WXFLK

RGBOK 34679 SODLJ WMFCT YSPZV   HOGTB MUNCI ZGRDB JILKQ PAMJU

71Ø92 RHKTF PADKY BUMVZ KIVZK   DHKBC PEBHF 42168 FPQGR BT K

16 GPM

R2Y DE K7C NR31 1Ø1632R GR62 BT

BADEG SHRPX NOHVX 62854 OKMUQ   JEFCY TNRWP FILHE JKLDB VQSTZ

MAWCU 31Ø79 GGTZW QADYB SOXJZ   SUMDJ PGWFB MKVWG 11374 VANEQ

GANTV TGNQL 12169 VILCX YOFYZ   BAUJA 44Ø37 ZERMM YEVQF TDODH

STJKR WOFIK LUWVH GNXPC BBNQL   XIFZU 12576 HAPXQ BVRYH TCOLL

NYCEZ JVSIF BWEJW GOUYK PAGTQ   MIKXZ TKPJR MWQDN BUDCY YNBEQ

134Ø7 FALOV GEBDA RPXSH HXVNO   56428 MKUOQ FYEJC RPWNT LEFIH

KBDLJ STQVZ BT K

47

SERIES 2

17 GPM

JW6 DE D2N NR12 Ø9Ø427R GR66 BT

PINMF SOSLQ HANUP 3Ø429 LEPSY   BERXJ GIPMV MACCV LILHG CEFZY

TADSO RUTSR HAVZO DAFRQ WSQTG   YUWXZ FOPNK SDCJX 6Ø482 KUMVJ

GEGSW 12344 ZAYXW GAMUO ROTMQ   DUHJV DAQZX FOPUK VADYZ SOFCA

DIQAN DOCKS FAWQI DMNKG JWZTU   HHMOR JXLPP 1Ø829 LEXVB OYZXN

KITAW BETAR KUVDG FETVB REFMQ   LIJGH SUDXR CADNC JOGNH 76Ø98

MLWZC WUPVX RVYYP HRZKX 41735   RFPZT VEDCA NOPMQ GRHFQ ZBCYP

LIPJU XNMWK FIGHJ LOSDS WAVEX NUTYV BT K

48

14 GPM

8WFM DE U6C NR7 3Ø15Ø2R GR55 BT

PEJGN WHTEC IULMJ EGTSH WSVDL   84697 BRGQK FSNZM VRVZY YAFCT

HEMOQ RIWXK ADPKF WLNVN OLGJM   UYFVM XUQIJ RBSER ZQBPD HZYDN

36Ø51 PKGVJ GAFSD OSTOZ CKTHW   WFHET 49872 MLIKO ZIXAC YDAMX

FPXOZ DAVYT EFSKB UQBKJ SWBYI   LGVMU GXMSK MNRZH ZHAHA Ø2697

JEYTL OUCWR NOCFD OLIKR JEVTI   XGQSW VJZQC CFPKO JEYRL DWKGX

TBGEO 83154 UBKTF YVDLM UVEIQ   BT K

15 GPM

KY2 DE 7YBD NR8 312159R GR59 BT

DLNOQ ZWHIM UAHNZ SAWRD BXJDM   NKJLG RQSTO WEZHC 75932 UFMVI

YXYAZ VPWSR DJNGB QLTHO 18Ø64   KHMFI UCAEH VNZPB DEAFG TSRKI

JLWXO MBYQA GKDJL SLRQN WTCHZ   MFEIU XAVYY WRVWS BPGSJ TOLQN

IHMFK 51832 49376 UCAEH PVZBN   FAEDG STIRK LJWOX UMQBY GKLDJ

NRQSO ZHCWT YQOUM WZLIJ RTEDS   FAGZD NBPHV EAUMC HIKFL TNBQO

GPSJD VZRYW VYUXA IEMFL 6Ø239   AYBGD XJVKU LMNIO 57648 BT K

49

15 GPM

8PQ DE R35 NR5 221435R GR59 BT

FQECH WYHZN 68403 BPSWV PRAVZ   DFGJG NBRDE SKOQT HILWT JKCFI

QMALO MUEYC SZTUR HPYNU BQZMV   LFOAD EGXCR EYUCA MXVAU FHIMK

TEHCL WOQNZ ZYDGB WSKJV PROLN   27259 82415 DQSGJ BWIRT SCHTK

ILXWB MUORY AYXNH UVBPM AFZDI   REKCG TJWXJ MNLYO UMOAE FLXWK

BOEGK 96437 OJSLD WFTMC YPZVS   TGOBH CUINM ZGBRD IQJKL UJAPM

Ø7921 RTFHK KDAYP UBVMZ IVZKF   VHKCD PFEHB 26485 GPQFR BT K

16 GPM

RS2Y DE K7CL NR3 181946R GR62 BT

GEDAB XPSRH HXNVO 56483 LUQMO   FEYJC RWPNT HEFLI JBKDL VZQST

MAWCU 7Ø931 GWZGT YABQD OSXJZ   JUSMD WBPGF KGWMV 17413 NAQEV

FILIR JOTHI LBCYR COYZR SQCZA   RXJME OHDUH WPWVE SRHFI KMKDP

TAGNV QGTLN 19216 VILCX YOZYF   ABUAJ 7Ø434 MRZEM YEVFQ DOHDT

KTJRS FWOKI VWLUH CNGXP QNBLB   FXIZU 51726 XHAQP RYVHB COTLL

UZECN VFJSI WBWJE GOUKY QPTAG   XIMKZ RJPKT QDWNM BGDUC EYBQN

Ø7143 OVAFL BT K

50

SERIES 3

17 GPM

JW6 DE D2N NR11 Ø81614R GR66 BT

NIFMP OSQSL PAUHN 92Ø43 LSYEP   XBEJR VIPMG VCACM LHILG FCEYZ

SADOT RUSRT VZAOH RFQDA WQSGT   XUZYW OKPFN JDSCX Ø1846 UJVMK

WSGBE 24143 WZXAY GAUOM TRQMO   HDJVU AQZDX UOFPK VZAYD CFAOS

QDINA ODCSK IAQWF GMKND JWUTZ   OHMRH LPXPJ 92Ø81 LEXBV OZXYN

KAWIT ABTER UDVKG EFVBT MFQRE   IGHLJ SUDRX CNCDA OGJNH Ø6987

WCZLM UPWXP YVYPR HRKZX 41375   TFPZR VDAEC NPMQO FQRGH ZBPYC

IPJLU NWMKX FIHGJ SSOLD EAXWV   UTYNV BT K

51

15 GPM RECEIVING PRACTICE

SERIES 4

17 GPM

BAØ DE T4G NR6 -O- 281315R -FM 6S3 -TO FP2 GR66 BT

SECKG BIXHE YVYNC JALOM VOFRW   PETUZ 3657Ø WGCQT IHDCQ 28149

XVLKG MFXRY KGRYF MXHVL GIDQW   VETWC RZFQT 457Ø9 U VO LJNMY

DGIEB XOYEC 16382 SHPMD OHRAS   TPBWQ XJULZ SNIBF DUJNA JSDZK

AUNKZ ZNIIB JWXPF BULSO REGHA   MGSKE HIYDP XNBJC AVPLY UMFRO

ZVOTW CWEGQ DCITQ 48963 KYMVH   Ø1275 FRXLG SFNMA JNZDX JTIUK

ZBPLW SQODR PMEAU SEIHG XOHKB   YANLC VPJUY Ø5763 FWVRO CQMET

ZGQTI WCHKV TLBCW FNALK TOUIL   FKQPT BT K

16 GPM

XY31 DE 9BO NR13 -Y- 14213ØZ -FM T8C -TO 7RH GR62 BT

81429 DGYLX MFRLY GDRKX HVCMF   GWCIQ 824Ø3 TVWEQ FVAOT RULPZ

YMONJ XBCIY HSDKE EMSPG QAROH   56971 WLTPU XFBZJ DISNB NUJKA

SDNAZ UJBNK JBFTZ WLIZX RPSAU   ODQOM GXKES HIYEC JOHNB MURAY

FWZLV 48Ø93 VTCOP GIWEQ CHDQT   12576 KFYVG RFLMF GYNXL RKDVH

WCIGC 4Ø517 WZRTQ FEQOT LMAVU   JNVOP XEKXY NHNIB SSPED 28639

UAPOR LWJQB IZFTX SDSZN NJBKA   GNUKH SNJZA FZJIB LWXTD BOQAP

RUSPD HSKEM BT K

52

SERIES 4

15 GPM

SW1 DE C1Ø NR1 -M- Ø8Ø25ØR -FM BO3 -TO IB2 GR59 BT

HGIXO BENCY JMVYO PZAUL TVWRF   39Ø76 CGETQ DWQIC 42158 CKHYG

XLMRF KNSUA FJNZD BITZJ LAUXW   PBRSO PDHDN EKGES HHOXC BVYJI

UPLMN 93486 TZVWA ROQCF TWGEQ   172Ø5 CKVIY DGMLH XMLRF YVGFK

RDHCX 3Ø647 WTGQI WVZEC RVLTQ   APUOF YCJMN BXOYI 15298 KEGEH

PDOSN RPQSH LTWUA FIXZJ NSBSK   NZDUJ BZUAD DXNZB SITNJ FOULW

BSPAR DQMSP GIKEY YNBCE HYOJX   OPAML 13Ø58 RWUVF JVCTZ BT K

15 GPM

RF6 DE JPØ NR16 -R- 18Ø713R -FM TG8 -TO K9G GR59 BT

YKVML XFRQA LVIDG CRFXY GHKMW   1872Ø CTVWQ ZOTEQ RLAUF MNJYV

CBYIO HGMSE KSHDE RPABQ OTLPW   JZIBU DSJXF NNUKZ NXSDZ FKANJ

JIBUZ TOURP WDALS PDAMQ GDKES   BOJCH YXLNI YAPVM 89143 RZUFO

45962 WTVCP TGQEC DCIWQ Ø7526   HFYKR LMVGX SKUAD BJVFN XWLTI

JAPZN SMDQH LOGSU HIDEB CYEOB   Ø5893 LNVYJ MPUAR XWRZF VTCEP

WGQQT 41267 CVIDH LYMKG FMXRH   YGGCV DLIXF RQECG 97185 BT K

53

14 GPM

6JB DE BC1 NR3 -R- 301650Z -FM L3N -TO GM61 GR55 BT

SQASP JXBUL ZUSIF KJDAN PZTWB   NODMR GEIHX NHJOK MFUER VKTTP

KNZCZ SEHED WUTJQ BSNIJ LXZFD   BOAPR JPMGS BIYCH XVANO LYMJP

RFWOU 40369 ZTCEV ITGQQ 21785   WCXLD YRGFH KKVUM CJONY GKXIB

DSHYE LARVM PMHOU SOPAE BPRUP   NIULX JSANZ BFJDZ WFVZT LYTXW

CTEGQ RICFW 93601 KHVGM 24875   DKQXM IDHCY LGVFR VHNMY 21507

TQCWG OZERF VUWAT LOIXP BEQCY   BT K

54

SERIES 5

14 GPM

M3J DE FW2 NR4 -M- Ø21725R -FM SV3 -TO LH3 GR55 BT

MATCH BRUSH CHAIN BLITZ GIDDY   GAUDY NAVEL CLOTH NEEDS SLAVE

SLANT MUSTY HENCE MURDY LINKS   CHAIN LILAC LIMIT REFIT RELAY

OPTIC RIGID REVEL TOTEM TORCH   VOMIT VIZOR WAIVE YOURS XEBEC

WROTE SCALD WORTH OBESE NYMPH   NOVEL AFFIX AGENT BEACH BIRCH

STOVE BLOWN CATER DETER SNEER   DERMA SNAKE OLIVE PAINT BRUSH

ENACT EMPTY GIANT GEESE GALOP   BT K

15 GPM

AF9 DE JVØ NR5 -M- Ø31823R -FM RB6 -TO XQ8 GR59 BT

OPERA OUNCE PEDAL DIRTY LUCKY   KEMPT GAUGE LOOSE USUAL VENAL

WORSE GAUDY VEERY YEARN RAPID   SWIFT SHELF GAUNT VAPID YIELD

XRAYS GAVEL SKIVE GAUZE SLAKE   BETTY UPPER HEAVY ISSUE SALLY

UNFIT SOUND SWORD CLEAR SOLVE   TRUNK EMPTY SPACE FRUIT ELITE

PAPAL VENUS LABOR RUCHE ROUSE   WALTZ POLKA DECAY ROSIN ROOMY

ARRAY SPOUT BOARD SPICE ROUND   OUTER STEAL WAIST WAIVE BT K

55

15 GPM RECEIVING PRACTICE

SERIES 5

15 GPM

M3J DE FW1 NR2 -M- Ø50625Z -FM SV1 -TO LH2 GR59 BT

AWARE BATON SATEN DEVIL JESUS   BIBLE SAVES WAFER ALONG FLOAT

DROLL EJECT TREAT GIVEN VOCAL   SWEAR HAITI KINKY VIVID STOCK

VOICE STEAM LATIN GUARD FARCE   TUMOR PLANT BRAIN SCENE SCENT

STAFF SHOCK NIGHT QUACK TIMES   NICHE POUND PEACE PIOUS PANEL

FANCY BUCHE REACT CLOWN BLIND   BLEED LARGE BLEST HARSH SHEEP

CHIME SPINE SCALE CHOIR CHOPS   ANGER PROOF SPORT LODGE BT K

16 GPM

E32 DE HG26 NR7 -R- 21Ø415R -FM SC18 -TO PY8 GR62 BT

MOUNT PATCH NEVER LOYAL JOINT   HONOR COVER DIVAN DIZZY SEIZE

DODGE DOUGH PASTE FRIED FLINT   SMOKE DOWDY SANDY BELOW CLOAK

OCEAN FAMED DUMPS COURT DITTO   TWIST CEASE MARKS OFTEN JUICE

SPURT CHEEK JIFFY JOIST BONES   FLOUR DIARY MERRY JINGO TWICE

ELDER WHIRL EASEL ELEGY HERON   FLOWN HEAVE BINGO CROWD UNITE

BEAST DRIED CHASM LOFTY HAVEN   HAREM VIXEN MINCE HURRY SWIFT

SHRUB AHEAD BT K

56

17 GPM

X91 DE VM3 NR16 -R- 232123R -FM BD6 -TO LY8 GR66 BT

BERRY KNEAD CLOTH GLAND BLOOD   KHAKI KNIFE LABEL KNURL JOINT

SKILL HENCE UNFIT ANGER IRONY   ANNOY IVORY JOUST MOUTH BREAD

FROST GRUFF LAUGH VISIT PIVOT   GUESS ARMED GUANO DEBAR TRADE

HOURS PAIRS STOCK DANES CURLS   CURVE CUPEL MANGY ABUSE SEWER

KNEEL CAUSE DRESS ADULT CHILD   GIRLS LATHE MANIA TWIST UNION

FIRES JULIA DIASY RIFLE STEEL   SQUIB VICAR ACHES ASHES ANGLE

SPUME SPEED MIRTH DECAY SPIRE   VAULT BT K

57

SERIES 6

17 GPM

UT5 DE 1GC NR1 -R- 100345Z -FM NW7 -TO LA1 GR66 BT

ECFPY GRNEH MSVKC UVGAT 95024   IQLVK MOSYH QDTZW RVXSE CWFTH

KNLTJ BIOYU PZNGH SFBCA 26148   JRHTL INJAU VXOQD UYDTS MWAEK

QTGIY VMRLF EXXOB ZMWKG 09753   QAPBZ NXSBE TCAVD NJFHM FVWQI

PNWUI OISYQ MVWLR EQXDG KRLYM   35980 FZWOJ KHGTR SAZUL DJOXB

KCUTH PYCGA 27614 FHYKX RMLVG   DNUZB KJSFZ ILJXN KQCWI PYJXV

MGSHO WRQDP TUSPA KOHEB CMILY   URANE 43752 OVZTE CGFTW 96801

QVAKU ZXFLY NTKLE JBWAM TNSBB   IGEOP BT K

16 GPM

MC22 DE BA19 NR16 -M- 292118R -FM CR1 -TO TP6 GR62 BT

JRMGN SDNFV KHDIB TBJCI WQZXW   POSNL QTEGW VZPOL TMARC UASRB

PKXHQ GIJBE VCHNU EOYEY 97835   60421 ZXJUD KSRPX NZUML QBEXY

PCGSO YVADK 58371 CHTWQ UZJBH   LRSPI FBNAJ VLNOE WETIM AROTG

KYIQG FMWFD 26490 HVCLM XFUZD   KYSJN GKIQD NXUFO BKWNZ CPTVL

PLJSA PIARB HQBXI EJPOS GQCTW   HMGDY EYCVM 43287 EVHOZ WRUFA

90561 XLRAP SDMEK UABZW LXNKZ   DQTIG YHGRK MVGCW EBHUR FDJSN

JIVOP SQBEJ BT K

58

15 GPM RECEIVING PRACTICE

SERIES 6

15 GPM

BAØ DE T4G NR6 -O- 281315R -FM 5S3 -TO FP2 GR59 BT

SEHKG BIXHE YVYNC MJLOA WVFOR   ZPTUE 7Ø365 QCWGT IQCHD 92481

LVZKG MYFRX KRGYF LVXMH WQDGI   TWVEC TFZRQ 974Ø5 UVOPA LYNMJ

DIEGB XYEOC 26138 SHMPD OARSH   TBPWQ LXZUJ SBNIF NJUDA KZDSJ

KZUAN BZNII FWPXJ UOBSL AHQRE   MKSEG DHIYP XJBNC PVLAY CFMUR

ZOTVW CGWEQ QTIDC 39648 KVMYH   Ø2817 FLXRG SANFB XZDJN KUITJ

ZLPWB RDOQS UPAEM GHISE BKOXH   CLYAN YJPVU 356Ø7 OWFRV BT K

15 GPM

XY31 DE 9BO NR13 -Y- 14213ØZ -FM T8C -TO 7RH GR59 BT

81429 DGYLX MFRLY DGKRX MHVCF   IWCGQ Ø8432 ETWVQ FOVAT ZPRLU

NYOMJ XIYCB EKHSD EPMSG HQROA   17956 WTLPU XBZFJ NDBSI KUNAJ

AZNDS JUNKB TJZBF WZILX PRUAS   OQPDM SGKZE EIYHC OBJHN MAYUR

LZFWV 3948Ø PVCOT QGWEI TQDHC   17265 KYVFG MRXFL LNGXY DHVRK

WGCIC 1Ø547 TQRWZ TOFEQ VLUMA   VNOJP XEXKY BYHNI EPSDS 23986

PRUAO BLJQW TIXFZ NSUDZ KNAJB   HKGNU DJNSX GBJXI LYFCW BT K

59

14 GPM

SW1 DE C1Ø NR1 -M- Ø8Ø25ØR -FM BO3 -TO IB2 GR55 BT

HGIXO BENCY JMVYO LPAZU TRWVF   96703 TCQEG DWIQC 58441 VKHGY

FXRML KUSNA FZNJD BIZTJ LXWAU   SPROB PNQDH EKSEG HVHXO BJIVY

UPLMN 63849 TAZWV FOQRC ETQWG   Ø2715 CIVYK HLDGM FXRLM KFVGY

RXHCD Ø6347 WQGIT EWVCZ RQLTV   OUPAF MNYJC YOBIX 95821 KGEHE

DNOPS RSQPH UAWLT XZFIJ SNKBS   JZNUD ABKUZ DNXZB SITNJ LOUFW

RBPSA DPQSM HIGKE EBNYC XYJOH   BT K

60

END

TM459-74

SERIES 1

16 GPM

6C5 DE V4T NR7 -M- 150949R -FM TC4 -TO VG5 GR6₹ BT

46821 CHKNS BEMPY WZTUI LQRXA FDHOJ VCKRT HFDUW XIENB PZYQM

AGLOJ 37509 SBNQU XYIGH FEDOS TVKJZ WRLCM APOQC KMYZE GHSVA

JWBIX DLRNU PFYJL CZMSI VGPFR DOHUE WUXAQ NUJOF 37205 MGWQC

LKRSD UJXHY ZIVET NPABO 91648 LVOZX HSUIN JRTWK GPEQB YMFCA

JQGTB ZLVFW RIPDM YHUCO AEKNS XYZWI PJUVM XSTGK RADNH OQFCE

LBOUG 93064 LQWSJ YVRNK CIVEF ADHMP TZYWX RPOLB AFIQS CZUKO

HMCGT JORVZ BT K

17 GPM

PD3 DE SM1 NR2 -R- 011011Z -FM SF7 -TO YQ3 GR66 BT

XTGIC BAFKQ WSLDH EMNPU 07369 52418 ZYJCD HMORK BWUNJ FEAPI

CQVTY XSLCG 27659 MOJDA BFQTW ZXUNG IELRS PKYCD HNPRW ZXKJE

BISUO VUTQL GFAJQ 18304 07629 MAEIS LVUWP HNOCB DGZYT SRKFA

ILORG FSJNY VZTST BHKMQ XUWEC CGJMO EHSVU BILKN QADFR YTCWX

15853 PAJNY XUSRO DFIKC BEHRM LHGTW PZYVC XQOLI BFHJK NSTMD

ECGPR UTJHA DBFLP RMQWY VONGI ZCESX 84260 UDGNT 93517 AILER

ZQPMJ FCHOV XBUYW AJMOW ZKQIF CXSRP BT K

61

SERIES 1

18 GPM

CY4 DE ID5 NR1 -P- 071420Z -FM HF6 -TO VE5 GR72 BT

NDHLK VTEBU GFMPU ZJGDB CHAIL   RTOWX YVQEK NSDIX 05146 97382

CBFSO NAEHR VZQJL KYUWT PMZUJ   CEHNK AQSPL GDWYR XTMIF BOUPL

BEHNR 62918 53047 ZDIMJ KCQTX   SYWOG FVADH MPRIE VYOKB AZWSN

QXUJL GFCTF XTQOI ALNPH ZUKJG   EBRVD CWSMX JZWYT BEGCI NLOKQ

PSURH FADMV YLJGO 57420 18396   SPKEX YUQIB AZTFM NHCDR WVZJK

BMPHV WRQLY UXTIC EGDON FSKQZ   OYUIG BFJLS VXRHM DNECT PWAZO

13569 80742 DENTQ YPJGB AISRU   WMVHL DFYQM BPADU XVSLJ FHCOR

TWZKI ENFKU BT K

18 GPM

LP6 DE ZR1 NR13 -Y- 191345R -FM XY9 -TO DP2 GR72 BT

CIMPG YRZWX VSOKE ABDHL NTBFQ   26497 01538 NZXTO KCYUP JRWIE

DGLHM SVACP ZWJME BHNOQ GDKTV   RXIYL ASUQN YDVZS FBCGA HJILR

UXWTM IOPFJ SWZFX QYDCH VILGB   AEOPM NRUWL AHOPS RDCFJ KIEBQ

GZXNV MUTRO JZWSF CBIQE ZTLKA   HPGDM YUNXA 93681 72045 DHJOC

YVTZN LTQIF WRUMG BESXK CFJHO   VXQPL UZSID BAGNR WTMYE KJOTD

WQMHF IVXSR CPABG LKEUZ NYCHJ   VUSQP ZWKFB DEAIM RONGL UTXOD

BJLFP UVSEH ZWTYQ RXNIM GCAKW   PZLGD XUQNI YORMT VSKED FHACJ

PMQZA WYRDG BT K

62

18 GPM RECEIVING PRACTICE

SERIES 1

19 GPM

WS6 DE FT2 NR17 -O- 061803z-FM TW 3 -TO AB9 GR76 BT

29837 51604 KJOQE BHAPM WZRCS TUXVN ULIFG DFIJC WUTRO LYXVZ

SQKAG HDBNP MLUYR 02795 16438 OZWSH BIKJG QMPFD AECNT XVVCA

53746 82091 IERSU YQPFL ZOGDB HJNMR WXVRN KIGEC TPKFH ZWWTS

JDAFM UQPXU OLBKD ZRXVD USMIJ ACGLH ENQKB 65931 70482 AJKJL

HBHEQ BGVXY UCKDU BYBGB SHNKC YMNPB IWTUZ ARLXQ JHFOD TKVRC

WDFUH NEXBI MUPQZ GSAVH EYKZM COAQP WLNCR TLZJV FDEOS XIGHY

PIMCG RWZXY OKESV BADLH TFQBN 64792 10385 ZTOXN CUPYK WREIJ

GHNLD CAPVS MEJZW HOQNB KTDGV LIXYR BT K

63

16 GPM

AB2 DE 5U4 NR3 -Z- 021558R -FM BT1 -TO YH6 GR62 BT

JAFCH BKVES TRYMO BGJTQ KTJWR   BEGQP AFYCM WVZFL MPRDI OUYCH

SKANE IZXWY MUPVJ KTXVS HDRNA   EFOCQ GOULI 40963 LWLSQ KRYNV

FEVIC PHAND XYTWZ BORLP SIAQF   DUVKG TCHGN ZRJVO CGXIT QFBKA

HLWDS UNEPN 93067 84512 DJZCY   KOHRN JUBNW IAFPE YVGTU GLXCS

96297 AJMDO WQBTF HUZNX SLIRE   DYPCK WPHRN EKZJX OSBUI LTGVY

QAQFJ 83104 96027 SEMIA PULWV   BOHCN TDCYG AKXFR GORIL YJFND

DNAGT 86841 BT K

17 GPM

PQ3 DE LF9 NR13 -M- 170930Z -FM MJ3 -TO QB1 GR66 BT

TZVSR QKBNH CWXEU OJCMG USEVH   NLBKI IOXLQ CYPBC WGLTH BHBRE

CIDKF OXFRU YJPNA 38155 XCYWT   RDQJA KHBJF XCWYT DTNMS RGETC

UJAHT PFDLD IKRWM INBGO XFZGC   02864 TGUND UEVBT KNHLD PSCRX

FQZIK WMAOJ WUXYD VFHOC JPZNQ   RLAEI 75913 IQXNU DOPGC QAGKC

UMGPF BGZDK LACIH XROWT KQYEV   XDMIS 61054 23987 OFCSB RENHA

DOXTY GLONR MADIE BFKWZ PQSUV   HJYCN ZULKE BGPAC XSRVI HFQMW

JOTDK MEYWT GNBRA DISUZ QPVXL   XOLZV BT K

64

18 GPM

RP8 DE WT1 NR1 -R- 091745Z -FM GI2 -TO XE7 GR72 BT

JFHOC KSEBX GRUMW FTQIL NTVZY XNZTV RTMUO WSZFJ QIECB TLAKZ

GDPMH NUXYA 68139 24057 JHDOC WXUTM PIOFJ WGZSX DYQCH LIBGB

MOPAE WULNR POAHS CRDJF KIQEB LIHJR CBJAF VSZDY QUASN YXIBL

TDKGV OHBNQ MWZJE CVSSP GDLMH PICMG WRYZX JSVIE HBADL FTNBQ

96247 31058 TZNXD UCKYP IRJWE KNEFU KWTZI OHFCR LVXSJ DPBAU

QFDYM HMWVL RIASU GPYJT TECNQ IXUTC OGEDN QSFKZ IYOUG LFBJS

MSBRH CNVEC ZWPAO 63159 40872 LRWQY HMBPY JVWZK DHNCR MFZAT

BUYQI EPSKX BT K

18 GPM

5Y3 DE 2AX NR5 -P- 151430Z -FM GT3 -TOKL7 GR72 BT

OTXQY LPANH JUZKG VBERD MWXSC YZJWT CEBGI KLNOQ RSPUH MAFDV

UPNED XSLKW ZHBOG YRQIA VTMJF CENRW ZPJDK YOIFB VQLGC TSHMA

XUEJR ZOFCB VUKHG YSIMA DLWQP TNEQV 86302 GNUIM YCBDP 54197

SJLFA XWZRO TKHIP XRMGE CYSJK ONFAD BHLQT ZWUVO DGKRW ZXQMJ

TLEAB HPIFU YVNCD 09783 56214 MSWKF HIOUY ZPGVN VKRCA EJKTX

MAFIJ XYTQP KECLS UVWHG DBNOR ZXYTS ZIJLE ABNCD GWHRO PKFUV

MZKGF 65480 33179 YOPKI ADMTV WZXJL SRHCB ENUCG KJRXZ WYTSP

98136 27540 BT K

65

19 GPM

UKQ DE IMD NR6 -O- 290929R -FM MT7 -TO HD2 GR76 BT

MUKHD ABEOQ VLIFB YUVWZ FLPOR   TSEIA GHKNM QOJCZ 95678 04132

VUKDA FHOSX ZYOPB ZGEMN LJCUF   LNVXZ ADJKT QWGLE HKMBC OSPRW

FTUFB OLISD ZMQGC YXJHE ANPVR   45671 TNEVL XRJFQ ZSHGU AKPWI

32867 JUSTW CLRYH AGMPV COVYR   BDKOX DFINQ ZUMID AFKRX BLSWZ

VTGMJ CEJOP QUSOK ANSZM HQUEC   WIPVF GDBLJ RTYMS 69032 XJZLW

IEMNO WGCPJ XSLKF UZQHA DBTUC   VZXPL IFRVG NAEOU QTJHB DLSMW

URIDN 02471 95286 YOGKB VLWJU   XQHEA TSXZM FPYCJ VXLGK TOKFU

MRBHI SPAZE QWNVI HSETO JRWGC   GLYJO BT K

66

18 GPM RECEIVING PRACTICE

SERIES 3

16 GPM

WM9 DE JR7 NR6 -Y- 011515R -FM JR7 -TO WM9 GR62 BT

BLNUY ZQPKA DFMCN 04682 13579 KHUYG ZSMEF PRIBA XLDOT JQVWH

WSOQT BMUXY JLDRV ZQPIF ACGKN ZNHDP TISEA 27531 46890 LMQRB

CGFOK JUYXV WDELM YCRSA UJPQW ZIGHB FKNOT XVDHN YCVJK GQXTU

OPRWF ABEHI KLMRD SKMGF ZQNHB ACIJL XVOPY UTWEM REFUV YGQTA

CDKSW XJZIH BLONP ZAYBX ZWDVE UFTGS HRIQP JOKNL MCAYB MCNDO

EPFKG RHXIS WJVKU LIJVT 37931 08654 58672 LKUWM 09142 XAYDX

CTRSD IENHQ BT K

17 GPM

8CK DE 9EX NR7 -Z- 101214R GR66 BT

PBOCN KWZIJ MGLQY BKPTG 94351 62708 QJCEA SMLXV WOIUH YXUMB

POIUY GRDWA QSEFT HUKOM NGVDZ ZECTB NYVRE PLJUV DAMFV USRPH

PLIJY TREWQ ASDFG HJKLM NBVCX QAZXS WEDCV FRTGB NHYUJ MKIOL

OLKNQ GECBI WZYJT SWMXC 93751 02846 RBVED KUJZG NLPAH QTOXY

WRYDZ SLQPA HKZNE ZJMUP YTKWU MLTHW JKYGP OEDGS 42769 05742

EQPLX GBRNA MIVRX BLWHT IDZLF URXUS JYTNA XXYWT ERQFA LNSKI

JOCGM WCXEW MBQHK ZTVBY JYFBY PFOGY BT K

67

18 GPM RECEIVING PRACTICE

SERIES 3

18 GPM

4BD DE 8LX NR8 -M- 170748Z -FM 8CK -TO 9EX -INFO J7B GR72 BT

ORILG KAXFR ZTDYG UPLWV ESIMA 79062 34108 FQSAJ TLVQY SOVUI

KEJZK PWRNH XEKJQ SOIUD TVLQL IESMA OHSZN UPSZK OHDRM UDKZB

FAZMH WZKZM SAGHD YMQZP FECKO DPENU SLKXW BZOHZ RQYIA TJMVF

NECRW JDPZK OFIYB LGVQC HMSTA EXJUR FOZBC HKVGU MSYAI WLDPQ

NQTEV 36802 UGMIN BCDYP 49175 LJFAS ZWROX PTHKI MXGER SJYCK

FONDA QHBTH UWVOZ KDRWG MXQJZ EBTLA FPHIU NYCVD 70839 15614

KSMFW OHWUI BPGNZ RKVAX JLTXE IMAJF YTXPQ CEKSL WGHUV OVNDR

DUTSE XFVHA BT K

18 GPM

GX5 DE 5HB NR16 -P- 171200Z -FM BD77 -TO PH4 -INFO BF6 GR72 BT

YTXZS JIQEL NADVC GOHRW KVUFT FMZKG 48065 71293 OKIPT MTDVA

XZJLW HSBRC UNCEG RKXJZ TPYSW HSNUM EBOAQ LIFBV VYUWX PDLFR

STEAK KMGNH JOCQZ 69587 40231 DKUAV SOHXF IYPZV MEGWN UCJKF

XLNZV KAJDT GEQWL BHKCM PRSWO FKTVU DOLXE QGMXZ HYSJE RPNVA

95410 82736 TUJSW HLCYR PMGVA OKEBX NQFID MDCIU FRKAX WBLZN

VHTGH JEOCT XOYKQ ANSZM EHQUC VPFIW LGJBD YDRTM 30926 61475

ELTVN JQXRF HUZGS PIAWK VRCYO MOINE CJWPG KFXLS QAUHZ TCDYB

TVEQN GXERM BT K

68

19 GPM

G84 DE G85 NR14 -R- 091415R -FM GX5 -TO 8LX -INFO 4SL GR76 BT

XKVPZ RGIVF EUNOA JBQHT SWDML   INYER 41072 36985 GKYBO WUVJL

HAXEQ CMTZS YJFCP LDVGH KUTFO   BIMHR ZASAP NIQVW EOHTS WCJGR

NYBUL PAZLQ MNDXF 62084 59173   UGKYH MFZES IAPBR DTXOL VHJWA

OTEQS UYBMX DVJRL PFZIW GNAKO   HYZDN SATEI 51237 KHMUO ZEEZB

BNREY UPSRH IPYLJ GBECI 02684   QLKNO MFBVA JPLDU ERVYN EPBCZ

VZNDG ERFSQ SAWRG ILKMO HJYNU   RBTGF DBECW SQAZX VXCGN LKJMN

DAFSB RQWET OYUIP UBYMX OHUWI   GQLYN WJZKI BNZPO FABHX DSETU

MYSLB JAECQ 62870 39154 KGTBT   JUOSQ BT K

69

19 GPM

1XO DE 8CK NR8 -M- 070413R GR76 BT

FGYPO EQNAI TDRSC YZABX 90142 KMWLU 65387 50846 93127 ILPVJ

KWJVU RXSXI PFGKE NOZDM AMBZY KLYJO PHQRI TSUFG DCVEW BAZXY

OPBLO HJZIX KWZDX GATQI FRVUR WMPUD OUXVP ILAZJ HZQWN GWKFN

DKLRN EHIBA FOWPR XGUTQ VKYZJ DXSNB KTFNO VIHZG PUWKJ RYAXS

DMYLD YXDUJ GKFCO KBLMQ 84069 51237 SATAI HPZON GANKZ PFZIQ

DBJRL UYBXM OTEQS VHJWK DTXLO RIVPA MFZES UGKHY 51739 62084

MNDFC PZSKQ NUBLU WZRGJ ETSOH NQIWB ZASEP VIRHR QTUFO LDVGX

YJFCP ZTSNO HAXEQ WUVLJ GKDOG GPBNZ BT K

18 GPM

PX1 DE CL2 NR13 -R- 122317R -FM G84 -TO 1XO -INFO VO5 GR72 BT

36985 70214 INYER SWBML JKBTQ EUNOA RGIVF XKVPZ TZPBY FKLXS

CGPWG NONEI RZYOB IKWAP HZUSG RKQSG ELTVN 61475 02693 PDYMR

DJGLP PFIWV KZUIE NMASZ XQKYJ JAEOT NGHVT ZUEKH MZNSA QOKXY

EOJEZ HBNGB ZDLSW XRFKA DIMUZ AJCFX RTMOY QUUNK LDXDP AWZKJ

NXIRT SHVEU LPZFU XDTOY NLOGR AMIBE KSWFZ SBUQB ZJYHN EZKUL

AGPZE SRVXI MFQNW ODJTK METYW GRANB SDZIU QLXPL JOFAZ SKBEX

URGMW QFLTI GNVZY JZHOD 05247 61389 NAUXY GMPDH LATKZ IEBQZ

XPLQL REWIJ BT K

70

TM459-84

18 GPM

RW2 DE CL4 NR3 -T- EWB -R- 171900Z -FM PX1 -TO 8CU GR72 BT

WFZSJ TOURN XBZNG EQIBK CJDFR   OSKBA ULRWN OMEPA LBIGB DHYCQ

ZXWSF TJFOI WMXPU IRJKH CABGF   VSFFZ NUSKA KVTGH NQHOB JEWMZ

AEDZX LNGHB WERIJ YPZUK XOZTN   58130 47692 DQPFN DLBHA OESJV

ZXRWY MGIPZ FUNEK ZIWKT ZRHOF   SJVLX AUPDU YNFQD VLMHW SUYPW

JBPGY NQETC 72048 69361 AOWZP   ETNCP RAXMV JSBLF UGYIO KZSQF

BNGOE TCXIU QYRLW PVMHV ZKBWV   TMZFA QBUIY KXPES 36981 40725

JOLGY DVAMF UHSRP OQLKN GIECV   WTCYJ SXWMC RDVBE KJUSZ NHLPA

MEJEZ YIGUO BT K

17 GPM

1ZO5 DE FB88 NR9 -Y- 262329R GR66 BT

QITOX QFTFG ULXJK WNZSA OBYKV   REPIM AHVDF WGUOS CXPZK IJVFZ

07345 89216 HRENV ULOPV MFPIX   WRBYG SLQPA HKENC ZJKUM QLZJV

81296 HREND ULOPB MFTIX YRVYG   SLQPA HKENK ZJMUP UTYWK ZJLVQ

ERAHN ZOSDC 32897 16540 DXSIN   QKVEY OWTXR ALHIR GDZJD MUFTG

EUTVB HKDLN SPXRC QFKIZ NWAOM   UWYVX HOVCF TJQMZ LRIER 57319

FTENU 20468 EXCSZ NIOGV WMQUR   FTDBL JATHU GRCPE EDSMN HFSKA

OXIQL YCZVP GWHTL HMRBE ICFKD   PIREM BT K

71

16 GPM

1Z02 DE AL82 NR4 -T- FB84 -M- 011550R GR62 BT

SORXU JYANP 83515 CXPWY DRFQA   LNKIB UVSHE OMJGC CEWUX KQAMB

PSZTB JUDNF OGIRL KARFX ZTGYD   OBNZH UPVWL ESAIN 69720 40382

AQFGH TLYQB SOIBK EXPWN YBKZP   LSERI UHXNZ QWFTB JAIDM 69752

LGSXC VYQTG AIEPF UJWNB OFNRH   JDYXZ 48215 39760 NUPNE LHSDW

FQAKB GCTIX RZOVJ CTNGH UDZKV   ISFKA OBPLR YXZWP HPDMA RKVNU

WJKSL 04369 OGVUL FEQZO BHRSA   TKSGH UVMPH KSEMA UOCHY PMIDR

PEMAO BQSUB BT K

72

18 GPM RECEIVING PRACTICE

SERIES 5

16 GPM

BD6 DE 8QB NR8 -R- 282021R GR62 BT

THREE SEVEN TIMES NEVER STRIP   STRAP PARTS SHAPE PHONE RIGHT

WRONG GROUP BLIND CHEST RULER   STEAK QUIET SMITE SMOKE KNIFE

VERGE FLING BLADE SNAKE BASIC   FIEND SEWER SLIMY FEWER STORM

STORE CADET TRAIN DRILL AGENT   SPIES ERROR LISTS MAJOR RANGE

MINOR STATE RADIO PETTY SIGHT   GOING MOTOR FIRST THIRD WHICH

ARMOR AGAIN UNTIL SIGNS SWORD   SWAYS SENSE POWER WORLD UNITÉ

TWICE WOULD BT K

17 GPM

1XO DE FB81 NR5 -O- 280409R GR66 BT

QUICK SHARP AVOID REACH EVERY   EXERT FORCE WRIST THUMB SPACE

MEANS LEVER SWIMS SCREW SEINE   ABOUT CLOSE SLANT SLIDE CLEAR

FORGE STARS METER MOUTH TAPES   MATCH WORTH BRUSH OBESE BALMY

GAUDY RIGID MUSTY LIMIT GLIDE   REFIT YOURS BEACH DETER WROTE

STOLE SCALD HENCE LINKS SNAKE   PAINT GAINT OLIVE RELAY BIRCH

NYMPH BLOWN ENACT OPTIC TOTEM   BLITZ TORCH CLOTH SLAVE LILAC

GEESE EMPTY CATER GIDDY NAVEL   NEEDS BT K

73

18 GPM RECEIVING PRACTICE

SERIES 5

18 GPM

1ZO DE 5ZU6 NR1 -F-R- 261335R -FM AL8 -TO BC6 GR72 BT

OPERA WORSE XRAYS UNFIT PAPAL   ARRAY OUNCE GAVEL SOUND VENUS

SPOUT PETAL VEERS SKIVE SWORD   LABOR BOARD BORED WEARY DIRTY

YEARN GOULS CLEAR RUCHE SPICE   LUCKY RAPID SLAKE SOLVE ROUSE

ROUND KEMPT SWIFT PETRY TRUNK   WALTZ OUTER SHELF UPPER POLKA

STEEL STEAL LOOSE GAUNT HEAVY   DECAY WASTE WAIST USUAL VAPOR

ISSUE FRUIT ROSIN WAIVE VENAL   YIELD SALAD ELITE ROOMY STOLE

STAIR CHAIR STOOL TYPES SNIDE   SWEAR THREE FEWER CADET STORM

PHONE RULER BT AR

18 GPM

J66 DE D2N NR18 -M- 231714R -FM 1XO -TO FB81 -INFO 8QB GR72 BT

THERE MIDST NOVEL UNDER SWING   WINGS BULGE JOINT BEACH ROUTE

CLOSE GATES THREE HOURS CORPS   STAFF WHILE THROW PLANS YEARS

ETHEL REBEL AMONG WROTE ABOUT   AFTER PLANE WORKS POINT MARCH

PLAIN QUOTE FORCE UNITY LOYAL   SMITH DRAMA FIRED TROOP VOTED

GUARD MEDIC WHICH UNTIL OFFER   CHECK STORE TOWNS WOUND SENSE

PRIDE EVERY SHARE CENTS AIDES   TODAY LIVED BEING FALLS BIRTH

QUIET USUAL QUINT PARTY LEAST   EVENT BLOWS UNITE SUNNY WORST

FIRST STATE BT K

74

19 GPM

1Z06 DE AL8 NR27 -O- 151624R GR76 BT

READY HORSE WARTS JAMES DEATH   GROUP MAGIC WORLD OTHER TRUCK

GREEK MILES STOCK FLOOD ALIKE   ROOMS STEPS YOUNG GAMES ROOST

PAPER BROWN DROVE GLASS CLERK   MONEY SEVEN STEAD WHOLE LEASE

EIGHT PRESS LIKES KNOWN POWER   LIGHT SHORT BLOWN LEWIS RUMOR

NEVER DAMES SCORE WEEKS PLANS   FLOAT GLOAT STUDY STUCK RAISE

EVILS HOMER NIGHT BASES FORCE   SMOKE FIFTH METAL NINTH PITCH

PEPSI WATCH WHEEL WHITE DELTA   ROGER ROMEO ALPHA BRAVO GREEN

ERUPT MILES BLOCK COLOR STICK   FIELD BT K

75

19 GPM

PS4 DE 9ND NR3 -M- 272315Z -FM PL5 -TO HK4 GR76 BT

BWMFZ GVQMA FMACY EDPQG TKRWK   UNISH OXVZL 68149 ADBPN VPIEZ

XYJHU RDLSK WCGQM 25703 FKTON   XQFMA OWXQA MIZSA YLFJP RUNLD

WXBID SAHVG YEMZK OCPQA LCRWN   KZVJT DSOEF IGYHX NUBQS 59703

LJGOA YMZQP ENIBX DWFUH KVTRC   HJDOF RAQSL TIZUW NYVTB KSHNC

81624 QBEIK JFCDE SPOHA LWURN   MPOEA BGLIV HCDYQ XFZWS JFKWI

OCJHD 54027 18639 AXNUY MPGPH   LKSTV QJAFG VOHCF EITRM XEKPS

81624 JGLOA XIWBJ DSLDG BUBLO   TMGCH JWNUS WRMPH BGYZD RAFDA

KFJHB 73159 UFPNG LZJQV 73405   OLGYJ BT K

18 GPM

4SL DE XL6 NR1 -Y- 081145Z -FM DU8 -TO 4SN GR72 BT

MTXWU BZMXU NVZTY FUHMW PJFLS   HVESU RVSXI FTIWL OURTM JOXTI

QCVAS XRWXY BTGJY NGODE 07245   HLPNA JDNIZ TYWUK VJDGE RIELA

DSLMP XTWZY ARFKX EXJDX IEPAF   ZOVRJ 43609 WOLFZ YJHXU ULNRV

97053 SHNKZ YPEMV UVQNS LFJYP   PIVEZ MIPDR JQSWL CTIGX YQTVG

OISVG VLROI 35852 RCPVJ LHIAC   JUMCT XCTUK ZUJKZ 68931 UIRSS

ESJOV EWNJZ XWFGS OITUE GPBAZ   WQHUK MINXR ZUKEL KEXSB EBQIC

HYCDQ QHONV LBHSA LMHVW GYIUO   XPEKS BDVRE GYOES KEMHC XTWOR

XCITU QETNZ BT K

76

SERIES 6

18 GPM

AN6 DE P2N NR21 -G-R- 272148Z -FM FV3 -TO P7X -INFO RA6 GR72 BT

VCOHF ATHJU YANJP YDNJF LYTKV   GSCBX QAKUD OHCUY VEDRH ISMCH

GHIXL IZUTY AXRLK SEOVF RGFTV   86419 SENKA FIEBC VSHLW 97562

QFGAJ ORSUX PVLFD YVYUX DFIEN   QSPAI XWMCV VUIYQ SBLJD MFQYD

QTFBN VDTKG VIGLV ATLKV OFHCG   JYHCN WCKAS DLGLP PUQSV LCPQV

MEPOA LXYIR 76942 UPDAV PUBAD   HXMRV MZFTA TCYWJ EPIBN RDYWG

XSIDS WJONA UMWQR CFKID QHMKD   48031 80467 UMPNE IRYKD XVZOL

UOUHD ZVJKT JDDHF TCRKV MRZLW   QBAXW NSIUM MJUPI 97630 WFTQB

GIPNC MGHLD BT K

17 GPM

CD4 DE OW6 NR7 -M- 041526Z -FM 4SN -TO 89L -INFO 8MD GR66 BT

97260 CUEWX MERHD IOGNV FKIQZ   65410 VYKOV IECGB RHDCN PNZEK

JVLSX 85130 NSQHZ LRWUN AUNXY   DZISU VWFKA INUDX TONRY MERID

13869 SHVOA SDZBI OXPXN RAOZF   OWZAP AVJZW QLFON NZSWA LVPOU

27839 PXRSC SESCZ EHTGL OGNLZ   SAIEM HXNUZ 82145 BPLOR KSGTX

KRWTJ FTONK CPQOA WOFDH NIBEX   EMZIM 57023 BPQEG HANDF SRQIA

BUCKZ SERLI TVWUL UHVSE XZVUP   04628 KDLHN OBSNB RENHB RXLGH

VMHPV 93651 IKTZW PZUYK ABCGF   JDFCR BT K

77

16 GPM

8PL DE AJ2 NR3 -Y- 211405Z GR62 BT

JACAJ DPXOU DJTOK CHOJD QIBEK RJLIH ERIWJ UNKFE 40478 YIRKL

VAKWF CFTGF 12986 RAHEN UTVEV EDNGU IQLOX NILKD DNCOA DKCUP

KNROH DZJOV EKQFO AMCFU CGQWM AHVSG MZQUP NXSID GRDYW METRI

BPJFL UHVSE ZQWPU RMXIN WGKAX DBPXG IXNUQ TYNOR DVESK JFCHA

DYOTX LRGON MDIEA DZWFK PVQSS JNHUC ZLUYK RISVX RWHQM DKPOH

OXTPL SRDVG QLASD GHIKT STUDZ SEPKX MITRU FVCOH GKFDE VLPKS

52407 EPYMW BT K

78

END

APPENDIX E

IMC SENDING PRACTICE EXERCISES

Follow the exercises as they appear in this manual. Do not start on another exercise until you feel certain that you can send each character in the preceding exercise correctly. The basic drills and exercises go from easy to more difficult and should be followed in this sequence to develop a good sending ability.

BASIC EXERCISE #1 - CHARACTERS E, I, S, H, 5, T, M, O, Ø

SHEET SEEMS SITES MISTS MOTTO   THEME 5ØØ55 TIMES TEEMS THESE

HOMES STEMS MOSES 5Ø55Ø MOIST   HOSTS SHOTS EMITS SHIMS SHOOT

Ø5Ø55 MEETS MOOSE MITES HOSES   TOMES MOTHS 555ØØ THOSE SHIES

TEETH HOOTS SHOES TOOTH Ø55Ø5   HOIST OMITS ITEMS TOOTS Ø5Ø5Ø

MOSES MISSED THE MOTH.   HIS SHOE HIT THE HOSTESS.

THE MOTTO MISSES THE THEME.   HIS THESIS IS 5ØØ SHEETS.

THE SHOTS HE SHOOTS MISS THE MOOSE, HIT THE HOSTS HOME SITE.

THE ITEMS HE MISSES I SEEM TO OMIT.   THE HOE HIT HIS TEETH.

THE HOSTS MOIST SHOES SOMETIMES SEEM TO EMIT HOT MISTS.

8

BASIC EXERCISE #2 - CHARACTERS A, R, L, W, J, P, 1

REAPS STEER PLATE TRIAL HORSE   WEEPS Ø5151 POOLS WAITS JESTS

SOAPS TOPER POLAR 11Ø15 ALERT   SOLAR LAPEL LASSO TAPIR JEWEL

Ø151Ø SHAPE PATER LISTS WALLS   MATER ROWEL 51Ø15 LATER TOWEL

JOWLS HOWLS TAPER SOARS 1Ø15Ø   LOOPS RESTS REELS TWIST APPLE

THE SLIM HEMP ROPE LASSO APPEARS APT TO SPLIT.

THE JESTER WALLOPS THE HORSE AS HE TROTS.   THE HORSE WAS LAME.

HIS JAW SHOWS THE PALE PALLOR AS THE ARTIST SEES IT.

TWIST THAT REEL WHILE I WRAP THIS ROPE AT THE LAST LOOP.

A TAPIR WILL RESIST TO AWAIT THE SHOOTER.

9

TM 459-101

BASIC EXERCISE #3 - CHARACTERS U, F, V, 2, 3, 4

SEVER SPORT VAPOR SHORT 21Ø51 TEPEE MOUSE SHAFT GRUFF HOUSE.

TRIPE 35125 STEAM WHEEL SPERM FEVER STEEL LIVER 42Ø53 LIFTS

PEARS FAVOR FRUIT SAVOR VERSE 53412 SIEVE SPLIT STAFF STOVE

HURLS VOTES 54533 PEARL FURLS PETER TRAIL SHIFT FRAIL 4554Ø

HIS PIPE HAD A SMELL LIKE THAT OF SHOE SOLES AFIRE.

THE RURAL HOME HAS LOTS OF FULL APPLE TREES THIS TIME.

THE GIVER OF THE LIVER SHOWED US HOW TO PREPARE IT TO EAT.

ALL WHEELS MUST MOVE FOR THE MOTIVE POWER OF THE AUTO.

WE MUST FIRST SEVER THE FLESH FROM THE OUTSIDE OF THE WHALE.

10

BASIC EXERCISE #4 - CHARACTERS N, D, B, X, 6, 8, 9

DROOP NINTH 35621 NASAL DINER EDITS EXERT ABATE DEBIT 2Ø813

DETER BIPED EXILE BEAUX BREAD PLANT Ø9826 STINT THIRD BINDS

ADEPT SIXTH EXPEL 813Ø5 BUXOM FIRST BURNT TOAST DRAPE BURST

12963 DANES FIFTH DONOR DUPED MIXED 88266 BLEND FIXED WAXEN

THE FIRST BURST OF FIRE EXPANDED THE BARREL OF THE RIFLE.

PAT STOOPED AS THE HAMMER SAILED ON OVER HIS BALDING HEAD.

WE MUST EXERT OUR FULL AND EARNEST EFFORTS IN ALL PRACTICE.

WE WERE TO EXPAND OUR PRESENT LINES AS THE NEED AROSE.

ALL OF THE DAMSELS WERE FAIR AND BUXOM BUT MOST WERE TIMID.

11

TM 459-102

BASIC EXERCISE #5 - CHARACTER G, Q, Z, K, C, Y, 7

QUART CRACK GRAIN LANKY QUICK   86327 HAUNT GROPE CROCK CRAZY

BISON CREEK CRANK 51074 KNOCK   TEXTS GREEK STAGE JONAS STICK

66778 TODDY CODEZ QUIET INDEX   YACHT GOOSE QUIRK 10345 GAZES

TODAY QUAIL TOUCH GRAZE CARRY   76531 QUEEN GRAVY GRIPE TOPAZ

SIXTY SIZZLING STEER STEAKS SAVORY AND SALTED TO SATISFY ALL.

THE VISITOR HAVING NEVER SEEN A BISON CALLED IT A MOOSE.

WE QUICKLY GRABBED THE GOOSE AND TWISTED ITS NECK CRAZILY.

THEY INSISTED THEY BLISTERED WHEN EXPOSED TO THE TORRID SUN.

THE MAVERICK JUMPED THE CREEK BUT MIRED KNEE DEEP IN THE OOZE.

12

PRACTICE ON LESSON ONE CHARACTERS

SAMWE NTOIM ISAMW ENTOA OTNEW   IOTNE SWNTI IMEOT OSMAI TWENT

OSETM TIAOS NWEMA TSMEO NOSTI   MAWES NOSME TIAWM OSMET IAWMO

SMETI OSMIA METWN TIAWE TNAWI   SMOET EIWAN MOSTE MEAWI NOTSM

MEWOW WANTS SOMES SMIAT OEWNS   MIATO OWNSM IATOE WNSMI OEWNI

MIAEW TNIEM OTWIE TOAWI SINAW   ASTNA MASNT WMOTS EWSMO ENEOM

MEN WET SIN NET SON NEW TEN SOW TAN OAT TIE WIN MET WAS SAT NOW

WAIT TIME WEST TINT EAST SNOW MASS MEAT TOSS SOME WANT MOAT

I SAW TEN STONE MASTS.

SAM SWINT WANTS SOME NEW SETS.

I WANT TO TOSS A SNOW MAN ONE TIME.

13

PRACTICE ON LESSON TWO CHARACTERS

WBECT GDXIO NZMØS QAYWB TCEBW GCBET TOGEC TGIDO DIOXG ODNXI

DINZX MXZIN XZØMN SMNOZ ØSZQM AMSØQ YSØAQ AWSQY QAWBY EYABW

CWYEB ZNXID AQSØM DOGTC MZNXI CWQMX EYSZI BZØND WQMXO YSZIG

TDNØA COXMQ EGIZS BDTNØ WCOXM OGTDI GTCDO XIZND MZNSØ AQWSY

AWEBY SQYAØ ZNMIX DTGIO NZYBC GDSEA TIIXN SAZØX YZING TØSGA

CAST GAME DINE CENT IDEA MANY BOAT DOME ITEM DEAD SNOB **STAG**

BIND CITY NICE COZY STAY TOYS DICE GATE ADAM BOYS GENT GOAT

NOISE YEAST WASTE MEANT TEASE BEAST TOXIC BOAST TODAY SENSE

TEN COZY TOTS TEASED NINE TINY BABES.

DAN, SAM, MAGGIE AND BOB DANCED TODAY.

SIX NICE NEW BOATS WAITED TWO DAYS TOO MANY.

14

PRACTICE

APEOD CHRDL XUNZR JRRFL RKDCT YDDNX NFYWK SCPLA ALPRO WYKCU

DLPIU UHQJD MKCPR HIZPN ASKBI UTVJO PXIMC COGHS BNNXA MENCY

KANOF DLFUJ FTUIK EJRDC WBUBK LEMGI HGIAY ZVCHC HDSQF NATNI

BCMPY TNRDV APEIL CUODM GTLHN OAOAL PNTRX ERTNB PTRNB METND

DSFNO PFGJL FRTBL HLLRA BFPLB GPVAR HISAP JAWRL PKNRY ONXCT

IMMEDIATE DELIVERY OF RADIO EQUIPMENT IS NECESSARY AT THIS TIME.

CONCENTRATED PRACTICE WILL MATERIALLY AFFECT PROFICIENCY.

THE RADIO OPERATOR IS SOMETIMES RESPONSIBLE FOR MANY LIVES.

CHECK YOUR KEY ADJUSTMENT TO INSURE MAXIMUM EFFICIENCY.

BEARDED AND GRIZZLED PROSPECTORS GATHERED TO STAKE THEIR CLAIMS.

15

TM 459-104

PRACTICE

XWSRT WHVHT WCDOY PITYV FMGJU   JNTIR PQGTC VFDWS APXGK YTICB

HZZWC IWQQH EKIDS QKTMD LSO1E   LAZMF PJNBX GWUMY QPOPG VMNBU

NORAB BETHG BYPOF MAUVD WNKKU   LHBJX SUMMW VNUXD SHSIB PWQAZ

INTIN PEXKM VGUPN MGEQA HRAUT   MHTDZ SFUNY HYNEN FIORV MNEVT

PZXDQ ZFSYT MWTGU BVINT DGBPS   NDTFG PJQAH CMFDX APHCV MSTSJ

THE COMPOSITION OF THE SYSTEM EXISTED IN THE ORIGINAL STATE.

RADIO COMMUNICATIONS REQUIRE WELL TRAINED OPERATORS.

MANUAL DEXTERITY AND MENTAL COORDINATION ARE SENDING REQUISITES.

THE CONVOY PASSED THE INSPECTION POINT AT THE APPOINTED TIME.

SEVENTY BUSY BEES BUZZED ABOUT THE BUZZARDS ROOST IN THE TREE.

16

PRACTICE

SVNRT QFLPZ CWYFS RBLMO BQMXJ   BZSYK SLZWA CQGXV YNIHW VNPFO

TNCXJ EKLMG BVDHM YUPOK FUJAE   IUJRH GMUKO ZTAUO JVIKP RWYTL

GSWCR VFYCZ QIYUM HUYAK RPGKY   QKQOR WEGCE DIZGO EDXRE PLOFH

TWDMV LPEZX BLOVR APKDE USHBG   XSUBJ MCISL JOTIF UOCFA GNHMT

EYJTK PLUPK RVKPX DXGRO STAJT   JSEAF GRYZT ZYSKF EPXWL WVCPT

THE TRAINING YOU RECEIVE IN THIS SCHOOL WILL BE AN ASSET LATER.

YOUR TRAINING CAN BE ADAPTED TO MANY SIMILAR CIVILIAN OCCUPATIONS.

THE QUIZZES CONSISTED OF MANY DIAGRAMS AND RELATED SCHEMATICS.

CONTACT WAS SPEEDILY ESTABLISHED BETWEEN UNITS BY THE RADIO OPERATORS.

YOUR FOREARM SHOULD BE MOVING DOWNWARD FOR EACH ELEMENT OF THE CHARACTER.

17

TM 459-105

PRACTICE

CJQKD XQMZF RTGJP PLSHL GLIKR   QYVCT CUACO OBRZQ KWTHP BUVSF

HLEQR ZLKVC KELEA JQHZI FVEBP   NKXMQ VAYDW EDPFR WHMKH YKQPS

NSMDI VFLWA ZJZTF PWLZW BRFZT   HEWGJ TIBUK GWDLA SKROP KAZFD

MEPHW NCJLR DACYS RXOSF CLQBL   CPOIR RXSFV HGDJX PDKMB QARCR

PLHWA VJBHF KDVKA OKPSR ZSPLS   NDNSU HSATA JFLHB XAFRV LPHRE

IT WAS NOTED THAT THE BLOATERS FLOATED WHEN DROPPED INTO THE BUCKET.

MANY BASS WERE SEEN LEAPING FROM THE WATER FOR EARLY FLIES.

ALL MEMBERS OF THE TANK CREW PRAISED THE ABILITY OF THE RADIO OPERATOR.

HIS WAS THE JOB TO GET A MESSAGE THROUGH FOR BADILY NEEDED SUPPLIES.

A COMMUNICATIONS CENTER CAN BE COMPARED TO A TELEPHONE EXCHANGE.

18

PRACTICE

Ø2176 1629Ø 89713 38967 238Ø9   2371Ø 38926 86721 Ø9167 938Ø2

62967 23107 89298 16182 ØØ182   19327 13ØØ8 97692 8Ø662 71769

3Ø791 Ø781Ø 69382 83622 Ø9128   6Ø373 97Ø16 32728 19689 8276Ø

6Ø373 97Ø16 32728 13737 Ø1699   48672 29Ø61 4Ø253 84937 5619Ø

1Ø373 2Ø394 3Ø571 4Ø612 5Ø231   49466 99221 32321 43345 32421

THE COMPANY REQUESTED 25 RIFLES TO BE SENT FORWARD BY 14ØØ HOURS.

THE PRESENT STRENGTH IS 85 ENLISTED MEN AND 4 OFFICERS.

THE CLUB MEMBERSHIP SHOWED 532 MEN, 164 WOMEN, AND 223 CHILDREN.

HIS DOCTOR PRESCRIBED WINE, SO HE ORDERED 1Ø BARRELS OF EACH COLOR.

HE HAD 5 NIECES, 8 NEPHEWS, 9 BROTHERS, AND 4 SISTERS at LAST COUNT.

19

TM 459-106

PRACTICE

84625 92847 86424 Ø8247 1Ø224 86736 75624 9Ø163 74628 48297

28934 FRBLP 32862 JWFRA 7Ø465 KLOIN 26913 HNVJX 692Ø7 NVBER

MWAFP 91862 FOGLQ 9682Ø SUWMW 16246 FORIV 98967 LSPFR 9238Ø

928Ø1 JVKXC 71968 LFSNE 81749 MLIPO 49251 CVBPO 98793 LFGDZ

81Ø46 71213 73629 98Ø9Ø/ 61923 91325 74829 92122 74657 93645

A HOLE WAS DUG 25 FEET BY 6 FEET TO MAKE SURE THAT HE STAYED DOWN.

THE TRUCK HAD 14 WHEELS AND TRAVELED AT 7Ø MILES PER HOUR.

AT 23ØØ HOURS YOU WILL BE RELIEVED AND YOU CAN SLEEP UNTIL Ø53Ø HOURS.

THIS SCHOOL IS SITUATED 12 MILES FROM AUGUSTA AND 9Ø FROM COLUMBIA.

A YARD CONTAINS 3 FEET AND A FOOT CONTAINS 12 INCHES. CHECK CONTACTS.

20

PRACTICE

MJWFN FOGQL JBEXH VGERY NDNUN QSPGI DTAST OTPSR KSHUN LKGSF

CSTXT UAMHW KLZCB WISRI PUTQJ IODML YUVBO OAKCK BHBFZ QHADY

HADNF LFMWP MCBYW OGDXU TGJFA GEPJW UITXM TZEZB KXIAJ RYLNR

RKVVS ITOBJ SYGCC DKNMW FJIDC HPCVE SQAIO PUNAO QOGKT QSWHU

QXLIZ CHYXG FYHBM PGPXD PLMZY LXKRV HBSOE AHAEB YLNZU STVXF

GOOD SENDING CAN BE ACCOMPLISHED THROUGH PRACTICE AND INTEREST.

ONE MUST PRACTICE CONSTANTLY TO IMPROVE WHETHER SENDING OR GOLFING.

SEVEN DODDERING CODGERS SITTING AT A BURLESQUE WITH BALD PATES SHINING.

ALGERNON TIZZY TEETERED CRAZILY AS HE TWISTED DIZZILY AROUND.

THEY QUICKLY GRUNTED LIKE HOGS AT A TROUGH WHEN WE MENTIONED FOOD.

21

TM 459-1Ø7

EXAMPLE OF A BASIC SENDING TEST CARD

JPLZE CVGQU MBNAO LWSRI PMCNF CONXS HJKRS TQIFC LKOPR ADFSG

LGFHW NCBZQ PABLT KVJFX 38634 NRYCM PKLTR JZSWE BCGSA BLPAR

1. Correct all errors made during your transmission.

2. Allow the proper spacing intervals between your characters and

    groups.

3. You will be required to copy back your own tape;
    send slowly and accurately and you should have no difficulty.

22

METHOD OF CORRECTING ERRORS

1. During your basic sending test you may make an error in sending
    which must be corrected.

2. The following procedure will be used to correct all errors made
    during any transmission. Note example below:

    KRGBV PLKED QZXSW RGSMI PJAXC FKH (EEEEEEEE) PJAXC FKSRD
    <u>1</u>   <u>2</u>   <u>3</u>   <u>4</u>   <u>5</u>   <u>6</u>   <u>5</u>   <u>6</u>

3. While sending group #6 you send "H" instead of "S". You would
    then send a series of 8E's (EEEEEEEE), then repeat group #5, send
    group #6 correctly, and continue with your transmission.

4. When copying back your tape, the transmission should read as shown
    below:

    KRGBV PLKED QZXSW RGSMI PJAXC ~~FKH~~ FKSRD

23

PRACTICE

84625 92847 84624 Ø8247 1Ø224   86736 75624 75614 Ø4836 9Ø163

43759 Ø2847 83748 Ø1837 54728   81622 54756 88766 99254 33421

ØØ778 88564 55332 11232 66554   67566 33422 88665 77445 44433

33221 22335 55664 77556 44332   97719 43445 45454 43432 67566

75632 21123 1Ø324 26547 27534   38561 62839 81Ø93 5384Ø 7198Ø

68388 3Ø331 31ØØØ 76548 28464   43655 66751 1Ø396 4187Ø 47632

Ø3759 17322 47755 23144 55566   77554 55544 87224 56375 86754

985Ø8 35476 5978Ø 41656 7856Ø   46588 77654 98Ø74 23754 81233

85674 Ø9576 25437 95732 33222   11332 55446 77645 99876 Ø4327

23485 72643 86574 91426 55344   76853 94322 64578 46832 23422

24

PRACTICE

Ø2176 1629Ø 89713 38697 238Ø9   2381Ø 38926 86721 Ø9167 238Ø9

62967 231Ø7 89398 16182 ØØ182   19327 13ØØ8 97692 8Ø662 71769

3Ø791 Ø781Ø 69382 83622 Ø1928   6Ø373 97Ø16 32728 19689 8276Ø

6Ø373 97Ø16 32728 13736 Ø1699   48672 29Ø61 4Ø253 84937 5619Ø

1Ø373 2Ø394 3Ø571 4Ø612 5Ø231   49466 99221 32321 43345 14253

Ø1927 98798 87678 76576 54543   67584 Ø9121 23984 45362 Ø1856

Ø1928 58492 465Ø7 23456 39521   78543 54Ø96 Ø9664 44655 73322

67744 31812 31845 Ø4387 6397Ø   98235 76576 23412 22113 55446

84957 37562 29496 1936Ø 75926   42869 81945 96625 Ø2658 73628

84629 Ø1835 84629 36154 75538   84623 72957 93638 83512 Ø1836

25

TM 459-lØ9

```
LBDFZ VRFYU RNJCA MHOWB UPYKQ   CKZGQ YZKFV FVTKB DYDHT OIJJC

UAICX FSVCL MPIHL KPCOT RKSNN   TXNFS XFNZX PTXUL BVNWZ XHMZX

PNORI LSEMJ UAUVW IDBDB RNCIY   MJSRW RNSET LIBNQ DJFZI FIEND

PLHDM TCJXY GHQPF EDIGM TSJFK   DTRLR KZGXP ONDYL CPHXZ FOZEI

ZSCFY BKHFA BEBCZ AIOUI JLYDE   MWTGY OAKXY VBINT DGBPS SQMQZ

JWDJD PJNXP VOLZE QWFNY GEADT   BFUNI OHEYA CILTG ELXKV ZHBNP

GMONV XCRBU VCJSJ UOIMC NORAR   POSCE WNMDH CVPHV QMCSZ KLKGL

MDJAI MWCLZ JSHBL GWPYF HTXPV   YIJRO WYKOU CUOXW IGHAR YTNKP

WUSPR PKMBS IZJRI ZNBRF QVWVM   AKLRT MYOEB KHQZR UELYZ XGDRV

WIOYN BYVPQ RFJDV DBNFO KOPGU   ZGYXT UZCBO FUXMK GUZLZ QVJXE
```

26

```
GNIAS BERUJ VTCZW UKGOY FSANO   22341 HCKEV WULDJ ZCMXK RPIHN

12345 CQIOK DWPYT BZHDV MNLYC   OWMZF HAQLJ YSPTB ARMDX BSGQU

TYLMJ AXXNH Ø9451 HEFPF KJERP   QEVMK BALOP HSKMG CJGDK EDGNX

DYCAP FYYTU BQGUC PVZRQ SSWUR   52134 THLWC MBNZS ARVND WILLO

FYYTU BQGUC GTFLE ZIJTX 31Ø47   TQKQR SZEHC YWAYI BETRK VIHCE

JWJML PWFSG ZEFVD 3451Ø BUIBD   ZRNFA DAHCC GMLPN GKJNX YROON

MHCPD UTDLA BMLYX HAFBF CPIYZ   SQPKJ LKVUO USOQQ TXZWR 293Ø1

KCKNS QAVOO YTHQO IWEYL WHBWX   KCYUE 2Ø345 ZMQVA XGCHU SNSFC

TNIZG ICXFD VYFJR UAJUW BDTKP   LPXOP ZMAEL IJDMR 34561 YGFMN

UAHRT TEQFT FWDQV NFNRE EBZPT   NUWBL CXETF IVWEK JQTUQ KQJDM
```

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TM 459-110

ADVANCED DRILLS AND EXERCISES

This part of the manual is designed to help overcome various difficulties that you might have in your hand sending and to prepare you for higher speeds.

Practice on the "dit" characters and numberals found on the first several pages should help you to further develop the smooth wrist movement and consistent "dit" formation so necessary to good, rhythmic characters.

The drills on "dah" characters and numberals are calculated to assist you in making "dahs" of equal length and consistent spacing, another requisite of rhythmic characters.

The random code groups and clear text will help you to combine the different types of characters, and to perfect character, group, and word spacing.

Your instructor will assign the type of practice needed to help you overcome your particular difficulties.

PRACTICE ON DIT CHARACTERS
I S H B D U V

```
SHDBU IUISV BVDIU VHBIU DSIUV   HDIBU SVBID UUVDH SDHUB VUIBV

HDHSD BVUSI DBHVS SHHIU VVDBI   DBUIB UDDHI HSBUV SBDDU IUVBS

HIUHS BVDBI HUIDS VIDUV BHDVI   SUHBD UVIHB UDUBI SHUBD HIVDU

IHSUB DSIVU SUHDB DIHBS VSVHD   BUSIH DUVIS BDHIV SBHDI SUHBV

DIBDS HUBHI VDIHU SBVID BHDSU   IVSBD UIHBS DVUBS HUDVI SDBVU

SBHUD ISBHD VIHSB DHSUI UDBSV   BBUHD SDLEM DVSHH ISVBU DUIBD

HUSID VHISV DSHBI SIVHD UIDBS   UHIVH DSIHU VDIUV BDUHI SBDHV

DBHIS UVVSB DUHIV BUDSH IDBIU   VBSDU BSHIU BHUDS VUSDV SHIBD

UDSIU HIVSD BHDIS UUIVB UBHID   HBUSV IDUBD SIUVB ISDHI HBDIS

BHSSD VHVUS ISHSD BHBDS SIVUI   HVDUI HVBID SBDUB UBVIS VBHDI
```

TM 459-III

PRACTICE ON DIT CHARACTERS

I S H B D U V

BJUDS ISVHB VBJSI SIVDB BVDUI   HBUVU DSUHV UBHIB SVUDH UDHUV

BUSVD VSHSD UBDIV DVBHS UVHSI   IDSIH VHSIH SBDUB IHVUD SISHB

BHIBV DBHVI DVHHD USVIU SIBUV   BUSHI IVUHV DUISH VSUIS SHSBD

VIHUD BVHSD UHUSV BVIHD UDUVI   HSVDH VUBHI DUBHI UBHIV HBDIS

DHVUS VDUBD UDHIV VISHB HUDVI   SHVID UIUBV HISUD BVHIB UIDBH

ISDHI VBISV ISVDB HBDUS UVIBH   SBHDI HBVHS IUBVD BVDSI DVUHI

VISHV SUDBH SSVIB USHVH IUHBV   BDISB UDDBV SHUID DBVHI IDUVS

VUDUB BVSIU USVUD DHSBB HBSDB   HSIVD VISHB HDIUV SHIVD HUUSH

BVHDS IBVUS DBVIU DVDBS IHVDS   SIHUH BBVID HBDVS IUVDS IHBVU

UUDHI VHVBS ISVDB BHSIU VUVSH   BBHSI UVHIH BDUBV UIVSH IUDSV

30

PRACTICE ON DAH CHARACTERS

C Y X Q F L Z K G P J

CLFXP KGZXY LGXJC JXCYQ FXJZY   GFYKG XLFGX LZGGK FCLGP YJXGZ

CPYCK GLJCK LKPJP KFXYJ FGJZC   ZLFYJ YKGXJ QXCPF LXJLQ FYCPL

XJQYF FQLJG CPYJP GYJCK ZQCYL   FZFGL PCPZJ GKJPK CPCJG LXQJZ

CYGJZ YJXGF LGXJL GXJLX YFCJX   CKPKG FJZGK YKJGZ GJPCX XYFYP

CQLFQ GLJLF GKJYX QYJXF FZGLJ   CGKPJ XJGYC YGFFL ZGZJP JKKCJ

PYCLG XFZJK YCLZG CPYXJ QJFLG   XJLFC YCZGK KKZPZ FQJQX LXYGC

PYXJY YJFXZ GYYPF JZGCP KGJCX   GGJKP JCYXQ FJLXY LFLJZ JLZKG

LPPKL JQGKP YCXXY JJCXF PJGZF   QLCTJ XJYPK GZLJG LLFCP JGFKG

JPCYP FZLJG CQXYF LFGLX XKCJX   CYQLJ FLJFZ YXZGJ KGPCR PJLFG

XYCGL GZJKP JKYXC CGCLF CGXYK   JZLJK PPCYJ XLQFX JQFFC ZJCJL

31

PRACTICE ON SHORT CHARACTERS

A E M N O R T W

EANMO RTAWE MNRWO TENAM WROTA   NREOM AMEWN TEMOA ANRWT OMENR

WTAME RONTW AEMNO RTWAE NAMEM   ONTRW MANER TOAEW MNROT EMWAO

NRTWO TRWAM ENORT WAEMN ROTAW   MORNE TAWMN OETRW RTAOE ANMRT

OWAMN TREOW AMNOR ETTNA WMWEO   RAEME MNNAO WAEMR RTNOW TNNAE

MORTW ARTME WOEMA NMAAO ERWTE   NMROW AORRT MNENA WOMTW TWOER

MTMNM AEWTO RTMEO NTRRO MTRWA   TWOME MNOTA EROAR WMETO NRTTN

MTWON ROMWT WAEOT NRWMA EOARR   WNWRA TRWAE RAWMO NOMTW WENMO

NMMNO RMROW TWWOE AEANM NEMTA   EANRN WENOW NETNR REMAT AEMNR

ORAOE TORWA ORNEW NTWTW OWRAM   RTOME AOOTM WAERT WNLAM EOAAM

ENTMN RENTM ROAEO DTNWE RMNNT   AEMNW WATER AAWOR AMONE ONENA

32

PRACTICE ON SHORT CHARACTERS

A E M N O R T W

MEWTR OTMAE EARON MAEWN EAMRO   TANWE RNEWR OMWEN WTRON RERTW

TORWR WTOOT MNOTA WAEOY MEMAO   RTAWE NEMOR TWMEA NAORA WETAN

AWORM EONMW NANTW TNEOM MWEAW   ENMRR ONAMT RNTOM AOMTE ARMAW

WROTR NEWAT ROAET TOMNW TROTN   WOOTE AWOWR NTAEE WTORN RMNNE

AERWM RMWNM MNORT WAMOR TWATW   ANERT OAWNE TAEMA RTAWT EWORO

MNANT ERONM AMONO NRMEN NMOMO   WTROE ATONE AWMAE MNWTR EATRO

RNEMT RTAEN MMWTR ONAWR TOMAE   ATEME RWOWO NOROA TAWTN TONME

ROWAM EMAAW ROTRE WATRA NENAW   MNORW OWWTE NORTN TWAET MEATO

MATWT EMNWN ORMEA MNRTO WERMA   TRNRN MENEW ORNME MOOAW AEMRT

WTROE AWONA ENMAE NRTNM OMOAW   EMWRT ATONO RNWAE ORWAO RTNME

33

PRACTICE ON DIT NUMBERALS

3 4 5 6 7

35647 65734 37356 45346 73564   65437 54643 37653 74546 46437

57346 57434 57563 74543 76676   73654 75465 34665 45665 76465

37657 75657 34743 56434 64546   73643 75737 65564 37437 63476

37534 44375 77345 54356 74643   73547 67345 63576 46347 57356

37435 64337 56457 67436 75463   53475 36475 63377 56364 57463

57563 74537 46537 64573 45366   55743 34764 36753 47365 54763

67554 36743 64573 45376 73654   53376 64354 37657 35473 34357

64365 75374 46365 34576 43457   76563 37476 53736 43636 75546

67354 76375 45463 73765 45364   34567 73543 64375 73466 55374

34

PRACTICE ON DIT CHARACTERS AND NUMBERALS

I S H B D U V 3 4 5 6 7

14S5B 6B5HS 316B7 73R14 5HS6B   7DB6H 51S34 U3V4V 314SH 6VH7B

5V35H 1B35B D43U6 B5HVU 3S576   73V6H 51V64 UND4V 5S431 B3V5U

4U6B7 5H4V3 14U6H S1513 B6D7H   13S4B V6V34 5U4V5 3S7HV 4UV6V

3H5V7 147D6 4H5VU S316B 51D3V   5SB7B 3D5V4 H61U7 H54V6 13V74

V4H5H 16B3V D3754 1U63B 7UV31   7456H BS1U4 53674 H5S41 BVD3D

4U5VU DH4SB 43163 65HB1 3SHB5   D4V37 45VHB 65UD7 3V1S4 47B6H

6BDUV 57613 45V3U 541SV SH537   63DBH 74UV4 U513H S5H71 BVDUB

4V31S H5B6D D5H13 7UV31 31SV5   65HH6 B73V7 45UU1 54SHB H67D4

UV4B3 5V376 SV13D 7476D H1S4V   56BBV S36D7 D7UV3 IV434 S5H6B

S6HVD B73U1 DV3U4 5S4H1 657V7   B34B3 D45V5 UDS7D 1564H VB43S

35

PRACTICE ON DAH NUMERALS

1 2 8 9 Ø

89Ø18 228Ø1 29Ø28 91298 ØØ182 912Ø8 Ø1892 Ø9182 82912 9Ø128

18Ø8Ø 9Ø9Ø2 1Ø928 89Ø12 891Ø1 92Ø11 89218 12Ø18 Ø892Ø 99821

8Ø291 Ø9Ø28 12191 98Ø28 12198 98219 828Ø8 1Ø9Ø1 9291Ø 2181Ø

19228 Ø1298 229Ø8 11Ø91 298Ø8 1Ø912 2Ø981 9Ø2Ø2 8Ø912 82298

Ø928Ø 11819 1Ø889 18Ø21 9Ø81Ø 2829Ø 12928 22Ø98 18992 Ø1812

9Ø981 18Ø88 28ØØ2 98Ø81 19Ø19 9Ø2Ø2 Ø2111 29189 128Ø2 9Ø188

129Ø2 12991 91Ø19 1929Ø 19281 28189 89Ø91 122ØØ 99Ø11 9Ø28Ø

21182 219ØØ 12189 89Ø89 18Ø2Ø 21Ø18 98891 12Ø92 1Ø29Ø Ø2182

28821 8Ø919 Ø2929 12ØØ9 929Ø1 98218 11289 Ø1281 189Ø1 99Ø12

1288Ø Ø2118 2Ø189 81289 Ø12Ø2 89Ø81 9Ø212 89Ø8Ø 91812 Ø192Ø

36

PRACTICE ON DAH CHARACTERS AND NUMERALS

C Y X Q F L Z G K P J 1 2 8 9 Ø

C1JYX 82Q9J FQ9XJ ØLJ1Z Y2X1Q J91CØ CFØ12 ZLL2G 2J8GK 82YXJ

CØZ92 L18KG JKK9P 9PØC1 PJCØC ØP912 XYJ22 YJ1Q9 1CØ2Q J98XF

X8Q91 8JFØL LF12G LØF9Z ØJL1Z Z1J8G 1GZJG 2881C Y2XJ1 CQ9XJ

Q8Y18 FØLJF Z2F18 G28ZJ K9PG1 PØJCX CYJ12 QJ8FØ 28XØL 9ZJZ9

PC18J FL121 8FG18 Z2GJL 8PGJY 2CØYZ ØF9K8 8XJ91 YØP9G 12X8K

8J21Q 1ØFL9 2JØY1 C2XJ2 Y8Y9Ø L18Q8 CØLFQ 8Y1QJ 19KJ1 9ØP2X

2Q1GJ 8GZ1L FZ1ØL QN8FX 8J8Z2 L91XJ 21JFC FCC19 ZC22G 2ØJØJ

C2Y9J 8Y1CQ X1L2F 9LF1J G2KP9 QCØX1 8FY2J L81Ø2 YØZG1 P8CØ9

ØXYJX FØL1Z K8J9G 2C81X Q29FØ LJZ2G 8K9PØ C1Y2X 8FQ9Ø Z1J2G

Y18C1 X8J9F ØL1Z2 8KP9G CØ1Y2 GX89F 1LZØ2 G8YC1 JXLQ9 1ZG82

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TM 459-115

134

SENDING PRACTICE

YLTSG FDMVW RKWSO GHCGB UMPUJ   YDAFT ZPCJA NESYH XQZKB OGBWQ

UOKEI WFSAR DMULV NHIVT MCLDR   XIGYE BPVTF AKSZO YRLYL NZWHC

DJQVX QHWPO WUCIA EBNGM UJSMF   GDKRP XPAIL EJUZR XOZCG BHNSW

RYVLF BEGQI VSTXM JHFTO QKWBA   DMUPC NXEZT OIMYL ADGMR WOXYR

HCQKV ULWFJ CANTZ QUPJI HKFNS   VBGDP SBGQZ PEANV ZIJPW CHOYU

SWOKI DJACQ RYULT XHEGP SXMVI   MRFBD MPBIL ASWNZ QHYME VGOYK

BHCOU DRGIT XSJEF NJWCP DPXZT   UQMLK FBNRC AZQIF BOVYM WSLHD

KTYMZ EOACW PXRGS JHFEQ AIUVN   URVGB DJKLS PDGYQ ZUIDO MJWSZ

AJFPG UFBEL NQVXV WRMKL IKHCB   RCHNT OTYXP AEOZT PNKFV BIOEY

PLDZR TGAJH DMSXW PIFCN RKSWY   FMECQ URLPN JKXVG AHBOE BSZJI

38

SENDING PRACTICE

EGNVY LFAUX QMWHD YPKIV WGMSE   TBUAK LQRHC ODMTC RJZFX PELVZ

WGSMY AHODT CKVMX ZQIBJ RXOYE   FLMKI GCQUN WHDRB SAUPT PJFZA

GOUYL CJHRW UPTYM FAHDM QVIOQ   SNXVI WEBGD NRSKT FKELP JCBNI

ZRLGC AFJPV ZUNYI EFMTW YOHCO   SQJDW RXKSK GBEQA UNBIM HTXTV

ZPEBN WMDEU YHSLZ BFOAJ XTPRK   GECMY ICQVJ FOZWR KUXDA HFGNS

BKEMU WQORJ ICTHY SZLDV PXAGT   LHDQL DXUFB MZIPE AKTJW VYOSR

MGLCS DOIZQ YFVBC TNJGE XWRZI   PULOJ FBKAE TNWNX LGGHC DKPOH

VRUSU YIAZY VGKNP EURQH BLSXJ   FMTDW OCYIA ELPUG DJQWT ZOIVR

SXLGY MHNFA EBKCT UOZFE JCHXT   YVQUL MGASY NZRKE KIPUX WPOKI

WSVMR QFCAE BJODF BZTUJ IAMCQ   YRWID HANWV PLFGK BNLTR DGLXT

39

TM 459-116

SENDING PRACTICE

58021 AFKQV SXWNP HKPUX ZRMFA   IQSWR LDCET ZUTLI EBDUY XFTON

NSPHI BEINN XUYZS HFCBG JLQVZ   BAHJO TUYYQ JGFKG 95146 MKRWX

VHDAE JIKHL QWVMP TBFHA VYWRN   IFINS WYUKP KDACO RVHCL AFPTY

XWZUN MSILR UYAGB JSWVN KLJGH   EDBAE CBMPZ YBXNQ TPRSM HGEHL

PUTOF BELOQ OBDGK KICJQ OSWXJ   IGFEU 78463 RMTXC WVMNN OLGDC

CDKOR VYGCD AONPS OHFMP SVXZS   JPIPH JPXTR OMQFA DEHIV DFAJS

WZVLC XVTML GINUU HEJKO RIAKS   WYUKI HINTR RWXUG BBGEC 05916

NJLQO UFEBG QCACG NPWOZ WTPZT   LKDAD CXYXQ MFNYE IGVYM QKZBS

TUOJR NDLAH FCWNI GRWYU TCJAP   XHYEP NXJVQ ROPGF DATXU LSNQL

73640 MHISW OYJHK IFGAN QSQUY   ZHBED GFENT WRPLM SVWZK FIADP

40

SENDING PRACTICE

54692 AJOUQ YWEHM PFJMP TWZSR   HNIOU YUQDB JKHFS VXTWR TNQKH

BQKQU SPLHF LOQTZ WUTTV 06381   DEMNL IYFCV ANWHI EKMJC GILMO

CBNRL ZYVUS OPRLI DEEAD BGRYS   ZDHIJ OQUZX VXCXF GBBFM SWMIF

DAROP NLARW YUBFH NQTWY ZVJXK   RVZFD HSUNK 86932 GBLNY LJHEC

GIDPT UTWRQ MPROL 36709 NOGTT   WZXAE HLMRS VJGCJ PAQBC DIHAS

SXOZV VEGIJ KNSWU ZXGOT YZQPK   MLABC 69328 JOSVZ UFADP QSNIH

UWKKH FJNMV SGIQE COPUN JGDFD   QTOTY ROPYD FHIBL NHWYY 17832

KHBWX TRGFB 37805 CKJLN IVXZP   SPRRV WBAVZ XYZUA JKLLC DATXM

ECCMU QRNAB EEJNR SMNHE FGHLU   VTTIL 39072 OKFCT WXAPQ JICQS

UYZXB RAAFI LNOGV WPSWY 57793   TUOGC DHKDQ DRVYM BXAKS VZJGF

41

TM 459-117

SENDING PRACTICE

DETPN GAUPT GZRGF ATJMU KZGQJ   OPUMW DPAGD WZFST WNLKP OADTV

OIGXY RQLJH ELMRS TUZXS POLKJ   LJFES CBBGO ZYWXN HDBCD BIPQY

XZWKH HQVYV TFACF AHILS RUINC   RNMKJ NDDCE NFVBR QZXYN UXMKT

AOWMG KRTUW TQOJA FETZX NLDAN   BIPQG FUVHW SLMJN KHUZY RLNMK

IGECS QPOQV XOACV JHSRY XZVTR   QTUDC ABAEG IGIKO PPNMR ZNSID

EFUZY WLOPU CATRW PHLJH FJSUY   AWEFE CLAYR QSNLA OVTDZ ALPLJ

GESYU VWSJI HIGBN XBFGD AGPDZ   XTQOP JKHGF XRPNL MIHAZ BDCLD

ABJIJ HSYED CQZVS SNMAC IKDCN   LIGFZ VUSOT ZUPOI HGEBN OUVOZ

YWVES LKFEM REDNT MZECA ILOTO   MLUYT SPNKJ HGBAT MWXJF AKOSW

MKYZX YREIO GEBEF EQUWY TPMJH   IFGAV UZPHD SBSUV QQNJF EPXGC

42

SENDING PRACTICE

EZKPY UCBJO TXIMS WBHNR VAEIN   SWZBR MHDCG LQUYD GLQVZ FJMOR

TYXTA BEIKN SWXUP HKOPB CFJAG   EIMQU YDHLP TZBFJ NRVZE IMQVZ

AFJNR WCGKO SQYXB DKCOS UTBLH   AEHLP TXZCG HMQUY BDIKO SUWZD

FIMRV BGJNC EJNQW XZPFK RVYSO   TLAFK QVZDI NPXBE JOUVY CHMSX

ACFKP WZGLQ SHMRB DILTX GEJNO   RUWPA EIMQV ZBFJN RWCGK OSXBD

KHNPT VWXYZ UDFJL PRUTQ MSLCH   EIGAG LQVYU PKGBH MRWXT OJECI

NSXWS NIDDJ OTXVR MHCEF KRPUZ   ZQLGA BADHL PTXYV SPMIK EBBEI

MQUZX ROLHD ACFJN RVYWU QNJKG   CFGOS WAFKP VZUOG EFGLQ WYTNI

DACHM RXXSP MHCED IGJOS NTYUZ   WDRKL QAFCA ILOSV XBDBC GKMRX

IOTWX FDJNQ UXWUS QLEHG MPRTZ   PNHZE UXAEI MQVZW RNFJB BFJNR

43

SENDING PRACTICE

WQNHC CPORS IEHTN ZUGMV FABVX   WTLLA HSFIE BFGPQ ROXYZ YMJJD

USOSW DJWZG INELF HKTOM RQYWI   JLMNP ARSZE BCDHU AFBHP VVCKE

XDBCE FHILR USNAW BAUER PQVYX   MACDU YZKLJ GFNOP WVXZT TSQOJ

GMAEO SIMAC RANNA GHIRS UYXWR   TQPOL KJEDB JMXUL KFDPQ VYXVZ

HBZWG IESMC RANNB OPQTU XHACF   JLMKY XLHEF GQUVW ZJKOP STRYV

HZOQY EABVS FIGNM ULVWR CABDK   KLMNE SIGFY GOQTT IDPPU RVXWX

LZSOU SWXZC IGWTP BHABA DJNQV   KFEMG RCUYP YZHIN MLJEF QOTVG

XKOPS IKABV RNLHG QXADV EUMGW   YQOPA BHHJM KNRST UVXYZ TLIGG

FEDXZ UPMGA DIHSW YVQNK CFJOT   XRLEB XZWSO HDAEK QVYTP MIFBF

JLNRU CZTOJ SCFMQ WYLIA EKNPU   XRHGD BVXRN IFADK PUZWS IOHCE

44

SENDING PRACTICE

CLRXU GKOZA EQBNW PDSVI AHUYV   MPHKC NLBJF GJQES JMKOR TWXYT

AZBYC XDWEV FUGTH SIGJR KQLPM   ONATJ DCLKP TOMMY QEWSB DENIH

NMURD PROCK GFWIA VFQVS XZYZX   JHULB ACEGI KNPRT VXZYW USQOM

KIGEC ABFHJ LOQSU WYZXV TRPNL   JDHFB ACFIL ORUXZ BDJGM RSPAC

HKQVW NKLHD BUQJE OZPSX EGNFM   ITYVY TWAZB YCXEW CJGVL OILST

FHMQU NPRHA DKPYZ BMEUT GKIWJ   XLNRV OQSUF ABZNF AOQXJ DLVMH

EPTWI RGUYS QKPJS IBEWZ YGDOC   HKLMU NRVTA CEFIG KMPRT VXYVB

DFHJL NOQSU WYBEG IKMPR TXZWX   ACHGL DNQUO SQAGL QVZUP KFBHM

RTWYT OJECI NSXXS NIDDJ OUYWR   MHCEF KPZVQ LGBAD IPUZW RMFBC

HOTYV QLEAB GNSXX SNHGC FMRWY   TOIDA EJQVZ UJLKK PZUQL JCDHM

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TM 459-119

SENDING PRACTICE

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VQMIE CHKOS WYUPL HDADH LPTXX   TSYUO KGCAD GJMPS VYYUR OLIFC

BEHKN QTWZX WSPNK HEBCF ILORU   XZVTQ MJGAX AEIMQ UYXTP LHDAB

FJLNR VXWSO KGCBC DGHKO SPTXV   WZXRU NQSMI FJEAC EGIKM OQSUW

XZYVT RPNLJ HFDCA BDFHJ LNPRT   VXYZW UQSMO IKGEB ACFUL ORUXZ

BEJMP SWXZX VYSTP NJMHD FBGCA   IDHKN QOUWT VQRLE ACDHI JOPST

WXZYV URQNM JIGFD CABFE LMRUX   ZYWVT SQONP LKHKG BECFI LORUX

ZXWSP LHFDB ADJGM PSVYZ VTQNK   GESCB EAHJK IMQOT NUWAB EFIJM

NQRVW ZZVUR QOMNK JHFDC ADHLP   UYXWT PLIGT BDCEK OSXYZ XVTRP

NLJHF DBACE GIKMO QSUWY ACEGO   KMOQS UWYZX WTRPV NLJHF DBCJG

KFBNO RSVWZ ACDLM TUHIE PQXYD   ENNIS MTCRC ADJKL PQVWY ZBFOA
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SENDING PRACTICS

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SEBLM IGCFO PKHYV ZTOXU TRPMK   UPMIF ADCEA IHGGN MQTUW LQIQW

ONXZY WVSUQ FDARP NMLJI HFDEC   ZWBKH GACNB UYWVZ XRXGR SOYSL

OGAFC BBAQT ZXQGL HEDDV NSJRP   QMKJI ZWVQP SDACF IKLOY QURPT

LKNOJ GBDXI YZWTR SQABD CFKMP   PQWQS PAEFI OLKHN AEPNM UVDCB

TUDGH FTSNX ZFEJL POYXZ GXYVW   XUYON HGBAI BHLZM SRERJ HRVMU

VCCJG PRHJR ZADFG VXWNK BCJIU   TSQOM ZWUPK EADJL JINOP STYLM

HFDYX USKHK EBCNZ RSPLH GEVFI   OPQNG ZCGHR WTMLN OIEAB MUZQV

TMKFC DAGAH IACJR QLQSW VUVTX   ZWQED XYXYF VRQLM OQVHA DNJIF

CSUYZ XPJHG FEDBK OLTXR NJGFM   RUSWR PKIJE DBBAZ VWUTI GJHFD

PSUZX WPOKL GDCTX ACIKM QTXAN   CWYBC HGLUS PZSKJ YZEEA QRTQN
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TM 459-120

SENDING PRACTICE

DETPN GAUTT GZRGF ATJMU KAGQJ   OPUMW DIAGD WXFSF WNLKP OADTV

OIGXY RQLJH ELMRS TUZXS POLKJ   IJFES CBBGO ZYWXN HDBCD BIPQY

XZWKH HQVYV TFACF AHILS RUINC   RNMKJ NDDCE NFVBR QXYHN UXMKT

AOWMG KRTUW TQOJH FETZX NLDAN   BIPQG FUVJW SLMJN KHUZY RLNMK

IGECS QPOQV XOACB KHSRY XZVTR   QTUDC ABAEG IGIKO PPNMR ZNSID

EFUZY WLOPU CATRW PHLJH FJSUY   AWEFE GLAYR QSNLA OVTDZ ALPLJ

GEDYU VWSJI HINMU XBFGD AGPDZ   XTQOP JKHGF XRPNL MIHAX BDCLB

ABJLJ HSYED CQXVU SNMAC IKDCN   LIGFZ VUSOT ZUPOI HGEBM OUVOX

YWVEL LKFEM REDNT VZECA ILOTO   MLUYT SPNKJ HGBAD MWXJF AKOSW

MKTZX YWROI GEABF EQUWY TPMJH   IFGAV UZPHD SBLUV QQNJF EPXGC

48

SENDING PRACTICE

16830 43975 Ø6782 58Ø22 41594   66793 13854 1579Ø 19369 4347Ø

22681 2587Ø 38494 5Ø316 97166   38Ø78 24912 5Ø527 39272 15835

26Ø23 82691 4857Ø 37591 46931   4Ø164 Ø9843 16726 85431 8Ø76Ø

48479 468Ø2 59736 Ø3197 21258   15Ø58 37269 26943 4813Ø 79125

Ø7364 57891 469Ø1 69323 23587   4857Ø 57Ø12 46845 18373 269Ø9

37261 14852 Ø5848 Ø7621 479Ø1   33794 68526 4179Ø Ø8532 68542

17385 6359Ø 8641Ø 25369 92718   47513 89476 2528Ø 134Ø7 76954

3289Ø Ø6715 48391 96384 52921   Ø6731 Ø6548 2Ø451 38235 26718

469Ø1 69524 Ø398Ø 75413 28526   67Ø19 8Ø764 43297 8159Ø 34856

3Ø157 27321 99475 468Ø1 9382Ø   35724 94693 4Ø512 Ø7988 13268

49

SENDING PRACTICE

95372 86539 35061 73892 40259   17680 12048 34169 81742 18357

69074 48905 89053 69325 72548   03041 52267 27450 31642 92841

86836 35641 36587 74680 95289   40201 37069 59841 71279 05131

80690 37148 07425 18963 52075   19742 95273 84062 85296 30741

58148 37260 18639 24306 57363   84015 48391 73590 71265 26149

23129 56477 31059 25360 72682   96880 74591 91434 26789 37504

31697 79680 94003 68946 59985   46564 02470 27580 18493 71580

83547 26964 30701 12212 13573   78530 18291 44234 36925 66789

25048 86491 37953 03072 84196   15062 82251 13126 37675 39480

06138 78259 58362 09741 48029   47692 26547 06973 81350 35891

50

SENDING PRACTICE

75381 24718 96143 84021 08671   95204 29837 16053 93568 27359

14829 24613 05472 76225 14030   85247 26396 35098 50964 47906

13150 97217 14895 96073 10304   98259 08647 78563 14653 63868

14703 69258 26048 37259 24791   57025 36981 52470 84173 09608

94162 56217 09537 19384 51048   36375 60842 93681 06273 84185

09573 98762 43410 19547 08869   18624 06352 95013 77465 92132

08517 39481 08572 07420 46564   58005 64986 30049 08697 79613

09876 52963 43244 19281 03587   37531 21221 10703 46962 74538

08493 57675 62131 15228 28051   69148 27370 35973 19468 84052

19835 05318 37160 74562 29674   92084 14790 26385 95247 83160

51

SENDING PRACTICE

75381 24718 96143 84021 Ø8671   95204 29837 16Ø53 93568 27359

14829 24613 Ø5472 76225 14Ø3Ø   85243 62396 35Ø98 5Ø964 479Ø6

1315Ø 97217 14895 96Ø73 1Ø2Ø4   98259 Ø8647 78563 14653 63868

147Ø3 69258 26Ø48 27259 24791   57Ø25 36981 5247Ø 84173 Ø96Ø8

94162 56217 Ø9537 19384 51Ø48   23375 6Ø842 93681 Ø6273 84185

Ø9573 98762 4341Ø 19547 Ø8869   18624 Ø6352 95Ø13 77465 92132

Ø8517 39481 Ø8572 Ø742Ø 46564   58995 64986 3ØØ49 Ø8697 79613

Ø9876 52963 43244 19281 Ø3567   37235 21221 1Ø7Ø3 46962 74538

Ø8493 57675 62131 15228 26Ø51   69148 2737Ø 35973 19468 84Ø52

19835 9Ø546 3716Ø 74562 29674   92243 1479Ø 26394 95247 8316Ø

52

SENDING PRACTICE

59Ø14 24698 153Ø4 56Ø99 51372   4654Ø 19285 18577 4Ø248 18521

84326 79537 269Ø1 358Ø1 42568   3977Ø 24681 34768 Ø3527 96385

Ø1936 28376 17Ø18 47Ø96 73Ø81   95173 Ø2937 24496 Ø6849 56Ø12

18629 3845Ø 4Ø873 85394 Ø627Ø   32687 26Ø39 7Ø834 55682 1Ø14Ø

59748 37968 51183 24ØØ2 92579   69755 64116 Ø9845 1Ø294 26Ø37

41137 Ø9832 97312 5965Ø 85321   96264 15984 87361 14376 45419

436Ø1 27496 39598 5827Ø 148Ø6   73521 Ø4837 152Ø8 39629 28164

Ø9475 16437 53861 96239 64Ø27   Ø5179 91285 Ø7534 Ø5Ø49 25238

41769 368Ø1 38571 Ø6947 23763   5Ø419 17295 49268 37184 Ø2685

148Ø6 97525 32397 1Ø843 76854   129Ø6 Ø8521 93646 47395 Ø8261

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<u>PRACTICE</u> <u>MESSAGE</u>

8CK DE 9EX NR7 -R- 1Ø1214R GR 36 B̄T̄

DRILL SGDBC AEIQN 59786 GHECI   MORTU XKPJL QSWYX VFBAD HMPTX

ZUWVL 856Ø4 DFKOB NSRQE ZAGCJ   IPRTK IJLNO MGADE BCHFV XWZUB

HIORT VXYZL FDGCE AKJNP QMUWS   CJMNI 95632 PTVXZ RSOLK FDGBH

AEUYW QAGIL ORSUY PZXMJ 4Ø361   DEHKQ B̄T̄

54

<u>PRACTICE</u> <u>MESSAGE</u>

4BD DE 8LX NR8 -M- 171Ø48Z GR 47 B̄T̄

DRILL CFHIL OPUWZ BEGKD MRTNQ   YXSAA BDFGI JHECK OQUYZ XWVRS

PMNTL CGMPU WYQSR TJILH KEANB   FOVXZ DCHJK EFBDA NTVXW QSRZY

UPOGB IRBDA ECFGM QSRUV WYTZX   KLIJH PONHJ PRLQS DFCAV WYUNO

TZXKG EDFHI JLMQS VCTUZ NOKEA   GCPYR BWEFI LNPRD UWYKG HBDJO

QMTCX ZCAVE IJNSU WYZQP GHLBK   AORMF VTXDC B̄T̄

55

PRACTICE MESSAGE

GX5 DE 5HB NR16 -P̂- 171200Z GR 41 B̄T̄

DRILL DLHNT UYXEB JCEGI KFHCD   RSQLU 35924 VXYOP NTWZM BAJGH

IJMPR 96405 DCLFC VXZWT YUNOE   ABCFG DBEIK MORSQ VWZYA UTNLP

DFHJI SLQRN VXZWY UPOMB DCAHI   LNPCV YWXZU QSROK 54623 CEFGA

BCFIM ORSLU WXYZJ LKGHD 57098   BAPQN FIKMP UWYQS OHDCA GBELR

NVXZJ B̄T̄

56

PRACTICE MESSAGE

G84 DE G85 NR14 -R- 171415R - FM G85 - TO G84 GR 12 B̄T̄

DRILL TDGIJ MOQNT WXYVZ URSKL   HBEAF CDINY WXUZR SVQTO PPLKH

MJFEA BGCJM B̄T̄.

57

PRACTICE MESSAGE

1XO DE 8CK NR3 -M- Ø7Ø413R GR 39 $\overline{BT}$

DRILL ZWCDH NPRUX QYOQM 62185   IFDEA CBDFI JMPSV YUXRQ OJNTW

LTGHC ABEZO RSTQV ZYNJG DFAEB   CHILM KPWXU 52178 JGIQL MWXQT

NPSNH ECAEG 41Ø89 JMPQR TUVXY   BFADC IHLFD BQOSZ YWEGI KLNPQ

SUVXT YBDAR HCJMO 16932 EHIJL   MXQBY RTOUX ZFGAC DMNBK $\overline{BT}$

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PRACTICE MESSAGE

PX1 DE CL2 NR13 -R- 122317R GR 43 $\overline{BT}$

DRILL BFNTW HKMQS 157Ø1 OPRTU   XZJWF AYDCN LGIEB FILOR UWYZX

VTQPS MKNHJ DEGBA CORTW YKIGF   DBAHM 72489 NPSUT XLZJE FHKMP

RUWYZ SOLNQ DEBCA JGIVX THJLN   71362 SVXYT UWOAD GKCPR IMFEB

38654 FHJLP RTVXZ NOKGD IEACB   USWQM HJKNR UWXYS TVOQM PLIFG

ZBDEA CGLSQ VWIUR $\overline{BT}$

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TM 459-126

RW2 DE CL4 NR3 -T- 3WB -R- 171900Z - FM CL4 - TO 3WB GR 51 $\overline{BT}$

DRILL EFGDA NMXYD BEFGC HKMQU   ZXVYW TRSNL IAJOP DFHKM BGIOP

AEJLQ RWXOY SVTUN CFHKD IALNP   KJGSR UVQYZ XWTMO EHLPT BGJOU

VRSQN CFIKM ADWXZ YDGKN AFQRS   WYLIJ CHBPU ZXVTM EDHKL ONMTU

YWJIE BFPSR QVZXA CGDFH BMPUG   JLITW ZXRSQ OKNAC VEFIN ADPVY

BGHMU RSQLK CEOJW YXZQS AHJLM   DNKVW YAHIJ HMQSR GTUVW ZDPOM

EF JL $\overline{BT}$

60

PRACTICE MESSAGE

IZ05 DE FB88 NR9 -Y- 262329R - FM FB88 - TO 1Z05 GRNC $\overline{BT}$

DRILL ADVISE PARENTS CADET MARTIN MILLER CONFINED STATION HOSPITAL

POSSIBLE PNEUMONIA DRILL $\overline{BT}$

PRACTICE MESSAGE

1XO DE AL8 NR1 -Z- GRNC $\overline{BT}$

DRILL CONTRACTORS CANNOT FURNISH QUOTATIONS AIRPLANE SMOKE ELIMINATOR

ASSEMBLY BEFORE FEBRUARY TENTH DRILL $\overline{BT}$

61

TM 459-127

PRACTICE MESSAGE

1ZO4 DE AL82 NR4 -T- FB84 -M- Ø1155ØR - FM AL82 - TO 1ZO4

- INFO FB84 GRNC B̄T̄

DRILL TEN CARLOADS NORTHERN STANDARDS DUE QUARTERMASTER

SUBSISTENCE AGENT NOT RECEIVED DRILL B̄T̄

J66 DE 6WO NR5 -P- 131456R - FM 6WO - TO J66 - XMT 5TE GRNC B̄T̄

DRILL RERAD TWELFTH RAYMOND WALLING ENROLLEE REQUESTS TRUE

COPY PROCEEDINGS SUBMITTED THIS OFFICE UPON COMPLETION DRILL

B̄T̄

62

PRACTICE MESSAGE

BC6 DE 8QB NR8 -R- 282921R GRNC B̄T̄

DRILL OUR CASUALTY LISTS DELAYED BY ERROR OF MESSENGER BUT WILL

ARRIVE BEFORE MIDNIGHT DRILL B̄T̄

AL8 DE AL2 NR6 -P- 18Ø229 GRNC B̄T̄

DRILL REPORT ARRIVAL OF MAJOR RINELAND BY TELEPHONE UPON

ARRIVAL AT YOUR GP DRILL B̄T̄

63

PRACTICE MESSAGE

1XO DE FB81 NR5 -O- 280409R - FM FB81 - TO 1ZO GRNC $\overline{BT}$

DRILL RECONSTRUCTION OF FLORIDA KEYS RAILROAD WILL BE

UNDERTAKEN JOINTLY WITH STATE ADMINISTRATION DRILL $\overline{BT}$

1ZO DE 5ZU6 NR1 -F-R- 222120R - FM 5ZU6 - TO 1ZO GRNC $\overline{BT}$

DRILL HOSPITAL BILOXI RADIOS REQUEST STATUS SAMUEL F SMITH

RELATIVE CASE REQUIREMENTS DRILL $\overline{BT}$ AR

64

PRACTICE MESSAGE

J66 DE D2N NR18 -M- 231714R GRNC $\overline{BT}$

DRILL RERAD DATE SPREADER ASSEMBLY GOING FORWARD BY EXPRESS

TOMORROW DRILL $\overline{BT}$

1Z06 DE AL8 NR27 -O- 221120R - FM AL8 - TO 1Z06 GRNC $\overline{BT}$

DRILL TEMPORARY APPOINTMENT HARTFORD A KILLAN MOTOR EXPERT

JANUARY FIRST APPROVED DRILL $\overline{BT}$

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TM 459-129

PRACTICE ON CLEAR TEXT

PS4 DE 9ND NR3 -M- 272315Z - FM PL5 - TO HK4 GR57 $\overline{BT}$

INTELLIGENCE IS AN OFFENSIVE WEAPON CMM ONE WHICH SEARCHES

OUT THE VULNERABLE POINTS IN A NATIONS ARMOR CMM AND

ATTACKS STRONG POINTS AGAIN AND AGAIN UNTIL THEY CMM

TOO CMM ARE MADE WEAK PD THE ONLY DEFENSE AGAINST

INTELLIGENCE IS SECURITY AND NO FORM OF SECURITY IS MORE

IMPORTANT OR MORE EFFECTIVE THAN COMMUNICATION SECURITY

PD $\overline{BT}$ K

66

PRACTICE ON CLEAR TEXT

4SL DE XL6 NR1 -Y- Ø81145Z - FM DU8 - TO 4SN GR82 $\overline{BT}$

SINCE MOST INDUSTRIAL MACHINERY IS DRIVEN BY POWER OBTAINED FROM

COAL CMM THE IMPORTANCE OF WESTERN EUROPE TO THE SAFETY OF THE FREE

WORLD MAY BE ILLUSTRATED BY A COMPARISON OF COAL RESOURCES PD THE

UNITED STATES AND FREE EUROPE COMBINED NOW PRODUCE MORE THAN TWICE

AS MUCH COAL AS THE ENTIRE SOVIET EMPIRE PD BUT IF RUSSIA CONTROLLED

ALL EUROPE CMM THE PICTURE WOULD BE DIFFERENT PD SOVIET COAL

PRODUCTION WOULD THEN BE GREATER THAN THAT OF THE UNITED STATES PD $\overline{BT}$ K

67

TM 459-130

149

PRACTICE ON CLEAR TEXT

AN6 DE P2N NR21 -M- 272148Z - FM FB3 - TO P7X - INFO RA6 GR87 $\overline{BT}$

STRIKE THE KEYS WITH QUICK CMM SHARP STROKES CMM BUT AVOID

HAMMERING OR POUNDING THE KEYS PD REACH FOR THE KEYS WITH THE

FINGERS CMM AND EXERT FORCE FROM THE WRIST CMM NOT FROM THE

SHOULDERS PD USE THE THUMB OF THE RIGHT HAND TO OPERATE THE

SPACE BAR PD AT THE END OF EACH LINE CMM RETURN THE CARRIAGE

TO THE RIGHT BY MEANS OF THE CARRIAGE LEVER PD USING THE

LEFT HAND CMM PUSH THE CARRIAGE LEVER ALL THE WAY TO THE

MARGIN STOP PD $\overline{BT}$ K

68

PRACTICE ON CLEAR TEXT

CD4 DE LB5 NR7 -M- Ø41526Z - FM 4SN - TO 89L - INFO 8MD GR79 $\overline{BT}$

THE GAP BETWEEN THE CONTACTS CMM REGULATED BY THE SPACE

ADJUSTING SCREW AT THE BACK OF THE KEY CMM SHOULD BE ABOUT

THE THICKNESS OF A POSTCARD PD THIS MEASUREMENT APPLIES

TO EVERY KEY CMM AND IS NOT A MATTER OF PERSONAL PREFERENCE

PD CONTACTS THAT ARE TOO CLOSE TOGETHER HAVE AN EFFECT

SIMILAR TO WEAK SPRING TENSION CMM AND CONTACTS THAT ARE

SPACED TOO FAR APART HAVE THE SAME EFFECT ON SENDING AS TOO

MUCH SPRING TENSION PD $\overline{BT}$ K

69

TM 459-131

PRACTICE ON CLEAR TEXT

8PL DE 2J2 NR3 -Y- 211405Z GR95 $\overline{BT}$

NO PERSON IS ENTITLED TO KNOWLEDGE OR POSSESSION OF CLASSIFIED DEFENSE

INFORMATION SOLELY BY VIRTUE OF HIS RANK CMM OFFICE CMM POSITION CMM

OR SECURITY CLEARANCE PD SUCH MATTER WILL BE ENTRUSTED ONLY TO

INDIVIDUALS WHOSE OFFICIAL DUTIES REQUIRE KNOWLEDGE OR POSSESSION

AND WHO HAVE BEEN PROPERLY CLEARED PD RESPONSIBILITY FOR DETERMINING

WHETHER THE OFFICIAL DUTIES OF A PERSON REQUIRE THAT HE HAVE ACCESS TO

ANY ITEM OF CLASSIFIED DEFENSE INFORMATION RESTS UPON EACH INDIVIDUAL

WHO HAS POSSESSION CMM KNOWLEDGE CMM OR COMMAND CONTROL OF THE

INFORMATION INVOLVED AND NOT UPON THE PROSPECTIVE RECIPIENT PD $\overline{BT}$ K

70

PRACTICE ON CLEAR TEXT

BF6 DE SG7 NR11 -P- 051606Z GR87 $\overline{BT}$

ONE OF THE WORLDS MOST SUCCESSFUL EXPERIMENTS IN COLLECTIVE

SECURITY BEGAN ON 4 APRIL 1949 CMM WHEN REPRESENTATIVES OF THE

UNITED STATES AND 11 OTHER NATIONS OF THE FREE WORLD CMM MEET-

ING AT WASHINGTON CMM SIGNED THE DEFENSIVE ALLIANCE KNOWN AS

THE NORTH ATLANTIC TREATY ORGANIZATION PD SINCE THEN TWO

ADDITIONAL COUNTRIES CMM GREECE AND TURKEY CMM HAVE JOINED THE

ALLIANCE BRINGING THE TOTAL NUMBER TO 14 PD THE LONG HYPHEN

DISCUSSED PRINCIPLE OF COLLECTIVE SECURITY HAS AT LAST BECOME

A WORKING REALITY IN NATO PD $\overline{BT}$ K

71

PRACTICE ON CLEAR TEXT

4SN DE 8MD NR6 -M- Ø41242Z GR89 $\overline{BT}$

A TYPEWRITER CONTAINS 18ØØ TO 2ØØØ PARTS PD AN OPERATOR TYPING

AT THE RATE OF 6Ø WORDS PER MINUTE ACTUATES 1ØØØØ TO 12ØØØ

PARTS PER MINUTE PD OTHER FACTORS BEING EQUAL CMM IF THE TYPIST

MAINTAINS AN EVEN TOUCH THE TYPEWRITER RESPONDS PERFECTLY PD

UNEVEN TOUCH CMM HOWEVER CMM WILL CAUSE THE MOST WELL HYPHEN

ADJUSTED TYPEWRITER TO SKIP SPACES CMM PILE UP TYPE BARS IN A

TANGLE CMM CROWD LETTERS TOO CLOSE TOGETHER CMM DEVELOP RIBBON

FEED TROUBLES CMM AND OTHERWISE BEHAVE AS THOUGH IT WERE MAL-

ADJUSTED PD $\overline{BT}$ K

72

PRACTICE ON CLEAR TEXT

BD77 DE PH4 NR16 -M- 23Ø71ØZ GR8Ø $\overline{BT}$

AN OPERATOR WHO TRIES TO SEND TOO FAST ON THE HAND KEY HAS A

TENDENCY TO FORM SHORT DAHS AND SPACE CHARACTERS TOO CLOSE

TOGETHER PD SENDING TOO FAST FOR A CONSIDERABLE LENGTH OF TIME

RESULTS IN A QUOTE GLASS ARM PD UNQUOTE THIS CONDITION IS

CHARACTERIZED BY AN UNNATURAL TIGHTENING OF THE MUSCLES OF THE

ARM AND A GENERAL LOSS OF CONTROL PD SEND AT A SPEED WHICH YOU

CAN CONTROL PD REMEMBER ACCURACY FIRST CMM SPEED LATER PD $\overline{BT}$ K

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TM 459-133

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:
KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

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  TJAGSA (5)
  MFSS (12)
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  USAAMS (50)
  USAARMS (50)
  USACHS (5)
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  11-7
  11-16
  11-57
  11-98
  11-117
  11-155
  11-500 (AA-AE) (4)
  11-557
  11-587
  11-592
  11-597
USARV (10)

NG: State AG (3); Units—same as active Army except allowance is one copy to each unit.

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For explanation of abbreviations used, see AR 320-50.