

# The International Morse Code

A Teaching Record using the Audio-Vis-Tac Method  
Developed and Narrated by Philip S. Gross, Ph.D

Folkways Records FX 6141



SIDE I  
Band  
Band  
Band  
Band  
INTRODUCTION TO LEARNING THE CODE  
USING THE SOUND SYMBOL  
NUMBERS AND THE ALPHABET  
LEARNING THE NUMBERS

SIDE II  
Band  
Band  
Band  
DICTATION LESSON #1 The Alphabet  
NUMBERS  
DICTATION LESSON #2

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DESCRIPTIVE NOTES ARE INSIDE POCKET

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## Side I, Band 1: Introduction to Learning the Code

Contrary to popular belief the use of code goes beyond radio and wire circuits. It is also sent by blinker lights, by heliograph, by wigwagging of flags, by automobile horns, and by whistles of ships and locomotives. Those who know code have peculiar and often invaluable ability to communicate. Especially in time of war or other serious emergency the need for code takes on an added significance. There seems to be a felt need for the individual who is engaged in outdoor work or sports to know code, just as there is a felt need for the individual functioning within a group in time of war or condition of emergency.

The method used to teach International Morse Code in this album was devised by Philip S. Gross, a Doctor of Philosophy in Experimental Education. The preliminary experiment for this method was performed at the Metropolitan Vocational High School in New York. The final experiment was performed at Fort Monmouth, Red Bank, N.J. The results of the experiments were conclusive in showing that the average operator of the code keyboard could acquire a skill of 4-7 words a minute within 3 to 4 hours. Normally, a similar skill takes 50 to 60 hours.

There are various ways of learning code. First by single dots and single dashes then combinations of dots and dashes more or less by rote and trial-and-error. Another way is the auditory combined with the principle of reinforcement (which was the control in the Fort Monmouth experiment). Another way stresses the visual approach. The method used in this album is the Gross Method of perceptualization, mnemonics, association, and analysis. There is greater stress on MENTAL training. Mere practice, which may be bad as well as good practice gives way to DIRECTED and MEANINGFUL TRAINING.

## Side I, Band 2: Using the Sound Symbol

A sound symbol is made up of dots and dashes, as we prefer to say DITS and DAHS (DITS are the dots, and DAHS are the dashes). The whole combination of dits and dahs is necessary to describe a character. For instance, A is the combination of Dit Dah. B is the combination of Dah Di Di Dit. Notice that DIT

is the final sound while the dits which precede the final one are referred to as Di thus it is not dit dit dit, but rather DI DI DIT.

Our first step will be to analyze the code so that you may be able to understand and recall the symbol quickly and easily as a derivation from the English alphabet. READY! A is DIT DAH. Look at the capital A in Chart One and notice the superimposed dots and dashes (of course, expressed as dits and dahs). Remember A (DIT DAH) the DIT is the apex of the printed A, the DAH is the bar of the A. B signal is DAH DI DI DIT. Notice the DAH as the side of the B and the DI DI DIT as the three dots representing the loops of the B. C is DAH DIT DAH DIT. Notice how they fit the pattern of the C curve (DAH DI DAH DIT). D is DAH DI DIT. DAH for the bar of the D, and DI DIT for the curve. Notice that the B had three DITS, the D has two DITS. E is merely DIT. This is shown as the dot in the middle line of the E. Then F is DI DI DAH DIT, shown as DI DI the bar of the F, DAH the upper line of the F, and DIT appropriately the middle line (similar to the DIT for the E) emphasizing that E and F are related in form. G is DAH DAH DIT. Superimposed on the G curve it is DAH DAH culminating in the DIT for the middle line. H is DIDIDIT (the four dots in the corners of the H). Appropriately I (half the size of H) is DI DIT (two dots at the extremes of the I). J is DIT DAH DAH DAH, superimposed as dit dah for one side of the J, dah for the bottom, and dah for the final foreshortened curve. K is DAH DIT DAH. Dah for the first side, DIT for the break in the middle, and DAH for the final inclined line. L is DI DAH DI DIT. On the L DI DAH the line, DI DIT the lower bar. M is DAH DAH, or the two sides of the M. N is DAH DIT, or the first side of N as DAH and the final portion the DIT. O is DAH DAH DAH, or on the O curve three dahs, DAH DAH DAH. P is DI DAH DAH DIT. On the P the DI DAH is the first bar, DAH represents the curve, and DIT at the middle. Q is DAH DAH DI DAH. On the Q curve DAH DAH DI DAH. It is worthy of note that O is DAH DAH DAH, while Q is DAH DAH DI DAH representing the same difference that exists between the printed O and Q. R is DI DAH DIT. On the R curve DI DAH the first bar followed by DIT the final curve. S is DI DI DIT, three dots as expressed in the B DI DI DIT. T is DAH,



just the top bar representing the T, DAH. U is DI DI DAH (DI DI the initial curve, DAH the final curve). V (war sign of victory, first four notes of Beethoven's Symphony) DI DI DI DAH. One side of the V (DI DI DI) the final side (DAH). W is DI DAH DAH. DI DAH the first side, DAH representing the rest of the W, DI DAH DAH. X is DAH DI DI DAH (one of the cross bars DAH DI, the other conversely DI DAH). Y is DAH DI DAH DAH. On the Y DAH the first bar, DI the middle vertex, DAH another bar, and DAH the final bar. Z is DAH DAH DI DIT. DAH the upper part of the Z, DAH the inclined portion, followed by DI DIT, the lower bar. Z DAH DAH DI DIT.

REMEMBER! in superimposing the DITS AND DAHS we follow certain rules.

1. We go from left to right.
2. We go from top to bottom.
3. The BAR portion of the character may be represented by a DAH, DI DAH, or DIT DIT.

There are certain combinations usually found to be more difficult than others; namely,

F AND L . . . . . ; G AND W . . . . . ;  
P X AND Z . . . . .

### Side I, Band 3: Numbers and the Alphabet

As to the numbers from one to ten, we do not take the trouble to analyze them as we did the alphabetic characters because they are formed NATURALLY in an analytic way. They are as follows: ONE

. . . . . (Note there are five code signs in the numbers, while the alphabetic characters have a maximum of four). TWO . . . . . THREE . . . . . FOUR . . . . . and FIVE . . . . .  
Now conversely SIX is DAH DI DI DI DIT . . . . .  
SEVEN . . . . . EIGHT . . . . . NINE . . . . .  
. . . . . and TEN . . . . .

Now on CHART 2 you will find OUTLINES of the Alphabet. Please superimpose, in the manner of the CHART 1, the symbols on the characters, until you know it without hesitation. Your inner voice should be saying A DI DAH not dot dash. Let your inner voice sound it out as you superimpose the symbols on the characters. READY!

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

IN CODE TRANSMISSION THE RELATIVE DIFFERENCE IN THE INTERVAL OF THE DIT AND THE DAH IS AS one is to three spaces.

### Side I, Band 4: Learning the Numbers

Now the numbers ONE TO FIVE . . . . .

. . . . . and . . . . .

Numbers SIX TO TEN . . . . .

. . . . . and . . . . .

Don't forget your INNER VOICE in SOUNDING OUT THE CODE CHARACTERS AND NUMBERS.

### Side II, Band 1: Dictation Lesson #1, The Alphabet

Dictation Lesson One Paper and Pencil--Ready!

Write	Listen	Think	Answer
DI DAH	• —		A
DAH DI DI DIT	— •••		B
DAH DI DAH DIT	— • —		C
DAH DI DIT	— ••		D
DIT	•		E
DI DIT DAH DIT	• — •		F
DAH DAH DIT	— — •		G
DI DI DI DIT	••••		H
DI DIT	••		I
DI DAH DAH DAH	• — —		J
DAH DI DAH	— • —		K
DI DAH DI DIT	• — ••		L
DAH DAH	— —		M
DAH DIT	— •		N
DAH DAH DAH	— — —		O
DI DAH DAH DIT	• — — •		P
DAH DAH DI DAH	— — • —		Q
DI DAH DIT	• — •		R
DI DI DIT	• — •		S
DAH	—		T
DI DI DAH	— ••		U
DI DI DI DAH	••• —		V
DI DAH DAH	• — —		W
DAH DI DI DAH	— •• —		X
DAH DI DAH DAH	— • — —		Y
DAH DAH DI DIT	— — ••		Z

### Side II, Band 2: Numbers

#### NUMBERS

DI DAH DAH DAH DAH	• — — — —	1
DI DI DAH DAH DAH	•• — — —	2
DI DI DI DAH DAH	••• — —	3
DI DI DI DI DAH	•••• —	4
DI DI DI DI DIT	•••••	5
DAH DI DI DI DIT	• — •••	6
DAH DAH DI DI DIT	• — — ••	7
DAH DAH DAH DI DIT	• — — • —	8
DAH DAH DAH DAH DIT	• — — — •	9
DAH DAH DAH DAH DAH	• — — — —	0



In this lesson you LISTEN for the SIGNAL and you THINK the Proper RESPONSE.

(At first you will be helped by your inner voice, then it should become automatic)

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

# DECODE THE FOLLOWING DISTRESS SIGNAL

• S • • O • • S • • XXX • S • • O • • S •  
 XXX • S • • O • • S •

## THE FIRST CODE MESSAGE:

• W • • H • • A • T • H • • A • T • H •  
 G • • O • • D • • W • R •  
 O • • U • G • • H • T •

FOUR SCORE AND SEVEN YEARS AGO

## BEGINNING A GREAT SPEECH:

• F • • O • • U • R •  
 S • • C • • O • R • E •  
 A • N • D • S • E • V • E • N •  
 Y • • E • A • R • S • A • G •  
 O •

THE PEN IS MIGHTIER THAN THE SWORD

## SOME FAMOUS SAYINGS:

T • • H • E • P • E • N •  
 I • S • M • I • G • H •  
 T • I • E • R • T • H • A •  
 N • T • H • E • S • W •  
 O • R • D •

• P • E • N • Y •  
 W • I • S • E • A • N •  
 D • P • O • U • N •  
 D • F • O • O • L • I •  
 S • H •



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

1 .-..-	6 -..-
2 ...-	7 -..-
3 ...-	8 -..-
4 ....	9 -..-
5 ....	ø -..-