

General Tape Instructions: The cassette tape contains two programs, Side 1: Morse Code Trainer, and Side 2: Morse Code II (for advanced study). The tape is loaded with :INPUT ;RUN GO. Allow the tape to continue playing until the first menu (LEVEL) appears. Stop the tape and begin studying. To change an entry press H and RUN GO. A new test may be taken after all 25 characters are displayed (Test Mode). The computer will wait for you to press a number key before starting a new test. This allows the test answers to remain on the screen for as long as you need them to check your answers.

This program incorporates ideas used by the U. S. Navy and by professional code instructors in one self-contained tutor. Side 1 sends code at approximately 15 wpm (words per minute) *per character with programmable pauses (speed input)*. Side 2 sends code at approximately 20 wpm/character. This technique allows for a quick and easy progression to higher speeds. It is highly recommended that a key and an oscillator or a buzzer be used to practice sending code as well.

Morse Code was developed in the mid 1800's by Samuel B. Morse for the U.S. government. Originally, the code involved the clicks of a key connected to a telegraph line. With the advent of radio, clicks were replaced by the familiar tonal dits and dahs that are made by keying an electronic oscillator. In radio communications, the Morse Code is superior to voice communications in a number of ways. The code can be understood in some of the noisiest situations. And, because a single tone requires a narrower bandwidth to transmit and receive intelligibly, receivers can be very finely tuned (high Q circuits) to eliminate even more interference. Also, more transmitting stations can fill up a band when the individual bandwidth of each station is narrow. Morse Code is efficient and compact. More so than any computer code such as ASCII. All letters in ASCII require 8 bits. Some letters in Morse Code require only 1 bit (e and t).

The lesson plan that follows is recommended. Tests, whether open-book (SHOW) or closed-book (TEST) may be taken at any speed and on any level. Test characters are given in 5 rows of 5 characters. To obtain a NOVICE class license you must demonstrate the ability to send and receive Morse Code at 5wpm. You must also take a short written test on FCC rules and elementary electronics. A NOVICE license may be upgraded to a TECHNICIAN class license by passing another written test on electronics. Higher licenses require 15wpm and 20wpm code capability. A TECHNICIAN class license allows the holder to operate a 2-meter FM transceiver with VOICE communications. Some of the most advanced radio transceivers made are built to operate in the 2-meter band (scanning, digital displays, programming).

The entire contents, program, and method

© 1984, FRED RODNEY
ALL RIGHTS RESERVED

Fred Rodney, 1190 Albany Avenue, Brooklyn, New York 11203



*Morse Code Trainer by Fred Rodney 1984

```

1 NT=0;E=-55;F=85;G=108;GOTO 10
2 FOR L=1 TO T: NEXT L; RETURN
4 NT=3; MU=F; NT=8; MU=G
5 NT=3; MU=F; NT=8; MU=G
6 NT=3; MU=F; NT=8; MU=G
7 NT=8; MU=F; MU=C
8 NT=8; MU=F; MU=C
9 NT=8; MU=F; MU=C; NT=0; RETURN
10 CX=E; PRINT "LEVEL: "; CX=E; PRINT "1.A,E,I,M,N,O,S,T,U"; CX=E; PRINT "2.B,C,D
    F,G,H,I,P,R
11 CX=E; PRINT "3.J,K,Q,V,W,X,Y,Z"; CX=E; PRINT "4.A-Z"; CX=E; PRINT "5.O-9"; CX=E
    ; PRINT "6.A-Z, & 0-9
12 CX=E; PRINT "7.$ , - , / , : , ?"; CX=E; PRINT "8.0-9, & $-?"; CX=E; PRINT "9.
    A-Z, O-9, & $-?
13 A=KP; IF (A<49)+(A>57) GOTO 13
14 IF A=49A=9; J=0
15 IF A=50A=9; J=9
16 IF A=51A=8; J=18
17 IF A=52A=26; J=0
18 IF A=53A=10; J=26
19 IF A=54A=36; J=0
20 IF A=55A=10; J=36
21 IF A=56A=20; J=26
22 IF A=57A=46; J=0
23 CLEAR; E=-35; PRINT; CX=E; PRINT "SPEED: "; CX=E; PRINT "1.SLOW"; CX=E; PRINT "2.
    MOD. "; CX=E; PRINT "3.FAST"; T=KP; IF (T<49)+(T>51) GOTO 23
24 CLEAR; IF T=49T=2000
25 IF T=50T=1000
26 IF T=51T=300
27 CLEAR; PRINT; CX=E; PRINT "MODE: "; CX=E; PRINT "1.LEARN"; CX=E; PRINT "2.TEST 5+
    X5="; W=KP; IF (W<49)+(W>50) GOTO 27
28 IF W=50CLEAR; PRINT; CX=E; PRINT "SCREEN: "; CX=E; PRINT "1.SHOW"; CX=E; PRINT "
    2.TEST"; M=KP
29 CLEAR; NT=10; MU=90; MU=G; GOSUB 2; IF W=49GOTO 31
30 FOR R=-20 TO 20STEP 10; CY=20; FOR S=1 TO 5; IF M=50 BC=0
31 B=RND (A)+J; GOSUB *(B); GOSUB 2
32 IF W=49CX=0; CY=0; TV=(B); BOX -1,0,9,11,3; BOX -1,0,11,13,3; OSUB 2; CLEAR; G
    OTO 31
33 PRINT; CX=R; TV=(B); NEXT S; GOSUB 2; NEXT R; GOSUB 2; BC=7; O=KP; GOTO 29
34 GOSUB 6; GOSUB 9; GOSUB 5; GOSUB 5; GOSUB 6; RETURN!
36 GOSUB 4; GOSUB 9; GOSUB 5; GOSUB 9; RETURN
39 GOSUB 6; GOSUB 8; GOSUB 8; GOSUB 6; RETURN!
44 GOSUB 8; GOSUB 5; GOSUB 8; RETURN
45 GOSUB 9; GOSUB 5; GOSUB 5; GOSUB 9; RETURN
46 GOSUB 6; GOSUB 9; GOSUB 6; GOSUB 9; RETURN
47 GOSUB 9; GOSUB 5; GOSUB 9; GOSUB 6; RETURN!
48 GOSUB 7; GOSUB 8; RETURN
49 GOSUB 6; GOSUB 8; GOSUB 8; RETURN
50 GOSUB 5; GOSUB 7; RETURN!
51 GOSUB 4; GOSUB 8; RETURN
52 GOSUB 5; GOSUB 9; RETURN!
53 GOSUB 4; GOSUB 5; RETURN
54 GOSUB 9; GOSUB 5; GOSUB 5; RETURN
55 GOSUB 8; GOSUB 4; RETURN!
56 GOSUB 7; GOSUB 5; RETURN!
57 GOSUB 8; GOSUB 8; GOSUB 6; RETURN!
58 GOSUB 7; GOSUB 4; RETURN
59 GOSUB 9; GOSUB 6; GOSUB 9; GOSUB 6; RETURN!
63 GOSUB 5; GOSUB 8; GOSUB 5; RETURN
65 GOSUB 6; GOSUB 9; RETURN

```

Enter *(0) to *(46) of MORSE CODE II

*Morse Code 2 by Fred Rodney 1984

```

1 NT=0; E=-45; F=85; G=108; CLEAR; GOTO 10
2 FOR L=1 TO T: NEXT L; RETURN
4 NT=2; MU=F; NT=6; MU=G
5 NT=2; MU=F; NT=6; MU=G
6 NT=2; MU=F; NT=6; MU=G; NT=0; RETURN
7 NT=6; MU=F; MU=G
8 NT=6; MU=F; MU=G
9 NT=6; MU=F; MU=G; NT=0; RETURN
10 PRINT; CX=E; PRINT "LEVEL: "; CX=E; PRINT "1.CHARACTERS"; CX=E; PRINT "2.MESSA
    GES"; CX=E; PRINT "3.ALL CODES
11 A=KP; IF (A<49)+(A>51) GOTO 11
12 IF A=49A=46; J=0
13 IF A=50A=8; J=46
14 IF A=51A=54; J=0
15 CLEAR; E=-35; PRINT; CX=E; PRINT "SPEED: "; CX=E; PRINT "1.LEARN"; CX=E; PRINT "2.
    FAST "; T=KP; IF (T<49)+(T>50) GOTO 15
16 CLEAR; IF T=49T=1000
17 IF T=50T=300
18 CLEAR; IF T=49T=2000
19 IF T=50T=1000
20 PRINT; CX=E; PRINT "MODE: "; CX=E; PRINT "1.LEARN"; CX=E; PRINT "1.SHOW"; CX=E; PRINT "
    2.TEST"; M=KP
21 W=KP; IF (W<49)+(W>50) GOTO 20
22 IF W=50CLEAR; PRINT; CX=E; PRINT "SCREEN: "; CX=E; PRINT "1.SHOW"; CX=E; PRINT "
    2.TEST"; M=KP
23 CLEAR; NT=10; MU=90; MU=G; GOSUB 2; IF W=49GOTO 27
25 FOR R=-40 TO 40STEP 20; CY=10; FOR S=1 TO 5; IF M=50 BC=0
27 B=RND (A)+J; GOSUB *(B); GOSUB 2; IF W=50 GOTO 30
28 CX=0; CY=0; IF B < 47 TV=(B); BOX =1,0,9,11,3; BOX -1,0,11,13,3; GOSUB 2; CLE
    AR; GOTO 27
29 GOSUB *(B)+100; GOSUB 2; CLEAR; GOTO 27
30 CX=R; IF B < 47 TV=(B); PRINT; GOTO 32
31 GOSUB *(B)+100
32 NEXT S; GOSUB 2; NEXT R; GOSUB 2; BC=7; O=KP; GOTO 23
34 through 90 (see Morse Code Trainer)
91 GOSUB 6; GOSUB 9; GOSUB 6; GOSUB 9; GOSUB 6; RETURN
92 GOSUB 9; GOSUB 6; GOSUB 9; GOSUB 6; GOSUB 9; RETURN
93 GOSUB 4; GOSUB 9; GOSUB 6; GOSUB 9; RETURN
94 GOSUB 4; GOSUB 7; GOSUB 4; RETURN
95 GOSUB 6; GOSUB 9; GOSUB 6; GOSUB 6; GOSUB 9; RETURN
96 GOSUB 9; GOSUB 6; GOSUB 8; GOSUB 6; GOSUB 9; RETURN
97 GOSUB 4; GOSUB 5; GOSUB 4; RETURN
191 PRINT "AR"; RETURN
192 PRINT "NK"; RETURN
193 PRINT "SK"; RETURN
194 PRINT "SOS"; RETURN
200 CLEAR; CY=9; CX=E; PRINT "MORSE CODE II"; CX=E; PRINT "RODNEY 1984"; CX=26; :
    RINT "STAND BY"
    210 BOX 0,1,85,31,3

```

*(0) through *(46) Morse Code Trainer - Morse Code II: add *(B) below
 *(47)=91 *(48)=92 *(49)=93 *(50)=94 *(51)=95 *(52)=96 *(53)=07
 *(54)=98

© FRED RODNEY, 1984 ALL RIGHTS RESERVED