

BAND 9: ABTXR OJET MDHNH QVARC Ø3579
 MICED GFLMN ETAYU FTNAS XCWKC
 JXEYF MKVOY QZNXW CLFIG YQURE
 XDACA FZYQW 28594 MOPAN 712Ø9
 TTROL WGIMO NABJD 93264 KQZAX

BAND 10: MPADI SPHCQ BJCYD XFNKE RALDO
 36127 XGDTL ZPGUN LKQCH QMEVC
 9Ø653 CLTIL 8Ø71Ø YCAOA XBEZB
 WHIMO RKZMO THZVI LBJIZ CRJLA
 EVTEN JKCDE MOHUS 2487Ø ZKILD
 HEFKL DHJNG TVPTC KDKGN VTXPH

BAND 11: FDUMB 17863 WDFBW KTOPC USAQZ
 HKFEL 14E66 ZDXNE 9815L QFEQW
 QZNXW HDMIH 732Ø1 PODLK HGXQJ
 JXEFY GPMAE 29584 NQAXD I4KYD
 NF27J CUJHW J3RUA FEPBR N98BA
 IEDYU YQTØB PIA5Q VZGYE OBRKD
 VFKPQ PMIDA 4Ø376 N6PIC FINIS

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International **MORSE CODE**

Conversa-phone's code course prepares you for Novice, Technician and General Class amateur code examinations. (From 3 through 16 words per minute) This course includes 12" long playing record and instruction manual.

Learning the International Morse Code is much the same as learning to speak and understand a foreign language. Both are best learned by listening and speaking (or sending), since they are both languages of sound. For this reason, it is important to learn code in terms of sound patterns only. This record provides the necessary sound patterns; you the student must supply the effort and time for regular practice.

The FCC requirement for a Novice or Technician License is code reception and sending at five words per minute. This means that you must copy and send perfectly for at least one minute out of a five-minute test. A word is considered to be five characters long; each letter counts as one character and each number or punctuation mark counts as two characters. Since most persons get nervous during the examination, it is a good idea to be able to copy a steady seven or eight words per minute before taking the test.

The code language is much simpler than an ordinary spoken language because it has only two sounds, dit and dah, a short and a long sound, respectively. A dah should be approximately three times as long as a dit. The spacing between dits and dahs in any letter should be equal to the length of a dit. Between letters the spacing is that of a dah, while between words the spacing should be equal to five dahs.

Since sending ability is also required by the FCC, it is important to practice sending as well as receiving. A very common fault with beginners is that they pay little attention to sending beyond trying to send as fast as they can, rather than trying to form the letters correctly. At first it may appear that sending is easier than receiving, but this is generally because most beginners (and many non-beginners) do not listen to their own sending with a critical ear.

A simple straight telegraph key costs very little but is a necessity for sending code well. A buzzer or tone oscillator is also necessary. They can be purchased or built. Magazines such as QST, CQ, or 73 often have articles describing such devices. The RADIO AMATEUR'S HANDBOOK also contains information about them. Construction of your own code practice oscillator is not difficult and is, apart from learning the code, an instructive project to someone who is just starting in ham radio.

The key should be mounted so that it will not jump around while in use. The easiest way to do this is to screw it to a thin piece of wood about 18" x 6". The key should be adjusted so that there is little if any side play and about 1/16" of vertical movement at the knob. Place the key on the table so that your elbow and forearm are supported. The tension on the key should be tight enough so that the key is controllable, but not so tight that your sending becomes choppy. Some experimentation will be necessary to find the tension that suits you best. The manner of grasping the knob is also a matter of individual choice. However, most operators find that grasping the knob between the thumb and middle fingers with the index finger resting on top proves easiest in the long run. When getting used to your key the important thing to remember is that you are sending the code, not the key.

For purposes of learning, it is sometimes easier to divide the letters and numbers into several groups and learn one group at a time. Before using the record you should try to say sounds for the characters aloud in order to get the rhythm fixed. Here are the seven basic groups:

Group 1:	E	dit
	T	dah
	O	dah dah dah
	A	dit dah
	N	dah dit
	I	dit dit
	S	dit dit dit
Group 2:	R	dit dah dit
	H	dit dit dit dit
	D	dah dit dit
	U	dit dit dah
	C	dah dit dah dit
	M	dah dah
	L	dit dah dit dit

Group 3:	P	dit dah dah dit
	F	dit dit dah dit
	W	dit dah dah
	Y	dah dit dah dah
	B	dah dah dit

Group 4:	J	dit dah dah dah
	K	dah dit dah
	Q	dah dah dit dah
	X	dah dit dit dah
	V	dah dah dit dit

Group 5:	1	dit dah dah dah dah
	2	dit dit dah dah dah
	3	dit dit dit dah dah
	4	dit dit dit dit dah
	5	dit dit dit dit dit

Group 6:	6	dah dit dit dit dit
	7	dah dah dit dit dit
	8	dah dah dah dit dit
	9	dah dah dah dah dit
	0	dah dah dah dah dah

(zero is usually written with a slash to distinguish it from the letter O)

Group 7:	. period	dit dah dit dah dit dah
	, comma	dah dah dit dit dah dah
	? question mark	dit dit dah dah dit dit
	/ fraction bar	dah dit dit dah dit
	error	dit dit dit dit dit dit dit

IT CANNOT BE EMPHASIZED TOO STRONGLY, IT IS THE SOUND PATTERN THAT IS ALL-IMPORTANT, NOT THE FACT THAT THE LETTERS MAY BE DITS AND DAHS.

USING THE RECORD

The record is designed to be used with a three-speed turntable. By increasing the turntable speed the code speed goes up proportionally. Side one consists of the seven basic groups at speeds of three, four and seven words per minute, depending upon the turntable speed.

Throughout the record, code groups, rather than ordinary words are used. Many times an operator will fill in missed letters to fit a word or even write ahead if he thinks he knows what the word is going to be. This habit is not desirable and the use of code groups prevents this habit from forming. You should always copy only what you hear, regardless of apparent errors.

Start by learning bands one through seven. Stay with a band until you can copy it perfectly at 3 words per minute, then practice sending simultaneously with it. After you have learned a band at one speed go on to the next band at the same speed and learn it. When you finish band seven, go back to band one at the next higher speed and continue through until you can copy all of side one at seven words per minute. Now go to side two, which contains all letters in the code groups and learn it at the lowest speed. Then go back to the beginning of side two at a higher speed. If this procedure is adhered to, you will be much less likely to memorize any one band and your speed will increase progressively.

Bands 1-7 are 3, 4 or 7 wpm, depending on turntable speed, band 8 is 4, 5 or 9 1/2 wpm: band 9 is 5, 7 or 12 wpm: band 10 is 6, 8 1/2 or 14 wpm: and band 11 is 7, 9 1/2 or 16 1/2 wpm.

CONTENTS OF RECORD

BAND 1:	ETOANIS	ETA	TAS	SEO	INT	ANI
	ESO	SIA	NEO			
BAND 2:	RHDUCML	RUH	LMC	DHC	MRU	DLM
	CLU	HCR	DRH			
BAND 3:	PFWYGB	GFP	PYG	GWF	FWP	WBF
	FBY	YPF	BGW			
BAND 4:	JKQXZV	KXJ	QKZ	XVJ	XZK	KZQ
	VKZ	QKX	JXV			
BAND 5:	12345	412	352	341	542	531
	452	253				124
BAND 6:	67890	908	780	869	709	687
	867	760				906
BAND 7:	., ?/	, ?/	., ?	./,	?, .	./,
BAND 8:	KFQCO	AEIGU	VDMVH	JEHDY		
	ZNZMB	08542	APLMK	13579		
	CBNCM	BDGNY	CRNJO	CKOGT		
	AOUKP	NDHBH	IEOKD	KYUOM		
	MBWFD	DYUIE	HDMIA	ZQSUA		