

**PHONETIC  
SPEECH  
DICTIONARY  
for the  
SC-01  
SPEECH  
SYNTHESIZER**



500 Stephenson Highway, Troy, MI 48084  
(800) 521-1350 (313) 588-0341



# INTRODUCTION

VOTRAX<sup>®</sup> Speech Synthesis Technology produces each of the 45 basic speech sounds, called phonemes. This handy dictionary gives you quick access to the VOTRAX<sup>®</sup> phoneme sequences used to create approximately 1400 words. Because VOTRAX<sup>®</sup> speech synthesis uses these basic phonetic sounds, you may program virtually any word in the English language by learning to use and combine the various phoneme codes.

This dictionary is intended for use with the SC-01 Speech Synthesizer. It can also serve as a guide for programming any product containing a VOTRAX<sup>®</sup> synthesizer.

## GENERAL DESCRIPTION OF THE SC-01 CHIP

The SC-01 Speech Synthesizer is a completely self-contained solid state device. This single chip phonetically synthesizes continuous speech, of unlimited vocabulary, from low data rate inputs.

Speech is synthesized by combining phonemes (the building blocks of speech) in the appropriate sequence. The SC-01 Speech Synthesizer contains 64 different phonemes which are accessed by a 6-bit code. It is the proper sequential combination of these phoneme codes that creates continuous speech.

## PHONEME DESCRIPTION

**Table 1** lists the 64 phonemes produced by the SC-01. Each sound is represented by its VOTRAX™ phoneme code and is accompanied by its phoneme symbol and an example. The underlined segments of the example word demonstrate the phoneme use, i.e., sound to be pronounced.

**Table 2** provides the phoneme sequences used to produce vowels in the group called diphthongs, (2 vowel sounds in sequence, identified as a single sound, e.g., the long “i” vowel).

**TABLE 1: PHONEME CHART**

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
ØØ	EH3	59	ja <u>ck</u> et
Ø1	EH2	71	en <u>l</u> ist
Ø2	EH1	121	heav <u>y</u>
Ø3	PAØ	47	no sound
Ø4	DT	47	bu <u>t</u> ter
Ø5	A2	71	ma <u>d</u> e
Ø6	A1	103	ma <u>d</u> e
Ø7	ZH	90	azu <u>r</u> e
Ø8	AH2	71	ho <u>n</u> est
Ø9	13	55	in <u>h</u> ibit
ØA	12	80	in <u>h</u> ibit
ØB	11	121	in <u>h</u> ibit
ØC	M	103	ma <u>i</u>
ØD	N	80	su <u>n</u>
ØE	B	71	ba <u>g</u>
ØF	V	71	va <u>n</u>
1Ø	CH*	71	ch <u>i</u> p
11	SH	121	sh <u>o</u> p
12	Z	71	z <u>o</u> o
13	AW1	146	law <u>f</u> ul
14	NG	121	th <u>i</u> ng
15	AH1	146	fa <u>t</u> her
16	001	103	loo <u>k</u> ing
17	00	185	bo <u>o</u> k
18	L	103	la <u>n</u> d
19	K	80	tr <u>i</u> ck
1A	J*	47	ju <u>d</u> ge
1B	H	71	he <u>l</u> lo
1C	G	71	ge <u>t</u>
1D	F	103	fa <u>s</u> t
1E	D	55	pa <u>i</u> d
1F	S	90	pa <u>s</u> s

/T/ must precede /CH/ to produce CH sound.

/D/ must precede /J/ to produce J sound.

**TABLE 1: PHONEME CHART**

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
2Ø	A	185	<u>day</u>
21	AY	65	<u>day</u>
22	Y1	80	<u>yard</u>
23	UH3	47	<u>mission</u>
24	AH	250	<u>mop</u>
25	P	103	<u>past</u>
26	O	185	<u>cold</u>
27	I	185	<u>pin</u>
28	U	185	<u>move</u>
29	Y	103	<u>any</u>
2A	T	71	<u>tap</u>
2B	R	90	<u>red</u>
2C	E	185	<u>meet</u>
2D	W	80	<u>win</u>
2E	AE	185	<u>dad</u>
2F	AE1	103	<u>after</u>
30	AW2	90	<u>salty</u>
31	UH2	71	<u>about</u>
32	UH1	103	<u>uncle</u>
33	UH	185	<u>cup</u>
34	O2	80	<u>for</u>
35	O1	121	<u>aboard</u>
36	IU	59	<u>you</u>
37	U1	90	<u>you</u>
38	THV	80	<u>the</u>
39	TH	71	<u>thin</u>
3A	ER	146	<u>bird</u>
3B	EH	185	<u>get</u>
3C	E1	121	<u>be</u>
3D	AW	253	<u>call</u>
3E	PA1	185	no sound
3F	STOP	47	no sound

**TABLE 2: DIPHTHONG CHART**

Phoneme Combination	Key Words
A1-AY-Y	<u>fate</u> , <u>maid</u>
AH1-EH3-Y	<u>find</u> , <u>wide</u>
UH3-AH2-Y	<u>fight</u> , <u>white</u>
AH1-I3-UH3-L	<u>file</u> , <u>smile</u>
O1-UH3-Y	<u>foy</u> , <u>boy</u>
O1-I3-UH3-L	<u>foil</u> , <u>spoil</u>
AH1-O2-U1	<u>found</u> , <u>cow</u>
UH3-AH2-U1	<u>foust</u> , <u>house</u>
O1-U1	<u>float</u> , <u>note</u>
Y1-IU-U1	<u>few</u> , <u>you</u> , <u>music</u>
AY-I1	<u>fear</u> , <u>beer</u>

## Phonetic Programs

A A1, AY, Y  
a-2 UH2, UH3  
able A1, Y, B, UH3, L  
abort UH1, B, O2, O2, R, T  
about UH1, B, UH2, AH2, U1, T  
above UH1, B, UH1, UH3, V  
accept EH1, K, PAO, S, EH1, EH3, P, T  
access AE1, EH3, K, PAO, S, EH1, EH3, S  
account UH1, K, AH1, UH3, W, N, T  
acid AE1, EH3, S, I1 D  
act AE1, EH3, K, T  
active AE1, EH3, K, T, I1, V  
actual AE1, EH3, K, T, CH, U1, UH3, L  
add AE1, EH3, D  
address AE1, EH3, D, R, EH1, EH3, S  
ade (use "aid" program)  
adjust UH1, D, J, UH1, UH3, S, T  
adjacent UH1, D, J, A1, AY, S, EH3, N, T  
advance AE1, EH3, D, V, AE1, EH3, N, T, S  
advise AE1, EH3, D, V, AH1, EH3, Y, Z  
affect UH1, F, EH1, EH3, K, T  
after AE1, EH3, F, T, ER  
again UH1, G, A2, EH1, N  
age A1, AY, Y, D, J  
agent A1, Y, D, J, EH3, N, T  
ahead UH1, H, EH1, EH3, D  
aid A1, AY, Y, D  
air EH2, EH2, R  
alarm UH1, L, AH1, R, M  
alert UH1, L, ER, R, T  
all AW, L  
allocate AE1, UH3, L, UH2, K, A1, Y, T  
allow UH1, L, AH1, UH3, U1  
alpha AE1, AW2, L, F, UH1  
already AW, L, R, EH1, EH3, D, Y  
also AW, L, S, O1, U1  
altitude AE1, UH3, L, T, I2, T, IU, U1, U1, D  
aluminum UH1, L, IU, U1, M, I3, N, UH1, M  
am AE1, EH3, M

america UH1, M, EH1, R, I3, K, UH2, UH3  
amount UH1, M, AH1, UH3, W, N, T  
amp AE1, EH3, M, P  
amplify AE1, EH3, M, P, L, I3, F, AH1, EH3, AY  
an AE1, EH3, N  
and AE1, EH3, N, D  
angle AE1, EH3, NG, G, UH3, L  
another UH1, N, UH1, UH3, THV, ER  
answer AE1, EH3, N, S, ER  
any EH2, EH2, N, Y  
apostrophe UH1, P, AH1, UH3, S, T, R, UH3, F, Y  
approach UH1, P, R, O1, U1, T, CH  
approve UH1, P, R, IU, U1, U1, V  
approximate UH1, P, R, AH1, K, PAO, S, EH3, M, I3, T  
approximate-2 UH1, P, R, AH1, K, PAO, S, EH3, M, A2, Y, T  
april A1, Y, P, R, UH2, L  
architect AH1, R, K, UH2, T, EH3, EH2, K, T  
(see "R" program)  
area EH1, EH3, R, Y, UH1  
arrive UH1, R, AH1, EH3, Y, V  
arrow EH1, EH3, R, O1, U1  
article AH1, R, T, EH3, K, UH3, L  
as AE1, EH3, Z  
ASCII AE1, EH3, S, K, Y  
ask AE1, EH3, S, K  
assemble UH1, S, EH1, EH3, M, B, UH3, L  
asset AE1, EH3, S, EH1, T  
assign UH1, S, AH1, EH3, Y, N  
assist UH1, S, I1, I3, S, T  
associate UH1, S, O1, SH, Y, A1, Y, T  
associate-2 UH1, S, O1, SH, Y, I2, T  
assume UH1, S, IU, U1, M  
at AE1, EH3, T  
(see "eight" program)  
attach UH1, T, AE1, EH3, T, CH  
attempt UH1, T, EH1, EH3, M, P, T  
attend UH1, T, EH1, EH3, N, D  
audio AW, D, Y, O1, U1

august AW2, AW2, G, EH2, S, T  
 authorize AW2, AW2, TH, ER, AH1, Y, Z  
 automatic AW2, AW2, DT, UH3, M, AE1,  
 EH3, DT, I3, K  
 available UH1, V, A1, Y, L, UH3, B,  
 UH3, L  
 average AE1, EH3, V, R, I1, D, J  
 avoid UH1, V, O1, UH3, I3, AY, D

**B** B, E1, Y  
 back B, AE1, AE1, K  
 bad B, AE1, AE1, D  
 badge B, AE1, AE1, D, J  
 bag B, AE1, AE1, G  
 balance B, AE1, AH2, L, I3, N, DT, S  
 ball B, AW2, AW1, L  
 band B, AE1, EH3, N, D  
 bank B, AE1, I3, NG, K  
 bar B, AH1, UH3, R  
 base B, A1, AY, Y, S  
 basic B, A1, Y, S, I2, K  
 bat B, AE1, EH3, T  
 batch B, AE1, EH3, T, CH  
 bath B, AE1, AE1, EH3, TH  
 battery B, AE1, EH3, T, ER, Y  
 be (use "B" program)  
 bed B, EH1, EH3, D  
 been B, EH1, EH3, N  
 beep B, E1, Y, P  
 before B, Y, F, O2, O2, R  
 begin B, Y, G, I1, I3, N  
 bell B, EH1, UH3, L  
 below B, Y, L, UH3, O2, U1  
 bend B, EH1, EH3, N, D  
 best B, EH1, EH3, S, T  
 beta B, A2, A2, AY, T, UH2  
 better B, EH1, EH3, T, ER  
 between B, Y, T, W, E1, Y, N  
 bid B, I1, I3, D  
 big B, I1, I3, G  
 bill B, I1, I3, L  
 billion B, I1, I3, L, Y, UH3, N  
 bin B, I1, I3, N  
 binary B, AH1, Y, N, EH3, EH3, ER, Y

birthday B, ER, R, TH, D, A1, I3, Y  
 bit B, I1, I3, T  
 bite B, UH3, AH2, Y, T  
 black B, L, AE1, EH3, K  
 blank B, L, AE1, EH3, NG, K  
 blew (use "blue" program)  
 blind B, L, AH1, EH3, Y, N, D  
 block B, L, AH1, UH3, K  
 blown B, L, O1, U1, N  
 blue B, L, IU, U1, U1  
 blur B, L, ER, R  
 board B, O1, O2, R, D  
 bolt B, O2, O2, L, T  
 bond B, AH1, UH3, N, D  
 book B, OO1, OO1, K  
 bored (use "board" program)  
 boss B, AW1, AW2, S  
 bother B, AH1, UH3, THV, ER  
 bottom B, AH1, UH3, T, UH1, M  
 bought B, AW1, AW2, T  
 box B, AH1, UH3, K, PAO, S  
 brace B, R, A1, Y, S  
 brain B, R, A1, Y, N  
 brake B, R, A1, Y, K  
 branch B, R, AE1, EH3, N, T, CH  
 bravo B, R, AH1, UH3, V, O1, U1  
 break (use "brake" program)  
 bridge B, R, I1, I3, D, J  
 brief B, R, AY, Y, F  
 bright B, R, UH3, AH2, Y, T  
 bring B, R, I1, I3, NG  
 broke B, R, O1, U1, K  
 brought B, R, AW, T  
 brown B, R, AH1, UH3, U1, N  
 bubble B, UH1, UH2, B, UH3, L  
 budget B, UH1, UH3, D, J, I2, T  
 bug B, UH1, UH2, G  
 build B, I2, I2, L, D  
 bus B, UH1, UH2, S  
 business B, I3, I3, Z, N, EH2, S  
 busy B, I3, I2, Z, Y  
 but B, UH1, UH2, T  
 button B, UH1, UH3, T, EH3, N  
 buy B, AH1, EH3, I3, Y

by	B, AH1, EH3, I3, Y	check	T, CH, EH1, EH3, K
bye	B, AH1, EH3, I3, Y	cheer	T, CH, AY, I2, R
byte	(use "bite" program)	chip	T, CH, I1, I3, P
C	S, E1, Y	choice	T, CH, O1, UH3, I3, AY, S
cable	K, A1, Y, B, UH3, L	circle	S, ER, R, K, UH3, L
calendar	K, AE1, UH3, L, I3, N, D, ER	circuit	S, R, R, K, I2, T
calibrate	K, AE1, UH3, L, UH3, B, R, A1, Y, T	city	S, I1, T, Y
call	K, AW2, AW1, L	claim	K, L, A1, AY, Y, M
came	K, A1, AY, Y, M	class	K, L, AE1, EH3, S
can	K, AE1, EH3, N	clean	K, L, E1, AY, N
cancel	K, AE1, EH3, N, S, UH3, L	clear	K, L, AY, I3, R
capable	K, A1, Y, P, UH3, B, UH3, L	clerk	K, L, ER, K
capacitor	K, UH2, P, AE1, EH3, S, EH3, T, ER	clip	K, L, I1, I3, P
capacity	K, UH2, P, AE1, EH3, S, I3, DT, Y	clock	K, L, AH1, UH3, K
car	K, AH1, UH3, R	close	K, L, UH3, O1, U1, Z
card	K, AH1, R, D	close-2	K, L, UH3, O2, U1, S
care	K, EH3, EH3, ER	cloud	K, L, AH1, UH3, W, D
carpenter	K, AH1, R, P, I3, N, D, ER	coarse	K, O1, O2, R, S
carriage	K, EH2, EH3, R, I1, D, J	code	K, OO1, O2, U1, D
carry	K, EH2, EH3, R, Y	coin	K, O1, UH3, I3, AY, N
carton	K, AH1, R, T, I3, N	collar	K, AH1, UH3, L, ER
case	K, A1, AY, Y, S	collect	K, UH1, L, EH1, K, T
cash	K, AE1, EH3, SH	colon	K, OO1, O2, U1, L, I2, N
cassette	K, UH1, S, EH1, EH3, T	color	K, UH2, UH2, L, ER
cassette-2	K, A2, AY, S, EH1, EH2, T	column	K, AH1, UH3, L, UH3, M
category	K, AE1, EH3, DT, UH3, G, O1, R, Y	combine	K, UH2, M, B, AH1, EH3, Y, N
catalog	K, AE1, EH3, DT, UH3, L, AW2, AW2, G	comma	K, AH1, UH3, M, UH1
caution	K, AW2, AW1, SH, UH3, N	command	K, UH2, M, AE, EH3, N, D
cent	S, EH1, EH3, N, T	commerce	K, AH1, UH3, M, ER, S
center	S, EH1, EH3, N, T, ER	commercial	K, UH1, UH3, M, ER, SH, UH3, L
centi	S, EH1, EH3, N, T, I1, I3	communicate	K, UH2, M, Y1, IU, U1, N, I3, K, A1, Y, T
centigrade	S, EH1, N, T, I3, G, R, A1, Y, D	company	K, UH1, UH3, M, P, EH3, N, Y
certify	S, R, R, T, I3, F, AH1, Y	compare	K, UH1, UH3, M, P, EH3, EH3, ER
change	T, CH, A1, AY, Y, N, D, J	compile	K, UH1, UH3, M, P, AH1, EH3, I3, UH3, L
character	K, EH1, R, EH1, K, T, ER	complete	K, UH1, UH3, M, P, L, AY, Y, T
charge	T, CH, AH1, R, D, J	comply	K, UH1, UH3, M, P, L, AH1, EH3, Y
charlie	T, CH, AH1, R, L, Y	component	K, UH2, M, P, O2, O1, N, EH2, N, T
chart	T, CH, AH1, R, T	computer	K, UH1, M, P, Y1, IU, U1, T, ER

conceal K, UH1, N, S, E1, AY, L  
condense K, UH1, N, D, EH1, EH3, N, S  
condition K, UH1, N, D, I1, I3, SH, UH3, N  
confirm K, UH1, N, F, ER, R, M  
confuse K, UH1, N, F, Y1, IU, U1, U1, Z  
confusion K, UH1, N, F, Y1, IU, U1, U1,  
ZH, UH3, N  
congratulations K, UH1, N, G, R, AE1, D, J,  
UH3, L, A1, AY, SH, UH3, N, Z  
connect K, UH1, N, EH1, EH3, K, T  
console K, AH1, UH3, N, S, O1, U1, L  
console-2 K, UH1, N, S, O1, O2, L  
consult K, UH1, N, S, UH1, UH2, L, T  
consume K, UH1, N, S, IU, U1, U1, M  
contain K, UH3, UH3, N, T, A1, AY, Y, N  
continue K, UH1, N, T, I1, I3, N, Y1, IU,  
U1  
contract K, AH1, UH3, N, T, R, AE1,  
EH3, K, T  
contrast K, AH1, UH3, N, T, R, AE1,  
EH3, S, T  
control K, UH1, N, T, R, O1, O2, L  
convenient K, UH2, N, V, E1, N, AY, EH3,  
N, T  
copper K, AH1, UH3, P, ER  
copy K, AH1, UH3, P, Y  
correct K, O2, O2, R, EH1, EH3, K, T  
correspond K, O1, R, I3, S, P, AH1, AH2,  
N, D  
cosine K, O1, U1, S, AH1, Y, N  
cost K, AW2, AW1, S, T  
could K, IU, IU, OO1, D  
count K, AH1, UH3, W, N, T  
country K, UH1, N, T, R, Y  
couple K, UH3, UH1, P, UH3, L  
courage K, ER, R, I3, D, J  
course K, O1, O2, R, S  
court K, O1, O2, R, T  
cover K, UH1, UH3, V, ER  
crane K, R, A1, AY, Y, N  
crash K, R, AE1, EH3, SH  
crease K, R, E1, Y, S  
create K, R, Y, A1, Y, T  
creation K, R, Y, A1, Y, SH, UH3, N

credit K, R, EH1, EH3, D, I1, T  
crew K, R, IU, U1, U1  
critical K, R, I1, T, I3, K, UH3, L  
cross K, R, AW, S  
crowd K, R, AH1, UH3, U1, D  
cry K, R, AH1, EH3, I3, Y  
cue (use "Q" program)  
cup K, UH1, UH2, P  
curious K, Y, ER, Y, UH1, S  
current K, ER, R, EH3, N, T  
currency K, ER, R, I2, N, DT, S, Y  
curse K, ER, R, S  
curve K, ER, R, V  
customer K, UH1, UH2, S, T, UH1, M, ER  
cut K, UH1, UH2, T  
cycle S, UH3, AH2, Y, K, UH3, L

D

D E1, Y  
daily D, A1, AY, Y, L, Y  
damage D, AE1, EH3, M, I1, D, J  
danger D, A1, AY, Y, N, D, J, ER  
dark D, AH1, R, K  
dash D, AE1, EH3, SH  
data D, A1, Y, DT, UH1  
date D, A1, AY, Y, T  
day D, A1, I3, Y  
dead D, EH1, EH3, F  
dealer D, E1, AY, L, ER  
dear D, AY, I3, R  
debit D, EH1, EH3, B, I2, T  
debt D, EH1, EH3, T  
december D, Y, S, EH1, EH3, M, B, ER  
decide D, Y, S, AH1, EH3, Y, D  
decimal D, EH1, S, M, UH3, L  
decision D, Y, S, I1, ZH, UH3, N  
decline D, Y, K, L, AH1, EH3, Y, N  
decrease D, Y, K, R, E1, Y, S  
deduct D, Y, D, UH1, UH2, K, T  
deep D, E1, Y, P  
deer (use "dear" program)  
defeat D, Y, F, E1, AY, T  
defend D, Y, F, EH1, EH3, N, D  
defensive D, Y, F, EH1, EH3, N, S, I1, V  
defer D, E1, F, ER, R

deficit D, EH1, F, I3, S, I1, T  
 degree D, Y, G, R, E1, Y  
 delay D, I1, L, EH3, A1, Y  
 delete D, E1, L, E1, Y, T  
 deliver D, Y, L, I1, V, ER  
 delta D, EH2, EH3, L, T, UH1  
 demand D, Y, M, AE1, EH3, N, D  
 demonstrate D, EH1, M, UH3, N, S, T, R, A1, Y, T  
 deny D, Y, N, AH1, EH3, Y  
 destroy D, Y, S, T, R, O1, UH3, I3, AY  
 detail D, E, T, EH3, A1, I3, UH3, L  
 determine D, Y, T, ER, M, I1, N  
 device D, Y, V, UH3, AH2, Y, S  
 dew (use "do" program)  
 diagnostic D, AH1, AY, I3, G, N, AH1, UH3, S, T, I3, K  
 dial D, AH1, EH3, I3, UH3, L  
 dictionary D, I1, I3, K, SH, UH3, N, EH3, EH3, ER, Y  
 did D, I1, I3, D  
 die D, AH1, EH3, Y  
 diet D, AH1, EH3, AY, I2, T  
 differ D, I1, I3, F, ER  
 difference D, I1, F, R, EH3, N, DT, S  
 different D, I1, F, R, EH3, N, T  
 digit D, I1, D, J, I1, T  
 digital D, I1, D, J, I3, T, UH3, L  
 dime D, AH1, EH3, Y, M  
 diode D, AH1, EH3, AY, O1, U1, D  
 direct D, ER, EH1, EH3, K, T  
 directory D, ER, EH1, EH3, K, T, ER, Y  
 dirt D, ER, R, T  
 disagree D, I1, S, UH1, G, R, E1, Y  
 disappear D, I1, S, UH1, P, AY, I3, R  
 disconnect D, I1, S, K, UH1, N, EH1, EH3, K, T  
 discuss D, I1, I3, S, K, UH1, UH2, S  
 disk D, I1, I3, S, K  
 display D, I1, I3, S, P, L, A1, I3, Y  
 distance D, I1, S, T, EH3, N, T, S  
 divide D, I1, V, AH1, EH3, Y, D  
 dividend D, I1, V, I1, D, EH1, EH3, N, D  
 division D, I1, V, I1, ZH, UH3, N

do D, IU, U1, U1  
 dock D, AH1, UH3, K  
 doctor D, AH1, UH3, K, T, ER  
 document D, AH1, K, Y1, UH3, M, EH3, N, T  
 does D, UH2, UH1, Z  
 dollar D, AH1, UH3, L, ER  
 done D, UH1, UH3, N  
 door D, O1, O2, R  
 double D, UH3, UH1, B, UH3, L  
 doubt D, UH3, AH2, U1, T  
 down D, AH1, UH3, U1, N  
 draft D, R, AE1, EH3, F, T  
 draw D, R, AW  
 drill D, R, I1, I3, L  
 drink D, R, I1, I3, NG, K  
 drive D, R, AH1, EH3, Y, V  
 drop D, R, AH1, UH3, P  
 drum D, R, UH1, UH2, M  
 dry D, R, AH1, EH3, I3, Y  
 due (use "do" program)  
 dump D, UH1, UH2, M, P  
 duration D, ER, R, A1, Y, SH, UH3, N  
 during D, ER, R, I1, NG  
 duty D, IU, U1, U1, T, Y  
 dwell D, W, EH1, EH3, L

E E1, Y  
 each E1, AY, T, CH  
 ear E1, I2, R  
 early ER, R, L, Y  
 earn ER, R, N  
 east E1, AY, S, T  
 easy E1, AY, Z, Y  
 echo EH1, EH3, K, O1, U1  
 edge EH1, EH3, D, J  
 edit EH1, EH3, D, I2, T  
 educate EH1, D, J, U1, K, A1, Y, T  
 effect UH1, F, EH1, EH3, K, T  
 efficient E1, F, I1, SH, EH3, N, T  
 effort EH2, EH3, F, ER, T  
 eight A2, A2, Y, T  
 eighth A2, A2, Y, DT, DT, TH

eighty A2, A2, Y, T, Y  
 either E1, Y, THV, ER  
 electric EH3, L, EH1, K, T, R, I2, K  
 electrician EH3, L, EH1, K, PAO, T, R, I1, SH, UH3, N  
 electronic EH3, L, EH1, K, T, R, AH1, N, I2, K  
 elevator EH1, L, UH3, V, A2, AY, D, ER  
 eleven EH1, L, EH1, EH3, V, I2, N  
 eligible EH1, L, UH3, D, J, EH3, B, UH3, L  
 eliminate EH1, L, I1, M, I1, N, A1, Y, T  
 else EH1, EH3, L, S  
 emit Y, M, I1, I3, T  
 employ EH1, EH3, M, P, L, O1, UH3, I3, AY  
 empty EH1, EH3, M, P, T, Y  
 enable EH1, N, A1, Y, B, UH3, L  
 enclose EH1, EH3, N, K, L, O1, U1, Z  
 end EH1, EH3, N, D  
 engine EH1, EH3, N, D, J, I1, N  
 engineer EH1, N, D, J, I2, N, AY, I1, R  
 endorse EH1, EH3, N, D, O2, O2, R, S  
 english I1, NG, G, L, I2, SH  
 enter EH1, EH3, N, T, ER  
 entry EH1, EH3, N, T, R, Y  
 epsilon EH1, P, S, UH3, L, AH1, UH3, N  
 equal Y, K, W, UH3, L  
 equipment E1, K, W, IL, P, M, EH3, N, T  
 erase E1, R, A1, Y, S  
 error EH3, EH3, EH3, R, ER  
 escape EH1, EH3, S, K, A1, AY, Y, P  
 escrow EH1, EH3, S, K, R, O1, U1  
 establish UH1, S, T, AE1, EH3, B, L, I2, SH  
 estate EH1, EH3, S, T, A1, AY, Y, T  
 estimate EH1, S, T, EH3, M, I3, T  
 exact EH1, EH3, G, PAO, Z, AE1, EH3, K, T  
 examine EH1, EH3, G, PAO, Z, AE1, EH3, M, I1, N  
 exceed EH1, EH3, K, PAO, S, E1, Y, D  
 except EH1, EH3, K, PAO, S, EH1, EH3, P, T

exchange EH1, EH3, K, PAO, S, T, CH, A1, AY, Y, N, D, J  
 execute EH1, EH3, K, PAO, S, UH3, K, Y1, IU, U1, T  
 exempt EH1, EH3, G, PAO, Z, EH1, EH3, M, P, T  
 exit EH1, EH3, G, PAO, Z, I1, I3, T  
 expect EH1, EH3, K, PAO, S, P, EH1, EH3, K, T  
 expedite EH1, EH3, K, PAO, S, P, EH1, EH3, D, UH3, AH2, Y, T  
 expend EH1, EH3, K, PAO, S, P, EH1, EH3, N, D  
 experiment EH1, K, PAO, S, P, EH1, R, UH3, M, EH3, N, T  
 exponent EH1, K, PAO, S, P, O2, O2, N, EH3, N, T  
 express EH1, EH3, K, PAO, S, P, R, EH1, S  
 extension EH1, EH3, K, PAO, S, T, EH1, EH3, N, SH, UH3, N

F EH1, EH2, F  
 face F, A1, AY, Y, S  
 facility F, UH2, S, I1, L, I3, T, Y  
 fact F, AE1, EH3, K, T  
 fahrenheit F, EH1, R, I2, N, H, UH3, AH2, Y, T  
 fail F, A1, AY, I3, UH3, L  
 fall F, AW, L  
 false F, AW, L, S  
 familiar F, UH1, M, I1, L, Y1, ER  
 far F, AH1, UH3, R  
 farad F, EH3, EH3, ER, AE1, EH3, D  
 fast F, AE1, EH3, S, T  
 fault F, AW, L, T  
 feat (use "feet" program)  
 feature F, E1, AY, T, CH, ER  
 february F, EH1, B, Y1, IU, W, EH1, R, Y  
 federal F, EH1, EH3, D, R, UH3, L  
 fee F, E1, Y  
 feed F, E1, Y, D  
 feet F, E1, Y, T  
 fernale F, AY, Y, M, A1, AY, UH3, L

field F, E1, AY, UH3, L, D  
 fifteen F, I1, I3, F, T, E1, Y, N  
 fifth F, I1, I3, F, TH  
 fifty F, I1, I3, F, T, Y  
 file F, AH1, EH3, I3, UH3, L  
 fill F, I1, I3, L  
 final F, AH1, Y, N, UH3, L  
 finance F, AH1, EH3, Y, N, AE1, EH3, N, S  
 find F, AH1, EH3, Y, N, D  
 finger F, I1, I3, NG, G, ER  
 finish F, I1, N, I1, SH  
 fire F, AH1, EH3, AY, R  
 first F, ER, R, S, T  
 fit F, I1, I3, T  
 five F, AH1, EH3, Y, V  
 fix F, I1, I3, K, PAO, S  
 fixture F, I1, I3, K, PAO, S, T, CH, ER  
 flash F, L, AE1, EH3, SH  
 flat F, L, AE1, EH3, T  
 flight F, L, UH3, AH2, Y, T  
 flip F, L, I1, I3, P  
 floor F, L, O1, O2, R  
 flop F, L, AH1, UH3, P  
 flow F, L, O1, U1  
 fly F, L, AH1, EH3, Y  
 fold F, O2, O2, L, L, D  
 follow F, AH1, AW2, L, O1, U1  
 food F, U1, U1, D  
 foot F, OO1, OO1, T  
 for (use "four" program)  
 fore (use "four" program)  
 force F, O2, O2, R, S  
 foreman F, O2, O2, R, M, EH2, N  
 forget F, O2, O2, R, G, EH1, EH3, T  
 forgive F, O2, O2, R, G, I1, I3, V  
 form F, O2, O2, R, M  
 format F, O2, O2, R, M, AE1, EH3, T  
 forty F, O2, O2, R, T, Y  
 forward F, O2, O2, R, W, ER, D  
 found F, AH1, UH3, W, N, D  
 four F, O1, O2, R  
 fourth F, O1, O2, R, TH

fox trot F, AH1, UH3, K, PAO, S, T, R, AH1, UH3, T  
 frame F, R, A1, AY, Y, M  
 fraud F, R, AW, D  
 free F, R, E1, Y  
 french F, R, EH1, EH3, N, T, CH  
 frequency F, R, E1, K, W, EH3, N, DT, S, Y  
 frequent F, R, E1, K, W, EH3, N, T  
 friday F, R, AH1, EH3, Y, D, A1, I3, Y  
 fright F, R, UH3, AH2, Y, T  
 from F, R, UH1, UH3, M  
 front F, R, UH3, UH1, N, T  
 fruit F, R, IU, U1, T  
 fuel F, Y1, IU, U1, UH3, L  
 full F, OO1, L  
 function F, UH1, UH2, N, K, SH, UH3, N  
 fund F, UH1, UH2, N, D  
 furnace F, ER, R, N, EH3, S  
 further F, ER, R, THV, ER  
 future F, Y1, IU, U1, T, CH, ER

G D, J, E1, Y  
 gage (use "gauge" program)  
 gain G, A1, AY, Y, N  
 gait (use "gate" program)  
 gallon G, AE1, AH2, L, UH3, N  
 game G, A1, AY, Y, M  
 gamma G, AE1, EH3, M, UH2, UH3  
 gap G, AE1, EH3, P  
 garage G, UH1, R, AH1, UH3, ZH  
 gas G, AE1, EH3, S  
 gate G, A1, AY, Y, T  
 gauge G, A1, AY, Y, D, J  
 general D, J, EH1, EH3, N, ER, UH3, L  
 generate D, J, EH1, N, ER, A1, Y, T  
 gentlemen D, J, EH1, EH3, N, T, L, M, I2, N  
 german D, J, ER, R, M, EH2, N  
 get G, EH1, EH3, T  
 girl G, ER, R, L  
 give G, I1, I3, V  
 glass G, L, AE1, EH3, S  
 glitch G, L, I1, I3, T, CH  
 globe G, L, O1, U1, B  
 go G, OO1, O1, U1

golf G, AW2, AW2, UH3, L, F  
 good G, OO1, OO1, D  
 govern G, UH1, UH3, V, ER, N  
 grade G, R, A1, AY, Y, D  
 gram G, R, AE1, EH3, M  
 grand G, R, AE1, EH3, N, D  
 graph G, R, AE1, EH3, F  
 grate (use "great" program)  
 gray (use "grey" program)  
 great G, R, A1, Y, T  
 green G, R, E1, Y, N  
 greet G, R, E1, Y, T  
 grey G, R, A1, AY, Y  
 grind G, R, AH1, EH3, Y, N, D  
 grocery G, R, O1, U1, S, ER, Y  
 ground G, R, AH1, UH3, W, N, D  
 group G, R, U1, U1, P  
 grow G, R, O1, U1  
 guard G, AH1, R, D  
 guarantee G, EH1, R, I3, N, T, E1, Y  
 guess G, EH1, EH3, S  
  
 H A1, AY, Y, T, CH  
 had H, AE1, EH3, D  
 half H, AE1, EH3, F  
 halt H, AW, L, T  
 hammer H, AE1, EH3, M, ER  
 hand H, AE1, EH3, N, D  
 handle H, AE1, EH3, N, D, UH3, L  
 hang H, AE1, I3, NG  
 happy H, AE1, EH3, P, Y  
 hard H, AH1, R, D  
 has H, AE1, EH3, Z  
 have H, AE1, EH3, V  
 he H, E1, Y  
 head H, EH1, EH3, D  
 hear H, AY, I3, R  
 heart H, AH1, UH3, R, T  
 heat H, E1, AY, T  
 heavy H, EH1, V, Y  
 height H, UH3, AH2, Y, T  
 held H, EH1, UH3, L, D  
 hello H, EH1, UH3, L, UH3, O1, U1  
 help H, EH1, EH3, L, P

henry H, EH1, EH3, N, R, Y  
 her H, ER  
 here (use "hear" program)  
 hertz H, R, R, T, S  
 hex H, EH1, EH3, K, PAO, S  
 high H, AH1, EH3, Y  
 his H, I1, I3, Z  
 hold H, O2, O2, L, L, D  
 hole H, O1, U1, L  
 home H, O1, U1, M  
 hook H, OO1, OO1, K  
 host H, O1, U1, S, T  
 hot H, AH1, UH3, T  
 hotel H, O1, U1, T, EH2, EH2, L  
 hour AH1, UH3, W, ER  
 house H, UH3, AH2, U1, S  
 how H, AH1, O2, U1  
 human H, Y1, IU, U1, U1, M, EH2, N  
 hundred H, UH1, UH2, N, D, R, I3, D  
 hungry H, UH1, UH2, NG, G, R, Y  
  
 I AH1, EH3, I3, Y  
 idle AH1, Y, D, UH3, L  
 idol (use "idle" program)  
 if I1, I3, F  
 immediate I1, I3, M, E1, D, Y, EH3, T  
 important I1, I3, M, P, O2, O2, R, T, EH3, N, T  
  
 improper I1, I3, M, P, R, AH1, UH3, P, ER  
 improve I1, I3, M, P, R, IU, U1, U1, V  
 in I1, I3, N  
 inch I1, I3, N, T, CH  
 include I1, I3, N, K, L, IU, U1, U1, D  
 income I1, I3, N, K, UH1, UH3, M  
 independent I1, N, D, E1, P, EH2, EH3, N, D, EH3, N, T  
  
 index I1, I3, N, D, EH1, EH3, K, PAO, S  
 india I2, I3, N, D, Y, UH2  
 indicate I1, N, D, I3, K, A1, Y, T  
 industrial I1, I3, N, D, UH1, UH2, S, T, R, AY, UH3, L  
  
 inform I1, I3, N, F, O2, O2, R, M  
 initial I1, I3, N, I1, SH, UH3, L  
 inn (use "in" program)



















