

***** SPEAKEASY FOR THE DRAGON *****

Connect your SPEAKEASY with the cable supplied, to the centronics printer port of your DRAGON.

There may be some noise coming from SPEAKEASY at this stage depending on the data present at the printer port.

To stop this, using direct mode on your DRAGON, type :-

PRINT E-2,CHR\$(4); then press ENTER.

The noise should stop, if not check that the SPEAKEASY lead and connector are not broken, or wires loose.

Assuming everything is correct load in "THE WORD FACTORY" program for a demonstration of SPEAKEASY's abilities.

SPEAKEASY words are made up from allophones (see allophone tables).

It is necessary to send the required allophone numbers to the SPEAKEASY unit in order to produce speech.

It is very easy to do this on the DRAGON using the PRINT E-2, command.

For example :- PRINT E-2,CHR\$(57)CHR\$(7)CHR\$(45)CHR\$(53)CHR\$(4);

SPEAKEASY will say 'HELLO'.

Remember to place a semicolon at the end of the print statement so as to inhibit the carriage return, otherwise SPEAKEASY will see the carriage return (CHR\$ 13) as an allophone.

Another method to predefine a 'word' as a string is for example :-

```
10 A$=CHR$(57)+CHR$(7)+CHR$(45)+CHR$(53)+CHR$(4)
20 B$=CHR$(6)+CHR$(3)+CHR$(26)+CHR$(1)+CHR$(16)+CHR$(4)
30 C$=CHR$(39)+CHR$(7)+CHR$(21)+CHR$(19)+CHR$(4)
40 PRINT E-2,A$;B$;C$;
```

If many words are to be used in your program these are best defined using a DATA statement as shown below.

```
10 A=1
20 READ N : S$(A)=S$(A)+CHR$(N)
30 IF N=0 THEN END
40 IF N=4 THEN A=A+1
50 GOTO 20
60 DATA 8,24,16,9,49,31,13,52,4
70 DATA 46,52,62,21,4
80 DATA 40,40,58,4
90 DATA 0
```

The three words shown in the DATA statements are now in S\$(1), S\$(2) and S\$(3).

To 'say' these words enter :- PRINT E-2,S\$(n) Where n can be any number between 1 and 3.

FURTHER NOTES.

To make a 'T' sound using CHR\$(13) it is necessary to POKE&H9C,2 before using ?E-2,CHR\$(13). This is because the DRAGON treats CHR\$(13) as a carriage return.

An alternative is to use CHR\$(17) for the 'T' allophone.

The "WORD COMPILER" program listing should be changed at line 2070 to read :- 2070 A=17

The machine code user can use the subroutine at \$BCF5 to send the contents of the "A" register to the printer port.

Using this subroutine it is not necessary to POKE&H9C etc, as stated above.

Below is the table of Allophones with the numbers zero to 63 decimal all these sounds may be reproduced using "SPEAKEASY". Remember the words shown are only guidelines, the general rule is experiment to get the best result.

Num.	Allopn.	SamplW.	Num.	Allopn.	SamplW.
0	PA1	Pause	32	/AW/	Out OU
1	PA2	Pause	33	/DD2/	Do D
2	PA3	Pause	34	/GG3/	Wig WI
3	PA4	Pause	35	/VV/	Vest V
4	PA5	Pause	36	/GG1/	Guest GU
5	/OY/	Boy OY	37	/SH/	Ship S
6	/AY/	Sky Y	38	/ZH/	Azure Z
7	/EH/	End E	39	/RR2/	Brain R
8	/KK3/	Comb C	40	/FF/	Food F
9	/PP/	Pow P	41	/KK2/	sKy K
10	/JH/	dodGe G	42	/KK1/	Can't C
11	/NN1/	thiN N	43	/ZZ/	Zoo Z
12	/IH/	sIt I	44	/NG/	aNchor N
13	/TT2/	To T	45	/LL/	Lake L
14	/RR1/	Rural R	46	/WW/	Wool W
15	/AX/	sUcceed U	47	/XR/	Repair R
16	/MH/	Milk M	48	/JH/	Whig W
17	/TT1/	parT T	49	/YY1/	Yes Y
18	/DH1/	They TH	50	/CH/	Church C
19	/IY/	sEE E	51	/ER1/	fIR IR
20	/EY/	bElGe EI	52	/ER2/	fur ERR
21	/DD1/	could ID	53	/OW/	bcAU AU
22	/UW1/	tO O	54	/DH2/	THEy TH
23	/AO/	Aught AU	55	/SS/	veSt S
24	/AA/	hOt O	56	/MH2/	No N
25	/YY2/	YEs YE	57	/IH2/	Hoe H
26	/AE/	hAt A	58	/OR/	stORe OR
27	/HH1/	He H	59	/AR/	Alarm A
28	/BB1/	BUSiness BU	60	/YR/	cleaR R
29	/TH/	THin TH	61	/GG2/	Got G
30	/UH/	bOOk OO	62	/EL/	saddle L
31	/UW2/	fOOD OO	63	/BB2/	Business B

Silence.

PA1 (10ms)	before BB,DD,GG,JH
PA2 (30ms)	before BB,DD,GG,JH
PA2 (50ms)	before PP,TT,KK,CH
PA3 (100ms)	between clauses and sentences
PA4 (200ms)	between clauses and sentences

Voiceless fricatives.

* /FF/
* /TH/
* /SS/ shirt, leash

Short Vowels.

* /IH/	sitting, stranded	/HH1/	before front vowels
* /EH/	extent, gentlemen		
* /AE/	extract, acting		
* /UH/	cookie, full	* /AO/	talking, song
* /AX/	lapel, instruct	* /AA/	pottery, cotton

*these allophones can be doubled