SPEECHLAB^(R) MODEL 20A

APPENDIX "D"

AUTO SLOT FINDER

The following program will automatically find SpeechLab and
set SLOT to the correct slot number. This allows SpeechLab
to be placed in any available slot (1-7). A typical PR# state-
ment could then be:

          PRINT D$;"PR#";SLOT


```
12090      REM AUTO SLOT FINDER
12100      C100=-16384+256: REM SLOT #1 ADDRESS
12110      C700=-16384+7*256: REM SLOT #7 ADDRESS
12120      CFFF=-16384+15*256*15*16+15
           :REM DISABLE SLOTS ADDRESS
12130      SLOT=0
12140      POKE CFFF;0: REM DISABLE SLOTS
12150      FOR I=C100 TO C700 STEP 256
12160      SLOT=SLOT+1
12170      POKE I,0: REM ENABLE SLOT
12180      IF PEEK (-14071)#141 THEN 12200:
           IF PEEK (-14098)#202 THEN 12200:
           IF PEEK (-13546)#48  THEN 12200
12190      RETURN:REM FOUND SLOT
12200      NEXT I:REM KEEP LOOKING
12210      PRINT "NO SPEECHLAB IN SYSTEM."
12220      END
```

USING THE SPEECHLAB 20A WITH DOS

To use the SpeechLab 20A with DOS and Integer Basic it is
necessary to issue the "LOMEM"command from within Basic.
This is accomplished with the following POKE commands:

```
10      POKE 74,124
20      POKE 75,21
30      POKE 204,124
40      POKE 205,21
```

These POKE's must be the first commands entered in the Basic
program. In particular, they must preceed any DIM statements.

In addition, all PR# and IN# commands must be executed from
PRINT statements as mentioned on Page 33 of the DOS manual.
For example:

```
50      DIM D$(1)
60      D$="": REM"" IS CONTROL D
70      PRINT D$;"PR#3"
80      PRINT : REM INITIALIZE SPEECHLAB
90      PRINT D$;"PR#0"
```

A complete example follows on the next page.

Apple Integer Basic, Applesoft Basic, and DOS have some in-
compatible conventions. The software changes given here will
allow SpeechLab to work with Integer Basic and DOS, but not
with Applesoft. A future application will address using
SpeechLab with Applesoft.

```
0       REM EXIT THIS PROGRAM BY TYPE
1       REM RESET AND THEN 3D0G RETURN
15      REM SET LOMEM;MUST BE DONE FIRS
20      POKE 74,124
21      POKE 75,21
22      POKE 204,124
23      POKE 205,21
30      DIM D$(1),W$(20)
35      D$="": REM   "" IS CONTROL D
37      REM LINE 40 KEEPS SCREEN CLEAN
40      PRINT D$;"NOMON I,C,O"
45      CALL -936: REM  CLEAR SCR OF NOM
        ON
50      PRINT D$;"PR#3"
60      PRINT
70      PRINT D$;"PR#0"
80      PRINT "NOW 20A IS INITIALIZED"
100     PRINT

105     PRINT "SAY TEST WORD NOW"
110     PRINT D$;"PR#3"
120     PRINT "TEST WORD"
130     PRINT D$;"PR#0"
140     PRINT "NOW SPEECHLAB IS TRAINED"
150     PRINT "SPEAK.."
160     PRINT D$;"IN#3"
170     INPUT W$
175     PRINT D$;"PR#0"
176     PRINT D$;"IN#0"
180     PRINT "YOU SAID";W$
190     PRINT D$;"IN#0"
195     PRINT D$;"PR#0"
200     FOR I=1 TO 400
210     NEXT I
220     GOTO 160
230     END
```

APPENDIX "F"

TO SAVE AND RESTORE
VOCABULARIES WITH THE
SPEECHLAB 20A

After training is complete the training data may be saved
for reuse later. This is useful for a number of reasons.
First, you can increase the effective vocabulary size by
swapping one 32 word set with another giving a virtually
unlimited vocabulary size. Secondly, you can restore
saved training data to eliminate retraining each time you
use SpeechLab.

Saving and restoring data is simple. After training is
complete save locations 2048 (base 10) to 5500 and also
locations 90 and 91. These are the training tables. When-
ever this data is restored SpeechLab is ready to recognize
those words again. You don't have to reinitialize or re-
train SpeechLab -- just start recognizing.

The following commands will save SpeechLab's vocabulary tables, etc., onto the Apple disk:

```
POKE 5498,PEEK(90)
POKE 5499,PEEK(91)
PRINT D$;"BSAVE SDATA1,A2048,L3452"
```

To restore these tables for later recognition:

```
PRINT D$;"BLOAD SDATA1,A2048"
POKE 90,PEEK(5498)
POKE 91,PEEK(5499)
```

Note that SpeechLab should not be reinitialized ("PRINT") after restoring training data. See complete example below.

SAVING SPEECH DATA

```
10      REM SET LOMEM
20      POKE 74,124
30      POKE 75,21
40      POKE 204,124
50      POKE 205,21
60      DIM D$(1)
70      D$="":REM"" IS CONTROL D
80      REM KEEP SCREEN CLEAN
90      PRINT D$;"NOMON I,C,O"
100     CALL -936:REM CLEAR SCREEN
110     REM INITIALIZE SPEECHLAB,SLOT 3
120     PRINT D$;"PR#3"
130     PRINT
140     PRINT D$;"PR#0"
150     REM TRAIN ON A WORD
160     PRINT D$;"PR#3"
170     PRINT "A WORD"
180     PRINT D$;"PR#0"
190     REM SAVE ON DISK FILE F00
200     POKE 5498,PEEK(90)
210     POKE 5499,PEEK(91)
220     PRINT D$;"BSAVE F00,A2048,L3452"
230     END
```

```
10      REM SET LOMEM
20      POKE 74,124
30      POKE 75,21
40      POKE 204,124
50      POKE 205,21
60      DIM D$(1),W$(20)
70      D$="":REM""IS CONTROL D
80      REM KEEP SCREEN CLEAN
90      PRINT D$;"NOMON I,C,O"
100     CALL -936:REM CLEAR SCREEN
110     REM RESTORE SPEECH DATA
120     PRINT D$;"BLOAD F00,A2048"
130     POKE 90,PEEK(5498)
140     POKE 91,PEEK(5499)
150     REM RECOGNIZE PREVIOUSLY TRAINED SPEECH
160     PRINT D$;"IN#3"
170     INPUT W$
180     PRINT D$;"IN#0"
190     PRINT D$;"PR#0"
200     PRINT W$
210     GOTO 160
220     END
```