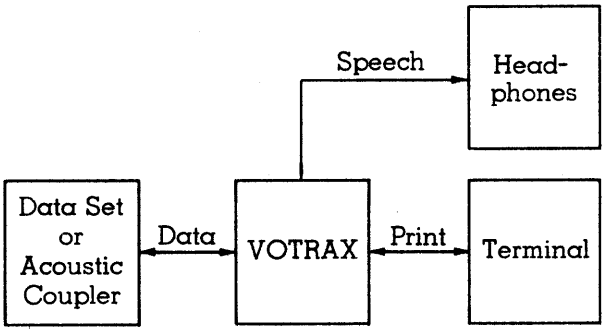
Votrax Interfacing

Interfacing VOTRAX to your terminal is a simple procedure. The cable which connects your terminal to an EIA, RS-232 acoustic coupler or data set is removed and plugged into the rear panel of VOTRAX. A second cable supplied to you will connect VOTRAX to the data set.

The data to be printed comes from the data set, goes into VOTRAX, and proceeds to the terminal. Data to be spoken also comes from the data set, goes into VOTRAX, and is spoken. That data is not routed to the terminal.

The total effort involved in interfacing VOTRAX to your C.A.I. equipment is merely a re-connection of cables.

Simple, isn't it?



VOTRAX® THE ELECTRONIC VOICE SYSTEM

For Computer-Assisted Instruction

Price List and Options

The following prices are in effect Nov. 1, 1974, and are subject to change without prior notice.

Student Stations	System Price	Maintenance Contract (per mo.)
8	$ 24,555	$ 256.
16	45,083	432.
32	84,267	800.
64	157,771	1,536.
128	295,947	2,816.
256	558,091	5,376.
512	1,053,195	10,240.

Each VOTRAX Student Station includes: One VOTRAX Voice Response Unit with speech rate control, volume control, student headphone, data switch interface for EIA or popular teleprinter/CRT terminals. Each System includes one phonetic keyboard and keyboard interface. Price quotation for custom installation available upon request.

Prices for other system configurations available upon request.

Votrax Programming for Computer-Assisted Instruction

The programming of VOTRAX for your C.A.I. Lessons is a simple procedure. Data that produces speech is sent as normal ASCII characters prefixed by two non-printable control characters and postfixed by another two, non-printable control characters on the data, which produces speech represents phonemes. Phonemes are the basic sounds of speech such as vowels and consonants. For example, the word "hello" consists of the phonemes "H", "EH", "L", "UH", and "O".

The first two control characters indicate the data following are to be spoken. After the data have been spoken, the last two control characters switch data back to the terminal for printing. The data itself represents the phonemes to be spoken plus the inflection or intonation on each phoneme. There are sixty-three phonemes and each can have any of four inflection levels. Six bits define the phoneme and two bits select the inflection level for a total of eight bits.

Programming VOTRAX in Basic Language

The printing of the word "hello" on a terminal is accomplished by the statement: PRINT "HELLO" in a basic program. The speaking of the word "Hello" through VOTRAX is accomplished by the statement: PRINT (v) (v) KA B@ HA BC EC OO (w) (w) (as keys on terminal). The (v) (v) and (w) (w) terminal characters represent the two non-printable control characters. The (v) (v) characters cause the following data to be spoken:

KA is an "H" phoneme
B@ is an "EH" phoneme
HA is an "L" phoneme
BC is an "UH" phoneme
EC is an "O" phoneme

OO instructs VOTRAX to speak the word. The (w) (w) characters switch data back to the terminal for printing.

Programming VOTRAX in Fortran Language

The speaking of the words "CORRECT, GOOD" is accomplished by the following statement: PRINT "(v) (v) IM KN KJ BD IM CL JN NO NO LM GI NM NM NO OO (w) (w)"

The (v) (v) characters cause the following data to be spoken:

IM is a "K" phoneme
KN is an "R" phoneme
KJ is an "R" phoneme
BD is an "EH" phoneme
IM is a "K" phoneme
CL is a "pause O" phoneme
JN is a "T" phoneme
NO is a "pause"
NO is a "pause"
LM is a "G" phoneme
GI is an "OO" phoneme
NM is a "D" phoneme
NO is a PAI phoneme

OO instructs VOTRAX to speak the words. The (w) (w) characters switch data back to the terminal for printing.

Programming is Easy

The examples illustrated are easily derived from the manuals supplied. As you can see, programming speech for your C.A.I. program is easy.

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