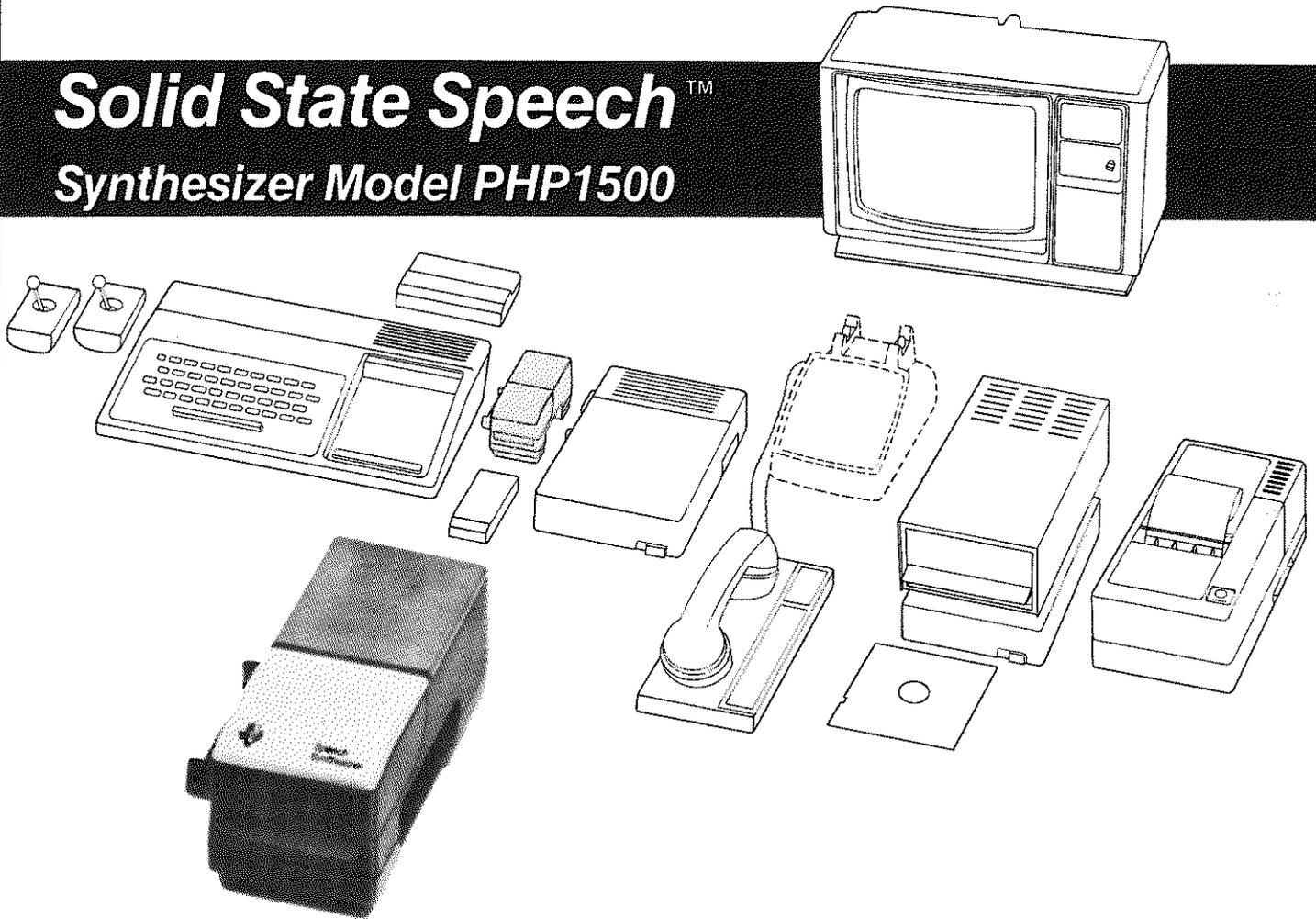


**Texas Instruments**  
**TI-99/4 Home Computer Accessory**



# Solid State Speech™

## Synthesizer Model PHP1500



The Texas Instruments Solid State Speech™ Synthesizer makes possible the exciting addition of speech to the TI-99/4 Home Computer. Utilization of the Speech Synthesizer requires an optional Command Module programmed for speech, such as the Speech Editor Command Module. These preprogrammed modules allow the Speech Synthesizer to be used without the need to do any programming. Speech can also be included as part of your own programs in TI BASIC.

The Speech Synthesizer is entirely electronic. There are no taped voice recordings or any other traditional recording medium. Instead, a vocabulary of words and phrases is permanently stored on chips contained within the Speech Synthesizer. Each word has been transformed into a pattern of bits. When processed, each pattern drives electronic circuitry that rebuilds the requested word and audibly reproduces it through a loudspeaker. The Speech Synthesizer contains a

resident vocabulary of over 300 words. Capacity is expandable with optional Plug-in Speech Modules.

Using the Speech Synthesizer is easy. It simply docks directly into the Home Computer by means of built-in connectors. There are no dangling cables. Next, you insert one of the Command Modules designed to call up speech from the Speech Synthesizer and you are ready to go.

The Speech Synthesizer provides a voice for the Home Computer, creating many new applications and enhancing the effectiveness of existing ones. It can communicate with you without you being near the display. It can recite instructions to those unable to read, or where written instructions might interfere with the display. It can provide exciting comments and sound effects in games, and it can reinforce concepts in educational applications.

# Specifications

## Operating modes.

The Speech Synthesizer can be used in several ways. In one mode, the Speech Synthesizer is controlled by a Command Module other than the Speech Editor Command Module. (This must be a Command Module with speech capability, and not all Command Modules have this feature.) In effect, the Command Module calls on the services of the Speech Synthesizer to perform requests for speech programmed into the module. This is the only operating mode available without the optional Speech Editor Command Module plugged into your Home Computer.

Other methods of operation require the use of the

Speech Editor Command Module. Using the TI BASIC programming language, words, phrases, or sentences may be recited under program control. The Speech Synthesizer can be programmed to provide verbal instructions, prompting messages, or intermediate or final data results without interfering with other data you may wish to retain on the display.

The Speech Editor Command Module can also immediately recite words, phrases, and sentences without having to write a program. In this mode just type in the desired word, push the return key and the Speech Synthesizer says the word.

## Speech Synthesizer resident vocabulary.

+ (positive)	B	CONNECTED	ENTER	GO
- (negative)	BACK	CONSOLE	ERROR	GOES
• (point)	BASE	CORRECT	EXACTLY	GOING
0	BE	COURSE	EYE	GOOD
1	BETWEEN	CYAN	F	GOOD WORK
2	BLACK	D	FIFTEEN	GOODBYE
3	BLUE	DATA	FIFTY	GOT
4	BOTH	DECIDE	FIGURE	GRAY
5	BOTTOM	DEVICE	FIND	GREEN
6	BUT	DID	FINE	GUESS
7	BUY	DIFFERENT	FINISH	H
8	BY	DISKETTE	FINISHED	HAD
9	BYE	DO	FIRST	HAND
A (ā)	C	DOES	FIT	HANDHELD UNIT
A1 (ah)	CAN	DOING	FIVE	HAS
ABOUT	CASSETTE	DONE	FOR	HAVE
AFTER	CENTER	DOUBLE	FORTY	HEAD
AGAIN	CHECK	DOWN	FOUR	HEAR
ALL	CHOICE	DRAW	FOURTEEN	HELLO
AM	CLEAR	DRAWING	FOURTH	HELP
AN	COLOR	E	FROM	HERE
AND	COME	EACH	FRONT	HIGHER
ANSWER	COMES	EIGHT	G	HIT
ANY	COMMA	EIGHTY	GAMES	HOME
ARE	COMMAND	ELEVEN	GET	HOW
AS	COMPLETE	ELSE	GETTING	HUNDRED
ASSUME	COMPLETED	END	GIVE	HURRY
AT	COMPUTER	ENDS	GIVES	I

I WIN  
IF  
IN  
INCH  
INCHES  
INSTRUCTION  
INSTRUCTIONS  
IS  
IT  
J  
JOYSTICK  
JUST  
K  
KEY  
KEYBOARD  
KNOW  
L  
LARGE  
LARGER  
LARGEST  
LAST  
LEARN  
LEFT  
LESS  
LET  
LIKE  
LIKES  
LINE  
LOAD  
LONG  
LOOK  
LOOKS  
LOWER  
M  
MADE  
MAGENTA  
MAKE  
ME  
MEAN  
MEMORY  
MESSAGE  
MESSAGES  
MIDDLE  
MIGHT  
MODULE  
MORE  
MOST  
MOVE  
MUST  
N  
NAME  
NEAR  
NEED

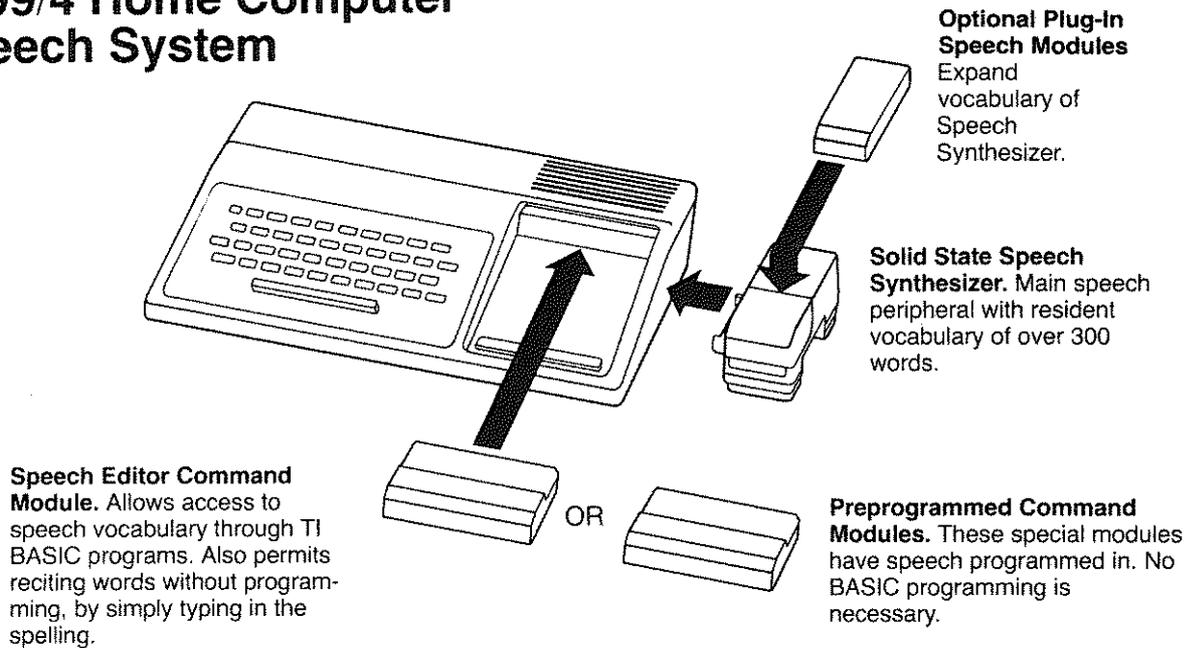
NEGATIVE  
NEXT  
NICE TRY  
NINE  
NINETY  
NO  
NOT  
NOW  
NUMBER  
O  
OF  
OFF  
OH  
ON  
ONE  
ONLY  
OR  
ORDER  
OTHER  
OUT  
OVER  
P  
PART  
PARTNER  
PARTS  
PERIOD  
PLAY  
PLAYS  
PLEASE  
POINT  
POSITION  
POSITIVE  
PRESS  
PRINT  
PRINTER  
PROBLEM  
PROBLEMS  
PROGRAM  
PUT  
PUTTING  
Q  
R  
RANDOMLY  
READ (réd)  
READ1 (réd)  
READY TO START  
RECORDER  
RED  
REFER  
REMEMBER  
RETURN  
REWIND  
RIGHT

ROUND  
S  
SAID  
SAVE  
SAY  
SAYS  
SCREEN  
SECOND  
SEE  
SEES  
SET  
SEVEN  
SEVENTY  
SHAPE  
SHAPES  
SHIFT  
SHORT  
SHORTER  
SHOULD  
SIDE  
SIDES  
SIX  
SIXTY  
SMALL  
SMALLER  
SMALLEST  
SO  
SOME  
SORRY  
SPACE  
SPACES  
SPELL  
SQUARE  
START  
STEP  
STOP  
SUM  
SUPPOSED  
SUPPOSED TO  
SURE  
T  
TAKE  
TEEN  
TELL  
TEN  
TEXAS  
INSTRUMENTS  
THAN  
THAT  
THAT IS INCORRECT  
THAT IS RIGHT  
THE 1 (thē)  
THE (thē)

THEIR  
THEN  
THERE  
THESE  
THEY  
THING  
THINGS  
THINK  
THIRD  
THIRTEEN  
THIRTY  
THIS  
THREE  
THREW  
THROUGH  
TIME  
TO  
TOGETHER  
TONE  
TOO  
TOP  
TRY  
TRY AGAIN  
TURN  
TWELVE  
TWENTY  
TWO  
TYPE  
U  
UHOH  
UNDER  
UNDERSTAND  
UNTIL  
UP  
UPPER  
USE  
V  
VARY  
VERY  
W  
WAIT  
WANT  
WANTS  
WAY  
WE  
WEIGH  
WEIGHT  
WELL  
WERE  
WHAT  
WHAT WAS THAT  
WHEN  
WHERE

WHICH  
WHITE  
WHO  
WHY  
WILL  
WITH  
WON  
WORD  
WORDS  
WORK  
WORKING  
WRITE  
X  
Y  
YELLOW  
YES  
YET  
YOU  
YOU WIN  
YOUR  
Z  
ZERO

## TI-99/4 Home Computer Speech System



### Vocabulary expansion.

Optional Plug-in Speech Modules add additional vocabulary, in specialized areas, to your Home Computer. Simply drop the appropriate Speech Module into the Speech Synthesizer and the new words are immediately accessible to you, in addition to the resident vocabulary in the Speech Synthesizer itself. (Requires Command Module with speech capability, such as the Speech Editor Command Module.)

### A technological milestone.

Speech synthesis is a milestone innovation in computer technology. For the first time, Texas Instruments has combined all the functions necessary to electronically duplicate the human voice track in a single semiconductor chip. Prior to this development, speech synthesis required so much logic and memory capability that it could only be done with large computers and at great cost. This exclusive TI technology reproduces complete words stored in memory.

Texas Instruments reserves the right to make changes in materials and specifications without notice

### Power source.

All power requirements of the Speech Synthesizer are supplied by the TI-99/4 Home Computer console.

### Physical characteristics.

**Length:** 13.7 cm (5.4-inches).

**Width:** 8.1 cm (3.2-inches).

**Height:** 6.8 cm (2.7-inches).

**Weight:** 0.3 kg (0.6 lbs).

### Limited warranty.

The Texas Instruments Solid State Speech Synthesizer Model PHP1500 is covered by a 90-day limited warranty against defects in materials and workmanship. This warranty covers only the hardware portion of the Speech Synthesizer. See *User's Reference Guide* for complete warranty text. TI cannot and does not warrant that the TI Home Computer programs and book materials will be free from error or will meet the specific requirements of the user. The user assumes complete responsibility for any decisions made or actions taken based on information obtained using these programs and book materials, which are made available solely on an "as-is" basis (see owner's manual).

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