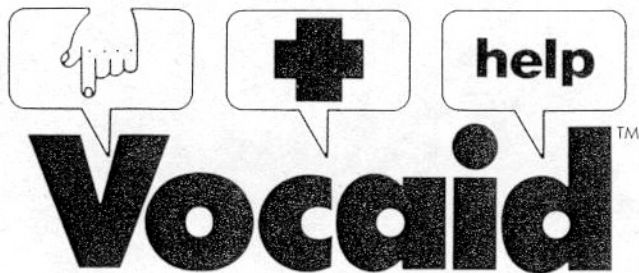




TEXAS INSTRUMENTS



Texas Instruments Electronic Vocal Aid

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Datamath Calculator Museum



## Introduction



### The Vocaid Design

The Vocaid electronic communication aid is designed to provide vocal assistance to speech-impaired individuals. This compact, portable device presents a 36-square touch-sensitive panel to the user. Touching a square activates an electronic circuit to verbally pronounce a letter, number, word, or phrase. The Solid State Speech™ quality is similar to that of a human voice heard over the telephone.

Certain degrees of motor and cognitive skill are necessary for successful utilization of the Vocaid vocabulary. The minimum skills required are the ability to recognize written or visual symbols and selectively apply pressure to the appropriate panel key (approximately 1¼" x 1¼"). Consumers are cautioned to carefully consider this requirement in determining the suitability of Vocaid for any individual desiring vocal assistance.

Four durable overlays (printed interchangeable panels) are provided to access functional vocabularies for bedside conversation, telephoning, leisure games, and spelling messages. The overlays are printed with identifying words or symbols to allow vocabulary choices. An overlay is held in place by a detachable plastic frame that has a raised key guide of 36 squares. The overlays are reversible, both sides containing identical panel keys, allowing the user to supply an alternative system of symbols for the given vocabulary, such as Blissymbolics or rebus symbols.

### Vocaid Features

Vocaid may be used almost anywhere because of its portable design and battery-powered operation. To prolong battery life, the communication aid has a built-in APD™ (Automatic Power

Down) feature. After approximately 2.5 minutes of non-use, the unit automatically turns off. Vocaid may also be operated from wall current using an optional Texas Instruments AC9460 adapter. (See page 4 for ordering information.)

To allow the user to control the volume, an optional speaker amplifier can be plugged in the Vocaid audio output jack. If unavailable locally, an amplifier may be ordered from Texas Instruments. (See page 4 for information.) This receptacle can also be used for an earphone if the user desires to rehearse the use of Vocaid without disturbing others.

### Bedside

This overlay provides two basic sentence structures:

- "I am \_\_\_\_\_."
- "I would like to \_\_\_\_\_."

The word "not" can be pressed after the verb to negate the meaning of either sentence. Phrases can then be pressed to convey common feelings and needs. To express right and wrong responses, the word "write" can be used for its homonym "right," or the combination "not write" can be used for "wrong." The vocabulary provided is designed to permit extensions via visible gestures to augment meaning (such as nodding "yes" or pointing to the TV or light switch).

### Telephone

This overlay can provide assistance in many telephone conversations. It allows the user to answer the phone, explain that the device is speaking, ask and answer straightforward questions, take a message, or ask the caller to call back.

The vocabulary for a speech-impaired individual to initiate emergency telephone requests for help is also available with this overlay. Forethought should be given to identifying the user's location. The first option might be to call friends or relatives who know the user's location. They can then relay the necessary information to the appropriate emergency services. As an alternative, many telephone operators can quickly determine the source of a phone call given the caller's phone number, and this overlay allows the user to provide phone numbers. Individuals needing

vocal assistance should not rely on this possibility, but be aware of it as a possible last resort if no other options are available.

### Alphanumeric

The complete alphabet and digits one through nine are included on this overlay. The "0" key is used both as a letter of the alphabet and as the null digit (zero). The user can spell any message with this overlay.

### Leisure

This overlay allows the user to participate in typical group games — even bidding hands in bridge. Some allowances must be made for the limited vocabulary. For example: a redouble would be indicated by two "doubles," a checkmate by declaring "I win," etc.

### Caution

To protect the unit, do not use or immerse the unit in water. Also, do not press the overlays or keyboard with any sharp instrument, as this may permanently damage the unit and/or overlays. Soiled overlays should be removed from the unit and wiped clean with a damp cloth.

### Important

Record the serial number from the bottom of the electronic aid and the purchase date in the space below. The serial number is identified by the words "Serial No." on the bottom of the case. Always refer to this information in any correspondence.

Model \_\_\_\_\_  
Serial No. \_\_\_\_\_  
Purchase Date \_\_\_\_\_

## Bedside Overlay

**Row 1:** I would like to  
Have medical help  
Have my medicine  
I am  
In pain  
Nauseous

**Row 2:** Please hurry  
Use the bathroom  
Have it open  
Hot  
Cold  
Dizzy

**Row 3:** Sit up  
Lie down  
Move  
Upset  
Hungry  
Thirsty

**Row 4:** Have more  
Quiet  
Be left alone  
Not  
Fine  
Tired

**Row 5:** Have it on  
Read  
Write  
Please explain  
Bored  
Ready

**Row 6:** OFF  
Bathe  
Have clean linens  
Thank you  
Help! I have a limited  
vocabulary  
Please ignore last  
remark/ON

## Telephone Overlay

**Row 1:** Hello  
I am using an artificial  
voice with a limited  
vocabulary  
Please ask so I can  
answer  
Help!  
Fire. Emergency.  
Help!  
Medical. Emergency.  
Help!  
Police. Emergency.

**Row 2:** Yes  
No  
Goodbye  
Just a minute  
My number is  
Wrong number

**Row 3:** Who is this?  
Please call back  
How?  
One  
Two  
Three

**Row 4:** Please spell it  
I'll take a message  
When?  
Four  
Five  
Six

**Row 5:** I don't know  
Please explain  
Where?  
Seven  
Eight  
Nine

## Row 6: OFF

Maybe  
Why?  
Zero  
Please repeat  
Please ignore last  
remark/ON

## Alphanumeric Overlay

**Row 1:** A B C D E F

**Row 2:** G H I J K L

**Row 3:** M N O P Q R

**Row 4:** S T U V W X

**Row 5:** Y

Z  
One  
Two  
Three  
Four

## Row 6: OFF

Five  
Six  
Seven  
Eight  
Nine/ON

## Leisure Overlay

**Row 1:** I would like to play  
A board game  
Cards  
Checkers  
Chess  
Dominoes

**Row 2:** Good play  
Check  
Oh-Oh  
What's the score?  
Are you sure?  
I Win!

**Row 3:** My play  
Your play  
Clubs  
One  
Two  
Three

**Row 4:** Double  
I'll take  
Diamonds  
Four  
Five  
Six

**Row 5:** I bid  
Pass  
Hearts  
Seven  
Eight  
Nine

**Row 6:** OFF  
No-Trump  
Spades  
Zero  
Please repeat  
Please ignore last  
remark/ON

## To Begin

With an overlay and batteries in place, press ON (in the bottom right corner). Two musical tones will sound.

As a desired word/phrase area is pressed, the word or phrase is spoken by Vocaoid. (If no overlay is in place when Vocaoid is turned on, a raspberry tone is heard, and the unit turns off automatically.)

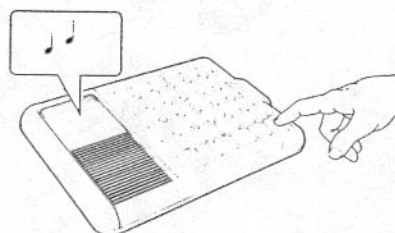
## To Make Sentences

To express a complete thought, a series of words or phrases may be spoken by pressing the desired areas in sequence. The user should wait until the device has completely spoken one phrase or word before pressing a subsequent phrase or word.

For example, press

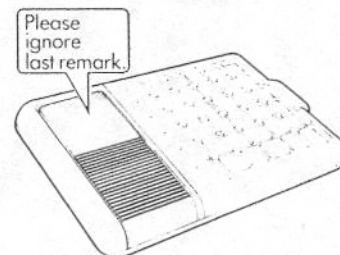
1.  
I WOULD LIKE TO

2.  
HAVE MY MEDICINE



## To Erase

Three of the overlays have a phrase that can function like an erase key. The phrase is PLEASE IGNORE LAST REMARK. It is located in the same area as the ON key. Press this phrase when an "erase" is desired.

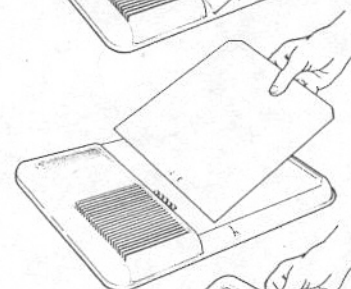


## To Install or Change Overlays

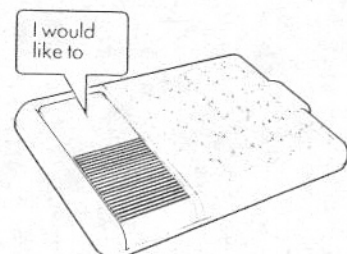
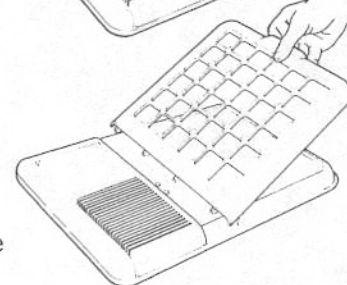
1.  
Grip the raised handle on the right edge of the plastic overlay frame. Lift firmly and the frame will snap free.



2.  
Align the desired overlay squarely on the Vocaoid. Only one overlay can be installed at a time for the unit to function properly.

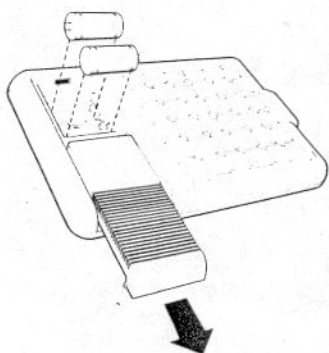


3.  
Replace the frame by first inserting hinges on the left edge. Then, snap the right edge of the frame into place.



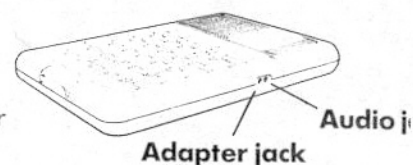
### To Insert or Change Batteries

1. Apply pressure to the top of the left front panel.
2. Slide panel in the direction shown.
3. Insert batteries. Requires two "D" cell alkaline batteries. Position the batteries as shown in the battery compartment. It is important that **alkaline** batteries be used for best results.



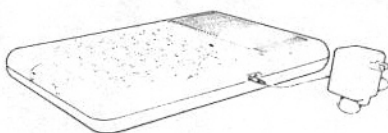
### Volume Control and Earphone

For those who desire to control the volume of Vocaid, an audio jack has been built in. The user may attach an auxiliary amplifier or earphone to this receptacle.



### Adapter Information

To eliminate the use of batteries, Vocaid may be operated with the Texas Instruments AC9460 Adapter. Plug the adapter into a standard 115-120V AC outlet and connect it to the Vocaid. The batteries are automatically disconnected when the adapter is attached.



**Caution:** Use of any other adapter may cause damage or void your Warranty.

### Accessory Ordering Information

The AC9460 adapter, auxiliary amplifier, or standard earphone may be ordered from Texas Instruments if unavailable locally. For price and order information, call or write Texas Instruments Consumer Relations. (See toll-free phone numbers and address under "If You Need Service Information.")

### In Case of Difficulty

If you experience difficulty with your product, the following instructions will help you analyze and possibly correct the problem without returning the unit to a service facility.

1. Check to make sure the unit is ON.
2. Check for low battery indications:
  - a. indistinct word pronunciation or unusual and unexpected sounds or tones
  - b. unusual or inconsistent operation
  - c. no response when the keys are pressed.
3. Check to be sure the overlay is properly installed.

4. If the batteries are new and properly installed, review the operating instructions to be certain that operating steps are followed correctly.

If none of the preceding procedures corrects the difficulty, return the product **prepaid** to the applicable **Service Facility**. For conditions and terms of in-warranty repairs, refer to the Warranty. An optional exchange service is available (a handling fee may be required) in some locations.

For your protection, the product should be sent insured; Texas Instruments cannot assume responsibility for loss or damage during shipment.

Please include information regarding the difficulty experienced with the unit, as well as return address information including name, address, city, state and zip code. Also include the overlays and optional adapter if in use when the difficulty occurred. The shipment should be carefully packaged and adequately protected against shock and rough handling.

### If You Need Service Information

If you need service information regarding the electronic communication aid, write to:

**Texas Instruments Incorporated  
Consumer Relations  
P.O. Box 53  
Lubbock, Texas 79408**

or call Consumer Relations at **800-858-1802** (toll-free within all contiguous United States, except Texas) or **800-692-1353** (toll-free within Texas). If outside contiguous United States, call **806-741-4800**

(We regret that we cannot accept collect calls at this number.)

The following mail-in addresses apply to in-warranty repair of products as referenced in the Warranty. An optional exchange service is also available in some locations as indicated in these instructions; however, a handling fee may be required.

Out-of-warranty products will be repaired or replaced with the same or equivalent reconditioned model (at TI's option) for a flat fee based on the repair rates in effect at the time of service. Because our Service Facility serves the entire United States, it is not feasible to hold units while providing repair estimates. To obtain the charges for a particular model in advance, call our toll-free number listed in the previous section.

### **U.S. Residents**

#### **U.S. Postal Service**

Texas Instruments Repair Service  
P.O. Box 2500  
Lubbock, Texas 79408

#### **U.P.S. or Other Carrier**

Texas Instruments Repair Service  
2305 North University Drive  
Lubbock, Texas 79415

### **Canadian Residents Only**

Geophysical Service Incorporated  
41 Shelly Road  
Richmond Hill, Ontario L4C5G4  
Telephone: (416) 884-9181

Consumers in California or Oregon may contact the following Texas Instruments offices for additional assistance or information.

Texas Instruments Consumer Service  
831 South Douglas Street  
El Segundo, California 90245  
Telephone: (213) 973-1803

Texas Instruments Consumer Service  
6700 Southwest 105th  
Kristin Square, Suite 110  
Beaverton, Oregon 97005  
Telephone: (503) 643-6758

### **Exchange Centers**

If your communication aid requires service, instead of exchanging the unit at your dealer or sending the unit to a service facility, you may elect to exchange the unit for a factory-reconditioned communication aid by bringing the unit in person to one of the exchange centers which have been established across the United States. No charge will be made for the exchange with proof-of-purchase during the first 90 days. The exchanged unit will be in warranty for the remainder of the original warranty period or for 6 months, whichever is longer.

A handling fee will be charged for exchange after 90 days from the date of purchase.

Out-of-warranty exchanges will be charged at the rates in effect at the time of exchange.

To determine if there is an exchange center in your locality, look for Texas Instruments Incorporated Exchange Center in the white pages of your telephone directory or look under the Calculator and Adding Machine heading in the yellow pages. Please call the exchange center for availability of your model. Write or call Texas Instruments Consumer Relations for further details and the location of the nearest exchange center.

## Consumer Information Card

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### Dear Purchaser,

Would you please take a moment to help us serve you better with Texas Instruments products? Vocaid is TI's first product specifically for speech-impaired individuals, and we are depending on user input for future product developments. Just complete the following questions and cut along the dotted line. Fold, seal and drop this postage-paid card in the mail. Thank you.

1.  
**Where did you purchase Vocaid?**

\_\_\_\_\_  
\_\_\_\_\_

2.  
**What price did you pay?**

\_\_\_\_\_

3.  
**Where did you first learn about Vocaid?**

- ☐ advertisement  
☐ newspaper or magazine article  
☐ referred by a physician/therapist  
☐ catalog  
☐ sales person  
☐ friend  
☐ other, please explain: \_\_\_\_\_

4.  
**What, if any, additional vocabulary overlays would you like to see added to Vocaid?**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5.  
**Other Comments:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6.  
We may wish to seek your opinion again, so we would appreciate your name and address. Your name will also be placed on our mailing list so that we may notify you if additional overlays and plug-in cartridges become available for Vocaid.

**Mr.  
Mrs.  
Ms.**

**Street Address**

**City**

**State**

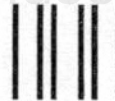
**Zip Code**

**Phone**

\_\_\_\_\_

Please tape closed before mailing.  
Do not staple.

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Please fold here.  
Datamath Calculator Museum



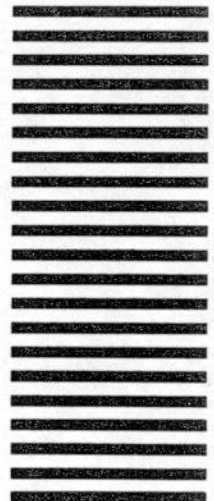
No Postage  
Necessary if  
Mailed in the  
United States

**BUSINESS REPLY MAIL**

FIRST CLASS PERMIT NO. 7284 DALLAS, TX.

Postage Will Be Paid By Addressee

**Texas Instruments  
Consumer Relations  
Attn: Vocaid™  
P. O. Box 53  
Lubbock, TX 79408**



## One-Year Limited Warranty for Electronic Communication Aid

**This Texas Instruments Electronic Communication Aid Warranty Extends only to the Original Consumer Purchaser of the Product.**

### **Warranty Duration**

This Texas Instruments consumer product is warranted to the original consumer purchaser for a period of one (1) year from the original purchase date.

### **Warranty Coverage**

This Texas Instruments product is warranted against defective materials or workmanship. This warranty covers the electronic and case components of the product. These components include all semiconductor chips and devices, plastics, boards, wiring and all other hardware contained in this device. This limited warranty does not extend to the programs contained in the software.

### **Warranty Disclaimers:**

**Any implied warranties arising out of this sale, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the above one year period. Texas Instruments shall not be liable for loss of use of the product or other incidental or consequential costs, expenses, or damages incurred by the consumer or any other user.**

Some states or provinces do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

### **Warranty Performance**

During the above one (1) year warranty period, your defective product will either be repaired or replaced with a reconditioned model of an equivalent quality (at TI's option) when the product is returned, postage prepaid, to Texas Instruments Service Facility. The repaired or replacement unit will continue the warranty of the original unit or six (6) months, whichever is longer. Other than the postage requirement, no charge will be made for such repair, adjustment and/or replacement. TI strongly recommends that you insure the product for value prior to mailing.

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Texas Instruments invented the integrated circuit, the microprocessor and the microcomputer, which have made TI synonymous with reliability, affordability and compactness. Vocaid carries on TI's tradition of technology leadership.

Vocaid owner's guide developed by the Educational Development Branch, Texas Instruments.

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