Chapter Six

Scanning and Joystick Selection

DigiCom 2000
Scanning and Joystick Selection

Introduction

If you do not intend to use the DigiCom in Scanning or Joystick mode you can skip this chapter. Also, messages cannot be programmed into the DigiCom using scanning. Scanning is only used for speech output.

If you are going to use the DigiCom in Scanning or Joystick mode with Picture or Spell Sequences, you should have read Chapters One through Five which provide operational and technical foundations necessary for using this device successfully. We hope you will read these chapters to help you gain the best out of your DigiCom product. If you plan to use the DigiCom in scanning and only plan to use “Areas” as your message assembly method, then you can read Chapters One, Two, Three and Six and be successful. If you are not sure whether this chapter applies to you, please read on to determine whether scanning or joystick features may benefit someone in your life.

This chapter describes the scanning and joystick options. If you are new to the concept of ‘scanning’, you may need to read and reread this chapter. It will provide you with valuable information as you learn to understand the benefits and challenges of scanning. And, for efficiency, if you haven’t learned to program and use the DigiCom in touch mode yet, go back and learn to do that first. If a person understands how a device works in touch mode first, they will generally have an easier time learning about scanning.

This manual is intended to provide operational information. Individuals wanting to learn more about assessment, use and training approaches with scanning are referred to professional augmentative communication resources; some of which are listed in our appendix.
Deciding What To Read

Some customers purchasing a DigiCom are very familiar with scanning and joystick options and uses. If you are one of these customers, you will probably be able to start in the section in this chapter entitled, “How To Select and Setup Scanning”. This section primarily provides the steps for programming. If you are new to scanning and need to understand the purpose of scanning and basic principles of scanning, this information is included in the sections in this chapter entitled, “Purpose of Scanning and Joystick Selection Methods” and “Principles of Scanning”. After you have read these sections, you can return to the “How To Select and Setup Scanning” section to learn how to program the DigiCom to meet your needs.

In either case, you will have an easier time learning to setup and use scanning or joystick access if you have already recorded messages into the DigiCom and have your overlays ready so you may proceed to set the DigiCom up to talk using an indirect selection method! So, program messages on at least one level before trying to explore these features.
In this Chapter

In this chapter you will learn the basics of Scanning and Setting Up and using Scanning. You will learn:

- What You Need to Get Started
- The Purpose of Scanning and Joystick Selection Methods
- Principles of Scanning: Scan Types, Stepping and Selecting with Switches, and Scan Patterns
- How to Select and Set Up Scanning: Visual or Auditory
- Fine Tuning Your Scanning Choices: Visual or Auditory
- How to Select and Set Up Switch Joystick Scan
Scanning and Joystick Selection

What You Need to Get Started

To use the DigiCom in Scanning, you must first plug in a switch or joystick. The DigiCom is designed to be used with normally open (N.O.) switches. These are switches that are ‘off’ or ‘open’ until the switch is depressed or ‘closed’, at which time the switch is ‘on’. Switches and Joysticks are not included with the standard DigiCom. If you need to order a switch or joystick you can contact Sym Systems Sales Support line at 1-408-456-0133 or your DigiCom representative for order information.

If you are equipped with the DigiCom and a switch or joystick, you will also need the following depending on which scanning method you will be using:

1.) “User’s” overlays which are printed on clear vellum (so the LEDs can be easily seen through the overlays). These overlays are translucent and must be inserted over the touch panel whenever the DigiCom is in use. Remember to match the overlay to the appropriate keyboard layout. (FOR ALL SCANNING AND JOYSTICK METHODS)

2.) At least one recorded level so you have messages to “access” using scanning. This way you can see the true use of scanning using messages you previously prepared. The easiest method to “test” scanning in is Areas. Once you have mastered that, try Picture and Spell Sequence as you need.
What You Need to Get Started (cont.)

3.) Your charger in the event the charge goes low while you are working. (FOR ALL SCANNING METHODS)

4.) An earphone or headphones like those used with most AM radio earphones or walkman-type headphones. These have a mini phono plug on the end to fit into the earphone jack. (FOR AUDITORY SCANNING ONLY)

Purpose of Scanning/Joystick

Scanning is an “indirect” selection method for making the DigiCom talk (it cannot be used to program). Selection Method refers to the means through which you activate the keys on the touch panel. Scanning allows the DigiCom to be used by people who cannot physically press the touch panel. Scanning can be done “directly” using a joystick. This is considered “directed scanning” and generally allows a person more control. To do this, a joystick or a variety of switches can be used to select messages and perform different functions (e.g. backspace, speak, change level, etc).

In Scanning, whether a joystick or switch is in use, lights (LEDs) imbedded under the touch panel provide visual feedback to quickly locate specific keys. Also, in scanning mode, sounds, words or phrases can be presented to cue a person. Used well, these features assist people with impaired coordination or vision who may not be able to accurately find or press the keys on the touch panel.
Principles of Scanning

Scan Types

There are three basic types of scanning: visual scanning, auditory scanning, and joystick scan. DigiCom offers each type. Generally, a team consisting of the augmentative communicator, parent(s), and various educational and healthcare professionals including speech-language pathologists help determine what type of scanning will be used when scanning is identified as the selection method needed. These same individuals can usually assist in determining the optimal switch or joystick. These team members can be assisted by a manufacturer sales representative who can describe features and sample uses of the products they carry.

**Visual scanning** requires a person to use their vision to look as lights (LED’s) highlight keys. When a desired key is highlighted, the person can press a “switch” to make a selection. The DigiCom comes with special overlays printed on a semi-transparent paper so the lights (LEDs) underneath the touch panel are highly visible. The lights on a DigiCom are bright red.
Auditory scanning requires a person to listen to a private auditory cue (sound, word, phrase), through an earphone, headphone or pillow speaker, and then press a “switch” to make a desired selection. Once the switch is pressed, a message will be outspoken to others in the room. Auditory scanning is a complex method of accessing messages however, it offers people with visual and speech limitations the opportunity to access messages for speech output for increased independence initiating and talking with others. Auditory scanning has also been used by educators and clinicians to assist individuals having difficulty learning information visually. Therefore, it can be powerful.

Joystick scanning allows a person to use either visual or visual and auditory information to make their selections. The joystick allows a person to direct the scan to a specific location and then speak a message by pressing a “fire” button or stopping and using a “pause” to make a selection. If you are familiar with joysticks used for video-games, you can generalize your knowledge to the application of a joystick for these purposes.
Stepping and Selecting Using Switches

Scanning consists of two distinct operations – **stepping and selecting**. These operations are controlled by a person who responds to light or auditory cues and presses a switch to activate the device. **Stepping** means to advance through the scanning choices. **Selecting** refers to narrowing the scanning choices until a single area or key is chosen. With a joystick, the stick itself is used for stepping, and the button(s) are used for selecting.

There are four stepping methods and three scanning patterns (discussed next). The stepping method chosen should reflect the type of switches being used with the DigiCom.

**Auto Scan (Automatic Scan)** is a stepping method where the scanning advances automatically. It will move from area to area automatically until the DigiCom recognizes a switch input, at which point it will advance to a narrower range of choices until finally a single key is chosen. It requires the use of one switch and works with all types of switches. Automatic scanning requires a person to set a scan speed to control how fast or slow the scan will progress.
1 Switch Step Scan is often used when the user can only handle a single switch and cannot respond to the automatic movement of the scan. This method is sometimes used when a person is just beginning to learn to scan. There are other applications for the use of this method as well. Selection of 1 Switch Step scanning will tell the DigiCom to expect the input of only one switch. The single switch then has two uses: One switch is capable of both stepping through the scan and selecting by holding the switch down for a longer period of time. You will need to set a “holddown time” when using single switch scanning.

2 Switch Step Scan is the method to be used with two separate switches. One switch is used for stepping through the scan and the other switch is used for selecting the desired message. Again, this method is often used when a person cannot respond to the automatic movement of the scan. For example, when using 2 Switch Step Scan to move from one key to another, one by one (Linear scanning pattern), one switch will be used to step the scan from one key to the next key and the other switch will be used to select the desired key (spoken message).
Stepping and Selecting Using Switches

Inverse (Automatic) Scanning is a method where the person maintains hold on a switch and the scan automatically progresses. Then, the person must lift off the switch to make a selection. Inverse scanning is done with a single switch. Depending on an individual’s motor skills, it is sometimes easier than “Auto” scan.

Joystick Scanning is a method where a person uses a joystick. This method will allow him or her to maneuver through the touch panel freely – moving up, down, left and right to adjacent areas. When the person lands on the key they want, they press the “fire button” on the joystick or “pause” a designated time and the DigiCom registers a response and speaks a message. This set up can often be more efficient than use of scanning.

 Helpful Hint:

All of the switching methods mentioned above work with a joystick (in the event you do not have any switches but do have a joystick). When 1 Switch Step or Auto Scanning is selected, either the stick or the buttons can be used for selections. When 2 Switch Step is selected, the stick steps through the scan and the button(s) can be used to select. The joystick is a versatile choice for switching devices if the user is capable of controlling it.
Scan Patterns

The Scanning Pattern determines the sequence that the DigiCom scans and the order that it narrows down the selection of rows, columns, groups and finally the desired message. There are three scan patterns available on DigiCom: Linear, Row-Column (R-C), and Row-Group-Column (R-G-C). These patterns are not applicable to Joystick Scanning.

**Linear Scanning** goes through all the keys sequentially, from left to right across each row starting at the top and then proceeding down. The person using automatic linear scan only needs to make one switch press to make their selection. This scanning pattern is useful with auditory scanning and with keyboard layouts such as 1x3, 1x2, 2x4 and even 2x6. Linear scanning is frequently considered a good starting place for people just learning to scan.
Scan Patterns

**Row-Column Scanning** advances row by row until a switch press indicates one row is selected. Then, the scan goes column by column across that row until a switch press indicates a single key is selected. Once the single key is selected the DigiCom will speak or perform a function depending on what has been programmed in that key. Two switch presses are needed to make a selection using Row-Column Scanning.
Scan Patterns (cont.)

Row-Group-Column (R-G-C) Scanning advances row by row until a switch press indicates one row is selected. Then it breaks the selected row into subgroups. Another switch press is needed to make a selection of the desired subgroup. After one of the subgroups of keys is selected, the scan goes column by column within the subgroup. Finally, a third switch press is needed to select a single key. Once the single key is selected, the DigiCom will speak or perform a function depending on what has been programmed in that key. Three switch selections are needed to make a selection using Row-Group-Column Scanning.

To learn more about these scanning patterns, try them by following the directions in the programming sections of this manual.
How to Select and Setup Scanning

Quick Review

First, in order to get into the Scanning option or to alter the scanning set up, you must be in Program mode. You should have already programmed messages and prepared overlays. Now, choose the level and make any other final decisions (i.e. lock out levels or lock in levels) before setting up for scanning. Be sure that a translucent User’s overlay with symbols to represent the messages is inserted over the touch panel when the DigiCom is given to the user.

You should have already read about how to get into Program mode in previous chapters, but here’s a quick reminder of the procedure:

1. Press [Set Up] and then [Program/Play].
2. The display will show the current setting:

   Mode: PROGRAM
   < > OK Cancel
Quick Review (cont.)

3. Press (<) or (>) to step to program if not already displayed.

4. Press (OK) to select Program.

(If you are already in Program mode, you do not need to do these steps.)

If you are going to use Spell Sequencing with scanning, select one of the alpha-numeric overlays. The next section describes how to customize the scan set up and defines various vocabulary related to scanning.

+ HELPFUL HINT:

The DigiCom will wait for input from the switches before scanning, except when the Auto Scan option is selected.
Scanning Set Up

Before activating the keys to set up Scanning (some of these keys are also used to set up Switch Joystick), you should think of the customized settings that match your switch or input device and to suit your individual needs. There are numerous combinations of settings to accommodate almost any person. You will probably want to return again to this section after reading the whole chapter, or periodically for reference while programming and using the DigiCom in scanning.

To set up the DigiCom for Scanning you will need to confirm Scanning and then you will be provided with choices to customize your settings.

To set up for Scanning follow these steps:
1. Press (Set Up) and then (Scan Controls).
2. The display will show:
   
   | SCANNING  
   | <  >  OK  Cancel |
   
   or

   | JOYSTICK  
   | <  >  OK  Cancel |

3. Press the (<) or (>) key to choose scanning. (Remember: Selection Method refers to the means through which you activate the keys on the touch panel.)

4. Press (OK) and continue to adjust the various settings for Scanning that apply to you.
Scanning Set Up (cont.)

Following the selection of “scanning”, you must choose between auditory and visual scanning in addition to four different methods of scanning (Auto Scan, 1 Switch Step Scan, 2 Switch Step Scan, and Inverse Scan). Within each of these four methods are settings such as: switch hold-down time, number of scanning passes, function row disabled, etc. When you have completed the steps for customizing the Scanning or Switch Joystick method, the DigiCom will begin scanning whenever it receives an input from a switch or joystick. (Switch Joystick Scan is covered in more detail later in this chapter.)

Selecting Auditory or Visual Scanning

Some of the differences between visual and auditory scanning modes have already been discussed. By selecting Auditory: OFF, you will not be using auditory scanning at all; you will be using visual scanning only.

By selecting Auditory ON, the verbal cue of each single key or the first key in any highlighted group of LEDs will be played back.

 Helpful Hint:

If you are going to use Auditory Scanning, you must record a verbal cue in each key because that is the cue used by the auditory scanner so they can make selections. Also, be certain to set your Speech Controls so verbal cue is OFF when using auditory scanning. In this way, the verbal cue will only be used as a cue for the scanner and the message will be spoken aloud to the communication partner.
To select between Auditory: OFF/ON follow these steps:

1. Press (Set Up) and (Scan Controls)
2. The display will show:

   SCANNING
   <   >  OK   Cancel

   or

   JOYSTICK
   <   >  OK   Cancel

3. Press the (<) or (>) key to select SCANNING.
4. Press (OK) to confirm your choice. The display will show the current auditory setting:

   Auditory: OFF
   <   >  OK   Cancel

   or

   Auditory: ON
   <   >  OK   Cancel

5. Select ON if you are setting your scanning up for AUDITORY SCANNING. Select OFF to use VISUAL SCANNING only.

6. Press (OK) to confirm your selection. You will be asked to make decisions about additional options which are described below. If you do not wish to do this now, press (Cancel) to exit these menu choices.
Selecting Scan Prediction:
On/Off

Whether you have chosen auditory scan ON or OFF, you will be asked to decide if you want SCAN PREDICTION ON or OFF. Scan Prediction reduces unwanted selections and increases scanning speed by lighting only valid selections. With Scan Prediction ON, the DigiCom will scan only those keys which have messages or those pictures or letters which are made up of valid sequences. Under most circumstances, when you are using scanning you will want Scan Prediction ON. Explore this feature to understand it better.

To setup Scan Prediction:
1. Press (Set Up) and (Scan Controls)
2. The display will show:

   SCANNING
   <  > OK Cancel

   or

   JOYSTICK
   <  > OK Cancel
Selecting Scan Prediction: On/Off

3. Press the (<) or (>) key to select SCANNING.

4. Determine if you want auditory (ON) or (OFF)

5. (Press OK) to confirm your selection. The display will show:

   ![Prediction: OFF](image)

   or

   ![Prediction: ON](image)

6. Use the (<) or (>) arrow keys to scroll to your choice.

7. Press (OK) to confirm your selection. Press (Cancel) at any time to abort.
Function Row: Scan/No Scan

The Function Row option allows you to include or exclude the top row of function keys from the scanning routine. You are given the choice of having the Function Row ON or OFF. If you decide to turn the function row off while using scanning, you will want to consider defining some of the message keys as some of the user function keys so the person can have control (i.e., change levels, speak with a key, power down etc.).

Now that you are familiar with selecting Scan Controls we will only list the steps needed to select each individual function. If you are not sure of all the steps, go back to the previous example and start from there.

To setup the Scan Function Row option press SET UP and then Scan Controls:

1. You will be given this option after making two other decisions (auditory on/off, prediction on/off) within the scanning menu.

2. The display will show the current setting:
   ON or OFF:

   Function Row: ON
   <   >   OK   Cancel

3. Use the (<) or (>) arrow keys to scroll to your choice of ON or OFF.

4. Press (OK) to confirm. You can press (Cancel) at any time to abort.
Selecting the Stepping Method

Selecting the stepping method is one of the most important decisions for using scanning. The person must be able to understand what is expected by the stepping method used. If you are not familiar with stepping methods and wish to learn more about these before deciding this setting, press (Cancel) now and go to the “Principles of Scanning” section in this Chapter that defines stepping methods in more detail.

There are four options for stepping methods. You can choose between Auto Scan, 1 Switch Step, 2 Switch Step, or Inverse Scan.

To select the stepping method:
1. Use the steps you learned previously to select scanning and then use the < and > arrow keys to scroll to your selection.
2. The display will show one of the following current settings:

   AUTO SCAN
   < > OK Cancel
   or
   1 SWITCH STEP
   < > OK Cancel
   or
   2 SWITCH STEP
   < > OK Cancel
   or
   INVERSE SCAN
   < > OK Cancel

3. Press (<) or (>) to change your stepping method and (OK) to confirm your selection. Press (Cancel) at any time to abort.
Selecting the Scanning Pattern

Selecting a scanning pattern is very important and is usually decided at the same time the Stepping Method is determined. The scanning pattern sets what pattern or sequence the lights will illuminate. There are three common scanning patterns which are available on the DigiCom: Row-Column (R-C), Row-Group-Column (R-G-C) and Linear (LINEAR).

To select the scanning pattern:
1. Use the steps you learned previously and scroll to your selection using the (<) and (>) buttons.
2. The display will show the current settings:

   Pattern: R-C
   <   >  OK  Cancel

   or

   Pattern: R-G-C
   <   >  OK  Cancel

   or

   Pattern: LINEAR
   <   >  OK  Cancel

3. Press (<) or (>) to change your stepping method and press (OK) to confirm your selection. Press (Cancel) at any time to abort.

HELPFUL HINT:

Having to choose any scanning pattern will be skipped if the ‘Keyboard Layout’ is set to either 1x2 or 1x3. The DigiCom will just scan each of these keys in a Linear fashion because there are so few selections.
Fine Tuning Your Scan Choices

Once you have decided you need to use scanning and you have determined whether you need Auditory, Prediction and the Function Row ON or OFF, and you have selected the Stepping Method and Scan Pattern, you are ready to “fine tune” your scanning choices.

Depending on the choices you made above, you will be presented with options from the features listed below. At all times, to make selections you will use the (<) or (>) arrows to scroll between choices and press (OK) to confirm a selection and (Cancel) to abort.

**HELPFUL HINT:**

If at any time you only want to adjust one of these features, go to the feature through the Scan Controls menu. While in this menu, press (OK) to progress to the feature you want to change. When you are at the desired option, use the (<) or (>) keys to scroll to the choice you wish to select, then press (OK) to accept that choice. When presented with the next option, press (CANCEL) to get out of the menu.
Scan Speed
(only applies to Auto or Inverse Scan)

**Scan Speed** refers to the time for the stepping sequence to proceed from one step to the next. The Scan Speed option is only offered in Auto or Inverse Scan. The range of proceeding from one scanned key to the next is 0.3 seconds to 6 seconds.

The scan speed choices are: .3s, .6s, .9s, 1.2s, 1.5s, 1.8s, 2.1s, 2.4s, 2.7s, 3.0s, 3.3s, 3.6s, 3.9, 4.2s, 4.5s, 4.8s, 5.1s, 5.4s, 5.7s, 6.0s.

A scan speed of .3s is very fast and a scan speed of 6.0s is very, very slow. If a person is just learning to scan, it is often better to select a slower scan speed.

**HELPFUL HINT:**

If you are using Auditory Scanning (Auditory: ON), the scan speed will also depend on the spoken length of the verbal cue.
Restart: On/Off

(Resume Scan or Stop after message is spoken. Only applies to Auto Scan.)

The **Restart** option tells the DigiCom to automatically resume scanning once a selection is made. The Restart option is only provided in Auto Scan. The Restart Options are OFF or ON.

**If Restart is set to OFF**, the DigiCom will stop scanning after a selection is made and the person will need to press the switch to resume the scanning. The Restart OFF setting should be considered when a person is auditory scanning.

**If Restart is set to ON**, the DigiCom will continue to scan after a selection is made.

```
Restart: OFF
<   >  OK   Cancel
```

*an illustrated example

Start: Beginning or Left Off

The Start Option tells the DigiCom to resume scanning at either the BEGINNING (top left hand corner) or where you LEFT OFF (the last key or row you selected). How you have setup the messages on each level will help you determine which setting is most efficient.

The display will show:

```
Start: BEGINNING
<   >  OK   Cancel
```

The Start Option choices are: BEGINNING or LEFT OFF.
Passes Option

The **Passes** option sets the number of passes in a scan. This includes how many times the DigiCom will go through a specific portion of a selection cycle (e.g., go through the rows in a row-column scan) before resuming the original scan pattern.

![Passes Option screenshot](image)

The number of passes can be set from 1 to 9. Generally people will set this for 1, 2, or 3 passes.

Hold-Down Time

**(becomes active in Play Mode)**

The **Hold-Down Time** option for scanning sets the minimum hold-down time on the switch for a valid selection to be registered. The DigiCom may be set to respond to switch presses ranging from 0 seconds up to 4 seconds in decimal increments. For many people, the Hold Down Time setting will be 0.

![Hold-Down Time screenshot](image)

The Hold-Down Time can be set for .0s, .2s, .4s, .6s, .8s, 1.0s, 1.5s, 2.0s, 2.5s, 3.0s, 3.5s, 4.0s.

The Hold-Down Time becomes active in Play Mode.
Release Time
(only applies to 1 and 2 Switch Step Scan; becomes active in Play Mode)

The **Release Time** option sets the minimum amount of time between switch presses before another switch press will register to activate. The value ranges from 0 to 4 seconds in decimal increments. For many people, the Release Time setting will be 0.

![Release Time setting](image_url)

The Release Time can be set for .0s, .2s, .4s, .6s, .8s, 1.0s, 1.5s, 2.0s, 2.5s, 3.0s, 3.5s, 4.0s.

The Release Time becomes active in Play Mode.
Transition Delay
(only applies to Auto and Inverse Scan)

Transition Delay refers to the transition time between scanning rows and then making a switch press and scanning the columns of a row. It also refers to the time between the scanning function row and moving to the message keys each time a new scanning sequence begins. Transition delays are only observed after a switch press that changes the pattern. (i.e. change from row to column)

![Transition Delay Interface](image)

The Transition Delay time can be set to 1x, 2x, 3x, 4x, 5x, or 6x. For example, if it is set for 2x, the scan speed at the point of transition will be 2x’s slower than the actual scan speed setting.

Transition Delays may be most helpful to people who have a difficult time adjusting their body or eyes after making a switch selection. These individuals may benefit from a slight delay at the time of a transition before the scan speed resumes at full speed. (This feature requires exploration to fully understand its benefits.)
Switch Joystick Scanning

The following options are available to individuals using Switch Joystick Scan. You will see that some decisions you make here are the same as are required in other selection methods.

To setup for Switch Joystick follow these steps:
1. Press (SET UP) and then (Scan Controls).
2. The display will show:
   
   **SCANNING**
   
   `<  >  OK  Cancel`
   
   or
   
   **JOYSTICK**
   
   `<  >  OK  Cancel`

3. Press the (<) or (>) key to choose Switch Joystick.
4. Press (OK) and continue to adjust the various settings for Switch Joystick.
Function Row: On/Off
(becomes active in Program Mode)

The Function Row option allows you to include or exclude the top row of function keys from the directed scan routine when using a joystick. If you decide to turn the Function Row OFF, consider defining some of the message keys as the user function keys to provide more control. (See Chapter Three, Define: Function)

The options for the Function Row are ON or OFF.

Wrap: On/Off
(becomes active in Program Mode)

With Wrap: ON, the highlighted LED on the scan panel will “wrap” around to the other end when it reaches the end of the current direction. So, when the scan light reaches the end of a row, and Wrap is ON, you will see the light appear in the first key on the opposite side of that row when the cycle begins again.

With Wrap: OFF, the highlighted LED will stop at the end of the current direction until the joystick is reversed or moved in another direction.

The Joystick Wrap options are ON or OFF. The Wrap Off feature may be easier for beginning joystick users.
Select On: Button/Pause

When using a joystick, you must decide whether you want an individual to make their selection by using the “fire” button or by pausing and having the DigiCom speak or perform a function after a pause time.

When **Select: BUTTON** is chosen, a highlighted LED on the scan panel will be activated only if the fire button on the switch joystick is pressed.

Select: BUTTON
<  > OK Cancel

On the other hand, when **Select: PAUSE** is chosen, a highlighted LED on the scan panel will be activated if the user pauses for a set amount of time after pressing the switch joystick.

Select: PAUSE
<  > OK Cancel
Pause Time
(applies to Select: PAUSE only)

With Select: PAUSE, a pause time must be set so when you pause on a key, that key is selected automatically after a set amount of time. The Pause Time ranges from 0.3 to 6 seconds in decimal increments.

The Pause Time options for the joystick are: .3s, .6s, .9s, 1.2s, 1.5s, 1.8s, 2.1s, 2.4s, 2.7s, 3.0s, ..., 5.4s, 5.7s, 6.0s.

Stick Speed

Stick Speed controls how fast the highlighted LED moves from position to position on the scan panel. The Joystick is moved by the person but the speed the highlights move is controlled by this setting. The speed ranges from 0.0 to 3 seconds in decimal increments.

The Stick Speed control settings are: .0s, .3s, .6s, .9s, 1.2s, 1.5s, 1.8s, 2.1s, 2.4s, 2.7s, 3.0s.
How to Use Scanning

Connecting Switches

As earlier stated, you must have a switching device such as a switch or joystick connected to the DigiCom. These will all plug into ports on the back panel of the DigiCom as shown here:

Single or double switches require a mini (1/8") phono plug and connect into the Switch jack. Joysticks or multiple switches (like a touch pad) plug into the Joystick port. A joystick may be used as either a single or double switch as well.

It is important to only use switches compatible with the DigiCom.

**HAVING TROUBLE?**

Be sure to have either a joystick or a switch plugged in, but not both. If you have both a joystick and a single switch plugged in, you can expect to have problems.
Scanning Exercise

Now, it is time to explore scanning or beginning speaking using your DigiCom using Scanning or Switch Joystick! Try the exercise below to practice.

1. Set Up the DigiCom in Areas for a 4x8 overlay. Any group and level can be used.

2. Prepare a 4x8 overlay with symbols for playing a favorite card game (adult or child- e.g. Go Fish, Rummy, Poker, etc.).

3. Record messages into the DigiCom corresponding to the overlay. Use single words, phrases and complete sentences when recording. Try recording a lengthy joke in one or more of the keys so the person can tell a joke while playing.

4. Set Up the DigiCom for visual scanning only, prediction off and function row off. Have this setup for Automatic Scanning using the Row-Column (R-C) scan pattern. Then fine-tune your choice. Be certain the DigiCom speaks when the single key is selected.

Now try some advanced programming and fine tuning combinations to see how the system changes based on the settings you select.

If you want to try auditory scanning, don’t forget to record verbal cues so the auditory cues can be heard.
COMING UP NEXT:

You now know the principles of scanning on the DigiCom and how to use them. You will probably want to return to this chapter periodically as you change the settings for the Scanning mode. The next chapter, The Disk Drive, explains how to save speech to a disk and then how to get it back from a disk.