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VENUS 4600 / 6000
OPERATOR'S MANUAL

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Daktronics, Inc.

Venus® 4600, 6000 & 6500

Operator's Manual

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For Version 5.6

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Controller Type: _____

Lampbank Size: _____

Technology: _____

Software Version: _____

Date of Installation: _____

Installer/Trainer: _____

Warranty Information: _____

_____

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Table of Contents

INTRODUCTION INTRO-1

CHAPTER 1 GETTING STARTED 1-1

1.1 How To Use This Manual 1-1

1.2 Hints and Reminders 1-1

1.3 Mouse Vs. Keyboard Selection 1-1

1.4 Selection Boxes 1-2

1.5 Power Up 1-2

1.6 Main Menu Options 1-2

CHAPTER 2 SEQUENCE EDITOR 2-1

2.1 Editing a Word Message in the Sequence Editor 2-1

2.2 Sequence Editor Tools 2-4

2.2.1 The Frame 2-4
2.2.2 The Toolbox 2-5
2.2.3 The Pull-down Menus 2-6
2.2.4 The Color Indicator 2-9
2.2.5 The Font Indicator 2-10
2.2.6 The Status Bars 2-11

2.3 Chapter Two Review 2-11

CHAPTER 3 INCLUDE SEQUENCES 3-1

3.1 Include Frames 3-1

3.2 Include Sequences 3-1

3.3 Including Messages 3-2

3.4 Including Time and Temperature Frames 3-3

3.5 Setting the Time and Date on Your Computer 3-3

3.6 Chapter Three Review 3-4

CHAPTER 4 SCHEDULE EDITOR 4-1

4.1 Creating a Schedule 4-1

4.2 Select Sequence 4-2

4.2.1 Changing the day 4-2
4.2.2 Changing the time 4-2

4.3 Select Message 4-3

4.4 Select Schedule 4-3

4.5 Sign to Dim 4-3

4.6 Sign to Bright 4-3

4.7 Sign to Blank 4-4

4.8 Type in Sequence 4-4

4.9 Type in Message 4-5

4.10 Type in Schedule 4-5

4.11 Schedule Menu 4-5

4.12 Advanced Block Functions 4-6

4.12.1 Blocking, Cutting and Pasting 4-6

4.13 Scheduling Review/Exercise 4-6

4.14 Editing an Enhanced Schedule 4-8

4.15 Select Sequence 4-8

4.15.1 Changing the Time 4-9
4.15.2 Changing the Day 4-9
4.15.3 Changing the Day of the Week 4-9
4.15.4 Examples of Entries 4-10

4.16 Select a Message 4-11

4.17 Select a Schedule 4-11

4.18 Sign to Dim 4-11

4.19 Sign to Bright 4-12

4.20 Sign to Blank 4-12

4.21 Type in Sequence 4-12

4.22 Type in Message 4-13

4.23 Type in Schedule 4-13

4.24 Menu Commands 4-13

4.25 Additional Hints 4-15

CHAPTER 5 DIRECT DISPLAYING AND QUICK DISPLAY 5-1

5.1 Direct Display Operation 5-1

5.1.1 Displaying Sequences/Include Sequences 5-1
5.1.2 Schedules 5-2
5.1.3 Dimming 5-3
5.1.4 Adjust 5-3

5.2 Quick Display 5-4

5.3 Displaying Review/Exercise 5-6

5.4 Word Message, Include, Scheduling and Displaying Review Exercise 5-7

CHAPTER 6 REMOTE DISPLAYING 6-1

6.1 Remote Indoor Controller 6-1

6.1.1 Master Operations 6-1
6.1.2 Slave Operations 6-5
6.1.3 Remote Menus 6-7

6.2 Remote Venus Controller 6-8

6.2.1 RVC Operation 6-8
6.2.2 Remote Menus 6-12

6.3 Remote Display Unit 6-13

6.4 Remote Network Operation 6-17

6.4.1 Displaying Sequences/Include Sequences 6-17
6.4.2 Other Considerations 6-17

CHAPTER 7 GRAPHICS/ANIMATION EDITING 7-1

7.1 Edit Menu Overview 7-1

7.1.1 Screen Orientation 7-1

7.2 Frame Options 7-10

7.3 Miscellaneous Options 7-12

7.4 Effects 7-12

7.4.1 Entry Effects 7-12
7.4.2 Hold Effects 7-13
7.4.3 Exit Effects 7-13

7.5 Simple Animation 7-14

7.6 How to Use Provided Sequences 7-14

CHAPTER 8 VIDEO IMAGE READER & VCAP 8-1

8.1 Using a VIR, VIR Controls 8-1

8.2 Using a VCR/Video Footage 8-3

8.3 VCAP 8-4

8.3.1 Running VCAP.EXE 8-4
8.3.2 Configuring 8-4
8.3.3 Loading VCAPTSR Program 8-4
8.3.4 Capturing Frames 8-4
8.3.5 Quad vs. Pixel and Zooming 8-5
8.3.6 Ending The Capture Process 8-5
8.3.7 Renaming VCAP.SEQ 8-5
8.3.8 Capturing Hints and Tips 8-6

8.4 VCAP for Windows 8-6

8.4.1 Configuring 8-6
8.4.2 Capturing Frames 8-7

8.5 Using External Graphics Programs 8-7

8.4.1 Encoders 8-7
8.4.2 Setup 8-7
8.4.3 Typical Use 8-8

CHAPTER 9 ANIMATION TECHNIQUES 9-1

9.1 Steps to Creating a Good Animation 9-1

9.1.1 Planning 9-1
9.1.2 Details 9-1
9.1.3 Start Animating 9-1
9.1.4 Unofficial Test of a Good Animation 9-1
9.1.5 Bibliography 9-2
9.1.6 Clip Art Addresses 9-3

9.2 Combine Frames 9-3

9.3 Some More Tips 9-6

9.3.1 Realism 9-6
9.3.2 Scrolling Window 9-6

9.3.3 Dimension 9-7
9.3.4 Make 'em Laugh 9-7
9.3.5 Personality 9-7
9.3.6 Other Media 9-7

9.4 Word Animation 9-7

9.4.1 Shadowing 9-8
9.4.2 Letter by Letter 9-8
9.4.3 Throbbing 9-8
9.4.4 Flashing text 9-9
9.4.5 Wiggling 9-9
9.4.6 Scripting 9-10
9.4.7 Filtering 9-10
9.4.8 Stretching and Falling 9-10
9.4.9 Zooming 9-11

CHAPTER 10 MESSAGE EDITOR 10-1

10.1 Using Message Editor 10-1

10.2 Message Editor Tools 10-2

10.2.1 The Frame 10-3
10.2.2 The Toolbox 10-3
10.2.3 The Pull-Down Menus 10-4
10.2.4 The Color Indicator 10-5
10.2.5 The Font Indicator 10-6
10.2.6 The Status Bars 10-6

10.3 Chapter Review 10-7

CHAPTER 11 UTILITIES 11-1

11.1 File Utilities 11-1

11.1.1 Backing up Files 11-2
11.1.2 Copying Files from a Disk 11-2
11.1.3 Creating Libraries 11-3
11.1.4 Copying Files Between Libraries 11-3
11.1.5 Deleting Files and Libraries 11-4

11.2 Printer Utilities 11-4

11.2.1 Printing a Sequence 11-5
11.2.2 Printing a Schedule 11-5
11.2.3 Printing a Message 11-5
11.2.4 Printing a Directory 11-5
11.2.5 Printing a Description 11-6
11.2.6 Printing a LOG file 11-6
11.2.7 Printing Quick Display Files 11-6

CHAPTER 12 THE VENUS SHELL PROGRAM & MS-DOS 12-1

12.1 DOS Prompt 12-1

12.2 The Venus Shell Program 12-1

12.3 Password Protection 12-2

12.4 Directories 12-4

12.5 Naming Files 12-4

12.6 Erasing Files With DOS 12-4

12.7 Formatting Diskettes 12-5

12.8 Copying Diskettes 12-5

12.9 Setting Time and Date 12-5

12.10 Selected Files 12-6

CHAPTER 13 SYSTEM CONFIGURING AND LOGGING 13-1

13.1 Selecting a Sign 13-1

13.2 Exiting the Venus 46/6000 Program 13-1

13.3 Configuring 13-1
- 13.3.1 Configure System 13-2
- 13.3.2 Configure Sign 13-3
  - 13.3.2.1 Review/Edit 13-3
  - 13.3.2.2 Add a Sign 13-3
    - 13.3.2.2.1 Add a Direct (local) Sign 13-3
    - 13.3.2.2.2 Add Remote Display Unit (RDU) 13-5
    - 13.3.2.2.3 Add Indoor Controller 13-6
    - 13.3.2.2.4 Add Remote Venus Controller (RVC) 13-7
    - 13.3.2.2.5 Add a Remote Network Controller 13-8
    - 13.3.2.2.6 Editing Sign 13-9
  - 13.3.2.3 Delete a Sign 13-9
  - 13.3.2.4 Reorder Signs 3-9
  - 13.3.2.5 Window 3-10
  - 13.3.2.6 Preview 13-10
  - 13.3.2.7 Quick Display 13-10
  - 13.3.2.8 Expanded Memory 13-11
- 13.3.3 Configure Devices 13-11
  - 13.3.3.1 Communication Ports 13-12
  - 13.3.3.2 Temperature Sensors 13-13
  - 13.3.3.3 Video Image Reader 13-13
  - 13.3.3.4 Indoor Remote 13-14
  - 13.3.3.5 Printer 13-14
- 13.3.4 Print Configuration 13-14
- 13.3.5 Backup Configuration 13-15
- 13.3.6 Database Integrity 13-15
- 13.3.7 Exit 13-15

13.4 Restarting the Sign Driver 13-15

13.5 Logging 13-16
13.5.1 V46LOG/V6LOG Programs 13-16
13.5.1.1 Preview Log File 13-16
13.5.1.2 Print Log File 13-17
13.5.1.3 Rename a Log File 13-17
13.5.1.4 Delete Log File 13-17
13.5.1.5 Exit to DOS 13-17

CHAPTER 14 WINDOWING 14-1

14.1 Window Configuration 14-1

14.2 Displaying with Windows 14-2

CHAPTER 15 CONTROL FRAMES 15-1

15.1 Data Fonts 15-1

15.1.1 Changing Data Fonts 15-1
15.1.2 Loading the Fonts into Memory 15-2

15.2 Real Time Data (RTD) 15-2

15.2.1 RTD Port Configuration 15-2
15.2.2 Creating an RTD Frame 15-3
15.2.3 Real Time Data Display 15-4
15.2.4 RTD: Step by Step 15-4

15.3 Sizzler Applause Meter 15-5

15.3.1 Configuring RTD Port 15-5
15.3.2 Enabling RTD 15-5
15.3.3 Creating Sizzler Sequence 15-6
15.3.4 Displaying Sizzler Sequences 15-6
15.3.5 Quick Displaying Sizzler Sequences 15-6
15.3.6 Chaser Lights 15-6
15.3.7 Normal Operation 15-6
15.4 Time and Temperature 15-7
15.4.1 Creating a time and temperature sequence 15-7
15.5 Transmit Data 15-9
15.5.1 Creating a Transmit Data Frame 15-9

CHAPTER 16 KEYSTROKE MACRO 16-1

16.1 Configuring Keystroke Macro 16-1

16.2 Loading Keystroke Macro 16-1

16.3 Using Keystroke Macro 16-1

16.4 Other Technical Information 16-2

APPENDIX A GLOSSARY A-1

APPENDIX B EDIT KEYSTROKES AND CHEAT SHEET B-1

B.1 Main Edit Menu B-1

B.2 Cursor Movement B-1

B.3 Edit Text Menu B-1

B.4 Text Manipulation B-2

B.5 VIR Fetching B-2

APPENDIX C FONTS C-1

APPENDIX D ENTRY, EXIT AND HOLD EFFECTS D-1

APPENDIX E TRAINING SEMINAR INFORMATION E-1

E.1 Controller Operator Seminars for 1994 ..... E-1

E.2 One Day Venus Beginner Operator Seminar Training Schedule E-2

E.3 Two Day Venus Beginner Operator Seminar Training Schedule E-3

E.4 Three Day Venus Beginner Operator Seminar Training Schedule E-5

E.5 Two Day Advanced Operator Training Schedule E-7

APPENDIX F TRAINING CERTIFICATION AND TRAINING CERTIFICATION ANSWERS F-1

F.1 True/False F-1

F.2 Multiple Choice F-1

F.3 Short Answer F-1

F.4 True/False F-3

F.5 Multiple Choice F-3

F.6 Short Answer F-3

Venus 4600/6000 Operation Test F-5

Venus 4600/6000 Advanced Operator Test F-6

APPENDIX G ANIMATION PROGRAMMING RATES G-1

APPENDIX H OTHER SOFTWARE AND VIDEO ENCODER INFORMATION H-1

APPENDIX I VIDEO STANDARDS I-1

APPENDIX J TYPICAL SYSTEM SETUP J-1

APPENDIX K SEMINAR EVALUATION K-1

Introduction

A BIT ABOUT DAKTRONICS:

Daktronics, Inc. was founded in 1968 by Drs. Aelred Kurtenbach and Duane Sander who were professors of Electrical Engineering at South Dakota State University in Brookings, South Dakota. The original goal of the company was to offer an alternative to university graduates who were leaving the area for greater opportunities.

Daktronics began with the design and manufacture of electronic voting systems for state legislatures. Today more than 40 legislative assemblies in more than 30 states have Daktronics voting or sound systems. Other voting system products and unique software have been developed, including a system for city and county governments.

With the help of wrestling coaches, Daktronics developed the patented Matside wrestling scoreboard. This three-sided scoreboard, which was designed for the arena floor, let fans, referees and competitors see scores and times without missing any action. Today, Matside scoreboards are used at many important wrestling tournaments. The development of this unique wrestling scoreboard led Daktronics into the design of the All Sport line, the most complete line of scoreboards available today.

Time and temperature displays and computer-programmable message/animation systems using solid state circuitry and incandescent lamps were the next logical step forward for the company. Today, Daktronics information displays can be seen at banks, shopping centers, motels, auto dealerships, civic centers, and sports stadiums. Offered technologies include the SunSpot incandescent, Starburst color, Infoline LED (light emitting diode) and Glow Cube reflected light displays.

Daktronics has been awarded contracts for several Olympic events as well as other international sporting events such as the All Africa Games and the Commonwealth Games.

Daktronics subsidiaries permit greater control over the quality of system components. Star Circuits, a subsidiary, designs and manufactures circuit boards used in Daktronics displays and for other customers. Chrondek, Inc., acquired in 1988, produces timing equipment for auto racing. This acquisition will allow Daktronics to work closely with the auto racing community to develop products for that specific market.

Since 1968 Daktronics has grown to become an internationally-recognized leader in the scoreboard and information display industry. According to Dr. Al Kurtenbach, president of Daktronics, "The programmable display industry has experienced explosive growth during the past 20 years and Daktronics is proud of its position in the industry. The company has progressed because of its ability to provide innovative solutions to clients' communication problems."

THE IMPORTANCE OF YOUR JOB:

Congratulations on being selected to operate a Daktronics display! Someone has invested a considerable amount of money into the latest technology in electronic displays and control equipment, and is counting on you to help them get the most for their money.

Sounds like quite a responsibility, doesn't it? And what a great opportunity. You'll be talking to thousands of people every day with your programming. Don't think for a minute that anyone could operate the display like you do. You are unique; the way you think, the way you act, the way you feel, and your personality will shine through on the display. Thousands will be looking at your ideas, comments and creative advertising messages. A "Good Morning" message with clever graphics or animation can really make someone's day brighter. Think of yourself as a radio disc jockey or television anchor person. You are the person who presents the information.

Good things take time. Daktronics engineers have spent years perfecting the control system used to operate your display. You probably won't be a programming expert right away. But you will be surprised at how easy the system is to operate and how much of the work it can do. In very little time, you'll be making the display do what you would have never thought possible. Take time to learn the system well. Your investment now will save you time and money in the long run. Follow instructions in this manual. Try to schedule yourself for a Beginner Operator Seminar at Daktronics. Call Daktronics early on if you have questions. Daktronics has trained staff who will step you through procedures.

PROMOTING YOUR SYSTEM:

There are basically two applications in the display industry. You need to determine which yours is and then come up with a plan for operating it.

The first application is the **moving audience application**. This applies to displays that are located in front of businesses where the audience is moving (often driving) by. You need to consider what your drive-time is going to be. Drive-time refers to how long people driving by will have to see your display. As a general rule, your sequences probably should be less than 10 seconds in length. This varies with location however, and you will want to clock your drive time. Next you need to determine what you want to display. Some ideas might be: advertisements for your location, time and temperature sequences, public service announcements and interesting quotes. As a suggestion, insert your time and temperature after every second or third sequence. If you decide you want every viewer to see a message and time and temperature then you may choose to set hold times so your time and temperature sequence is two seconds long and all your other messages are eight seconds or less.

The second application is the **stationary audience application.** This applies to arena, civic center or stadium settings where viewers are seated. You won't have to keep your messages quite so trimmed down, but you don't want your viewers bored either. As a general rule, keep your sequences shorter than 15 seconds. You may want to come up with your own length. Next you need to figure out what you want to display. Some ideas might be; statistics, advertising, upcoming event information, special welcomes, player information, team history trivia, public service announcements, cheers and entertaining animation.

DESCRIPTION OF TERMS AND TECHNOLOGIES:

An extensive glossary can be found in **Appendix A**.

Controller

The controller is the computer that is used to create, edit, and display sequences on a Daktronics message center. It is made up of a monitor (usually a CRT-Cathode Ray Tube), CPU (Central Processing Unit-this contains the processor and memory), and the keyboard. This manual was written for Venus 4600 and 6000 controllers.

Venus
The name for the series of Daktronics message center controllers. You have either a Venus 4600 or 6000 system. Your controller will be labeled.

Edit

To create or change something.

Font

A font is a particular style and size of letter used in creating a word message.

Frame

There are various types: 1) a **Graphic** frame holds text or graphics (pictures), 2) an **Include** frame holds only the name of a sequence to direct the computer to find a particular sequence, 3) a **Time and Temperature** frame which displays the time read by the computer, and the temperature read by a temperature sensor (if one has been purchased), 4) an **RTD** frame is set up to receive data from other software programs.

Include Sequence

This is a sequence which is made up of only include frames (see Frame, above). This type of sequence is actually just a list of the different sequences that the operator wants to run in a particular order.

Lampbank

This is the matrix size of a message center. It is noted in pixels high by pixels wide for example, 16x80 or 112x176. (See **Pixel**)

Menus

Daktronics software is Menu-oriented. This means that at any given time a list of different options will be available to the operator. Most frequently used menus are the Main Menu (what the computer usually boots up to), the Edit Menu (the menu used for creating sequences, schedules or messages), the Sign Menu (used for operating the display) and the Shell Program Menu.

Messages

A message is a series of frames created in the Edit Menu. Messages contain text frames.

Numeric Keypad

On the right side of the keyboard is a set of keys with numbers, arrows, symbols and a few words. These are the keys that are easiest to use when moving the highlight bar or the cursor when in the Edit Menu.

Pixel

A pixel is an individual lamp on the matrix of your display. When editing sequences and messages, you will be turning on/off individual pixels to create a desired effect. Pixels can be turned on in varying intensity for a Starburst 256 color display, Starburst 65,536 color display, SunSpot 4-shades monochrome display and SunSpot 16-shades monochrome display.

Quick Display

Quick Display is a program in the Venus controllers to quickly display a sequence or message. Quick Display can only be used with direct display signs.

Sequence

A sequence is a series of frames created in the sequence editor. These frames consist of Graphic, Time and Temperature, Include and RTD frames. Graphic frames have animation capabilities. The sequence will display each frame in order as controlled by entry, hold and exit modes. Think of a sequence as a cartoon flip book. The book is a sequence and each page is a frame.

Schedule

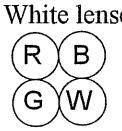
Through a schedule, the operator controls the day/date and time that the display will run include sequences, and what time the sign will blank at night (if the operator desires this). This lets the operator program the display in advance.

Technologies

This refers to the type of pixel that makes up an electronic message center. They may be color lenses or bulbs (Starburst, Starburst 256, Starburst 65,536), monochrome lenses or bulbs (SunSpot, SunSpot 4-shades, SunSpot 16-shades), reflective cubes (Glow Cube), or Light Emitting Diodes (LED). LEDs can be either one color (usually red) or three colors (red, green and amber).

Starburst color, Starburst 256 color and Starburst 65,536 color displays are made up of a quad pattern of pixels. Red, Blue, Green and White lenses covering incandescent bulbs.

Example of a Starburst quad:



Lighting just red pixels will give a red appearance, lighting a combination pattern of red and white will give the appearance of pink, etc. A Starburst 256 color display, Starburst 65,536 color display, SunSpot 4-shades monochrome display and SunSpot 16-shades monochrome display will go one step furthur by varying the intensity levels of each pixel to create either 256 or 65,536 color combinations or shades of grey depending on the technology.

SunSpot, SunSpot 4-shades monochrome and SunSpot 16-shades monochrome displays are made up of incandescent lamps or smaller lamps behind lenses. These are monochrome displays.

Glow Cube displays are made up of square reflective elements that rotate from one color to another (usually yellow and black). These elements have a special dye in the plastic that reflects the sunlight, black lighting or fluorescent lighting.

Tri-color L.E.D displays are made up of pixels that each have the ability to display red, green or amber (yellow).

Care of controllers

By taking a few precautionary steps, you can prevent costly repair bills, and lengthen the life of your computer. Please follow these suggestions:

- Place computer equipment away from open windows, heavy machinery or any other area that has a lot of dust in the air.
- Always cover equipment that is not in use. This goes for the printer as well as the computer.
- Avoid smoking and eating near the computer. Smoke and food particles can damage diskettes and cause disk errors.
- Keep diskettes away from all sources of magnetic fields (radios, TV's, audio speakers, all power transformers, motors, metal tools, power tools, etc.) Magnetic fields may permanently erase all data on a diskette.
- Keep the keyboard clean. This can be done by keeping foods and drinks out of the computer area. Key board vacuums can be purchased from most computer stores. Keyboard skins can also be purchased to protect the keyboard.
- Take diskettes out of the computer when not in use. This is very important when moving a computer. Place unused disks in their boxes or in disk file holders.
- Unplug the computer if it will not be used for an extended period. This will prevent damage in the event of a lightning strike.
- Store disks at a temperature between 60-90 degrees Fahrenheit, with moderate humidity.
- Remove files from the fixed disk that aren't necessary. This will make for more efficient use of your computer and make your work easier.
- Make backup files on a regular basis (weekly is suggested). In the event of disk or hard drive damage you will be able to retrieve your sequences from backup disks. Make backups of important disks (IBM Reference, Venus System files, DOS). Never work from the original disk. Use the backup copy if you ever have a problem with your working disk.
- Clearly label all disks that are being used. This will prevent the loss of data by mistakenly formatting a "blank" disk or by simply losing track of what a disk contains.

- Avoid water in the control room--whether it be rain water leaking in from a window or a ceiling or drinking water. Either ban drinks from the control room or only allow squeeze bottles on the floor. Water inside computers can damage circuitry.

CUSTOMER SUPPORT/SERVICE INFORMATION:

Following are some phone and fax numbers that will help you contact the person you need at Daktronics. If you have operating questions ask for the Animation Department at **1-800-843-9878** or **(605)-697-4440**.

General Daktronics ..... (605)697-4000
General WATTS ..... (800)843-5843
Sales ..... (605)697-4300
Sales WATTS ..... (800)843-9878
Customer Service ..... (605)697-4400
Customer Service WATTS ..... (800)843-9879
Engineering ..... (605)697-4500
Daktronics Fax ..... (605)697-4700
Customer Service Fax ..... (605)697-4444

Beginner Operator Seminars are offered seven times a year. Advanced Operator Seminars are offered twice a year. Refer to **Appendix E** for a listing of seminars for this year. You should receive flyers on these but feel free to call and ask the Animation Department about the next scheduled ones.

Shortly after purchasing the display, you should receive a personal letter from Daktronics providing you with a variety of information such as seminar dates, newsletter back issues and contract information.

An operator support newsletter is published quarterly. You should automatically receive the first issue in less than three months upon purchasing the display. You should also receive some back issues with the introductory letter. If you would like to get more back issues, call the Animation Department.

Daktronics has an extensive library of cataloged sequences that you can purchase. Animation sales and package release information will be included in newsletters or in separate flyers. Call the Animation Department if you want a current listing of cataloged sequences in your matrix size(s).

Daktronics has developed a special option for its commercial or marquee customers called VIP (Very Impressive Programming) Services. A customer can sign up at the time of the sale, or at a later date. The service provides the customer hands off operation of the display. You fax the messages and ideas (with dates as to when they should run), and Daktronics will do the rest. For a low monthly fee we will provide this service and also give you access to our catalog. Daktronics will supplement the requested sequences with seasonal graphics and messages. This service is just a phone call away!

Call Customer Service about warranty questions or technical problems. If you don't know what warranty you will receive, call them and find out. You might want to write that information along with the controller and software information in the front of this manual so you have it to refer to. If you purchased your display from a Daktronics dealer, then you will need to work with them on all warranty and operating questions.

HARDWARE/SOFTWARE INFORMATION:

Hardware:

The hardware that comes with the controller you have purchased includes a personal computer with a hard drive, a keyboard, a mouse or trackball. Depending on your display type you will have a Display Transmitter Card (or cards if you have more than one display) or a modem (if you have a Remote Venus Controller). Refer to **Appendix J** for a typical system setup. The Display Transmitter Card sends display information to the display interface which is typically located at the display location.

The modem sends display information over phone lines to a Remote Venus Controller (RVC) which is located at the display location. The RVC is a computer that receives schedules and sequences from the Venus controller via modem and stores them in its memory. The RVC then does all the controlling.

Optional equipment includes a printer and a Video Image Reader. A printer is useful for printing sequences, messages, schedules and directories. Daktronics sells and supports the Epson series dot matrix printers, Hewlett Packard and IBM Laser printers. The Video Image Reader includes a frame grabber card (for digitizing images), a camera, camera stand and black and white monitor. For large matrix displays a video cassette recorder is often included in the contract so operators can fetch images from videotapes.

Software:

The controller software is MS-DOS based, menu driven and uses the keyboard, a mouse or a trackball for entry selection. The software is compatible with DOS version 5.0 or higher. For more about MS-DOS please refer to **Chapter 12** or the DOS manual included with your system.

The Venus controller operating software is made and copyrighted by Daktronics and is not intended for use with anything other than Daktronics equipment without the permission of Daktronics.

The Venus controller system software is installed on your computer's internal hard disk drive. The initial installation is done in-plant before your system is shipped. You should find among the disks in the User Kit package, a disk labeled Venus 4600 or Venus 6000 Installation Diskette. Keep this near the computer for reference. This software is run-time protected. You could install it on another computer system, but without a software

THE BASICS OF OPERATING AN ELECTRONIC DISPLAY:

Following are basic steps to operating a display. First find your display and application type and then read the steps. This will help you know which sections of the manual you need to concentrate.

Direct Display--a moving audience

1) Create/edit individual sequences you want to display. Make up a sequence for every message you want to display.

2) Decide what days you want sequences to run. Write this down until you are used to the process. You may choose to do this if there is more than one operator working on the system.

3) Create/edit include sequences. Have an include sequence for every day of the week. You could even name them that way: i.e., IncMon, IncTues, etc. Include sequences tell the display what order sequences should display. Creating and editing include sequences is explained in detail in **Chapter 2**.

4) Create/edit your schedule. In the schedule you will enter the include name, the time it is to start running and the day of the week.

5) Run the schedule on your display.

6) Select the sequence to display until the next schedule entry picks it up.

Remote-Controlled Display--a moving audience.

Refer to steps 1-4 above.

5) Connect with your remote unit (Remote Display Unit, Remote Indoor, Remote Venus Controller or Remote Network Controller).

6) Transfer individual and include sequences.

7) Transfer schedule(s).

8) Run the schedule on your display.

9) Select the next sequence to display until the next schedule entry picks up.

Direct Display--a stationary audience.

1) Create/edit individual sequences you want to display. Make up a sequence for every message/animation you want to display.

2) Create/edit include sequences that you can use for before the event, half time and after the event. You could name these by the date of the event or who the team is playing.

   NOTE: Steps 3 and 4 are only for those wishing to run a schedule to start up an include sequence before an event.

3) Create/edit your schedule. In the schedule you will enter the include name, the time it's to start running and the date.

4) Run the schedule on your display.

5) Edit Quick Display and enter in the individual sequences and include sequences according to your event script.

6) Run the display during the event in the Quick Display mode.

Chapter 1: Getting Started

1.1 How To Use This Manual

Few people have the time or desire to sit down and read an instructional manual word-for-word. Fortunately, the Venus 4600/6000 manual is designed to get you operating your electronic display both quickly and successfully. There is no need for you to read every word of the manual before you begin working with the system. By simply following the step-by-step instructions in the first few chapters, you will be well on your way to displaying word messages and the time and temperature on your display. As you continue on to later chapters, you will discover how to effectively display sequences, schedules and messages, how to create your own amusing animations, and how to get the most out of the entire Venus 4600/6000 system. Keep the manual somewhere easily accessible to use as both a programming guide and a reference book.

Begin by thoroughly reading this chapter. In it, we will provide you with some important hints and reminders that will make your progression through the manual much quicker and simpler. Then we will get your computer powered up and ready for you to begin your training.

As you continue on to **Chapter Two** and beyond, remember—only with continued frequent use will you familiarize yourself with the menus and options available with the system. Make sure to complete all exercises and answer the review questions found in each chapter. It is also recommended that you complete the V4600/6000 Operation Test (**Appendix F**) after you have gone through all the chapters. You may want to copy the test and retain the original for future use.

1.2 Hints and Reminders

The V4600/6000 manual has been written and designed to be easily understandable. The conventions listed below will help you quickly skim chapters to locate exercises, reviews, descriptions and more.

• Lists of options, tools or functions are preceded by this symbol.

NOTE: Notes preceded by this word contain important additional information or a warning.

Boldface Keyboard commands, menu options, and tools appear in boldface type.

ENTER Press the Enter (also called Return) key.

CTRL Hold down the CTRL key while typing a letter.

ALT Hold down the ALT key while typing a letter.

1.3 Mouse VS Keyboard Selection

The Venus 4600/6000 systems are designed to be used with either the mouse or the keyboard. Experienced operators will find themselves preferring one or the other, but will switch between the mouse and keyboard to perform certain tasks. In this manual, we will provide you with both the mouse actions and the keyboard commands for tasks as they are needed. We will use the following terms to describe the various mouse actions:

• CLICK means quickly press and release either the left or right mouse button.

- DOUBLE-CLICK means quickly press and release the left mouse button twice. (In many cases, double-clicking saves you from having to click on **OK** or **ENTER**.)
- LEFT-CLICK means quickly press and release the left mouse button.
- RIGHT-CLICK means quickly press and release the right mouse button.
- DRAG means press and hold down the designated mouse button while moving the mouse.

To select a particular menu or option within the menu, left-click on the name. Pull-down menus and their options are also easily accessed with the keyboard. Simply type the underlined letter to pull-down a particular menu or to select an option. Functions represented by an icon for mouse selection also have corresponding keyboard commands.

NOTE: For a complete listing of the keyboard commands, refer to **Appendix B**.

1.4 Selection Boxes

Selection boxes are found throughout the program. These boxes contain lists of items from which you are to select one, some or all. The lists may contain directories, file names, help topics or (frame parameters). To select an item in the selection box, move the highlight bar to the item with the arrow keys and press **ENTER**, or left-click on the item. Any action chosen will affect only the selected item(s).

Many times selection boxes contain more items than can fit on the screen. These selection boxes have a scroll bar located at the left edge. A scroll bar may be used to page down through the list of items. The scroll bar may be used three different ways:

- Click on the top or bottom arrow of the scroll bar.
- Drag the scroll box (the white square on the scroll bar) up or down.
- Click the shaded scroll bar area to make the box move to that point.

To page down through a long list, you may also use the keyboard. Press the up or down arrow keys to move the highlight bar.

1.5 Power Up

The computer(s) you receive from Daktronics is already configured for your installation and comes with all the required software already installed. At boot-up, the computer will bring you to the Main Menu and from here you can choose where to start.

1.6 Main Menu Options

The following are the Main Menu options and their descriptions. Each of the functions within these options are described thoroughly in the corresponding chapters.

EDIT MENU

This menu offers the choices to edit a sequence a message or a schedule. To edit sequences see **Chapter 2**. To edit messages see **Chapter 10**. To edit schedules see **Chapter 4**.

SIGN MENU

This menu offers the choices to display sequences, messages or schedules on your sign. For displaying to direct control sign see **Chapter 5**. For displaying to remote controlled signs see **Chapter 6**.

PREVIEW MENU

This menu allows you to preview sequences or messages on the monitor without displaying them on the sign. The preview option will allow you to preview off of the hard drive of your computer in any configured sign size and library or preview from a diskette in any sign size and library configured on the diskette.

UTILITIES MENU

This menu allows you to copy, delete, rename or move files from computer to diskette or diskette to computer. Other options include setting up new library names and deleting existing libraries. The utilities menu also contains the printing functions make printouts of sequences, messages and schedules. For more information on file or printing utilities see **Chapter 11**.

SYSTEM MENU

This menu offers the options to change signs, enable the enhanced scheduling function and exiting to the shell program or DOS. For more information on enhanced scheduling, see **Chapter 4**. For more information on the Shell Program see **Chapter 13**.

Chapter 2: Sequence Editor

2.1 Editing a Word Message in the Sequence Editor

Welcome to the Venus 4600/6000 system! The following exercise will help you familiarize yourself with the Venus software, while demonstrating the ease with which the system is operated. This exercise is not intended as a complete overview of the system's capabilities, or as a substitute for reading the rest of the manual. Throughout the exercise there will be many references to topics that are covered in greater detail later in this manual.

With this first exercise you will create a basic text sequence. Messages can be created either in the Sequence Editor or in the Message Editor. At this time training will taking you through the Sequence Editor. The Sequence Editor allows you to work in the entire matrix, entering text and graphics within the same frame. Text can be moved row by row and column by column. The Sequence Editor has an unrestricted format, allowing you to manipulate just portions of the frame with color and graphics. The Message Editor works more like a word processing program. It is best used when you have a lot of text or data to enter. Step by step instructions on the **Message Editor** are in **Chapter 10**.

Ready to learn about the Sequence Editor? Instructions stress keyboard selections, but mouse commands can be derived from the command given. For example, if you are told to press **E** for **Edit**, you would know to click on the **Edit** option. A good rule to keep in mind is, "when in doubt press **ESC**." This will usually take you back to the previous step or something that looks familiar.
Okay, begin at the Main Menu.

- Press **E** for **Edit**.
- Press **S** for **Sequence**.
- Press **N** for **Name**.
- Type in your first name. (The name must follow DOS standards--no more than eight characters, no spaces, periods, etc.).
- Press **ENTER**. A dialogue box will tell you the sequence does not exist. Press **Y** for **YES (or ENTER)** to create it.

The Edit Menu appears.

NOTE: The name of the current menu or mode will always appear in the upper right corner of the screen.

- The black rectangle in the middle of the screen is a graphic frame and is in direct proportion to your display size.

- Press **ALT-Z** (or left click on the magnifying glass) for **Zoom**. This will zoom the frame to a size that makes individual pixels easy to view. Press **Ctrl-Z** (or right-click on the magnifying glass icon) to decrease the size. There are four sizes available while editing.

- Press **CTRL-F** or left-click on the blackboard icon to go to **Font Select**. A list of fonts will appear.

NOTE: A complete listing of fonts and their naming conventions can be found in **Appendix C**.

- Use the arrow keys to activate and move the highlight bar to the font of your choice and press **ENTER**, or double-click on the font name.

The Sequence Editor Menu reappears with the selected font shown in the lower left corner of the screen.

- Press **ALT-T** or left-click on the "T" icon to enter the **Text Mode**.
- Type in your first name.
- **Justify**, or horizontally center, the text by pressing **ALT-J** or by left clicking on the "←T→" icon. Your name is now centered horizontally with a block around it.

NOTE: Typing **CTRL-ENTER**, **CTRL-J** or left-clicking on the "←T→down" icon will justify your text and return the cursor to the next line of text. Use this option for multiple line messages.

- Now center the text vertically. Press **ALT-C** (or left-click on the scissors icon) to cut the block with your name in it. Use the down arrow key to move the block to the vertical center of the frame. The mouse may also be used by dragging the block around while holding down the left mouse button or by simply left-clicking where you would like to place the block.

NOTE: Using the mouse to vertically center a block may alter horizontal centering.

- Press **D** (or click on the icon with two overlapping squares) to **Drop** the block in place.
- **ESC** to exit the Block Mode. Press **ESC** to exit the Text Mode.

- Now that your text is entered you can dress up your frame with color and effects. Now select a color (Starburst and Tri-color LED operators) or gray scale (SunSpot, Glow Cube and LED operators) by left-clicking on one of the 16 squares in the grid at the lower left corner of the screen. The selected color or gray scale will be used as a background behind your text.

NOTE: For commercial applications, shadowing every frame is not recommended. Keep text crisp and bright, using all colors for text and black as a background. This will greatly reduce maintenance and power costs. The lifetime of a lightbulb is directly related to how many hours it is on. Use color more freely with logos and special promotional items. Keep in mind also that selecting Teal, (composed of blue and green) will light twice as many lights as if just blue or green were selected. If you don't want to shadow your frame, skip to the Miscellaneous Menu portion.

- To select colors with the keyboard you can use **CTRL-X** to toggle all colors on and off. Use **CTRL-R** for Red, **CTRL-B** for Blue, **CTRL-G** for Green and **CTRL-W** for White. Further details on color selection are explained later in this chapter. As you select colors, you will not notice any change to the frame.

- Now that you have selected a color you are ready to apply it to the frame. Press **F** for **Frame.** Press **S** for **Shadow** . You will be given the options of **Outline, Down/Left, Down/Right, Up/left and Up/right.** Select one of these. Now you will be prompted to enter the length of the outline. This refers to how deep you want the black area around the text to be. For **Outline** 1-2 is recommended. For the other options use 1-5 for most fonts. Too big of a black area can dwarf the text

NOTE: Pressing **ENTER** after selecting a shadow option will default the shadow to 1.

- Effects can add a lot to the appearance of a message, but can be of no use if they take too long. Longer effects are Scroll left, right, Wand, left, right, Unveil left, right Roll left, right. Because displays are typically much wider than they are tall, these have to move across the entire horizontal display. If these are used, a fast rate should be applied.

- Press **E** for the **Entry Menu.** Now you are ready to put an effect on your frame. How do you want your frame to appear? An important thing to keep in mind is; don't spend too much time with effects.

  NOTE: Illustrations of individual entry effects may be found in **Appendix D**. Some of the entry effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube.

- Press **O** to select **Coalesce** under the **Entry Menu**. This will prompt you for a direction and rate. When selecting a rate, try selecting from the lower two rows of numbers. **The higher the number you select the faster it will be.** You will have a chance to see how your selection works before saving your work to disk.

- Now that you have selected an Entry Effect you can modify the Hold Time. Press **H** for the **Hold Menu** and press **H** again for the **Hold Time**. Select **1.0** for the Hold Time. The Hold Time controls how long the current frame will appear and is calculated in tenths of seconds. Text frames should appear at least .5 seconds (half a second). Animation frames can display as fast as 1/30 (30 frames a second). Keep your application in mind when selecting the hold time.

- For a Hold Mode, you can select for the frame to **Steady**, **Twinkle**, **Flash** or **Bijou**. If you have a wild entry effect you will not want a wild hold mode. Press **S** for the **Steady** mode. This mode is recommended for most frames.

  NOTE: Illustrations of individual hold effects may be found in **Appendix D**. Some of the entry effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube.

- Exit effects can be applied but this is not recommended for regular use. Press **X** for the **Exit Menu** and then press **K** for **Kaleidoscope**. An exit effect will cause the display to completely black out which breaks up the viewing continuity. Use transitions instead. A transition can be a nice graphic or pattern to move the viewer from one thought to the next. Individual frames from the background package (developed by Daktronics) can used for this.

  NOTE: Illustrations of individual exit effects may be found in **Appendix D**. Some of the entry effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube.

- The frame is now complete. Now for additional practice it is time to add a frame and enter your last name. Before doing this however, there is a shortcut for adding new entry effects. When creating several text frames, it would be tedious to select an effect for every frame. The Miscellaneous option will enable the computer to do this for you.

- Press **M** for **Misc**. If a checkmark appears nect to the **Auto Effects** option, the computer will randomly assign entry effects to new frames as they are added to the sequence. Use this option to save time when creating text sequences. If there is no checkmark next to **Auto Effects**, press **A** (or left-click on the **Auto Effects** option).

- Press **CTRL-A** (or click on the Add icon). This will add a blank frame to your sequence. Notice that the entry effect is different from the effect you selected in frame one. Also notice that the frame number in the lower left corner shows GRP FRM 2 of 2.

NOTE: Holding down **CTRL-A** or the left mouse button for too long will add multiple blank frames.

- Practice going back and forth between frames. You will want to do this frequently to check your work. To go back to frame one press **F11** (the function key at the top of the keyboard) or click on the left arrow icon.
- Press **F12** to go to frame 2 or click on the right arrow icon. Even if you are a mouse-user, you may find it quicker to use **F11**, **F12** for this option.

- Go to the Font Selector and choose a different font.
- Enter the Text Mode and type your last name.
- Justify and vertically center your last name, (**ALT-J**, **CTRL-J** or **CTRL-ENTER**).
- **ESC** (twice) from the Block and Text Modes.
- Return to frame one, (**F11**).
- Select a color and shadow your frame.

Your first text sequence is now complete!

- Press **S** for **Seq**.
- Press **V** for **Verify**. You will see your sequence exactly as it would appear if it were running on the display. Notice that the duration time is shown at the bottom. Remember that commercial application messages should be under 10 seconds and sports application messages under 15 seconds.
- **ESC** to quit verifying.
- Return to the **Seq** Menu.
- Select **Update/Quit**. This option will save your sequence to the fixed disk and return you to the Main Menu.

2.2 Sequence Editor Tools:

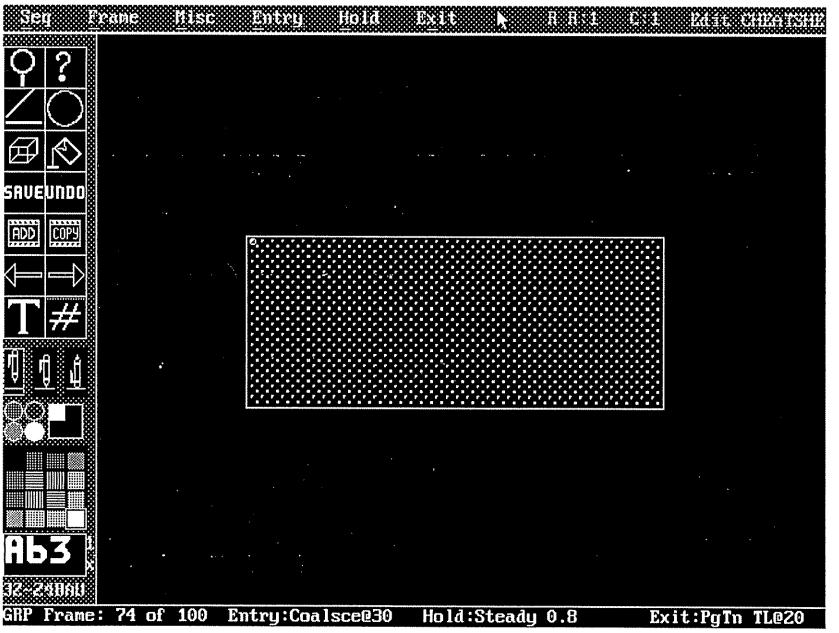
Now that you have seen how easy it is to create a simple text message with the Venus 4600/6000 system, let's take a more in-depth look at the Edit Menu. You are currently at the Main Menu.

- Press **E** for **Edit** Menu.
- Press **S** for **Sequence**.
- Press **N** for **Name**.
- Name the new sequence OVERVIEW.
- Press **ENTER** and **Y** for **Yes** (or press **ENTER**) to create the sequence.

The Edit Menu may be divided up into six areas. These areas are: **The Frame**, **The Toolbox**, **The Pull-Down Menus**, **The Color Indicator**, **The Font Indicator** and the **Status Bars**. Each of these areas are described on the following pages and more detailed discussion may be found in later chapters.

2.2.1 The Frame

The Frame area on your monitor represents your display. There are several types of frames, but the most commonly used is the graphic frame like you see before you now. **Graphic frames** hold text or graphics. At the upper left corner of the frame is a small cursor. This cursor represents one pixel or one element of your technology (i.e., incandescent lamp, Glow Cube or LED). The cursor may be moved around the frame using the keyboard or the mouse. To move the cursor with the keyboard, turn NUM LOCK off (found on the numeric keypad at the right of the keyboard). You may now use the arrow keys on the numeric keypad to move your cursor up, down, left or right. The 1, 3, 7 & 9 keys on the numeric keypad will move the cursor diagonally. To move the cursor with the mouse, click on the cursor with either the left or right mouse button and continue to hold down the mouse button as you drag the cursor around the frame.



2.2.2 The Toolbox

The Toolbox is located at the left side of the screen. Toolbox functions are: **Zoom**, **Help**, **Line Draw**, **Circle Draw**, **Fill Area**, **Block Mode**, **Save Frame**, **Undo Frame**, **Add Graphic Frame**, **Copy Grapic Frame**, **Previous Frame**, **Next Frame**, **Text Mode**, **Go To Frame**, and **Move Modes**.

NOTE: For a complete listing of edit keystrokes, refer to **Appendix B**.

Zoom

Zoom changes the magnification of the frame. When editing a sequence, Zoom the frame to a size that makes individual pixels easy to view.

Help

Help provides information about topic areas of your choice.

Line Draw

Line Draw helps you draw or erase straight lines at any angle.

NOTE: As with most Toolbox functions, only selected colors will be used when drawing or erasing lines.

Circle Draw

Circle Draw helps you draw or erase circles. In the Circle Draw function, you will also find an option for rotating objects within a circle at any angle between 1 and 359 degrees.

Fill Area

Fill Area allows you to fill an enclosed area with the selected color, or to change all similar colored areas within a frame to the selected color.

Block Mode

Block Mode allows you to mark off an area within your frame to be altered, without altering the entire frame. The list of Block Mode options are nearly the same as those found within the pull-down Frame Menu. Once again, the only difference is that Block Mode options only affect a section of the frame. Frame Menu options affect the entire frame.

Save Frame

Save Frame saves the current frame to the working memory. It does not save the entire sequence to disk.

NOTE: Moving to a Previous or Next frame also saves the current frame to the working memory. See **Previous Frame** and **Next Frame** below.

Undo Frame

Undo Frame returns the frame to its last saved version.

Add Graphic Frame

Add Graphic Frame adds a new graphic frame after the current graphic frame.

Copy Graphic Frame

Copy Graphic Frame makes an exact duplicate of the current frame and places it after the current frame. Any graphic or text information within the current frame, as well as Entry, Hold and Exit effects from the current frame, will be copied.

Previous Frame

Previous Frame takes you to the previous frame of your sequence.

Next Frame

Next Frame takes you to the next frame of your sequence.

Text Mode

Text Mode allows you to type letters or graphics (if a Graphic Font is selected) on the frame.

Go To Frame

Go To Frame lets you move directly to any frame in your sequence without the use of the Previous and Next Frame commands.

Move Modes

Move Modes determine what happens as you move the cursor around the frame. There are three move modes—**Move**, **Move/Set** and **Move/Clear**.

- **Move** is represented by the first Move Mode icon on the left. If Move is selected, the cursor will neither draw nor erase pixels as it is moved.
- **Move/Set** is represented by the middle Move Mode icon. If Move/Set is selected, the cursor will draw pixels with the selected color as it is moved.
- **Move/Clear** is represented by the far right Move Mode icon. If Move/Clear is selected, the cursor will erase pixels with the selected color as it is moved.

NOTE: To Move or Move/Set with the mouse, drag the cursor while holding down the left mouse button. To Move/Clear with the mouse, you must drag the cursor while holding down the right mouse button. You may also use the numeric keypad arrow keys to move the cursor.
NOTE: The **INS (0)** key may be used to turn one pixel on at a time. The **DEL (.)** key may be used to turn one pixel off at a time.

2.2.3 The Pull-Down Menus

The **Pull-Down Menus** are found at the top of the screen. These menus are: **Seq**, **Frame**, **Misc**, **Entry**, **Hold** and **Exit**. Remember, to access a menu or menu option, press the underlined letter or left-click on the menu or option name.

Seq Menu

The **Seq Menu** contains options that pertain to the entire sequence. **Seq** Menu options are as follows:

- **Info** lists Sign Directory, Sequence, Library, Lampbank Size, Disk and RAM information.
- **Verify** lets you view your sequence while still in the Edit Mode.
- **Read/Create** allows you to update and quit the current sequence and begin editing another sequence without returning to the Main Menu.
- **Restart** undoes any changes that have been made to the current sequence since it was last updated.
- **Rename** allows you to copy the current sequence to another name. The original sequence will also remain on the fixed disk.
- **Update** saves the current sequence to the fixed disk.
- **Update/Quit** saves the current sequence to the fixed disk and exits to the Main Menu.
- **Quit** exits to the Main Menu without saving the current sequence to the fixed disk.

- Pull down the **Seq Menu** and press **C** for **Read/Create**. A dialogue box will ask you if you would like to save the current sequence. Select **YES**. A listing of sequences will then appear.
- Press **N** for **Name**.
- Name the new sequence REVIEW. Select **YES** to create it.
- Press **CTRL-F** to select a font.
- Press **ALT-T** to enter the Text Mode.
- Type "Review".
- Press **ALT-J** to justify the text.
- Press **ALT-C** to cut the block and center it vertically.
- Press **D** to **Drop** the block in place.
- **ESC** (twice) to exit the Block and Text modes.
- Press **R** for **Restart**. Notice that the frame was cleared because it was not saved to disk.
- Press **N** for **Rename** and rename the sequence "Menus".
- Press **U** for **Update**. Notice that you are still in the Edit mode.
- Press **Q** for **Quit**. A dialogue box asks you if you would like to save the current sequence. Select **NO**.

Frame Menu

The **Frame Menu** contains options for altering individual frames. Many of the options found within the **Frame** Menu are the same as those in the Block Mode. The only difference is the area that is affected. Block Mode options affect only part of the frame, whereas **Frame** Menu options affect the entire frame. **Frame** Menu options are as follows:

- **Shadow** allows you to fill black areas within the frame with colors or gray scales. A black shadow will surround any graphics or text already in the frame, separating them from the 'background' color. Once a frame has been shadowed, the color can not easily be changed.
- **Delete** removes a frame or frames from the sequence.
- **Duplicate** makes multiple copies of individual or groups of frames.

NOTE: If you only wish to make one or two copies of a single frame, the Copy option is quicker.

- **Fetch** pulls a copy of an individual or group of frames from another location and places it after the current frame in the sequence you are editing. Frames may be fetched from the sequence you are editing, from another sequence saved on the fixed or a floppy disk, from a message or from the VIR (Video Image Reader).

NOTE: For detailed instructions on how to use the VIR, see **Chapter 8**.

- **Combine** takes information from one frame and combines it with information in the current frame. There is no limit as to how many different frames may be combined with the current frame.

NOTE: For detailed instructions on how to combine frames, see **Chapter 9**.

- **Clear** erases information within a frame without removing the entire frame from the sequence. The clear option only removes the selected colors from a frame (i.e., if blue is the only color selected, only blue pixels will be cleared from the frame).
- **Invert** turns on pixels that are currently off and turns off pixels that are currently on, resulting in a negative of your frame.
- **Mirror** flips the information within the frame horizontally.
- **Upside Down** flips the information within the frame vertically.
- **Insert** allows you to insert different types of frames after the current frame. You may insert Graphic, Include, Time & Temp, Real Time Data and Transmit Data Frames.

NOTE: You will find it easiest to use the Add option to insert Graphic frames to your sequence. However, if the current frame is not a Graphic frame, you must use the **Insert** option to add a Graphic frame after it.

- **Parameters** allows you to change information only on Include, Time & Temp, Real Time Data and Transmit Data Frames. You will not be able to select **Parameters** if the current frame is a Graphic frame.

NOTE: To learn more about the control frames see **Chapter 15**.

Misc. Menu

The **Misc Menu** primarily contains options for altering frame effects. **Misc** Menu options are as follows:

- **Auto Effect** will randomly assign entry effects to new frames as they are added to the sequence. This option should be selected to save time when making text messages. It should not be used when creating animation.
- **Set as Defaults** saves the Entry, Hold and Exit effects from the current frame as the default effects. If Auto Effect is not selected, the default effects will be assigned to each new frame that is added to the sequence.
- **Range of Frames** copies some or all of the effects from the current frame to a selected number of frames.
- **Edit Description** allows you to type a one-line description of your sequence. The description may be printed out with a directory of sequences in a library.

Entry Menu

The **Entry Menu** contains the entry effects that determine how each frame will come on to the display.

NOTE: Illustrations of individual entry effects may be found in **Appendix D**. Some of the following entry effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube. Effects not allowed on Glow Cube displays are marked with an asterisk (*) in the list below.

Entry Menu options are as follows:

- **Entry Rate** determines how quickly an entry effect works. The higher the **Entry Rate**, the quicker the frame will appear on the display.
- **Change** is the equivalent of no entry effect. The new frame simply replaces the old one.
- **Coalesce** dissolves the previous frame to reveal the new frame.
- **Venetian** looks like a venetian blind closing over the previous frame.
- ***Roll** rolls over the previous frame.
- ***Scroll** pushes the previous frame off the display.
- **Wand** replaces the previous frame row by row or column by column.
- ***Unveil** looks like a curtain closing over the previous frame.
- ***Zoom** brings the new frame on the the display from a single point.
- ***Page Turn** looks like the page of a book turning to reveal the new frame.
- ***Splice** looks like bars from the top and bottom of the display joining to reveal the new frame.
- **Kaleidoscope** looks like several shapes growing in size to cover the old frame.
- ***Slot Machine** looks like the spinning of slot machine reels that finally stop on the new frame.
- **Radar** looks like the clockwise sweep on a radar screen, revealing the new frame as it sweeps.

Hold Menu

The **Hold Menu** contains options for how long a frame will stay on the display and how it will look for the length of time it is on the display.

NOTE: Some hold effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube. Effects not allowed on Glow Cube displays are marked with an asterisk (*) in the list below.

Hold Menu options are as follows:

- **Hold Time** is the length of time the frame will remain on the display.
- **Hold Rate** determines how quickly a hold effect works. The higher the **Hold Rate**, the quicker the hold effect.
- **Steady** is the most common hold effect choice. The frame will stay steady on the display for the duration of the Hold Time.
- ***Twinkle** looks like stars twinkling on the frame for the duration of the Hold Time.
- ***Flash** inverts and re-inverts the frame or changes it to all pixels on or off and back for the duration of the Hold Time.
- ***Bijou** creates a moving outline of pixels that rotate either clockwise or counter-clockwise around the perimeter of the frame for the duration of the Hold Time.

Exit Menu

The **Exit Menu** contains the exit effects that determine how a frame leaves the display. It is recommended that you only use exit effects at the end of sequences or to set off parts of one sequence. Exit effects cause one frame to leave the display before the entry effect for the next frame begins. The result is a brief moment between frames where the display is actually blank.

NOTE: Some of the following exit effects are prohibited with Glow Cube displays because they are not visually appealing, and they also limit the lifetime of a Glow Cube. Effects not allowed on Glow Cube displays are marked with an asterisk (*) in the list below.

Exit Menu options are as follows:

- **Exit Rate** determines how quickly an exit effect works. The higher the **Exit Rate**, the quicker the frame will leave the display.
- **Stay** is the equivalent of no exit effect. The frame stays in place as it is replaced by the next frame's entry effect. Always use this effect, unless you want to separate thoughts or sequences.
- **Dissolve** fades the current frame to black.
- **Venetian** closes like a venetian blind, blanking the sign.
- ***Roll** blanks the sign by rolling the current frame off.
- ***Scroll** pushes the current frame off, blanking the sign.
- **Wand** blanks the sign row by row or column by column.
- ***Unveil** looks like a curtain opening to unveil the blank sign.
- **Kaleidoscope** looks like several repeating shapes growing until they blank the sign.
- ***Zoom** the current frame moves off the display from a single point.
- ***Page Turn** looks like the current frame turning as a page of a book to reveal the blank sign.
- ***Splice** looks like bars moving to the top and bottom of the display to reveal the blank sign.
- **Blank** just blanks the sign without a special effect.
- ***Slot Machine** moves like the reels of a slot machine, finally stopping to reveal the blank sign.
- **Radar** looks like the clockwise sweep on a radar screen, revealing the blank sign as it sweeps.

2.2.4 The Color Indicator

The **Color Indicator** is located at the left side of the screen, just below the Toolbox. There are three areas within the Color Indicator section—the **Color Selection Quad**, the **Quad/Pixel Indicator**, and the **Color Palette**.

The Color Selection Quad

Below the Move Mode icons are four circles, the **Color Selection Quad**. For Starburst display operators, these circles represent a color quad, with one red, one blue, one green and one white pixel. Starburst 256 display operators will also see a color quad, but each color pixel will have a number between 0-3, representing the four intensity levels of each pixel. Starburst 65,000 color display operators will see the color quad, but each color pixel will have a number or letter from 1-9 and A-F, representing the 16 intensity levels of each pixel. Tri-Color LED operators will see one yellow, one

red, one green, and one black pixel in their Color Selection Quad. SunSpot, Glow Cube and LED display operators will see four similar colored pixels. Regardless of your specific display technology, turning pixels on/off within the Color Selection Quad will select the color or gray scale with which frame editing functions are performed.

Left-clicking on a pixel in the Color Selection Quad will turn that color on/off. For Starburst-256 display operators, left-clicking will change the color's intensity level.

To select colors with the keyboard, use the following commands:
- **CTRL-X** turns all colors on/off.
- **CTRL-R** turns red or the upper left pixel on/off (or changes intensity of red for Starburst 256 or Starburst 65,000 color displays).
- **CTRL-B** turns blue or the upper right pixel on/off (or changes intensity of blue for Starburst 256 or Starburst 65,000 color displays).
- **CTRL-G** turns green or the lower left pixel on/off (or changes intensity of green for Starburst 256 or Starburst 65,000 color displays).
- **CTRL-W** turns white or the lower right pixel on/off (or changes intensity of white for Starburst 256 or Starburst 65,000 color displays).

Tri-color LED operators will use the following keyboard commands to select colors:
- **CTRL-X** turns all colors off.
- **CTRL-R** turns red on.
- **CTRL-G** turns green on.
- **CTRL-Y** turns yellow on.

The Quad/Pixel Indicator

The **Quad/Pixel Indicator** is the square found to the right of the Color Selection Quad. The Quad/Pixel Indicator shows you whether the cursor is controlling a single pixel at a time or a four pixels at a time (a quad). To toggle between Pixel and Quad, right- or left-click on the indicator or press the **slash** (/) key on the numeric keypad. If you are in the Pixel mode, you will see one yellow square in the Quad/Pixel Indicator. If you are in the Quad mode, you will see four yellow sqares in the Quad/Pixel Indicator.

NOTE: Tri-color LED displays do not have a Quad mode.

The Color Palette

The 16-square grid below the Color Selection Quad is the **Color Palette**. Colors or gray scales may be selected by left-clicking on one of the squares in the Color Palette. If you use the Color Selection Quad to select colors, you will see a highlight move to the corresponding color on the Color Palette.

NOTE: For Starburst 256 and Starburst 65,000 color display operators, choosing a color from the Color Pallette will produce that color in all highest intensity levels.

2.2.5 The Font Indicator

The **Font Indicator** is located just below the Color Selection Indicator. The Font Indicator looks like a blackboard. On the blackboard you will see a sample of the selected font. Below the blackboard is the name of the selected font. To change the selected font, left-click on the blackboard or press **CTRL-F**.

Each font may also be doubled in size. To the right of the blackboard, you will see either a **1X** or **2X**. 1X means that the font is normal size. 2X means that the font is doubled in size. To change the size of the selected font, right-click on the blackboard or press **CTRL-D**.

2.2.6 The Status Bars

The final areas of the Edit Menu to be discussed are the **Top** and **Bottom Status Bars**.

The **Top Status Bar** contains the pull-down menus. To the right of these menus you will find a letter. This letter (R, B, G or W) shows what color pixel your cursor is currently on. You will also see Row and Column coordinates indicating the position of the cursor. Finally, at the far right side of the Top Status Bar, you will see the name of the current mode and the name of the current sequence in all caps.

The **Bottom Status Bar** contains frame information. You will see the number of frames in your sequence, as well as the current frame number. You will also see an abbreviation indicating the current frame type (i.e., GRP for Graphic Frames, T&T for Time and Temp frames, etc.). To the right of frame numbers, you will find information regarding the entry, hold and exit effects and rates for the current frame.

2.3 Chapter Two Review

Now that you've had a brief overview of the Sequence Editor Menu, let's review with a simple word message exercise.

- Pull down the **Seq** Menu.
- Press **C** for **Read/Create**. A dialogue box will ask you if you would like to save the current sequence. Select **NO**. A listing of available sequences will then appear.
- Press **N** for **Name**.
- Name the new sequence REVIEW1. Select **YES** to create it.
- Zoom the frame to a comfortable viewing size.
- Press **CTRL-F** to select a font.
- Press **ALT-T** to enter the Text Mode.
- Type "Welcome to" on frame one.
- Press **ALT-J** to justify the text.
- Press **ALT-C** to cut the block and center it vertically.
- Press **D** to **Drop** the block in place.
- **ESC** twice to exit the Block and Text modes.
- Select a color
- Pull down the **Frame** Menu.
- Press **S** for **Shadow**.
- Press **O** for **Outline**. Choose an outline length of **2**. Select **YES** to accept the shadow.Pull down the **Hold** Menu.
- Press **H** for **Hold** Time. Choose **1.0**.
- Press **CTRL-A** to add a new graphic frame.
- Select a different font.
- Enter the Text Mode. Type in the name of your location.
- Justify and center the name vertically.
- **ESC** out of the Block and Text modes.
- Pull down the Frame Menu.
- Press **S** for **Shadow**. Shadow **Down/Right**. Choose a shadow length of 3.
- Pull down the **Seq** Menu.
- **Verify**.
- **ESC** to quit verifying.

- Pull down the **Seq** Menu.
- **Update/Quit**.

As further review, answer the following questions. Try to refer back to the previous information as little as possible:

1) How do you add a new graphic frame?
2) How do you select a font?
3) How do you save your sequence to fixed disk and return to the Main Menu?
4) How do you go back and forth between frames?
5) How do you justify text?
6) How do you cut a block?
7) How do you drop a cut block?
8) How do you enter the Text Mode?
9) How do you command the computer to select random entry effects for new frames?
10) Where do you look to find the current frame number?
11) Where do you look to find the current editing mode?
12) Which pull-down menu contains the Shadow option?
13) Which option allows you to view the sequence as it would look on the display?
14) Is it easy to change the color of a shadowed frame once the shadow has been accepted?
15) How do you zoom the size of your working area?

Try the following exercise, refering back to the previous information as little as possible.

Create a new sequence called REVIEW1B. Make a word message saying "Have a Nice Day!" Use the following suggestions to put to use what you have learned in this chapter.

1) Use at least two frames.
2) Use 2 different fonts.
3) Justify and vertically center all text.
4) Set the Hold Time on at least one frame to .9.
5) Shadow all frames different colors.

Chapter 3: Include Sequences

3.1 Include Frames

The simple text message that you created in **Chapter 2** consisted only of Graphic frames. As we mentioned earlier, these are frames that may contain text or graphics. In this chapter we will discuss two more types of frames--**Include** frames and **Time & Temp** frames. For a further discussion on Time and Temperature frames refer to **Chapter 15**.

Include (INC) frames link separate sequences together. An include frame may be inserted at any point in a sequence. However, most often they are placed at the end of a sequence, so that as the current sequence is done displaying, the included sequence will immediately begin.

Let's link two sequences together. Begin by editing the REVIEW1 sequence that you created in Chapter 2.

- Press **F11** to go to the last frame.
- Pull down the **Frame** Menu.
- Select **Insert**.
- Select **Include**.
- A selection box containing all available sequences in the current library will appear. Select the sequence named REVIEW1B and **ENTER**. The bottom status bar will now show you that the current frame is an **INC** (Include) frame. The name of a sequence and a library will appear next to the frame number. The sequence shown here has now been linked to the sequence you are currently editing.

NOTE: Include frames are automatically inserted after the current frame.

- Pull down the **Seq** Menu.
- Select **Verify**. As you verify the current sequence, you will now see REVIEW1B appear after REVIEW1 has ended. You have successfully included a sequence!
- **ESC** to quit verifying.
- Pull down the **Seq** Menu.
- Select **Update/Quit**.

3.2 Include Sequences

It is possible to make sequences that consist only of several include frames. These are called **Include Sequences**. Include sequences allow operators to link several sequences together in a particular order, making the actual displaying process much quicker and simpler. Instead of specifying times for several different sequences to start displaying, the operator need only specify the starting time for a particular Include sequence. As the Include sequence is displayed, it consecutively displays those sequences included within it.

Both moving and stationary audience application operators may benefit from the use of Include sequences. Operators with moving audiences will find that Include sequences are an essential element in scheduling.

NOTE: A detailed discussion of Scheduling can be found in **Chapter 4**.

Include sequences allow the moving audience application operators to display a variety of messages and sequences over an extended period of time.

Stationary audiences are most often found at sports installations. Operators at these installations don't often have the luxury of being able to pre-plan when particular sequences will run and in what order. However,

they may still use Include sequences during the pre-game, halftime, time-outs, and other breaks in the sports action.

To create an Include sequence, begin at the Main Menu.

- Pull down the **Edit** Menu and select **Sequence**.
- **Name** the new sequence INCWED.

NOTE: It is recommended that you name Include sequences according to when they will be displayed. For example, an Include sequence that is run during halftime might be named INC_HALF. An Include sequence that will run only on Wednesdays might be called INC_WED. Sequences are stored alphabetically, so using a prefix of INC will enable you to locate any Include sequences quickly.

- Pull down the **Frame** Menu.
- Select **Insert**.
- Select **Include**.
- At the selection box, select a sequence to be included from the listing of sequences. When you have selected the sequence, the bottom status bar will state that you are on an **INC** frame. The name of the sequence you just selected will appear to the right of the frame number.
- You are now ready to include several more sequences. Pull down the **Frame** Menu and repeat the previous steps for including sequences. Continue the process until you have included a total of four different sequences.

NOTE: If you decide at any point to replace an included sequence with a different sequence, use the Previous or Next Frame options to move to that included sequence. Select **Parameters** from the **Frame** Menu. Select the sequence with which to replace the current one.

- Return to frame one. Frame one is a graphic frame that should be deleted from your Include sequence. Pull down the **Frame** Menu.
- Select **Delete**. A dialogue box will ask you if you want to delete the frame. Select **YES**.
- **ESC** to exit the delete option.

NOTE: If you do not **ESC** after deleting the frame, the computer will advance to the next frame of the sequence, asking you if you would like to delete it.

- To view the Include sequence you have just created, pull down the **Seq** Menu and select **Verify**. The sequences will verify in the order you entered them.
- **ESC** to stop verifying.
- Save the Include sequence by selecting **Update/Quit** from the **Seq** Menu.

3.3 Including Messages

Messages can be included into your include sequences.

- Pull down the **Frame** Menu.
- Select **Insert**.
- Select **Include**.
- At the selection box press **I** for **Filetype**.
- Select a message to be included from the listing. When you have selected the message, the bottom status bar will state that you are on an **INC** frame. The name of the message you just selected will appear to the right of the frame number.

NOTE: If you decide at any point to replace an included message with a different message, use the Previous or Next Frame options to move to that included message. Select **Parameters** from the **Frame** Menu. Select the message with which to replace the current one.

3.4 Including Time and Temperature Frames

Time & Temp frames may contain any of the following information: the **Time** (in Twelve or Twenty-Four Hour Formats), the **Date** (including Day, Month and Year), and the **Temperature** (Fahrenheit or Celsius). The current time and date information are read from the computer's internal clock and are placed in the frame. (See **Section 3.4** of this chapter to change the time and date settings on your computer.) The temperature is read from the temperature sensor located at the sign and is placed in the frame.

NOTE: Not all installations are equipped with a temperature sensor. You will only be able to display the temperature if your installation has a temperature sensor.

There two types of Time & Temp frames: 1) Pre-formatted and 2) Custom. Four sequences have been installed on your system that contain pre-formatted Time and Temp frames. The DATE sequence contains a Time & Temp frame that has been formatted to display only the current date. The TEMP sequence contains a Time & Temp frame that has been formatted to display the current temperature. The TIME sequence contains a Time & Temp frame which has been formatted to display the current time. The TIMETEMP sequence contains a Time & Temp frame that has been formatted to display the current time and temperature. In this chapter we will only use these pre-formatted Time and Temp frames. Custom Time and Temp frames are frames that you design. See **Chapter 15** for a discussion on designing custom Time and Temp frames.

To display any of the four previously mentioned time and temperature sequences, you may simply display them individually or as part of an Include sequence.

- Edit the sequence named REVIEW1B.
- Using the Next Frame option, go to the last frame of the sequence.
- Pull down the **Frame** Menu and select **Insert**.
- Select **Include**. A selection box will provide you with a listing of sequences from which to choose.
- Select TIME.

NOTE: If your installation has a temp sensor, select TIMETEMP instead of TIME.

- Pull down the **Frame** Menu again, select **Insert** and **Include**.
- This time, select DATE as the sequence to include.
- Pull down the **Seq** Menu and select **Verify**. You should now see the sequence REVIEW1B, followed by the TIME (or TIMETEMP) sequence and the TEMP sequence.
- Check to see that the date and time are correct. (Refer to **Section 3.4** of this chapter if the date or time need to be changed.)
- Pull down the **Seq** Menu and **Update/Quit**.

3.5 Setting the Time and Date on Your Computer

When you display the time or date, the information is fed from your computer's internal clock into the sequence. If the date or time are not correct within the sequence, the computer's internal clock will have to be changed. The following steps should be used to change the date or time.

- From the Main Menu, pull down the **System** Menu.
- Select **Exit**. This will exit you out of the Main Menu and into the **Shell Program**.
- Move the highlight bar to **Set Date/Time** by pressing the down arrow key or by moving the mouse. Select the option by pressing **ENTER** or left-clicking on it.
- The current date will be shown. If the information is correct, press **ENTER**. If it is incorrect, type the correct date in the format shown and **ENTER**.
- The current time will be shown. If the information is correct, press **ENTER**. If it is incorrect, type the correct time in the format shown and **ENTER**. The Shell Program will return to the screen.
- Press **ENTER** (while the highlight bar is on the **Display/Edit/Utility** option) to return to the Main Menu.

Now when you display the time and date, they will show the correct time and date.

3.6 Chapter Three Review

Now that we have covered Including Time and Temperature frames, let's review with a simple Include sequence exercise.

- Pull down the **Edit** Menu
- Select **Sequence**
- **Name** the Sequence INCLUDE
- Pull down the **Frame** Menu
- Select **Insert**
- Select **Include**
- Choose a sequence to include.
- Press F11 to return to frame 1
- Pull down the **Frame Menu**
- Select **Delete**
- Select **Yes**
- **ESC**
- Pull down the **Seq Menu**
- **Update / Quit**

As further review, answer the following questions. Try to refer back to the previous information as little as possible:

1) How do you delete the first frame of an Include sequence?
2) How do you insert an include frame?
3) How do you verify an Include sequence?
4) What pull-down menu contains the INCLUDE option?
5) What three letters are found in the bottom status bar to indicate that the current frame is an include frame?
6) What is the name of sequences that contain only include frames?
7) What purpose(s) does an include sequence serve for your particular audience application?
8) What Frame Menu option allows you to replace the sequence chosen in the current include frame?
9) What would be a good name for an Include sequence that was to be displayed only on Saturdays?
10) Where does a new include frame get inserted--before or after the current frame?

Chapter 4: Schedule Editor

IMPORTANT

There are two different types schedules. The first schedule type, discussed in sections 4.1 to 4.13 can be used with all Venus 4600 or Venus 6000 versions and all display types; direct, Remote Venus Controller (RVC), Indoor Remote Controller (IRC) and Remote Display Units (RDU).

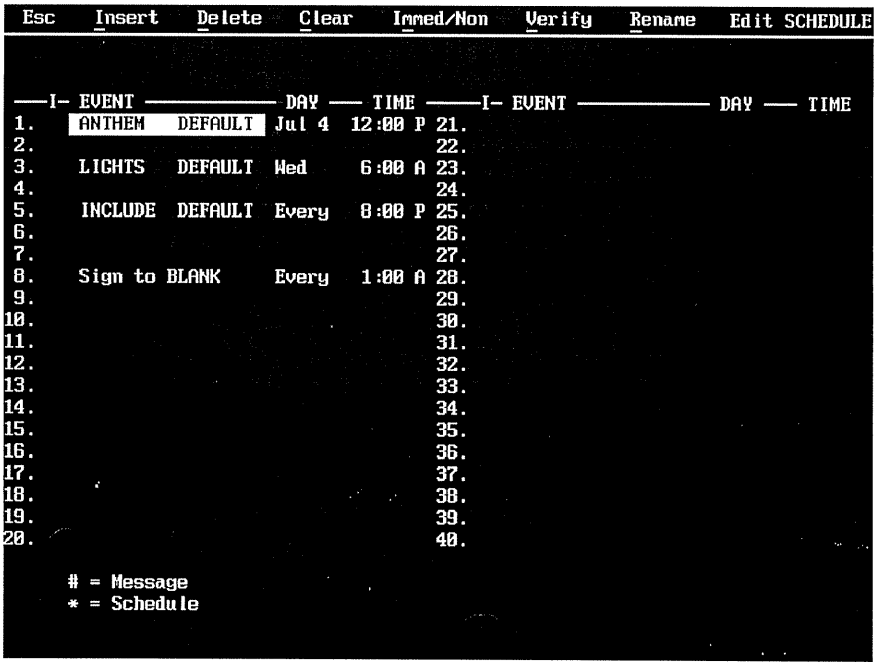
The second type of scheduling, the enhanced schedule is discussed in sections 4.14 to 4.25. This scheduling can only be used with Venus 4600 or Venus 6000 software versions 5.5 or higher and *only* on direct and Indoor Remote Controller (IRC) signs. Currently it will *not* work with Remote Display Units (RDU) or Remote Venus Controller (RVC) displays.

Scheduling is mainly used for moving audience applications. It would be tedious to manually change sequences every time you wanted a new one to start displaying. The Venus scheduling allows the operator to enter in days and dates for sequences up to one year in advance. Stationary audience applications can use scheduling to start up a display before an event. Once an event is underway, you will need to end the schedule and manually start (or queue) sequences. Displaying a schedule directly is learned in **Chapter 5** and displaying a schedule remotely is learned in **Chapter 6**.

4.1 Creating a Schedule

This type of schedule is used with all Venus 4600 or Venus 6000 software versions and all display types. Following are instructions for editing a schedule and entering Include sequences into it, from the Main Menu.

- Press **E** for **Edit**.
- Press **C** for **Schedule**.
- Press **N** for **Name**. Schedules are named like sequences in that the file name must follow DOS standards. For your first schedule, name it SCHEDULE. Press **ENTER,** then **Y** for **Yes** to create it.



The Venus Schedule Editor screen. For descriptions on editing please see the following pages.

- Now the Schedule Editor screen is displayed. The following sections will take you through adding entries to your schedule. Each of the steps are explained, but we will concentrate mainly on **Select Sequence** as this is the choice used most often.

4.2 Select Sequence

Select Sequence is used most often when editing a schedule. With the highlight bar on the upper-left corner under Event follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Select Sequence** and press **ENTER**. A listing of the existing sequences appears.
- Highlight the Include sequence you made in **Chapter 3** and press **ENTER**. The sequence you selected is entered under EVENT. The DAY column reads Every and the TIME column says 1:00 AM. The event column must be entered before DAY and TIME can be edited.

NOTE: When first editing a schedule, it is easiest to have an Include sequence that starts at the same time every day. If you later add in more Include sequences that will run on specific days or dates you will need to position them above the Everyday Include sequences. To do this, move the highlight bar to the top line and press **I** for **Insert**, then **ENTER** to select a sequence to insert.

IMPORTANT NOTE: The computer reads the schedule once every minute from top to bottom and displays the first entry it matches. All entries containing specific dates must be placed before entries that are specific days of the week. Also, entries that are the specific days of the week need to come before the everyday entries.

FOR EXAMPLE: Entry number two will never be displayed because the computer will always read and match entry number one first. To make entry number two appear it needs to be entered before entry number one. To do this, highlight entry number one and press **Insert**. Then enter the specific date entry.

1.	INCLUDE DEFAULT	Every	7:00 A
2.	HOLIDAY DEFAULT	July 4	7:00 A

4.2.1 Changing the Day

- Move the highlight bar to the right so that it is highlighting the DAY column. Press **ENTER** or use the mouse to change the information by clicking the right mouse button.
- To schedule a particular sequence by the day or date press **ENTER** on the option of your choice. Now you can select the particular day or date information--use the up and down arrow keys to change the months and the days of the month. Use the left and right arrow keys to change the field being edited. Press **ENTER** to lock in the date.

4.2.2 Changing the Time

- Move the highlight bar so it is highlighting the TIME column. Press **ENTER**. Press the up arrow key until **7:00 AM** is shown. In the future if you want to change minutes you can move the highlight bar to the right for minutes and use the up arrow to advance the minutes. If you need to change the **AM** and **PM**, move the highlight bar using the left and right arrow keys to the **AM**. Use the up arrow key to switch it to **PM**. Press **ENTER**.

NOTE: Pressing **ENTER** records the current setting and returns the highlight bar to the move mode after editing.

4.3 Select Message

Select Message is used when you have created files in Message Editor. See **Chapter 10, Message Editor** for creating messages. With the highlight bar on the upper-left corner under Event follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Select Message** and press **ENTER**. A listing of the existing messages appears.
- Highlight a message and press **ENTER**. The message you selected is entered under EVENT. The DAY column reads Every and the TIME column says 1:00 AM. The EVENT column must be entered before DAY and TIME can be edited.

NOTE: A message is denoted in the schedule by a #.
NOTE: A message will not run or be recognized by an RVC or an RDU.

4.4 Select Schedule

Sometimes you may want to call another schedule from within the schedule you are editing. **Select Schedule** is also used when you have filled all the lines in your schedule and need more entries. With the highlight bar on the upper-left corner under Event follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Select Schedule** and press **ENTER**. A listing of the existing schedules appears.
- Highlight a schedule and press **ENTER**. The schedule you selected is entered under EVENT. The DAY column reads Every and the TIME column says 1:00 AM. The EVENT column must be entered before DAY and TIME can be edited.

NOTE: A schedule is denoted in a schedule by a *.
NOTE: When a schedule is an entry in another schedule, it will begin running at the scheduled time and will run continuously unless the original schedule is also an entry in the second schedule (the one currently running).

4.5 Sign to Dim

Sign to Dim is used when you want to dim the lamps on an incandescent display or turn the lights off of a Glow Cube display through the schedule. If your display has a photocell it is recommended to use the photocell instead of the scheduled dim option. If you choose to use this option place the highlight bar on the upper-left corner under EVENT and follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Sign to Dim** and press **ENTER**.
- The entry will say **SIGN TO DIM** under EVENT. The DAY column reads Every and the TIME column says 1:00 AM. The EVENT column must be entered before DAY and TIME can be edited.

NOTE: When you choose the sign to dim option be aware that the **Scheduled Dim** option needs to be selected in the Sign Menu. This will ensure that the display will dim according to the schedule and not manually or through a photocell. If your display is not dimming at the correct time, check under the **Sign Menu** and **Dimming** that the **Scheduled Dim** option is selected.

* **For Remote displays Dimming only appears when you are connected to the display.**

4.6 Sign to Bright

Sign to Bright is used when you want to brighten the lamps on an incandescent display or turn the lights off of a Glow Cube display through the schedule. If your display has a photocell it is recommended to use the photocell instead of the scheduled bright option. If you choose to use this option place the highlight bar on the upper-left corner under EVENT and follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Sign to Bright** and press **ENTER**.
- The entry will say **SIGN TO BRIGHT** under EVENT. The DAY column reads Every and the TIME column says 1:00 AM. The EVENT column must be entered before DAY and TIME can be edited.

NOTE: When you choose the sign to bright option be aware that the **Scheduled Dim** option needs to be selected in the Sign Menu. This will ensure that the display will brighten according to the schedule and not manually or through a photocell. If your display is not brightening at the correct time, check under the **Sign Menu** and **Dimming** that the **Scheduled Dim** option is selected.

* **For Remote displays Dimming only appears when you are connected to the display**

4.7 Sign to Blank

The **Sign to Blank** option allows you to blank your display at a certain time during the night. It is recommended that you blank lamp displays for some period of time at night when viewer numbers decrease significantly. This lowers power costs.

IMPORTANT

The **Sign to Blank** option is not recognized by RVC or RDU displays. If you have an RVC or an RDU display you will need to make a sequence called BLANK. To create the blank sequence:

- Go to **Edit** and **Sequence** from the Main Menu.
- Name the sequence BLANK.
- Once you are in the sequence editor, go to the **Sequence** Menu and choose **Update/Quit**.
- For further instructions on creating sequences see **Chapter 2, Sequence Editor**.

NOTE: There are locations that do display sequences 24 hours a day. Glow Cube and LED displays are often run 24 hours/day because of lower power consumption.

To blank the display at 11:00 PM everyday, use the following instructions.

- Move the highlight bar to the bottom of your EVENT list. Press **ENTER**.
- Choose **Sign to Blank**. Press **ENTER**. Under DAY, Everyday should be listed.
- Move the highlight bar to the TIME column and press **ENTER**.
- Move the up arrow key to 11:00, then move to AM and press the up arrow key so that PM is shown. Press **ENTER**.

4.8 Type in Sequence

The **Type in Sequence** option will allow you to type in the name of a sequence instead of selecting from the list of available sequences. When chosen, you will be prompted to type in the sequence name and library name where the sequence is located.

NOTE: Use caution when selecting this option as an invalid sequence name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Sequence** and press **ENTER**.
- You will be asked to type in the sequence name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The DAY column reads Every and the TIME column says 1:00 AM. The event column must be entered before DAY and TIME can be edited.

4.9 Type in Message

The Type in Message option will allow you to type in the name of a message instead of selecting from the list of available messages. When chosen, you will be prompted to type in the message name and library name where the message is located.

NOTE: Use caution when selecting this option as an invalid message name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Message** and press **ENTER**.
- You will be asked to type in the message name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The DAY column reads Every and the TIME column says 1:00 AM. The event column must be entered before DAY and TIME can be edited.

NOTE: A message is denoted in a schedule by a #.
NOTE: A message will not run or be recognized by an RVC or an RDU.

4.10 Type in Schedule

The Type in Schedule option will allow you to type in the name of a schedule instead of selecting from the list of available schedules. When chosen, you will be prompted to type in the schedule name and library name where the schedule is located.

NOTE: Use caution when selecting this option as an invalid schedule name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Schedule** and press **ENTER**.
- You will be asked to type in the schedule name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The DAY column reads Every and the TIME column says 1:00 AM. The event column must be entered before DAY and TIME can be edited.

NOTE: A schedule is denoted in a schedule by a *.

4.11 Schedule Menu

The schedule menu includes the following options.

ESC
This option allows you to save or quit the Schedule Edit Menu and takes you back to the Main Menu.

Insert
This option inserts a line above the highlighted line.
NOTE: Any entries that exceed line 40 will be lost. Be aware of this when inserting many entries.

Delete
This option deletes the highlighted line.

Clear
This option clears the information out of the highlighted line.

Immediate/Nonimmediate
The **immediate** option starts displaying the sequence the second the computer clock reaches the scheduled time. This option does not let currently displaying sequences be completed if they overlap with other

scheduled sequences. Daktronics cautions the use of this option especially if advertisements are is being displayed. The **Nonimmediate** option allows the currently displaying sequence to be completed.

Verify

This option verifies that all sequences entered in the schedule are on the hard drive. Always use this option before saving the schedule.

Rename

This option retains the original schedule on the hard drive and gives you a copy to work with.

Press **ESC** and **Y** for **Yes** to save the schedule to disk.

4.12 Advanced Block Functions

Advanced block functions will allow you to work more efficiently within your schedule.

4.12.1 Blocking, Cutting and Pasting

- **CTRL** and the arrow keys will define a block.
- '-' (Minus key) cuts the blocked information.
- '+' (Plus key) copies the blocked information.
- **ENTER** pastes the copied or cut block at the current position and replaces existing data.
- Pressing the **INSERT** key inserts the block at the current position moving the existing information down.
- The **DELETE** key deletes the block of information

NOTE: Information exceeding line 40 will be lost.

4.13 Scheduling review/exercise

Let's review the steps we used to create a Schedule. From the Edit Menu:

- **E** for **Edit**.
- **C** for **Schedule**.
- **N** for **Name**.
- Type in schedule name, **ENTER.**
- Press **ENTER** to bring up list of available entry options.
- Highlight **Select Sequence**, **ENTER.**
- Highlight the name of your Include sequence and **ENTER.**
- Move the highlight bar past DAY to TIME, **ENTER.**
- Use up arrow key until **7:00 AM** is shown, **ENTER.**
- Move the highlight bar down one line using the down arrow key.
- Press **ENTER.**
- Highlight Sign to Blank, or insert blank sequence.
- Highlight TIME and **ENTER.**
- Use up arrow key until 12:00 AM is shown, **ENTER**
- Press **ESC**
- Press **Y** to save

Try the following hands on exercise looking at the previous keyboard commands instructions as little as possible. Then answer the questions below.

Create a new schedule called Review4. Enter in the Review1 at 7:00 AM on Mondays and Review2 at 7:00 AM Everyday. Choose Sign to Blank at 1:00 AM Everyday. Save the schedule and try answering the following questions:

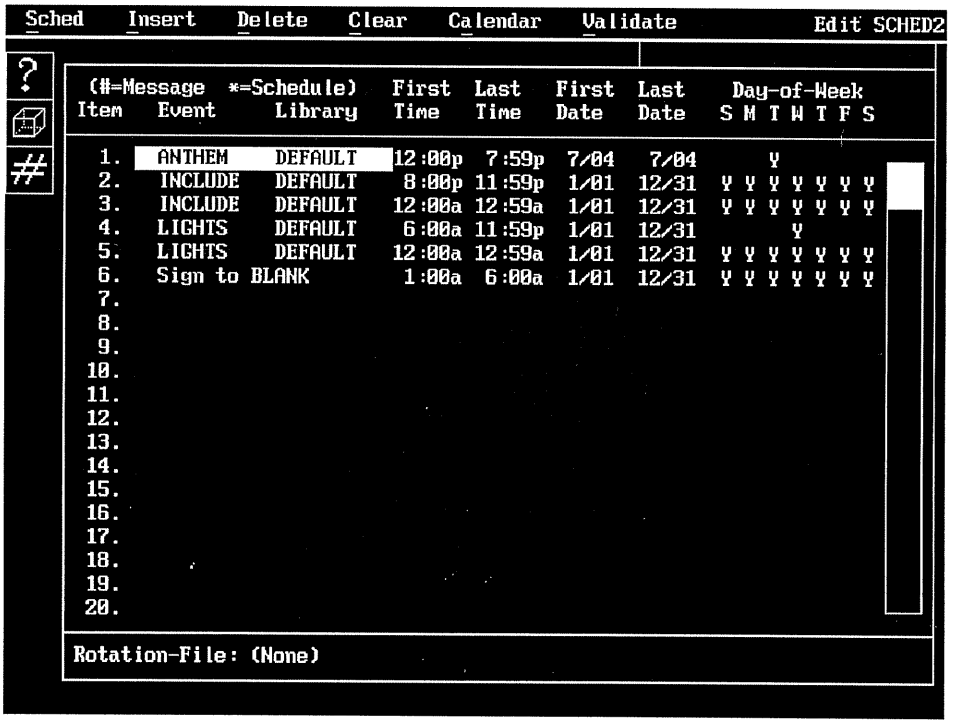
1) How do you insert a line?
2) How do you specify a sequence to run on a particular day of the week?
3) How do you specify a sequence to run on a particular date?
4) How do you verify that the sequences all exist?
5) How do you blank the sign at 11:00 PM every night?
6) How would you copy a block of information?
7) Why should you be careful in using the Immediate option?
8) If a schedule is edited will the information changed automatically change on the display?
9) How do you change AM to PM?
10) Can you enter the day and the time before the event?

4.14 Editing an Enhanced Schedule

A schedule is used to program sequences to be displayed at specific times of the day and on specific dates. The Enhanced Schedule allows you to select the day and/or date and time you want a specific sequence to display. The enhanced schedule alleviates the need for Include sequences by compiling a rotation group consisting of sequences that are to run. The computer will check the schedule once every minute to find all of the sequences that are scheduled. There are 250 entry slots available for your use. **This version of the Enhanced Schedule can only be used with software versions 5.5 or higher Venus 4600/6000. Enhanced Scheduling is *only* available with direct control displays or Indoor Remote Server displays. Contact your Daktronic's representative if you are unsure of your remote type.**

4.15 Select Sequence

- Press **Y** for **System**.
- Press **E** for **Enhanced Schedule**. This option needs to be checked for the Enhanced Schedule to work. This only needs to be done once. A check mark by the word Enhanced will tell you if enhanced scheduling is activated.
- Press **E** for **Edit**.
- Press **C** for **Schedule**.
- Press **N** for **Name**. Type SCHED2. Press **ENTER**, then **Y** for **Yes** to create it.



The Venus Enhanced Schedule Editor screen. For descriptions on editing please see the following pages.

Determine which sequences you want to display, at what times and dates, and in what order they are to be displayed before you continue. Until you are confident editing with enhanced scheduling, you may want to use a desk calendar to record when sequences should start and stop. If there is a specific order in which the sequences are to be displayed, they need to be entered into the schedule in that order.

- Using your arrow keys or the mouse, position your highlight bar over entry number one. Press **ENTER** or right-click. This will allow you to select the type of file you want to insert. Choose **Select Sequence**. This brings up a listing of the sequences from which you can choose. Select the first sequence to be displayed and press **ENTER**. It is now inserted into Event one.

4.15.1 Changing the Time

The schedule will display entries in the order they are listed reading from top to bottom. It will only display sequences that match a given time, date and day of week. It will skip over the sequences that do not match and move down to the next entry.

- The entry is automatically given a FIRST TIME of **12:00a** and a LAST TIME of **11:59p.** This displays the sequence 24 hours a day. To change the display times, move the highlight bar to the FIRST TIME entry. Press **ENTER**. Now type in the time of day that the sequence is to start displaying. If using the mouse, right-click to edit the information. Use the up and down arrow keys to increase or decrease the times and the right or left arrow keys to move between hours and minutes. To switch from **AM** to **PM**, place the highlight on the hours and increase by twelve or highlight the minutes and press **'A'** or **'P'**. **ENTER** to save changes.

- Move the highlight bar to the LAST TIME entry and change the time as you did for the FIRST TIME. The LAST TIME is the last time the sequence is to be displayed.

  NOTE: The time only works on a 24 hour clock, 12:00a to 11:59p. The FIRST TIME can not be later in the day than the LAST TIME. For example, if a sequence is to be displayed from 9:00a to 2:00a, a 15 hour period of time, it needs to be entered twice. The first entry needs to read FIRST TIME **9:00a** and LAST TIME **11:59p**. The second entry needs to be FIRST TIME **12:00a** and LAST TIME **2:00a.**

4.15.2 Changing the Day

- Move the highlight bar to the FIRST DATE entry. The entry is automatically given a FIRST DATE of January 1, and a LAST DATE of December 31. Edit this in the same way that the times were edited. The FIRST DATE is the first date the sequence will be displayed. The LAST DATE is the last date the sequence will be displayed. Change the LAST DATE like you did the FIRST DATE.

  NOTE: The days only work on a 365 day calendar, from January 1 to December 31. The FIRST DATE cannot occur after the LAST DATE. If the sequence is to be displayed from December 15 to January 4, it needs to be entered twice. The first entry needs to be FIRST DATE **December 15** and LAST DATE **December 31**. The second entry needs to be FIRST DATE **January 1** and the LAST DATE **January 4**.

4.15.3 Changing the Day of the Week

- Select which days of the week the sequence is to be displayed. Move the highlight bar to the first DAY OF THE WEEK. Press **ENTER** to turn the **'Y'** on and off. If the **'Y'** is present, the sequence will display on that day of the week. Continue across the days of the week, pressing **ENTER** on each day you want the sequence to display.

- Continue entering sequences.
- Once you are done entering sequences, check for any entries are highlighted with a '<' to the left of the entry. This means that there is an error in that entry. Move the highlight bar over the entry and select **Validate**. This will tell you what the error is. You will need to correct the error before continuing. If you do not choose to correct the error, the error will remain and the sequence may not display as you want it to.
- Once all the sequences are entered in the schedule with the display times, dates and days selected, you may exit the schedule by selecting **S** for **Schedule** and **P** for **Update/Quit**.

4.15.4 Examples of Entries

Below are some examples of how to enter sequences to display:

1. A sequence to display 365 days a year, 24 hours a day, every day of the week should be entered as:

					S M T W T F S
Sequence Name	12:00a	11:59p	1/01	12/31	Y Y Y Y Y Y Y

2. A sequence to display 365 days a year, 24 hours a day, only on Mondays and Thursdays should be entered as:

					S M T W T F S
Sequence Name	12:00a	11:59p	1/01	12/31	Y Y

3. A sequence to display from February 3 to March 12, from 3pm to 5pm on Wednesdays, Thursdays, Fridays should be entered as follows:

					S M T W T F S
Sequence Name	3:00p	5:00p	2/03	3/12	Y Y Y

4. A sequence to display from January 2 to April 15, at 5 minutes after the hour from 9:00a to 2:00p on Mondays, Wednesdays, and Fridays should be entered as follows:

					S M T W T F S
Sequence Name	9:05a	9:06a	1/02	4/15	Y Y Y
Sequence Name	10:05a	10:06a	1/02	4/15	Y Y Y
Sequence Name	11:05a	11:06a	1/02	4/15	Y Y Y
Sequence Name	12:05p	12:06p	1/02	4/15	Y Y Y
Sequence Name	1:05p	1:06p	1/02	4/15	Y Y Y
Sequence Name	2:05p	2:06p	1/02	4/15	Y Y Y

5. A sequence to display from August 2 to September 11, from 8:00p to 2:00a every day of the week should be entered as follows:

					S M T W T F S
Sequence Name	8:00p	11:59p	8/02	9/10	Y Y Y Y Y Y Y
Sequence Name	12:00a	2:00a	8/03	9/11	Y Y Y Y Y Y Y

NOTE: The sequence will only display on September 11 from 12:00a to 2:00a. If you want it to play from 8:00p to 12:00a on September 11, the LAST DATE on first entry should be changed to 9/11.

4.16 Select Message

Select Message is used when you have created files in Message Editor. See **Chapter 10, Message Editor** for creating messages. With the highlight bar on the upper-left corner under Event follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Select Message** and press **ENTER**. A listing of the existing messages appears.
- Highlight a message and press **ENTER**. The message you selected is entered under EVENT. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

NOTE: A message is denoted in the schedule by a #.
NOTE: A message will not run or be recognized by an RVC or an RDU.

4.17 Select Schedule

Sometimes you may want to call another schedule from within the schedule you are editing. **Select Schedule** is also used when you have filled all the lines in your schedule and need more entries. With the highlight bar on the upper-left corner under Event follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Select Schedule** and press **ENTER**. A listing of the existing schedules appears.
- Highlight a schedule and press **ENTER**. The schedule you selected is entered under EVENT. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited. The FIRST DAY and TIME is when the new schedule will begin, the LAST DAY and TIME will be ignored.

NOTE: A schedule is denoted in a schedule by an *.
NOTE: When a schedule is an entry in another schedule, it will begin running at the scheduled time and will run continuously unless the original schedule is also an entry in the second schedule (the one currently running).

4.18 Sign to Dim

Sign to Dim is used when you want to dim the lamps on an incandescent display or turn the lights off of a Glow Cube display through the schedule. If your display has a photocell it is recommended to use the photocell instead of the scheduled dim option. If you choose to use this option place the highlight bar on the upper-left corner under EVENT and follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Sign to Dim** and press **ENTER**.
- The entry will say **SIGN TO DIM** under EVENT. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

NOTE: When you choose the sign to dim option be aware that the **Scheduled Dim** option needs to be selected in the Sign Menu. This will ensure that the display will dim according to the schedule and not manually or through a photocell. If your display is not dimming at the correct time, check under the **Sign Menu** and **Dimming** that the **Scheduled Dim** option is selected.

* **For Remote displays Dimming only appears when you are connected to the display.**

4.19 Sign to Bright

Sign to Bright is used when you want to brighten the lamps on an incandescent display or turn the lights off of a Glow Cube display through the schedule. If your display has a photocell it is recommended to use the photocell instead of the scheduled bright option. If you choose to use this option place the highlight bar on the upper-left corner under EVENT and follow these steps:

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Sign to Bright** and press **ENTER**.
- The entry will say **SIGN TO BRIGHT** under EVENT. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

NOTE: When you choose the sign to bright option be aware that the **Scheduled Dim** option needs to be selected in the Sign Menu. This will ensure that the display will brighten according to the schedule and not manually or through a photocell. If your display is not brightening at the correct time, check under the **Sign Menu** and **Dimming** that the **Scheduled Dim** option is selected.

* **For Remote displays Dimming only appears when you are connected to the display**

4.20 Sign to Blank

The **Sign to Blank** option allows you to blank your display at a certain time during the night. It is recommended that you blank lamp displays for some period of time at night when viewer numbers decrease significantly. This lowers power costs.

NOTE: There are locations that do display sequences 24 hours a day. Glow Cube and LED displays are often run 24 hours/day because of low power consumption.

- Move the highlight bar to the bottom of your EVENT list. Press **ENTER**. Choose **Sign to Blank**.

- The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited. **ENTER**.

4.21 Type in Sequence

The **Type in Sequence** option will allow you to type in the name of a sequence instead of selecting from the list of available sequences. When chosen, you will be prompted to type in the sequence name and library name where the sequence is located.

NOTE: Use caution when selecting this option as an invalid sequence name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Sequence** and press **ENTER**.
- You will be asked to type in the sequence name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

4.22 Type in Message

The Type in Message option will allow you to type in the name of a message instead of selecting from the list of available messages. When chosen, you will be prompted to type in the message name and library name where the message is located.

NOTE: Use caution when selecting this option as an invalid message name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Message** and press **ENTER**.
- You will be asked to type in the message name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

  NOTE: A message is denoted in a schedule by a #.
  NOTE: A message will not run or be recognized by an RVC or an RDU.

4.23 Type in Schedule

The Type in Schedule option will allow you to type in the name of a schedule instead of selecting from the list of available schedules. When chosen, you will be prompted to type in the schedule name and library name where the schedule is located.

NOTE: Use caution when selecting this option as an invalid schedule name or library will not be displayed.

- Press **ENTER**. A list will be shown. These are the different options that you may select.
- Move the highlight bar to **Type in Schedule** and press **ENTER**.
- You will be asked to type in the schedule name then press **ENTER**. You will also be asked to type in the library name then press **ENTER**. The FIRST DATE column reads 1/1 and the LAST DATE column reads 12/31. The FIRST TIME column says 12:00 AM and the LAST TIME column says 11:59 PM. The EVENT column must be entered before DATES and TIMES can be edited.

  NOTE: A schedule is denoted in a schedule by an *.

4.24 Menu Commands

The menu options across the top are **Schedule**, **Insert**, **Delete**, **Clear**, **Calendar** and **Validate**.

Schedule:

Info: This option provides schedule information such as sign directory, library, schedule name and sign size.

Verify: This option lists sequences that will display on a specific day. Select **Verify** and choose a day you would like to view. A listing of what is running and when it will run is created. This can be printed out if you have a printer.

Read/Create: This option allows you to exit the current schedule and edit another one without returning to the Main Menu. Read/Create will give you the option to save.

Rotate: This allows you to choose a sequence to be displayed after every 2, 3, 4, etc. sequence. Once a sequence has been chosen to rotate, it is denoted at the bottom of the screen with the sequence name and how often it rotates.

Rename: This allows you to rename the schedule to a new name. The original schedule will remain under the original name on disk.
NOTE: The schedule must be updated before it can be renamed to retain the original file name and scheduled information.

Update: This option allows you to save the schedule to disk and continue editing it.

Update/Quit: This option allows you to save the schedule to disk and exit to the Main Menu.

Quit: This option allows you to exit from the schedule without saving it.

NOTE: You will be given the opportunity to save the schedule before quitting.

Insert: This option allows you to insert a blank line between listed sequences. Move the highlight bar to the desired line and press **'I'**. A blank line is placed where the highlight bar is and everything below will be moved down a line. Any entries exceeding line 250 will be lost.

NOTE: If you have an entry on line 250 and insert another line before it, the information on line 250 will be lost.

Clear: This option allows a line to be cleared. Move the highlight bar to the desired position and press 'C'. Any information on the line will be cleared. Once a line is cleared the information cannot be retrieved.

Delete: This option allows a line to be deleted. Move the highlight bar to the desired position and press 'D'. The line will be deleted. All entries below this position will move up one position.

Validate: This option will give information on an error of a highlighted line.

Calendar: A calendar is available for your use. It will bring up the current year. The page up and page down keys allow you to page through the months.

Help

ALT-H brings up the Help Menu. This menu gives helpful information on the schedule.

Block Mode

The block mode is available to move information from one area to another. To activate the block mode, move the highlight bar to the area to be copied. Press **CTRL** and the down arrow key (on the numeric pad) or **ALT-B.** This starts the block mode. Use the arrow keys to expand the block. The block can only be expanded down and to the right of the starting position of the block. Once the desired area is highlighted, press either the **'+'** (plus key) for copy or the **'-'** (minus key) for cut. Move the highlight bar to the desired position and press **ENTER**. The blocked information is placed. Anything after the highlight bar moves down.
NOTE: If you want to select one line, press **CTRL** and the down arrow key. Move the arrow key back up to the line you wish to copy.

Go To

ALT-G will allow you to choose the item number to go to.

4.25 Additional Hints

To change all the First or Last Times at once, move the highlight bar to the First or Last Time entries and press the '+' (plus key) to advance the times up in fifteen minute increments or the '-' (minus key) to decrease the time by fifteen minute increments. The '*' (asterisk key) will increase the time in one hour increments and the '/' (forward slash key) will decrease the time in one hour increments. This only works if the times are in one continuous column. A blank line will not allow the times below it to change.

To change all the First or Last Dates at once, press the '+' (plus key) to advance the dates in one day increments and the '-' (minus key) to decrease the dates in one day increments. The '*' (asterisk key) will advance the dates in one week increments and the '/' (forward slash key) will decrease the dates in one week increments. This only works if the dates are in one continuous column. A blank line will not allow the dates below it to change.

Chapter 5: Direct Displaying and Quick Display

The following sections will teach you about displaying sequences and schedules for your direct display sign. The following sections will provide you with indepth directions to control your sign.

5.1 Direct Display Operations

5.1.1 Displaying Sequences/Include Sequences

To start a sequence on a direct sign, follow these instructions from the Main Menu. Moving audience application displays use scheduling most often, but may want to start up a sequence without a schedule at installation.

- Press **S** for Sign, **S** for Sequence.
- Move the highlight bar to the sequence you want to display, press **ENTER** and **C** for Continuous. This plays the sequence you select until another sequence is started, a scheduled sequence starts, or the display is blanked.

The Monitor option automatically shows the sequence displaying. Many operators like to leave the display in the Monitor mode so at a glance you can see what the display is running.

Menu options; Sign, Sequence

Cancel (ESC)
This option takes you back to the Main Menu.

Library
This option allows you to change your current library and if you have a network, this option also allows you to change drives.

Sign
This option allows you to change the current sign being controlled by the Display/Sequence option. This option applies to those with more than one direct display.

Continuous
This option displays the selected sequence until the sign is blanked or another sequence or message is started either through this menu, through a schedule or through Quick Display.

One time
This option displays the selected sequence one time.

 # Times
This option displays the selected sequence a certain number of times that the user specifies from 1 to 32,000.

Single Step
This option displays the selected sequence one frame at a time in sequential order. The first frame is displayed when you press the **N** key or click on the NEXT option. Each time the NEXT frame option is used, the next frame is displayed. After displaying the last frame of the

sequence, the sequence starts over with the first frame. To stop Single Step displaying, click on **ESC** and start a new sequence or blank the sign.

Selected Frame
This option allows you to **ENTER** in a certain frame number in the selected sequence.

Monitor
This option allows you to see what is running on the display.

Status
This option under the Monitor Menu will tell you what all direct signs are doing. Schedules and/or Sequences being displayed, the time and temperature (if you have a sensor) all are listed.

Blank
This option allows you to blank the display. It will stop sequences or messages currently running.
NOTE: Blank will not stop schedules.

Window
This option allows you to open and close Windows (sections of the display). For further directions on Windows, see **Chapter 14**.

Stop
This is used to stop a default sequence. See **Set Default** in **Section 5.1.5**

5.1.2 Schedules

Moving audience applications will almost always want to use scheduling. Stationary audience applications can also use it to start up the sign before an event. Following are instructions from the Main Menu to run a Schedule.

- Press **S** for Sign, **C** for Schedule.
- Highlight the schedule that you want to run and press **ENTER**.
- Press **R** for Run. This will start the schedule running and will take you to the schedule status mode.

  NOTE: When a schedule is run, it will start displaying the entry considered the most logical starting place by the computer. The schedule will display the correct entries when their time and dates have been reached.

Menu options; Sign, Schedule

Cancel (ESC)
This option or pressing **ESC** takes you back to the Main Menu.

Library
This option allows you to select a different library and stay within the Sign, Schedule Menu.

Sign
This option allows you to select a different sign to display from and stay within the Sign, Schedule Menu.

Run
This option allows you to run a schedule.

Monitor
This option allows you to find out what schedule is running or if no schedule is running.

End
This option stops the schedule that is running.

5.1.3 Dimming

For indoor and outdoor SunSpot and Starburst technologies you can dim and brighten the display manually. This can also be done under the Brightness menu through the Automatic option (if you have a temperature sensor with your display). At a certain level of ambient lighting the lamps will dim. During the daytime the lamps should be brightest because they are competing with sunlight. In the evening and at night they should be dimmer because they aren't competing with the sunlight.

Dimming for the Glow Cube displays consists of turning the fluorescent or black lights on or off. Lights should be illuminated at night for viewing. During the day lights can be turned off.

To turn dimming on or off or to turn Glow Cube lights on or off, select the **D**imming option and select with the highlight bar or the highlighted letter of the option you would like used. Your choices are:

Manual Dim / Lights on
Dims the bulbs on an incandescent display or turns the lights on a Glow Cube display.

Manual Bright / Lights off
Brightens the bulbs on an incandescent display or turns the lights off on a Glow Cube display.

Photocell Direct
If your direct sign installation has a Photocell this option can be selected and the Photocell will automatically adjust the brightness of the lights according to the outdoor lighting conditions.

Photocell Remote
If your remote sign installation has a Photocell this option can be selected and the Photocell will automatically adjust the brightness of the lights according to the outdoor lighting conditions.

5.1.4 Adjust

- From the Main Menu select **S** for **S**ign
- Select **A** for **A**djustments
- Select the option under **Adjustments** you desire. These options include.

Powerfail
If powerfail is selected (shown by a check mark), and a power failure occurs the sequence or schedule previously running, automatically starts up once power is back on to the computer. It is recommended that customers using scheduling use Powerfail so down time is as brief as possible.

Logging
If logging is selected (shown by a check mark), the computer will log in a file (DOS extensions are .LOG) stored on the hard drive every time a new sequence is displayed. Scheduled activities will also be logged. To preview, print, rename copy or delete a file you will need to exit the Main Menu and select the Logging option from the V46 or V6 Shell Program.

RTD
The RTD (Real Time Data) option allows the computer to receive data from other sources such as Dakstats statistical software or other scoring packages. Select which RTD Port to be used to control selected frame display.

Set Default
Instead of blanking your display, a Default sequence can be set. This default sequence is displayed when Stop is selected in the Sign/Sequence or Quick Display menus.

Clear Default
The default sequence that has been set can be cleared using the Clear Default option.

5.2 Quick Display

Quick Display works with direct displays and is recommended for sporting applications. During the event, you can stay in the Quick Display mode to control the display. Following are instructions to edit an existing Quick Display file and then to display sequences using it.

- From anywhere in the Venus 4600 or 6000 press **CTRL Q.** Quick Display files must already be set up on the computer. If not, you will need to configure them. Instructions to do this are found in **Chapter 13**.

- After pressing **CTRL Q** a screen, with 100 file cells, appears. Other options are listed at the top of the screen. You will be using these later. Notice at the bottom of the screen that there are several black Quick Display boxes. You need configured your own Quick Display files and named them appropriately. Refer to **Chapter 13**. These correspond to the function keys located at the top of your keyboard, **F1-F10.** Quick Display screen 1 can be accessed by pressing **F1**, Quick Display screen 2 can be accessed by pressing **F2** and so forth. Press **F1** now if it is not currently selected. The selected Quick Display file will be highlighted in red.

- To add or change a Quick Display sequence cell, you can move the highlight bar (with your arrow keys or by clicking with the left mouse button) to the cell where you want to insert a sequence.

- Press **E** for **E**dit or the right mouse button. Existing sequences are listed. Highlight the sequence you wish to insert, press **ENTER** and then **C** for **C**ontinuous. **C**ontinuous displays the sequence until another sequence is started or the display is blanked.

- The sequence name is listed in the first Quick Display file box. Move the highlight bar down to the next file box and press **E** for **E**dit. Highlight a different sequence, press **ENTER** and then **O** for **O**ne Time. **O**ne Time displays the sequence just one time.

- To display an inserted sequence highlight the Quick Display cell with the sequence and press **ENTER**. To queue more than one sequence to run at one time, keep pressing **ENTER** on the desired sequences. They will queue or line up in the queue area at the bottom right of the screen.

NOTE: Sequences have to be entered into the Quick Display file listing before they can be displayed.

- Enter in five more sequences using different display features. These are listed below:

The following menu options are found under the **E**dit menu in Quick Display. A sequence must be selected first before the following options can be used.

(ESC) Cancel - This option returns you to the Quick Display menu by pressing the **ESC** key.
Delete - This option deletes the sequence out of the Quick Display listing. It does not delete the sequence off disk.
One Time - This option displays the sequence just one time. The display then automatically blanks, starts the next sequence queued in or returns to the Default sequence. A default sequence must be set by you.
Times - This option allows you to select how many times you want the sequence to display. After it has displayed the selected number of times, the display blanks or automatically starts the next sequenced queued in.

Window - If a window (or windows) has (have) been configured for the sign you use this option to open and close windows. Refer to **Chapter 14** to learn how to configure and use windows.
Library - This option allows you to select sequences from different libraries.
Single Step - This option allows you to control the timing of each frame. The sequence is displayed one frame at a time. The user controls the display rate by pressing **N** to display the next frame.
Filetype - This option allows you to switch from selecting sequences to messages. Selecting **Filetype** again will switch you back to sequences.
Continuous - Continuous displays the sequence until another sequence is started or the display is blanked or stopped by the operator.
Selected Frame - This option allows you to select (by frame number) which frames of the sequence will be displayed.
Set Default - A Default sequence can be selected so that when a selected sequence is done displaying the controller automatically displays a "default" sequence. This sequence could be an include sequence or a logo, or any other sequence you desire.

- To display from the Quick Display mode move the highlight bar to the sequence you want to display and press **ENTER**. Remember to press **N**ext if the sequence currently running is continuous.

- In the lower right corner the current sequence is listed. In the upper right corner the currently displayed sequence is shown.

- As the highlight bar moves over different cells in the lower left corner a code for how the sequence is displayed is given. (CN= Continuous etc.).

- Press **ENTER** on a **O**ne Time sequence and then **ENTER** on a Continuous sequence. Notice that after the One Time sequence has displayed, the next sequence listed automatically displays. When a **C**ontinuous sequence is displayed you need to queue another sequence and then press **N** for **N**ext. To stop the **C**ontinuous sequence you could also press **B** for **B**lank or **S**top. Blank also clears the queue. These options are listed at the top of the Quick Display screen. Other options are **Z** for **Z**ooming the monitoring area and **C** for **C**lear which clears sequences from the queued area. The **P**rint option allows you to print the Quick Display listing. **R**eturn returns you to where you were before entering Quick Display.

- Quick Display allows you to shell to DOS by pressing **ALT-ESC**. To return to Quick Display press **ALT-ESC** again.

After reading this section on Quick Display, try and answer the following questions:

1) How do you add a sequence to the Quick Display screen listing?
2) How do you start up a schedule?
3) How do you run a sequence continuously on the display?
4) Describe the Single Step option?
5) Are you more likely to run schedules or use Quick Display?
6) When is the Powerfail mode good to use?
7) Should you brighten or dim an outdoor display at night?
8) What does the logging feature do?
9) If a sequence is entered into Quick Display as displaying continuously, how could you stop it?
10) How do you switch from Quick Display screen 1 to 2.

5.3 Displaying review/exercise.

Let's review the steps we used to display a sequence, schedule and how to run Quick Display.

For Sequences:
- **S** for **S**ign
- **S** for **S**equence
- Highlight sequence to display
- Press **ENTER**
- **C** for **C**ontinuous
- **M** for **M**onitor
- **B** to **B**lank Display

For Schedules:
- **S** for **S**ign
- **C** for S**c**hedule
- Highlight schedule to display
- Press **ENTER**
- **R** for **R**un
- **ESC** to get out of status mode

For Quick Display:
- **CTRL Q**
- **F1** to select QD screen 1
- Highlight top left file box
- **E** for **E**dit
- Highlight sequence to enter
- Press **ENTER**
- **C** for **C**ontinuous

Try to answer the following questions then try the hands-on exercise. See if you can do so without looking at the above instructions:

For displaying sequences:

Start up a sequence to run continuously and monitor it to make sure it is displaying. Select another sequence and run it just one time and blank the sign.

For running a schedule:

Start up a schedule to run. When it asks you if you want to run a sequence, select Include. ESC and go back to Sign, Sequence and Monitor to make sure the display is running. Now go back in and end the schedule.

For using Quick Display:

Press **CTRL-Q** to enter the Quick Display mode and cue up five sequences. Add three more sequences into the Quick Display file listing. Queue these in and run them. Blank the display and return to the Main Menu.

5.4 Word Message, Include, Scheduling and Displaying Review Exercise

Create a word message that you can use for your display. Create an include sequence with this word message entered as well as five other sequences. Include Time or T&T after each sequence.

Moving audience applications:

Edit the schedule and enter the Include sequence to start up 10 minutes from the current time listed in the lower right-hand corner of the screen. Run the schedule. End the schedule and blank the sequence that is currently running.

Stationary audience applications:

After creating the include sequence, enter it into a Quick Display file to run one time and display it. Queue in six other sequences. Blank the sign when you are finished with the exercise.

Chapter 6: Remote Displaying

The following sections will teach you about remote displaying of sequences and schedules. There are four different types of Venus 4600 and 6000 remote displays. There are Remote Indoor Displays, Remote Venus Controllers, Remote Display Units and Remote Network controllers. Each section is discussed individually and in depth. To see what type of display you have go to the Main Menu and choose System and Select Sign. Your display type will be listed after the matrix size.

6.1 Remote Indoor Controller

Two Venus controllers are used in an indoor remote setup. One computer is used as the master (located at the operator's site) to create new sequences and schedules. The work created on the master is transferred to the second Venus controller, the slave (located at the display). The slave directly controls the display. The master and the slave are connected via modem. More than one display can be controlled from either controller:

1)The master transfers information to the slave which in turn controls the display.

2)From the Shell Program, the slave controller will run the Indoor Remote Server file. This will allow the slave to communicate with the master controller. From the Indoor Remote Server the slave can receive information from the master or it can run the display directly. For direct display options see **Chapter 5.**

NOTE: When you receive your computer, it should already be configured for the correct sign size, and technology. If not, please see **Chapter 13, Section 13.2.3**.

6.1.1 Master Operations

Calling the slave

- Turn the modem on if it is an external modem.
- Select the correct sign.
- From the Main Menu, press **S** for **Sign**. The menu will change to the Sign Menu
- Press **Y** for **System**.
- Press **C** for **Connect**.
- Press **Y** for **Yes** to connect.
  If there is a password configured for the slave, you will need to Enter it. You must type in the word exactly as it was entered at the slave (caps vs. lower case). You will only see X's being entered in. This will help to keep your password secret. If a password has not been config ured, you will not have to enter anything. You will hear the modem dialing. The modem status screen will appear and show you what the modem is doing. Wait for this box to disappear and OK to show at the bottom status bar. There will be a high-pitched screeching sound once the modem has connected. You are connected.

Transferring Files to the slave

NOTE: You will have to send all information to the slave. The slave does not know what to display until the information is sent and started by sequence or schedule.

- Press **F** for **File**. This will bring up a list of options. Choose **T** for **Transfer.**
- A list of all the sequences are listed under the selected sign and library will appear.
- Choose the sequences to be transferred by moving the highlight bar over the names and press

ENTER. A check mark will appear in front of the sequence name once it has been selected. More than one may be selected. All of the sequences may be selected by pressing **A** for **All.**

- Press **G** for **Go**. This will transfer all information selected to the sign. Notice in the lower left corner that the status of each sequence being transferred is shown. When an **OK** is in the extreme left, then all sequences have been transferred.
- Now transfer the schedules by pressing **T** for **Transfer**. Once the list of sequences appears, press **I** for **Filetype**. This will bring up the list of schedules. Choose the schedules to be transferred to the slave in the same manner that the sequences are selected. Once all are marked, press **G** for **Go**. Notice again, in the lower left corner that the status of each schedule being transferred is shown. When an **OK** is shown in the extreme left corner, then all schedules have been transferred.

NOTE: Messages will never appear as a file choice as they are not recognized by a remote display.

NOTE: You may transfer sequences or schedules to the slave which are currently running if they have had changes made to them. You will have to restart the new information so that the change will go into effect.

Displaying Sequences and Schedules

In most situations you will want to run a schedule, however if you want to test the display by starting up some sequences, follow these instructions.

Sequence

- To display a sequence, press S for **Sequence**.
- A list of sequences at the slave should appear. Choose the sequence or include sequence that is to play by moving the highlight bar over the name. Press **ENTER.**
- Now you need to decide how you want the sequence to play.

Continuously: The sequence will play indefinitely until another sequence is told to play or a schedule starts

One Time: The sequence will play once

 # Times: The sequence will play the number of time specified

Single Step: The sequence is displayed one frame at a time. To move from frame to frame, press the space bar. (Daktronics recommends limited use of this unless you can see your display.)

Select Frame: This allows a frame from a sequence to be displayed. (Daktronics recommends limited use of this unless you can see your display.)

Schedules

- To run a schedule, press **C** for **Schedule.**
- The list of schedules at the Slave will be brought up. Choose the one to run by moving the highlight bar over it and press **ENTER**.
- Press **R** for **Run.**
- Go to **Sequence** and choose the sequence to run until the next scheduled item will start running. Choose this sequence to run **Continuously**.

NOTE: If you are running an enhanced schedule, **DO NOT** start a sequence to run.

Status

It is a good idea to check the status of the sign once a schedule or sequence have has started.

- Press S for **Sequence**. A listing of sequences at the sign are brought up.

- Sign size with rows and columns
- Current time and date at the slave
- Temperature (optional) and temperature offset
- Connect time
- Brightness setting
- Memory left at the sign
- Press **ESC** twice to get back to the main Sign Menu.

Monitor

You may monitor what is running on the sign. You will notice that some of the frames do not show in entirety. What you are seeing is the change between frames. The computer is showing this information.

- Press **S** for **Sequence**. You will be at the Sequence Menu.
- Press **M** for **Monitor**. This will bring up the screen with the sequences playing at the sign.
- Press **ESC** twice to get back to the Main Sign Menu.

List

You have the option to bring up a listing of all the sequences that are at the sign.

- Press **S** for **Sequence**.
- Press **I** for **List**. This will bring up a listing of all sequences and schedules currently at the slave and a listing of when the sequences and schedules where transferred. There is also a list of elapsed time, which shows how long the sequence has displayed.
- Press **ESC** twice to return to the Sign Menu.

Library

The Indoor Remote allows for more than one library at the slave. They will automatically be created when you transfer information to the slave under any other library than default.

- To change a library, press **S** for **Sequence**. This will bring up all the sequences at the slave under that library.
- Press **L** for **Library**. This will bring up a list of the libraries at the slave. Select the library you want by moving the highlight bar over the name and pressing **ENTER**. This will bring up the sequences listed under this library.

Removing Sequences, Schedules and Libraries from the Slave

You may remove sequences schedules, and libraries from the Slave when they are no longer in use. It is best not to remove a sequence or schedule from the Slave that is currently running. You will need to stop the sign to remove them if they are displaying (it is recommended that instead of leaving the display blank while transferring, you display a Time and Temperature sequence that doesn't need to be transferred).

- To remove sequences and schedules from the Slave, press **F** for **File**. This will bring up a list of the sequences at the Slave. Select the sequences to remove by moving the highlight bar over the names and pressing **ENTER**.
- Press **G** for **Go**. This will remove the selected sequences. In the lower left corner, you will see the names of the sequences quickly flash by as they are being removed. An **OK** will appear in the lower left corner when it is done removing the sequences.
- To remove schedules, press **F** for **File**. This will bring up the list of sequences again. Since you want to remove schedules, you will need to press **I** for **Filetype**. This will bring up the schedules listed at the Slave. Select the desired schedules to remove in the same manner as removing sequences.
- Once schedules to be deleted have been selected, press **G** for **Go**. This will remove the selected schedules. In the lower left corner, the names will flash by. An **OK** will appear in the lower left corner when deleting is done.
- To remove a library that is no longer in use, you have to remove all sequences from it first.

See the section above on removing Sequences from the Slave.

- Press **F** for **File** from the Sign Menu.
- Press **L** for **Remove Library.** This will bring up a list of libraries at the slave. Select the libraries you wish to remove by moving the highlighting bar over the names and pressing **ENTER**.
- Once you have selected the libraries to remove, press **G** for **Go**. This will remove the selected libraries. In the lower left corner, you will see an **OK** when this is completed.

Stopping or blanking the sign

There are times when you might want to stop the sign, for example, before transferring an include sequence. If the include has the same name as the one already existing at the slave, but has a new sequence in it, you will need to transfer the include sequence and the new sequence to the Slave. The include sequence will write over the one at the Slave, but you will have to stop the sign and then restart the schedule for the new sequence and included sequence to start. The following are instructions to do this.

- Press **C** for **Schedule.**
- Press **E** for **End.** This will end the schedule but the sequence that has been displaying will continue. From the Sign Menu highlight and press **ENTER** on the Blank Sign option (now you can start up a Time and Temperature sequence unless you don't mind leaving the display blank.
- Now you can transfer the changed sequences and include sequences.
- Once transferring is complete, from the Sign Menu select Run Schedule. Select the schedule and press **R** for **Run.** You will also want to start up a sequence to display until the next schedule entry kicks in.
- Press **ESC** once to return to the sign menu.

Dimming

You may choose to dim the sign from this option.

- You may dim/lights off or bright/lights on the sign manually which means you have to tell the sign when the lights need to come on or off, or when the lights need to be brighter or dimmer.
- You may also do this in the schedule (see **Chapter 4**).
- The last option is to have the dimming be controlled by a photocell. The sign will take care of itself by monitoring the sunlight around it. A photocell is needed.

NOTE: On incandescent signs, you will want the lights on bright during the day since the lights of the sign have to compete with the sunlight. During the evening hours, they can be on dim since there is no sunlight for it to compete with. On a Glow Cube, you will have the sign on lights off during the day, and lights on during the night. The lights will illuminate the elements for night viewing and is not needed during the day.

- A check mark will appear in front of the option that has been chosen. To change options move the highlight bar over the option you want and press **ENTER.**

Adjustments

This option lets you adjust the time, temperature and the password at the sign.

- To change the time, press **A** for **Adjustments.** Then press **T** for **Time.** This will automatically set the time at the sign from that of your computer. If there is an offset for time zones, this will be taken into consideration since this has already been programmed into Configure Sign when the sign is made.
- To change to temperature, press **A** for **Adjustments**. Then press **O** for **Temperature Offset.** You will then need to **ENTER** the number of degrees plus or minus from the temperature currently on the sign.
- Press **ENTER** when you have the number typed in.
- To change the password, press **A** for **Adjustments.** Then press **P** for **Password.** You may type in the new password. Make note of how it is typed in exactly, caps and all.
- Press **ENTER** when the new password is typed in.

Disconnect

- When you are finished with your communications to the slave, you may disconnect. To do this, press **ESC**. The option to disconnect is brought up. Choose YES. This will bring you back to the Main Menu.

6.1.2 Slave Operations

The sign that is to be used to receive information from the master needs to be the first direct sign listed when going under **System** and **Select Sign**.

The computer acting as the slave needs to have the Sign Driver running. The sign driver can be turned on in the Shell Program.

In the shell program select the **Indoor Remote Server**. Normally, this program is started when the slave computer is turned on. No operator is present. The computer is now ready to receive information from the master.

If the sign is to be controlled from the slave at one time or another, all operations should be made through the Indoor Remote Server menu.

Display a sequence

- Move the highlight bar over **Start Sequence** and press **ENTER**.
- A list of sequences in memory is brought up. By moving the highlight bar up and down, you may select the one you want to display by pressing **ENTER.**
- You are then asked how you would like this sequence to display.

  Continuously: The sequence will run continuously until another sequence is started or the display is blanked.

  # of Times: The sequence is told to display a certain number of times.

  Single Step: The frames are manually gone through using the space bar to go to the next frame.

  Selected Frame: A given frame in a sequence is displayed.

The following are menu options while in the Indoor Remote Server menu.

Select Sign

- Move the highlight bar over **Select Sign** and press **ENTER**. This will give you a listing of the signs available to run.

Monitor sign

- Move the highlight bar over **Monitor** and press **ENTER**. This will show you what is currently running on the sign. This is not a continuous monitor but is a sampling of frames every few seconds. The sequence you are monitoring will not run smoothly.

Sign status

- Move the highlight bar over **Sign Status** and press **ENTER**. This will bring up the current status of the sign. The following choices will appear:
  - Sign Identifier: the name given to the sign
  - The current schedule, sequence and frame running
  - Dimming setting
  - Status of temperature sensors
  - Information on Error correction, Dial Mode and Power failure.

Start Sequence

- Move the highlight bar over **Start Sequence** and press **ENTER**
- A list of sequences in the memory is brought up. By moving the highlight bar up and down, you may select the one you want to display by pressing **ENTER**.
- Then you choose how you would like this sequence to display.

Blank sign

- Move the highlight bar over **Blank Sign** and press **ENTER**. This will automatically blank the sign, but the schedule will continue to run.

Run a schedule

- Move the highlight bar over **Run Schedule** and press **ENTER**.
- Select the schedule to run by moving the highlight bar over the schedule you want to run and press **ENTER**.
- The schedule displays a sequence from the schedule until the next entry in the schedule is to play.

End schedule

- Move the highlight bar over **End Schedule** and press **ENTER**. This will end the schedule running, but will leave the current sequence displaying (unless you have already blanked it).

Preview

- Move the highlight bar over **Preview** and press **ENTER**. This will bring up a list of sequence.
- Select the sequence you want to preview by moving the highlight bar over it and pressing **ENTER**.
- To end preview, press **ESC** once to return to selecting sequences, twice to return to the remote options.

Adjustment

- Select the mode you want by moving the highlight bar over it and pressing **ENTER**.

Brightness: Allows you to choose between Manual Dim or Bright and Auto Dim or Bright
Logging: Allows the logging to be turned on or off
Powerfail: Allows the power failure mode to be turned on or off
RTD Selector: Allows you to select which RTD port is to be used, if any

Exit

- Move the highlight bar over **Exit** and press **ENTER**.
- You will be asked if you want to exit the Remote session and go into DOS. **Y** will take you to the Venus Shell Program and **N** will take you back into the Remote Mode.

After reading this section on Indoor Remote, try and answer the following questions:

1) What does the Master computer do?
2) What does the Slave computer do?
3) How do you stop the sign?
4) How do you send sequences to the Slave?
5) Can you send a sequence that is already running at the Slave?
6) What does status tell you?
7) How do you know when the sequences are transferred to the Slave?
8) How do you run a schedule?
9) When listing sequences, what information does this option give you?
10) Can you run the sign directly from the Slave?

6.1.3 Remote Menus

When entering the Sign Menu at the Main Menu you will first enter the Remote Logon Menu. This menu includes:
ESC - ESC to the Main Menu
Log - Clear, View, and Print a log file.
NOTE: It is a good idea to clear the log file every-once-in-a-while. The log file will contain every bit of activity between the sign and the computer. This file will get very large very quickly.
System - Select Sign, Connect, Term, and Datascope
NOTE: Datascope is a diagnostic tool used to verify data going to the sign and coming back from the sign.

The Remote Menu is entered once the computer is connected to the sign.
This menu includes:
ESC - ESC to the Main Menu and disconnect from the sign.
File - Transfer, Retrieve, Remove, Remove Library
Seq - Brings listing of availabe sequences to display.
Sch - Brings listing of available schedules to display.
Dimming - Manual Dim/Lights on, Manual Bright/Lights off, Photocell, Scheduled Dim
Adjust - Time, Password, Temperature offset
Log - Clear, View
System - Status, Disconnect, Datascope, Diagnostics.
NOTE: The Status option under System is different from the sign status we have already discussed. This status option will give you the status on data sent to and retrieved from the sign. This information can be cleared.
NOTE: The diagnostics option is used for installers only and is password protected. **DO NOT USE.**

6.2 Remote Venus Controller

The Remote Venus Controller (RVC) allows you to run the display without being directly connected to it. The computer at the operator site transfers information to the Remote Venus controller (via telephone lines) which then controls the display. Your computer and the RVC are only connected for as long as you need to transfer information and give instructions. You can transfer sequences, include sequences and schedules to the RVC and tell them when to run. When you are done, you simply have to disconnect and you will no longer be connected to the RVC. The sign will display what the RVC tells it to until you give it further instructions.

NOTE: When you receive your computer, it should already be configured for the correct sign size, and technology. If not, please see **Chapter 13, Section 13.2.3**.

6.2.1 RVC Operation

Calling the RVC

- Turn the modem on if it is an external modem.
- Select the correct sign.
- From the Main Menu, press S for **Sign**. The menu will change to the Sign Menu
- Press **Y** for **System**.
- Press **C** for **Connect**.
- Press **Y** for **Yes** to connect.
  If there is a password configured for the RVC, you will need to Enter it. You must type in the word exactly as it was entered at the RVC (caps vs. lower case). You will only see X's being entered in. This will help to keep your password secret. If a password has not been config ured, you will not have to enter anything. You will hear the modem dialing. The modem status screen will appear and show you what the modem is doing. Wait for this box to disappear and OK to show at the bottom status bar. There will be a high-pitched screeching sound once the modem has connected. You are connected.

Transferring Files to the RVC

NOTE: You will have to send all information to the RVC. The RVC does not know what to display until the information is sent and started by sequence or schedule.

- Press **F** for **File**. This will bring up a list of options. Choose **T** for **Transfer.**
- A list of all the sequences are listed under the selected sign and library will appear.
- Choose the sequences to be transferred by moving the highlight bar over the names and press **ENTER.** A check mark will appear in front of the sequence name once it has been selected. More than one may be selected. All of the sequences may be selected by pressing **A** for **All.**
- Press **G** for **Go**. This will transfer all information selected to the sign. Notice in the lower left corner that the status of each sequence being transferred is shown. When an **OK** is in the extreme left, then all sequences have been transferred.
- Now transfer the schedules by pressing **T** for **Transfer**. Once the list of sequences appears, press **I** for **Filetype**. This will bring up the list of schedules. Choose the schedules to be transferred to the RVC in the same manner that the sequences are selected. Once all are marked, press **G** for **Go**. Notice again, in the lower left corner that the status of each schedule being transferred is shown. When an **OK** is shown in the extreme left corner, then all schedules have been transferred.

  NOTE: Messages will never appear as a file choice as they are not recognized by a remote display.

  NOTE: You may transfer sequences or schedules to the RVC which are currently running if they have had changes made to them. You will have to restart the new information so that the change will go into effect.

Sequence

- To display a sequence, press **S** for **Sequence**.
- A list of sequences at the slave should appear. Choose the sequence or include sequence that is to play by moving the highlight bar over the name. Press **ENTER.**
- Now you need to decide how you want the sequence to play.

Continuously: The sequence will play indefinitely until another sequence is told to play or a schedule starts

One Time: The sequence will play once

 # Times: The sequence will play the number of time specified

Single Step: The sequence is displayed one frame at a time. To move from frame to frame, press the space bar. (Daktronics recommends limited use of this unless you can see your display.)

Select Frame: This allows a frame from a sequence to be displayed. (Daktronics recommends limited use of this unless you can see your display.)

Schedules

- To run a schedule, press **C** for **Schedule.**
- The list of schedules at the RVC will be brought up. Choose the one to run by moving the highlight bar over it and press **ENTER**.
- Press **R** for **Run.**
- Go to **Sequence** and choose the sequence to run until the next scheduled item will start running. Choose this sequence to run **Continuously**.

NOTE: If you are running an enhanced schedule, **DO NOT** start a sequence to run.

Status

It is a good idea to check the status of the sign once a schedule or sequence have has started.

- Press **S** for **Sequence**. A listing of sequences at the sign are brought up.
- Press **A** for **Status**. This will bring up a box that shows:
  - A listing of schedule, include and sequence playing at the sign
  - Software revision
  - Sign size with rows and columns
  - Current time and date at the slave
  - Temperature (optional) and temperature offset
  - Connect time
  - Brightness setting
  - Memory left at the sign
  - Press **ESC** twice to get back to the main Sign Menu.

Monitor

You may monitor what is running on the sign. You will notice that some of the frames do not show in entirety. What you are seeing is the change between frames. The computer is showing this information.

- Press **S** for **Sequence**. You will be at the Sequence Menu.
- Press **M** for **Monitor**. This will bring up the screen with the sequences playing at the sign.
- Press **ESC** twice to get back to the Main Sign Menu.

List

You have the option to bring up a listing of all the sequences that are at the sign.

- Press **S** for **Sequence**.
- Press **I** for **List**. This will bring up a listing of all sequences and schedules currently at the slave and a listing of when the sequences and schedules where transferred. There is also a list of elapsed time, which shows how long the sequence has displayed.
- Press **ESC** twice to return to the Sign Menu.

Library

More than one library is allowed at the RVC. They will automatically be created when you transfer information to the slave under any other library than default.

- To change a library, press **S** for **Sequence**. This will bring up all the sequences at the slave under that library.
- Press **L** for **Library**. This will bring up a list of the libraries at the slave. Select the library you want by moving the highlight bar over the name and pressing **ENTER**. This will bring up the sequences listed under this library.

Removing Sequences, Schedules and Libraries from the RVC

You may remove sequences schedules, and libraries from the RVC when they are no longer in use. It is best not to remove a sequence or schedule from the RVC that is currently running. You will need to stop the sign to remove them if they are displaying (it is recommended that instead of leaving the display blank while transferring, you display a Time and Temperature sequence that doesn't need to be transferred).

- To remove sequences and schedules from the RVC, press **F** for **File**. This will bring up a list of the sequences at the RVC. Select the sequences to remove by moving the highlight bar over the names and pressing **ENTER**.
- Press **G** for **Go**. This will remove the selected sequences. In the lower left corner, you will see the names of the sequences quickly flash by as they are being removed. An **OK** will appear in the lower left corner when it is done removing the sequences.
- To remove schedules, press **F** for **File**. This will bring up the list of sequences again. Since you want to remove schedules, you will need to press **I** for **Filetype**. This will bring up the schedules listed at the RVC. Select the desired schedules to remove in the same manner as removing sequences.
- Once schedules to be deleted have been selected, press **G** for **Go**. This will remove the selected schedules. In the lower left corner, the names will flash by. An **OK** will appear in the lower left corner when deleting is done.
- To remove a library that is no longer in use, you have to remove all sequences from it first. See the section above on removing Sequences from the RVC.
- Press **F** for **File** from the Sign Menu.
- Press **L** for **Remove Library.** This will bring up a list of libraries at the RVC. Select the libraries you wish to remove by moving the highlighting bar over the names and pressing **ENTER**.
- Once you have selected the libraries to remove, press **G** for **Go**. This will remove the selected libraries. In the lower left corner, you will see an **OK** when this is completed.

Stopping or blanking the sign

There are times when you might want to stop the sign, for example, before transferring an include sequence. If the include has the same name as the one already existing at the RVC, but has a new sequence in it, you will need to transfer the include sequence and the new sequence to the RVC. The include sequence will write over the one at the RVC, but you will have to stop the sign and then restart the schedule for the new sequence and included sequence to start. The following are instructions to do this.

- Press **C** for **Schedule.**
- Select the schedule currently running by placing the highlight bar over the schedule and press **ENTER**.
- Press **E** for **End.** This will end the schedule but the sequence that has been displaying will continue. From the Sign Menu highlight and press **ENTER** on the Blank Sign option (now you can start up a Time and Temperature sequence unless you don't mind leaving the display blank.
- Now you can transfer the changed sequences and include sequences.
- Once transferring is complete, from the Sign Menu select Run Schedule. Select the schedule and press **R** for **Run.** You will also want to start up a sequence to display until the next schedule entry kicks in.
- Press **ESC** once to return to the sign menu.

Dimming

You may choose to dim the sign from this option.

- You may dim/lights off or bright/lights on the sign manually which means you have to tell the sign when the lights need to come on or off, or when the lights need to be brighter or dimmer.
- You may also do this in the schedule (see **Chapter 4**).
- The last option is to have the dimming be controlled by a photocell. The sign will take care of itself by monitoring the sunlight around it. A photocell is needed.

NOTE: On incandescent signs, you will want the lights on bright during the day since the lights of the sign have to compete with the sunlight. During the evening hours, they can be on dim since there is no sunlight for it to compete with. On a Glow Cube, you will have the sign on lights off during the day, and lights on during the night. The lights will illuminate the elements for night viewing and is not needed during the day.

- A check mark will appear in front of the option that has been chosen. To change options move the highlight bar over the option you want and press **ENTER.**

Adjustments

This option lets you adjust the time, temperature and the password at the sign.

- To change the time, press **A** for **Adjustments.** Then press **T** for **Time.** This will automatically set the time at the sign from that of your computer. If there is an offset for time zones, this will be taken into consideration since this has already been programmed into Configure Sign when the sign is made.
- To change to temperature, press **A** for **Adjustments**. Then press **O** for **Temperature Offset.** You will then need to **ENTER** the number of degrees plus or minus from the temperature currently on the sign.
- Press **ENTER** when you have the number typed in.
- To change the password, press **A** for **Adjustment.** Then press **P** for **Password.** You may type in the new password. Make note of how it is typed in exactly, caps and all.
- Press **ENTER** when the new password is typed in.

Disconnect

- When you are finished with your communications to the slave, you may disconnect. To do this, press **ESC**. The option to disconnect is brought up. Choose **YES**. This will bring you back to the Main Menu.

After reading this section on Remote Venus Contollers, try and answer the following questions:

1) What does the Master computer do?
2) How do you stop the sign?
3) How do you send sequences to the RVC?
4) Can you send a sequence that is already running at the RVC?
5) What does status tell you?
6) How do you know when the sequences are transferred to the RVC?

7) How do you run a schedule?
8) When listing sequences, what information does this option give you?
9) Can you run the sign directly from the RVC?

6.2.2 Remote Menus

When entering the Sign Menu at the Main Menu you will first enter the Remote Logon Menu. This menu includes:
ESC - ESC to the Main Menu
Log - Clear, View, and Print a log file.
NOTE: It is a good idea to clear the log file every-once-in-a-while. The log file will contain every bit of activity between the sign and the computer. This file will get very large very quickly.
System - Select Sign, Connect, Term, and Datascope
NOTE: Datascope is a diagnostic tool used to verify data going to the sign and coming back from the sign.

The Remote Menu is entered once the computer is connected to the sign.
This menu includes:
ESC - ESC to the Main Menu and disconnect from the sign.
File - Transfer, Retrieve, Remove, Remove Library
Seq - Brings listing of availabe sequences to display.
Sch - Brings listing of available schedules to display.
Dimming - Manual Dim/Lights on, Manual Bright/Lights off, Photocell, Scheduled Dim
Adjust - Time, Password, Temperature offset
Log - Clear, View
System - Status, Disconnect, Datascope, Diagnostics.
NOTE: The Status option under System is different from the sign status we have already discussed. This status option will give you the status on data sent to and retrieved from the sign. This information can be cleared.
NOTE: The diagnostics option is used for installers only and is password protected. **DO NOT USE.**

6.3 Remote Display Unit

The Remote Display Unit (RDU) allows you to run the display without being directly connected to it. The computer at the operator site transfers information to the Remote Display Unit controller (via telephone lines) which then controls the display. Your computer and the RDU are only connected for as long as you need to transfer information and give instructions. You can transfer sequences, include sequences and schedules to the RDU and tell them when to run. When you are done, you simply have to disconnect and you will no longer be connected to the RDU. The sign will display what the RDU tells it to until you give it further instructions.

When you receive your computer, it should already be configured for the correct sign size, and technology. If not please see **Chapter 13, Section 13.3.2**.

Calling the RDU

- Turn the modem on if it is an external modem.
    - Select the correct sign.
    - From the Main Menu, press **S** for **Sign**. The menu will change to the Sign Menu
    - Press **Y** for **System**.
    - Press **C** for **Connect**.
    - Press **Y** for **Yes** to connect.
      If there is a password configured for the RDU, you will need to enter it. You must type in the word exactly as it was entered at the RDU (caps vs. lower case). You will only see X's being entered in. This will help to keep your password secret. If a password has not been config ured, you will not have to enter anything. You will hear the modem dialing. The modem status screen will appear and show you what the modem is doing. Wait for this box to disappear and OK to show at the bottom status bar. There will be a high-pitched screeching sound once the modem has connected. You are connected.

Transferring files to the RDU

You will have to send all information to the RDU. The RDU does not know what to display until the information is sent and started by sequence or schedule.

- Press **F** for **File**. This will bring up a list of options. Choose **T for Transfer.**
- A list of all the sequences that are listed under the selected sign and library should appear.
- Choose the sequences to be transferred by moving the highlight bar over the names and press **ENTER.** A check mark will appear in front of the sequence name once it has been selected. More than one may be selected. All of the sequences may be selected by pressing **A** for **All.**
- Press **G** for **Go**. This will transfer all information selected to the RDU. Notice in the lower left corner that the status of each sequence being transferred is shown. When an **OK** is in the extreme left, then all sequences have been transferred.
- Now transfer the schedules by pressing **T** for **Transfer**. Once the list of sequences appears, press **I** for **Filetype**. This will bring up the list of schedules. Choose the schedules to be transferred to the RDU in the same manner that the sequences are selected. Once all are marked, press **G** for **Go**. Notice again, in the lower left corner that the status of each schedule being transferred is shown. When an **OK** is shown in the extreme left corner, then all schedules have been transferred.
  NOTE: Messages will never appear as a file choice as they are not recognized by a remote display.

  NOTE: You may transfer sequences or schedules to the RDU that are currently running if they have had changes made to them. You will have to restart the new information so that the change will go into effect.

Sequence

- To display a sequence, press **S** for **Sequence**.
- A list of sequences at the RDU should appear. Choose the sequence or include sequence that is to play by moving the highlight bar over the name. Press **ENTER.**
- Now you need to decide how you want the sequence to play.
  The following are selection options in Sequence:

  Cancel: left-click or press **ESC** to cancel

  Continuously: left-click or press **C** to run a selected sequence continuously. The sequence will play continuously until another sequence is told to play or a schedule starts

  Blank
  - Move the highlight bar over **Blank** and press **ENTER**. This will automatically blank the sign, but the schedule will continue to run.

  Status
  It is a good idea to check the status of the sign once the schedule or sequence have been started.
  - left-click or press **A** for **Status**.
  - A listing of schedule, include sequence and sequence displaying will appear:
    - RDU revision
    - Sign size with rows and columns
    - Current time and date at the sign
    - Temperature (optional) and temperature offset
    - Connect time
    - Brightness setting
    - Memory left at the sign

  List
  You have the option to bring up a listing of all the sequences that are at the RDU.

  - left-click or press **I** for **List**. This will bring up a listing of all sequences and schedules currently at the RDU. A listing of when the sequences and schedules where transferred will also be shown and a list of elapsed time, which is how long the sequence has been displaying.

Schedules

NOTE: **RDU'S ARE NOT ABLE TO RUN AN ENHANCED SCHEDULE**

- To run a schedule, press **C** for **Schedule**.
- The list of schedules at the RDU will be brought up. Choose the one to run by moving the highlight bar over it and press **ENTER**.
- Press **R** for **Run**.
- Go back to the Seq Menu and choose to run a sequence continuously until the next scheduled item will run. A list of sequences currently at the RDU should appear. Select which you want to display and choose it to display indefinitely. This will display until the next scheduled item kicks in (the computer checks every minute as to what it should be displaying).

  End schedule
  - left-click or press **E** to **End** and press **ENTER**. This will blank the sign.

  List
  You have the option to bring up a listing of all the sequences that are at the RDU.
  - left-click or press **I** for **List**. This will bring up a listing of all sequences and schedules currently at the RDU. A listing of when the sequences and schedules where transferred will also be shown and a list of elapsed time, which is how long the sequence has been displaying.

Adjust

- Select the mode you want by moving the highlight bar over it and pressing **ENTER**.
  Dimming: Allows you to choose between Manual Dim or Bright and Auto Dim or Bright

Disconnect

- When you are finished with your communications, you may disconnect. To do this, press **ESC**. The option to disconnect is brought up. Choose YES. This will bring you back to the Main Menu.

Removing sequences and schedules from the RDU

You may remove sequences and schedules from the RDU when they are no longer in use. It is best to not remove a sequence or schedule from the RDU that is currently displaying. You will need to stop the sign to remove them if they are displaying.

- To remove sequences and schedules from the RDU, press **F** for **File**. This will bring up a list of the sequences at the RDU. Select the sequences to remove by moving the highlight bar over the names and pressing **ENTER.**
- Press **G** for **Go**. This will remove the selected sequences. In the lower left corner, you will see the names of the sequences quickly flash by as they are being removed. An **OK** will appear in the lower left corner when it is done removing the sequences.
- To remove schedules, press **F** for **File**.This will bring up the list of sequences again. Since you want to remove schedules, you will need to press **I** for **Filetype**. This will bring up the schedules listed at the sign. Select the desired schedules to remove in the same manner as removing sequences.
- Once all have been selected, press **G** for **Go**. This will remove the selected schedules. In the lower left corner, the names will flash by. An **OK** will appear in the lower left corner when this is done.

Stopping or blanking the sign

There are times when you might want to stop the sign, for example, before transferring an include sequence. If the include has the same name as the one already existing at the RDU, but has a new sequence in it, you will need to transfer the include sequence and the new sequence to the RDU. The include sequence will write over the one at the RDU, but you will have to stop the sign and then restart the schedule for the new sequence and included sequence to start. Following are instructions to do this.

- Press **C** for **Schedule**.
- Select the schedule currently running by placing the highlight bar over the schedule and press **ENTER**.
- Press **E** for **End**. This will end the schedule but the sequence that has been displaying will continue. From the Sign Menu highlight and press **ENTER** on the Blank Sign option (now you can start up a Time and Temperature sequence unless you don't mind leaving the display blank.
- Now you can transfer the changed sequences and include sequences.
- Once transferring is complete, from the Sign Menu select Run Schedule. Select the schedule and press **R** for **Run.** You will also want to start up a sequence to display until the next schedule entry kicks in.
- Press **ESC** once to return to the Sign Menu.

Dimming

You may choose to dim the sign using this option.

- You may dim/lights off or bright/lights on the sign manually which means you have to tell the sign when the lights need to come on or off, or when the lights need to be brighter or dimmer.
- You may also do this in the schedule (see the section on schedules for this).
- The last option is to have the dimming be controlled by a photocell. This is probably the easiest. The sign will take care of itself by monitoring the sunlight around it. You need to have a photocell for this.

NOTE: On incandescent signs, you will want the lights on bright during the day since the lights of the sign have to compete with the sunlight. During the evening hours, they can be on dim since there is no sunlight for it to compete with. On a Glow Cube display, you will have the sign on dim/lights off during the day, and bright/lights on during the night. The reason for this is that the lights illuminate the cubes for night viewing that is not needed during the day.

- A check mark is in front of the option that has been chosen. To change it move the highlight bar over the option you want to select and press **ENTER.**

Adjustments

This option lets you adjust the time, temperature and the password at the RDU.

- To change the time, press **A** for **Adjustments**. Then press **T** for **Time**. This will automatically set the time at the sign from that of your computer. If there is an offset for time zones, this will be taken into consideration since this has already been programmed into Configure Sign when the sign is made.
- To change the temperature, press **A** for **Adjustments**. Then press **O** for **Temperature Offset**. You will then need to **ENTER** the number of degrees plus or minus from the temperature currently on the sign. Press **ENTER** when you have the number typed in.
- To change the password, press **A** for **Adjustments**. Then press **P** for **Password**. You may type in the new password. Make note of how it is typed in exactly, caps and all. Press **ENTER** when the new password is typed in.

Disconnect

- When you are finished with your operations on the RDU, you may disconnect. To do this, press **ESC**. The option to disconnect is brought up. Choose yes. This will bring you back to the Main Menu.

After reading this section on the RDU, try and answer the following questions:

1) Does the modem have to be turned on to call the RDU?
2) Does a sequence have to be in the memory at the RDU to display?
3) How do you stop the sign?
4) How do you transfer sequences to the RDU?
5) Can you transfer a sequence that is already displaying?
6) What does status tell you?
7) How do you know when the sequences are transferred?
8) How do you run a schedule?
9) When listing sequences, what information does this option give you?

6.4 Remote Network Operation

The Remote network feature allows several Venus computers connected on a Novell® Network to control one or more displays. The remote network operation is almost identical to the direct display operation. The remote does not directly control the sign but instead it communicates with another Venus computer that controls the sign. The communication is transparent to the user, however, a remote network sign may run somewhat slower because of the extra overhead of communication.

6.4.1 Displaying Sequences/Include Sequences

Please refer to **Chapter 5, section 5.1 Direct Display Operation** for displaying on a Remote Network Controller.

6.4.2 Other Considerations

There are certain limitations to a Remote Network system. These must be taken into consideration when setting up a Remote Network system. Refer to **Chapter 13, section 13.3.2.2.5** for configuration of a remote network system.

1. A Novell® Network must be detected in order to configure a remote network sign.
2. Every direct display sign on the entire network must have a unique socket number.
3. A single computer can not have a network remote sign and a direct display sign with the same socket number.