User

Manual

0150-0255C
Kalatel VDR

GE Interlogix
Video Systems Group

For technical support before and after installation, call 800-469-1676.

Technical support is available 24 hours a day, 7 days a week.

Call:	**Tech Support** Monday through Friday)	800-469-1676 (6 A.M. – 5 P.M. PST
	Tech Support	541-740-3589 (all other times)
	Main	800-343-3358 or 541-754-9133
Fax: day)	**Tech Support**	541-752-9096 (available 24 hours a
	Main	541-754-7162
Web:	www.kalatel.com	

0150-0255C / November 2003

C E

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CONTENTS

1 FEATURES, CONNECTIONS, AND SETUP

1.1 Product Description

The Kalatel VDR is a Digital Video Recorder designed to be a direct replacement for a Time Lapse VCR. Digital Video Recording allows the user to have continuous recording on a removable hard disk, without the need for replacing or rewinding of videotapes. The VDR provides menu based search capabilities for recorded events. The VDR also supports the use of Type I CompactFlash Storage Cards.

1.2 Features

- Single channel VHS Input/Output connection.

- Accepts Single Camera input or a Multiplexed input from most popular multiplexers.

- Compatible with Color or Monochrome cameras.

- Records up to 60 pictures per second (NTSC) or 50 pictures per second (PAL).

- Continuous Recording in Disk Overwrite mode.

- Removable Hard Drive.

- CompactFlash Storage Card Slot (Type I).

- A simple on-screen menu system.

- Timed recording.

- Programmable Auto Delete Mode.

1.3 Unpacking

Check the package and contents for visible damage. If any components are missing or damaged, contact the supplier immediately. **Do not attempt to use the unit.** If, for any reason they must be returned, the contents must be shipped in the original packaging.

Package Contents

- The Kalatel VDR unit.

- Power supply and (2) power cords (US and EU).

- 1 set (2) of Drive keys.

- The Kalatel VDR user manual.

1.4 Installation Environment

Power: Ensure that the site's AC power is stable and within the rated voltage of the external power supply. If the site's AC power is likely to have spikes or power dips, use power line conditioning or an Uninterruptable Power Supply (UPS).

Ventilation: Install the unit in a well-ventilated area. Take note of the locations of the cooling vents in the unit's enclosure, and ensure that they are not obstructed.

Temperature: Observe the unit's ambient temperature specifications when choosing a location space. Extremes of heat or cold beyond the specified operating temperature limits may cause the unit to fail. Do not install the unit on top of other hot equipment.

Moisture: Do not expose the unit to rain or moisture. Moisture can damage the internal components. Do not install this unit near sources of water.

Chassis: You can place other equipment on top of the unit if it weighs less than 35 pounds.

1.5 Passwords

Figure 1-1 Passwords

Password Name	Function	Changeable by user?	Password
Advanced Menu Password	Provides access to the Advances menu for the installer.	Yes: See page 5-5	**0 0 0 0**
Factory Password	Restores the unit to the factory defaults.	No	**8 1 1 1**

A password is provided to limit access to the Advanced menu. It is recommended that the default password be changed after installation is complete. As a security measure, store the password in the administrator's secured files or in a limited access area. For instructions on entering the Advanced menu with the password see section **4.7 Main Menu ® Advanced Menu** on page 4-13.

A password is also provided to return the unit to the factory defaults. For instructions on returning the unit to the factory defaults, see section **5.6 Advanced Menu ® Factory Settings** on page 5-5.

1.6 Front Panel Controls and Features

Figure 1-2 Front Panel

1. **Removable Hard Drive:** Drives are removable for archival purposes.

2. **CompactFlash Storage Card Slot:** Used to capture, retain, and transport selected video files.

3. **Record button:** Press this button to begin recording.

4. **Pause button:** Press this button to pause playback.

5. **Search button:** Press this button to enter the Search Filters menu.

6. **Increase and Decrease Record Speed buttons:** Press these buttons to increase or decrease the Record or Playback speed.

7. **Arrow Buttons:** Controls Playback speed and menu selections.

8. **Enter Button:** Confirms selection in menus.

9. **Reverse play button:** Press this button to playback video in reverse at the normal record speed.

10. **Stop button:** Press this button to stop Recording or Playback.

11. **Play Forward button:** Press this button to playback video at the normal record speed.

12. **Menu Button:** Provides access to on-screen menus.

13. **Power On Indicator:** Indicates power is on when LED is lit.

14. **Alarm Indicator:** Indicates an alarm condition when the LED is lit.

1.7 Back Panel Connections

Figure 1-3 Back Panel
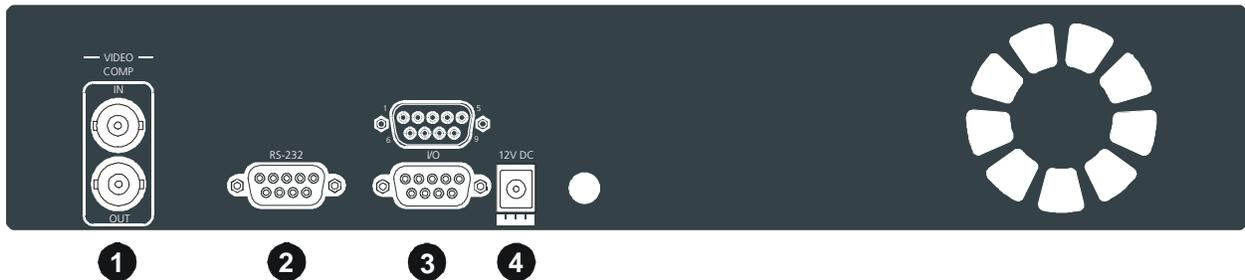
1. **Video In:** Composite video input with BNC style connector.

   Video Out: Composite video output with BNC style connector.

2. **RS-232 Serial Port:** Serial port for Flash Upgrading of software. Also for external control of unit.

3. **I/O Port:** For connecting peripheral devices such as alarm devices, alarm relays, or the VEXT connection.

4. **Power Connector:** Connect 12 Volt DC external power supply.

Video Input and Output

The unit is equipped with a Composite input and output. The video input is auto terminating.

Composite Input: 75 Ohm BNC connector.

Composite Output: 75 Ohm BNC connector.

Composite Looping: Yes, while unit is On or Off.

Power Connector

Power Supply Input
Voltage: 120 to 240 Volt AC
Tolerance: ±10%
Frequency: 50 to 60 Hz

Power Supply Output
Voltage: 12 Volt DC
Power: 35 Watt
Connector: 2.1mm barrel, Center Positive

RS-232 Serial Port

Use a Null Modem cable when connecting to a PC. When connecting to a multiplexer, it may be necessary to construct a cable using the pin-out documentation of the MUX as a guide. See the pin-out configuration for the VDR below.

Connector Type: DB-9

Gender (on unit): Male

Cable Required (Connected to PC): Null Modem

Cable Required (Connected to Multiplexer): Variable, depending on pin-out configuration of MUX.

DB-9 Pin Configuration for Serial Port

Pin	Use
1	DCD
2	RX
3	TX

Pin	Use
4	Not Connected
5	Ground
6	Not Connected

Pin	Use
7	RTS
8	CTS
9	Not Connected

RS-232

DB-9 Connector on Back Panel
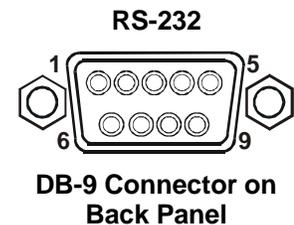
1.8 Accessories I/O Port

The back panel of the unit is equipped with an Accessories Port (DB-9 style connector) for connecting peripheral devices such as alarm devices, alarm relays, or the VEXT connection.

Do not attempt to wire accessories directly to the DB-9 connector.

Pin	Use
1	Alarm In
2	Alarm Out
3	Record Start In

Pin	Use
4	Alarm Record Reset
5	VEXT Pulse Out
6	Error Out

Pin	Use
7	Ground
8	Videoloss Out
9	Disk End Out

I/O

DB-9 Connector on Back Panel
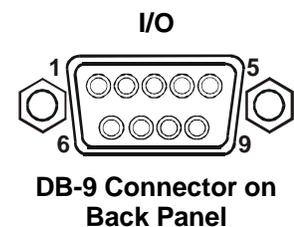
Alarm In

An alarm condition can be activated by an Active Low TTL input or by relay contact devices such as pressure pads, passive infrareds, door switches, or other similar devices.

Input: Active Low TTL w/ pull-ups or Normally Open Relay.
High: 5V (12V tolerant)
Low: Ground

Minimum Duration: 0.5 Seconds
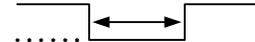
Figure 1-4 Normally Open Relay Alarm Connection
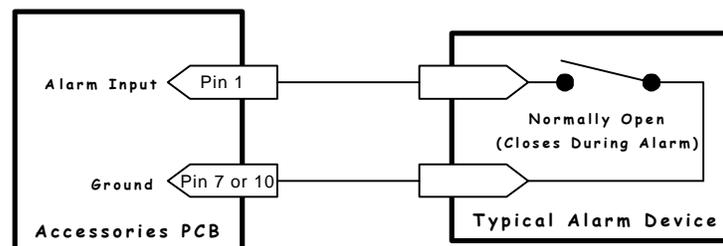
Alarm Out

The Alarm output is activated while the Alarm Input is active. The Alarm output is only active for the duration of the alarm event.

Output: Active Low
High: 12V
Low: Ground
Current Out: 50mA Max
Short Circuit Protected.

Low for duration of alarm.
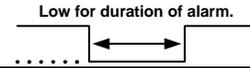
Record Start In

Record Start In will place the unit in Record mode when activated. Compatible with the Disk End Out signal from a second unit.

Input: Active Low TTL w/ pull-ups or Normally Open Relay.
High: 5V (12V tolerant)
Low: Ground

Minimum Duration: 0.5 Seconds
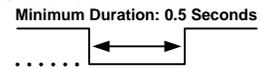
Alarm Record Reset

This feature is for future development, and has not yet been implemented.

VEXT Pulse Out

The Video External Pulse connection (VEXT) simplifies multiplexer operation by automatically synchronizing the Multiplexer and the VDR.

The VDR sends a VEXT pulse to the Multiplexer indicating that it is ready to record the next image. The Multiplexer responds by sending the next image to the Video Input on the VDR.

The VEXT connection is especially beneficial for units configured with dual record speeds (Normal and Alarm).

Use of the VEXT connection is Highly Recommended when connecting the unit to a multiplexer.

Output: Active Low
High: 5V
Low: Ground (0.8V Max)
Current Out: 50mA Max
Short Circuit Protected.

Error Out

The Error Out signal is activated when the unit experiences any operational or internal error.

Output: Open Collector
High: Transistor Off
Low: Transistor On
Active When On.
Current Out: 10mA Max

Minimum Duration: 0.5 Seconds
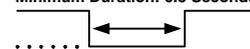
Videoloss Out

The Videoloss Out signal is activated when the unit experiences videoloss on the video input (Composite).

In the event of videoloss, `VIDEOLOSS` will be indicated near the upper left hand corner of the primary monitor.

Output: Open Collector
High: Transistor Off
Low: Transistor On
Active When On.
Current Out: 10mA Max

Minimum Duration: 0.5 Seconds
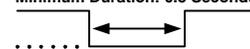
Disk End Out

The Disk End Out is activated when there is 5 minutes of recording space left on the hard disk. The VDR must be in Record mode and set to Continuous Overwrite mode.

Output: Open Collector
High: Transistor Off
Low: Transistor On
Active When On.
Current Out: 10mA Max
Minimum Duration: 0.5 Seconds

1.9 Setting the Time and Date

It is recommended that, as a minimum, the following menu items be configured before using the unit. For detailed information about using the menu system, see section 3.

❏ **Main Menu ® Time/Date ® Set Time Format**

To set the Time format, use the **Arrow buttons** to select the desired Time format. Format the time as either:

- **12 HOUR**

- **24 HOUR**

```
Time Format Setup

  Select Format
     12 Hour
```

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.
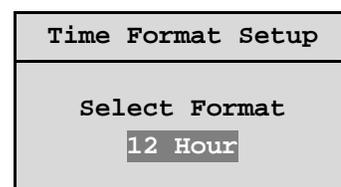
❏ **Main Menu ® Time/Date ® Set Date Format**

To set the Date format, use the **Arrow buttons** to select the desired Date format. Format the Date as either:

- **DD/MM/YY**

- **MM/DD/YY**

- **YY/MM/DD**

```
Date Format Setup

  Select Format
    MM/DD/YY
```

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ **Main Menu ® Time/Date ® Set Time**

To set the Time:

```
               Time Setup

                HH MM SS
                03 05 53

         [CANCEL]   [OK]
```
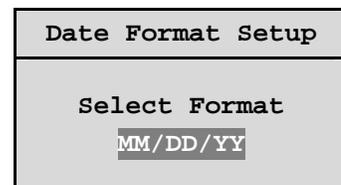
1. With `HH MM SS` highlighted, press the **Enter** button. The highlighting will move to the row of numbers.

2. Enter the time in Hours, Minutes, and Seconds. Use the **to** change the values. Use the **Arrow buttons** to navigate among the three fields.

3. Press the **Enter** button to confirm the selection.

4. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select **[OK]**, then press the **Enter** button.

--OR--

5. **To Exit the menu without making changes:** Use the **Arrow buttons** to select **[CANCEL]**, then press the **Enter** button.

❏ **Main Menu ® Time/Date ® Set Date**

To set the Date:

```
               Date Setup

              MM DD YY DAY
              12 17 00 SUN

         [CANCEL]    [OK]
```

1. With `MM DD YY DAY` highlighted, press the **Enter** button. The highlighting will move to the row of numbers.

2. Enter the date in Months, Days, and Years. Day of the Week will update automatically. Use the **Arrow buttons** to change the values. Use the **Arrow buttons** to navigate among the three fields.

3. Press the **Enter** button to confirm the selection.

4. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select **[OK]**, then press the **Enter** button.

--OR--

5. **To Exit the menu without making changes:** Use the **Arrow buttons** to select **[CANCEL]**, then press the **Enter** button.

1.10 Setting the Alarms

❏ **Main Menu ® Alarms**

Use this menu to specify:

```
               Alarms Menu

     Hardwire Alarm :   Enable
     Alarm Buzzer   :   Enable
          [CANCEL]    [OK]
```

- Whether an alarm condition will be activated when the unit detects a signal on the Alarm In connection.

- Whether the internal buzzer is activated during an alarm condition.

To configure the alarm settings:

1. Use the **Arrow buttons** to navigate among the fields.

2. Use the **Arrow buttons** to change the values of the highlighted fields.

3. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select **[OK]**, then press the **Enter** button.

--OR--

4. **To Exit the menu without making changes:** Use the **Arrow buttons** to select **[CANCEL]**, then press the **Enter** button.

```
         Alarms Menu
 Hardwire Alarm :   Enable
 Alarm Buzzer   :   Enable
     [CANCEL]     [OK]
```

1.11 The Removable Hard Drive

The Kalatel VDR has a built-in removable hard drive that comes in 40, 80, and 160 GB models. The hard drive is hot swappable; meaning the VDR need not be powered down before drive removal. However, it is recommended that the drive not be removed during any drive activity (read/writes).

Whatever state (recording, playback) the drive is operating in, when it is removed, is the same state it will start up in when reinstalled.

Hard Drive Front Panel

1. Hard Drive Activity LED, Amber.
2. Power Indicator, Green.
3. Active Handle (Shown Open).
4. Handle.
5. Key Lock.
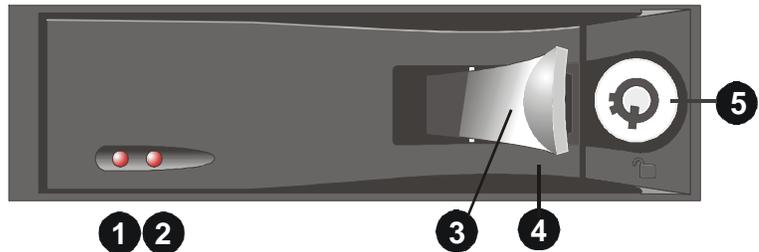
Key Lock

1. Power On. Drive Locked
2. Power Off. Drive Locked.
3. Power Off. Drive Unlocked. (Shown)
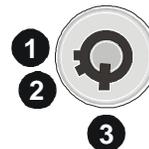
1.12 Removing the Hard Drive
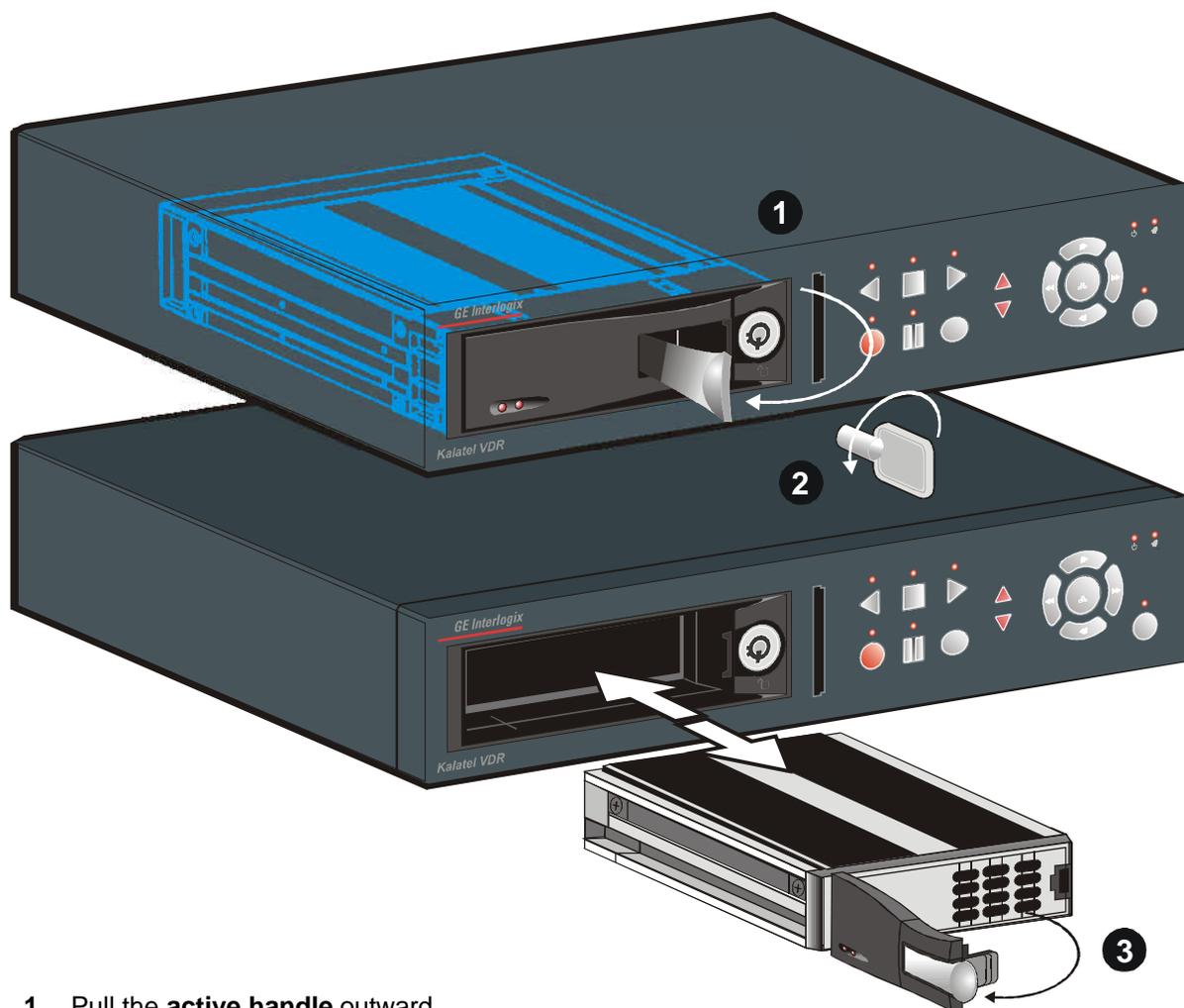
1. Pull the **active handle** outward.
2. Use the **key** provided and place the key lock in position **3** shown above (rotate counter clockwise).
3. Pull the **handle** outward and slide the carrier body away from the cartridge frame.

To reinsert the drive perform the above steps in reverse. The Kalatel VDR will reset when the drive is installed.

1.13 Using CompactFlash Storage Cards

The VDR uses industry standard Type I CompactFlash Storage Cards of varying capacities up to 512Mb (See Section 8 for tested manufacturers). The CompactFlash cards can be used to store, retrieve, and transport selected video files. The video files can be played back using GE Interlogix QuickWave software that is automatically copied to the CF card. GE Interlogix recommends that upon initial use a minimum of two CF cards be purchased. One CF card is used to create a Master CF card and the other(s) for the copying and transfer of video files.

Master CF card

The Master CF card is used to store and transfer the resident QuickWave application back onto Blank HDD's that can be inserted into the VDR. A blank HDD is defined as one not containing QuickWave software.

Creating a Master CF card

Upon initial use of the VDR:

1. Insert the selected CF card to be used as a Master in the CF card slot with the label (top) facing to the right. Slide in the card until it is firmly seated in the socket. The following message will appear.

```
┌──────────────────────────────────────────┐
│              Compact Flash                │
├──────────────────────────────────────────┤
│                                           │
│  Compact Flash detected. Initializing...  │
│                                           │
│                                           │
└──────────────────────────────────────────┘
```
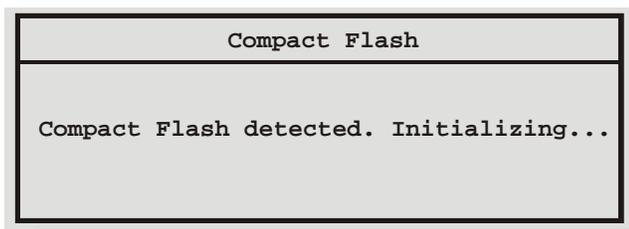
2. If the CF card is formatted QuickWave will be copied to it without any user intervention. A "Writing QuickWave" status bar will display. To format an unformatted CF card please go the **Format** command in the **Main Menu** under **Compact Flash**. The Format command places a FAT16 file system on the CF card. Please note that formatting the CF card permanently erases any data currently stored on that card. After formatting, QuickWave is automatically copied to the CF card.

3. Remove the Master CF card and label it "Master CF card". GE Interlogix recommends that this Master CF card be stored in a safe place for use whenever a new and blank HDD is inserted into the VDR.

NOTE

Note: When a new HDD is detected in the VDR, the VDR will request that the Master CompactFlash be inserted in the CF card slot so that QuickWave may be copied to it. Units equipped from the factory with HDDs have QuickWave preinstalled.

To Use a CF card:

1. Stop all recording or playback operations on the VDR.

2. Insert the CF card into the CF card slot with the label (top) facing to the right. Slide in the card until it is firmly seated in the socket. The following message will appear.

```
                  Compact Flash

    Compact Flash detected. Initializing...


```
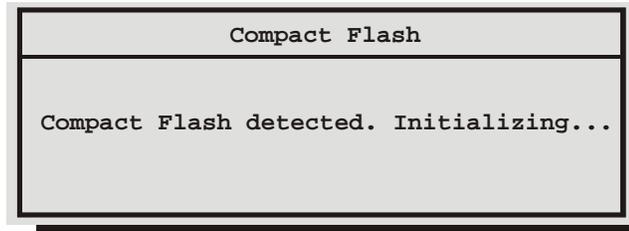
4. When this message disappears the CF card is ready for use. The first time a CF card is used we recommend that the card be formatted using the **Format** command in the **Main Menu** under **Compact Flash**. The Format command places a FAT16 file system on the CF card. Please note that formatting the CF card permanently erases any data currently stored on that card.

5. Once Formatting is complete the CF card will be ready for use. For detailed information on the Storage and Retrieval of data, please see **Section 4.6 Main Menu ® CompactFlash**.

6. Once operations are complete remove the CF card by grasping it with your thumb and forefinger and pulling it out of the CF card slot.

2 USER OPERATIONS

2.1 Recording

To begin recording, press the **Record** button. `RECORD` will be indicated for three seconds, near the upper left hand corner of the primary monitor. The unit always starts recording at the end of the previously recorded data.

Recording will continue until:

- Another mode is selected (Play mode, or Stop mode).

- The disk is full (In No Overwrite and Overwrite Once modes). See section **5.1 Advanced Menu ® Disk Overwrite Mode** on page 5-1, for details regarding Disk Overwrite modes.

RECORD

○
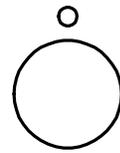
Record button

Normal Recording

The unit records at the normal record speed until an alarm condition is detected. The normal record speed is indicated on the LCD, and can be altered using the **Up/Down Record Speed** buttons, or in the menu system.

For information about altering the normal record speed from the menu system, see **Main Menu ® Record Settings ® Normal Record Speed**, on page 4-5 of the Operator Programming section of this manual.

The normal record speed can be altered while the unit is recording. The unit will continue recording while the menu system is active.

△
REC/PLAY SPEED
▽

Record Speed buttons

Alarm Recording

When an alarm condition is detected, the unit automatically switches to the alarm record speed. The alarm condition is indicated in several ways:

- With the word `ALARM`, displayed on the primary monitor, near the upper left hand corner of the screen.

- With the LED Alarm Indicator on the front panel of the unit.

- With the internal buzzer (if activated in the menu system). For information about activating the internal buzzer during alarms, see **Main Menu ® Alarms** on page 4-3 of the Operator programming section of this manual.

- By an external device, connected to the alarm output of the unit (if the unit is installed that way).

ALARM

Alarm Indicator

The alarm record speed cannot be changed using the **Up/Down Record Speed** buttons on the front panel. The alarm record speed must be changed in the menu system. For information about altering the alarm record speed, see **Main Menu ® Record Settings ® Alarm Record Speed**, on page 4-5 of the Operator Programming section of this manual.

The unit returns to the normal record speed when the alarm condition ends.

Disk Nearly Full Notification

This message will appear on the primary monitor to indicate that the unit has stopped recording, because the disk is full.

```
           Message
Disk Full. Recording Has Stopped.
            [OK]
```

In No Overwrite mode: The user must acknowledge the on-screen message by pressing the **Enter** button.

Unit will not record over previously recorded data. To continue recording, the data must be erased (or deleted) in the **Advanced ® Disk Maintenance** menu.

In Overwrite Once mode: The user must acknowledge the on-screen message by pressing the **Enter** button.

The unit will continue recording again when the user presses the **Record** button.

2.2 Playback

Play Forward

To begin normal playback, press the **Play Forward** button. The unit will begin playing back data from the beginning of the last recording session.

Playback is indicated:

- As **PLAY** near the upper left hand corner of the primary monitor, for three seconds.

PLAY

Play Forward button

Reverse Play

To begin reverse playback, press the **Reverse play** button. The unit will begin playing back data from the beginning of the last recording session.

Reverse playback is indicated:

- As **REVERSE PLAY** near the upper left hand corner of the primary monitor, for three seconds.

If there is only one recording session on the hard disk, the unit will indicate **START OF DATA** on the primary monitor.

REVERSE PLAY

Reverse play button

Playback Speed

The unit will playback the data at the rate it was recorded. The user can alter the playback speed using the **Up/Down Record Speed** buttons.

Altering the playback speed overrides any change in playback speed that would occur due to an alarm condition in the playback. To clear the override, press the **Stop** button, then press the **Play** button to resume playback at the speed the data was recorded.

REC/PLAY SPEED

Record Speed buttons

Fast Forward

During playback, press the **Fast Forward** button. The unit will display images at a higher than normal rate. There are 4 Fast Forward rates. Repeated pressing of the **Fast Forward** button will increase the playback speed.

Fast Forward is indicated:

- As `FAST FORWARD` near the upper left hand corner of the primary monitor, for three seconds.

Fast Forward Button

Rewind

During playback, press the **Rewind** button. The unit will display images (in reverse) at a higher than normal rate. There are 4 Rewind rates. Repeated pressing of the **Rewind** button will increase the rewind speed.

Rewind is indicated:

- As `REWIND` near the upper left hand corner of the primary monitor, for three seconds.

Rewind Button

Pause

During playback, press the **Pause** button to pause playback, and display a single frame on-screen.

Pause is indicated:

- As `PAUSE` near the upper left hand corner of the primary monitor, for three seconds.

PAUSE

Pause button

Single Frame Advance

While in Pause mode, press the **Single Frame Advance** button. The unit will advance a single frame, then return to Pause mode.

Single Frame Advance Button

Single Frame Rewind

While in Pause mode, press the **Single Frame Rewind** button. The unit will rewind a single frame, then return to Pause mode.

Single Frame Rewind Button

Start of Data & End of Data

If the start or end of data is reached during playback, `START OF DATA` or `END OF DATA` is indicated near the upper left hand corner of the primary monitor.

2.3 The Search Interface

The Search Interface feature allows the user to search the hard disk for recorded events, such as an alarm condition, or a previous recording session. For example, each time Record mode is activated, it is considered a separate recording session.

To enter the Search Filters menu, press the **Search** button. The Search Filters menu is displayed on the primary monitor.

SEARCH

Search button

Use this to specify:

- The Start and Stop date of the search.

- The Start and Stop time of the search.

- To search for recorded alarms.

```
            Search Filters
     Start                 Stop
DATE: 12/25/00    [ ]      01/01/01     [ ]
    (MM/DD/YY)             (MM/DD/YY)

     Start                 Stop
TIME: 11:11:21    [ ]      12:34:34     [ ]


ALARM: [ ]

        [CANCEL]       [START SEARCH]
```

Searching for All Recorded Events

Using the **Arrow buttons** to navigate, highlight **[START SEARCH]**, then press the **Enter** button. The Search Results window will appear. For information about selecting a recorded event, see **Selecting from the Search Results**, in this section.

2.4 Specifying Search Parameters

Selecting a Start and Stop Date

1. Using the **Arrow buttons** to navigate, highlight the **DATE** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Arrow buttons** to change the start and stop date values. Use the **Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop date parameter, use the **Arrow buttons** to place an **[X]** in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Selecting a Start and Stop Time

1. Using the **Arrow buttons** to navigate, highlight the **TIME** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Arrow buttons** to change the start and stop time values. Use the **Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop time parameter, use the **Arrow buttons** to place an **[X]** in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Searching for Recorded Alarms

1. Using the **Arrow buttons** to navigate, highlight the **ALARM** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Arrow buttons** to activate the alarms search, by placing an **[X]** in the check box.

3. Press the **Enter** button at any time to exit Edit mode.

Starting the Search

Using the **Arrow buttons** to navigate, highlight the `[START SEARCH]` parameter, then press the **Enter** button. The Search Results menu will appear.

Search Results				
	Start Date	Start Time	Days	HH MM SS
000	01/01/00	00:07:14	0	00:00:36
001	01/01/00	23:35:20	0	00:08:11
002	02/12/00	23:43:30	0	00:33:49
003	02/12/00	00:17:23	0	01:38:18

4 matches found.

"ENTER" to play

Selecting from the Search Results

Use the **Arrow buttons** to select a recorded event.

Press the **Enter** button to select the event, or press the **Menu** button to exit the Search Results menu.

3 THE MENU SYSTEM

This section provides a brief overview of the menu system, for complete information about Operator and Installer programming, see section **4: Operator Programming**, or section **5: Installer Programming**.

How to use this Manual

Throughout this manual, there are headings like these.

❏ **Main Menu ® Timer Settings**

Meaning: From the Main menu, select **TIMER SETTINGS**, then press the **Enter** button. A Pop-up or Pull down menu will appear.

❏ **Main Menu ® Record Settings ® Normal Record Speed**

Meaning: From the Main menu, select **RECORD SETTINGS**, then press the **Enter** button. This opens another menu. In this menu, select **NORMAL RECORD SPEED**, then press the **Enter** button.

A Pop-up or Pull down menu will appear.

Pull-down Menus

Pull-down menus are the top-level menus. Make a selection in a Pull-down menu to enter the appropriate sub-menu (typically a Pop-up menu). Changes to the unit's parameters are usually made in Pop-up menus.

To exit a Pull-down menu, press the **Menu** button.

Pop-up Menus

Pop-up menus usually have a parameter (or several parameters), from which the user can make a selection or change the value.

Use the **Arrow buttons** to select a new parameter and to change the value of that parameter.

To Save changes and Exit the menu: Select **[OK]**, the press the **Enter** button.

To Exit the menu without making changes: Press the **Menu** button or select **[CANCEL]**, then press the **Enter** button.

Menu button

In some boxes, items are highlighted on the screen. They are represented in this manual as follows:

Not highlighted:	Highlighted:
TIME/DATE	**ALARMS**

Entering the Main menu

Enter the Main menu by pressing the **Menu** button. The Main menu will appear on the primary monitor.

Menu button

The Arrow Buttons

When in the Main Menu the Arrow buttons are used to navigate and modify field values.

Up Arrow Button

Left Arrow Button   **Right Arrow Button**

Down Arrow Button
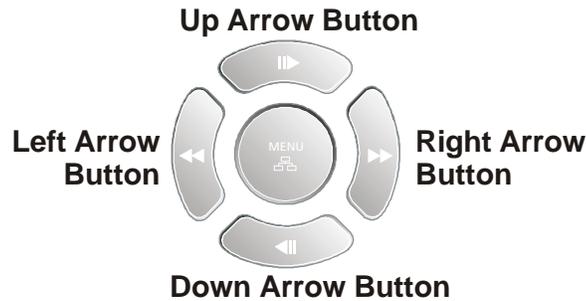
The Main Menu

The Main menu provides access to all of the operator programmable options. Each sub-section of the Main menu is described briefly in this section.

For complete information about operator programming in the Main menu, see section 4.

```
Time/Date

Alarms

Timer Settings

Record Settings

Display Settings

CompactFlash

Advanced Menu

About
```

❏   **Main Menu ® Advanced Menu**

To access the Advanced menu:

1. Select **ADVANCED MENU** from the Main menu, then press the **Enter** button. The Password Box will appear.

2. Enter the Advanced menu password. Use the **Arrow buttons** to select a character, then use the **Enter** button to complete the selection, and move to the next character.

3. Pressing the **Enter** button on the last character will complete the password selection and the unit will display the Advanced menu.

```
        Password Box


Please Enter The Password!
          0---
```

The Advanced Menu

For security reasons, a password is provided to limit access to the Advanced menu. For instructions about entering the Advanced menu, see **Main Menu ® Advanced Menu**, on the previous page.

The Advanced menu provides access to all of the installer programmable options. Each sub-section of the Advanced menu is described briefly in this section.

For complete information about installer programming in the Advanced menu, see section 5.

```
Disk Overwrite Mode

Disk Maintenance

Auto Delete Mode

Adjust Picture

Front Panel Lock

Factory Settings

Change Password

Firmware Upgrade
```

4 OPERATOR PROGRAMMING

4.1 Main Menu ® Time/Date

Use this menu to specify:

```
Set Time Format
Set Date Format
Set Time
Set Date
Set Region
```

- The time format: 12 or 24 hours.

- The date format: MM/DD/YY, DD/MM/YY, or YY/MM/DD.

- The time.

- The date.

- Set the Region for the Auto Daylight Savings Time feature.

❏ Main Menu ® Time/Date ® Set Time Format

To set the Time format, use the **Arrow buttons** to select the desired Time format. Format the time as either:

```
Time Format Setup

Select Format
12 HOUR
```

- **12 HOUR**

- **24 HOUR**

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ Main Menu ® Time/Date ® Set Date Format

To set the Date format, use the **Arrow buttons** to select the desired Date format. Format the Date as either:

```
Date Format Setup

Select Format
MM/DD/YY
```

- **DD/MM/YY**

- **MM/DD/YY**

- **YY/MM/DD**

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ **Main Menu ® Time/Date ® Set Time**

To set the Time:

```
                              Time Setup

                              HH MM SS
                              03 05 53

                          [CANCEL]   [OK]
```

1. With **HH MM SS** highlighted, press the **Enter** button. The highlighting will move to the row of numbers.

2. Enter the time in Hours, Minutes, and Seconds. Use the **Arrow buttons** to change the values. Use the **Arrow buttons** to navigate among the three fields.

3. Press the **Enter** button to confirm the selection.

4. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select **[OK]**, then press the **Enter** button.

--OR--

5. **To Exit the menu without making changes:** Use the **Arrow buttons** to select **[CANCEL]**, then press the **Enter** button.

❏ **Main Menu ® Time/Date ® Set Date**

To set the Date:

```
                              Date Setup

                              MM DD YY DAY
                              12 17 00 SUN

                          [CANCEL]   [OK]
```

1. Press the **Enter** button. The highlighting will move to the row of numbers.

2. Enter the date in Months, Days, and the Year. Day of the Week will update automatically. Use the **Arrow buttons** to change the values. Use the **Arrow buttons** to navigate among the three fields.

3. Press the **Enter** button to confirm the selection.

4. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select **[OK]**, then press the **Enter** button.

--OR--

5. **To Exit the menu without making changes:** Use the **Arrow buttons** to select **[CANCEL]**, then press the **Enter** button.

❏   **Main Menu ® Time/Date ® Set Region**

Use this menu option to set the region for the Auto Daylight Savings Time feature. Choices are:

- **OFF**: Clock will not be changed automatically.

- **USA**: DST starts at 02:00 on the first Sunday in April. DST ends at 02:00 on the last Sunday in October. Includes: United States (except Hawaii, American Samoa, Guam, Puerto Rico, Virgin Islands, parts of Indiana and Arizona) and Canada (except Saskatchewan).

- **EUR**: DST starts at 01:00 GMT on the last Sunday in March. DST ends at 01:00 GMT on the last Sunday in October. Includes: European Union Countries.

- **AUS**: DST starts at 02:00 on the last Sunday in October. DST ends at 03:00 on the last Sunday in March. Includes: South Australia, Victoria, ACT, NSW. Excludes: Tasmania.

```
          Regional Settings

  Daylight Saving :    USA

  Time Zone       :   GMT+07:00


  SUN,  6 APR 2003 02:00 (+1)

  SUN, 26 OCT 2003 02:00 (-1)



        [CANCEL]  [OK]
```

The clock will only be automatically adjusted once on a given time and date. If you manually set the clock back before the last DST change, the time will not get automatically adjusted again for that same time change.

4.2 Main Menu ® Alarms

Use this menu to specify:

- Whether an alarm condition will be activated when the unit detects a signal on the Alarm In connection.

- Whether the internal buzzer is activated during an alarm condition.

```
          Alarms Menu

  Hardwire Alarm :   Enable
  Alarm Buzzer   :   Enable
      [CANCEL]     [OK]
```

4.3 Main Menu ® Timer Settings

This menu allows the user to program a timed-recorded event. Use this menu to specify:

- The date, or days on which the recording will occur.

- The start and stop time.

- The record speed.

- The record quality.

- Whether the event is enabled.

DATE	START	STOP	SPD(pps)	QUALITY	ON/OFF
31	16:45	17:05	20	High	On
Sat	07:55	08:10	10	Med	Off
Mon-Fri	09:56	11:05	60	Low	On
Sat-Sun	14:23	14:50	60	High	On
Mon-Sun	02:23	03:34	20	Med	Off
--	--:--	--:--	--	--	--

[OK]

EDIT Mode   Hit "ENTER" To Toggle EDIT Mode

Creating a Timed Recording:

1. Using the **Arrow buttons** to navigate, highlight the **DATE** parameter of the last line item (indicated with double dash marks).

2. Press the **Enter** button to enter the Edit mode. **EDIT MODE** will appear on-screen, in the lower left-hand corner of the Timer Settings menu. The user may press the **Enter** button to exit Edit mode at any time.

3. Use the **Arrow buttons** to change the values of the **DATE** setting.

Date (Day of the Month)	1 through 31
Day of the Week	Monday through Sunday
Range of Days	All Weekdays (Monday-Friday), All Weekend Days (Saturday-Sunday), Monday-Sunday (Everyday)

4. When finished entering the Date, use the **Arrow buttons** to navigate the **START** setting.

5. Use the **Arrow buttons** to enter the time the recording will begin. The Hours and Minutes are edited separately. The start and stop times are always configured in a 24-hour clock. When finished entering the start time, use the **Arrow buttons** to navigate to the **STOP** setting.

6. Use the **Arrow buttons** to enter the time the recording will end. Entering a time "before" the start time will cause the unit to record until the indicated stop time on the next day. When finished entering the stop time, use the **Arrow buttons** to navigate to the **SPD** setting.

7. Use the **Arrow buttons** to enter the record speed in pictures per second.

NTSC Record Speeds	60, 30, 20, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1, 0.0
PAL Record Speeds	50, 25, 17, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1, 0.0

8. When finished entering the Record Speed, use the **Arrow buttons** to navigate to the **QUALITY** setting.

9. Use the **Arrow buttons** to enter the record quality (Low, Medium, or High). Higher record quality settings use more disk space.

10. When finished entering the Record Quality, use the **Arrow buttons** to navigate to the **ON/OFF** setting.

11. Use the **Arrow buttons** to Activate, Deactivate, or Delete the recording.

12. When finished, press the **Enter** button to exit the Edit mode. Use the **Arrow buttons / Arrow buttons** to navigate to **[OK]**, then press the **Enter** button to complete the selection.

Editing a Timed Recording:

1. Using the **Arrow buttons** to navigate, highlight the event parameter you wish to edit.

2. Press the **Enter** button to enter the Edit mode. **EDIT MODE** will appear on-screen, in the lower left-hand corner of the pop-up menu.

3. Use the **Arrow buttons** to change the values. Use the **Arrow buttons** to navigate among parameters in the same row.

4. When finished, press the **Enter** button to exit the Edit mode. Use the **Arrow buttons** to navigate to **[OK]**, then press the **Enter** button to complete the selection.

Deleting a Timed Recording:

1. Using the **Arrow buttons** to navigate, highlight the **ON/OFF** parameter of the event you wish to delete.

2. Press the **Enter** button to enter the Edit mode.

3. Use the **Arrow buttons** to select **DEL** from the menu.

4. Press the **Enter** button to confirm the selection and exit the Edit mode.

5. Use the **Arrow buttons** to navigate to **[OK]**, then press the **Enter** button to remove the selection and exit the menu.

4.4 Main Menu ® Record Settings

Use this menu to specify:

```
Color/Mono
Normal Record Speed
Alarm Record Speed
Video Quality
```

- Color or Monochrome recording.

- The record speed during Normal recording.

- The record speed when the unit detects an alarm condition.

- The recorded picture quality.

❏   Main Menu ® Record Settings ® Color/Mono

This menu sets the recorded video to be in Color or Mono. If you select auto, (default), the unit will auto detect color as before. If you select mono, it will force the recording into monochrome. All recorded and looped video will be monochrome. Use the **Arrow buttons** to select **Auto** or **Mono**.

```
Auto
Mono
```

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏   Main Menu ® Record Settings ® Normal Record Speed

Use the **Arrow buttons** to select the desired Normal Record Speed.

Normal Record Speeds:

NTSC: 60, 30, 20, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1, 0.0.

PAL: 50, 25, 17, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1, 0.0.

```
Normal Record Speed

Pictures Per Second
       5p
```

When the Normal Record Speed is set to 0.0, the unit will only record while an alarm is active.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ **Main Menu ® Record Settings ® Alarm Record Speed**

Use the **Arrow buttons** to select the desired Alarm Record Speed.

Alarm Record Speeds:

NTSC: 60, 30, 20, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1.

PAL: 50, 25, 17, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

```
Alarm Record Speed

Pictures Per Second
      60p
```
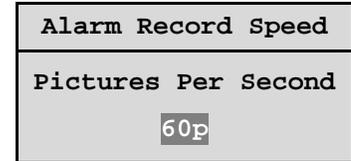
❏ **Main Menu ® Record Settings ® Video Quality**

Use the **Arrow buttons** to select the desired Record Quality. Select **High**, **Med** or **Standard**.

Higher record qualities use lower compression, requiring more disk space.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

```
Record Quality

Select Quality
     High
```

4.5 Main Menu ® Display Settings

Use this menu to specify what status information will be displayed on the primary monitor. Select On or Off, for the following items.

- The current time and date.
- The remaining amount of time before the hard disk runs out of record space.
- The time and date of the last alarm.
- The Record or Playback Speed.
- During Playback, the time and date the recording was made.

```
Current Time / Date
Record Capacity
Last Alarm
Record Playback Speed
Playback Time / Date
```
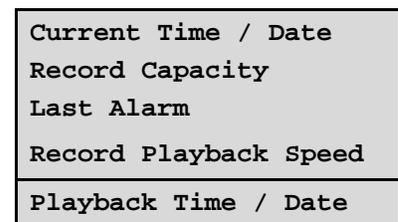
❏ **Main Menu ® Display Settings ® Current Time / Date**

To display the current Time and Date near the upper right hand corner of the primary monitor, select **ON**. Use the **Arrow buttons** to select **On** or **Off**.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

```
OFF
ON
```

❏ **Main Menu ® Display Settings ® Record Capacity**

Select ON, to display the amount of time remaining before the hard disk runs out of record space. The data is displayed near the upper left hand corner of the primary monitor. The unit displays the Record Capacity with two measures of time, and switches automatically depending on the amount of time remaining:

| OFF |
| ON |

- Days and Hours

- Hours and Minutes

- Minutes and Seconds

Use the **Arrow buttons** to select ON or OFF.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ **Main Menu ® Display Settings ® Last Alarm**

To display the time and date of the last alarm, near the upper right hand corner of the primary monitor, select On. The unit will display NONE if there is no previous record of an alarm.

| OFF |
| ON |

Use the **Arrow buttons** to select On or Off.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.
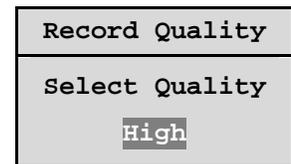

❏ **Main Menu ® Display Settings ® Record Playback Speed**

To display the Record or Playback Speed, near the lower right hand corner of the primary monitor, select On. The unit will display NONE if there is no previous record of an alarm.

| OFF |
| ON |

Use the **Arrow buttons** to select On or Off.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

❏ **Main Menu ® Display Settings ® Playback Time / Date**

To display the time and date the recording was made (during playback) select On. The data is displayed near the upper right hand corner of the screen.

| OFF |
| ON |

Use the **Arrow buttons** to select On or Off.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

4.6 Main Menu ® CompactFlash

Use this menu to search for, retrieve, and store video files. Select **Main Menu ® CompactFlash** to display the CompactFlash commands. Select from the following items.

```
        Store

      Retrieve

       Format
```

- **Store:** Search by Time, Date, or Alarm and Store selected files to CF card.

- **Retrieve:** Search by Time, Date, or Alarm and Retrieve selected files from CF card to the VDR.

- **Format:** Prepare the CF card for use or erase files previously stored.

❏ **Main Menu ® CompactFlash ® Store**

Once this command is selected the **CompactFlash Store Search Filters** Menu will appear.

Use this to specify:

- The Start and Stop date of the search.

- The Start and Stop time of the search.

- Whether to search for an alarm.

```
          Compact Flash Store Search Filters


               Start               Stop
     DATE:   10/21/03    [ ]     10/21/03      [ ]
             (MM/DD/YY)          (MM/DD/YY)


               Start               Stop
     TIME:   15:09:47    [ ]     15:09:47      [ ]



     ALARM: [ ]



             [CANCEL]      [START SEARCH]
```

Searching for All Recorded Events

Using the **Arrow buttons** to navigate, highlight **[START SEARCH]**, then press the **Enter** button. The Search Results window will appear. For information about selecting a recorded event, see **Selecting from the Search Results**, in this section

Selecting a Start and Stop Date

1. Using the **Right or Left Arrow buttons** to navigate, highlight the **DATE** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to change the start and stop date values. Use the **Right or Left Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop date parameter, use the **Up or Down Arrow buttons** to place an `[X]` in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Selecting a Start and Stop Time

1. Using the **Right or Left Arrow buttons** to navigate, highlight the `TIME` parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to change the start and stop time values. Use the **Right or Left Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop time parameter, use the **Up or Down Arrow buttons** to place an `[X]` in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Searching for Recorded Alarms

1. Using the **Right or Left Arrow buttons** to navigate, highlight the `ALARM` parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to activate the alarms search, by placing an `[X]` in the check box.

3. Press the **Enter** button at any time to exit Edit mode.

Starting the Search

Using the **Right or Left Arrow buttons** to navigate, highlight the `[START SEARCH]` parameter, then press the **Enter** button. The Search Results menu will appear.

Preview the Selected Files

Once the selected files are displayed you have the option of previewing the files before copying them to the selected device by hitting the **Enter button**. Use the **Up or Down Arrow buttons** to highlight a recorded event and hit the **Enter button**. The highlighted file will begin playing. When that file is finished the next file on the list will play. The following display will also appear to indicate the system is in **Preview Mode**.

```
   Preview Mode
'MENU' to Return
```
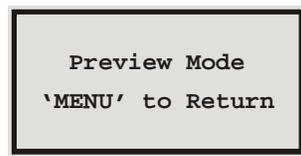
Hit the **Menu button** to return to the Search Screen,

```
       Compact Flash Store Search Results


        Start Date    Start Time   Size (MB)
   000   10/16/03      09:27:18        28 [ ]
   001   10/16/03      09:28:04         2 [x]
   002   10/16/03      09:28:06         2 [x]
   003   10/16/03      14:04:54        18 [ ]
   004   10/16/03      18:10:19     18208 [ ]
   005   10/22/03      07:56:40         2 [x]
   006   10/22/03      07:57:08         2 [ ]
   007   10/22/03      07:57:09         4 [ ]
   008   10/22/03      08:01:40         2 [ ]
   009   10/22/03      08:01:42         2 [ ]


   29 Matches Found
                          Selected  [      8](MB)
          Available on Target Medium [    10](MB)

   'LEFT'/'RIGHT' to select or deselect
   'ENTER' to Preview          'SEARCH' to Store
```

Selecting from the Search Results

1. Use the **Up or Down Arrow buttons** to highlight a recorded event.

2. Use the **Right or Left Arrow buttons** to select a recorded event by placing an **[X]** in the check box. Please note the size of the file or files selected cannot exceed the capacity of the targeted device.

Storing the Search Results

Hit the **Search button** to begin the file copying process. A progress bar will display until the operation is complete.

```
        Storing
   ┌──────────────┐
   │▐▐▐▐▐▐▐       │
   └──────────────┘
      [CANCEL]
```
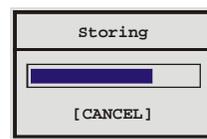
When finished the system will display a **Storing Complete Message Box**. At this point it will be safe to remove the CF card from the VDR. The video files can be played back using GE Interlogix QuickWave software that is automatically copied to the CF card. The files may also be copied and viewed on any PC equipped with a CF card reader.

```
          Message

      Storing Complete.


          [OK]
```
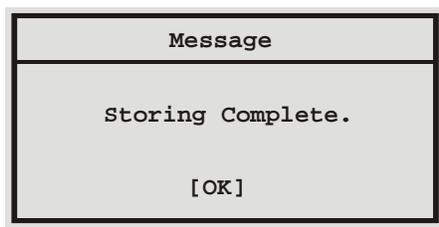
❏   **Main Menu ® CompactFlash ® Retrieve**

Once this command is selected the **CompactFlash Retrieve Search Filters** Menu will appear.

Use this to specify:

- The Start and Stop date of the search.

- The Start and Stop time of the search.

- Whether to search for an alarm.

```
        Compact Flash Retrieve Search Filters


             Start              Stop
 DATE:    10/21/03    [ ]      10/21/03       [ ]
          (MM/DD/YY)           (MM/DD/YY)


             Start              Stop
 TIME:    15:09:47    [ ]      15:09:47       [ ]



 ALARM: [ ]



              [CANCEL]      [START SEARCH]
```

Searching for All Recorded Events

Using the **Arrow buttons** to navigate, highlight **[START SEARCH]**, then press the **Enter** button. The Search Results window will appear. For information about selecting a recorded event, see **Selecting from the Search Results**, in this section

Selecting a Start and Stop Date

1. Using the **Right or Left Arrow buttons** to navigate, highlight the **DATE** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to change the start and stop date values. Use the **Right or Left Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop date parameter, use the **Up or Down Arrow buttons** to place an **[X]** in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Selecting a Start and Stop Time

1. Using the **Right or Left Arrow buttons** to navigate, highlight the **TIME** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to change the start and stop time values. Use the **Right or Left Arrow buttons** to navigate among the different parameters.

3. To activate the start or stop time parameter, use the **Up or Down Arrow buttons** to place an **[X]** in the check box.

4. Press the **Enter** button at any time to exit Edit mode.

Searching for Recorded Alarms

1. Using the **Right or Left Arrow buttons** to navigate, highlight the **ALARM** parameter, then press the **Enter** button. The unit will enter Edit mode.

2. Use the **Up or Down Arrow buttons** to activate the alarms search, by placing an **[X]** in the check box.

3. Press the **Enter** button at any time to exit Edit mode.

Starting the Search

Using the **Right or Left Arrow buttons** to navigate, highlight the **[START SEARCH]** parameter, then press the **Enter** button. The Search Results menu will appear.

```
         Compact Flash Retrieve Search Results


             Start Date    Start Time   Size (MB)
      000    10/16/03       09:27:18           28 [ ]
      001    10/16/03       09:28:04            2 [ ]
      002    10/16/03       09:28:06            2 [ ]
      003    10/16/03       14:04:54           18 [ ]
      004    10/22/03       07:56:40            2 [ ]
      005    10/22/03       07:57:08            2 [ ]
      006    10/22/03       08:01:40            2 [ ]
      007    10/22/03       08:01:42            2 [ ]




       8 Matches Found
                             Selected  [      0](MB)
             Available on Target Medium [   39104](MB)

      'LEFT'/'RIGHT' to select or deselect
                                   'SEARCH' to Store
```

Selecting from the Search Results

1. Use the **Up or Down Arrow buttons** to highlight a recorded event.

2. Use the **Right or Left Arrow buttons** to select a recorded event by placing an **[X]** in the check box. Please note the size of the file or files selected cannot exceed the capacity of the targeted device.

Retrieving the Search Results

Hit the **Search button** to begin the file copying process. A progress bar will display until the operation is complete.

```
        Retrieving

   [                    ]

        [CANCEL]
```
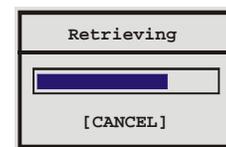
When finished the system will display a **Retrieving Complete Message Box**. At this point it will be safe to remove the CF card from the VDR. The files are now stored on the VDR's Hard Drive.

```
┌─────────────────────────────────┐
│            Message              │
├─────────────────────────────────┤
│                                 │
│       Retrieving Complete.      │
│                                 │
│             [OK]                │
│                                 │
└─────────────────────────────────┘
```
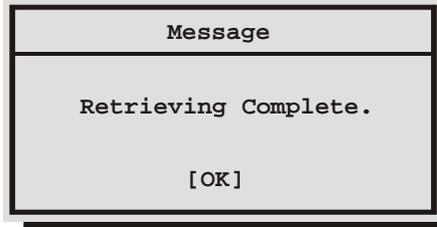
❏ **Main Menu ® CompactFlash ® Format**

Use this command to prepare a new CF card for use in the VDR or erase files that are already stored on the card. The Format command places a FAT16 file system on the CF card. Please note that formatting the CF card permanently erases any data currently stored on that card. Selecting Format will display the following warning.

```
┌─────────────────────────────────────────┐
│                 Format                  │
├─────────────────────────────────────────┤
│                                         │
│ All data will be permanently erased!    │
│         Do you want to continue?        │
│                                         │
│          [OK]     [CANCEL]              │
│                                         │
└─────────────────────────────────────────┘
```

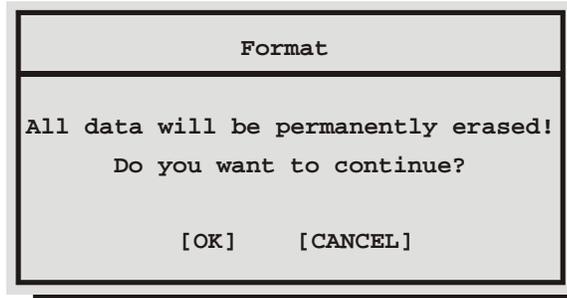Selecting **OK** will begin the format process. The system will display a **Format Complete** message when finished.

4.7 Main Menu ® Advanced Menu

To access the Advanced menu:

```
┌─────────────────────────────────┐
│          Password Box           │
├─────────────────────────────────┤
│                                 │
│   Please Enter The Password!    │
│             0───                │
│                                 │
└─────────────────────────────────┘
```

1. Select **ADVANCED MENU** from the Main menu, then press the **Enter** button. The Password Box will appear.

2. Enter the Advanced menu password. Use the **Arrow buttons** to select a character, then use the **Enter** button to complete the selection, and move to the next character.

3. Pressing the **Enter** button on the last character will complete the password selection and the unit will display the **Advanced** menu.
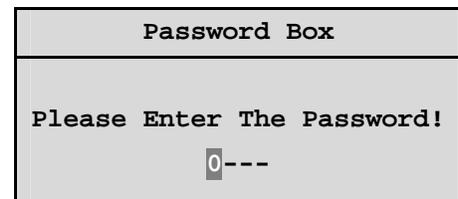
4.8 Main Menu ® About

❏ **Main Menu ® About**

Use this menu to display information about the VDR. Select **Main Menu ® About** to display the About
screen.

```
Serial Number:      V301-9-3300005
Software Version:   1.05
Software Date:      Oct 15 2003 15:06:18
Software Checksum:  59767E0E
Boot Code Ver.:     1.00
Disk Size:          41.11 GB


                    [OK]
```
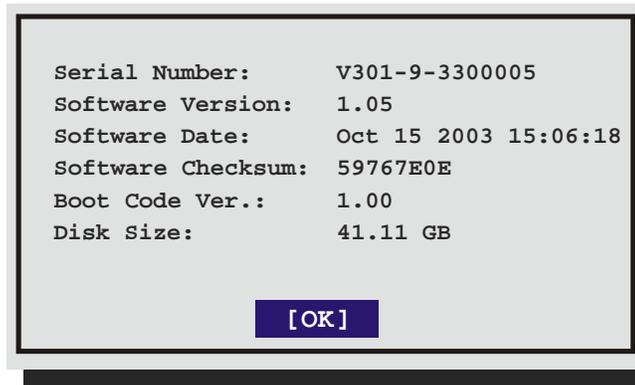
5 INSTALLER PROGRAMMING

For security reasons, a password is provided to limit access to the Advanced menu. For instructions about entering the Advanced menu, see section **4.6 Main Menu ® Advanced Menu**, on page 4-8.

5.1 Advanced Menu ® Disk Overwrite Mode

Use this menu to specify how the unit will handle disk overwrite issues once the hard disk becomes full.

The unit handles disk overwrite issues in three ways:

- No Overwrite.
- Overwrite Once.
- Continuous Overwrite.

```
Disk Overwrite Mode

    Select Mode

Continuous Overwrite
```
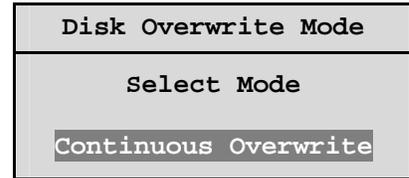
❏ **Advanced Menu ® Disk Overwrite Mode ® No Overwrite**

Functions of No Overwrite mode:

- Recording always starts at end of last recording.
- Recording stops when end of disk is reached (when disk is full).
- When the end of the disk is reached, the unit displays an on-screen message indicating that the disk is full, and the unit has stopped recording. User must acknowledge the on-screen message by pressing the **Enter** button.
- Unit will not record over previously recorded data. To continue recording, the data must be erased (or deleted) in the **Advanced ® Disk Maintenance** menu.
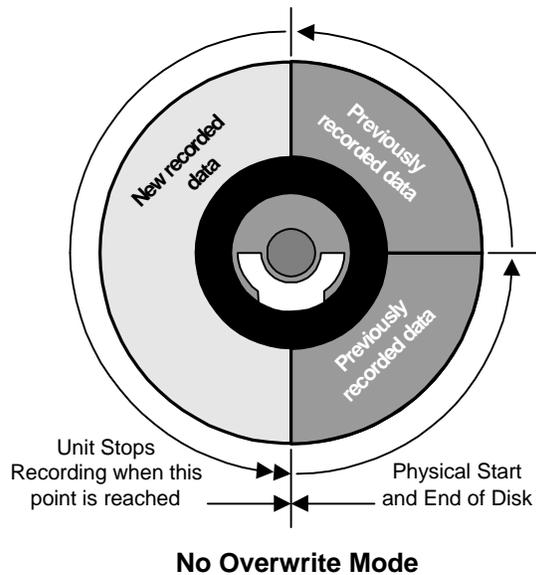
No Overwrite Mode

❏ **Advanced Menu ® Disk Overwrite Mode ® Overwrite Once**

Functions of Overwrite Once mode:

- Recording always starts at end of last recording.

- The unit overwrites all previously recorded data.

- Recording stops before the unit overwrites any of the newly recorded data (data from the current record session).

- When the end of the disk is reached, the unit displays an on-screen message indicating that the disk is full, and the unit has stopped recording. User must acknowledge the on-screen message by pressing the **Enter** button.

- The unit will continue recording again when the user presses the **Record** button.

Overwrite Once Mode

New recorded data

Previously recorded data overwritten

Unit Stops Recording when this point is reached

Physical Start of Disk
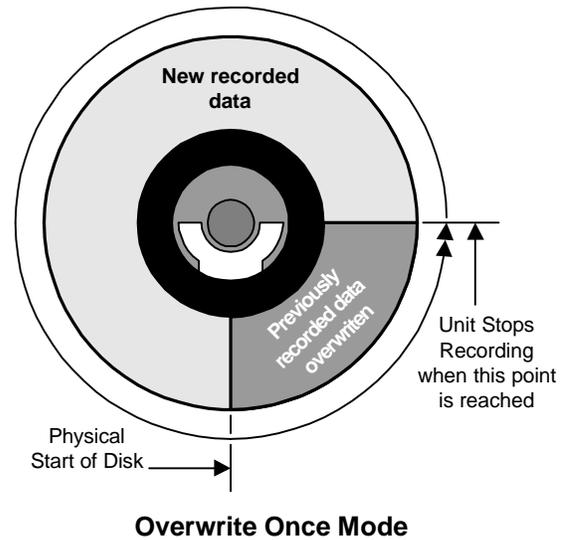
❏ **Advanced Menu ® Disk Overwrite Mode ® Continuous Overwrite**

Functions of Continuous Overwrite mode:

- Recording always starts at end of last recording.

- The unit overwrites all previously recorded data.

- The unit overwrites newly recorded data (data from the current record session).

- Unit never stops recording.

- Record Capacity display will not count down.

Continuous Overwrite Mode

Previously recorded data overwritten

New recorded data overwritten

Unit records over all recorded data
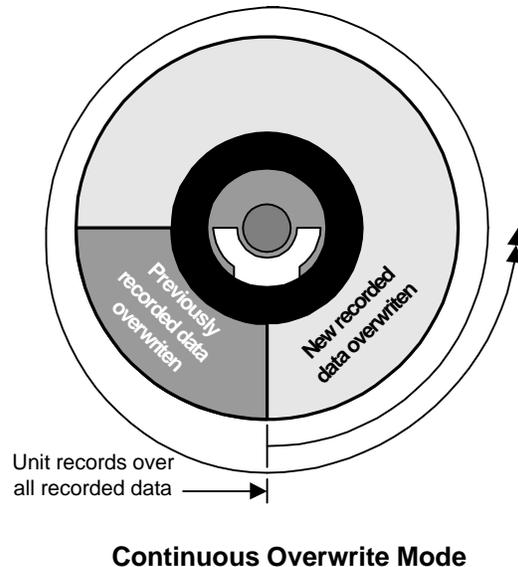
5.2 Advanced Menu ® Disk Maintenance

The user can have previously recorded information:

- Deleted (with the possibility of restoring it).

- Undeleted (restored if it has not yet been overwritten).

- Erased (removed with no possibility of restoring it).

```
Delete Disk
Undelete Disk
Erase Disk (Permanent)
```

❏ **Advanced Menu ® Disk Maintenance ® Delete Disk**
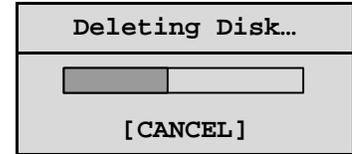
To begin deleting the disk, use the **Arrow buttons** to select `DELETE DISK`, then press the **Enter** button. The Deleting Disk menu will appear. The unit will begin deleting the oldest recorded information immediately.

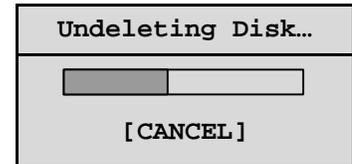To stop the delete process, select `[CANCEL]` by pressing the **Enter** button.

Data that was deleted before `[CANCEL]` was selected will remain deleted unless `UNDELETE DISK` is selected.

```
Deleting Disk…

[CANCEL]
```

❏ **Advanced Menu ® Disk Maintenance ® Undelete Disk**

To restore information that was previously deleted, use the **Arrow buttons** to select `UNDELETE DISK`, then press the **Enter** button.

To stop the restore process, select `[CANCEL]` by pressing the **Enter** button.

```
Undeleting Disk…

[CANCEL]
```

❏ **Advanced Menu ® Disk Maintenance ® Erase Disk (Permanent)**

Caution: Erasing the disk removes recorded data without the possibility of restoring it.

To begin erasing the disk, use the **Arrow buttons** to select `ERASE DISK (PERMANENT)`, then press the **Enter** button.

To stop the erasing process, select `[CANCEL]` by pressing the **Enter** button.

Data that was erased before `[CANCEL]` was selected will remain deleted permanently.

```
Erasing Disk…

[CANCEL]
```
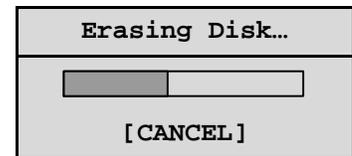
5.3 Advanced Menu ® Auto Delete Mode

Configuring the unit with the Auto Delete mode from 7 to 99 days prevents the unit from displaying or archiving any data that is more than the selected number of days old. This feature may be required by law in some jurisdictions, please consult with the local authorities.

Use the **Arrow buttons** to select from `7-99 Days` or `OFF`.

Press the Enter button to implement the selection.

If the selection is altered from what was previously selected, the confirmation menu will appear.

Rotate the **Arrow buttons** to select **Yes** or **NO**.

```
ADM Setting


  99   Days
```

```
Message

ADM will change. Are you sure?

        Yes
```
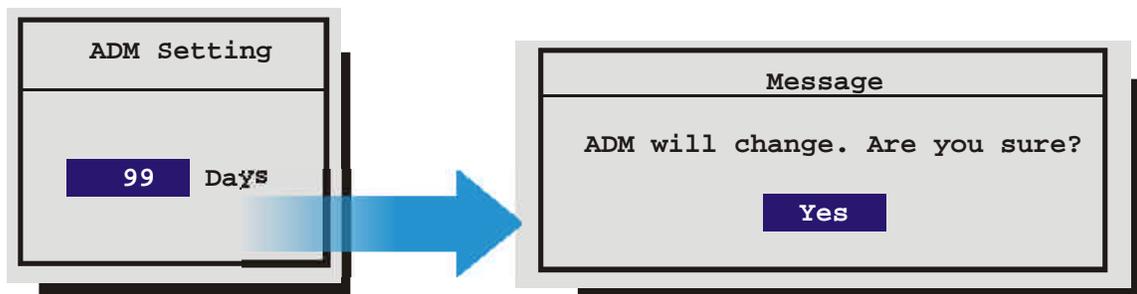
5.4 Advanced Menu ® Adjust Picture

Use this menu to specify the Brightness, Contrast, and Saturation of the video input. Adjustments made to the video input will alter the recorded image.

```
Brightness
Contrast
Saturation
```

❑ Advanced Menu ® Adjust Picture ® Adjust Brightness

Use this menu to increase or decrease the brightness of the image.

1. Use the **Arrow buttons** to navigate to the numbers.

2. Use the **Arrow buttons** to increase or decrease to brightness.

3. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select `[OK]`, then press the **Enter** button.

--OR—

4. **To Exit the menu without making changes:** Use the **Arrow buttons** to select `[CANCEL]`, then press the **Enter** button.

```
Adjust Brightness

       050

[CANCEL]      [OK]
```

❑ Advanced Menu ® Adjust Picture ® Adjust Contrast

Use this menu to increase or decrease the contrast of the image.

1. Use the **Arrow buttons** to navigate to the numbers.

2. Use the **Arrow buttons** to increase or decrease to contrast.

3. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select `[OK]`, then press the **Enter** button.

--OR—

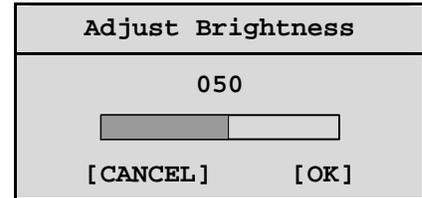4. **To Exit the menu without making changes:** Use the **Arrow buttons** to select `[CANCEL]`, then press the **Enter** button.

```
Adjust Contrast

       050

[CANCEL]      [OK]
```

❑ Advanced Menu ® Adjust Picture ® Adjust Saturation

Use this menu to increase or decrease the saturation of the image. Saturation refers to the amount of color displayed in the image.

1. Use the **Arrow buttons** to navigate to the numbers.

2. Use the **Arrow buttons** to increase or decrease to saturation.

3. **To Save the changes and Exit the menu:** Use the **Arrow buttons** to select `[OK]`, then press the **Enter** button.
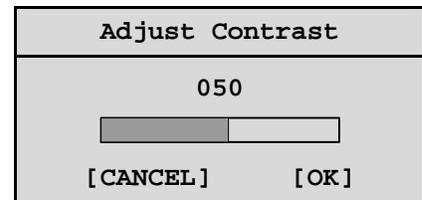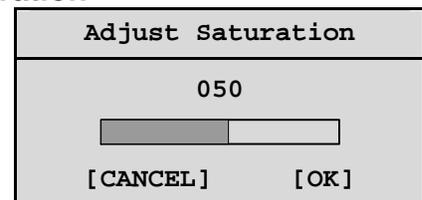
--OR—

4. **To Exit the menu without making changes:** Use the **Arrow buttons** to select `[CANCEL]`, then press the **Enter** button.

```
Adjust Saturation

       050

[CANCEL]      [OK]
```

5.5 Advanced Menu ® Front Panel Lock

Use this menu to Lock or Unlock the front panel.

Use the **Arrow buttons** to select UNLOCK KEYBOARD or LOCK KEYBOARD.

Press the **Enter** button to confirm the selection and exit the menu.

--OR—

Press the **Menu** button to exit the menu without making changes.

```
Unlock Keyboard
Lock Keyboard
```

5.6 Advanced Menu ® Factory Settings

Use this menu to enter the Factory Password, and restore the unit to the factory defaults.

Use the **Arrow buttons** to select a character, then use the **Enter** button to complete the selection, and move to the next character.

Pressing the **Enter** button on the last character will complete the password selection and return the unit to the factory default configuration.

```
Password Box

Please Enter The Factory Password
O---
```

5.7 Advanced Menu ® Change Password

Use this menu to change the Advanced Menu Password.

Use the **Arrow buttons** to select a character, then use the **Enter** button to complete the selection, and move to the next character.

Pressing the **Enter** button on the last character will open the Confirmation Box.

```
Password Box

Enter A New Password
O---
```

Re-enter the New password.

Pressing the **Enter** button on the last character will complete the password selection.

```
Confirmation Box

Please Re-Enter The Password
O---
```

If the password in the Confirmation Box **matches** the password from the Password box, this message will appear.

Press the **Enter** button to select **[OK]** and exit the menu.

```
Message

The New Password Has Been Accepted!
[OK]
```

If the password in the Confirmation Box **does not match** the password from the Password box, this message will appear.

Press the **Enter** button to select **[OK]** and exit the menu.

```
┌──────────────────────────────────┐
│             Message              │
├──────────────────────────────────┤
│  The Password Was Not Changed!   │
│             [OK]                 │
└──────────────────────────────────┘
```

5.8 Advanced Menu ® Firmware Upgrade

Use this menu to upgrade the VDR's Firmware using a PC connected to the VDR's Serial Port, the upgrade file, and the WinFlash program. The following message screen will display when this command is selected.

```
┌──────────────────────────────────┐
│         Firmware Upgrade         │
├──────────────────────────────────┤
│  Warning! Do not power off unit  │
│  until the operation is done!    │
│                                  │
│     CANCEL          [OK]         │
└──────────────────────────────────┘
```
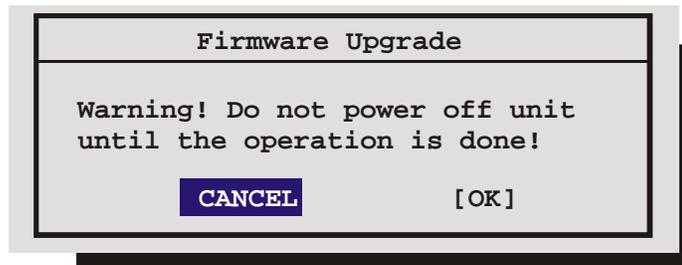
Use the **Arrow buttons** to select Cancel to exit this command or OK to proceed.

6 RS-232 REMOTE PROTOCOL

The RS-232 protocol command structure uses "Start of Text" (S_x) and "End of Text" (E_x) characters to identify the beginning and end of command sequences.

The VDR supports the following command sequences:

ASCII Command String

Command	ASCII String	Bytes in Hexadecimal
Play Forward	S_x **PLF** E_x	02 46 50 4C 03
Record	S_x **REC** E_x	02 52 45 43 03
Stop	S_x **STO** E_x	02 53 54 4F 03
Pause	S_x **PAU** E_x	02 50 41 55 03
Fast Forward	S_x **FWD** E_x	02 46 57 44 03
Rewind	S_x **REW** E_x	02 52 45 57 03
Frame Forward	S_x **FAD** E_x	02 46 41 44 03
Frame Reverse	S_x **RAD** E_x	02 52 41 44 03
Play Reverse	S_x **RPL** E_x	02 52 50 4C 03
Increase Speed	S_x **ISP** E_x	02 49 53 50 03
Decrease Speed	S_x **DSP** E_x	02 44 53 50 03
Search	S_x **SEA** E_x	02 53 45 41 03
Up Arrow	S_x **ARU** E_x	02 41 52 55 03
Down Arrow	S_x **ARD** E_x	02 41 52 44 03
Left Arrow	S_x **ARL** E_x	02 41 52 4C 03
Right Arrow	S_x **ARR** E_x	02 41 52 52 03
Menu	S_x **MEN** E_x	02 4D 45 4E 03
Enter	S_x **ENT** E_x	02 45 4E 54 03
Set Clock	See instructions for setting clock in the following section.	

Note: All byte values shown in hexadecimal.

Setting the Clock

The following table shows the command sequence for setting the clock:

Command	1	2	3	4	5	6	7	8	9	10
Value	02	43	4C	4B	20	y1	y2	2D	m1	m2

Command	11	12	13	14	15	16	17	18	19	20
Value	2D	d1	d2	2C	h1	h2	3A	f1	f2	03

This gray cells in the Value row of this table indicate the correct positions for each byte of data in the command string.

Place the hexadecimal value of the desired ASCII character into the command string. Enter a two digit value for the Year, Month, Day, Hour, and Minute into the command string. Each digit is a separate byte. Use the last two digits of the year for the year value (For example, 2001 is entered as 01). Time is always designated in Military Time.

Example

In this example, 14:39 on December 25, 2000 is used to demonstrate the Set Clock Command String.

	Notation Used in Value Column	ASCII Character of desired Value	Hex Value entered into command string.
Year Character #1	y1	0	30
Year Character #2	y2	0	30
Month Character #1	m1	1	31
Month Character #2	m2	2	32
Day Character #1	d1	2	32
Day Character #2	d2	5	35
Hour Character #1	h1	1	31
Hour Character #2	h2	4	34
Minute Character #1	f1	3	33
Minute Character #2	f2	9	39

The final Set Clock Command String for 14:39 in December 25, 2000 would appear as follows:

Command	1	2	3	4	5	6	7	8	9	10
Value	02	43	4C	4B	20	30	30	2D	31	32

Command	11	12	13	14	15	16	17	18	19	20
Value	2D	32	35	2C	31	34	3A	33	39	03

ASCII Status Request Messages

Command	ASCII String	Bytes in Hexadecimal
Model Name Request	S_x **MLN** E_x	02 4D 4C 4E 03
Software Version Number Request	S_x **SVN** E_x	02 73 77 4E 03
Record Mode Status Request	S_x **RMS** E_x	02 52 4D 73 03
Stop Mode Status Request	S_x **SMS** E_x	02 73 4D 73 03

ASCII Status Response Messages

Command	ASCII String
Model Name Response	S_x MLN **VDR** E_x
Software Version Number Response	S_x SVN **1.18** E_x
Record Mode Status Response	S_x RMS **0** E_x (Not Recording)
	S_x RMS **1** E_x (Recording)
	S_x RMS **2** E_x (Not Recording and Disk Full)
	S_x RMS **3** E_x (Recording and Disk Full)
Stop Mode Status Response	S_x SMS **0** E_x (Not Playing)
	S_x SMS **1** E_x (Playing)
	S_x SMS **2** E_x (Not Playing and End of Disk)
	S_x SMS **3** E_x (Playing and End of Disk)

7 FACTORY DEFAULTS

Function	Setting
Time Format	24 Hour
Date Format	MM / DD / YY
Normal Record Speed	60 pictures per seconds (NTSC) or 50 pps (Pal)
Alarm Record Speed	60 pictures per seconds (NTSC) or 50 pps (Pal)
Record Quality	High
Disk Overwrite Mode	Continuous Overwrite
Auto Delete Mode	Off
Front Panel Locked	Off
Brightness	50%
Contrast	50%
Saturation	50%
Display Current Time and Date	Off
Display Record Capacity	Off
Display Last Alarm	Off
Display Record or Playback Speed	Off
Display Playback Time and Date	Off
Baud Rate	9600
Hardwire Alarm	Enabled
Alarm Buzzer	Disabled

8 TECHNICAL SPECIFICATIONS

General

Power Supply	120-240 Volt AC, Auto-Ranging adapter
Input Voltage	12 Volt DC
Power consumption	20 Watts Max.
Operating Temperature Range	Operating: 0 to 40 ºC. Storage: -20 to +60 ºC.
Relative Humidity Range (Non-Condensing)	Operating: 10% to 80%. Storage: 10% to 95%
Dimensions	Inches: 13 x 10.5 x 2.5, MM: 330 x 267 x 63.5
Weight	9.25 lbs. (4.20 kg)

Connections

Power Connector	2.1mm Barrel Connector, Center Positive
Accessory I/O Port	DB-9 Male. See Section 1.8, Accessories Port
RS-232 Serial Port	DB-9 Male DTE Connection
Composite Video In	BNC connector (See caution below)
Composite Video Out	BNC connector

Video

Video Signal Input	0.7 to 1.4 Volts peak-to-peak, with Automatic Gain Control
Video Signal Output	1 Volt peak-to-peak into 75-ohm
Input Termination	75-ohm
Colors	Y:U:V 4:2:2, 16.8 Million Colors
Gray Scale	256 Levels
Horizontal Resolution	720 Pixels
Vertical Resolution	484 Lines
Compression Standard	Wavelets

On-screen Video Indicators

End of Data	Pause	Rewind
Fast Forward	Play	Start of Data
Last Alarm	Record Capacity	Time and Date
Record Speed	Reverse Play	Video Loss
Playback Speed		

Part Numbers

User Manual	0150-0255

Approved CompactFlash Cards

Manufacturer	Capacity
Fujifilm	128Mb
RCA	32Mb
PNY	128Mb
ProMaster	64Mb
Memorex	64Mb
SanDisk	64Mb
SanDisk	128Mb
SanDisk	512Mb
Lexar 4x	64Mb
Simple Tech	512Mb

All specifications are subject to change without notice. GE Interlogix believes all specifications are correct, but no liability is assumed for omissions or errors.

9 WARRANTY AND SERVICE

9.1 Factory Service

⚠ **Warning:** Do not open the top cover or attempt to service the unit, as this may expose you to dangerous voltages and other hazards. Programmer maintenance of this unit is limited to external cleaning and inspection. Refer all servicing to qualified personnel.

If the unit requires factory service, contact the dealer who supplied the unit to you for the correct procedures on returning the unit to the factory or the nearest factory service center.

If the dealer is not available, contact the manufacturer of the unit as detailed below and request a Return Material Authorization number (RMA). The unit's serial number must be provided before a RMA number can be issued. Units returned to the factory for service must have freight and insurance prepaid, and must show the RMA number clearly on all shipping documents. The failure symptoms must be clearly described by the operator and enclosed with the unit together with a copy of the original suppliers invoice. Failure to comply with these instructions will delay service of the unit, and may result in the unit not being accepted by the Repair Center.

Factory Address

GE Interlogix
Attention: Repair Center
3050 Redhill Ave.
Costa Mesa, CA. 92626
United States of America
Telephone: 800-343-3358 (7:00 AM to 4:30 PM, Pacific Time)
In Oregon: 541-754-9133
Fax: 541-754-7162 (24 hours a day)

For warranty information, see the following page.

9.2 Warranty and Return Information

GE Interlogix warrants all of its equipment for three years from the date of purchase. This warranty covers any defects in materials and workmanship. Equipment failures that are due to improper installation, modification, abuse, or acts of nature will not be covered by this warranty. The repair department will evaluate all equipment returned for repair to determine warranty coverage. The Tech Support Manager will resolve any questions that may arise during evaluation to make a final determination.

Note: The three-year warranty does not apply to the following products:
MobileView® and the monitor CRT, which carry a 12-month warranty from the date of purchase.

The warranty specifically covers any defects in material and workmanship and does not cover equipment that has been abused, damaged, or modified.

For all warranty repairs, GE Interlogix will cover all costs, including parts, labor, and shipping. Repaired equipment will be returned via the same method of shipment in which it was received. If a customer requests a faster return shipment, the difference will be charged.

For all non-warranty repairs, the customer will be billed for parts, labor, and shipping. Labor will be billed in half-hour increments.

Note: Customers requesting an estimate prior to repair will be notified by phone. If they cannot be reached, they will be notified by fax. If we are unable to reach the contact person for repair authorization after one phone attempt and two fax attempts, the equipment will be returned without being repaired. We will hold equipment no longer than two weeks.

Advance Replacement Policy

When an advance replacement is required, we will send the customer replacement equipment from our stock and receive the returned product in exchange. The received equipment will be evaluated and the repair department will determine whether it is a warranty replacement. If it is non-warranty, see our repair policy above for details. The following guidelines will be used for all advance replacements:

- Fewer than 45 days from purchase, GE Interlogix will replace the product with new equipment.

- From 45 days to 1 year from purchase, GE Interlogix will replace the product with refurbished equipment.

- From 1 year to 3 years from purchase, the product must be sent in for repair. Advance replacements will be sent for a fee of $100.

If you have questions about this policy, please contact the GE Interlogix RMA Department at 800-469-1676.