

DVRI Series Digital Video Recorders

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Addendum



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I REO QUICK INSTALL GUIDE

1.1 Introduction

This guide provides the steps necessary to install the DVR1 in combination with a REO Multiplexer or REO Switcher Monitor. If you are not familiar with the operations of the DVR1 and the REO Monitor, refer to the corresponding instruction manuals.

1.2 Required Software Version

Ensure that the DVR1 and REO monitor's software version is equal to or higher than noted below.

Product	Software Version
DVR1 (all models)	1.14 or higher (available at www.philipscsi.com)
REO Multiplexer Monitor	2.01c or higher
REO Switcher Monitor	1.00 or higher


1.3 Installation

1.3.1 Connection of Audio/Video Cable (A/V Cable)

To record camera images, the REO VCR In/Output allows connection of the DVR1. Connect the Mini Din plug to the VCR connector of the REO System Monitor.


1. Connect the BNC connectors to the **VIDEO IN** and **VIDEO OUT** of the DVR1.

ATTENTION:

 **VIDEO IN** of the A/V cable must be connected to **VIDEO OUT** of the DVR1.
VIDEO OUT of the A/V cable must be connected to **VIDEO IN** of the DVR1.

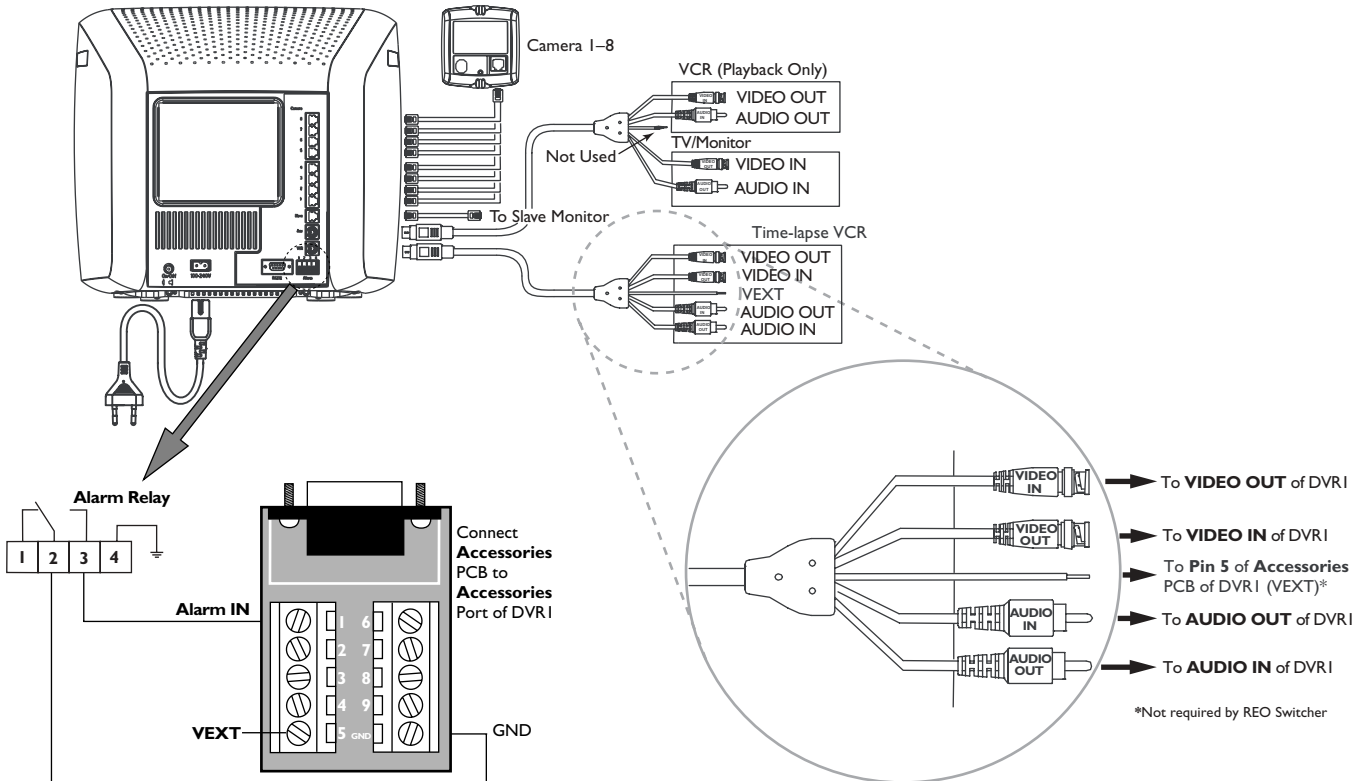
2. Connect the black VEXT cable (located in the A/V cable) to the VEXT-pulse output of the DVR1 (**Pin 5 of Accessories port**) for proper synchronization between the System Monitor and DVR1.
3. If the DVR1 also has audio recording capabilities, connect the RCA connectors to **AUDIO IN** and **AUDIO OUT** of the DVR1.

ATTENTION:

 **AUDIO IN** of the A/V cable must be connected to **AUDIO OUT** of the DVR1.
AUDIO OUT of the A/V cable must be connected to **AUDIO IN** of the DVR1.

1.3.2 Connection of Alarm Contact

In case of an alarm, the output relay contact of the REO System Monitor can change the recording speed from **Normal** recording to **Alarm** recording until the alarm is acknowledged by the user or automatically resets after the programmed alarm time has expired.



1.4 Programming the REO System monitor

No special programming is required for the REO Switcher. If using the REO Multiplexer, ensure that the *Record* mode is set to **Multiplexing** (verify this via the REO Main Menu > Settings > VCR).

1.5 Programming the DVR1

To view the DVR1's menu screen using the REO System Monitor:

- On the REO System Monitor, press **MENU > SWITCH TO PLAYBACK VIEW**
- On the DVR1:
 - Select **MENU > ADVANCED MENU**, then press **ENTER**
 - Enter the correct password (default is 0000) and **ENTER**
 - Press **ENTER** to access the *Advanced Menu*
 - Select **MULTIPLEXER FORMAT**, then **ENTER**
 - Select **PHILIPS REO**, then **ENTER**
 - Press **MENU** twice to exit.

1.6 Remote Viewing Considerations

The following pertains to the **Remote Viewer Software** (included with the DVR1; allows Remote Viewing of video via a PC with this software loaded).

The Ethernet port connection depends on the network configuration:

- For a DVR1 connected directly to a Hub, use a *Straight Through* cable.
- For a DVR1 connected directly to a PC, use a *Crossover* cable.
- For a DVR1 connected via standard phone line (POTS) using LAN modems, refer to the Philips CSI Web site.* A PSTN-LAN* modem can be used for remote access to one of the Philips digital products through a POTS line.

*Refer to our Web site at www.philipscsi.com under **Tech Tips, #12 Applications Notes, 3COM OfficeConnect 56K LAN Modem**.

Further information regarding connection of optional equipment is found in the DVR1 Instruction Manuals.

2 INSTALLATION GUIDE FOR THE COMBINED PHILIPS MULTIPLEXER, INTUIKEY KEYBOARD & DVR1 SERIES SYSTEM

2.1 Overview

The latest software for the Philips *System4*® Multiplexers, IntuiKey Keyboard, and DVR1 greatly improves the functionality of the system. This new software simplifies retrieval of the DVR1's recorded video via the IntuiKey keyboard.

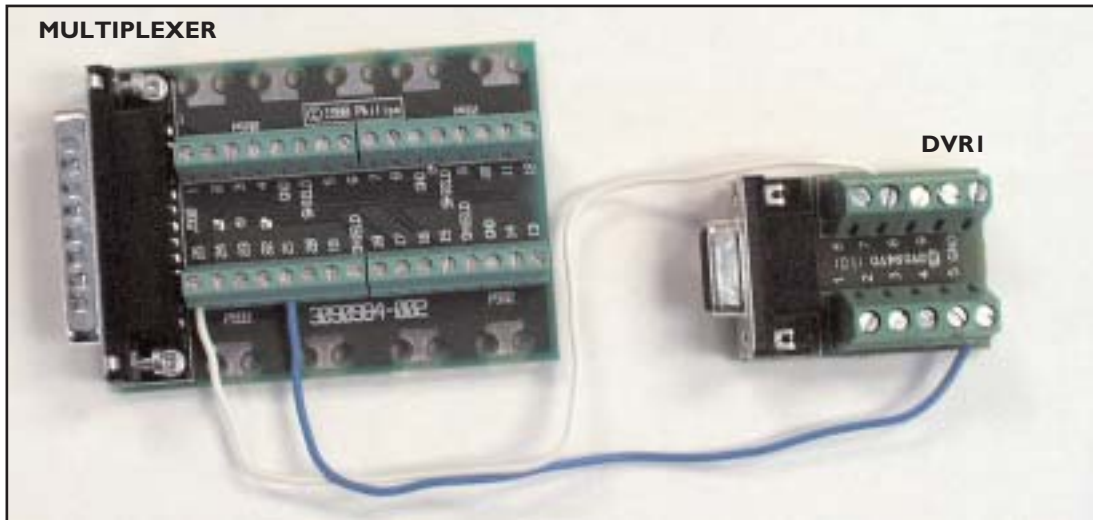
2.2 Required Software Version

Ensure that the keyboard, DVR1, and Philips Multiplexer software versions are equal to or higher than those noted below. Software for these products is available at www.philipscsi.com.

Product	Software Version
System4 Multiplexer	3.05 or higher
IntuiKey Keyboard (all models)	1.03 or higher
DVR1 (all models)	1.14 or higher

2.3 Installation

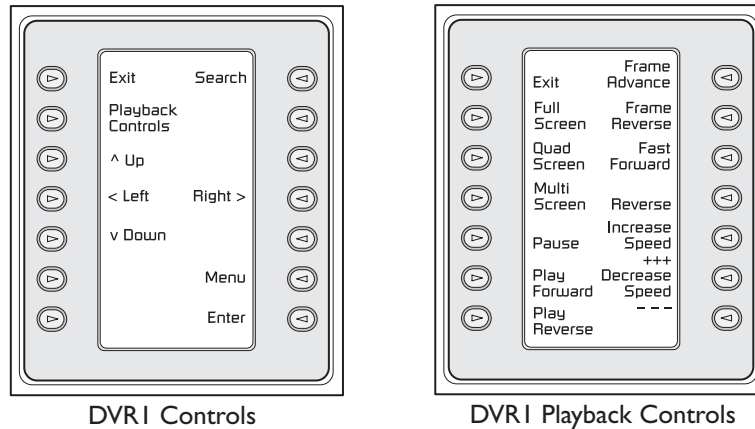
1. Connect an RS-232 null modem cable (Philips model #S1385) from the Multiplexer's Console port to the DVR1's RS-232 port.
2. Connect the IntuiKey keyboard to the Multiplexer's KYBD port using a standard keyboard cable.
3. Connect a Vext Cable from the Multiplexer to the DVR1 for proper video synchronization between the Multiplexer and DVR1, as follows:
 - Vext Pulse Out: DVR1 Pin 5 to Multiplexer Pin 21.
 - Ground: DVR1 Pin 7 to Multiplexer Pin 25.



4. Multiplexer Setup (refer to the Multiplexer's Instruction Manual for further details):
 - Connect the Monitor to **MON A** output of the Multiplexer.
 - Execute the following Multiplexer *Advanced Menu* commands:
 - **ADVANCED SETUP → VCR SETUP → RECORD SETUP VCR OUT → VEXT INPUT "ON"**
 - **ADVANCED SETUP → VCR SETUP → RECORD SETUP VCR OUT → SELECT VCR "DVR1"**
 - **ADVANCED SETUP → PC/PRINTER → CONNECT TO VCR "SERIAL PORT 96,N,8,1"**
5. DVR1 Setup (refer to the DVR1 Instruction Manual for further details):
 - Connect the Monitor to **VCR output** of the DVR1.
 - Execute the following DVR1 *Advanced Menu* commands:
 - **ADVANCED MENU → MULTIPLEXER FORMAT "PHILIPS"**
 - **ADVANCED MENU → COMMUNICATIONS → BAUD RATE "9600"**
6. Connect the DVR1's **VCR OUTPUT** to the Multiplexer's **VCR INPUT**. Also connect the Multiplexer's **MON A** output to the Monitor.

2.4 DVRI Keyboard Menus

There are two new keyboard menus that provide direct access to the DVRI menus and its recorded video (refer to the keyboard's instruction manual for further information on keyboard menus).



2.4.1 DVRI Controls Menu

To view the **DVRI CONTROLS** menu, at the Keyboard's **MULTIPLEXER MAIN MENU**, select **RECORDER CONTROLS**, then **DVRI CONTROLS**. The multiplexer will enter the *VCR View* mode.

When this screen is selected, the DVRI output signal switches to **MON A** of the multiplexer (the multiplexer *Playback* mode remains unchanged).

Below is a list of the new Keyboard Softkey buttons for the *DVRI Controls* menu along with an explanation of the functions they perform.

Softkey	Functions
Exit*	<ul style="list-style-type: none"> • Presents the previous keyboard menu (RECORDER CONTROLS). • Output signal of the Multiplexer is switched to MON A.
Playback Controls	<ul style="list-style-type: none"> • Presents the DVRI PLAYBACK CONTROLS menu (see Section 2.4.2). • The Multiplexer is forced into <i>Playback</i> mode to decode playback video from the DVRI.
Search	<ul style="list-style-type: none"> • Presents the DVRI's <i>Search</i> screen. • Video selected directly from this menu is not decoded unless the Multiplexer is in <i>Play</i> mode. Press PLAYBACK CONTROLS on the DVRI to properly view decoded video.
Up, Down, Left, Right	Navigate the DVRI's menu screens
Enter	Equivalent to the DVRI's <i>Enter</i> command.
Menu	Equivalent to the DVRI's <i>Menu</i> button.

*To stop playback and resume recording, **EXIT** the **DVRI CONTROLS** and **RECORDER CONTROLS** menus, then press **PLAY** on the Multiplexer's Main menu.

NOTES:

1. The front panel buttons of the Multiplexer and AllPlex keyboard do not provide direct access to the DVRI's *Search* menus.
2. When the IntuiKey keyboard is in the **DVRI CONTROLS** menu, all **MON A** display keys from the front panel and Allplex keyboard are blocked except the following:
 - ALARM ACK
 - ACTION ACK
 - ALT, MON B
 - Display keys for **MON B** are not blocked (except for **Freeze**).
3. If connection has been broken while the Multiplexer is in **DVRI CONTROLS** mode (via the IntuiKey keyboard), the Multiplexer **MON A** display becomes locked in this mode. To force the Multiplexer out of **DVRI CONTROLS** mode, execute the following command via the Multiplexer front panel: **ALT, 1, VCR, SEQ**.
4. If the Multiplexer was placed in *Menu* mode via front panel buttons, and the IntuiKey keyboard goes into **DVRI CONTROLS**, the Multiplexer remains in Multiplexer *Menu* mode. However, the **DVRI CONTROLS** keys on the IntuiKey keyboard will still control the DVRI. To display the DVRI menus, first leave the Multiplexer menus (from the front panel), then leave and reenter **DVRI CONTROLS** on the IntuiKey keyboard.

2.4.2 DVRI Playback Controls Menu

Below is a list of the new Keyboard Softkey buttons for the *DVRI Playback Controls* menu along with an explanation of the functions they perform.

Softkey	Functions
Exit	<ul style="list-style-type: none">• Presents the previous keyboard menu (DVRI CONTROLS).• Output signal of the DVRI is switched to MON A.
Full, Quad, Multi	Presents the various viewing options of the multiplexer.
Pause, Play Forward, Play Reverse, Frame Advance, Frame Reverse, Fast Reverse, Fast Forward, Increase Speed, Decrease Speed	Equivalent to the DVRI's front panel buttons.

3 RS-232 REMOTE PROTOCOL

3.1 Supported Command Sequences

The DVR1 supports the following command sequences, entered via PC once communication has been established between the PC and the DVR1. The Baud Rate should be set at 9600 Baud, with 1 Stop Bit, 8 Data Bits, and Parity at None.

All byte values entered at the PC must be in hexadecimal values. Each command string begins with an STX (02) character and ends with an ETX (03) character.

COMMAND	CHARACTERS	START					END
		1	2	3	4	5	
Play Forward	FPL	02	46	50	4C	03	
Record	REC	02	52	45	43	03	
Stop	STO	02	53	54	4F	03	
Pause	PAU	02	50	41	55	03	
Fast Forward	FWD	02	46	57	44	03	
Rewind	REW	02	52	45	57	03	
Frame Advance	FAD	02	46	41	44	03	
Reverse Frame Advance	RAD	02	52	41	44	03	
Play Reverse	RPL	02	52	50	4C	03	
Set Clock	<i>See instructions for setting clock in the following section.</i>						
Increase Speed	ISP	02	49	53	50	03	
Decrease Speed	DSP	02	44	53	50	03	
Search	SEA	02	53	45	41	03	
Arrow Up	ARU	02	41	52	55	03	
Arrow Down	ARD	02	41	52	44	03	
Arrow Left	ARL	02	41	52	4C	03	
Arrow Right	ARR	02	41	52	52	03	
Menu	MEN	02	4D	45	4E	03	
Enter	ENT	02	45	4E	54	03	

Example:

To **Play Forward**, enter the following command at the PC keyboard, using the starting and ending characters and hexadecimal equivalent of the **FPL** from the above chart: **02 46 50 4C 03 <Enter>**

3.2 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	11	12	13	14	15	16	17	18	19	20
VALUE	02	43	4C	4B	20	y1	y2	2D	m1	m2	2D	d1	d2	2C	h1	h2	3A	f1	f2	03

The gray cells in the *Value* row of the 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, entering two digit values for Year, Month, Day, Hour, and Minute into the command string. The year is a 2-digit number, and the time is military time (24-hour clock).

See the example to follow.

SET CLOCK 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 on December 25, 2000 is as follows:

COMMAND	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VALUE	02	43	4C	4B	20	30	30	2D	31	32	2D	32	35	2C	31	34	3A	33	39	03

OR:

02 43 4C 4B 20 30 30 2D 31 32 2D 32 35 2C 31 34 3A 33 39 03 <Enter>

