



INSTRUCTION MANUAL

**NETWORKING SOFTWARE
FOR 1-CHANNEL DIGITAL
VIDEO RECORDERS**

DR0100NET NTSC

Thank you for purchasing TOA's 1-channel digital video recorders. Please carefully follow the instructions in this manual in order to ensure long, trouble-free use of your digital video recorders.

TOA Corporation

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1. GENERAL DESCRIPTION

The DR0100NET software program permits recorded images from networked TOA 1-channel digital video recorders (the “1-Channel DVR” herein) to be viewed, searched, remotely controlled and saved to a personal computer (PC). A single PC installed with this program can also remotely control the selected 1-Channel DVR of two or more Recorders.

Note: Two or more PCs cannot be used in a system.

2. FEATURES

- **Viewing of Recorded Images**

Images recorded on the 1-channel DVR can be viewed by the PC. The system configuration of the 1-Channel DVR and TOA's Multi-Switcher permits images to be viewed in multi-split screen displays (4, 9, and 16-segment split screens).

A single image can be displayed on the entire screen.

- **Search of Recorded Images**

Search can be performed for date/time and recording blocks. Search result is displayed as a thumbnail.

- **Remote Control**

The 1-Channel DVR's front panel keys can be operated from remote locations. Menu setting operation can be remotely accessed. It is also possible to save the 1-Channel DVR's menu setting contents to a connected PC or upload data from the PC.

- **Saving Images to a PC**

Recorded 1-Channel DVR images can be saved to a PC. Images saved to the PC can also be viewed later.

- **Other Functions**

Images displayed on a PC can be printed out.

3. THE SOFTWARE LICENSE AGREEMENT

TOA CORPORATION Software License Agreement

To our customers:

Be sure to first read this Software License Agreement before using the DR0100NET Software (the "Software" herein).

Your consent to the conditions stated in this Agreement and the conclusion of this Agreement are assumed when the Software upgrade of your PC is completed.

You are not licensed to use the Software unless you agree to the conditions in this Agreement.

Clause 1. Licensing

TOA CORPORATION licenses its customers to use the Software. The PC(s) for which customers are licensed to use the Software are limited to those PC(s) each customer personally manages and uses. The "customer" herein refers to those who actually purchased the TOA 1-CHANNEL DIGITAL VIDEO RECORDERS, regardless of whether they are individuals or companies.

Clause 2. Copyright

TOA CORPORATION holds the copyright of the Software, which is protected by Japan's Copyright Act and applicable international treaties, etc.

Clause 3. Prohibition of Duplication, Distribution, Modification, and Analysis

- (a) The customer must not copy or duplicate the Software.
- (b) The customer must not assign, lend, transfer or otherwise allow any third party to use the Software.
- (c) The customer must not decompile or reverse-engineer the Software.

Clause 4. Quality Assurance

TOA CORPORATION assumes no responsibility, under any circumstances, for losses (including but not limited to losses of business profits, interruption of business operation, loss of business information, and monetary damages) that the customer may sustain resulting from the use of the Software or inability to use it.

Clause 5. Termination of the Agreement

TOA CORPORATION can terminate this Agreement if the customer infringes this Agreement. The customer is not allowed to use the Software if the Agreement is terminated.

4. SYSTEM REQUIREMENTS

This program has been designed based on the following system requirements:

- 1) OS: Windows 2000(R) Professional (SP2 or later) and Windows XP(R) Professional Edition
- 2) CPU: 1GHz clock rate or greater.
- 3) Memory: At least 256MB of RAM
- 4) Screen resolution: 1,024 x 786 pixels or greater
- 5) Color resolution: 16 bits (65,536 colors) or greater
- 6) Multi-Switcher: C-MS91D, C-MS91S, C-MS161D, C-MS161S

The above figures ensure correct operation during practical use.

Windows 2000(R) Professional (SP2 or later) and Windows XP(R) Professional Edition are registered trademarks held in the U.S.A. and other countries by Microsoft Corporation.

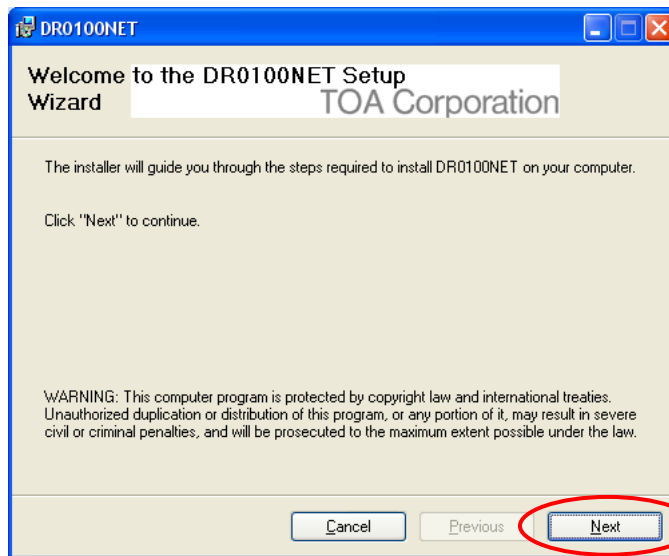
Note

Some of the program's functions could malfunction or its performance be adversely affected if other application programs are operating during operation of the program.

5. INSTALLATION AND UNINSTALL

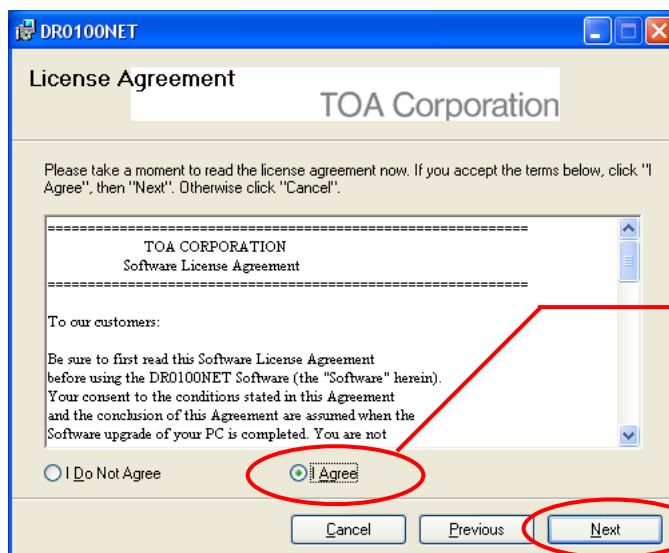
5.1. Installation Procedure

1. Save the DR0100NET software program "DR0100NET NTSC.msi" to a PC and then double-click DR0100NET NTSC.msi to activate it.
2. According to the installation screens, proceed with the following procedures.
 - 2-1. An installer is activated.



Click [Next].

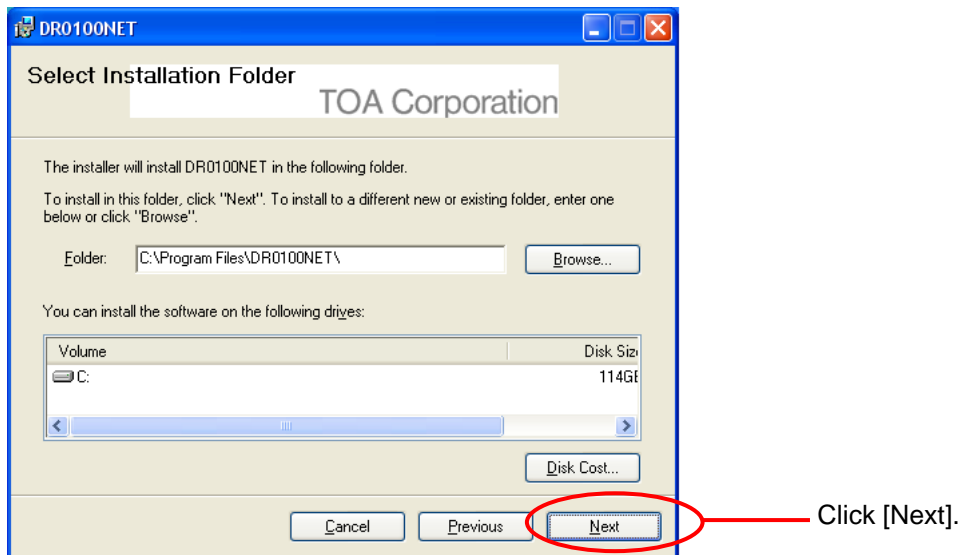
- 2-2. "The Software License Agreement" screen is displayed.



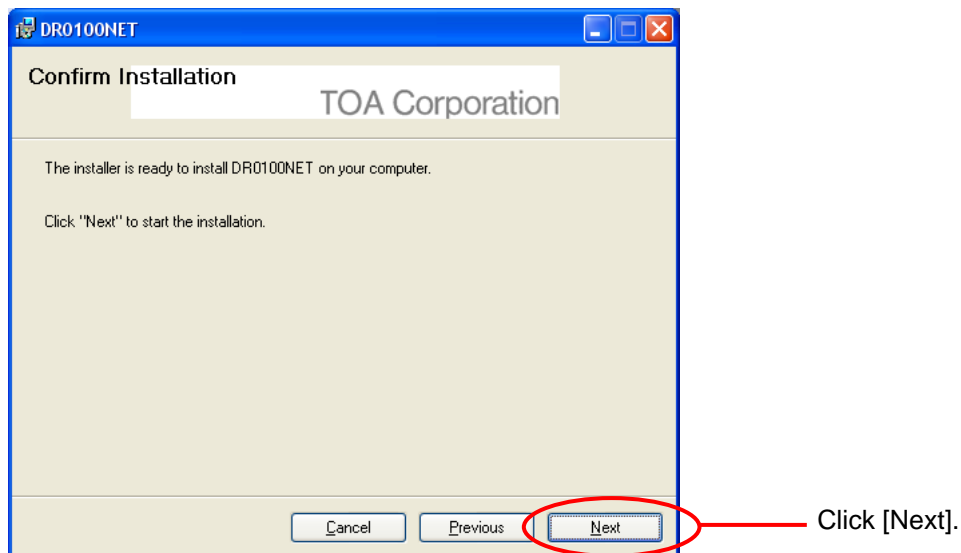
Be sure to first read this "The Software Licence Agreement" before using the DR0100NET software. Please click [I Agree] button when you agree to the conditions described.

Click [Next].

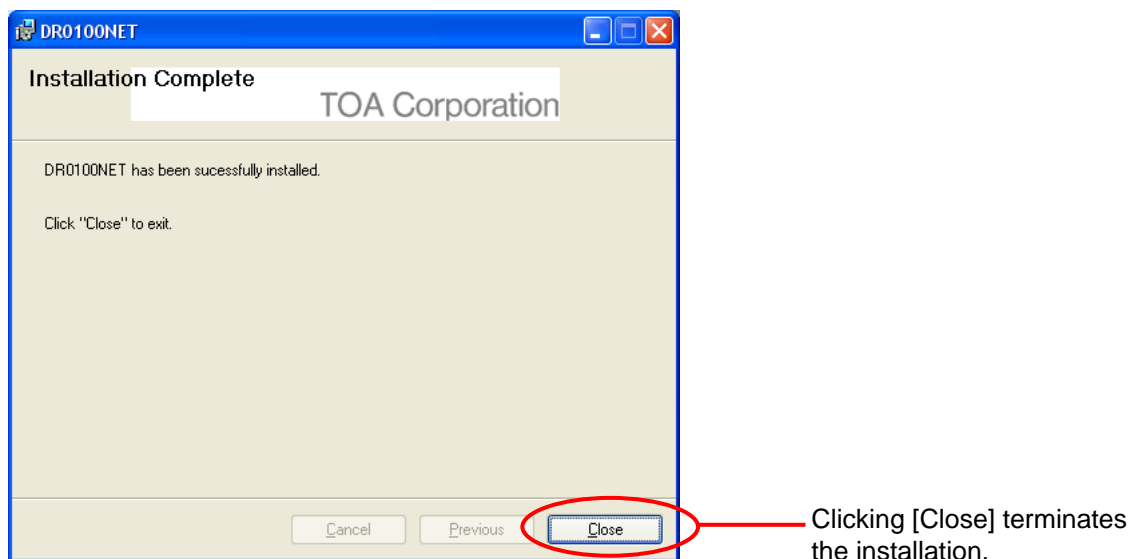
2-3. Designate the folder into which the program will be installed.



2-4. Installation in progress.



2-5. Installation complete.



The icon shown below is added to the desktop screen when the installation is correctly completed.



← DR0100NET icon

This completes the installation.

Double-click this icon when activating the DR0100NET program.

5.2. Uninstall Procedures

Click [Start] → [Settings] → [Control Panel] → [Add or Remove Programs]. Choose [Change or Remove Programs] and [DR0100NET] to delete the entire program.

Note: DR0100NET holder cannot be deleted even if uninstall procedures are performed according to the procedure above.

Click [My computer] → [C:drive] → [Program files]. Choose [DR0100NET] to delete the DR0100NET folder.

6. NETWORK SETTINGS

6.1. 1-Channel DVR's Network Settings

Perform the 1-Channel DVR's network settings. For details of its operation, please refer to the instruction manual for the 1-Channel DVR.

1. Open the 1-Channel DVR's menu screen.
2. Click [Communication setting] → [Network setting] and then display the network setting screen.
3. Perform settings for "IP address", "Subnet mask", and "Default gateway".

6.2 Personal Computer Network Settings

Use the network property to set the PC IP address.

1. Display the "Local Area Connection Properties" screen.

<For WindowsXP>

Click [Start] → [Settings] → [Network Connections].

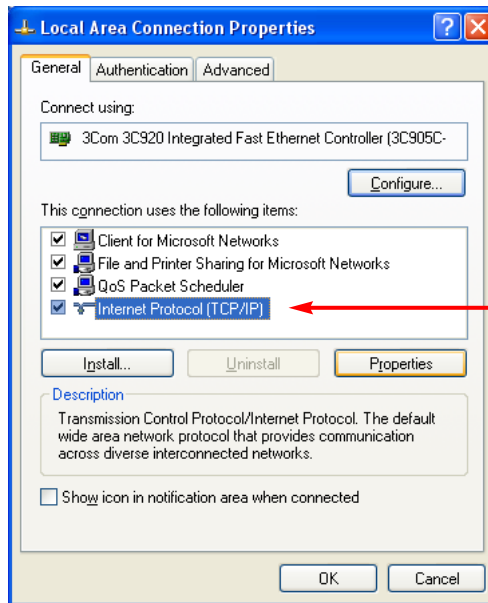
Double-click the [Local Area Connection] icon to open the "Local Area Connection Status" window and then click [Properties]. (Instead of double-clicking, right-click [Local Area Connection] and then click [Properties].)

<For Windows2000>

Click [Start] → [Settings] → [Network and Dial-up Connections].

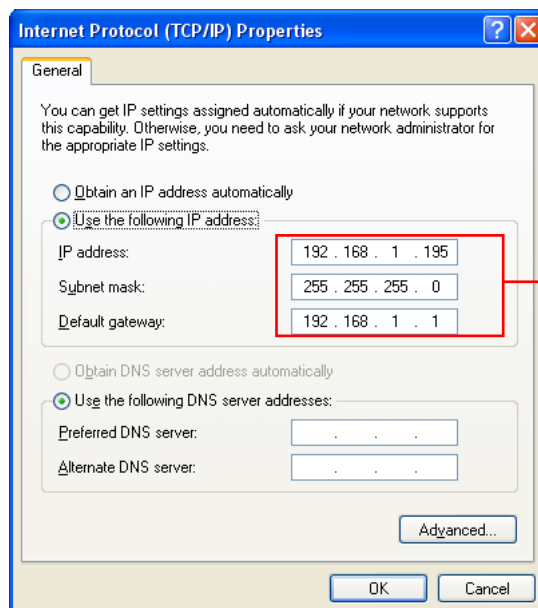
Double-click the [Local Area Connection] icon to open the "Local Area Connection Status" window and then click [Properties]. (Instead of double-clicking, right-click [Local Area Connection] and then click [Properties].)

2. Choose [Internet Protocol (TCP/IP)] for the communication device to be used for communications from “Local Area Connection Properties” screen.



Choose [Internet Protocol (TCP/IP)].

3. Click [Properties] to open the “Internet Protocol (TCP/IP) Properties” window. Choose [Use the following IP address] and perform settings of PC’s “IP address”, “Subnet mask”, and “Default gateway”.



Perform each setting to the system configuration.

4. Click the [OK] button to terminate the setting.

7. OPERATION

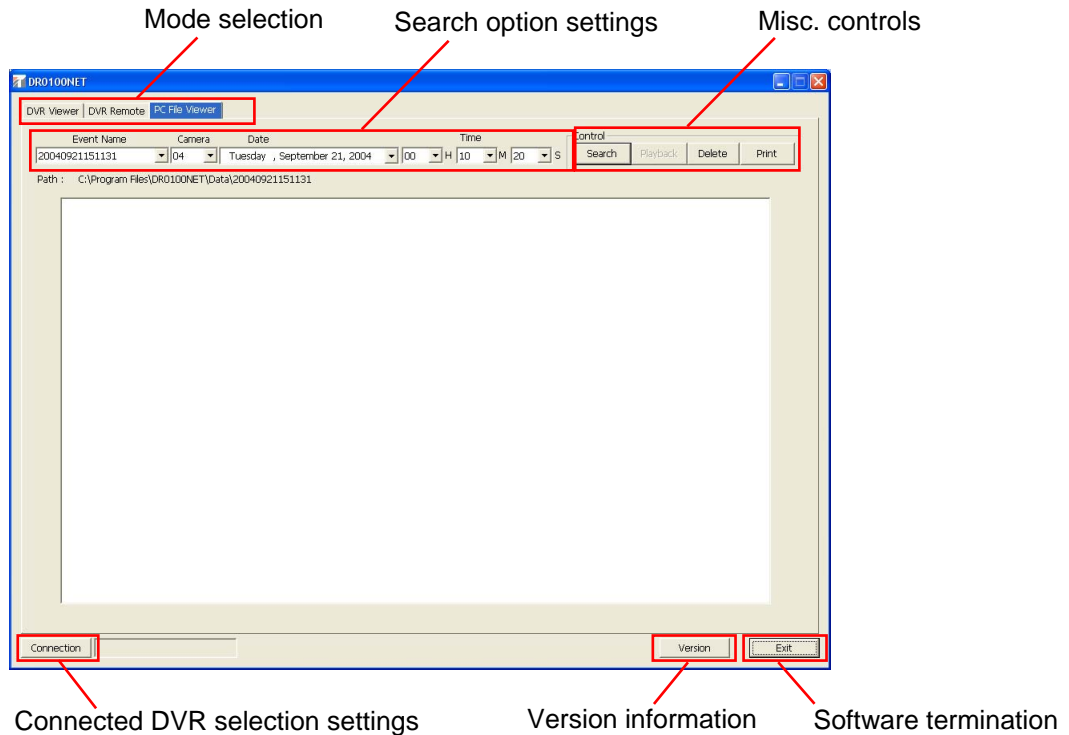
7.1. Software Program Activation and Termination

Activation. Double-click the shortcut icon “DR0100NET” which was added to the desktop screen during the installation.

Termination. Click the [Exit] button located at the bottom right-hand corner of DR0100NET screen.

7.2. PC File Viewer

Images saved to a PC can be viewed on the PC or printed out. Double-clicking the shortcut icon “DR-0100NET” displays the following screen:



- Mode selection

Choose the desired tab from the “Mode selection”: [DVR Viewer], [DVR Remote], and [PC File Viewer] tabs.

[DVR Viewer] : Enables viewing of images recorded on the 1-Channel DVR.

[DVR Remote] : Enables remote control of the connected 1-Channel DVR’s key operation, menu setting, and search functions.

[PC File Viewer]: Enables viewing of images saved to a PC.

Note: The screens displayed when clicking the [DVR Viewer] or [DVR Remote] tab cannot be opened without first selecting [Connection] and performing the required settings.

- Search option settings

Designate “Event Name”, “Camera”, “Date”, or “Time” in order to search for and find images saved to the PC.

- Misc. controls

Enable [Search], [Playback], [Delete], and [Print] operations.

[Search] : Enables search of images saved to a PC based on the above-designated search option. Since the search function cannot be used when an image is enlarged (during playback or still image display), click on the image to revert to thumbnails.

[Playback] : Plays back the image selected (Double-click) as a result of search operation (thumbnails). To return to thumbnails, click on the image.

[Delete] : Deletes the event being selected

[Print] : Prints the image being viewed.

- Connected DVR selection settings
[Connection] : Enables connection to the 1-Channel DVR.
[DVR Viewer] and [DVR Remote] tabs can be selected after connecting the 1-Channel DVR.
- Version information
[Version] : Displays the DR0100NET software program's version information.
- Software termination
[Exit] : Exits the DR0100NET software program.

Note: Playback speed in PC File Viewer mode is fixed(3-frame display per second).

7.3. DVR Connection Selection

Registration and connections can be performed for the 1-Channel DVR when connected over a network. The following screen is displayed when [Connection] is clicked.

7.3.1. DVR Connection Selection: Top for screen

DVR Connection Selection

DVR Entry List

Name	IP Address	Port

Buttons: Add, Change, Delete, Connect, Close

Registration, change, and deletion of the registration list

Connection to DVR Termination of connected DVR selection settings

- Registration, change and deletion of registration List
 - [Add] : Enables registration of the 1-Channel DVR to be connected.
(Enables registrations of up to three hundred 1-Channel DVR's to be connected.)
 - [Change] : To change the setting contents, click the desired 1-Channel DVR in the registration list and then choose [Change].
 - [Delete] : The desired 1-Channel DVR can be deleted by choosing it in the registration list.
- Connection to DVR
 - [Connect] : Permits connection to the desired 1-Channel DVR chosen from the registration list.
(Multiple units cannot be simultaneously selected.)
- Termination of connected DVR selection settings
 - [Close] : Press [Close] to terminate the settings in the "DVR Connection Selection" window.

7.3.2. New Connected DVR Registration

New Entry

New DVR Entry :

Name:

IP Address:

Port:

Buttons: OK, Cancel

Assign a name to the 1-Channel DVR.
(Not more than 20 characters.)

Designate the 1-Channel DVR's IP address.

Designate the 1-Channel DVR's port.

Note
The default value of the 1-Channel DVR's port number is set to "8001".

7.3.3. Registration Change

Change Entry

Change DVR Entry :

Name:

IP Address:

Port:

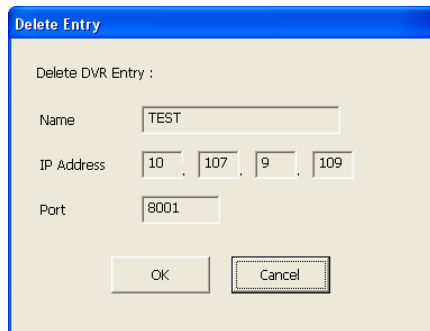
Buttons: OK, Cancel

Change name. (Not more than 20 characters.)

Change IP address.

Change port number.

7.3.4. Registration Delete



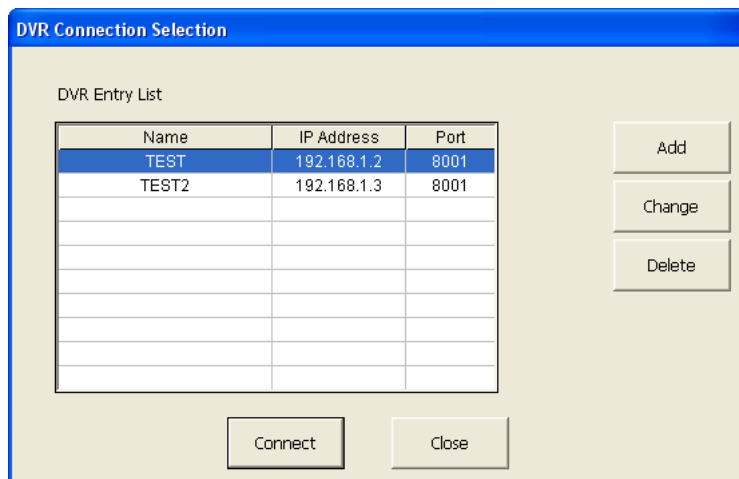
The 'Delete Entry' dialog box contains the following fields and buttons:

- Title: Delete Entry
- Label: Delete DVR Entry :
- Name: Text box containing 'TEST'
- IP Address: Four text boxes containing '10', '107', '9', and '109' respectively.
- Port: Text box containing '8001'
- Buttons: 'OK' and 'Cancel'

Pressing [OK] deletes the currently displayed registration contents.

7.3.5. DVR Connection Selection: Registration Completion

The following screen is displayed when the [OK] button is clicked in the “New Entry” window displayed when [add] is clicked or the “Change Entry” window displayed when [change] is clicked.



The 'DVR Connection Selection' dialog box contains the following elements:

- Title: DVR Connection Selection
- Label: DVR Entry List
- Table:

Name	IP Address	Port
TEST	192.168.1.2	8001
TEST2	192.168.1.3	8001

- Buttons: 'Add', 'Change', 'Delete' (stacked vertically on the right); 'Connect', 'Close' (stacked horizontally at the bottom).

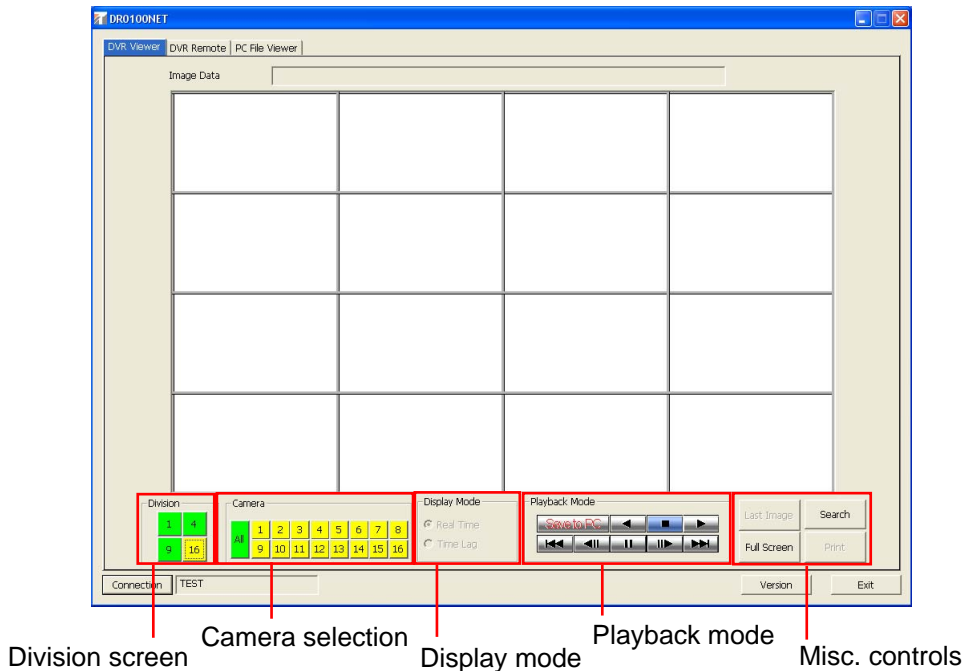
7.4. DVR Viewer

Permits viewing, search, and saving of the 1-Channel DVR's recorded images to the connected PC.

Note: Operations performed here are reflected only on the PC, and do not permit remote control of the 1-Channel DVR. To remotely operate the 1-Channel DVR, choose the [DVR Remote] tab.

7.4.1. DVR Viewer: Top for Screen

Clicking the [DVR Viewer] tab displays the following screen.



- **Division screen**
Images can be displayed on 1-, 4-, 9- or 16-segment split screens. (Note: This function cannot be used if the Multi-Switcher is not connected to the system.)
 - **Camera selection**
Individual cameras can be selected. (Note: This function cannot be used if the Multi-Switcher is not connected to the system.)
 - **All**
Displays images full-screen in the order in which they were received by the PC.
 - **Display mode**
Both [Real Time] and [Time Lag] display modes are available.
 - **Playback mode**
Permits playback, reverse playback, forward frame playback, reverse frame playback, forward block playback, reverse block playback, pause, stop, and saving of displayed images to the connected PC.
- Note:** In playback mode by means of above-mentioned "Playback mode", either "Real Time" or "Time Lag" playback is performed while recording is in progress on the 1-Channel DVR.
- **Misc. controls**
 - [Last Image] : Displays the most recent image recorded on the 1-Channel DVR's hard disk.
 - [Full Screen] : Displays only a single image on the entire screen. To return the displayed image to its original picture size, either press the [Esc] or click the displayed image.
 - [Search] : Searches for the 1-Channel DVR's recorded images.
 - [Print] : Prints out currently displayed images.

7.4.2. About the Real Time and Time Lag Displays

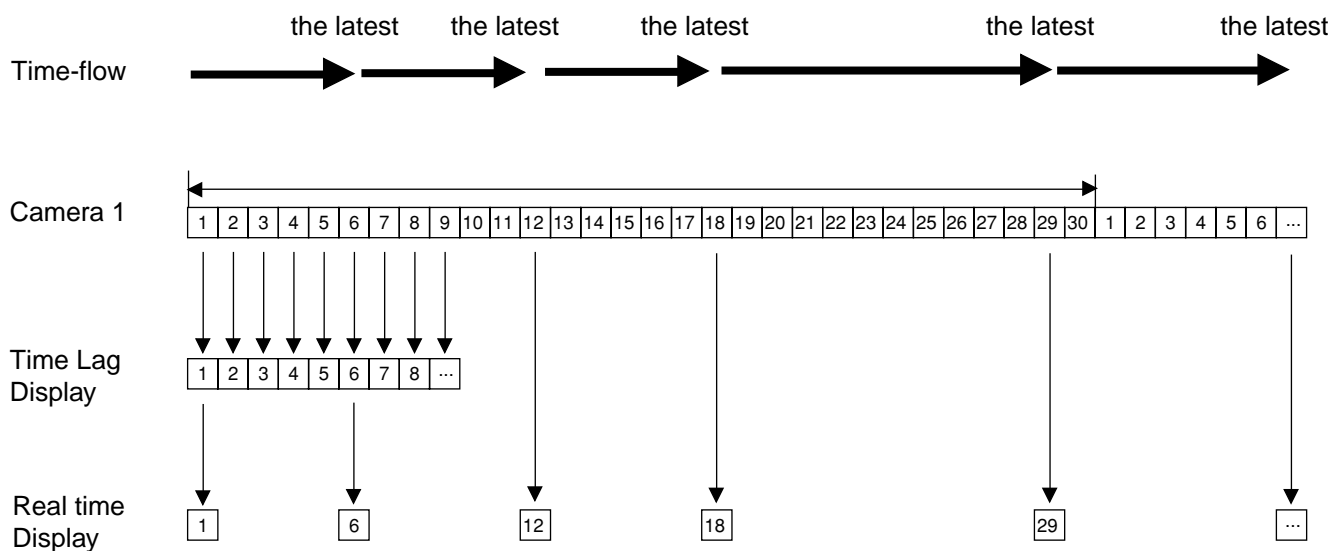
Images are displayed as follows when a single camera is connected to the 1-Channel DVR and recording is performed at 1/30 second intervals.

Real Time Display

By always reading and displaying the most recent image recorded on the 1-channel DVR's hard disk, images can be displayed in close to real time. (Since the latest recorded image is read for each image display, recorded images between the last and the latest displays are skipped.)

Time Lag Display

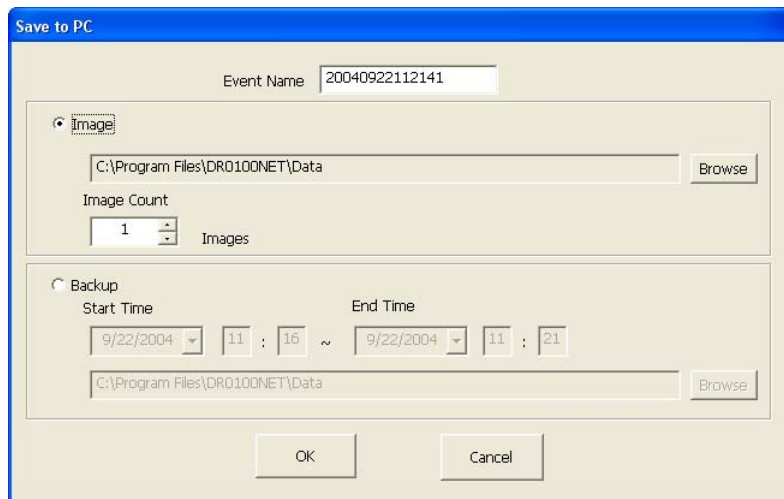
Reads and displays all images recorded on the 1-Channel DVR's hard disk. (Since the 1-Channel DVR reads and displays all recorded images, a short interval is required for data processing, making it impossible to display true real time images.)



Note: Intervals at which the PC receives images from the 1-Channel DVR vary depending on the load of communications processing regardless of whether the DVR is in Time Lag or Real Time display mode.

7.4.3. DVR Viewer: Saving to a PC

The following screen is displayed when [Save to PC] in the Playback mode is clicked.



Set the save method to either [Image] or [Backup]. Clicking [OK] after performing the required settings permits the image to be saved to the PC.

7.4.4. "Image" Saving

A location where the image is to be saved can be designated when [Browse] button is clicked. Clicking "OK" after setting the required frame number to be saved permits the latest image currently displayed on the screen displayed after clicking the [DVR Viewer] tab as the starting point to be saved to the PC, while displaying the images for the setting frame numbers. After saving of the images for the setting frame number completion to the PC, the "Playback" indicator automatically stops.

Note: Click [All] button on the "Camera selection" to check the latest image.

7.4.5. "Backup" Saving

Backup start and end times can be set in unit of 1 minute. A location where the backup image is to be saved can be designated when [Browse] button is clicked.

7.4.6. About "Backup" saving duration

We recommend saving only the necessary point to a PC as "Backup" saving takes time to save. Backup saving duration, when the 1-Channel DVR or network software is not in recording nor in playback mode, is as follows.

Ex. 1

Picture quality: Level 3 (32KB), Performing backup for 5 minutes' recorded images at the recording interval of 1/5.

Duration of backup: about 7 minutes.

Necessary HDD space capacity: 48MB (32KB x 5 frames x 60 seconds x 5 minutes)

Ex. 2

Picture quality: Level 3 (32KB), Performing backup for 5 minutes' recorded images at the recording interval of 1/30.

Backup duration: about 40 minutes.

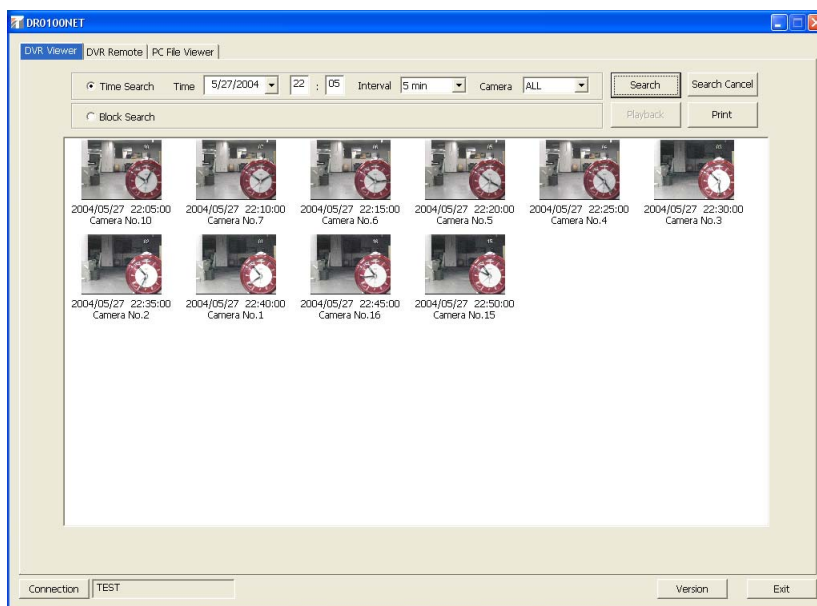
Necessary HDD space capacity: 288MB (32KB x 30 frames x 60 seconds x 5 minutes)

Note

Backup duration varies depending on the load of network, PC capacity, and the 1-Channle DVR or network software operating status (Recording/Playback, etc.).

7.4.7. DVR Viewer: Search

The following screen is displayed when [Search] on the “Misc. controls” is clicked.



[Time Search] : Search is performed based on “Time”, “Interval”, and “Camera”. Search results are displayed in thumbnail form.

[Block Search] : The first image of each block (from the start to the end of a recording session) is displayed in thumbnail form.

[Search] : Search begins after [Time Search] or [Block Search] is selected.

[Playback] : Permits images selected in the search to be viewed.
(Double-click the desired image to start playback.)

Note: "Real Time" or "Time Lag" recorded image is displayed while recording is in progress on the 1-Channel DVR.

[Print] : Currently-displayed images can be printed out.

[Search Cancel] : Terminates the search.

Double-clicking a thumbnail image displayed after search completion switches the image from thumbnail to full-screen image. Click on the screen to return to the thumbnail form.

When Pressing [Esc] key on the keyboard while the thumbnail image after search completion is being displayed, the thumbnail image being displayed can be stopped.

Note: Ensure to press [search] button each time you have changed “Search option settings” to reflect the search settings correctly.

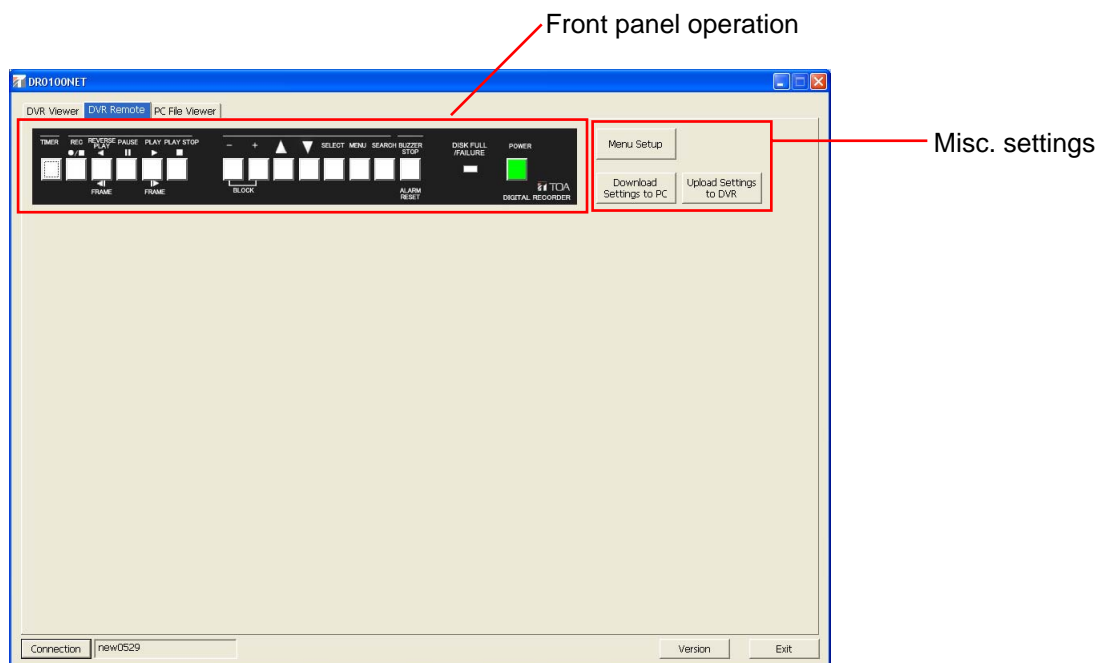
7.5. Remote DVR Operation

The 1-Channel DVR offers remote control of key operation and menu setting.

Note: Operations here are reflected only on the 1-Channel DVR, and operation results do not affect the PC setting (except when executing [Download Settings to PC] and [Upload Settings to DVR]). Remote control cannot be performed when the 1-Channel DVR is in key lock status. (Key lock can be released.)

7.5.1. Remote DVR Operation: Top for Screen

Clicking the [DVR Remote] tab displays the following screen.



- Front panel operation

The 1-Channel DVR's front panel-mounted keys can be remotely operated.

For details regarding front panel key operation, please refer to the instruction manual for the 1-Channel DVR.

- Misc. settings

[Menu Setup] : The 1-Channel DVR's menu settings can be changed on the PC screen.

Note: Settings of the following functions cannot be performed on the PC screen.

- Key Lock
- Network setting (IP address, Subnet mask, and Default gateway)
- System maintenance
- Summer time setting

[Download Settings to PC] : Saves the 1-Channel DVR's setting data to a PC.

[Upload Settings to DVR] : Uploads menu setting data saved to the PC to the 1-Channel DVR.

7.5.2. Remote DVR operation: Menu setting

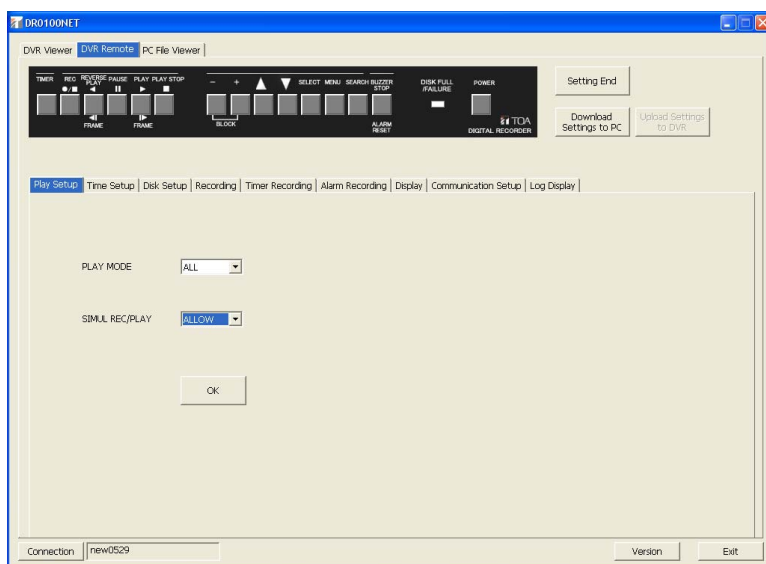
The following screen is displayed when the [Menu Setup] button is clicked.



Note: Clicking the [OK] button automatically turns off the power to the 1-Channel DVR. Clicking [Setting End] after menu setting completion automatically switches on the power to the 1-Channel DVR. Do not switch on the recorder's main power switch manually during menu setting. As doing so may result in the setting value invalid.

7.5.3. Remote DVR operation: Play setting

Clicking [Menu Setup] → [Play Setup] displays the following screen. Pressing [OK] button fixes the setting values.

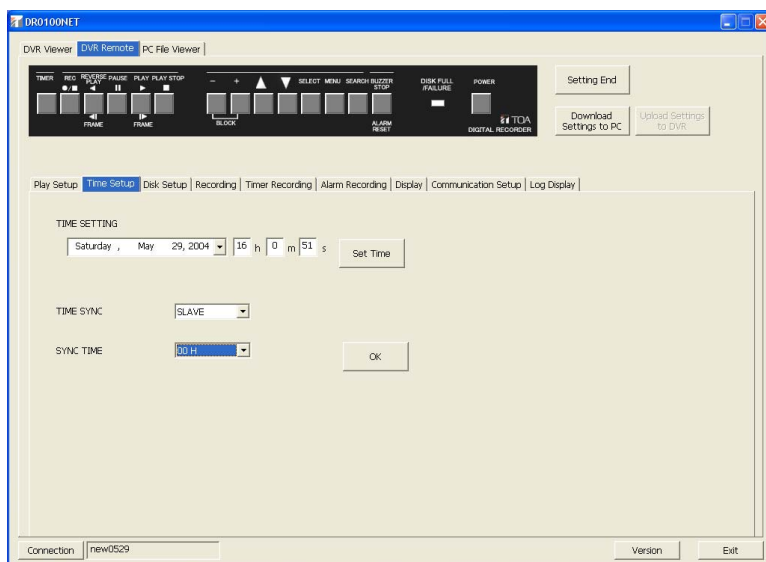


Note

When the C-DR0100 is in use, PLAY MODE settings cannot be selected.

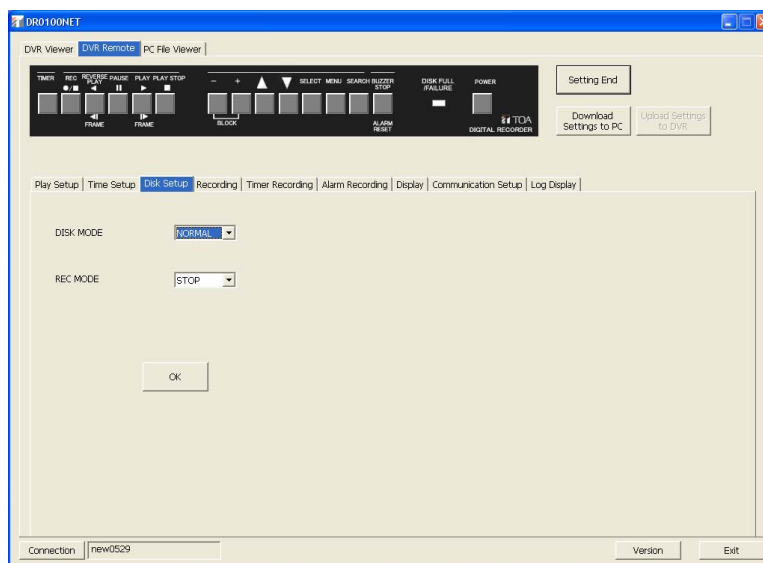
7.5.4. Remote DVR operation: Clock setting

Clicking [Menu Setup] → [Time Setup] displays the following screen. Pressing [OK] button fixes the setting values.



7.5.5. Remote DVR operation: Disk setting

Clicking [Menu Setup] → [Disk Setup] displays the following screen.
Pressing [OK] button fixes the setting values.

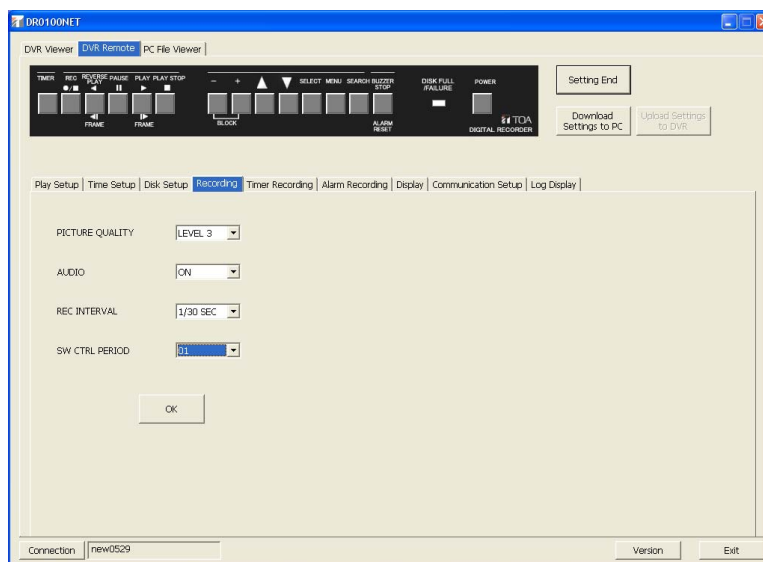


Note

When the C-DR0100 is in use, DISK MODE settings cannot be selected.

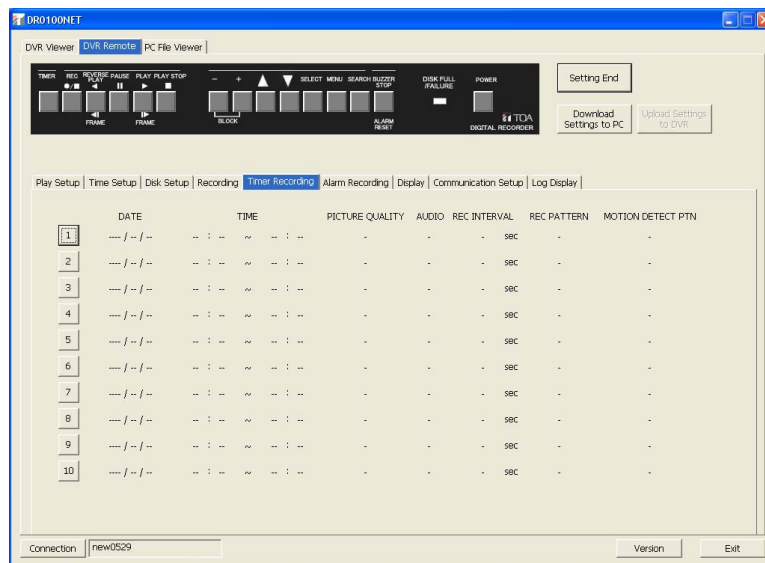
7.5.6. Remote DVR operation: Recording setting (general)

Clicking [Menu Setup] → [Recording] displays the following screen.
Pressing [OK] button fixes the setting values.



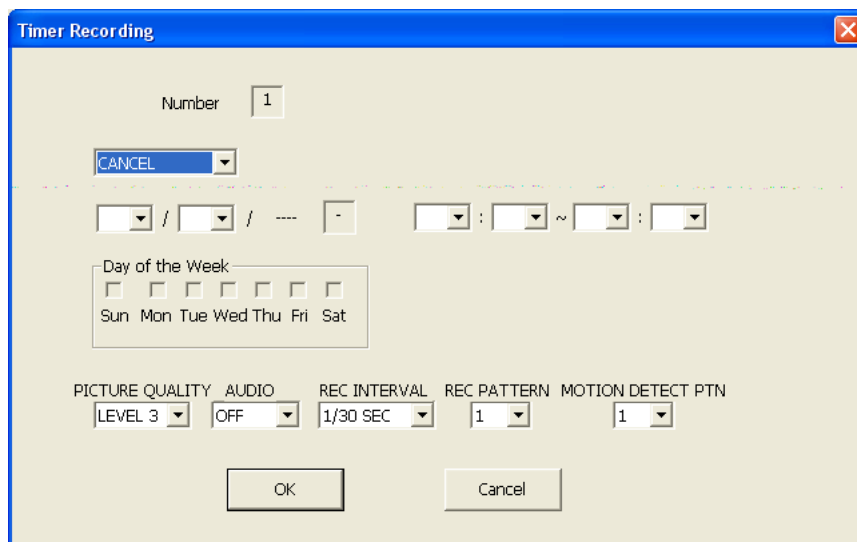
7.5.7. Remote DVR operation: Recording setting (timer programming)

Clicking [Menu Setup] → [Timer Recording] displays the following screen.



7.5.8. Remote DVR operation: Programming setting

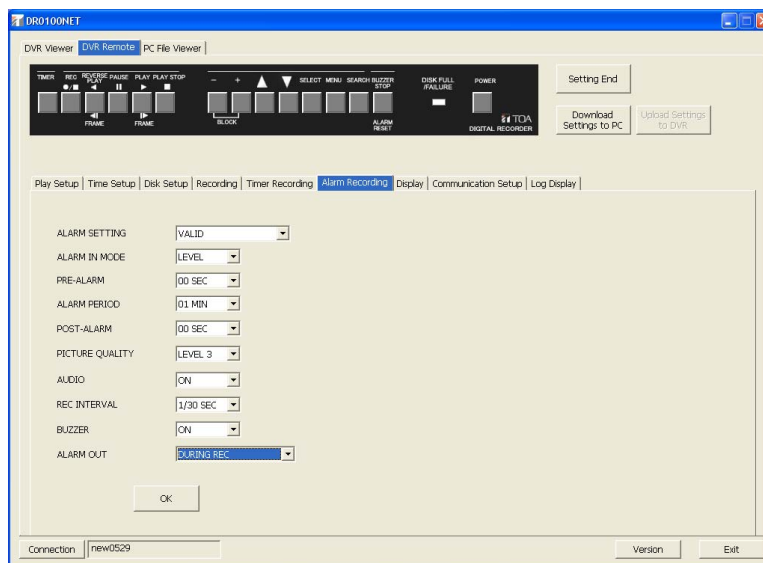
The following screen is displayed when each number is clicked on the above-displayed screen. Pressing [OK] button fixes the setting values.



Settings can be performed for individual numbers.

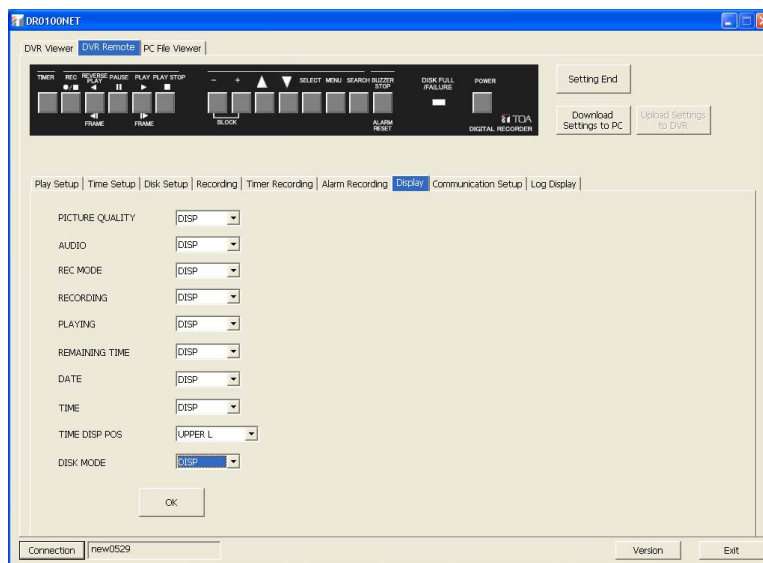
7.5.9. Remote DVR operation: Recording setting (alarm)

Clicking [Menu Setup] → [Alarm Recording] displays the following screen.
Pressing [OK] button fixes the setting values.



7.5.10 Remote DVR operation: On-screen display setting

Clicking [Menu Setup] → [Display] displays the following screen.
Pressing [OK] button fixes the setting values.

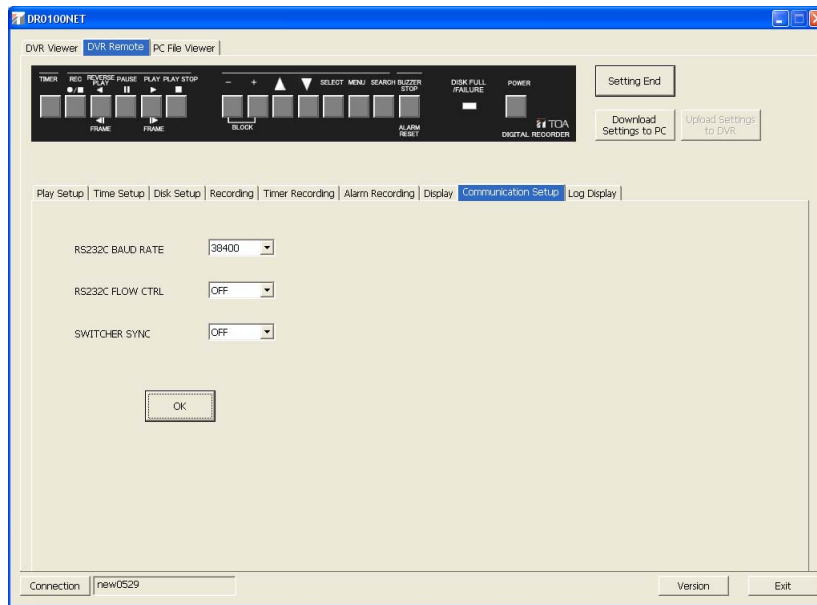


Note

When the C-DR0100 is in use, DISK MODE settings cannot be selected.

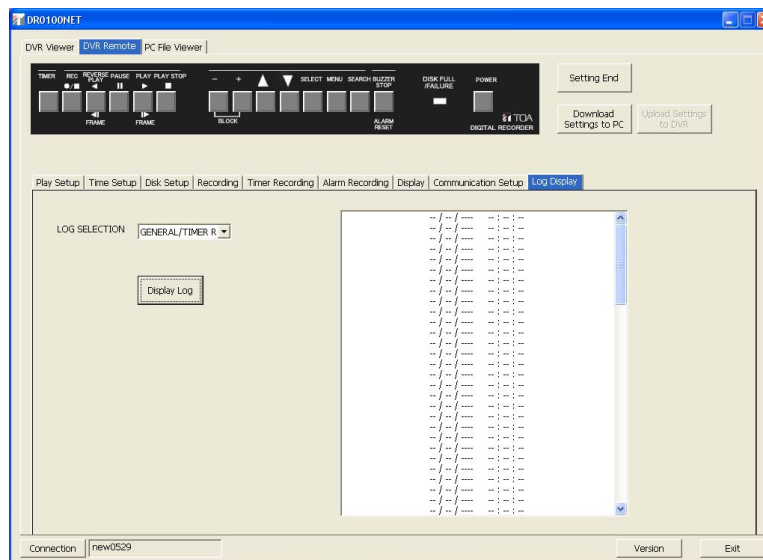
7.5.11. Remote DVR operation: Communication setting

Clicking [Menu Setup] → [Communication Setup] displays the following screen.
Pressing [OK] button fixes the setting values.



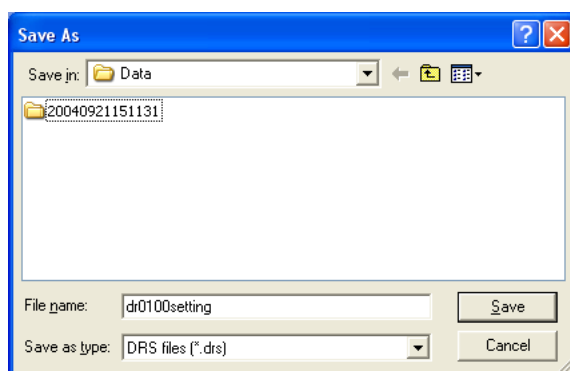
7.5.12. Remote DVR operation: Log display

Clicking [Menu Setup] → [Log Display] displays the following screen.
Choose the desired log from the “LOG SELECTION” screen, and then press the [Display Log] button.



7.5.13. Remote DVR operation: Menu setting download

The following screen is displayed when the [Download Settings to PC] button is clicked on the remote DVR operation screen.



Save in : Choose a location where the menu setting data will be stored.

Filename : Assign a name to the file to be stored.

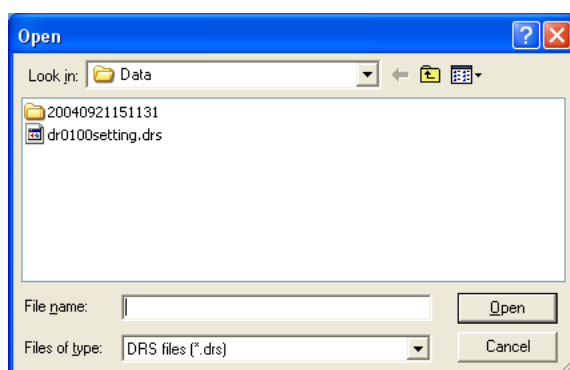
7.5.14. Remote DVR operation: Menu setting upload

The following screen is displayed when the [Upload Settings to DVR] button is clicked on the remote DVR operation screen.



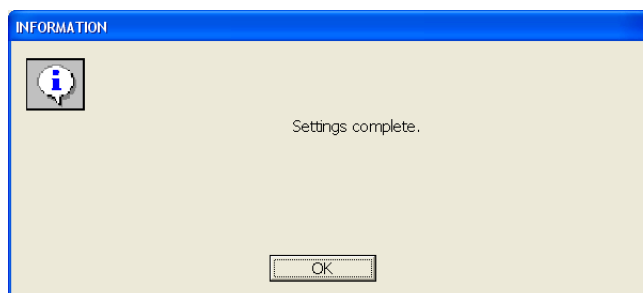
Note: Clicking the [OK] button automatically turns off the power to the 1-Channel DVR.

Do not switch on the recorder's main power switch manually during upload. As doing so may result in the setting value invalid.



Look in : Choose a location where the menu setting data was stored.

Filename : Designate the filename assigned to the menu setting data.



[OK] : Pressing this button automatically turns on the power to the 1-Channel DVR.

