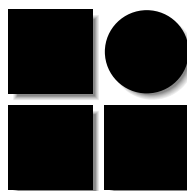


Quick Installation Guide



interpersonal -
computing GmbH

NeXT Version

April 1995

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1 Introduction

Moving pictures were set into motion at the beginning of this century. Fifty years later, thanks to television, they had made their way into nearly every home. Some 20 years passed before the camcorder was introduced to the market which enabled users to create their own moving pictures. At the same time, the computer was developed and proceeded to conquer the workplace by the end of the seventies.

Now, in the nineties, we are witnessing how these two technologies are joining forces: the MOVIE MACHINE Family (Movie Machine, Movie Machine Pro, Movie Machine II) for NEXTSTEP is an interface between analog video images and the computers, which processes digital signals.

1.1 What is Movie Machine for?

The Movie Machine displays moving video sequences on the computer screen (video overlay) and outputs* video to an external TV monitor for editing purposes using your computer's capabilities. The Movie Machine software VDOtv is designed for working with video overlay and the integrated TV tuner. The software* MMStudio can be used for video post production and editing.

You can use the integrated TV tuner as a source or connect players such as VCRs, video cameras, still video cameras, or video disc players to the Movie Machine Pro board and your computer. The VDOtv software module displays video sequences on your computer screen in real time and saves individual frames to your hard disk. Supported are the video typical FLM format and TIFF for editing in other applications or for use in the editing of your video. That's just what the MMStudio software was devised for. This application supports the implementation of effects, titles, still images, and graphics in your video. By connecting* a second video recorder to the Movie Machine board's video output, you can record videos edited with MMStudio.

Video Overlay live Video Digitizer

Movie Machine is a real-time video digitizer; an add-on board for IBM-AT and compatible PCs. Regardless of the type of graphics card installed, the digitized images are displayed in 21-bit color depth (~ 2 million colors) and saved as square pixels in 4:1:1 standard. The Movie Machine II even allows 24 bit in 4:2:2.

Video Mixer & Video Output

Movie Machine Pro/II edits videos on the PC and outputs them at a video bandwidth of 5.5 MHz. The output video displays two asynchronous video sources simultaneously as a foreground and background image.

Movie Machine adds a new dimension to your computer work, displaying more than just text and graphics on screen. It displays live video in

a window of any size, shape, and position.

The integrated on-board TV tuner is a permanent and simple source. Active and passive loudspeakers and headphones can be connected to the integrated amplifier.

**Integrated Video
and Audio**

VDOtv is capable of capturing video images. MMStudio can be used to mix videos and adds titles and effects available in the software's effects library. And the VDOrecorder software is used for recording video sequences to harddisk.

Software

* type and features may differ, please refer to the Hardware Guide

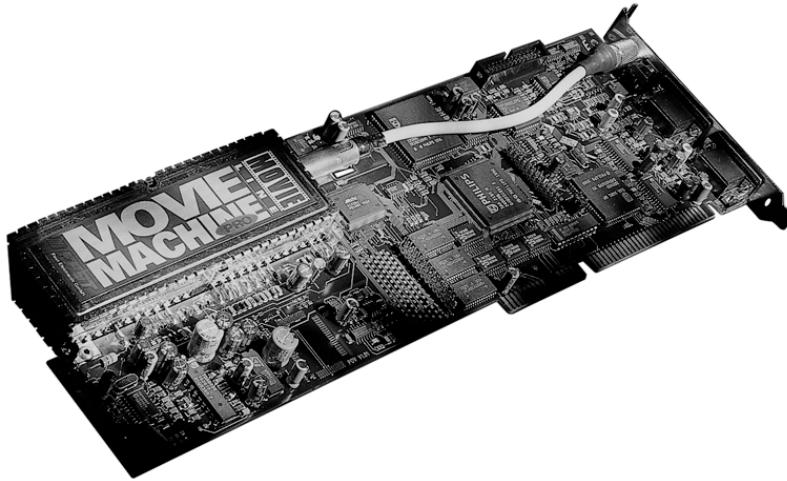
1.2 Movie Machine - Features

TV Standards	Movie Machine displays PAL and NTSC signals in overlay on the computer screen. You may use the software to switch between two standards.
16 MB RAM	Movie Machine can also be run without Memory Mapping via I/O. It can also be installed and operated in computers with main memory larger than 16 MB.
No Feature Connector	You need not to connect Movie Machine to the VGA board's Feature Connector. Because the clipping routines that mask out the video image wherever it is covered by other windows or menus are completely done by software.
Resolution 1024x768	Movie Machine integrates live video at a VGA resolution of 800x600 pixels in non-interlaced mode, on some systems up to 1024x768 pixels.
Video Quality	It digitizes the full PAL (768x576) and NTSC (640x480) resolution.
Video Effects	Foreground and background video can be superimposed over any source. The foreground image (the equivalent of VGA overlay) can be manipulated and scaled with luma and chroma keying and effects from the software's effects library. (not with Movie Machine 0)
NEXTIME Capture Board	Movie Machine was designed specifically as a NEXTIME frame grabber. Captured video sequences can be played back on any computer without additional hardware. The NEXTIME capture driver is part of the optional VDORRecorder software.
Frame Grabber	Digitized video images can be converted in VDOtv and stored as TIFF as well as loaded into MMStudio and added to videos.

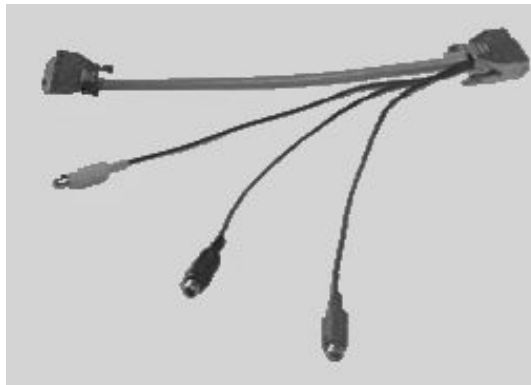
1.3 Delivery Packages

Hardware Movie Machine

- A Movie Machine 0/Pro/II add-on board for PC AT computers.



- A cable for connecting the Movie Machine board to the installed VGA card.



- An adapter from cinch connector to antenna for connecting the integrated tuner to an antenna cable.
- Two Feature Connector cables. (not needed for NEXTSTEP)

Basic software VDOtv & MMStudio

- This manual
- 3 1/2" disks with the software VDOtv, MMStudio and the VDO-boards driver
- Registration card

Software VDOrecorder & VDOconverter (optional)

- Manual
- 3 1/2" disks with the software VDOrecorder, VDOconverter and the ZORAN.config driver
- Registration card

Software Video Developer Kit (optional)

- Manual
- 3 1/2" disks with libraries and examples
- Registration card

1.4 Requirements

Movie Machine for NEXTSTEP can only be run on IBM AT or IBM compatible computers with at least a 486 processor. The board requires a full length 16-bit slot.

PC Configuration

- IBM AT or compatible computer with at least a 486 processor and a vacant 16-bit slot.
- At least 12 MB main memory, better 16 MB
- VGA card and an analog monitor

Software Requirements

- NEXTSTEP 3.2 for Intel, User, or greater

1.5 What Video Equipment is required?

- Inputs** Up to two/three external video sources can be connected to the computer when using Movie Machine. The only requirement is that the source carries a standard composite signal. All standard TVs, home VCRs, video cameras, Camcorders, still video cameras, U-matic players and laserdisk players can be used. The integrated* TV tuner can be connected to an antenna cable and used as a source via the included adapter.
- Outputs** A TV monitor with a video input connection suffices to display the output video. However, if you wish to record the edited video, you will need a video recorder with a standard composite input video connection (SCV).*
- Audio** Active and passive loudspeakers or headphones can be hooked up via the integrated amplifier.

* type and features may differ, please refer to the Hardware Guide

2 Installation

First install the board in your computer and connect all required cables. Then load the Movie Machine software.

2.1 Hardware

1. Switch off your computer and all peripheral equipment (including the monitor!); unplug the power cord, and remove the cover of your system unit.
2. Remove the slot cover of the vacant 16-bit slot you wish to use.

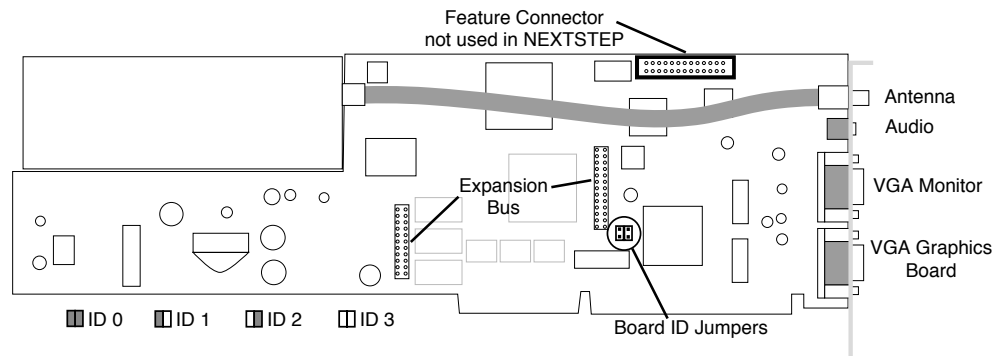


3. Carefully remove the Movie Machine board from its anti static envelope.

Avoid touching the components, conductor paths, and contact pins! Otherwise, components may be damaged by the discharge of static electricity.



4. The jumpers on the Movie Machine board (MMP 0) are factory-set. When installing more than one board (Screen Machine II and/or Movie Machine) in your computer, the jumpers must be changed before installation. The jumper settings have the following effect:



Both jumpers set:	MMP 0
Right jumper set:	MMP 1
Left jumper set:	MMP 2
None:	MMP 3
Default setting:	both jumpers set



The NeXT software Configure.app configures the necessary interrupts automatically. Please note that one of the following interrupts was left vacant to guarantee the successful installation of the Movie Machine board: 10, 11, 12, or 15.

5. Carefully insert the Movie Machine board into the vacant 16-bit slot directly next to the VGA board.
6. Make sure that the board is plugged in properly, that all pins on the board have made contact and that the board does not touch any other board. Screw the slot cover back into place.
7. Replace the system unit cover. However, leave the system switched off until you have reconnected all devices and cables.

2.2 Cable Connections

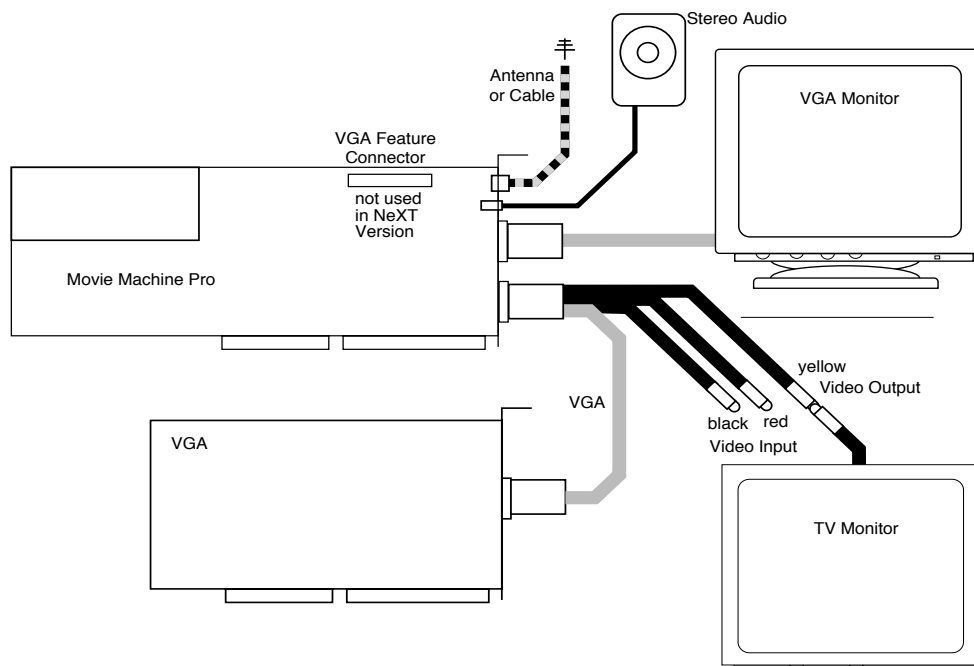
The Movie Machine Pro has two SCV inputs (black or red cinch plugs on the cable), a VGA analog input, a VGA analog output, and a SCV output (yellow cinch socket) in addition to the integrated TV tuner. Connect Movie Machine Pro's VGA analog input to the output of the VGA board using the cable included in the package. This ensures that Movie Machine Pro's signals are on sync to the VGA signal. The true color signals of Movie Machine Pro are mixed with the signals of the VGA board and transmitted to Movie Machine Pro's analog output. The board also has an audio output.

The cable with yellow markings is the video output connection. Connect your TV monitor or recorder to Movie Machine Pro via this socket.

The video signals may also conform to different video standards. Movie Machine Pro supports PAL and NTSC. The video standard can be specified in each software.

The channel settings for the integrated TV tuner are specified in the VDOtv software with the inspector.

Active and passive loudspeakers or headphones can be hooked up to the integrated stereo amplifier.



2.2.1 Connecting the Cables

1. Make sure that both the computer and the monitor are turned off. Disconnect the monitor cable from the VGA card.
2. Plug the cable with the video input signals into the socket on the Movie Machine board that is closest to the gold-colored slot socket at the edge of the board. Plug the other end into the socket of the VGA card used until now to connect the monitor to the board.
3. Now, reconnect the monitor to the other 15-pin connection of the Movie Machine Pro board.



The two 15-pin connections are designed for standard plugs. Pin 9 will not accommodate the plug of the monitor cable. This keeps you from mixing up the connections. To avoid possible damage to your system, always connect the plugs carefully into the sockets.

4. If you are using the integrated TV tuner as a source, use the supplied adapter to plug the antenna cable into the appropriate cinch socket on the Movie Machine Pro board and connect it to your TV connecting socket (cable or terrestrial).
5. Connect the other video sources via a cinch cable either to the red or the black input. Use the inspector's input PopUp button to toggle between the inputs.
6. Now connect the cable with yellow markings to the device where the output video is to be displayed (TV monitor and/or VCR).
7. As needed, connect your loudspeakers or headphones via a standard stereo jack plug to the Movie Machine Pro board,



You should avoid connecting a 2-pin mono jack plug to the audio socket of the Movie Machine Pro board. Doing so will short-circuit

the channel. If you wish to use a mono device, use an adapter for stereo to mono (available at specialized dealers). Then specify the setting MONO in MMTV (default in US version).



8. Once all cables have been connected you can restart your computer.

2.3 Software

Your package contains the following floppy disks:

MMTV.1.0_#1 ./MMTV.1.0.pkg
 ./ReleaseNotes.rtf
 ./InstallationGuide.rtf
 ./Licensing.rtf

MMTV.1.0_#2 ./VDOboards.config

1. Insert the first disk and click   in the WorkspaceManager.
2. A floppy icon with the name MMTV.1.0_#1 will appear on the shelf. If you select it, the File Viewer will display the file MMTV.1.0.pkg. Double clicking this file will start the NeXT Installer.app.

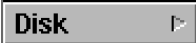





3. Press INSTALL in the Installer main window

A panel will ask to select the destination directory:



It is recommended to choose /LocalApps. The INSTALL button finally starts the installation process.

4. After a file check a panel might inform you, that some files are already installed. Please check (in the Log View of the Installer) if you want to overwrite this files. Press CONTINUE to continue the installation.
5. You may also copy the documentation files on your system.
6. Press   in the WorkspaceManager to unmount the floppy.
7. Insert the second disk and click   in the WorkspaceManager.
8. A floppy icon with the name MMTV.1.0_#2 will appear on the shelf. If you select it, the File Viewer will display the file VDO-boards.config. Drag this file into the directory /usr/Devices. If you have already an installed copy of an earlier release of the VDO-boards driver, first remove it in the NeXT Configure.app and delete it from the file system.

Now you have all files and applications installed on your system. The next step would be to configure the driver.

2.4 Driver Configuration



To use Movie Machine Pro and the NEXTSTEP software a system driver is necessary. This driver, `VDOboards.config` can be found either on your diskettes or on your system in `/usr/Devices`.



You can either start the `Configure.app` application by double clicking the `VDOboards.config` file or launch the `Configure.app` application. In the latter case choose OTHER, ADD to load the `VDOboards.config` file.

- double click the `VDOboards.config` file
- `Configure.app` is being launched:



Port-Address

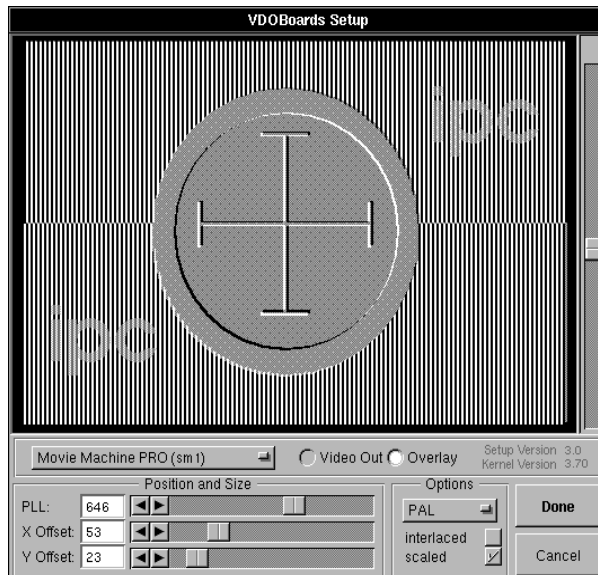
- Use the Port Address field for specifying the Movie Machine Pro address. A typical setting is `0x338`. Make sure that no other hardware device is using this port address.

Mapped Memory

- Movie Machine Pro for NEXTSTEP has installed 375 kB of RAM. In this field you should provide the virtual address for memory mapping. The address should be above the actual memory of your system. In the figure above this is `0x4100000` = 64 MB.

- By clicking the SETUP button the VIDEO SETUP is being opened.

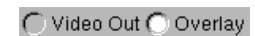
The Video Setup window allows you to adjust the Screen Machine II and Movie Machine Pro overlay video signal according to your VGA graphics adapter's video signal.



This popup button selects the board to be adjusted if there are more than one board installed on your system.



With this radio you switch between the adjustments for overlay and video out. For video out you have to connect a TV monitor to the yellow connector. PLL will be disabled during video out.



Use the PLL slider for adjusting the width of the video.

PLL

Use the X Offset slider for adjusting the horizontal position of the video.

X Offset

Use the Y Offset slider for adjusting the horizontal position of the video.

Y Offset

Selects the video system being used (PAL/NTSC) (SECAM only SMII).

Options

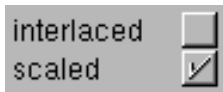
Check box for INTERLACED graphics (not necessary in NEXTSTEP).

interlaced

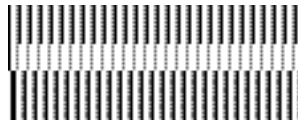
For resolutions higher than 800 x 600 pixels. Enable this check box if you are not able to adjust the width using the PLL slider.

scaled

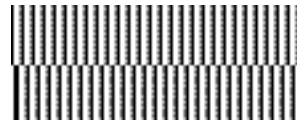
How to adjust your Movie Machine Pro for NEXTSTEP



1. The INTERLACED and SCALED check boxes define the graphics mode used by your graphics adapter.
2. Use the Y OFFSET slider until the horizontal dissection becomes a line:



wrong

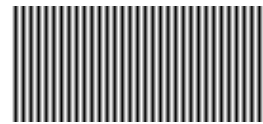


o.k.

3. Use the PLL and the X OFFSET sliders to completely cover the test image. You will see interference patterns if the width(PLL) of the video doesn't match.



wrong



o.k.

4. Once all values are set properly return to the Configure application by pressing the DONE button.

For further information on the Configure.app application please refer to the NeXT documentation.

reserved for future extensions

3 Ordering

Due to the increasing importance of electronic distribution on CD ROMs or Internet we integrated an automatic order and license system. It allows to order demo keys, update keys or simply to purchase a license. All information from the fields can be mailed, faxed or printed. Of course you also have the option to review them for further editing.

Please follow this instructions for ordering.

The screenshot shows a dialog box titled "Order Panel" with a close button (X) in the top right corner. The dialog is divided into several sections with various input fields and buttons. Numbered callouts (1-9) point to specific elements:

- ①: "Purchase License" button
- ②: "PaymentMethod:" section with radio buttons for "Credit Card", "Cash", and "EC-Check".
- ③: "Card Type:" section with radio buttons for "Master Card", "American Express", "Visa Card", and "Euro Card".
- ④: "Card Owner:" text field, "Card Number:" text field, and "Expires:" date field (MM / YY).
- ⑤: "Price:" text field showing "00.00 US\$" and a checkbox for "Member of European Union".
- ⑥: "Send Key via:" section with radio buttons for "E-Mail", "Fax", and "Snail Mail".
- ⑦: Address fields including "Company:", "Department:", "First, Last Name:", "Street:", "City:", "State, Country:", "Phone:", "Fax:", and "E-Mail:". A "ZIP:" field is also present next to the "City:" field.
- ⑧: "Software Source:" text field and "Serial Number:" text field.
- ⑨: Action buttons at the bottom: "Open in Edit", "Print / Fax", and "E-Mail".

- ① Switches the mode of the order panel: DEMO KEY, PURCHASE LICENSE, UPDATE LICENSE
- ② Payment Method, this group will be disabled at DEMO KEY and UPDATE LICENSE
- ③ Credit Card information fields, this group will only be enabled if you purchase a license and have "Payment Method: Credit Card" selected.
- ④ Price, this field shows the price if you purchase a license. If you are member of the European Union you will be charged additionally 15% VAT. There are no shipping costs, as long as you only order a key.
- ⑤ Here you may choose the way how to receive your key.
- ⑥ Please fill in this fields, we need this data to keep track about the delivered keys for updates and upgrades. Don't forget your E-Mail address!
- ⑦ This fields are filled in automatically and not used for most of the applications. If you order a license like JetPilot, the license key will be bound to that machine!
- ⑧ Software Source will help us to check the way of distribution and accelerate the final key generation. For the same reason there is the field Serial Number.
Fill in the serial number from your registration card, if you purchased a complete software package from your dealer. If you only order a DEMO KEY this field will be disabled.
- ⑨ OPEN IN EDIT will send the text to a new Edit document. PRINT or FAX will open the PRINT/FAX panel. E-MAIL opens the NeXT Mail.-app with the data from this panel.

3.1 Demo License

For most of our products demo licenses are available, that means if you have a installed release of this software, you may order a free time limited or option restricted key to test the software.

- Install the software. Simply follow the instructions given in the supplied ReadMe file or previous chapters of this manual. Because the software requires a driver you have to do the installation as root.
- Start the software by double clicking its icon. An alert panel will inform you, that the software wasn't yet licensed. This panel leads to the license panel where you have to choose "Order".
- Switch the order panel to DEMO KEY.
- All fields concerning purchase will be disabled. Now fill in all information we need to create your demo key (name, address, software source etc.). Please don't forget to choose the way you want to receive your free demo key.
- You may print or mail the request or send it into edit, where you may do further editing.
- Don't change any data generated by the system, because we need them to generate the key. Also our automatic key responder may not work with manually edited mails. We can't accept names like "Donald Duck" or companies like "ACME Inc."

We try to process all demo key requests within 24 hours.

3.2 Purchase Order

All products can be ordered directly from us. If you prefer to order it from your reseller you may also use this panel and print out the generated information. It will help your reseller to process your order.

- Install the software. Simply follow the instructions given in the supplied ReadMe file. If the software requires a driver you have to do the installation as root.
- Start the software by double clicking its icon. An alert panel will inform you, that the software wasn't yet licensed. This panel leads to the license panel where you have to choose ORDER.
- Switch the order panel to PURCHASE LICENSE.
- Now select your way of payment and fill in all information we need to create your key and process the payment (name, address, how to receive the key, credit card etc.).
- Decide how to send the key request. You have the choice to print it, mail it or send it into edit, where you may do further editing.
- Don't change any data generated by the system, because we need them to generate the key. Of course we can't accept names like "Donald Duck" or companies like "ACME Inc."
- After we have the confirmation of the payment we will send you your personal license key. An invoice will follow by fax or mail.

3.3 For Purchased Packages

You bought a software package from your reseller. These packages normally contain a TEMPORARY KEY. If the package was in stock for more than one month the TEMPORARY KEY may be invalid. At least you should immediately order your final license. Your package includes a card with your personal software serial number.

- Install the software. Simply follow the instructions given in the supplied ReadMe file. If the software requires a driver you have to install it as root.
- Start the software by double clicking its icon. An alert panel will inform you, that the software wasn't yet licensed. This panel leads to the license panel where you have to choose ORDER.
- Switch the order panel to UPDATE LICENSE.
- All fields concerning purchase will be disabled. Now fill in all information we need to create your final key (name, address, how to receive the key, serial number).
- Your package contains a SERIAL NUMBER. Please fill in this serial number into the appropriate field. This accelerates our check of the legal purchase. The field SOFTWARE SOURCE should contain the company name of your dealer.
- Decide how to send the key request. You have the choice to print it, mail it or send it to edit, where you may do further editing.
- Don't change any data generated by system, because we need them to generate the key. We can't accept names like "Donald Duck" or companies like "ACME Inc."
- After we have the confirmation of the Serial Number we will send you your personal license key.

4 Licensing

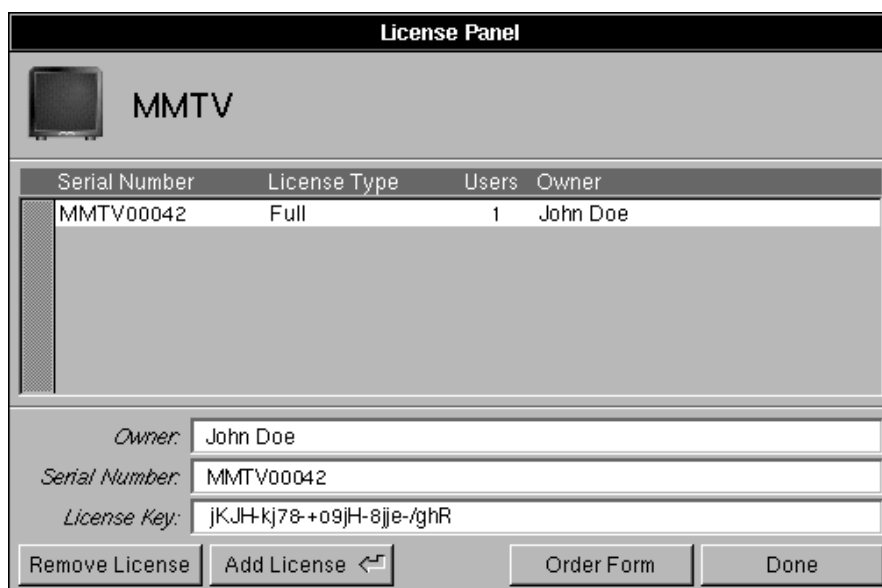
The variable licensing system supports single user licenses as well as multi user licenses. You may also have several single user licenses or store the licenses on a network and/or local machines.

Floating License

Floating license means, that the software may be stored anywhere in a network and can be started by any user. It is retained to a certain machine or user. You may start as many copies of this software as you own licenses. If the number of licenses is exceeded the system won't let you start another copy of the software.

RTU License

Some software products are machine dependent. You have once to decide the machine you want to use the software on, the key then contains information about this machine and can't be moved to another system.



The screenshot shows a window titled "License Panel" for the software "MMTV". It contains a table with license information and several input fields at the bottom.

Serial Number	License Type	Users	Owner
MMTV00042	Full	1	John Doe

Below the table, there are four input fields:

- Owner: John Doe
- Serial Number: MMTV00042
- License Key: jKJH-kj78-+o9jH-8jje-/ghR

At the bottom, there are four buttons: "Remove License", "Add License" (with a left arrow icon), "Order Form", and "Done".

4.1 Demo License

We decided to make most of our software available as demo. To use a demo version you only have order a FREE demo key, which enables the demo mode with restricted features or for a limited time. You need to have write access to the application to apply a license!

- After you followed the instructions in “Ordering - Demo License” you will receive a valid demo key after a few days (may be two).
- Start the software by double clicking its icon. An alert panel will inform you, that the software wasn't yet licensed. Please follow the panel to the license panel with pressing the APPLY LICENSE button.
- Enter Owner, Serial Number and License Key as we sent to you.
- Press the ADD LICENSE button. When the license system accepts the key you may leave the License Panel with the DONE button.

If the demo time is exceeded and you still want to test the software you have to order a new demo key.

4.2 Temporary Key

Purchased software packages may contain a TEMPORARY KEY. This key enables you to work with the software without any restrictions, except the key will become invalid after one month. You should order your free final key immediately after you installed the software the first time (See also “Ordering - For Purchased Packages”)

- Start the software by double clicking its icon. An alert panel will inform you, that the software wasn't yet licensed. Please follow

the panel to the license panel with pressing the APPLY LICENSE button.

- If you already have a DEMO KEY installed you first have to remove it. Therefore select the line with the demo key in browser and press the button REMOVE LICENSE.
- Enter Owner, Serial Number and License Key. The SERIAL NUMBER is printed on the included card. It is the same as for the temporary key.
- Press the ADD LICENSE button. When the license system accepts the key you may leave the License Panel with the DONE button.

If a panel informs you, that the key had become invalid, the time limit was exceeded due to too long storage times.

4.3 Update License

If you received your key update of the TEMPORARY KEY or DEMO KEY follow these steps to install the final license.

- Start the software by double clicking its icon.
- If your demo key or temporary key has become invalid in the meantime an alert panel will pop up. Please follow the panel to the license panel with pressing the APPLY LICENSE button.
- Select the invalid license or temporary key in the browser and press the button REMOVE LICENSE.
- Enter Owner, Serial Number and License Key as we sent to you. The SERIAL NUMBER is the same as for the temporary key.
- Press the OK button. Now you have a full enabled application.

4.4 Administrating Licenses

Here are some useful hints for administrating licenses.

- The License Panel allows entering, removing and reviewing all installed software licenses for this kind of application on the system. It is not able to keep track of licenses installed on other machines in the network, therefore we request to install the software once on a server as root.
- You need write access to the app folder to enter or remove a license.
- You may not use a temporary key or demo at the same time with the corresponding valid "Final License".
- If you move the application, copy it or install it new, you will loose the license entries. That means you have to enter the owner, key and serial number again, which shouldn't be that problem as long as you are the legal owner.
- You may not start two applications with the same serial number or key at one time.
- Once entered, the key won't be shown again in the application.
- Be sure to keep you license information on a safe place. We only will inform the registered owner about his license when the key was lost.

5 Support

Registered Movie Machine Pro for NEXTSTEP users may use the MMP hotline. Please only use the hotline for problems you can't solve by yourself. First contact your reseller for help.

Provide us with the following information:

- Release number of the operating system.
- Release number and serial number of software and driver, they can be found in the Info Panels, on floppy disks or in the Configure.app.
- Only report bugs and reproducible problems.
- Where did you purchase the software?
- Who is the receiver of the answer?
- Used hardware configuration, installed drivers and software.

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