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Making backup copies of your DVDs and VHS cassettes? NO PROBLEM!

Digital Videofilters DVF442 VHS and DVF552 S-VHS

Will allow making backup copies from an original DVD or VHS cassette to a VHS or S-VHS cassette or DVD-R

Will fully eliminate problems with the stability and uneven brightness of the picture in a copy made from an original protected recording

SDS-Super Digital Synchro

TTI-Time Trip Immunity

Unique code identification with LEDs

DVF442 - DVD, VHS
including a power supply unit

DVF552 - DVD, VHS, can process S-Video
including a power supply unit

Read these Instructions for Use before using your device!

Correct
the right electronics for you

Dear Customer:

Thank you for buying our **DVF442** or **DVF552** digital videofilter. This device will allow you make backup copies of videocassettes and DVDs (protected against copying by the MACROVISION system).

DVF442 or **DVF552** is inserted into the video path between a video player (videorecorder or DVD player) and the videorecorder on which the backup copy is made. The **DVF442** or **DVF552** device will eliminate problems with picture jumping (synchronization errors), flickering (changing brightness), pulsing, and color alternation. Those problems occurring during the playback of a copy of a protected videocassette or DVD are caused by the presence of a jamming signal (code) on the original videocassette/DVD.

The videofilter design utilizes a processor ensuring thorough synchronization and customer circuits for video signal processing. This ensures maximum reliability, functional and parameter stability, and loss-free video signal transmission in a 1:1 ratio, i.e. amplification factor = 1.

The **DVF442** videofilter processes standard video signals, and the **DVF552** also allows connection using **S-Video** MINI DIN cables, maintaining a better quality of the recording.

Another unique feature of the **DVF442** and **DVF552** videofilters is their built-in code identification using LED indicators, which makes it possible to determine whether a videocassette or DVD is protected against copying and with which code version.

The **DVF442** and **DVF552** devices belong among the components with a unified look within our mini collection of AV and satellite equipment, labeled "**440**, **442**, and **552**". We believe that the digital videofilters **DVF442** and **DVF552** will fully meet your requirements.

Enjoy!

- The videofilter is overloaded e.g. by connecting several devices (TV set, videorecorder) in parallel. Use an active video splitter.

The CODE Down and CODE Up LED indicators are not on (do not blink)

- The KEY push button is depressed (the videofilter is inactive)
- The video recording is not protected against copying (is not encoded)

The CODE Up LED indicator is on (blinking) even though the video recording is not protected (encoded)

- This is not necessarily an error, because there may be teletext information in the picture information area where jamming signals occur (the level of black and higher) - this occurs in video recordings made from TV broadcasts. When such recordings with teletext information are copied, it is not necessary to connect a videofilter (or to activate an already connected videofilter) and remove the teletext information with the filter, because the information as such (with no jamming signal in the sync area) does not impair the stability (quality) of picture.

If you are unable to remove a defect, or there is a different defect, disconnect the device from the mains immediately and have it repaired by a special service or the manufacturer of the device.

8. Maintenance

Cleaning the **DVF442** and **DVF552** videofilter housing

To clean dust from this device, use a dry, clean, soft cloth. Disconnect the power supply before cleaning.

! Do not use harsh cleaning or diluting agents. Using such agents may result in damage to the exterior and interior of the device!

9. Warranty Conditions

The manufacturer provides a 24-month warranty for DVF440, starting at the date of sale. The warranty does not cover defects caused by using the device contrary to these Instructions for Use or by force majeure.

6. Technical Data

Video signal frequency range: - unlimited
Input impedance: - video 75 ohms
Output impedance: - video 75 ohms
Input level of the video signal - 1 V / peak-to-peak
Output level of the video signal - 1 V / peak-to-peak
Power supply: - 12 V / DC
Current consumption: approximately 30 - 60 mA
Connectors: - 2 CINCH
(socket for the connection of input and output video cables)
- 1 POWER
5.5/2.1 mm standard power supply connector (2.1mm inner pin diameter) for the connection of a power supply unit - plus the pole on the inner terminal
DVF552 in addition - 2 S-Video MINIDIN
Controls: - 1 **KEY** button
(activating the videofilter function)
Dimensions- 90 x 65 x 35 mm

7. Defects and Troubleshooting

The POWER LED indicator is not on:
- No power supply connected
- Defective power supply unit
- Switched polarity of the output voltage of the power supply unit

The picture has low contrast, the picture is unstable (curving or jumpy), or the picture is jammed with dark horizontal or vertical stripes
- Low level (contrast) of the video signal - low recording quality
- The video signal does not comply with the TV standard
- The video signal is highly corrupted (low or no synchronization pulses). Insert a better tape with a better recording. If not available, the synchronization pulses of a poor-quality recording must be repaired using a special device.
- The power supply has a low output voltage or a low output ampacity

Important Warning!!!
Please be advised that any distribution or copying of encoded and original videocassettes and DVDs and copies of these made with DVF442 or DVF552 videofilters for non-personal use is prohibited and subject to criminal prosecution!!! This Warning shall indemnify the manufacturer and dealers of DVF442 and DVF552 for any damage and/or sanction in connection with abusing the DVF442 or DVF552 videofilters to distribute recording copies.

1. Table of Contents
Read these Instructions for Use carefully before connecting and using your **DVF442 / DVF552** device. Our warranty does not cover defects caused by failure to comply with the guidelines given in these Instructions for Use.

2. Device Placement
To ensure its safe operation and make full use of the device's features, follow the guidelines below when placing your device:
! - Protect the device from direct sunlight and do not place it near sources of excessive heat or in a dusty or humid environment.
! - Protect the device from strong vibrations.
! - Do not use the **DVF442 / DVF552** videofilter near possible sources of radio-frequency interference (mobile phones, CB radios, etc.) or near strong electromagnetic fields (power supplies, etc.)
! - Avoid relocating the device from a warm environment to a cold one, and vice versa, if not necessary.

3.1 Front and Back Panels of the DVF442

1 - activation switch (removing the code from the video signal)
2 - **KEY** LED indicator, signaling the removal of the code from the video signal
3 - **CODE Up** LED indicator, signaling the presence of a jamming code in the picture component area of the video signal
4 - **CODE Down** LED indicator, signaling the presence of a jamming code in the video signal synchronization area
5 - **POWER** LED indicator, signaling the power supply
6 - Input video signal connector **(CINCH)**
7 - Output video signal connector **(CINCH)**
8 - Power supply connector **(Standard 5.5/2.1)** plus the pole on the central terminal

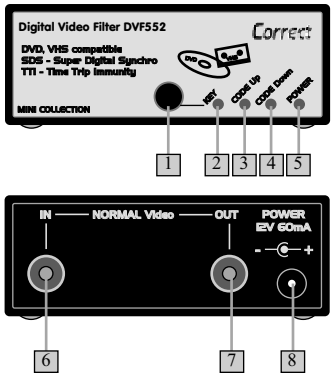


Fig. 1 Front and back panels of the **DVF442**

the **DVF442 / DVF552** videofilters do not include a video amplifier and thus cannot have any qualitative (negative or positive) effect. There is only an active and very fast load switch on the path of the video signal. The built-in sensor (synchronization separator) for the processor can hardly have any effect on the picture quality thanks to its input impedance, which is much higher than the impedance of the video signal (75 ohms).

SDS - Super Digital Synchro function is implemented using a processor-controlled synchronization of the videofilter with the video signal. This means there can be no problems with an imprecisely cut out MACROVISION jamming signal (code) known to appear with analogue decoders, which in addition tend to be temperature-dependent. Problems with impreciseness result in picture tearing during high-contrast changes (explosions, spotlights, etc.) and in various picture instability effects in the top part of a screen (picture bending or dropped colors).

TTI - Time Trip Immunity. This function means that the software in the processor ensuring synchronization takes into account the videorecorder time error (which does not appear in DVD players and digital videorecorders). This is the name for an error in the length of individual TV lines. Of course, the variance in the different lengths of TV lines is imperceptible to the human eye. A TV set will adjust for this error. The lower the quality of a videorecorder, the bigger the difference in the lengths of TV lines. Even some digital types of videofilters on the market do not take this error into account, which results in their incompatibility with some videorecorders and in the above-mentioned problems with picture instability etc. due to an imprecise cut-out of the jamming signal (code) of the MACROVISION system. The code must be cut out very precisely - milliseconds are the decisive units. However, the built-in processor in the **DVF442 / DVF552** videofilters synchronizes with each TV line separately. This means the difference in the lengths of the TV lines has no effect on the precise cut-out.

signal synchronization area. Its presence causes picture deformations of a copy of a protected video recording. In some cases, with susceptible monitors and TV sets, it may result in problems with picture stability even when playing an original video recording protected against copying.

The **CODE Up** LED indicator indicates the presence of a jamming signal (code) in the picture information (and teletext information) area of the video signal. Together with the first code part mentioned above, its presence causes a pulsing of the picture brightness or picture colors of the copy of a protected video recording. For older TV sets, it may cause these problems even when playing an original video recording protected against copying.

For advanced users: The jamming signal (code) is displayed (when viewing a video signal from a protected video recording on an oscilloscope) in the third to the seventeenth TV lines after each field synchronizing pulse, namely between each line synchronizing pulse of TV lines nos. 3-17. The **CODE Down** LED indicator signals the lower part of a jamming signal, which affects the composite sync signal with the level 0 "blacker than black" up to the top level of the "black" composite sync signal. The **CODE Up** LED indicator signalizes the presence of the top part of a jamming signal (code), which appears above the composite sync signal level (above the level of black).

The **DVF442 / DVF552** videofilter works completely automatically and does not require any further handling. The functions and basic parameters of the **DVF442 / DVF552** are the same.

However, the **DVF522** provides the opportunity to use the split **S-Video** signal system, in which video signals are transmitted with separate chrominance information, maintaining a better quality of video signal transmission from a **DVD** player to an **S-VHS** videorecorder. Nonetheless, the quality of the recording depends on other circumstances, such as the quality of the **S-VHS** cassette, the quality class of the videorecorder, and the recording speed (LP, SP).

Thanks to their new and unique patented design,

3.2 Front and Back Panels of the DVF552

1 - activation switch (removing the code from the video signal)
2 - **KEY** LED indicator, signaling the removal of the code from the video signal
3 - **CODE Up** LED indicator, signaling the presence of a jamming code in the picture component area of the video signal
4 - **CODE Down** LED indicator, signaling the presence of a jamming code in the synchronization area of the video signal
5 - **POWER** LED indicator, signaling the power supply
6 - Input video signal connector **(CINCH)**
7 - Input connector for split **S-Video** signal **(S-Video MINIDIN)**
8 - Output connector for split **S-Video** signal **(S-Video MINIDIN)**
9 - Output video signal connector **(CINCH)**
10 - Power supply connector **(Standard 5.5/2.1)** plus the pole on the central terminal

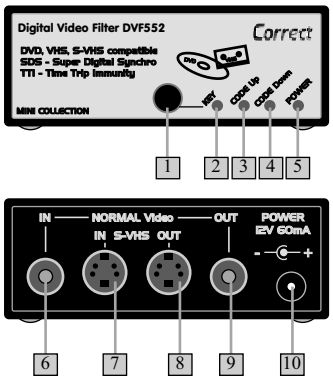


Fig. 2 Front and back panels of the **DVF552**

4. Connecting the DVF442 / DVF552 Videofilter

Before connecting the power supply, first connect the videofilter to your videorecorder, video player/DVD player and TV set.

4.1 Connecting the DVF442 videofilter

The connection of the **DVF442** digital videofilter is shown in **Fig. 3**. Always connect the equipment using "electrically shielded" (coax) video cables. If you use other, electrically unshielded cables (twin-leads), the picture might be distorted and the input and output of the videofilter might interfere. Use video cables with **CINCH** connectors on the end to be connected to the **DVF442** videofilter and with connectors corresponding to the types of connectors on the equipment used on the other end.

Connect the video signal output (VIDEO OUT) of the video player (videorecorder, DVD player) that will play a coded videocassette/DVD to the videofilter input (VIDEO IN). Connect the **DVF442** videofilter output (VIDEO OUT) to the video input (VIDEO IN) of the videorecorder used to make a copy or to the video input (VIDEO IN) of a TV set.

Because current DVD players transmit digital sound using optical cables, the videofilter is not fitted with **SCART** connectors. The sound is not and cannot be encoded; consequently, the videofilter does not work with it at all. In addition, separating video and audio signals prevents their interference, unlike when using **SCART** connectors and cables. The **DVF442** videofilter is equipped with **CINCH** connectors, which provide more universal and quality interconnection, for the above reasons. Connect the audio channel(s) directly with a cable. It does not matter whether the sound is monophonic, stereophonic, or multi-channel sound.

4.2 Connecting the DVF552 videofilter

The connection of the **DVF442** digital videofilter is shown in **Fig. 4**. It may be connected using **CINCH** cables, like the **DVF442**. In addition, the **DVF552** is equipped with **MINIDIN** connectors for processing S-Video signals. This interconnection ensures a better picture quality when making a copy of a DVD to an S-

the mains and then to the videofilter. In addition, never turn off your **DVF442 / DVF552** videofilter by pulling out the power supply connector when in operation; disconnect the power supply from the mains first! Because the videofilter is equipped with built-in protective circuits, it cannot be damaged. However, follow the above guidelines. By proceeding as advised, you will protect the power supply connector from discharges occurring when a power supply unit that already produces output voltage is connected to the device.

5. DVF442 / DVF552 Videofilter Operation

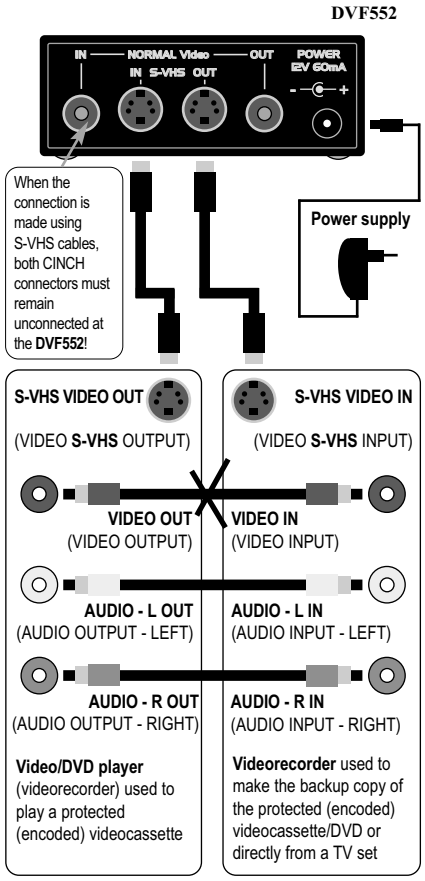
The **DVF442 / DVF552** videofilter must be connected to your equipment and its power supply already. After inserting the power supply plug to a 220V/50Hz mains socket, the **POWER** LED indicator must light up at the front panel of **DVF442 / DVF552**.

The **KEY** push-button switch works as follows: When depressed, decoding is turned off and the videofilter has no effect on the video signal whatsoever. The **CODE Down** and **CODE Up** LED indicators will not indicate the presence of a code. When the switch is not depressed, the videofilter will be active and will indicate and eliminate the **MACROVISION** jamming signal (code). This state will be indicated by the **KEY** LED indicator lighting up.

When the **KEY** switch is not depressed (the videofilter is active) and there is a video signal containing the jamming signal (code) of the **MACROVISION** system on the videofilter input (the video player, videorecorder, or DVD player is in playback mode), the **CODE Down** and **CODE Up** LED indicators, or one of them, will be on (blinking). The status of the LED indicators is affected by the current variant of the jamming signal (code). The variants change periodically or non-periodically depending on time and on the type of the MACROVISION jamming signal (code) contained on the videotape or DVD. Therefore, the **CODE Down** and **CODE Up** LED indicators will come on and blink as follows.

The **CODE Down** LED indicator indicates the presence of a jamming signal (code) in the video

Fig. 4 Connecting the **DVF552** videofilter



VHS cassette. With S-Video connection, the picture is transmitted as split into two components. The first component is a composite synchronization signal with a brightness channel (black-and-white picture); the second is a chrominance component. Only the **DVF552** videofilter can process this split signal.

Use special **S-Video** cables with **MINI DIN** connectors to interconnect the **DVF552** videofilter, a **DVD** player, and an **S-VHS** videorecorder. Instead of an **S-VHS** videorecorder, you can also use a digital **DV** videorecorder, a **DV** camcorder with signal recording, a **DVD** recorder, a Hard Disk videorecorder, or any other professional video recording equipment. The **DVF552** videofilter is prepared to operate with all of the above devices.

4.3 Power Supply Connection

Make sure the output voltage of the power supply unit corresponds to the input voltage of the **DVF442 / DVF552** videofilter, i.e. 12 V at a current consumption of approximately 30-60 mA. For faultless operation of the videofilter, the supply voltage must be stabilized and must be exactly 12 V. Therefore, do not use various low-quality power supply units.

Use a power supply unit with a standard-type output connector with a socket diameter of 2.1 mm to supply the **DVF442 / DVF552** videofilter. The plus terminal is in the center, the minus terminal is the connector jacket. If the terminals of a power supply are switched, the videofilter will not work. However, it will not be damaged thanks to its built-in power supply polarity inversion protection.

Ideally, use a power supply unit specially designed to supply the **DVF442 / DVF552** videofilter that is offered by the manufacturer.

Do not remove the power supply connector from the **DVF442 / DVF552** by pulling on the cable, as this might pull the cable off the connector. Always remove the connector holding the connector jacket. After connecting the **DVF442 / DVF552** videofilterto your equipment, connect the power supply first and then plug the power supply unit into a mains socket.

WARNING: Never connect the power supply to

Fig. 3 Connecting the **DVF442** videofilter