

SONY



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U-matic Videocassette Recorder

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**VO-9800**

(EIA/NTSC)



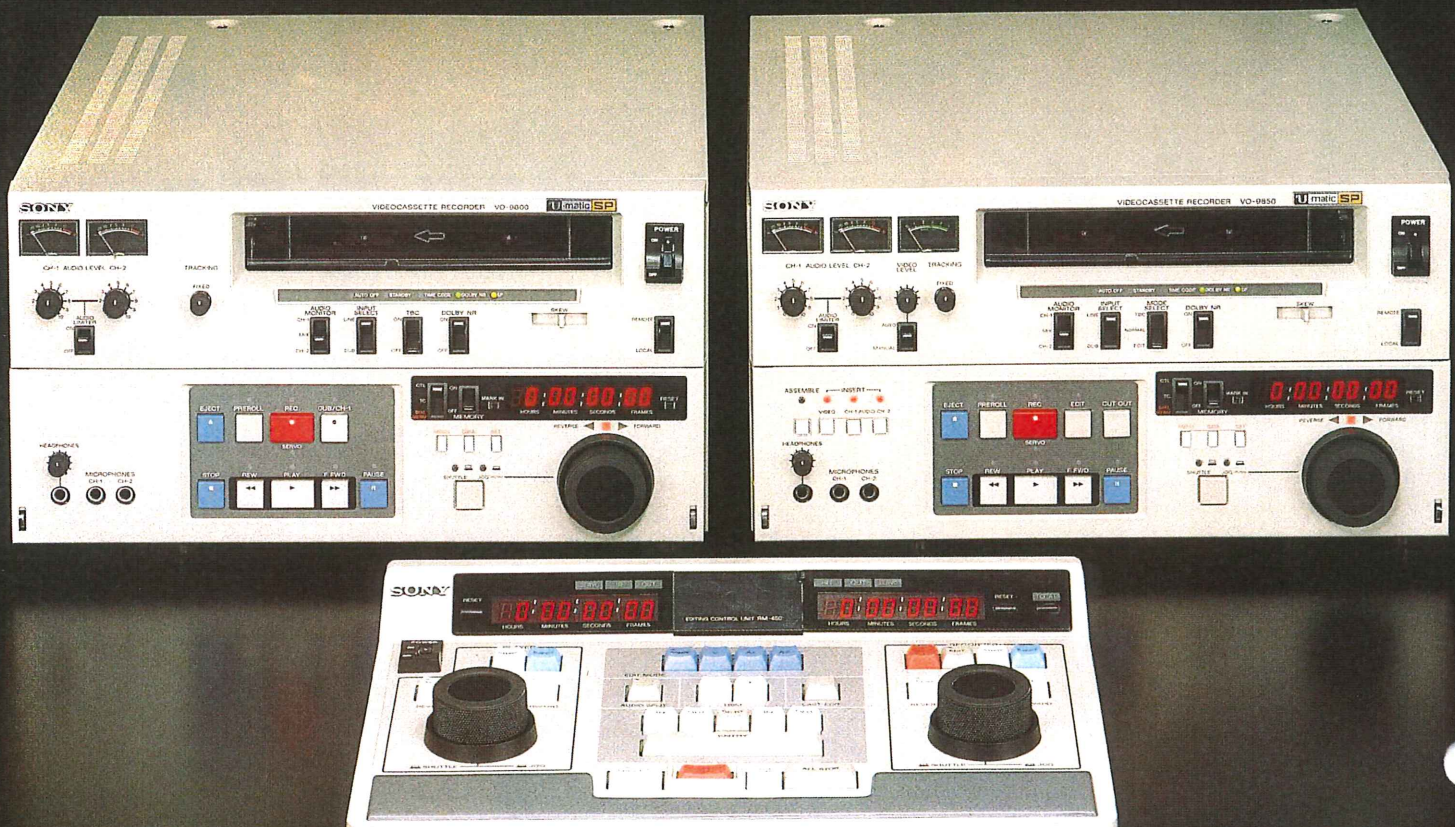
# SP U-matic—A Format for Program Origination

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Sony's U-matic, a worldwide standard format in the professional video field, has made another big step forward. A new U-matic recorder/player, the VO-9800, which functions as a player VTR in editing systems, is the result of Sony's intensive research and accumulated expertise.

The VO-9800, from the Type 9 series of Sony's U-matic family, provides an excellent quality picture in every parameter used to determine total picture quality thanks to the adoption of the SP format. It also ensures high quality dubbing for multi-generation recordings. Sound quality is greatly improved by the adoption of the Dolby\* C-Type NR circuit. As always seen in Sony's new product development, the VO-9800 maintains format compatibility and system consistency with current U-matics. In other words, it can just be added to current Sony editing systems with no modification. The optional BKU-704 Time Code Reader Board and a built-in 9-pin REMOTE interface (RS-422 serial) enable highly accurate and flexible editing operations.

With its outstanding cost performance, the VO-9800 will be an important part of many editing systems.



# OUTSTANDING FEATURES

## Video System

### Superior Picture Quality

The VO-9800 is the new generation U-matic from Sony. The SP U-matic technology, in which the FM carrier frequencies for luminance signal modulation are shifted up 1.2MHz from the conventional U-matic video format, was developed to achieve an overall quality improvement. The VO-9800 offers not only 330 TV lines of horizontal resolution but also greatly reduces luminance and chrominance ringing while maintaining a high signal to noise ratio. As a result, the VO-9800 provides an improved multi-generation recording capability. The VO-9800 can transmit luminance and chrominance signals separately through a DUB connector for minimum picture degradation caused by dubbing.

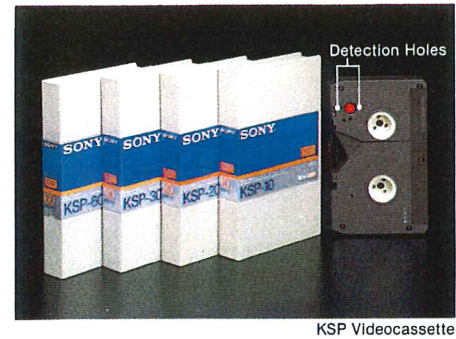


### Complete Interchangeability between SP and Conventional U-matic

The SP U-matic format is interchangeable with the conventional U-matic format. Therefore, conventional U-matics can playback high quality SP recorded pictures, and SP U-matics can improve the picture quality of conventional recordings.

### SP Mode Automatic Detection System

SP Videocassettes (KSP series) achieve the highest possible U-matic picture quality when used with SP U-matics in the SP mode. KSP series videocassettes have two detection holes. When SP U-matics detect these holes in the recording mode, they automatically switch to the SP recording mode. In the playback mode, SP U-matics detect which FM carrier frequencies are used for luminance signal modulation. Once the SP video format is detected, SP U-matics automatically switch to the SP playback mode.



KSP Videocassette

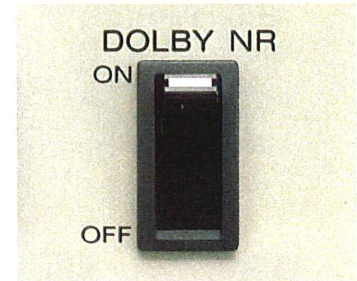
## Audio System

### Superior Audio Quality

The VO-9800 adopts new sendust heads and new audio circuits for superior audio quality. The frequency response is improved to 50Hz ~ 15kHz  $\pm$  3dB, and S/N ratio is improved to 52dB.

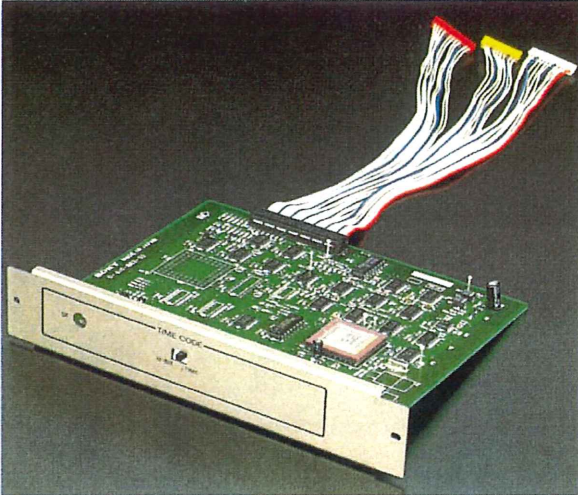
### Dolby C-Type Noise Reduction System

Dolby C-Type Noise Reduction System improves the S/N ratio to 72dB (measured by the CCIR/ARM filter, r.m.s.) and works only in SP recording/playback modes. Dolby NR can be selected by the Dolby NR ON/OFF switch in the SP recording mode. When in the Dolby NR ON mode, the Dolby NR pilot signal is recorded on to the audio channels along with the audio signals. In the playback mode, the VO-9800 automatically activates the Dolby NR system when the Dolby NR pilot signal is detected.



Dolby NR ON/OFF switch





BKU-704

## Time Code Capability with BKU-704 Time Code Reader (optional)

An optional time code reader board, the BKU-704, can be installed into the VO-9800. This allows it to read time codes.

### Main Features of BKU-704

- Can read SMPTE time code
- Easy installation
- Time code or user bits can be superimposed on the video signal (monitor output) via the Dial Menu Operation.

## Versatile System Interface

### 9-pin REMOTE Connector (RS-422 serial interface)

The VO-9800 provides a 9-pin REMOTE connector (RS-422 serial interface) for editing with the RM-450 Editing Control Unit.



9-pin REMOTE



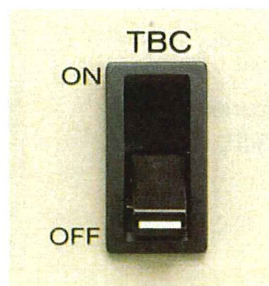
BKU-703

### BKU-703 33-pin Editing Interface (optional)

The BKU-703 33-pin parallel interface board can be installed into the VO-9800 for connection with the RM-440 Editing Control Unit and current 33-pin remote control units such as the RM-500, RM-580, and RM-555.

### TBC Connection

The VO-9800 provides EXT SYNC IN, SC IN, and RF OUT (OFF TAPE) for connection with an external time base corrector such as the BVT-810. When a TBC is used, the TBC ON/OFF switch on the VO-9800 has to be set to the TBC ON mode. The connection with TBC offers highly stable signal output in VO-9800.



TBC ON/OFF switch

## Editing Facility

### Player for Editing

The VO-9800 can be used as the player in an editing system that includes the VO-9850 and RM-450. When the BKU-704 Plug-in Time Code Reader is installed into the VO-9800, the VO-9800 can

### Back-space Editing Capability

The VO-9800 provides a back-space editing capability for smooth transitions between scenes.

### Audio Dubbing on CH-1

Additional audio for narration and background music is easy to record via the audio dubbing function. Additional audio is recorded on audio channel 1 on the already recorded tape.

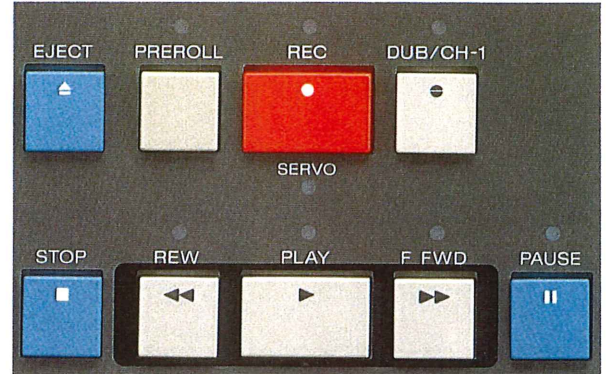
### High Speed Picture Search

#### SHUTTLE MODE

The search dial on the VO-9800 can offer various speeds, still,  $1/30$ ,  $1/10$ ,  $1/5$ ,  $1/2$ , 1, 2, 5, or 8 times normal speed in both the forward and reverse directions. In the still mode, noiseless still pictures, on which the guard band noise is located on the upper or bottom part of the monitor screen, is available. (On/off selectable via Dial Menu Operation.)

#### JOG MODE

In the JOG mode, accurate frame by frame search in both directions, as directed by the rotation of the search dial, is possible.

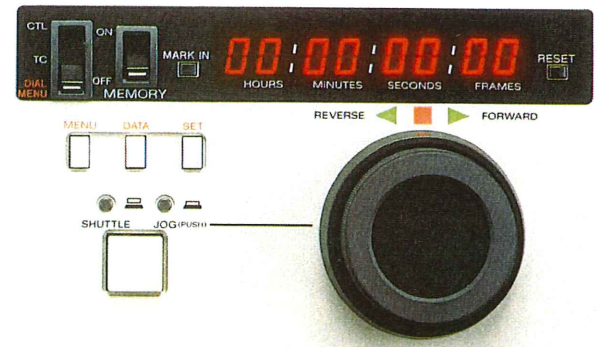


## Dial Menu Operation

The Dial Menu Operation provides maximum operational conveniences, such as:

- display of time codes/user bits
- selection of character size and position
- display of self-diagnostic results
- display of digital hour meter information
- setting of STILL TIMER (i.e. the length of time in still mode before releasing tape tension)
- setting preroll time
- selection of search dial operational modes (Direct or via Search Button)

and much more. The operation can be done while viewing the monitor or LED time counter.



Search Dial

## Improved Reliability and Serviceability

### STILL TIMER (Anti-clog Facility)

The STILL TIMER is provided to prevent tape and head damage occurring during long term STILL. When the STILL mode has been



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