

# LTC 3990/50 High Resolution Time-Lapse Video Recorder

- Up to 30 Days of Time-Lapse Recording
- Time/Date Search Capability
- Composite and S(Y/C) Input
- High Speed Video Scan
- RS-232C Output
- Utilizes S-VHS and VHS Tapes



The LTC 3990/50 high resolution time-lapse video cassette recorder uses state-of-the-art technologies to provide video and audio recording on command at selectable speeds for up to 720 hours (30 days). This recorder detects S-VHS or VHS tape and automatically sets the VCR for that mode.

The LTC 3990/50 includes a unique time/date search feature which "reads" tape in the playback mode, that was previously encoded during recording, and permits the user to initiate a search for the exact month, day, year, hour, minute, and second. The

LTC 3990/50 features remote programming and control through an RS-232C port.

The "Alarm Ready" feature allows recording of alarms even when the VCR is in the Timer mode. Alarm Command Speedup automatically switches the speed from extended record mode to a preprogrammed "Alarm Record Speed".

High Speed Alarm Recall and Review allows the tape to be rapidly scanned for the presence of alarm data. The recorder automatically switches from High Speed Search to the Play mode upon encountering the recorded

alarm. Still Playback freezes the tape for close observation of one picture. The seven day programmable timer starts and stops the recording for any two selectable periods for each day of the week.

Other features include: on screen display which records time, date, number of alarms, and other valuable information; battery backup protection; low tape out, tape end out, two independent alarm inputs, alarm output, alarm record reset, camera switch pulse, record start input, record status output, and electronic security lockout.

# SPECIFICATIONS

## Electrical

Model No.	Rated Voltage	Voltage Range	Power at Rated Voltage
LTC 3990/50	230 VAC, 50 Hz	207 to 253	23 W

**Tape Format:** 12.7 mm (0.5 in) VHS.

### Video Recording System:

Rotary Heads: 4 helical scan; 2 (-6), 2 (+6).

Luminance: FM recording.

Color: Converted subcarrier, direct recording.

### Selectable Speeds (Recording & Play):

3/12/24/48/72/120/168/240/480/720 h.

**Alarm Record Speeds:** 12 and 24 hours.

**Time/Date Search:** Via on-screen display (OSD).

**High Speed Video Scan:** 9 x 3-h speed.

**Rewind/Fast Forward Time:** 4 minutes (T-180).

### Alarm Command (From the Recording or Stop Mode):

Initiates selectable recording rate of 50, 10, or 5 fields/sec. at the 3, 12, or 24 hr. rate for best documentation during alarms.

Turns on Alarm Indicator and "Alarm-On" output until reset.

Stores the date and time of up to 9 alarm closures for later recall (1st + last 8).

Inserts Alarm-Code in on-screen display for easy location during later visual search.

Selected alarm recording speed can be programmed to continue for a period of 5 s, 15 s, 30 s, 1 min., 3 min. or until contact is reopened. Recorder then returns to previously established recording speed or Stop mode if initiated from the Stop mode.

### Video:

PAL color/CCIR mono, auto or manual selection.

Input and Output: 1.0 Vp-p, 75 ohm, unbalanced.

Horizontal Resolution:

S-VHS: 400 lines (monochrome and color).

VHS: 350 lines (monochrome); 240 lines (color).

Signal-to-Noise: 47 dB at 3 h speed.

### Audio:

Input: Line; -7.8 dBm, 50 ohm, unbalanced.

Output: -7.8 dBm, 600 ohm, unbalanced.

Response:  $\pm 3$  dBm, 100 Hz to 8 kHz at 3 h speed.

Signal-to-Noise: 40 dB at 3 h speed.

**Time/Memory Power-Loss Backup:** 720 hours.

Format:

Date: Day, Month, Year.

Time: Hour, Minute, Second (24 h format).

Tape-In, Index, Alarm, Timer, Digital Counter, Tape Speed, Lock, Tab, Fault, Tape End.

**Controls:** EJECT, SHARPNESS, SLOW TRACKING, TRACKING, REC, Rec/Play hours (UP, DOWN), REVERSE PLAY, REW SEARCH, FIELD REV, STILL, STOP, FIELD ADV, F. FWD SEARCH, PLAY, ALARM INDEX, TIMER, REC CHECK, PROGRAM, START/STOP, SET, DOWN, UP, BLK/WHT, V-POS, H-POS, ALARM RESET, COUNTER RESET, Reset (recessed), V LOCK.

### Connectors:

BNC: Video in, video out.

S Connectors: S(Y/C) in, S(Y/C) out.

RCA Phono Jack: Audio in, audio out.

15-Pin D-Connector (Terminal strip adapter provided):

Alarms commands in. "Alarm On" signal out.

Alarm record reset. Tape end out.

Tape end reset. Switcher control pulse.

Record start in. Record output.

Low tape out. Record check in.

One-Shot command in.

25-Pin D-Connector: RS-232C interface.

## Mechanical

**Finish:** Charcoal.

**Dimensions:** 435 W x 366 D x 94 H mm (17.1 x 14.4 x 3.7 in).

**Weight:** 6.5 kg (14.3 lb).

## Environmental

**Temperature:**

Operating: +5 °C to +40 °C (+41 °F to +104 °F).

## Electromagnetic Compatibility

**EMC Requirements:**

89/336/EEC:

Immunity: EN50082-1.

Emission: EN55022 Class B.

Harmonics: EN61000-3-2.

Voltage Fluctuation: EN61000-3-3.

**Safety:**

CE:

LVD Requirements: 73/23/EEC; EN60065.

## Accessories

**TC1350 Video Cassettes (10 pack):** VHS T-120.

**TC1381 Video Cassettes (10 pack):** S-VHS T-120.

**LTC 9061/00 Rack Kit:** For mounting one VCR in an EIA 19-inch rack. One rack unit wide by 3 rack units high.



# PHILIPS

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