

TEAC Professional Line

SL SERIES

SUPERIOR SOUND/LOW NOISE

SOURCE

MIN

MAX

RECORD

MODE

BIAS

LEVEL

HIGH

HIGH

TEAC

TEAC

TEAC 7010 SL

POWER

TAPE SPEED

TAPE

AUTO REVERSE

FAST

RECORD

STOP

MIC

LINE

PHONE

VU

VU

MONITOR

OUTPUT

SOURCE

RECORD

BIAS

LEVEL

"SUPERIOR SOUND/LOW NOISE" tape decks

TEAC 6010SL/7010SL/7030SL

7030SL

2-track 7½, 15ips,
professional use
master tape recording

4-track 3¾, 7½ips,
home or professional use



Operational simplicity through human engineering
Virtually all functions of the TEAC SL Series are pushbutton controlled. Symmetrically located piano key controls govern tape movement, complete solenoid operation provides feather touch response. Power on-and-off, speed change, tape monitor function, auto-reverse play, record function and recording channel selection are all accomplished with simple push buttons.

introducing the all new "Profes

7010 SL

4track 3 $\frac{3}{4}$, 7 $\frac{1}{2}$ ips,
extended playback, home or professional use



Three motor drive mechanism

The TEAC SL Series use a separate motor for capstan drive and for each reel table. The rugged precision "dual speed hysteresis synchronous motor" drives the capstan thus allowing electrical rather than mechanical speed change. Synchronization of this motor assures stable and constant tape run, uninfluenced by line voltage fluctuations or other external factors. The use of two TEAC high torque eddy current motors for reel drive and take up eliminates tape stretching and allows smooth and steady tape travel with optimum tape tension and ideal torque. The three motor system contributes to mechanical simplicity by eliminating gears, idlers, belts, etc. usually found in less expensive recorders. Total solenoid control permits the use of the optional remote control system to operate all functions of the main deck from a remote location.

Electronic automatic reverse. Automatic delay circuit

The 6010SL and 7010SL employ two methods of automatic reverse. The first is the TEAC Phase Sensing Signal system. This operates by placing a 50 or 60 Hz signal on the tape at the desired reverse point. With the AUTO REVERSE button in the "ON" position, the tape will change direction as this signal passes the playback head. The second method uses conventional sensing foil placed on the tape backing. As the sensing foil passes the contacts in the left tension arm post, the tape will stop, pause momentarily and reverse direction. Placing the sensing foil at each end of a reel of tape allows continuous play with the TEAC RC-602 Repeat Control Unit (optional accessory).

Upon changing direction of tape travel (either manually or automatically) the pinch roller and capstan engagement is momentarily delayed to allow the capstan to change direction

Professional Line SL Series" tape decks

and attain normal speed before tape travel is resumed. This eliminates tape acceleration sound and prevents tape damage and stretching.

The 7030SL incorporates automatic rewind or stop functions. With the application of sensing foil to the tape backing, the tape can be automatically rewound or stopped at any desired point. Selection of rewind or stop is accomplished with a "Sensing" switch on the rear of tape transport.

New "high density ferrite" heads

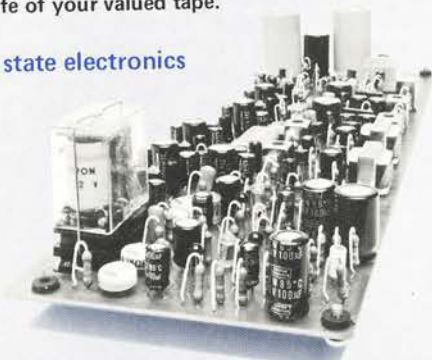


Component requirements for professional recording machines are very severe. All components must provide stable operation over a long trouble free service life. In order to maximize the quality of our SL Series recorders, TEAC Corporation has developed a new "high density ferrite" head. Composed of a diamond hard material, this head is virtually impervious to wear. All heads in the SL Series are "high density ferrite" heads for the ultimate in recording and playback efficiency.

These heads are fabricated using techniques similar to those employed when cutting gemstones. The extreme hardness and crystalline structure of the ferrite material, permits a degree of mechanical precision heretofore not possible with laminar construction techniques. The recording gap is milled with diamond cutters to a highly precise degree of linearity. The extreme narrowness of this gap and the high permeability of the ferrite material, results in a greatly improved upper frequency response, increased channel separation, reduced crosstalk between channels and produces clear, natural tones free of coloration.

Head tape contact surfaces are polished to a sparkling, mirror-like finish which prevents dust or tape oxides from adhering to tape surfaces. As a result contamination of the recording gap is reduced, and high frequency response stays constant over extended periods of use. Extremely smooth tape surface reduces tape wear and friction to a minimum greatly increasing the life of your valued tape.

All new solid state electronics



The SL Series incorporates new record and playback preamplifiers with a wide dynamic margin of performance, designed to professional standards. Specially selected low noise silicon transistors are used throughout. Designed for the low noise

concept, the preamplifiers have sufficient reserve power to handle all amplitude peaks without clipping or limiting. Circuit parameters are such that all signals are faithfully reproduced without coloration or distortion.

Dual monitoring capability

The use of the monitor switch allows instant comparison of the signal input and the actual recording being made. Thus, an immediate indication of the recording quality is available. Additionally, since the monitor switch also selects the signal to be displayed on the VU meters, comparison of the input and output signal levels can be made at a glance; a feature also useful for balancing channel output during playback. A convenient front panel jack is provided for headphone monitoring.

Built in mike line mixers

The TEAC SL Series have separate input level controls for microphone and line inputs, permitting the recording of signals from a microphone mixed with signals from a tuner, turntable or another recorder connected to the line input.

Impedance Roller/Stabilizer

Coupled to a dynamically balanced high mass flywheel for stabilized tape feed. This in combination with the mechanical tension arm comprizes a mechanical filter to void the effects of improperly wound or uneven tapes.

Extended playing time

The 7010SL and the 7030SL will accept any reel up to and including 10½ inch. Maximum playing time for a 10½ reel of 1 mil tape at 3¾ ips is 180 minutes. Thus, by using the automatic reverse feature (7010SL only) a maximum playing time of 360 minutes, or six hours, is available; a feature very useful for background music in the home, or commercially.

Reel size selector switch (7010SL, 7030SL) Tape tension switch (6010SL)

Optional accessories available for the SL Series are:

- AX-10 Sound on Sound-Echo Unit
- RC-604 Pause Control Unit
- RC-601 Remote Control Unit (RC-701 for 7030SL)
- RC-602 Repeat Play Unit (6010SL & 7010SL only)
- HP-101 Headphones (8 ohms)
- MC-105 Dynamic Microphone
- MC-201 Microphone (Electret Condenser type with windscreen)
- TZ-601 Plastic Cover

The 7030SL is a professional tape deck with operating speeds of 7½ and 15 ips. Since it is designed primarily for 2-track operation, it does not incorporate the automatic reverse features as found in the 6010SL/7010SL. Its normal head configuration is three 2-track heads (for erase, record and playback) of 2-track stereo, and a fourth 4-track playback head for playing back pre-recorded 4-track stereo tapes. Selection of 2 or 4-track playback is accomplished by push button. The 7030SL also has a cueing facility for precision cueing and editing. Recording equalization is automatically selected by the speed control button.

The 6010SL is identical to the 7010SL in all respects, except that it accepts up to 7 inch reels only.

SL



TEAC presents a new concept in recording technology

The recent advances in tape technology, and the vastly improved tapes of the Low Noise/High Output types (such as Scotch 203, BASF LP-35-LH and TDK-150-SD) as well as the new requirements levied upon the recording machines by these tapes, have rendered obsolete virtually all recorders currently available, in terms of their ability to fully employ the improved performance capabilities of these new tapes.

TEAC Corporation as a leader of the industry has once again advanced the state of the art with a series of decks designed to set a new standard of excellence. Designated the SL Series (Superior Sound/Low Noise) these new decks are engineered to provide full utilization of the improved tapes and recording process.

The resulting reduction of background noise and hiss to a level below audibility provides a new clarity of tone and a brilliance of highs not previously possible. Dynamic range is also extended, making possible the full enjoyment of lower listening levels free of annoying tape coloration. These dramatic advantages, plus wider frequency range and improved signal to noise ratio, allow professional quality recordings to be made in your home with the new TEAC SL Series, using the new Low Noise/High Output tapes.

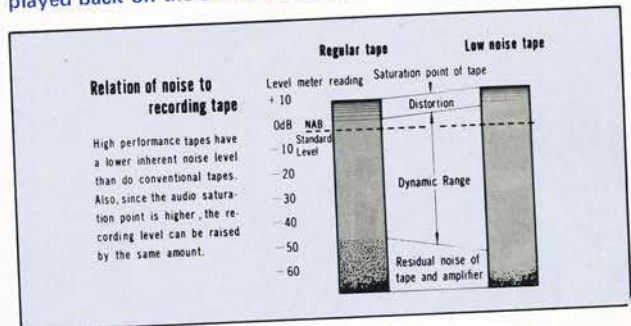
Essentially similar, several models are available in the new TEAC SL Series, varying only in their design to fit specific applications, or purposes.

What is this new concept in recording; how does it differ from the conventional process?

Briefly, the differences are twofold. First, the use of the new low noise tape requires a higher recording bias level. Secondly, since the saturation level of the new type tape is higher than with ordinary tape, the recording signal level must be greater. Additionally, since the signal to noise ratio and frequency response are much improved, the electronics of the machine must be capable of reproducing a wider frequency range in order to play back the recorded signal with full fidelity. Residual noise in the preamplifiers must be reduced to a level not usually attained, in order to derive full benefit from the low noise feature of the tape. TEAC has extensively engineered the SL Series of tape decks to meet, or exceed the requirements of this advanced recording method.

Switch controlled preset bias levels

New bias oscillator circuitry has been incorporated to allow pre-set bias selection from the front panel, for the type of tape used, thus eliminating the necessity of making internal adjustments. Additionally, this feature maintains full compatibility with your present tape library, except that you will note much improved performance from your present tapes when played back on the SL Series decks.



Expanded scale VU meters

The use of the improved Low Noise/High Output tapes calls for a higher recording signal level, to take full advantage of the superior performance these tapes offer. To meet this need, the new TEAC SL Series incorporates a meter level switch to allow expanded scale operation. This circuitry expands the scale of the meters by an additional +3 dB, thereby maintaining meter accuracy and preventing pegging or scaling out of the meter movement when recording or playing back the high output tapes. Two professional type, semi-linear, expanded scale meters are used. Readily visible even when using the remote control unit (optional), these internally illuminated meters provide extreme accuracy during the recording and playback functions.

The NAB standard recording level for conventional tapes is 0 VU as displayed on the VU meters. In the new SL Series, TEAC has adopted a new standard for use with the Low Noise/High Output tapes. With expanded scale operation as described above, and with the meter level switch in the HIGH position, the recording level as displayed on the VU meter will indicate +3 dB at 0 VU. This new standard represents another pace-setting engineering innovation from TEAC, as an industry leader in new developments.

"SUPERIOR SOUND/LOW NOISE" tape decks 6010SL/7010SL/7030SL

For the technically oriented, the below listed areas represent the most significant engineering improvements in the SL Series tape decks.

No possibility of recording clicks during recording. Since recording signal is applied to head before tape travel begins and is present at the head until tape travel ceases, the possibility of recording switch noise or recording clicks is eliminated. Electronic interlock keeps recording bias applied to head until after tape travel ceases and tape lifters are activated.

Muting relay on output stage prevents preamplifier from operating for 1 - 2 seconds after turn on, allowing amplifier and power supply to stabilize before operation begins. Totally eliminates turn on clicks through your amplifier system.

All IC recording preamplifiers
Mike and line preamplifiers, intermediate amplifier and output stages are dual IC amplifiers employing negative feedback for maximum stability, increased signal to noise ratio and extremely low distortion. In the playback and equalization circuitry, 3 stage direct coupled NF type circuitry is employed for maximum fidelity.

Line output amplifiers are 2 stage direct coupled (silicon transistors) to maintain the same high quality as the recording circuitry.

No compensating circuitry is needed for source or meter functions. Therefore distortion is reduced and monitoring or metering functions do not effect source signal quality.

Equalization is automatically selected by placing the bias switch in the proper position for the type tape used.

A word about prices and policies

Professional studio recorders used to produce music master tapes from which records are made, are designed to exhibit unchanged characteristics after prolonged periods of use. Only highly dependable, precision, electrical and mechanical components are used in the manufacture of these machines. The design engineering is such that only the latest and best manufacturing techniques are used.

TEAC's SL Series tape decks are manufactured to the same high standards and are designed to accomplish the same professional results as are studio recording machines. Additionally through applied "human engineering" we have provided you with an ease of operation not found in professional machines.

For these reasons our machines can operate in any environment or climate, are not affected by line voltage variations and will provide a long dependable trouble free service life. You may feel that our products are "over engineered", however our company policy is to manufacture all TEAC equipment to the highest possible standards. TEAC products have long served as the standard by which all others are measured.

As proof of this, check with professional recording engineers, you will often find that their own home audio centers contain TEAC equipment. As further proof, independent testing laboratories consistently report that TEAC equipment invariably performs better than the published specifications would indicate. A perusal of the specifications and features description, will be impressive however the superb tonal quality cannot be expressed by specifications. Only your own listening tests can adequately demonstrate this. The real test of any equipment comes with use and familiarity, we invite you to try these machines under any circumstances. Once you have used and listened to these machines the many reasons for the somewhat expensive price will be readily apparent, in as much as quality is not inexpensive.

SPECIFICATIONS	6010SL	7010SL	7030SL
Heads	Four; 4 track 2 channel, stereo or mono erase, record, playback and rev. playback.	Four; 4 track 2 channel, stereo or mono erase, record, playback and rev. playback	Four; 2 track 2 channel, stereo or mono erase, record, playback and 4 track playback
Reel size	7" and 5"	10 1/2", 7" and 5"	10 1/2", 7" and 5"
Tape speed	7 1/2 ips and 3 3/4 ips (±0.5%)	7 1/2 ips and 3 3/4 ips (±0.5%)	15 ips and 7 1/2 ips (±0.5%)
Motors	1 dual speed hysteresis synchronous capstan motor 2 eddy current type outer-rotor reel motors	1 dual speed hysteresis synchronous capstan motor 2 eddy current induction reel motors	1 dual speed, hysteresis synchronous capstan motor 2 eddy current induction reel motors
Wow and flutter	0.06% at 7 1/2 ips 0.09% at 3 3/4 ips	0.06% at 7 1/2 ips 0.09% at 3 3/4 ips	0.04% at 15 ips 0.06% at 7 1/2 ips
Frequency response	25 - 24,000Hz (±3dB, 30 - 20,000Hz) at 7 1/2 ips 25 - 16,000Hz (±3dB, 30 - 13,000Hz) at 3 3/4 ips	25 - 24,000Hz (±3dB, 30 - 20,000Hz) at 7 1/2 ips 25 - 16,000Hz (±3dB, 30 - 13,000Hz) at 3 3/4 ips	25 - 26,000Hz (±3dB, 30 - 22,000Hz) at 15 ips 25 - 24,000Hz (±3dB, 30 - 20,000Hz) at 7 1/2 ips
Signal to noise ratio	58dB	58dB	60dB
Harmonic distortion	1% at 1,000Hz normal operating level	1% at 1,000Hz normal operating level	1% at 1,000Hz normal operating level
Crosstalk	60dB at 1,000Hz	60dB at 1,000Hz	60dB at 1,000Hz
Stereo channel separation	50dB at 1,000Hz	50dB at 1,000Hz	50dB at 1,000Hz
Fast winding time	90 seconds for 1,200 feet	90 seconds for 1,200 feet	90 seconds for 1,200 feet
Inputs	Microphone: 600 ohms, -72dB (0.25mV) Line : 50,000 ohms or more, 0.1V	Microphone: 600 ohms, -72dB (0.25mV) Line : 50,000 ohms or more, 0.1V	Microphone: 600 ohms, -72dB (0.25mV) Line : 50,000 ohms or more, 0.1V
Outputs	Line : 0.3V for load impedance of 10,000 ohms or more Headphone: 8 ohms	Line : 0.3V for load impedance of 10,000 ohms or more Headphone: 8 ohms	Line : 0.3V for load impedance of 10,000 ohms or more Headphone: 8 ohms
Power requirements	117V AC, 60Hz, 130W	117V AC, 60Hz, 150W	117V AC, 60Hz, 150W
Dimensions	20 3/4" (H) x 17 1/2" (W) x 6 3/4" (D)	20 3/4" (H) x 17 1/2" (W) x 8 3/4" (D)	20 3/4" (H) x 17 1/2" (W) x 8 3/4" (D)
Weight	52 lbs (net)	62 lbs (net)	62 lbs (net)
Standard accessories	Empty Reel, Reel Holder, Input-Output Connection Cord, Oil and Applicator, Fuse, Cleaning Stick, AC Power Cord.	Empty Reel, Reel Holder, Input-Output Connection Cord, Oil and Applicator, Fuse, Cleaning Stick, AC Power Cord.	Empty Reel, Reel Holder, Input-Output Connection Cord, Oil and Applicator, Fuse, Cleaning Stick, AC Power Cord.

Specifications were determined with a low noise tape.

Specifications subject to change without notice.