# Tape Reproducers

## Extended Play Audio Tape Reproducers

### LJ-10

- **Model LJ-10-1**: Monaural, Half Track, Bi-Directional, .250 inch Tape
  - Price: $4,600
- **Model LJ-10-2**: Stereo, Two Track, .250 inch Tape
  - Price: $4,600
- **Model LJ-10-4**: Stereo, Quarter Track, Bi-Directional, .250 inch Tape
  - Price: $4,850

### Digitally Controlled Analog Audio Tape Recorder/Reproducer

#### LJ-12

- **Model LJ-12-1/1**: Monaural, Full Track, .250 inch Tape
  - Price: $7,500
- **Model LJ-12-2/1**: Stereo, Two Track, .250 inch Tape
  - Price: $7,950
- **Model LJ-12-4/1**: Stereo, Quarter Track, .250 inch Tape
  - Price: $7,950
- **Model LJ-12-2/2**: Stereo, Two Track, .500 inch Tape
  - Price: $9,350

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Effective January 1, 1984  All Prices Subject to Change Without Notice

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THE L. J. SCULLY MANUFACTURING CORPORATION
138 Hurd Avenue, Bridgeport, Connecticut 06604 U.S.A.
Model LJ-10 Reproducer
Model LJ-12 Recorder

LJScully

The Original Scullys
THE L.J. SCULLY MANUFACTURING CORPORATION
138 Hurd Avenue, Bridgeport, Connecticut 06604 U.S.A.
(203) 368-2332
WITH THE LJ-12 RECORDER, L.J. SCULLY OFFERS THE BROADCAST AND RECORDING INDUSTRIES A NEW STANDARD IN ANALOG RECORDING. NOW, AUDIO ENGINEERS HAVE COMPLETE DIGITAL CONTROL OF AN ANALOG TAPE RECORDER. AT THE HEART OF THE LJ-12 ARE THREE ADVANCED MICROPROCESSORS, EACH COMMUNICATING WITH THE OTHER, ALLOWING UNPRECEDENTED OPERATIONAL STABILITY AND FLEXIBILITY.
LJ Scully MODEL LJ-10

Professional Extended Play Reproducer
With 10" & 14" Reel Capacity
LJ-12 Recorder features:

- **SIMPPLICITY**
- Self diagnostics and plug-in circuitry for ease of service
- All connectors the finest available, including machined-pin gold plated I.C. sockets and two-piece plug/receptacle type circuit card connectors
- Complete digital control of the transport functions including the use of lifetime hall-effect switching
- Use of a rigid, precision ground casting for maintaining the accurate alignment of the tape transport
- Solid-state, infra-red tape sensor using no moving parts or tape slots that interfere with tape threading
- Closed loop, dc servo capstan drive for ultimate speed accuracy
- Bi-directional servo capstan system allows reverse play capability
- The most accurate vari-speed system ever offered, with precise digital control of capstan speed from 3.00 to 36.00 IPS in .01 IPS increments, with L.E.D. display of IPS or percent of deviation.
- Digital, real time position locator with LED display
- Home, replay and dump edit functions for ease of editing
- Shuttle control for easy cueing
- Digitally controlled constant tension reel motors for gentle tape handling
- Slow wind spooling mode for improved tape storage
- Long life, hot pressed glass bonded ferrite heads are standard
- Five position head stack allows spare head location in addition to the SMPTE time code head
- SMPTE compatibility using a center track between the two audio channels with a separate head to eliminate crosstalk problems
- Advanced, efficient switching power supplies insure cool operation without noisy fans

- Universal power supply mains input compatible with all world standards
- Versatile accessory connector allows access to all of the machine's vital internal signals including tallies, push-button inputs, and power supplies for easy interfacing to synchronizers and controllers
- Accepts both parallel and serial remotes and can be controlled using RS232 data (without the use of "black boxes")
- Transformerless, high current, true differential output stage can supply +28 DBM and distortion-free unbalancing
- Quiet punch-in and out with bias delays precisely controlled by the audio control microprocessor
- Non-volatile memory stores all audio adjustment values and insures dependable storage without batteries
- Storage of separate values for every audio parameter, for all four tape speeds, for four tape types, with NAB or IEC standards
- Programmable fast-mute level and automatic high frequency correction prevents monitor speaker damage in lifter defeat mode
- Built-in monitor amplifier with headphone jack and terminals for console mounted speaker
- Quiet Operation
Specifications

Tape Width: ¼ inch - Mono, 2-track or ½ track - 2 or 4 track

Tape Speeds: 3.75, 7.5, 15, and 30 IPS

Variable Speed Range: 3.00 to 36.00 IPS in .01 IPS increments

Tape Tension: 3.75 ounces, ± .5 ounces, at any tape speed from beginning to end of reel. (Measured between capstan and right-hand roller.)

Start Time: .40 seconds at 3.75 IPS .50 seconds at 7.5 IPS .60 seconds at 15 IPS .85 seconds at 30 IPS

Rewind Time: 120 seconds for 2400 feet

Wow/Flutter: Less than .025% at 30 IPS Less than .04% at 15 IPS Less than .06% at 7.5 IPS Less than .10% at 3.75 IPS

Signal-To-Noise Ratio: (Ref. 510nW/M) (Unweighted, 30-18Khz) (ANSI "A"-Weighted)

<table>
<thead>
<tr>
<th>Tape Speed</th>
<th>2-Track</th>
<th>2-Track</th>
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</thead>
<tbody>
<tr>
<td>30 IPS</td>
<td>71dB</td>
<td>68dB</td>
</tr>
<tr>
<td>15 IPS</td>
<td>66dB</td>
<td>65dB</td>
</tr>
<tr>
<td>7.5 IPS</td>
<td>65dB</td>
<td>62dB</td>
</tr>
<tr>
<td>3.75 IPS</td>
<td>63dB</td>
<td>60dB</td>
</tr>
<tr>
<td>30 IPS</td>
<td>75dB</td>
<td>72dB</td>
</tr>
<tr>
<td>15 IPS</td>
<td>72dB</td>
<td>69dB</td>
</tr>
<tr>
<td>7.5 IPS</td>
<td>69dB</td>
<td>66dB</td>
</tr>
<tr>
<td>3.75 IPS</td>
<td>67dB</td>
<td>64dB</td>
</tr>
</tbody>
</table>

Frequency Response: 30 IPS CCIR 40-24Khz ± 1.5 dB 15 IPS IEC 30-22Khz ± 1.5 dB 7.5 IPS IEC 30-18Khz ± 1.5 dB 30 IPS AES 30-22Khz ± 1.5 dB 15 IPS NAB 30-22Khz ± 1.5 dB 7.5 IPS NAB 35-18Khz ± 1.5 dB 3.75 IPS NAB 40-12Khz ± 1.5 dB

Crosstalk Rejection: 60 dB Minimum at 1Khz (stereo)

Depth of Erasure: 80 dB or better at 1Khz (Ref. 250nW/M)

Harmonic Distortion: Less than .5% at 30 IPS Less than 1% at 15 IPS Less than 1.5% at 7.5 IPS Less than 2% at 3.75 IPS

(DTN 45507 Weighted) (THD at 250 nW/M, 1Khz fundamental) (Distortion varies with bias setting and tape type)
Engineered for performance and maintenance-free operation, the LJ-10 is built to exacting specifications by LJ Scully craftsmen. This model offers unique advantages that have previously been unavailable to the broadcast industry. These features include:

- Closed loop drive offering substantially improved wow and flutter
- Linear actuated pressure rollers for a fast, smooth start
- Ability to gently handle 1 mil tape on 10” and 14” reels
- Built-in foil sensing
- Solid state logic control circuitry
- Motion sensing for smooth control of fast and stop operations
- Fault detection for early signaling of a potential malfunction
- Front panel plug-in printed circuit construction for easy alignment and maintenance
- Automatic equalization change with capstan speed selection
- Cue mode for easy loading and service

**Specifications**

- **Tape Speed:** 3 3/4 — 7 1/2 ips (other speeds upon request)
- **Head Configuration:**
  - Monophonic — full or half track
  - Stereophonic — two or quarter track
- **Reel Size:** Up to 14 inches
- **Rewind Time:** Approximately 160 seconds for 7200 ft.
- **Power Requirements:** 117 VAC, 50/60 Hz, 350 watts
- **Frequency Response:**
  - Mono: full track 68 dB, 30 Hz to 18K Hz
  - Mono: half track 65 dB, 30 Hz to 15 KHz
  - Stereo: two track 65 dB, 30 Hz to 15 KHz
- **Signal to Noise Ratio:**
  - Mono full track 68 dB, referenced to 510 nW/M
  - Mono half track 65 dB, referenced to 510 nW/M
  - Stereo two track 65 dB, referenced to 510 nW/M
  - Stereo 1/4 track 62 dB, referenced to 510 nW/M
- **Flutter and Wow:**
  - 3 3/4 ips less than .12% RMS-NAB, .17 DIN
  - 7 1/2 ips less than .08% RMS-NAB, .12 DIN
- **Amplifier Distortion:** Less than .2% THD at operating level
- **Maximum output before clipping:** +24 dbm into 600 ohms
- **Line Output:** Balanced output 600 ohms
- **Remote Connections:** Direction, play, fast, stop, fault, ready and ground
- **Size:** 19” x 24 1/2” x 9 1/2”
- **Shipping Weight:** 100 lbs.