

# BARCO CINE 7LT £6,300

While the Cine 7LT brings Barco's wealth of experience down to a price that, by its standards, is positively affordable, it's not a projector for the faint-hearted

### OVERALL

★★★★★

Refined CRT projection technology, married to superb de-interlacing, help deliver a smooth-looking image with extremely fine, realistic-looking detail, solid colours and an impressive dynamic range. But can you cope with the hassle of setting up?

### PERFORMANCE

★★★★★

### FEATURES

★★★★★

### BUILD

★★★★★

### EASE OF USE

★★★★★

### VALUE FOR MONEY

★★★★★

### KEY FEATURES

- 3x 7inch liquid-cooled Toshiba CRTs
- 2x and 3x line multiplication and de-interlacing
- Composite, S-Video, RGB and component video inputs up to 1080i/720p
- 32 memory banks with eight programmable aspect ratio settings per source
- Claimed 1,000 Lumens brightness (1800ANSI Lumens) with 15,000:1 contrast ratio

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projection systems

Typically, the words entry-level and Barco have never been uttered in the same sentence, unless you were the owner of a small high street cinema. However, with the launch of its Cine 7LT projection system, Barco is able to compete head on with the more domestic DLP (digital light processing) projectors. And while £6,300 is hardly pocket money, the Cine 7LT certainly seems to offer a generous combination of technology and engineering.

Three liquid-cooled Toshiba CRTs (cathode ray tubes) are included in this substantial package and account for much of its 40kg bulk, so siting this projector on a ceiling will inevitably involve some additional structural engineering.

The rear of its enclosure accommodates RS232 ports for connection to third-party control systems, a further serial comms port and six BNC terminals that cater for RGB input (plus horizontal and vertical sync) and composite video. An S-Video terminal completes the line-up.

The projector must be configured for each of these inputs, or at least the sources that are connected, by a trained installer. The additional expense incurred for the delivery and installation of the Cine 7LT will be a matter for negotiation with your dealer, although Barco is setting up a training programme to make this less complicated.

### Technology

Barco is one of a number of manufacturers focusing its latest research and design on new projection technologies such as DLP, as is proved by the up-and-coming Cine Versum 80 system. As a result, products such as the Cine 7LT benefit from the falling price in established, but highly refined, CRT technology, which is entering the twilight of its commercial growth.

One benefit of the CRT approach remains its inherently high contrast, specified here in excess of 15,000:1, while its optical resolution is true to some 1,000 lines. Interlaced and progressive video inputs up to 1080i and 720p are accepted (but not 1080p) through a cut-down version of Barco's Line Multiplier circuit (known as LIMO Pro).

This particular board doesn't include field doubling, but it does offer both line doubling and tripling, – the latter being the preferred option in our tests using the component video output of the Arcam and Pioneer DVD players we used.

Why? Because the Cine 7LT turns its multiplier off if a progressive video input is sensed, yielding a maximum 31.2kHz horizontal scan frequency with native progressive PAL sources. With an interlaced PAL video signal, subject to Barco's line tripling, this increases to a superior 46.5kHz, taking 625-line PAL per 50Hz field to 935 lines per 50Hz frame. Although this might seem counter-intuitive, it's vital to turn I-to-P conversion off on your DVD player before using the Cine 7LT.

### Set-up and optimisation

Let's be frank. There is no way that the Cine 7LT can compete with modern LCD/DLP models for ease of installation, and even the keenest enthusiast shouldn't attempt the initial set-up. What follows is a flavour of what's involved.

The procedure begins with Barco's service menu, where the projector distance, typically 1.4x the screen width, is determined (remember, CRT systems have no manual zoom). Scheimpflug adjustment – which optimises image focus in the corners of the screen – is achieved manually by tilting the lens. Optical lens focusing is also achieved manually with the aid of an on-screen grid (green CRT followed by red and blue).

Raster centring ensures that the illuminated (or scanned) area of the tube is centred in the middle of the phosphor (again G, R then B). Then comes static convergence, which includes manual CRT projection angle adjustment using superimposed R/G crosshairs and G/B crosshairs (green is taken as the reference).

Fine-tuning of horizontal and vertical shift on all tubes, plus bow, skew and keystone correction is achieved by digital control over the scanning beam. Seagull correction amends any pinching in the corners of the picture. Adjustment of horizontal size enables the amounts of overscan to be determined, just as vertical size accommodates different aspect



