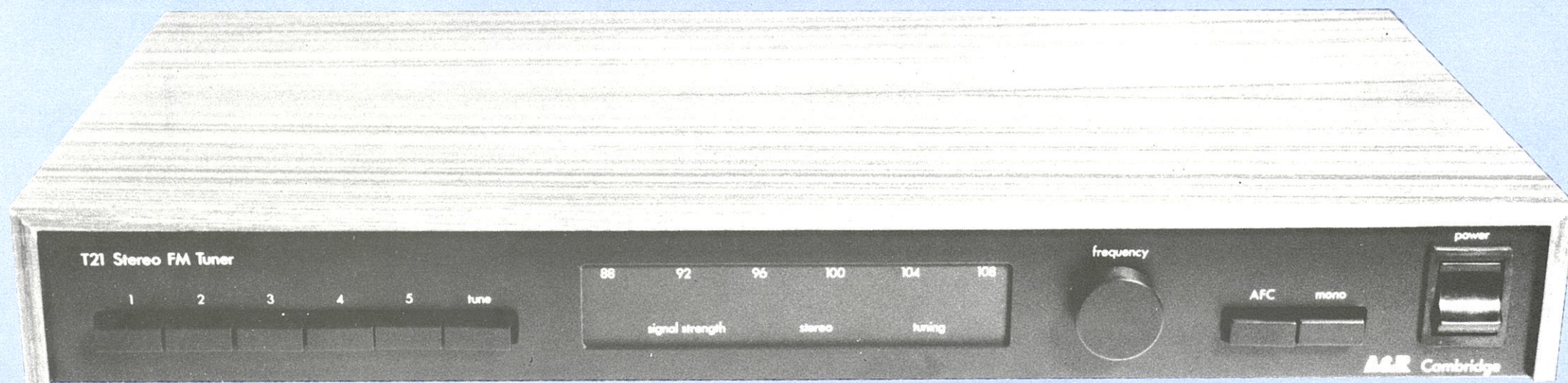


Sound Reliability.



The T21 Stereo FM Tuner

Amplification & Recording (Cambridge) Limited

A&R

THE T21 STEREO FM TUNER. A NEED FULFILLED.

When we launched the A60 stereo amplifier two years ago, we knew we had a pretty good product.

But its overwhelming success in the eyes of both the public and the press caused the A60 to surpass even our highest hopes. It became accepted as an amplifier totally in a class of its own: versatile, high in sound quality, beautifully styled and extremely reliable. All at a price that was well within easy reach of any music lover's budget.

However, it soon became clear that the notable A60 demanded the companionship of a tuner that would meet the same requirements, yet still remain in an equivalent price bracket.

And so the T21 stereo FM tuner was born.

Sleek modern styling. Easy to operate. Excellent sound quality. Very reliable. All the ingredients that made the A60 so distinctive, thoughtfully presented in a tuner that although primarily designed to match the A60 amplifier, is at home in most Hi Fi systems.

The operation of the T21 is simplicity itself. Switch-on is via a heavy duty rocker switch. Circuitry is included which mutes the audio output when the tuner is switched on or off, thus preventing unwanted 'thumps' in the loudspeaker. A toroidal mains transformer ensures an extremely low hum level at all times.

There is no complicated tuning scale on the T21. Instead, a row of 21 LEDs (light emitting diodes) spaced at precise 1MHz intervals operate to produce an accurate and stable tuning scale. Signal strength is also indicated by LEDs which show sufficient acceptable levels of signal for both mono and stereo reception. An LED tuning meter ensures that the station is precisely on tune.

Tuning can be carried out by using either the manual tuning control or

the preset controls which, once set, allow immediate switching from one station to another. A 'mute' facility is provided to remove background noise between stations. The usual AFC control is fitted, which ensures that the station remains accurately tuned in once selected.

An output level control on the rear of the T21 allows the tuner to be matched with almost any amplifier, and both 75 ohm and 300 ohm balanced aerial sockets are provided, thus allowing connection of any standard FM aerial.

The sound circuitry of the T21 has been designed to ensure the flattest frequency response. A 'birdie' filter considerably reduces unpleasant whistles ('birdies') arising from adjacent channel stereo broadcasts, and also compensates for phase errors in previous stages, thereby giving a low stereo distortion and

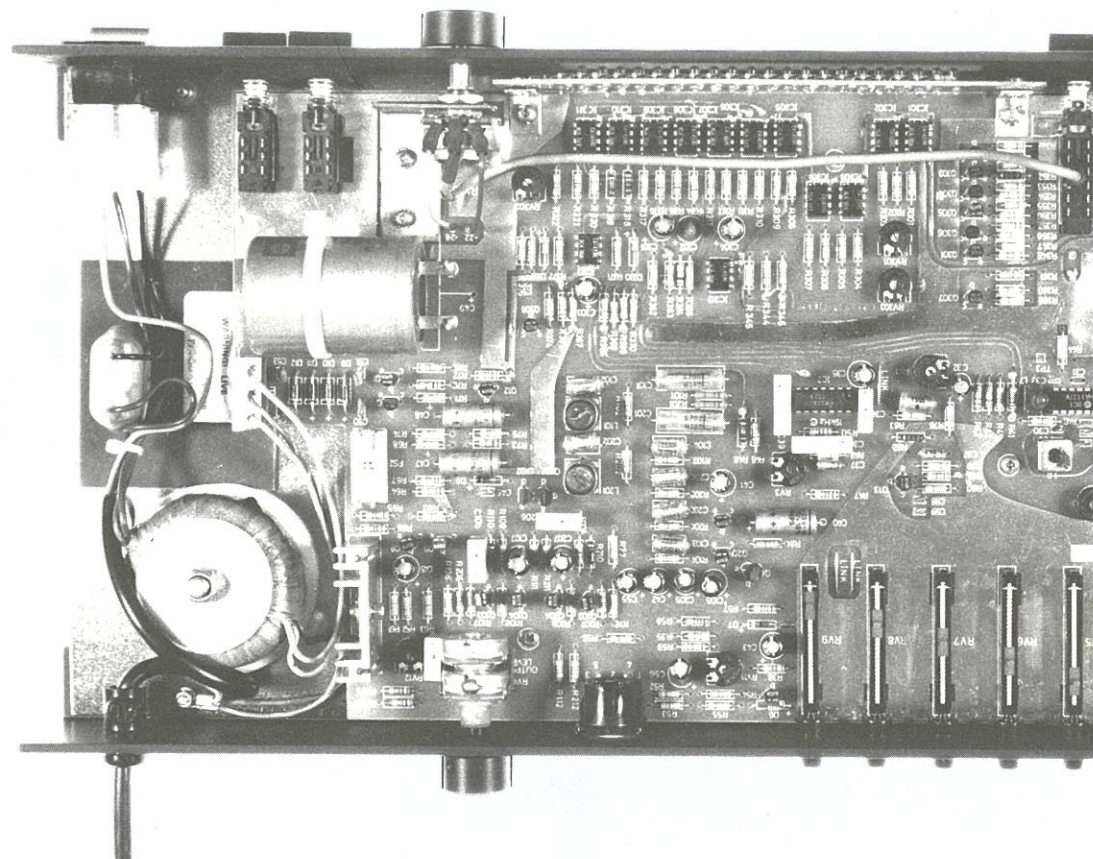
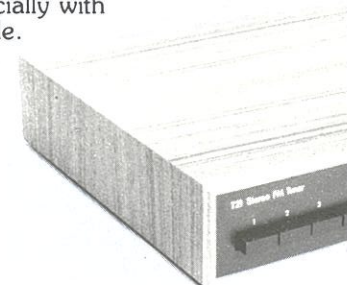
crosstalk level.

An efficient multiplex (MPX) filter removes the high frequency tones produced by the stereo decoder circuitry, preventing damage to loudspeakers and interference with the bias oscillator on tape recorders.

Like all A & R products, the T21 is put through rigorous quality control and reliability procedures. Each individual T21 is subjected to numerous specification trials, both for its technical performance and physical appearance. We take pride in knowing that the T21 is one of the most reliable FM tuners on the market today. In the unlikely event of your T21 developing a fault, full after sales service is available through your

A & R appointed dealer.

The T21 comes to you with a matt black fascia and matching knobs, and a choice of four finishes: teak, rosewood, walnut or matt black, thus ensuring a complete blending into any room setting, especially with its low, sleek profile.





Sound Reliability.

T21 SPECIFICATION

TUNING DISPLAY

Tuning Scale

In steps of 1MHz, using 21 matched red LEDs arranged as a moving pointer. There is a gradual changeover in light output between adjacent LEDs, allowing the interpolation of frequency readings to better than 0.5MHz.

Tuning Scale Accuracy

Within $\pm 200\text{kHz}$ of indicated reading.

Signal Strength Meter

Bargraph scale using 5 LEDs, 2 red then 3 green. The stereo signal-to-noise ratio is adequate when the first green LED is on. Saturation (all LEDs fully on) occurs at approximately 2mV aerial signal.

Tuning Meter

3 LED type: red-green-red. Correct tuning occurs when only the green light is on.

Stereo Beacon

Single red LED.

Tuning Range

87.5 to 108.5MHz

Aerial Inputs

Sockets for 75 ohms and 300 ohms aerials

Sensitivity (I.H.F.)

Typically $2.0\mu\text{V}$ (note 1)

-3dB Limiting Point

Typically $1.5\mu\text{V}$ (note 1)

Capture Ratio

1.5dB

Alternate Channel Selectivity

Better than 60dB

Repeat Spot Suppression

Better than 80dB

I.F. Rejection

Better than 80dB

A.M. Suppression

Better than 50dB (note 2)

Ultimate S/N Ratio (CCIR/ARM)

MONO - Better than 70dB

STEREO - Better than 68dB

Pilot Tone Suppression

Better than -50dB (note 1)

Subcarrier Suppression

Better than -40dB (note 1)

Distortion (T.H.D.), 1kHz

MONO - Better than 0.15% (note 3)

STEREO - Better than 0.25% (note 3)

Channel Separation

Better than 35dB (note 3)

Frequency Response

20Hz - 12kHz $\pm 0.5\text{dB}$, typically -3dB at 15kHz

Channel Balance

Within $\pm 1\text{dB}$

Output Level

Continuously variable; 8mV - 800mV at full deviation

Output Impedance

Less than 1k ohm

Recommended Load

Greater than 10k ohms

Notes

1) 95MHz, ref. 75kHz deviation, 75 ohms input

2) Ref. 75kHz deviation, 30% AM at 400Hz. Aerial signal $10\mu\text{V}$ - 10mV

3) 95MHz, ref. 22.5kHz deviation at 1kHz.

Output Socket

5 pin, 180° DIN type, signal on pins 3 and 5.

Overall Dimensions

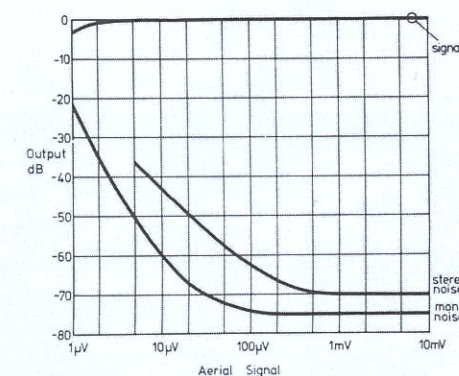
Height 60mm, Width 450mm, Depth 240mm.

Weight

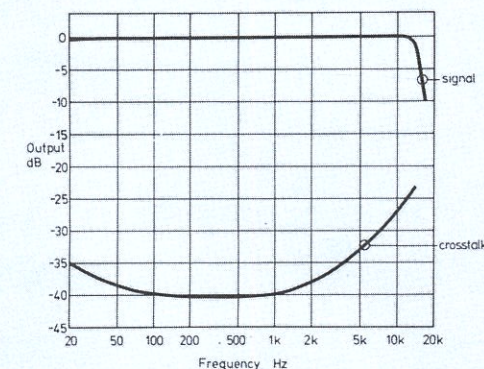
3.5kg

Power Requirements

200 - 250 Volts AC only, 6VA (100 - 120 Volt AC model to special order)



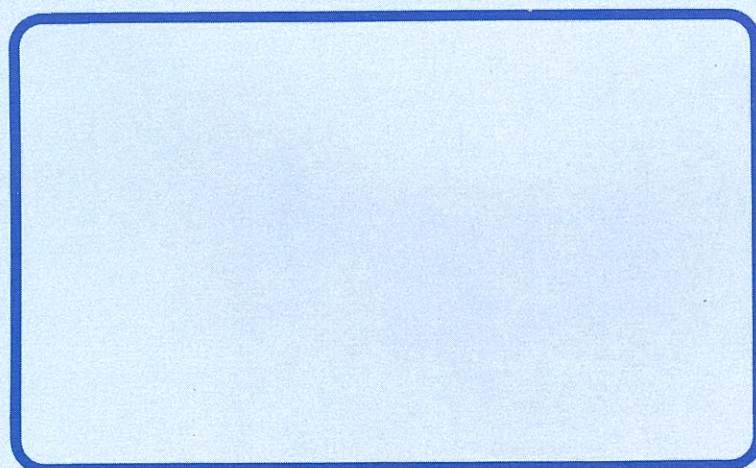
Signal-to-Noise Ratios - Mono and Stereo



Frequency Response and Stereo Separation

THE T21 FM TUNER.

Your nearest A & R appointed
dealer is:



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