

# Meridian 604



**M**eridian calls this brand new £1,350 604 tuner a 'digital wireless', which gives one clue to a design primarily intended to be part of a complete 600 (or 200) series system.

The company has pioneered both multi-room systems and digital-feed active loudspeakers, in which role the 604's internal analogue-to-digital converter and digital audio output are particularly relevant. However, in the context of a non-Meridian system, the non-digital 204 tuner, at half the price, might be the more logical option.

Presentation is quirky but typically classy, with plate glass forming much of the fascia. The compact midi-width unit is actually two separate slimline cases, siamesed by front and rear panels. Remote control is available, either via an extra, pricey Meridian system remote, or any other which follows Philips' protocol.

Ergonomics are unconventional. Partly to handle the multi-room dimension, this flexible tuner can be configured in various ways according to system and preference, or the patience to wrestle with the logic. Seven edgewise strips perform a variety

of functions, default providing scan tuning, preset storing and cycling. The flexible display is small, bright and rather digital-matrix. The signal meter is a little crude.

## Air check

Unusually but quite effectively, the 604 automatically soft-mutes weak signals so these sound quieter than strong ones. This may have misled our front-end tests, which may be worse for noise and better for overload than the figures suggest. *Classic FM*, at 40µV, was clear and quiet but largely monophonic at this input level.

The 604 was just capable of digging out Kiss despite the very strong local *Radiol* signal 0.3MHz down, but the reference tuner was a full grade better. The Meridian was also in difficulty with noise and adjacent channel interference on the other London stations, but its intermodulation performance was among the best.

## Sound quality

The formal listening test findings were slightly disappointing, but I spent several days under more relaxed circumstances,

developing a healthy respect for its capabilities, without exactly falling in love.

This is a very sweet sounding tuner, which delivers an unfailingly civilised sound with a lovely transparent midband that relishes the delicate portrayal of fine detail. An element of timesmear and chestiness at low frequencies is well disguised by a very dry and controlled bottom end, which in turn tends to focus attention on the slightly forward presence and the sweet, tidy treble. Image depth and dynamics are both slightly constrained, and there could be greater liveliness and urgency. But unflappability is part of its temperament, while dynamic range is very good indeed.

## Conclusion

Though the big price premium over the 204 will make most sense in a Meridian digital speaker system context, the 604 still deserves a Recommendation as a well-balanced, high performance, audiophile tuner.

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## Verdict

▲ Makes sense in a Meridian system; good all round performance.

▼ Pricey and ergonomically too quirky for radio buffs.

► £1,350RRP

■■■■■□

## Laboratory Report

The circuitry consists of three main PCBs in separately screened compartments: the radio receiver proper; the analogue output and A/D conversion process; and the computer panel with micro controller and an optically isolated interface to prevent interference from the digital circuitry. Aerial signals feed a discrete RF amplifier using a dual-gate MOSFET, while the mixer/oscillator and first IF amplifier functions are handled by a Philips TDA1574 IC. There are three stages of RF tuning before the mixer. Note some discrepancy between lab-measured and aerial-observed RF performance (see Air check).

The main IF selectivity is provided by two medium bandwidth, matched pair ceramic filters. Selectivity is very good, exceeding our limit at 400kHz separation, but more in line with 'wide' practice on the 200kHz spacing test. In addition to providing the usual demodulating function, the Philips TEA6100 IC interfaces directly with a microprocessor to supply IF frequency, signal strength, and centre-tuning information for display.

The output from the demodulator is passed through a level shifting stage and birdie filter to a National LM4500 Walsh-function decoder. Separation measured an excellent -40dB, although marginal signals begin to suffer (or benefit) from the progressive stereo blending undertaken to preserve the signal-to-noise ratio. De-emphasis at 15µs is applied prior to A/D conversion to match standard CD and broadcast characteristics, while the remaining analogue de-emphasis takes place in a discrete audio buffer stage.

## TEST RESULTS

|                                           |           |
|-------------------------------------------|-----------|
| <b>FM SECTION (front end)</b>             |           |
| Sensitivity for 50dB (CCIR) S/N           | 4µV*      |
|                                           | 12dB/µV   |
| S/N at 10µV input (CCIR, peak)            | 52dB      |
| RF Noise figure                           | 5dB       |
| RF Overload                               | 82dB/µV   |
| Intermodulation                           | very good |
| <b>ADJACENT CHANNEL PROTECTION</b>        |           |
| IHF Selectivity +/- 200 kHz wide          | +3dB      |
| narrow                                    | NAdB      |
| IHF Selectivity +/- 400 kHz wide          | >+60dB    |
| narrow                                    | NAdB      |
| <b>STEREO CROSSTALK (programme, peak)</b> |           |
| Level wide                                | -40dB     |
| narrow                                    | NAdB      |

|                                           |        |
|-------------------------------------------|--------|
| <b>DETECTOR AND DECODER</b>               |        |
| <b>Noise Floor (mono, peak)</b>           |        |
| unweighted                                | -67dB  |
| 'A' weighted                              | -68dB  |
| CCIR weighted                             | -60dB  |
| <b>Noise Floor (stereo, peak)</b>         |        |
| unweighted                                | -62dB  |
| 'A' weighted                              | -64dB  |
| CCIR weighted                             | -57dB  |
| <b>Distortion (100% modulation)</b>       |        |
|                                           | 0.4%   |
|                                           | -48dB  |
| <b>Frequency Response rel 50µs, 315Hz</b> |        |
| 5.0kHz                                    | -0.1dB |
| 10.0kHz                                   | -0.2dB |
| 12.5kHz                                   | -0.3dB |
| 16.0kHz                                   | -1.2dB |

\* See text