

All The Sixes!

Quad 66FM

Quad's latest tuner completes a fully remote-controlled system.

Eric Braithwaite sits back to find everything under control.

Anyone who holds their breath while waiting for a new product from Quad is liable to end up pretty purple in the face and in need of oxygen. This old-established company - in hi-fi terms anyway - has never been one to flirt with annual vagaries of fashion or succumb to the lure of the novel just for novelty's sake. New designs tend only to emerge from the Huntingdon headquarters once a decade on average. We've just begun a new decade - and, inevitably, Quad have brought out a series of products for it including this new, fully remote-controlled tuner.

That's not to say Quad do not have a long and respectable history of innovation. People with any interest in hi-fi who don't know about the original Quad electrostatic loudspeaker - a real landmark in speaker design in the late Fifties - must be few and far between. The Quad II valve power amplifier of the Fifties is still going strong as the basis for rebuilds; the transistor replacement, the 303 power amplifier, seduced an awful lot of hearts and minds in the Sixties; the 'current-dumping' 405 power amplifier was another landmark design and the ESL-63 which finally replaced the original electrostatic in the Eighties rapidly acquired classic status.

For the Nineties, Quad have not exactly launched a new series of hi-fi

separates that will create shock-waves in the way the ESL-63 did. Yet the new 66FM tuner - and its partners - is a novel departure. Its fascia is entirely devoid of any controls apart from its single semi-circular on/off switch. Like its partnering equipment, it's fully - and only - remote-controllable.

But what a remote control! Ergonomically, this has to be one of the best designs around, as well as being distinctively stylish and effective. It's particularly remarkable because it doesn't even have to be pointed at the tuner, the amplifier or the CD player to set things working - hide it behind your back, leave it aimed at a corner of the settee, no problem - things click and whirl smoothly into action. After a merry dance around the room it had to be pointed out of an open window before it could be persuaded not to transmit its commands by whatever devious route it could find.

This remote is something of a little masterpiece all on its own, emblematic of some serious thought about functionalism which Quad have put into the whole of the

'6' series. If the battery dies, for example, an owner will not be bereft of sound: a lead coiled in the battery compartment will power it from a socket on either the pre-amplifier or the tuner. This is the kind of sensible forethought which marks Quad's newest products: a commonsense approach which adopts the convenience factors inherent in the fast-developing 'lifestyle' market, without depending on gimmicks or gizmos and keeping a firmly focussed eye on serious hi-fi sound as well.

Like its relatively recent stablemate, the FM4, the 66FM offers just what is necessary for effective reception - and nothing more. The orange fluorescent display

contains a diagonal line which lights up in segments and which proved extremely effective. None of the all-too-common Oriental trick here of fitting a display that shows maximum all the time - even with an inappropriately weak signal; if the Quad display reaches the top, then the signal is

offering a bottle of champagne to the first to come up with the correct answer. All I know is it's better than the measly seven on offer from the FM4 which led to the joke that that was probably six more than many Quad customers needed because they only listened to Radio 3 anyway. That

was a slur, I think. All the same, even in London I had to programme a few sub-standard pirates to hit nineteen, so even with the FM band filling up the number should suffice for most people.

Scouting for enough stations

to keep the memory occupied suggested that the 66FM is a little less sensitive than the FM4: one or two distant stations in the South-East were noisier and it failed to pick up France Musique altogether, though admittedly even on the FM4 with my aerial it seldom comes in with more than AM quality.

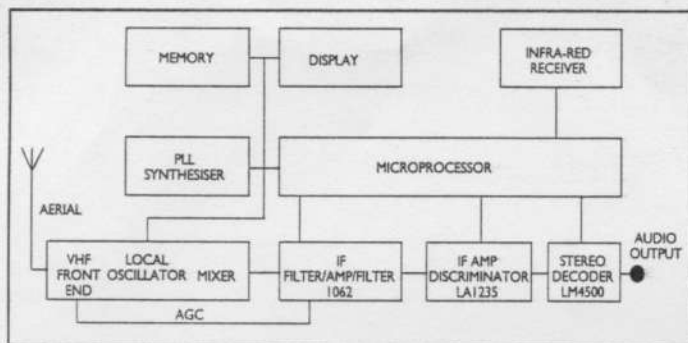
Quad's 66FM has all the hallmarks of the FM4: an extremely smooth, clear sound free of the graininess or tonal inequalities that afflict so many other tuners. The two share the same qualities

of good detailing, something which is often praised in rival tuners because a slight tonal upturn in the treble, say, will bring some of this detail out. As an example, the sounds of an announcer's intake of breath or a slight smacking of the lips on both the 66FM and FM4 were exactly of the volume they would have been had he been sitting between the speakers. The hum of air-conditioning or the buzz of a fluorescent light can be heard well in the background - where it's supposed to be.

A Serious Tuner

As it should be with a serious tuner, little things like different microphones, the distance someone turns away, the soft footsteps of someone sneaking out of the continuity studio, all become noticed in passing without making separate bids for the listener's attention.

Much the same is true of instrumental colour and breadth. Listening to Proms concerts - always something one has to be a little wary of since the Albert Hall has its own signature - it was striking how the 66FM maintained a full spread of sound. The orchestra flowed from the speakers; the audience's applause had no gaps. The same was true of an organ recital: I was listening to another tuner as well, and while it and the Quad were tonally almost equally accurate, in the other there was a sense of the organ pipes being too distinct from each other, as though they were



Quad 66FM block diagram showing signal chain along bottom.

too strong, just as the handbook tells you.

The rest is equally simple and easy on the brain cells: nineteen presets, programmed via the CD control buttons on the remote, a frequency display and a reminder of which preset number you've switched to. Tuning is digital, controlled by the Search functions on the same remote.

That's it! I spent barely ten minutes reading the manual, to sort out the dual-function commands on the remote and fill the memory with all nineteen stations. Why nineteen? I don't know. Quad are

MEASURED PERFORMANCE

These days Quad rate ease of use and pride of ownership higher than all-out performance, yet at the same time, being Quad, performance has to reach a standard both adequate for the task and broadly comparable with that set by the opposition.

I didn't expect the 66 to offer a measured performance better than the norm and in fact there's not so much that can be improved upon these days, many VHF/FM tuner parameters having reached a practical limit. The 66 hit many of them, if not all. Comparison with Pioneer's F-676 tested in this issue is illuminating, since it gets the Quad's measured performance into perspective, even if it fails to put the tuner itself into context, which is of course that of a completely remote controlled Quad system. For as Eric points out in the main review, here's a tuner without any front panel controls at all!

Frequency response shows just the slightest upward trend, amounting to a fraction of a dB around 5kHz. It's enough in energy terms to ensure the 66 sounds clear, if not bright, and avoid any tendency toward an overly soft or warm presentation. The MPX notch filter is a good one, well terminated, allowing the upper response limit to hit 16kHz (-1dB). Above this frequency output drops fast, as the response trace shows at right, to suppress 19kHz pilot by -51dB. There was little pilot and no

sub-carrier on the output of the 66, so apart from audio, it produces virtually no unwanted signals.

The benefit of effective pilot suppression lies in ensuring cassette recorder Dolby systems track properly. When present, Dolby sees this high frequency tone as a steady music signal, a situation that limits the amount of compression applied to low level signals, which means in effect the full benefits of noise reduction are not realised.

Curiously, the Quad, like the Pioneer, has a slow low frequency roll off which results in a lower limit of 27Hz. Tuners don't have inherent difficulties down at low frequencies, unlike LP for example, so this lower limit is likely to be down to a simple design decision, probably reflecting the company's traditional reticence about extending low frequency output because it doesn't suit the ESL-63 electrostatic loudspeaker.

All the same, the limit is low enough to reproduce the full musical spectrum properly, but I would expect the 66 on a wideband system (i.e. one using loudspeakers with extended bass) to sound a little leaner than some tuners as a result of this and the small treble plateau effect. These minor trends are, for those interested in fine details, just large enough to determine its basic tonal character. For Quad I should imagine the fact that the 66 has as wide an audio bandwidth as most competitors is enough.

Channel separation was a healthy 44dB in

the mid-band with some small decrease as usual to 33dB at high frequencies. This is a very good result. Similarly, distortion was low at around 0.12% at 50% modulation, the spectrum analysis showing a bit more second harmonic than third. At these low levels it is difficult to say much about the impact of these distortion harmonics on sound quality, especially with benign-sounding, second harmonic being dominant. The 66 compares well with the best tuners available (0.08% or thereabouts) in this respect, however, and it should not display any tendency toward sounding rough or coarse.

If there was one feature of the 66 that mildly disappointed me, it was its mediocre noise floor. At full quieting hiss measured -72dB, a figure that is commonly improved upon these days. Whilst -70dB is the break point of acceptability, I'd hope and expect a quality tuner like the Quad to exceed it by a healthy margin, say 5dB or so. The real test of acceptability in this area lies with Radio 3. Since the archetypal Quad listener is one that takes his listening to this station very seriously, it's where the 66 should excel. In most circumstances I know from experience that at -72dB hiss will be difficult to detect. However, I wouldn't put a bet on the odd pernicky listener with a really good aerial array not being able to just detect a faint hiss from the 66 at times. Quad themselves quote "signal-to-noise" as -70dB; a cassette recorder with Dolby B manages this nowadays. It's not an impressive figure for an expensive tuner.

separate instruments. For all that the '66 couldn't really bring off the real floor-shaking lower notes, there was more a sensation of music being made - and when the organist used the pedals or literally pulled out the stops you could almost walk up into the organ loft and point a finger at what he'd touched.

This is the difference between recognising an instrument and being able to guess with a reasonable degree of certainty who made it and whose fingers are playing it. It goes for Rock music, Jazz and Classical equally - that moment of recognition marks out a really good tuner from a good one - and the 66FM possesses just that amount of insight to put it into the former category.

Compared to its predecessor, the FM4, there are small qualitative differences. Another listener left after a couple of broadcasts mildly puzzled, preferring the greater bite and blare of brass on the FM4, but also happier with sweeter-sounding strings on the 66. Lower strings - and bass guitars, for that matter - had a spot more resonance on the

66, with an increased impression of going deeper. Below Middle C, there was a slightly 'fruitier' tone in the new tuner.

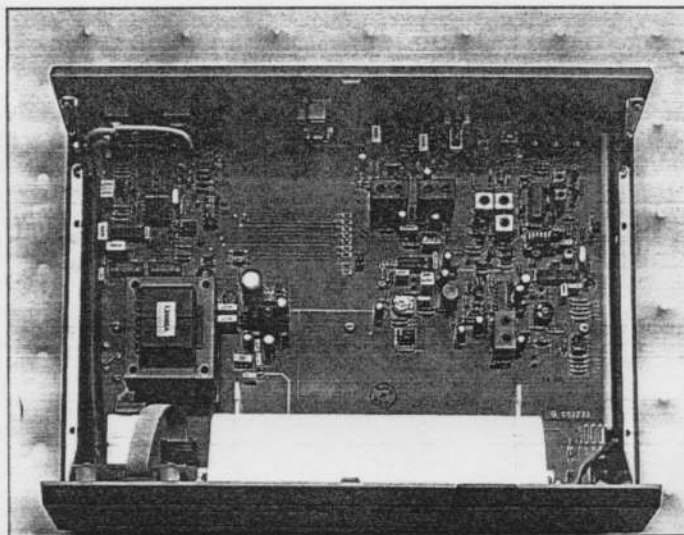
Some time later, this was put down to a slightly sharper, narrower focus - more

While it was not in the least intrusive, and had to be listened to very hard, there was just fractionally more background hiss and fuzz from the 66FM.

Also noticeable, on soloists, was a somewhat more forward presence, with a harpsichord concert placing the instrument ideally between and just a few inches in front of the speakers. It was a contrast to the more laid-back approach of the FM4, though it has to be said these differences were of the kind of degree that needs searching out.

In a way, these subtle differences were problematic. The 66 is marginally smoother, marginally less incisive and analytical than its predecessor. It's slightly 'rounder'. This is all to the good for current tastes, as it's certainly less destructive of compressed Rock, more listenable, a little less provocative of wincers. Is it better or worse? Opinions might be divided - I felt it was just slightly less unforgiving of a broadcast, but by no means

inaccurate. It's among the very best in terms of tonal colour and imagery; and since it can be controlled entirely from the armchair, in that respect it has few rivals ●



Like all Quad products, the 66FM is a picture of neatness internally. The radio stages are at right, the signal entering via a coaxial socket seen at the top of the picture. After the RF stages and mixer, it passes through a 1062 chip IF and then through a microprocessor based detector/decoder.

commitment, as it were - to the instruments in the mid and lower mid-range, but at the expense of clarity in displaying hall ambience or background silence.

Sensitivity to weak stations was good on stereo, but mediocre on mono, due to the presence of a faint 10kHz beat tone on the output. Since we're talking about very weak and noisy signals though, I don't think this sort of thing is especially relevant to users' expectations during normal usage. And at 25µV for stereo the 66 is as sensitive as most tuners around. Thankfully, Quad fit a fully informative signal strength meter that covers a very wide signal range and whose function is simply but succinctly explained in the handbook. Anything below 30µV is inadequate, they say, which is very true. "Adequate-to-good signal strength" ranges from 60µV up to 2.5mV, according to Quad, and overload is impending if the top bar lights, which it will do at 8mV. I found that bars five, six and seven cover the normally accepted signal range that gives best results.

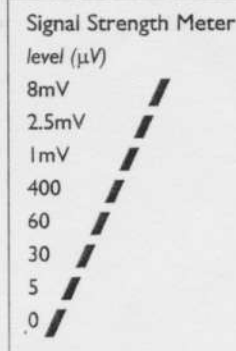
At 65dB, alternate channel selectivity was adequate for most situations in the UK, where station spacing is good enough to suit ordinary radios capable of far less discrimination than the 66. The only time high selectivity is really required is when trying to capture a weak station close to a very powerful one. The station must be so weak, that it'll not be of 'broadcast quality', so again high selectivity values, like sensitivity values, do not relate to normal hi-fi usage. The Quad's selectivity is entirely adequate for its intended purpose, even if they are not as high as that commonly achieved nowadays.

The new Quad 66 doesn't break any

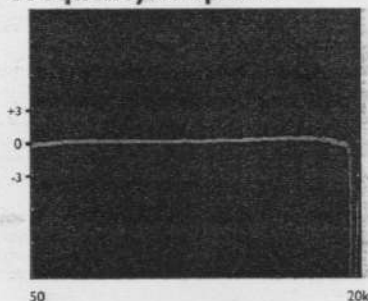
performance limits, but it does meet many - if not all - of the best. It will provide a sound quality comparable with the best tuners available, with the undoubted benefits of full remote control, ease of use that is unmatched and - a great signal strength meter! **NK**

TUNER TEST RESULTS

Frequency response	27Hz-16kHz
Stereo separation	-44dB
Distortion (50% mod.)	0.12%
Hiss (CCIR)	-72dB
Signal for minimum hiss	0.8mV
Selectivity (at 0.4MHz)	65dB
Sensitivity/mono	4µV
stereo	25µV

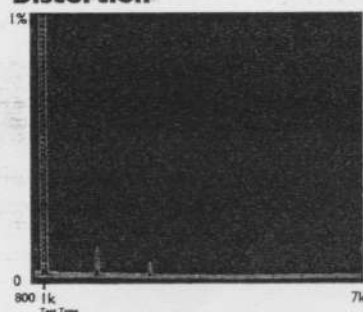


Frequency Response



A flat frequency response from 27Hz right up to 16kHz (-1dB) gives the 66FM natural tonal balance and a good sense of clarity.

Distortion



At half-full audio signal level (50% modulation) the 66FM produces little distortion at 0.12%, with second harmonic dominant.