

# NACA5 Revisited

MARTIN COLLOMS RE-ASSESSSES NAIM'S INEXPENSIVE SPEAKER CABLE, WITH SURPRISING RESULTS

MARTIN COLLOMS

**H**i-fi loudspeaker cables are often designed on scientific grounds, painstakingly manipulating many different parameters like conductor stranding and geometry, choice of dielectrics and fillers, massy termination, metallurgy, mechanical damping, RFI suppression and control, and even consistency of build. However, Naim's single-minded approach to achieving an involving musical replay performance required a different approach. While commercial cables aim for a universal mix and match character, this Naim cable is required to exemplify the performance of Naim systems, in particular its amplifiers, alongside a certain optimal combination of inductance and capacitance, plus very low loop resistance. The company saw no point in enhancing aspects like image depth or low level detail if Naim's hallmark qualities of timing, dynamic expression and rhythm were not optimised. Structural solidity, conductor spacing and rigidity seem to be the key factors.

Naim's very first cable was an almost casually twisted 56-strand generic flex made with just a few twists per meter. *NACA4* was its long running successor, a fairly rigid and unimpressive looking twin PVC cable that preceded the much stiffer *NACA5*. Naim systems were optimised for years with *NACA4* cable, and this product might well exist now but for the vicissitudes of commerce, which meant that another supplier was required. New samples were made to the exact specification and composition, yet it just would not sound the same. Precision measurement of parameters produced no consequential results, so after frustratingly extended experimentation, Naim elected to try a new design.

This was to become *NACA5*, which ended up with a rigid, high molecular weight polyethylene insulation with improved dielectric properties, and currently sells for a fairly modest £25 per metre. The previous cable's 56 strands of 0.3mm conductor were replaced by a more rigid, even harder to manage 19 strands of 0.5mm copper (of similar conductivity). The traditional 'dumbbell' spaced-twin build was readjusted for the same modest series inductance, yet once again early results remained disappointing, compounded by a long apparent running-in period. Further painstaking adjustments were made to the manufacturing process, until, after suitable running in, satisfactory results were obtained. After all that effort it's not surprising that Naim is loath to begin all over again.

*NACA5* first appeared back in 1989 and is available in both black and white shades. It is directional, and

a ridge running down one side helps ensure correct amp/speaker polarity. Much as I hate the running-in process, as it delays evaluation, this very effect had previously led me to miss out on the particular qualities of this cable. It is clearly intended to tie in with certain aspects of Naim's approach to music replay, and time seems to be required for them to develop. Assessed out of context it might well seem rather ordinary, so it was fortunate that a well conditioned *NAP300* helped reveal its particular qualities.

At first listen this cable ranks as merely 'average plus', especially in a non-Naim context. However, when well run-in and terminated it actually has good image depth and width, albeit with a mild touch of leanness in the upper mid, a mere trace of treble grain, and a relatively dry bass. Overall it sounds a little 'colder' than many audiophile cables, but is arguably more neutral.

If not 'de-stressed' with the usual Naim recommended alternate flexing and reflexing along its length, and if not run-in with several weeks of music, it can sound rather mechanical and two-dimensional. It's all too easy to be put off before you really begin, as I have been in the past. But (and it is a big but), when de-stressed, well run-in, and driven by a good amplifier, and also where the particular qualities of the cable are also expressed in the audio drive signal, then this design comes to life musically. That musical involvement factor is infectiously compelling, and adds considerable entertainment value.

Moreover, after trying many others, I could not identify an alternative with quite the same emotional enjoyment factor; one capable of similarly explicit and exuberant communication of those foot tapping musical messages. *NACA5* bass line timing, percussive attack and overall grip are as good as they get, and it actually has pretty good transparency and focus after good running in, so on balance it scores 105 marks.

I have clearly been won over, and anticipate receiving some polarised opinions that may well lead to a debate over the relative importance of different subjective aspects of replay quality.

## Conclusions

I now appreciate that this cable has been optimised for the task of bringing out the essential qualities of Naim electronics. No good explanation can be found for the exasperating extended running in requirement, but it has very good technical properties, is a high value general purpose cable, and may be confidently recommended, even at longer lengths. Mea Culpa!

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## Test Results

Loop resistance	0.001ohm/m
Parallel capacitance	16.5pF/m
(dielectric loss less than 0.0004 at both 1kHz and 10kHz - a very good result)	
Loop inductance	0.95uH/m

Technically speaking, these results are as good as they get.

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