



24-line modules prior to their assembly within finished units at MPE



The outer steel enclosure during MPE's in-house paint spray process



A 240-line unit (10 modules of 24 lines each) with varistor PCBs fitted

### MPE confirmed as world no.1 for telephone line filters

Following a period of extensive, iterative design, in late 2019 MPE was awarded a major contract to supply telephone line filters for a northern European program. This contract award represented the largest single order for telephone line filters in MPE's long history.

MPE has the longest documented track record of supplying these filters for both the defence and commercial markets. In fact MPE boasts the most extensive catalogue range of any manufacturer around the globe, with variants ranging from 2-line through to 240-line units.

The new contract award saw MPE manufacture fifteen 240-line telephone filter units. Each 240-line filter comprised ten 24-line modules, with each module in turn containing twelve high-symmetry, matched pair circuits. Every filter unit provided an insertion loss performance exceeding 100dB attenuation (50Ω system) and extending beyond 10GHz. MPE's self-healing capacitor technology was used throughout: each line was equipped with varistor transient suppression, and the units were CE compliant.

The production of such telephone line filters is notoriously difficult because of the capacitance values and the tight matching tolerances required to ensure that all lines are balanced. Totalling some 3,600 lines of filtering, such a filter requirement constituted one of the greatest manufacturing challenges that MPE has encountered over the past few years.

Despite production coinciding with the height of the Covid-19 pandemic in the UK and MPE having to adjust to staff isolations and new working practices, all 15 filter units were supplied during April, May and July, with the contract being completed right on time and to schedule.

The fulfilment of this order further confirms MPE's position as the world's number one provider of telephone line filters.

You can download your copy of MPE's telephone line filter catalogue via the following link: [www.mpe.co.uk/wp-content/uploads/2015/11/Telephone-Line-Filter-Catalogue-Issue-8.pdf](http://www.mpe.co.uk/wp-content/uploads/2015/11/Telephone-Line-Filter-Catalogue-Issue-8.pdf)