

**EMC Questionnaire Notes****QMF17<sup>1</sup> Issue 03**

- 2a)** EUT = Equipment Under Test. This is the product name.
- 2b)** Model number of the product (if applicable)
- 2c)** Serial number of the product.
- 3a)** What is the main function of the EUT
- 3b)** Where/ what environment would the equipment be used in? E.g. Domestic/Household.
- 3c)** Where EUT is manufactured/Designed.
- 3d)** Company of manufacturer (product could be bought in and then distributed)
- 4a)** Support equipment may be required to operate the EUT for testing purposes. E.g. an Audio amplifier might require the use of an oscilloscope or audio analyser when testing the EUT operations.
- 4b/c)** The EUT may require specialist ancillary equipment to allow proper testing, which should be provided by the client, if the use of a simple item of equipment is required then we may be able to supply this, given notice.
- 4d/e)** Modes of operation. To allow us to determine proper working functionality of the EUT during testing all modes (or worst case mode) should be determined and listed. E.g. a CD player might have play, pause, fast forward and skip modes as well as a standby state. A brief explanation describing the relevant modes should be given.
- 4f)** Which of the modes need to be exercised during Immunity testing. This may require further discussion in order to satisfy the requirements of the particular specification.
- 4g)** For Immunity tests a means of determining the correct functioning of the units operations is required. This might be simply viewing a monitor or LCD display for messages or graphics, listening to audio, or monitoring signals with the use of special software on a laptop etc. This test mode must last at least 45 min.
- 4h)** This is the time taken for the EUT to complete a cycle of its operations. E.g. if monitoring the video output of a DVD player it will be updating its video o/p continuously and quickly, therefore a 1 second dwell time would be required. This means we only have monitor the EUT at a given test frequency for 1 second before moving to the next test frequency.
- 4i)** Should the EUT error in any way how long would it take to recover to its correct state.
- 5a)** This refers to EMC testing of a system. E.g. A rack mounted unit might have several sections & identical boards in them dependent on customer requirements. In this case testing should preferably be performed on the most complex combination of these boards so that the worst case of a product family can be tested.
- 6a)** In what physical position is the EUT most likely to be used? Desktop, floor standing, wall mounted etc.
- 6c)** Are there any risks such as High Voltage or chemical substances used within the EUT that could potentially harm the test engineer/ user.
- 9a)** The number of different ports on an EUT and their respective maximum cable lengths have a bearing on the number of tests (and therefore test time) required for EMC testing. All ports on the EUT should be listed with connector type, maximum length of cable, number of cores used and whether shielded or not.
- 10)** Some standards require further testing dependent on frequencies generated and used within the EUT.  
Local oscillator, Crystal and data rate / clock frequencies should be listed.
- 11a)** If the unit contains any of the listed components then it could be susceptible to magnetic fields and this Magnetic Immunity (if not a mandatory requirement in the standard being applied) should be performed.
- 11b)** Any special components fitted to the Supply or signal leads which should provide surge protection must be tested. E.g. A metal oxide Varistor 275V rating across the live and neutral lines of an ac supply should be surge tested at 270V and 280V to prove correct operation.
- Please Note** If Full UKAS testing is completed, a UKAS test report (17025) is provided. Full UKAS testing does not allow modifications to the EUT during the EMC tests process. However, a standard report can be provided showing compliance with the relevant specifications, which will include a modifications page stating the required changes to the EUT in order to fulfil compliance.