

## MURPHY'S LAW

Murphy's Law effectively states that :-  
**IF ANYTHING CAN GO WRONG, IT WILL!**

Putting it in a mathematical form,  $1+1\Sigma 2$   
Where  $\Sigma$  represents the mathematical symbol **HARDLY EVER**.

Corollaries as applied to Telecommunications are as follows:-

- 1) Any completed and checked drawing will neither be complete nor correct.
- 2) Data will always be expressed in the least convenient form.
- 3) Important reference books will be missing, incorrect or out of date.
- 4) Vital instructions will invariably be received too late or lost.
- 5) If a project requires N components, there will always be N-1 components available.
- 6) The missing component will always be the most important one.
- 7) Nominally interchangeable parts will exhibit fundamental differences.
- 8) Cables cut exactly to length will be too short.
- 9) Connection leads will always be faulty, missing or of the wrong size.
- 10) Any item dropped will land where it will do the maximum damage or in the most inaccessible spot.  
(This is also known as the law of Selective Gravitation.)
- 11) The replacement for any item dropped will never be found in the "ready to use store" kept in ones pockets.  
(Also known as the law of Displaced Objects)
- 12) If a circuit cannot fail, it will - generally catastrophically.
- 13) Backups will only function during non essential testing.
- 14) The probability of failure is inversely proportional to the ease of repair.
- 15) Fail-safe circuits will always destroy those adjacent to them.
- 16) In overall performance tests, all errors are cumulative.
- 17) Equipment which works during testing, will always fail when put into service.
- 18) The most delicate repairs will always have to be carried out in the roughest conditions.
- 19) The faulty component will always be the last one checked, irrespective of where a start is made.
- 20) The most essential piece of test equipment will (a) not work, (b) not be present or (c) explode.
- 21) Several pieces of totally unrelated but essential equipment will always fail together.
- 22) A most important point, discovered with the advent of modern solid state technology is that transistors exist for the protection of fuses.
- 23) Murphy was an OPTIMIST!

Drafted from over 20 years of Nautical Electronic experience by a Marine Electronics Officer. I have experienced every one at least once, and some several times! I think Murphy must have been a sailor, as some of his laws seem to be borne out in daily life on board ships!