

Panamax Technical Article....

WHAT IS A GROUND LOOP AND WHAT IS A GROUND HUM?

A ground loop occurs when a piece of equipment or a system is connected to different grounds (i.e. AC and coax or data lines). When the data lines, coax lines or AC lines are not connected to the same grounding point there can be a difference in voltage between them when they enter your system. Inside the system these ground lines are interconnected so that the differences in voltage result in small amounts of AC current traveling in a “ground loop” through your equipment. A low voltage “ground loop” appears in your system as interference causing a decrease in performance (known as a ‘ground hum’ in audio/video equipment or horizontal black bands (“hum bars”) on your TV screen).

WHAT IS GROUND SKEW?

In the event of a surge from lightning or a power fault, one of the ground connections may have an enormously higher voltage than the others during the impulse. This voltage difference can result in large amounts of current traveling through your system, leaving damage in its path.