

Parallel Systems & Load Sharing In a paralleled generator system, it is common to have combinations of two or three generators operating in parallel.

- o An electrical generator driven by a RAT. It is usual to incorporate an interlock circuit to prevent paralleling of the APU, external supply with aircraft generators, as these sources are considered incompatible.
- o Continuity of electrical supplies; without paralleling, there may be a break in services when switching to a correctly functioning generator. The action of applying ground power until the generators are operating are as follows: Three phase AC is applied to the aircraft through a six pin ground power plug. These can be provided by:
 - o A battery which supplies vital DC loads and a static inverter.
 - o Disadvantages
 - o Fault propagation; avoided by adequate circuit protection units.

On the ground, either the external supply or APU generator(s) can supply power to all AC load bus bars in the absence of main generator power. Transformer rectifier units are included to supply the DC bus bars and charge the batteries. The static inverter will supply the AC standby bus bar. Before this power is allowed to pass to the aircraft's electrical system an interlock must be satisfied:

- o For correct voltage.

It has the following advantages and disadvantages:

- Advantages
 - o Better able to handle shock loads. Some aircraft types have separate battery charging facilities.
 - o Generator life is prolonged, since each generator is normally run on part load.
 - o Parallel operation does not without modification meet requirements for totally independent supplies. That no other power sources feeding the AC bus bars.