# **Electrical Panel**

### **BAT Switch**

>Connects/Disconnects Batt from Bat bus and charger >Switch operates in **Auto or Manual** 

- >**ON** (Off light extinguished)
- Batt powers Batt Bus (if AC pwr is not available)
- Batt charger allowed to charge, except when:
- EMER pwr is in use
- Inverter powered refueling is being used
- AC power is not present at charger input

### >**OFF** (Off light illuminated)

- Batt disconnects from Bat Bus
- Charger is inhibited
- Auto transfer of EMER pwr is inhibited

### **AC TIE Switch (1, 2, 3)**

>In Manual mode, Switch controls the Bus Tie Relay.

>ARM illuminates in Auto mode.

**ARM** – Illuminates when bus tie relav is open and switch is in ARM position

**OFF** – Bus tie relay is open and switch is in the OFF position. Busses are isolated from Tie Bus.

OFF & ARM Extinguished if Bus Tie Relay is closed

### DC Tie Switch (1 & 3)

- >Switch controls RCCBs in Man mode >Switch inop in Auto
- **OFF** DC Tie Bus is open due to:

mode

- Switch pushed (Man)
- RCCB protective trip

### EXT PWR Switch

**AVAIL** – Illuminates when EXT pwr is available.

ON – When AVAIL is illuminated, pressing switch provides external pwr to the AC Tie Bus. When AC Tie Bus is powered. ON illuminates. Pressing switch again disconnects external pwr.

### ADG ELEC Switch

Extinguished (default mode after ADG is deployed) – ADG will power L EMER AC bus and AUX hvd pump 1.

ON – ADG pwrs L & R EMER AC & DC busses, batt chrgr and batt bus. (Aux hyd pump no longer pwrd)

### System Select Switch

>Allows selection between Auto and Man >SELECT will illuminate if system reverts to Man. Pressing the switch extinguishes SELECT, and locks the system in Manual. >MANUAL - System

operating in Man mode

### **BUS OFF lights (13 total)**

**OFF** – Illuminates if associated bus is not powered

### **Electrical Priority for the AC** gen bus is:

- Associated IDG
- APU Gen
- AC Tie Bus (Ext or IDG)

### **Electrical Priority for the AC** Tie bus is:

- Ext Pwr
- Any IDG

# DC TIE 1

### SMOKE ELEC/AIR Switch

>Isolates Elec & Air (for smoke) in Auto or Manual modes

>NORM – Elec/Air ops normal >3/1 OFF

- Gen 3 sys & Pack 1Air sys OFF
- ECON mode OFF
- EIS CRTs to full bright
- >2/3 OFF
- Gen 2 sys & Pack 3 Air sys OFF
- >1/2 OFF
- Gen 1 sys & Pack 2 air sys OFF
- EMER pwr transfer inhibited

**OFF** (Illuminated) - Pwr is removed from Cargo Loading bus and Cabin AC Grnd Service Bus

### EMER PWR OFF/ARM/ON Selector

### >Controls Batt transfer to L EMER AC/DC bus >Selector operates in Auto or Manual mode

>**OFF** (also illuminates OFF light)

- Batt / Inverter inhibited from supplying pwr to L EMER AC & DC Busses

### >ARM:

If normal pwr is lost, batt will automatically supply pwr to:

- L EMER DC bus
- L EMER AC bus (through static inverter) **ON** light illuminates if auto transferred to EMER pwr.

For auto transfer to occur.

- Batt switch must be ON
- SMOKE/ELEC/AIR selector not in 1/2 OFF
- >ON (also illuminates ON light)
- L EMER AC & DC being powered by Batt / Inverter

### DRIVE Switch (1,2,3)

Switch disconnects IDG in Auto or Man modes

Fault: illuminates when:

- IDG oil temp high
- IDG oil press low
- IDG oil temp diff. out of limits

IDG disconnect reg'd

**DISC** – Press to disconnect IDG. Successful disconnect is indicated by illuminated DISC

### **GEN Switch (1.2.3)**

Switch resets generator in manual mode. Auto mode will perform this function

> **OFF** – Illuminates when GCR is tripped open (no pwr being supplied).

automatically, if req'd.

**ARM** – Illuminated when GCR is closed and generator relay is open. System is ready for pwr transfer.

### APU PWR Switch

Switch starts APU (if not already started from APU panel) and powers GEN busses. AVAIL - Flashes until APU reaches 95% & power is OK. Steady when OK for power transfer. ON – Illuminates when APU is powering a bus (any bus).

# **Emergency Power**

## **Battery Pwr Only** Battery

- Batt Dir Bus - Batt Bus

L Emg DC Bus Static Inverter L Emg AC Bus

# Powered:

DEU #1 DU #1 (PFD) DU #3 (EAD) MCDU #1 (stdby) IRS #1 VOR #1 (on PFD) VHF#1 A Ignition Interphone / PA

### **Battery Pwr and** ADG in Hyd mode

Battery ⊢Batt Dir Bus -Batt Bus L Emg DC Bus

ADG LADG Bus L Emg AC Bus

# ADG in Elec mode

-ADG -ADG Bus - L Emg AC Bus R Emg AC Bus -L<sub>TR-3</sub>

L Emg DC Bus -R Emg DC Bus -Batt Bus

Battery Charger -Batt Dir Bus Battery