CHAPTER
23

COMMUNICATIONS

Effectivity: ALL

INFLIGHT ENTERTAINMENT SYSTEM – FAULT ISOLATION/TROUBLE SHOOTING PROCEDURES

Task 23-33-61-810-901-A
Blank Screen on Business Class Seat Display Unit (SDU)

1. Possible Causes

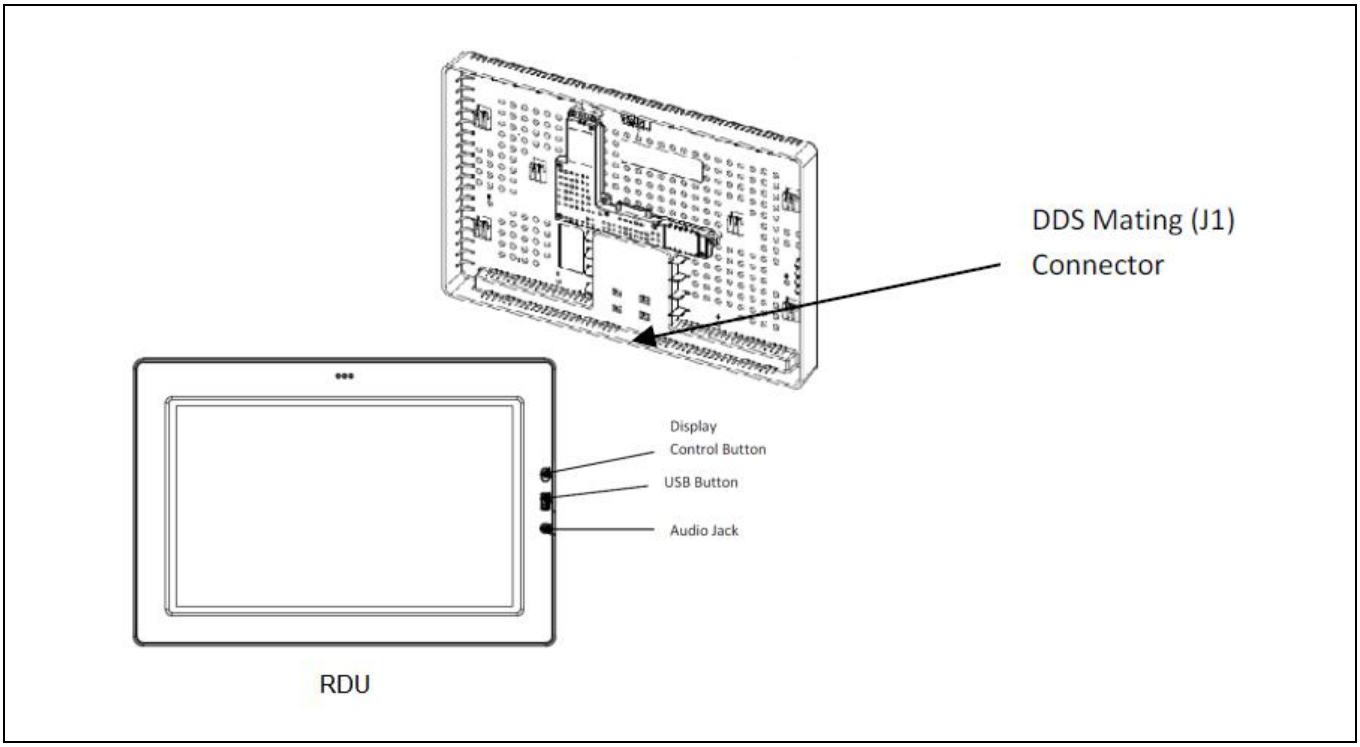
- Removable Display Unit (RDU)
- Display Docking Station (DDS)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-61 PB401 (A330-AMM-Supp 001)	Removal / Installation of SDU (RDU/DDS)
23-33-61 PB501 (A330-AMM-Supp 001)	Reset of RDU
Task 23-33-61-810-906-A	No Power to the DDS Fault Isolation Procedures
27-5504-10	Manufacturers Reference Data

B. Referenced Illustrations



3. Fault Isolation

A. Maintenance Action

(1) Verify “Display Control Button, Perimeter of the USB, and Perimeter of the Audio Jack” are illuminated.

(a) If no illumination, try “Reset of RDU” procedures (Ref. A330-AMM-Supp 001, 23-33-61 PB501).

(b) If after a few seconds unit still does not power on, remove the RDU front panel following “RDU Removal” procedure to reseat the RDU (Ref. A330-AMM-Supp 001, 23-33-61 PB401).

(c) If after reseating procedures RDU still shows a blank screen, replace with a “known good unit.”

(d) If “known good unit” is functional, return original RDU for repair.

(e) If “known good unit” is still not functional refer to Task 23-33-61-810-906-A – No Power to the DDS.

(2) If illuminated, depress the “Display Control Button” to turn on the backlight.

(3) If backlight is still off, run “Reset of RDU” procedures (Ref. A330-AMM-Supp 001, 23-33-61 PB501).

B. Test that the SDU is fully functional.

Task 23-33-61-810-903-A
No Audio at Business Class Seat Display Unit (SDU)

1. Possible Causes

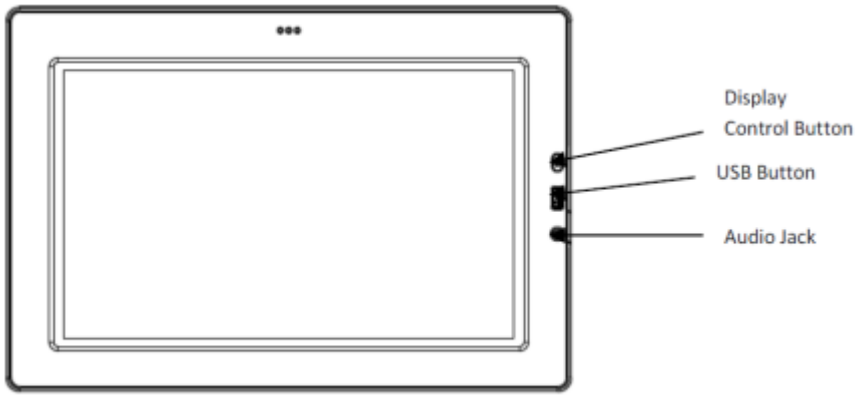
- Removable Display Unit (RDU)
- Audio jack

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-61 PB401 (A330-AMM-Supp 001)	Removal / Installation of SDU (RDU/DDS)
23-33-61 PB501 (A330-AMM-Supp 001)	SDU BIT Audio Test
23-33-61 PB501 (A330-AMM-Supp 001)	Reset of RDU
27-5504-10	Manufacturers Reference Data

B. Referenced Illustrations



RDU

3. Fault Confirmation

A. Maintenance Action

(1) Validate SDU has audio by running “BIT Audio Test” (Ref. A330-AMM-Supp 001, 23-33-61 PB501)

(2) Validate headset functionality used for the unit.

4. Fault Isolation

A. Maintenance Action

(1) Reset the RDU using “Reset of RDU” procedure (Ref. A330-AMM-Supp 001, 23-33-61 PB501).

(2) If there is still no audio, refer to “RDU Removal” and reseat the RDU (Ref. A330-AMM-Supp 001, 23-33-61 PB401).

(3) Remove the RDU using “Removal of RDU” procedure Audio replace audio jack connector.

(4) If replacing the audio jack does not resolve the problem, return the RDU for repair.

Task 23-33-61-810-907-A
Business Class Seat Display Unit (SDU) Discrepancy

1. Possible Causes

- Removable Display Unit (RDU)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-61 PB401 (-A330-AMM-Supp 001)	Removal / Installation of SDU (RDU/DDS)
23-33-61 PB501 (-A330-AMM-Supp 001)	SDU Conformity Check
27-5504-10	Manufacturers Reference Data

3. Fault Confirmation

A. Maintenance Action

(1) Follow the “SDU Conformity Check” procedures and verify that it notes a discrepancy in the RDU (Ref. A330-AMM-Supp 001, 23-33-61 PB501).

4. Fault Isolation

A. Maintenance Action

(1) From the Welcome Screen on the Crew Panel, select the Maintenance Mode button.

(2) Enter the Line Maintenance Password to gain access to Maintenance Mode.

(3) Select the Application Access button on the bottom right corner of the screen.

(4) Scroll to and select the System Status button.

(5) On the bottom left corner of the screen, press the A/C ID: button.

(6) Verify the Aircraft ID and Configuration are correct.

(7) If the Aircraft ID and Configuration are correct and there are still discrepancies, go to RDU in question and reseat RDU (Ref. A330-AMM-Supp 001, 23-33-61 PB401).

(a) Verify that the Software Load begins automatically.

NOTE: A message will be displayed on the RDU stating “Software Update in Progress” followed by “Initializing” to signify the Software Load Process.

(b) After Software Load is complete, verify there are no discrepancies with the SDU.

(c) If problem persists, replace RDU (Ref. A330-AMM-Supp 001, 23-33-61 PB401).

Task 23-33-63-810-901-A
Fault at Business Class Seat Power Box (SPB/SPM) to Passenger Seat Display Unit (SDU)

1. Possible Causes

- Seat Display Unit (SDU)
- Seat Power Box (SPB/SPM)
- Power Distribution Block (PDB/PDU)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-63 PB401 (A330-AMM-Supp 001)	Removal / Installation of SPB (SPM)
23-33-73 PB401 (A330-AMM-Supp 001)	Removal / Installation of PDB
27-5007-10	Manufacturers Reference Data

3. Fault Confirmation

A. Maintenance Action

(1) Troubleshoot the SDU to ensure there is no fault at the SDU.

4. Fault Isolation

A. Maintenance Action

(1) Make sure the IFE master switch is set to the OFF position.

(a) Verify all connectors are properly connected before turning ON the IFE master switch.

(2) Using a DC multimeter verify that pin outputs on the PDB 1 and 9, 3 and 11, 6 and 13, 8 and 15 are 28V.

(3) If output is not 28V, remove the PDB (Ref. A330-AMM-Supp 001, 23-33-73 PB401).

(4) Using a DC multimeter verify that pin outputs on the SPB (SPM) J8 Connector 1 and 14, 2 and 15, 3 and 16, 4 and 17 are 28V.

(a) If output is not 28V, replace the SPB (SPM) (Ref. A330-AMM-Supp 001, 23-33-63 PB401).

(b) If output is 28V, replace the PDB with a known good unit and double check to see if the pin output of the PDB is 28V.

(c) If PDB output is not 28V, replace SPB (SPM) with a known good unit.

Task 23-33-65-810-901-A
Seat Power Unit (SPU) Fault

1. Possible Causes

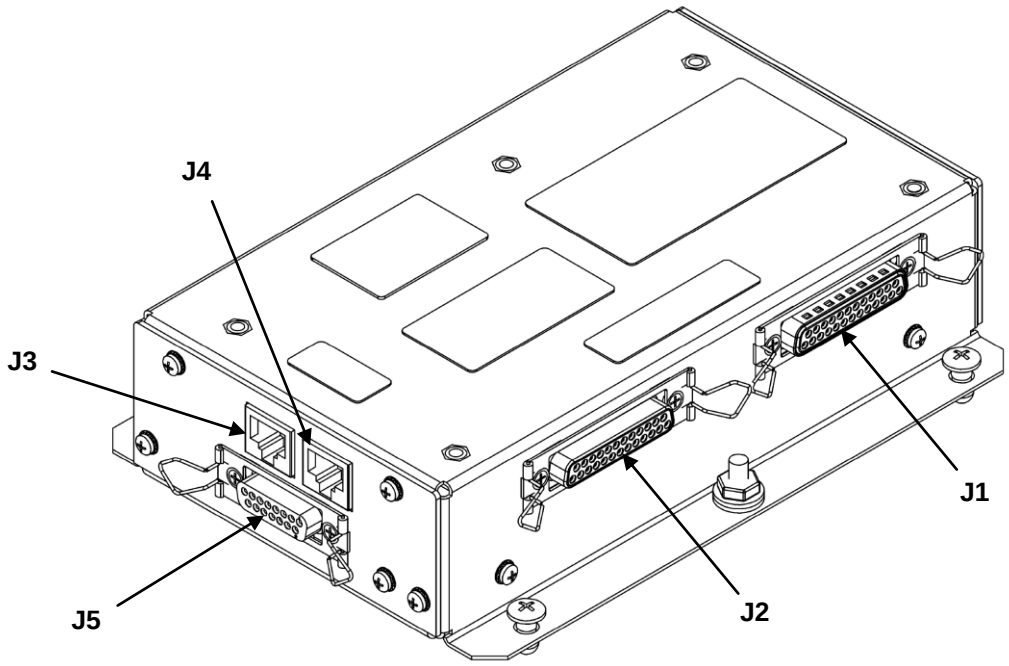
- Seat Power Unit (SPU)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-65 PB401 (A330-AMM-Supp 001)	Removal / Installation of the SPU
23-33-65 PB501 (A330-AMM-Supp 001)	Test of SPU
27-5002-10	Manufacturers Reference Data

B. Referenced Illustrations



Task 23-33-67-810-901-A
System Control Unit (SCU) Fault

1. Possible Causes

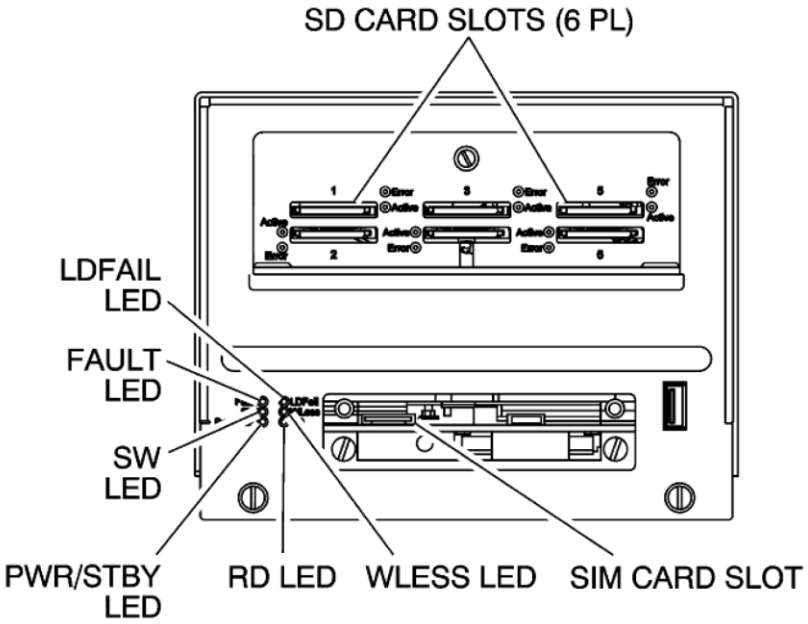
- SCU component
- Portable media

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-67 PB401 (A330-AMM-Supp 001)	Removal / Installation of SCU
23-33-67 PB501 (A330-AMM-Supp 001)	Test of SCU
27-5001-10	Manufacturers Reference Data

B. Referenced Illustrations



3. Fault Isolation

A. Automatic Tests:

(1) The SCU automatically does a Power-On Self Test (POST) when power is applied. This includes testing of the processor, memory, GSM/GPRS, battery, and other system resources. Results of POST are shown on the visual status indicator (LEDs). If no errors are detected, the LEDs indicate normal operations. POST results are logged in the SCU Log.

(2) During normal operations, the SCU automatically does periodic Built-In Test (PBIT) on a non-interference basis of the internal subsystems and detects as many faults as possible. Results of BIT are shown on the LEDs. If no errors are detected, the LEDs indicate normal operations. If the SCU LEDs indicate a BIT failure, the RED LED is not to be cleared until the next SCU power on cycle, even if the error is cleared. BIT results are logged in the SCU Log.

(3) During the Acceptance Test Procedure (ATP), the operator can select Intrusive Built In Test (IBIT) tests of the available components. If no errors are detected, the visual status indicators indicate normal operations. If the SCU detects an error, the failure results are indicated on the ATP screen.

B. Test Results and Fault Isolation:

(1) The preferred fault isolation method consists of doing the test procedures (Ref. A330-AMM-Supp 001, 23-33-67 PB501) while monitoring the Unit Under Test (UUT) to determine the malfunction. Refer to UUT test logs for reported errors.

(2) Any test procedure step that does not pass is considered a failure. Check the UUT test set up, test cables for improper connections, damaged contacts, or damage to the cable conductors or insulation. Make sure the contacts are clean and free of damage. Replace damaged components.

(3) After fault isolation and replacement of the damaged PWB assembly, cable, or other component, do the entire test procedure again to make sure that the problem has been corrected.

C. LED Explanations:

LED	EXPLANATION
Active LED	Green LEDs that provide SD card access status: - LED ON: Indicates that the SD card is inserted - LED blinking: Indicates that the SD card access is in progress - LED OFF: Indicates that there is no SD card inserted
Error LED	Amber LED's provide SD card or content problem status: - LED ON: Indicates that there is an SD card error, replace the SD card.
Fault LED	Red LED provides SCU failure status: - LED ON: Indicates that there is an SCU failure, replace the SCU (Ref. A330-AMM-Supp 001, 23-33-67 PB401). - LED OFF: Indicates that the SCU is operational.
SW LED	Amber LED that provides host software activity and IFE communication fault status: - LED ON: Indicates that the SCU host software is not operational - LED blinking: Indicates that there is a SCU host to IFE communication error - LED OFF: Indicates that the SCU host software is operation and there is no IFE communication fault
Pwr/Stby LED	Green LED provides the SCU power status: - LED ON: Indicates that the SCU power is ON - LED blinking: Indicates that the environmental controller is with-holding power - LED OFF: Indicates that the SCU power is OFF

LED	EXPLANATION
LDFail LED	Red LED provides media/content failure or software update fault status: - LED ON: Indicates that there is a removable media error. - LED Blinking: Indicates that the software update failed, replace media unit.
WLess LED	Amber LED provides wireless communication status: - LED ON: Indicates that there is a wireless device connected - LED blinking: Indicates that there is a wireless device initiating connection - LED OFF: Indicates that there is no wireless activity
RD LED	Green LED provides removable media status: - LED ON: Indicates that the removable media is detected - LED blinking: Indicates that the removable media access is in progress - LED OFF: Indicates that there is no removable media detected

Task 23-33-69-810-901-A
Business Class Passenger Control Unit-Tethered (PCU-T) Fault

1. Possible Causes

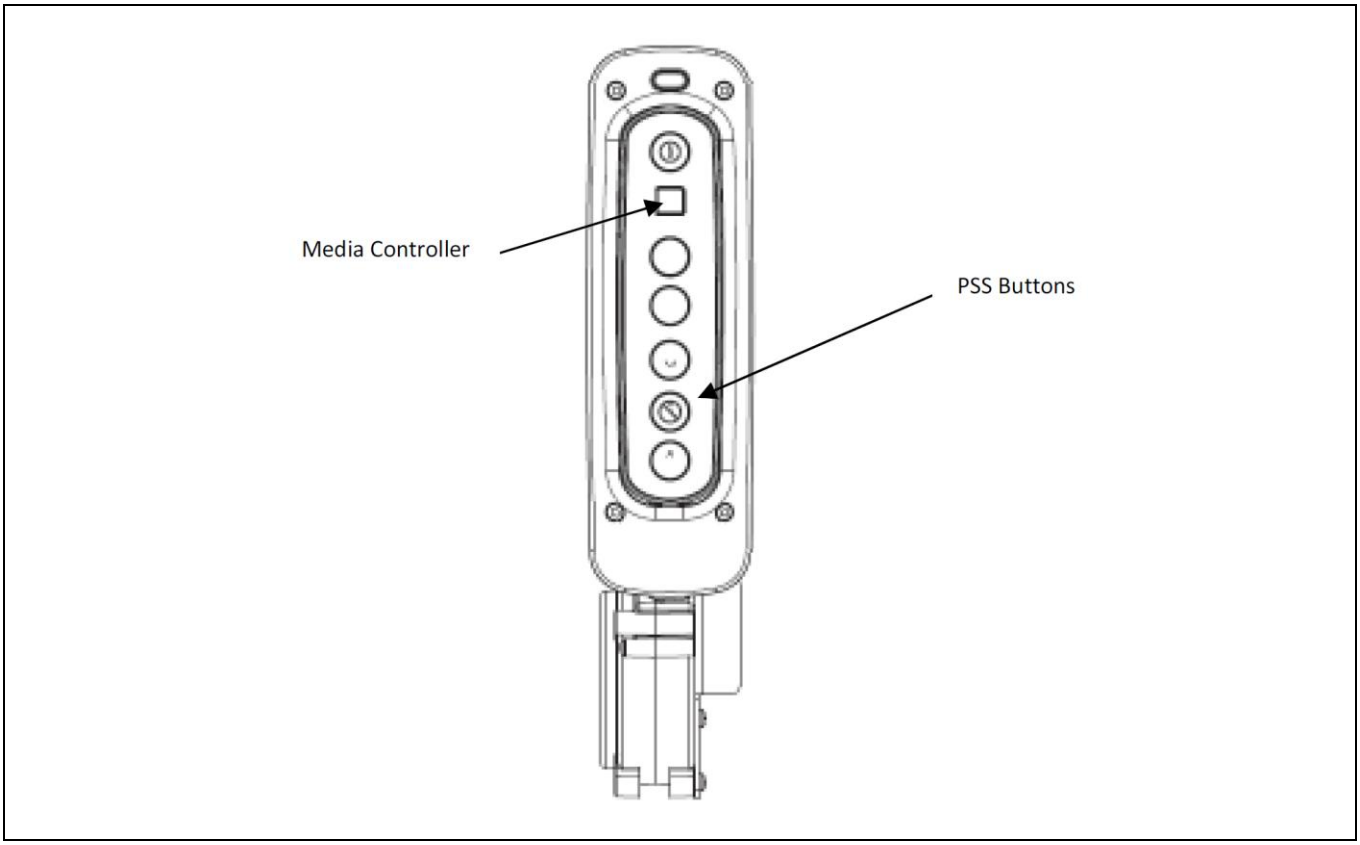
- PCU-T
- Latch assembly
- Ejector assembly
- Cord reel
- Connector

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
23-33-69 PB401 (A330-AMM-Supp 001)	Removal / Installation of PCU-T
23-33-69 PB501 (A330-AMM-Supp 001)	Test of PCU-T
27-6303-10	Manufacturers Reference Data

B. Referenced Illustrations



3. Fault Isolation

A. Maintenance Action

FAULT	FAULT ISOLATION
The Cradle does not lock the Handset (PCU-T).	Latch assembly may be faulty. Replace as required.
The Cradle does not release the Handset (PCU-T).	Latch assembly may be faulty. Replace as required.
The Cradle does not eject the Handset (PCU-T).	Ejector assembly may be faulty. Replace as required.
No continuity at some wires of the Cradle.	The cord reel may be faulty. Replace as required.
The release load is out of permitted range.	Latch assembly may be faulty. Replace as required.
The individual handset (PCU-T) buttons do not work.	Connector may be faulty. Replace PCU-T as required.

B. Test that the PCU-T is fully functional.