TECHSAVIATION
Training Center

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CABIN SYSTEMS - ATA 44-00

Cabin Systems

Cabin Services System

Introduction

The Cabin Services System (CSS) is an integrated system that has these functions:

- Passenger address
- Cabin interphone
- Passenger service system
- Cabin lighting system control
- Control and monitoring.

The CSS uses configuration database software to define the cabin interior configuration.

Flight attendants use the Cabin Attendant Panels (CAP) to interface with the CSS.

Maintenance personnel can use either the CAPs or the Maintenance Laptop (ML) for testing or fault diagnosis of the CSS.

Interior configuration changes are easy to do by changing the configuration database.

CSS-Passenger Address System

The Passenger Address System (PAS) receives audio inputs and sends them to the passenger cabin.

The PAS uses these components:

- Cabin Service System Controller (CSSC)
- Cabin Zone Units (CZU)
- Speaker Drive Modules (SDM)
- Cabin Attendant Panels (CAP)
- Cabin Attendant Handsets (CAH)
- Flight Deck Handset (FDH)
- Flight interphone.

The Cabin Services System (CSS) configuration database software controls the PAS.

The announcements can come from the flight crew, cabin crew, and the In-Flight Entertainment (IFE) system.

The IFE system provides:

- Prerecorded announcements
- Video audio
- Background music.

The CSSC receives all the digital audio inputs and sends it to the specific CZUs. The CZUs send the audio data to the SDMs.

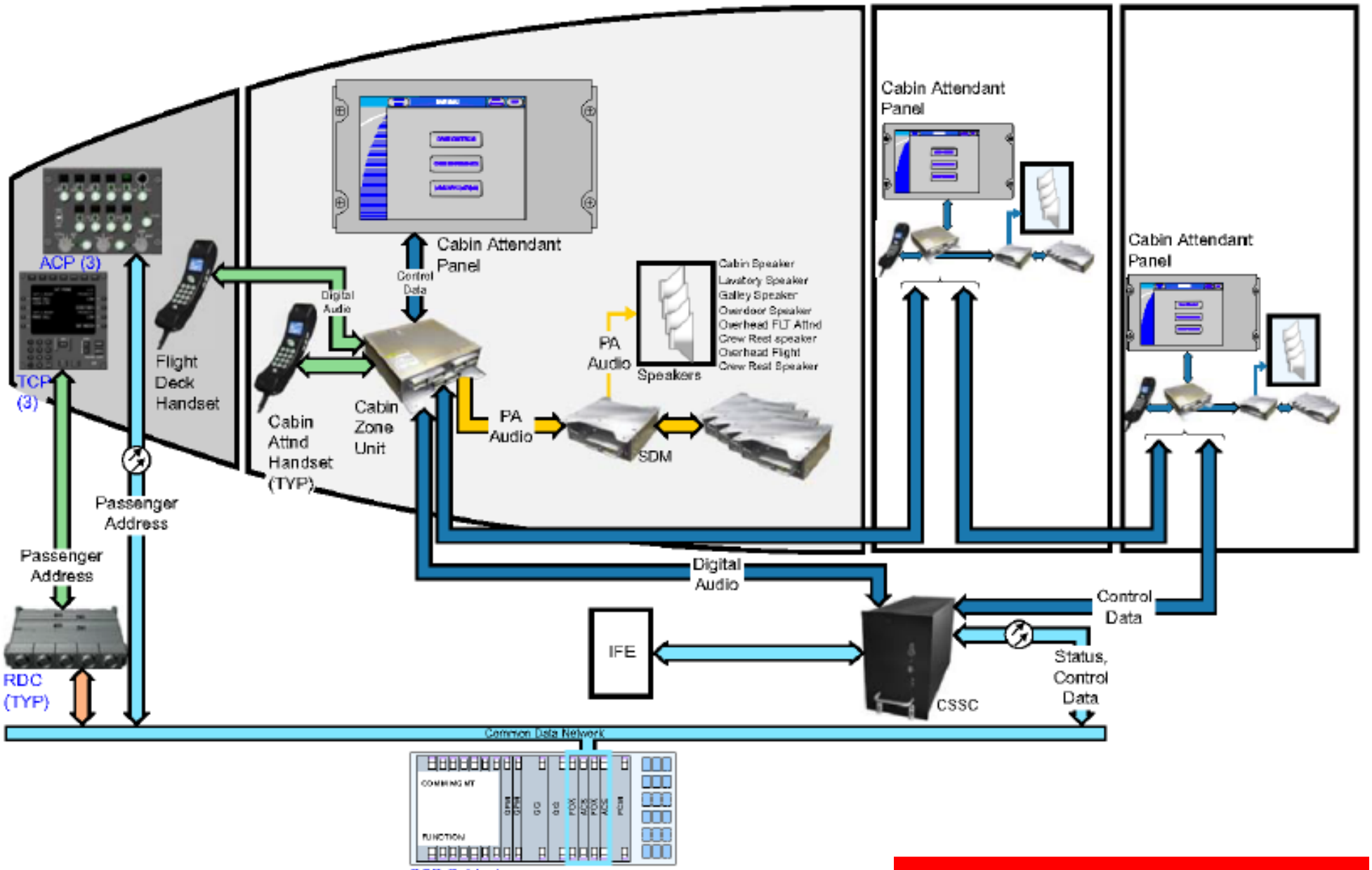
The SDMs do these functions:

- Announcement priority
- Volume control
- Generate alert tones and chimes.

The SDMs send the audio data to up to four speakers that convert the digital audio data to analog signal.

Automatic control adjusts the normal reference level because of flight conditions.

The attendants can also make manual adjustments from the CAPs.



CSS-Cabin Interphone System

The Cabin Interphone System (CIS) permits communication between cabin attendants and between cabin attendants and the flight crew.

The CIS uses these components:

- Cabin Service System Controller (CSSC)
- Cabin Zone Units (CZU)
- Cabin Attendant Handsets (CAH)
- Flight Deck Handset (FDH)
- Flight interphone system.

The Cabin Services System (CSS) configuration database software controls the cabin interphone system.

The flight crew uses the flight interphone, the Tuning Control Panels (TCP), and the Audio Control Panels (ACP) to interface with the CIS. They can also use the FDH.

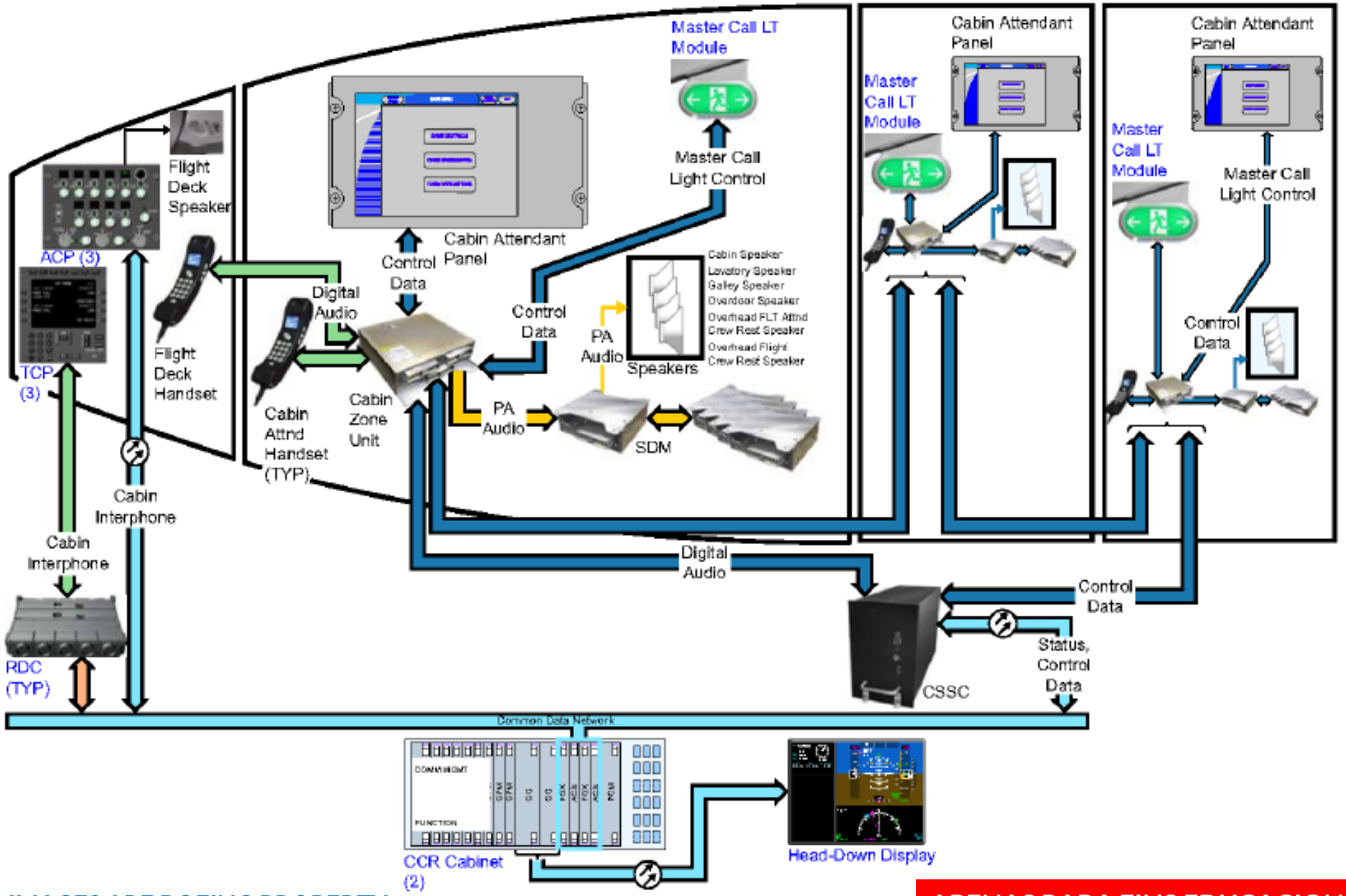
The cabin attendants use the CAHs to interface with the CIS.

Each CAH station has a two number dial code. Each CAH can make two-way, three-way, or four-way station-to-station calls.

There is also the capability to configure up to 10 conference calls.

When a call is made to the flight deck, a chime is generated, the CAB call light on each ACP illuminates, and an EICAS message is displayed.

When a call is made to a cabin station, a master call light and a chime are generated by the Passenger Address System (PAS).



CSS-Passenger Service System

The Passenger Service System (PSS) provides control for these functions:

- Passenger reading lights
- Passenger call lights
- Master call lights
- Large information signs
- Small information signs
- Electrically Dimmable Windows (EDW).

The PSS uses these components:

- Cabin Service System Controller (CSSC)
- Cabin Zone Units (CZU)
- Cabin Attendant Panels (CAP)
- Passenger Service Modules (PSM).

The Passenger Control Units (PCU) let passengers control their reading lights and attendant call functions.

These requests are routed through the In-Flight Entertainment (IFE) system and the CSSC to the CZUs.

The CZUs interface with the PSMs, which control the reading light in the Passenger Service Unit (PSU) and the individual attendant call lights.

The PSMs also control the large information signs.

The lavatories interface with the PSMs for these functions:

- Lavatory call
- Lavatory occupied signs
- Return to seat signs.

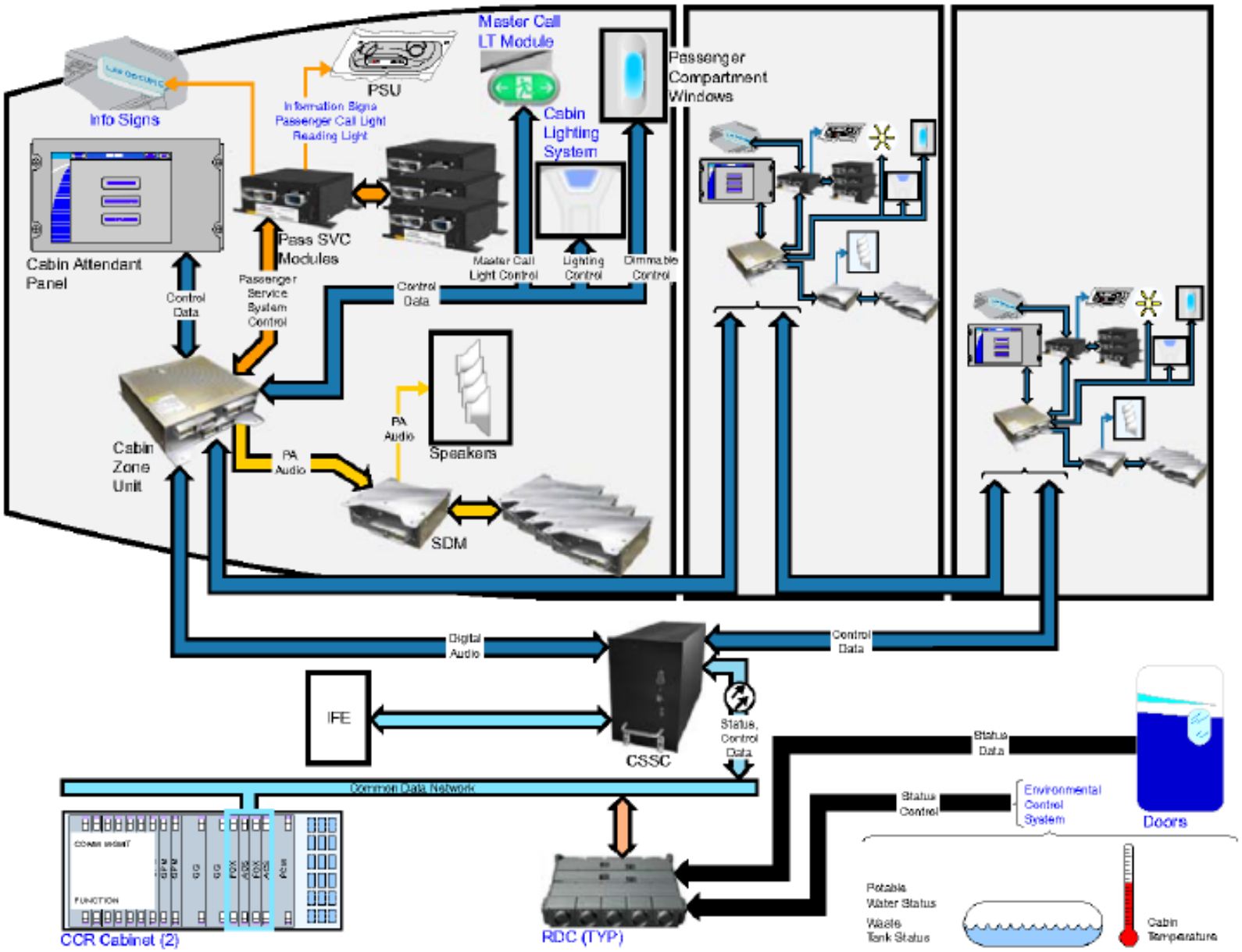
The CZUs directly control the cabin sidewall and ceiling lights. Automatic control of the cabin lights comes from the CSSC and is based on airplane data and the CSS configuration database software.

The CAPs provide control of these systems:

- EDW override
- Passenger reading light override
- Passenger attendant call override
- Cabin lighting
- Cabin zone temperature.

The CAPs are also used to monitor these systems:

- Potable water
- Waste systems
- Passenger Entry Doors (PED)
- Lavatory smoke detection.



Ground Crew Call System

The flight crew and ground crew use the ground crew call system to alert each other. The system supplies aural and visual indications in the flight deck and nose wheel well area.

When the flight crew selects GRD CALL on the Tuning Control Panels (TCP), the ground call horn sounds for three seconds in the nose wheel well.

There is a flight deck call switch on the P40 service and APU shutdown panel. When the ground crew operates this switch:

- The audio control panels FLT call lights come on
- A message is shown on EICAS
- A chime sounds through the communication warning speakers.

The ground crew call horn also comes on when the airplane is on the ground and one of these occurs:

- There is an equipment cooling failure
- The Earth reference system is on battery power
- APU fire.