Guard set at 243.00MHz
All diodes 1N3190

C-6287 /ARC51Control Panel
10-1-2010 \ kb
**C-6287/ARC51 radio set control**

The control unit provides the frequency setting of the ARC51BX transmitter receiver, as well as a few other settings like power on, squelch off, and guard-receiver-on.

The set frequency source is either:
- the manual MHz set on this control panel;
- one of 20 preset channels, or
- the Guard frequency 243 MHz.

**Frequency coding**

Any frequency can be set from 220.00 MHz to 399.95 MHz in 50kHz steps as a 5-digit nr. The first digit is 2 or 3, then 3 digits 0...9, and the last digit is 0 or 5. All digits are coded with contacts to ground. The first and last digit with a 1-out-of-2 code, the middle digits with a 2-out-of-5 code.

Together, this results in an 8-out-of-19 code.

Lamps.
The panel is illuminated by 12 small (red) lamps, each 5V/60mA. The 28V types have two strings of 6 series connected lamps.

**Volume control**

A constant impedance circuit is used for the volume control, while the audio output of the ARC51 is distorted when not loaded with the proper impedance, and also the aircraft audio mixer assumes a constant impedance sources.

**ADF**

A switch position (“ADF”) is available to replace the normal UHF blade antenna by the direction finder antenna unit AN/ARA-25 or AN/ARA-50, the solid state version.

**Control, Radio Set – Versions**

Depending on the volume control resistors, lamp voltage and extra options, 8 panels were used:

- C-6476/ARC-51A 600 Ω 28 V lamps
- C-6555/ARC-51A 600 5
- C-6556/ARC-51B 150 5
- C-6287/ARC-51BX 150 28
- C-6300/ARC-51A 600 5/28 rel/P + Rel/C
- C-6528/ARC-51B 150 5/28 rel/P + Rel/C
- C-7307/ARC-51A 600 5/28 digital display
- C-8616/ARC 150 5/28 digital display

The Rel/P (relay plain) and Rel/C (relay cypher) are two extra positions on the OFF-T/R etc switch. These panels have a step-down transformer to convert the telephone signal to 1Vpp-100 ohm for the microphone input of the other set.

The last two have a digital (LED) display instead of a mechanical one.