

C6533A COMMUNICATIONS SYSTEM CONTROL



Obsolescence Mitigation: Through the selection of commercial off the shelf (COTS) components and an upgradeable microprocessor.

Improved Performance: Digital communication provides crisp and clean audio with higher volumes.

Affordable: Less expensive than the current digital alternatives.

Low Maintenance Cost: System is designed with COTS components that are readily available.

Easy Installation: A drop-in, pin-for-pin match with the legacy system.

The C6533A Communications System Control (CSC) unit (or “Intercom”) is a communication device that provides audio monitoring and voice transmission selection capabilities to multiple radio channels, as well as internal communications between pilot and crew on rotary wing aircraft. It is approved for use on the CH47 Chinook/Cargo and UH60 Blackhawk/Utility helicopters, but is widely deployed on a variety of rotary wing aircraft.

The C6533A Communications System Control is a “drop-in” replacement for the C6533/ARC legacy system designed and built in the late 1960s. The new, flight tested and fully Department of Defense qualified Intercom, designated C6533A maintains the same physical characteristics, and user interface as the original unit.

The C6533A stands alone as the Intercom of choice for CH47s and UH60s in service today. This redesigned system is essentially transparent to the user community with the exception of the enhanced volume control.

For an affordable, drop-in replacement with clearer voice communications and improved volume control, consider the C6533A.

continued on reverse



INPUTS

Mic In *headset*

Frequency (C): audio, voice (200 Hz to 6 KHz)
Input impedance: 1.5 M ohm
Source impedance: 5 +/- 1 ohm @ 1 KHz (mic to mic return)
Source sensitivity: 36 dB range @ 1 KHz

Receive In *Receive 1-5, Aux, Nav 1,2*

Level: 0 to 7.78 VP-P, at 0 Vdc
Frequency: audio, voice (200 Hz to 2 KHz)
Input impedance: 20 K ohm
Source: similar units transmit out via interphone junction box

Direct In *Direct Direct (received audio - "Direct 1,2"); Direct Controlled (sidetones - "Direct 3,4")*

Level: 0 to 3.9 VP-P, at 0 Vdc
Frequency: audio, voice (200 Hz to 2 KHz)
Input impedance: 10 K ohm
Source: system receiver; Direct 1-4 bypass NHA system audio junction box; Direct 1-2 also bypass internal volume control

Interphone *Input/Output (I/O)*

Level in: range: 0 to 3.9 VP-P, at 0 Vdc
Frequency: audio, voice (200 Hz to 2 KHz)
Input impedance: 27 K ohm
Source: similar units "interphone" line

Power *+27.5 Vdc "Battery"*

+27.5 +/- .5 Vdc @ .49A max, typically 200mA operational

THROUGHPUTS

Microphone in to headphone(s) out

The communication system control allows for microphone audio to be routed to the speaker's headphone at all times.

This audio will also route to other users' headphones via the interphone path (this occurs regardless of sender's transceiver position, and listener's transceiver and toggle positions).

Microphone in to transmit out

Audio will route to the transmit out positions as the rotary selector switch moves from ICS (only) to one of the five radio selections. This will allow microphone audio to route to both the interphone line and to the single radio channel selected. The recipient who is not using interphone must then enable the toggle switch associated with that channel. For example, if the pilot transmits on channel three, the listener must throw the toggle for radio channel three in order to listen.

Receive in to headphone out

The operator's rotary selector switch chooses the radio channel to be monitored at the operator's headphone. This audio will not route to other users' headphones via the interphone line.

OUTPUTS

Headset *audio out - hi, lo*

Level: 0 to 3.53 VP-P, at 0 Vdc
Frequency: audio, voice, 100 Hz to 3 KHz
(load capable 100 to 5 KHz)

Transmit Out *"To Audio Transmitter 1-5"*

Level: 1.3 VP-P, at 0 Vdc
Frequency: audio, voice, 150 Hz to 2 KHz

Interphone *I/O*

Level: 0 to 8.6 +/- 2.1 VP-P Out, at 0 Vdc
Frequency: audio, voice (200 Hz to 2 KHz)
Output impedance: 150 ohm
Load: similar units "interphone" line; single-load impedance: 9K to 28K

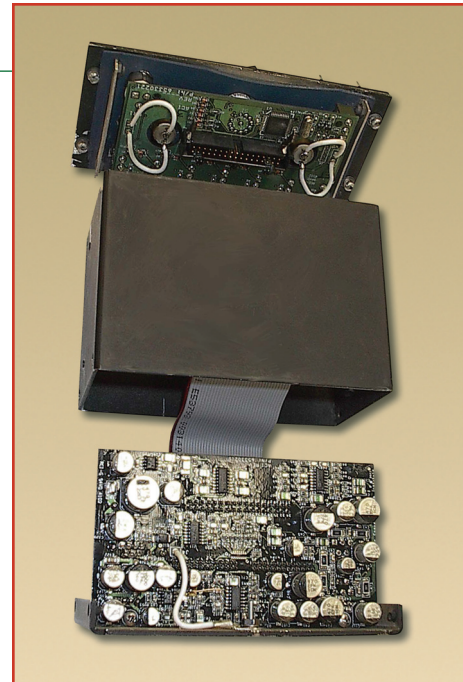
CONTROL

Transmitter *transceiver control, control 1-5*

Level: on - ground out (ground presence indicates control); transceiver desired is selected via front panel rotary selector switch

Push to Talk *ICS/Com/Radio headset*

Level: on - ground (ground presence indicates control); Com - see inputs; common/ground; when neither ICS nor Radio is selected, this common (ground) is externally connected to neither



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