



Digital Voice Communication System

DVCS6100

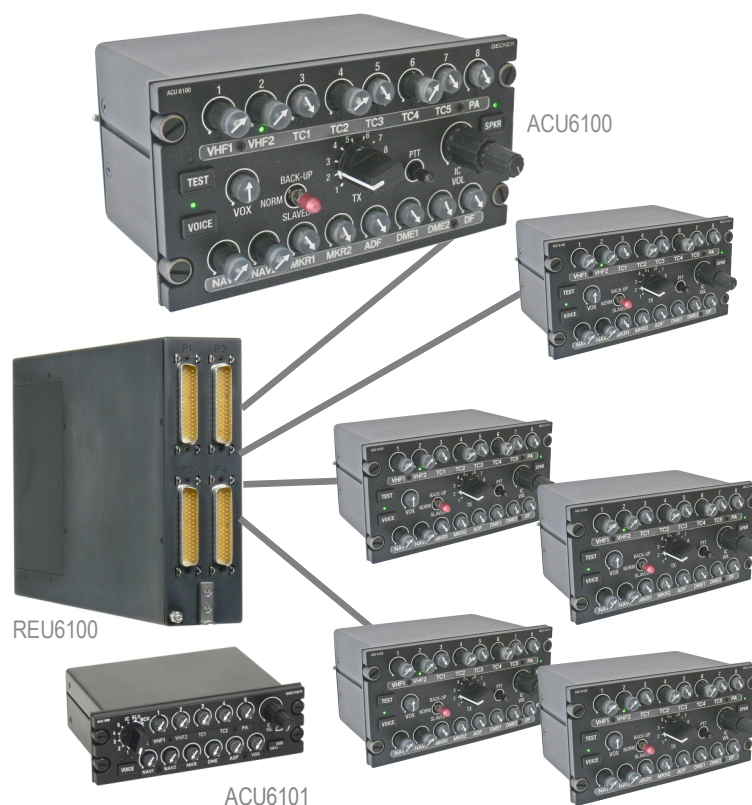
Intercom/Audio Systems

The DVCS6100 is composed of:

- one Remote Electronic Unit REU6100
- up to 6 Audio Control Units ACU6100 or ACU6101
- Optional Intercom Amplifier for up to 12 passengers

The ACU6100/ACU6101* allows control of:

- up to 8/5* communication channels
- up to 8/5* navigation channels
- up to 6 fixed direct channels
- up to 6 pilots/operators
- up to 12 pax via optional INTERCOM Amplifier
- 2 voice recorder outputs (pilot + co-pilot)
- 2 speaker outputs
- up to 8 alert tones with discrete activation
- non utilized ACU places can be used for INTERCOM Headsets (Pax)



The DVCS6100 is the latest state of the art Digital Audio Selector and Intercom System from Becker Avionics. Designed with both rotary and fixed wing aircraft in mind, Becker Avionics proven know-how in audio applications for the aerospace industry has been fully utilized. With the use of future-proof DSP and Microcontroller technology, the system meets today's latest technical and quality standards. A modular system design philosophy has been implemented to allow maximum flexibility during system integration and to ensure optimum performance and reliability during in flight operations

The DVCS6100 is composed of: one Remote Electronic Unit REU6100, up to 6 Audio Control Units ACU6100 or ACU6101, Optional Intercom Amplifier for up to 12 passengers. Each one of the max. 6 Audio Control Units transmits the status of the selected switches and rotary controls via a dual redundant CAN-Bus to the Remote Electronic Unit. Impedance matching and audio Digital Signal Processing takes place within the REU6100. The EM6100 is the memory device (optional). It is a small device connected to the REU6100 and stores the systems configuration. Allows easy field replacement without reconfiguration of the system on the bench. Configuration of the DVCS6100 during system integration or usage at operators site is eased by means of a special configuration software tool available from Becker Avionics.

To ensure a maximum of reliability and safety during operation, the system features special safety modes:

- Slaved Mode: In case total loss of pilots or co-pilots ACU, the control is switched in parallel, by means of setting the selector switch to SLAVED, to the other pilots ACU.
- Emergency Mode: In the event of a total power failure, the headsets of pilot and co-pilot are automatically by-passed direct to COM 1/ FIX1 and COM 2 / FIX2.

In case of a failure within the REU the system can be switched manually into this mode.

This manual fail-safe operation is activated by means of setting the selector switch on pilots or co-pilots ACU to the BACK-UP position.

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Technical Data:

Environmental Categories: DO-160E

Operational temp. range:	-40°C to +70°C (short time +70°C)
• Storage temp. range:	-55°C to +85°C
• Attitude:	50.000 ft.
• Humidity:	Cat. B
• Vibration:	Cat. S, curve M; Cat. U, curve G
• Acceleration:	20 g
Shock, operational	6 g in any direction
Shock, crash safety	20 g
• Inputs:	
Power Nominal	27.5 V DC
Power Emergency	18.0 V DC
Current Average	1.5 A at 27.5 V DC
Current Peak	4.5 A at 27.5 V Dc
• Microphones:	
Dynamic	6 (0.5...4 mVRMS into 20 Ω, adjustable)
Standard	6 (100...250 mVRMS into 150 Ω, adjustable)
• Transceiver:	
Mike-Line	8 (70mV...1.5 VRMS into 150 Ω, adjustable)
Rec-Line	8 (2.5...20 VRMS into 600 Ω, balanced, adjustable)
• Receiver Rec-Line	8(2.5...20 VRMS into 600 Ω, balanced, adjustable)
• Fixed inputs:	
Fixed Volume	3 (5...40 VRMS, adjustable)
Volume Controlled	3 (2.5...20 VRMS, adjustable)
• Keylines:	
PTT in	6 (for each ACU6100)
PTT out	8 (one for each transmitter)
• Discretes:	
Inputs	8 (alert tone activations) 6 (Winchman, CALL, E-Call,...)
• Outputs	4 (DF-blanking, CALL indication,...)
• Outputs:	
Headphones	6 (≥250 mW into 300 Ω or 0.5 W into 8 Ω)
Speaker	2 (12 W into 4 Ω)
Aural Alert Tones	8(+2 CALL tones)
Frequency Responses	Radios 300...6.000 Hz Intercom 300...6.000 Hz Warnings 800...4.800 Hz ≤ 2.5% at 1 kHz
Distortion	
• Dimming Inputs ACU:	
Dim Control Input 1	panel illu. Max. 27,5 V DC
Dim Control Input 2	Status LED ≤10mA per ACU
• Current Consumption:	≤ 150 mA inclusive illumination

- Mechanical:
 - Weight ACU ≤800 g
 - Weight REU ≤2.800 g
 - Dimensions ACU (W x H x D) 145.8 x 75.8 x 91.5 mm (without cabling)
 - Dimensions REU (W x H x D) 334 x 57 x 195 mm (1/4 ATR short)

Compliance:

- EASA ETSO-C50c
- FAA TSO-C139
- EUROCAE/RTCA
 - Audio ED-18/DO-21
 - Environm. DO-160E
 - Software ED-12B/DO-178B, Level C
- Night Vision Goggles compatible

Certified:

- DVCS6100 System EASA.210.443

Accessories:

- CSW6100-2 Configuration Software Tool
- EM6100-(000) External Memory



- EL6100-TX/RX / LP6100-TX/RX Customized Engraving or Laser Label
- LP6101-TX/RX Customized Laser Label

VHF1 • VHF2 HF1 HF2 VHF3 SAT SERV • PA

NAV1 • NAV2 ADF1 ADF2 MKR1 MKR2 DME1 • DME2

VHF1 • VHF2 HF1 HF2 • VHF3

NAV1 • NAV2 ADF1 ADF2 • MKR1