



# Square Peg

Communications Inc.

## *mini-M / Aero-I Voice Codec Unit (VCU)*



### **OVERVIEW**

The Voice Codec Unit (VCU) is used to provide analog interfaces for Inmarsat 4.8 kb/s voice channels. It allows user-furnished 2-wire telephone, 4-wire handset or 4-wire audio equipment to be connected to a voice channel via the Codec card of a first generation PLT unit or the Sync I/O card of a PLT-H unit.

Voice coding functionality is provided by a Digital Voice Systems, Inc. (DVSI) VC-20-MM voice codec board, which implements DVSI's proprietary software Advanced Multi-Band Excitation (AMBE™) voice coding algorithm.

The VCU is designed to be used in conjunction with Square Peg Communications Inc.'s Aeronautical Ground Data Unit (GDU) and Mini-M / M4 Physical Layer Tester (MPLT) software applications, which run on the generic Physical Layer Tester (PLT or PLT-H) platform. The GDU application supports the testing of physical layer performance and protocol implementation for Ground Earth Stations (GESs) and Aeronautical Earth Stations (AESs) implementing Inmarsat Aeronautical services while the MPLT

application supports the testing of Land Earth Stations (LESs) and Mobile Earth Stations (MESs) implementing Inmarsat Mini-M, M4, Fleet 77/55/33 and Swift 64 services.

For operation with a PLT CU, the VCU is connected to a Codec Interface card while for operation with a PLT-H CU, the VCU is connected to the Synchronous I/O PMC card via a breakout cable assembly.

In the context of the GDU, the VCU is used to provide analog voice interfaces for Aero-I voice calls. It may be utilized as part of a GES emulator, AES emulator or during type approval when running the Circuit Mode AATS tests.

In the context of the MPLT, the VCU is used to provide analog voice interfaces for low-rate voice calls as used in systems such as mini-M, GAN, Fleet and Swift64. It may be utilized as part of an LES emulator, MES emulator or during type approval.

The VCU can also be used as part of a production test procedure or for off-air monitoring.

