USB Simulator and Transmitter Features:

- **USB Interface to a host PC for set up and power**

- **PCM Simulation to > 10 MBPS**

- **Large on-board Flash Memory**

- **Very Long Frame Capability with low frequency Dynamics**

- **Complex Sub-Frame Capability**

- **Super-Commutation**

- **Sub-Commutation**

- **Embedded Stream Generation**

- **Generates Programmable Dynamic Parameters including:**

- **Sine, Square, Ramp and Step**

- **Fixed Word Value**

- **Common Word Value**

- **TTL Data and Clock Outputs**

- **Nominal 100 mW RF Transmitter output frequency modulated with the Simulated PCM Bitstream**

- **Customer specified L-Band, S-Band, NATO E-Band or 400 MHz band programmable transmitter centre frequency**

- **Available with a rechargeable Battery Pack for autonomous operation when programmed. Recharges through USB port**

The Apollotek Model APK8768 combines the features of the Apollotek APK8764 USB PCM Simulator with a low power RF Transmitter module and an optional rechargeable battery pack (APK8768B). This unit is set up and powered through a USB Port connection to a host PC to provide a high performance programmable PCM Simulator with programmable transmitter centre frequency to provide a portable radio telemetry link and groundstation test capability.

As well as being capable of operating at high data rates, the APK8768 is also designed to simulate low frequency parameter simulation within large and complex frame formats.

The APK8768 provides outputs of PCM Data and Clock at TTL levels through BNC connectors.

The RF transmission is through an SMA connector and the supplied stub antenna.

The TTL Clock Output BNC port can also be programmed to provide a Bit Clock, Frame Clock or Sub-Frame Clock.
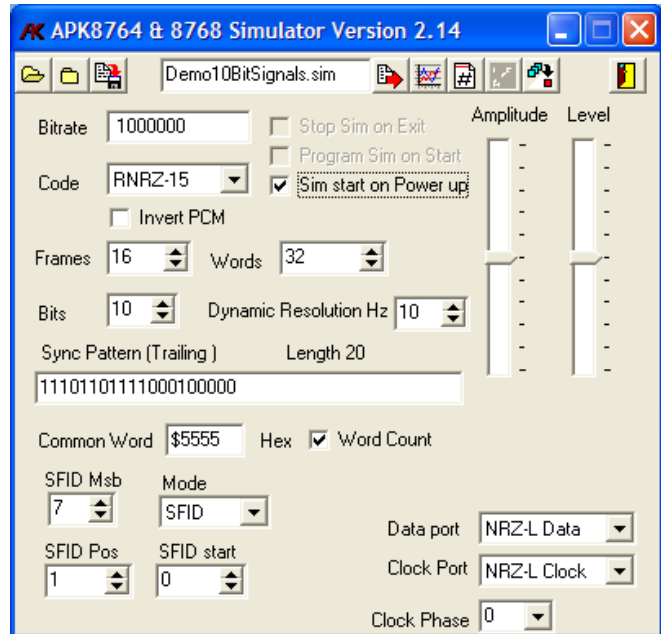
The APK8768 can be programmed with a GDSmate Frame Format.

The APK8768 is also available with a rechargeable Battery Pack and on/off switch which charges through the USB port. Specify APK8768-B for this option.
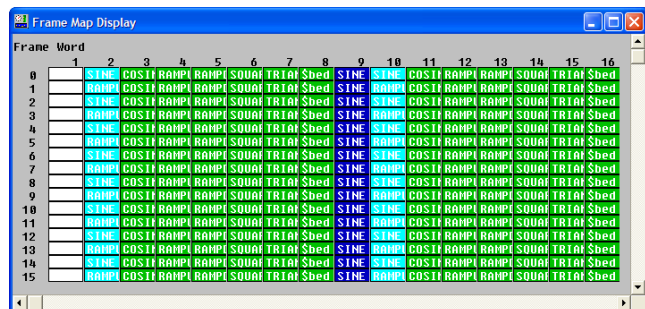
Apollotek Ltd. 3 Cypress Court Sunbury on Thames England Tel: +44 1932 780410 Fax: +44 1932 780334 e-mail: info@apollotek.co.uk

All specifications are subject to change without notice

Software Control

- **Select the Bit Rate for PCM**

- **Select the RF Transmitter Frequency**

- **Build the Data Frame**

- **Variable Bits per Word supported**

- **Assign Variables to Words**

- **Assign Embedded Data Stream Words**

- **Select the Variable Frequency**

- **Select the Variable Amplitude**

- **Select the Channel Interval**

- **Select the Channel DC Offset**

- **Update the Simulator**

- **Output Simulated Data**

- **Colour Coded Format Status identification**

- **The Simulator can be also loaded with Frame Format files generated by the ApolloDas 8600 PCM Encoder Set-Up Software**

- **Direct access to simulated parameters through the GDSmate Frame Map display**

Typical PCM Frame Set Up Form

Typical PCM Parameter Frame Map Display

System Interface Specification

Interface Type:	USB 2 with USB 1 compatibility
Programmable Functions:	PCM Frame Format and Bit Rate, Transmitter Centre Frequency, Individual parameter amplitude, Individual parameter offsets. Individual parameter frequency. Frame Format characteristics. Clock Output type. Parameter Setup selected through Frame Map Display

Mechanical Specification

Standard Module dimensions:	Length: 115 mm Width: 70 mm (including connectors) Height: 30 mm to 60 mm excluding antenna (depending on slice configuration).
Construction:	Multi-layer printed circuit boards mounted inside Aerospace grade aluminium housings precision machined from solid Aluminium.

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