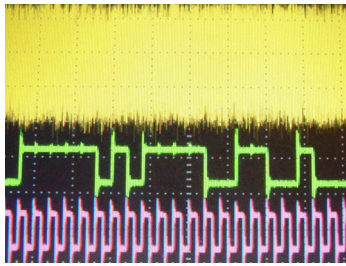


### Features:

- Provides clock and data recovery from perturbed serial PCM data over a Bit Rate range from 1500 BPS to 10 MBPS
- Processes PCM Codes including NRZ, RNRZ and Bi-Ø codes
- Unique Apollotek Analogue and Digital signal recovery design implementation
- Programmable Bit Rate
- Programmable loop bandwidth
- The Bit Synchroniser is set up and monitored through the USB port using Apollotek supplied software
- The programmed set up is stored in non-volatile Flash memory. The stored set-up is automatically loaded when power is applied
- This version of the Bit Synchroniser is powered from an external 5 Volt Power Supply
- Bit Synchroniser Lock Status and Input Signal Present LED display
- Standard Telemetry input and output interfaces and special electrical and optical interfaces are available
- Compatible with the Apollotek range of USB Telemetry Receivers and Decommutators
- Apollotek manufactures modular airborne instrumentation, solid state recorders, telemetry transmitters and a range of PC based Groundstation Telemetry instrumentation



The Apollotek APK8762-I is a high performance, miniature, USB controlled, externally powered Bit Synchroniser which is one of several configurations of Apollotek USB Signal Recovery Products.

The APK8762-I is packaged into a rugged aluminium housing with a flanged baseplate.

The APK8762-I USB Bit Synchroniser uses proprietary Apollotek developed analogue and digital signal processing techniques to extract a synchronised NRZ-L Data and Zero Degree Clock from a perturbed baseband serial PCM data stream input.

The APK8762-I operates from an external 5 Volt DC supply and provides NRZ-L Data and Clock outputs through individual BNC connectors and also RS422 Data and Clock through 4 pin circular connectors. The Data and Clock Outputs can also be connected directly to an Apollotek USB PCM Decommutator or other similar functional devices.

Bit Synchroniser set-up and status monitoring is provided through the USB port under control of the Apollotek Set-Up Software provided with the unit. Status information is also indicated by multiple coloured LEDs on both sides of the housing.

Other versions of the Apollotek Bit Synchroniser are powered directly through a USB port connection to a host PC. The Apollotek USB range also includes receivers, bit synchronisers and decommutators in several configurations. PCM Simulators and data presentation software is also available.

## **BIT SYNCHRONISER SPECIFICATIONS**

### **Electrical and Performance Specification**

Data Rates	1500 bps to 10 Mbps for NRZ-L Codes
Standard PCM Input Codes	NRZ-L/M/S, BIØ-L/M/S, RZ, RNRZ-L (2 <sup>11,15,17,20,23</sup> )
Input Signal Amplitude	0.4 V to 6 V ( ± 3 V peak-to-peak, +3V DC Maximum)
Input Impedance	User switchable to either 75 Ohms or 10 K Ohms
Input and Output Signal Connectors	BNC PCM input and NRZ-L Data and Clock outputs. 4 pin RS422 data and clock output connector (mating half provided)
Loop Bandwidth Equivalence	0. 01% >5% of bit rate (user programmable)
Tracking Range	>10% (user programmable)
Bit Error Rate	Approaches 1 dB of ideal performance curve below 10 MBPS
Output Data	LVTTL data and clock and RS422 on separate connectors
LED Indicators	Power (Green when powered) Lock (Red when out of lock, Green when in-lock) Signal Level (Green when above threshold) These LED Indicators are duplicated on both sides of the unit to aid visual observation of the Unit Status

### **System Interface Specification**

Interface Type	USB 2 Port. Backwards compatible with USB 1 ports
Power Requirements	External +5V Power Supply required
Software	Set-Up and controlled using Apollotek Windows based Set-Up Software supplied with the unit

### **Mechanical Specification**

Overall Size	147 mm long (including flanges) by 66 mm wide and 40 mm high
Manufacturing Processes	Surface mount internal PCB technology Flanged Base black painted rugged packaging

### **Operational Environmental Specification**

Temperature	-10 ° Centigrade to +70 ° Centigrade
Humidity	0 to 90% non-condensing

### **Non-operating in appropriate packaging**

Temperature	-25 ° Centigrade to +90 ° Centigrade
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All Specifications are subject to change without notice