Model 8656 SSB/SEB PAL B/G Scrambler

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DESCRIPTION

The Model 8656-SSB/SEB PAL-B/G Scrambler provides dynamic switched sync suppression, video inversion, and drop field scrambling, as well as data transmission for Scientific-Atlanta's PAL-B/G home terminals. The unit is compatible with all existing Scientific-Atlanta scrambling systems.

The Model 8656-SSB/SEB PAL-B/G Scrambler can be configured to operate in more than 30 scrambling modes. The scrambler receives data transactions from the Headend Controller and transmits the data to the home terminals. Home terminal control and descrambling information is transmitted in the form of amplitude-modulated pulses on the audio subcarrier of each scrambled channel. Data can be received at either 38,400 bps or 9600 bps utilizing RS-485 synchronous communication.

The data is encoded for increased security. Scrambler setup and operation is made easy by means of a front panel, programmable keyboard, and a 16 x 2 character display. The scrambler can be programmed to automatically change from sync suppression scrambling to video and/or sync inversion scrambling.

FEATURES

- Secures premium video with more than 30 scrambling modes
- Compatible with all Scientific-Atlanta PAL-B/G addressable systems
- Remote setup via System Manager
- Front panel LCD screen improves control and diagnostics
- Supports messaging with 32 kb (SSB) and 128 kb (SEB) memory

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SPECIFICATIONS

Electrical

Baseband Video

Input level
0.5 V p-p to 2 V p-p (1 V p-p nominal)
(neg going sync)
Output level
1 V p-p ±10%
Input impedance
75 Ω
Chrominance-to-luminance delay
35 ns, max
Group delay
80 ns p-p (max) up to 4.43 MHz
Differential gain
1.5%, max
Differential phase
2°
Frequency response
0.5 dB p-p max ripple up to 4.43 MHz,
>26 dB attenuation at 5.3 MHz
Response slope
0.3 dB/MHz max up to 5.1 MHz

Audio IF

Input level
+34 dBmV ±6 dB
Insertion loss
0 dB ±0.5 dB (at 33.4 MHz)
Impedance
75 Ω
Hum and noise
-60 dB
Data pulse
6 dB ±0.1 dB
Buzz reduction level
5.8 dB

Video IF

Input level
+46 dBmV ±6 dB
Insertion loss
0 dB ±1.0 dB (at 38.9 MHz)
Video sync suppression
5.4 dB, 5.8 dB, and 6.0 dB ±0.1 dB
Impedance
75 Ω
Frequency response
±0.25 dB
Differential gain
±0.25 dB
Differential phase
0.5 degrees
Hum and noise
-60 dB

Power Supply

Input voltage
220 V AC ±20%, 50 Hz to 60 Hz
Power consumption
85 W, max

Audio Pulse Timing

Audio pulse to sync delay
Variable in 70 ns steps
Timing pulse to data pulse delay
50 µs ±1.0 µs
Timing pulse width
6 µs ±0.1 µs

Mechanical

Size
Standard 483 mm, rack-adaptable chassis, 89 mm high
Fits the EIA standard 610-mm deep rack
Weight
4.5 kg

Environmental

Temperature
0°C to 50°C (32°F to 120°F)
Humidity
95% non-condensing

Note: All pulse widths and delay times use 50% point.

Specifications and product availability are subject to change without notice.

Scientific-Atlanta, Inc. http://www.sciatl.com
United States: 4261 Communications Drive, Norcross, GA 30093; Tel: 770-903-6701; Fax: 770-903-4617
Canada: 7725 Lougheed Highway, Burnaby, BC V5A 4V8; Tel: 604-420-5322; Fax: 604-420-5941
United Kingdom: Home Park Estate, Kings Langley, Herts WD4 8LZ, England; Tel: 44-1-923-266-133; Fax: 44-1-923-270-448
Singapore: 1 Claymore Drive, #08-11 Orchard Towers, Singapore 229594; Tel: 65-733-4314; Fax: 65-733-2706
Hong Kong: Suite 56 & 57, 5/F New Henry House, 10 Ice House Street, Central, Hong Kong; Tel: 852-2522-5059; Fax: 852-2522-5624