

# 3701 Series Data Transceiver

- Programmable Narrow or Wide Band
- Factory Alignment for Peak Performance
- Waterproof Casing
- Programmable up to 16 Channels



PHONE: (800) 275-2080

HIGH SIERRA ELECTRONICS, INC.

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A 3701 Configured for 16 Channels

## DESCRIPTION:

The Model 3701 Data Transceiver is designed for use with data generating devices using Audio Frequency-Shift Keying (AFSK) type modulation systems. It provides outstanding frequency stability and control.

The Model 3701 comes in VHF and UHF frequency ranges and features 16 programmable channels. Each has extremely short turn-on time that conserves power in battery operated systems. Multiple functions include 1200 to 9600 baud rates, and AC and/or DC audio coupling. When used as a repeater, the transmit frequency typically is specified as the received frequency, when using the 3701 in an ALERT/ALERT2 Transmitter.

This radio, with 16 dip switch selectable channels, is the standard transceiver featured in High Sierra Electronics' controllers, transmitters and repeaters. For certain applications, however, other radios or technology may be more appropriate. These alternatives include Spread Spectrum, RS-232 radio modems, GOES radio modules, crystal controlled radios, and cellular modems.

## SPECIFICATIONS: (Transmitter)

|                                  |   |
|----------------------------------|---|
| Output Power . . . . .           | 5/1 W   |
| FM Hum/Noise . . . . .           | 40 dB (12.5 kHz), 40 dB (25 kHz)  |
| Modulation Sensitivity . . . . . | 100 mV RMS (60% peak dev)   |
| Spurious Emissions               |   |
| Model 3701-00/-02 . . . . .      | -36 dBm   |
| Model 3701-03 . . . . .          | 60 dBm  |
| Frequency Deviation . . . . .    | + 2.5, Min. + 1.9 kHz (12.5 kHz)<br>+ 5.0, Min. + 3.8 kHz (25 kHz)              |
| Adj. Channel Power . . . . .     | 70 dB (25 kHz), 60 dB (12.5 kHz)  |
| Audio Response . . . . .         | +1, -3 dB from 6 dB per octave pre-emphasis and characteristic<br>300 ~ 3000 Hz |

Specifications continued on next page.....

02-3701-00(C)

*Environmental Monitoring Solutions*

WEB SITE: [www.highsierraelectronics.com](http://www.highsierraelectronics.com) E-MAIL: [sales@highsierraelectronics.com](mailto:sales@highsierraelectronics.com)

# 3701 Series Data Transceiver

## SPECIFICATIONS: (Receiver)

### Sensitivity

Model 3701-00/-02 .....0.30  $\mu$ V (12.5 kHz), 0.28  $\mu$ V (25 kHz)

Model 3701-03 .....0.25  $\mu$ V (12.5 kHz), 0.35  $\mu$ V (25 kHz)

### Selectivity

Model 3701-00/-02 .....65 dB (12.5 kHz), 70 dB (25 kHz)

Model 3701-03 .....50 dB (12.5 kHz), 60 dB (25 kHz)

### Inter-modulation

Model 3701-00/-02 .....-70 dB

Model 3701-03 .....-65 dB

### Spurious Emissions

Model 3701-00/-02 .....-57 dB (9 kHz to 1 GHz), -47 dB (1 GHz to 4 GHz)

Model 3701-03 .....-70 dB

### RX Hum/Noise

Model 3701-00/-02 .....-40 dB (12.5 kHz), 40 dB (25 kHz)

### Spurious/Harmonic .....65 dB

### Response Time .....< 16 ms

### Audio Output Power

Model 3701-00/-02 .....0.5 Watt

Model 3701-03 .....2.5 V @ 600  $\Omega$

### Squelch Attack Time

Model 3701-00/-02 .....< 20/40 ms (RSSI/Analog), < 10/30 ms (RSSI/Analog), +20 dB

### Squelch Decay Time

Model 3701-00/-02 .....5 ms Min., 20 ms Max.

## (General)

Frequency Range .....VHF 148 to 174 MHz, UHF 450 to 490 MHz, and  
UHF 400 to 430 MHz

Channel Spacing.....2.5/15 kHz (U.S. only), 12.5/25 kHz (outside the U.S.)

PLL Channel Step.....2.5 kHz, 5 kHz, 6.25 kHz

Lock Time .....<10 ms

LED Status Model 3701-00/-02 ....Yellow=Busy, Green=Receive/Decode, Red=Transmit

Operating Voltage .....9 to 18 VDC, 12 V nominal

Current Draw .....Tx Hi: 2 A, Tx Lo: 1 A, Standby 65 mA

Temperature Range .....-22° to 140° F (-30° to 60° C)

Dimensions .....4.6 x 2.4 x 1.4 in (11.7 x 6.2 x 3.5 cm) (H x W x D)

Weight .....9.4 oz (267 g)

## ORDERING GUIDE:

Model 3701-00.....Data Transceiver; VHF 148 to 174 MHz

Model 3701-02.....Data Transceiver; UHF 450 to 490 MHz

Model 3701-03.....Data Transceiver; UHF 400 to 430 MHz

## OPTIONS/SPARE PARTS:

Model 3701-15..... Data Transceiver Programming Kit: Includes Power Supply,  
Cable and Software.

See [www.highsierraelectronics.com](http://www.highsierraelectronics.com) for more specification and ordering information.

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