



*Tomorrow's Telemetry Today!*

Da-Tel Research Company, Inc.

932 N. Park Avenue / P. O. Box 1206

Montrose, Colorado 81402

www.da-telresearch.com

Phone: (970) 249-6129

Fax: (970) 249-8919

Email: info@da-telresearch.com

## G-7801C MODULE PARALLEL-TO-SERIAL, FS TRANSMITTER INSTRUCTION INFORMATION

- 16 DIGITAL STATUS INPUTS
- 30, 60, 120, 240, OR 480 B/P/S OPERATION
- ENCODER AND TRANSMITTER IN ONE MODULE
- PARITY ERROR CHECKING
- POINT SCAN EXTENDER MODULE

### GENERAL DESCRIPTION

The G-7801C Parallel-to-Serial, FS Transmitter incorporates 16-bit parallel encoder driving a three-frequency frequency-shift transmitter. The 16 inputs are typically from a contact or transistor driver, keying either low or high.

The timing circuitry of the G-7801C sequentially scans each of the 16 digital data lines. Before the data is scanned, a sync pulse is generated at the space key input of the FS transmitter. This sync pulse is two units of time long and signifies the beginning of the data stream. At the end of the 16-bit data stream, the parity generator adds a single bit to indicate parity. With two sync timing units and 17 data timing units, the total message length is 19 bits. This data and parity message stream keys the mark input of the FS transmitter. A local crystal-controlled oscillator provides the master timing



pulses.

A divider after the clock allows the bits-per-second to be selected by a solderless jumper. The possible rates of 30, 60, 120, 240, 480 bits-per-second allow the update rates shown below. The channel bandwidth typically required is numerically twice that of the bits-per-second rate. The G-7801C-E is available to extend the data message to 32 status inputs.

This highly secure and noise immune method of transmission is suitable for transmitting kWhr information in either BCD or pulse form. Status information can be transmitted from a remote to master location and controls can be asserted on a remote location by a master.

### SPECIFICATIONS

**CENTER FREQUENCY AND BANDWIDTH:** Provided to order in the range of 300 Hz to 10 kHz. Frequencies beyond 10 kHz available.

**FREQUENCY STABILITY:** 0.15% +/- 2 Hz in temperature range of -10 degrees C to +55 degrees C.

**OUTPUT LEVEL:** -25 dBm to +3 dBm into 600 ohms.

**FILTER:** Solder-in type with plug-in filter option, 600 ohms nominal with rising impedance out-of-band.

**SQUELCH:** Timing oscillator switched on and off by start-stop inputs of the encoder section.

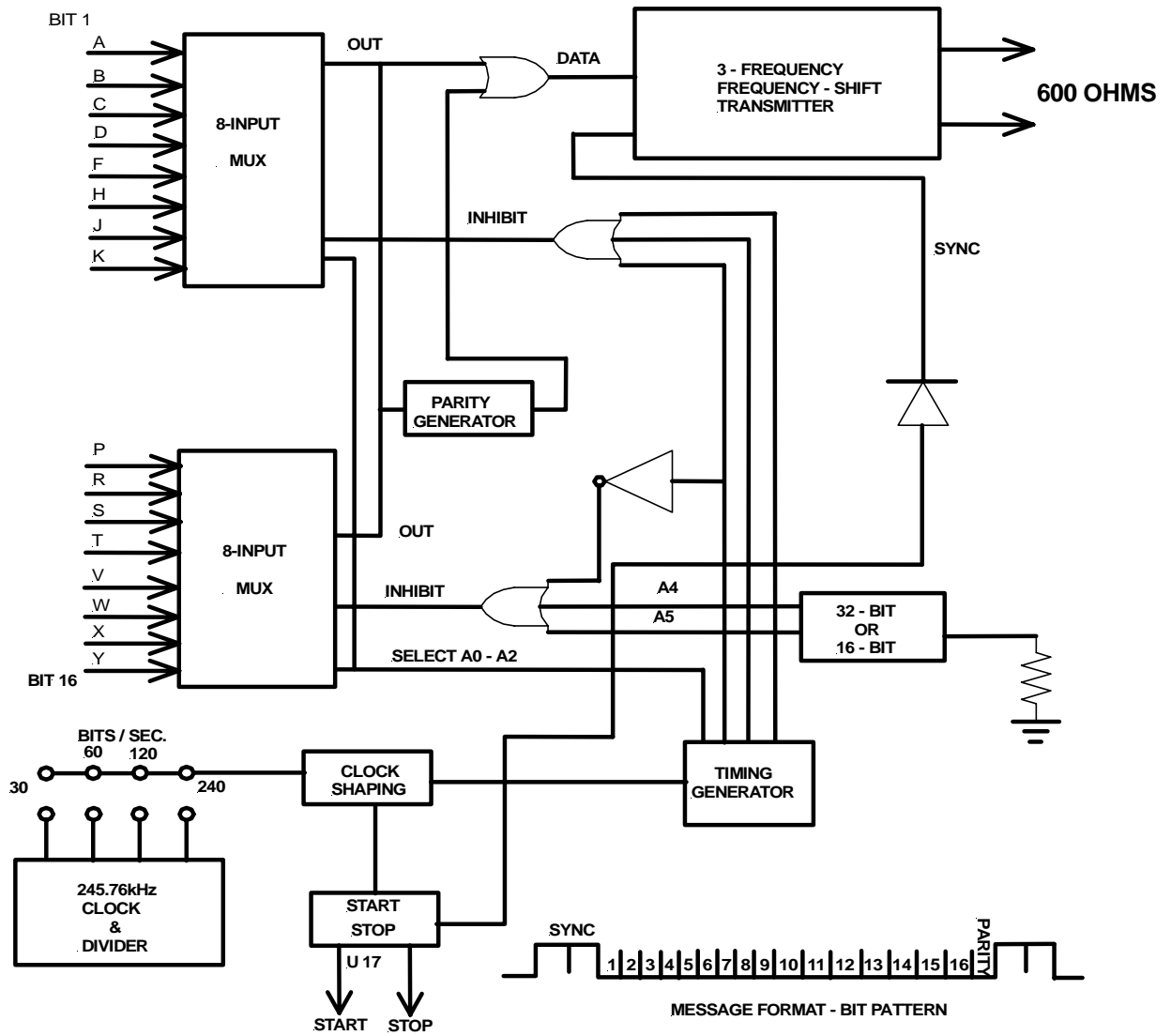
**STATUS/CONTROL INPUTS:** Dry contact standard, CMOS inputs optional.

**DATA RATES:** Jumper selectable; fixed rates of 30, 60, 120, 240, 480, bits per second. Data rates crystal controlled to 0.05%.

**LED indicator:** An indicator on the front panel is provided for each input, also SYNC and DATA indicators.

**POWER REQUIREMENT:** 75 mA at 12 V, module maximum; 40 mA minimum.

## G-7801C PARALLEL - TO - SERIAL TRANSMITTER



### NOTICE

As of the date of this printing, the specifications for the G-7801C in this Instruction Information sheet apply to all G-7801C, except as indicated. Because all Da-Tel products are continually being refined and improved, these specifications are subject to change without notice.