

# 201 Synchronous Data Set Adapter

## PRODUCT DESCRIPTION

The 201 Synchronous Data Set Adapter is a double buffered character interface and controller for Bell 201 Data Set or equivalent. It provides a telecommunication link between the computer and the data set for common carrier switched or leased lines. Either half duplex (2-wire) or full duplex (4-wire) operation can be accommodated. The use of synchronous modems provide higher baud than asynchronous modems over a voice grade facility, thus allowing high-speed terminals to transmit data more efficiently.

Hardware options provide a variety of variable functions. Options include such functions as "SYNC" character detect, character length, parity, and half or full duplex modes. Special character recognition (other than SYNC), block character checking and generation, and code translation is under program control.

## FEATURES

The 201 Synchronous Data Set Adapter consists of a single board controller that performs three general functions:

- Data Set Interface -- Provides control lines to a synchronous modem which is Bell 201 compatible. Full data set control to and from the modem is available.

- I/O Interface -- Contains the necessary logic to communicate with the multiplexor or selector channel bus of an Interdata computer.
- Character Control -- Provides serial-to-parallel and parallel-to-serial conversion, appends and tests parity, provides a match between the serial data stream and the strapped SYNC character and automatically switches to the synchronized mode when a match is detected, provides an interrupt for error conditions in addition to the normal End of Character interrupt.

## OPERATIONAL CHARACTERISTICS

The transmission is serial synchronous by character and bit utilizing a hard wired "SYNC" character for character synchronization. Any six, seven, or eight-bit character code can be used. Operation is half or full duplex. All turn-around timing, control-line coordination, and status reporting is automatically handled by the adapter.

Data Terminal Ready and SYNC Search are controlled by the program for automatic call reception, disconnect, and lockout. The 201 Adapter can also be used in conjunction with an 801 Automatic Dialer Interface for call origination. Ring, Data Carrier and Data Set Ready are brought into the adapter to provide full Data Set status information. The adapter can operate in the interrupt mode to provide maximum program efficiency.

## INTERDATA PRODUCT NUMBER

### M47-000 201 Data Set Adapter

**NOTE:** Data set adapters do not include cables to the data set.

### M10-054 Data Set Cable, 50 feet

**NOTE:** Various options and models are available for Western Electric or equivalent 201-Type Data Sets. The user should insure that the options or model selected are compatible with the selected Interdata adapter and that he understands the programming ramifications, if any. The user can obtain information regarding the data set and network from his local telephone company representative or from the appropriate manuals supplied by the Bell System or the data set manufacturer.

## SPECIFICATIONS

The 201 Synchronous Data Set Adapter is a single printed board.

**Dimensions:** 15 in. x 15 in.  
**Weight:** 3.5 pounds  
**Power:** + 5V @ 2.0A  
- 15V @ .05A  
+ 15V @ .05A

**Data Set Interface** — RS-232 compatible using DIP, with wide hysteresis and line filters to improve noise immunity.

**Mode** — Half or Full Duplex (Strap option).

**Transmission Speed** — Up to 9600 baud. Clocking source within the modem.

**Character Format** — (Strap option)

Character Size: 6, 7 or 8 bits

Parity\*: Odd, Even, None

**SYNC Character Recognition** — Strap option which may include parity, if equipped.

**Data Set Status** —

(generates interrupt if enabled)

Carrier

Data Set Ready

Ring

**Other Status** —

(set at end of character)

Parity Fail

Sync Character Detect

Send and Receive Overflow

\*Parity may be enabled/disabled with a strap option. When parity is enabled, Odd or Even parity is selectable under program control.

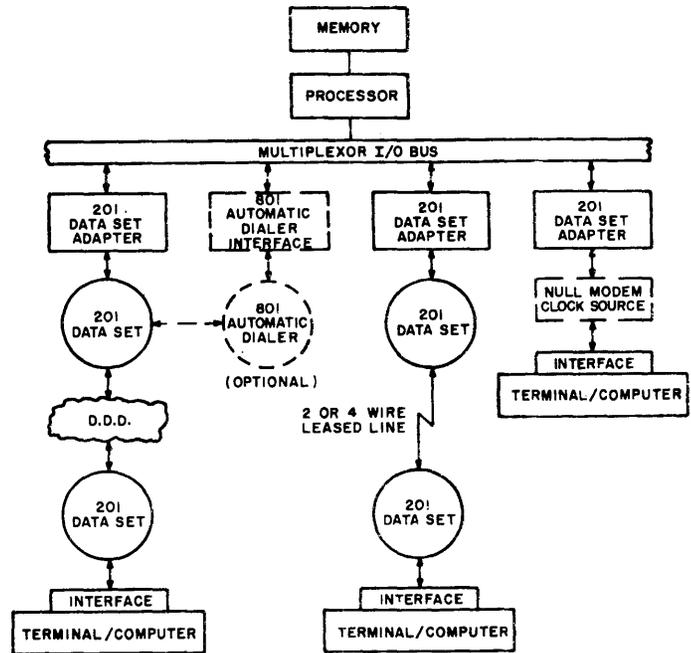
**Data Set Control** —

Request to Send (Half-Duplex Mode)

Data Terminal Ready

Information in this bulletin is not an explicit specification and is subject to change at any time.

# 201 Synchronous Data Set Adapter



## GENERAL DESCRIPTION

The 201 SYNCHRONOUS DATA SET ADAPTER is a double-buffered character interface and controller to any Bell 201 Data Set or equivalent. It provides a telecommunication link between the computer and the data set for common carrier switched or leased lines. Either half duplex (2-wire) or full duplex (4-wire) operation can be accommodated. The use of synchronous modems provide a higher baud than may be realized with asynchronous modems over a voice grade facility, thus allowing high-speed terminals to transmit data in a more efficient manner. Provisions via hardware options provide a variety of variable functions for the user. These options include such functions as "SYNC" character detect, character length, parity and half or full duplex modes. Special character recognition (other than SYNC), block character checking and generation and code translation is under program control.

## OPERATIONAL CHARACTERISTICS

The 201 Synchronous Data Set Adapter consists of a single board controller which performs three (3) general functions:

1. *Data Set Interface* — Provides control lines to a synchronous modem which is Bell 201 compatible.

Full data set control to and from the modem is available.

2. *I/O Interface* — Contains the necessary logic to communicate with the Multiplexor Bus of an INTERDATA computer.
3. *Character Control* — Provides serial to parallel and parallel to serial conversion, appends and tests parity, provides a match between the serial data stream and the strapped SYNC character and automatically switches to the synchronized mode when a match is detected, provides an interrupt for error conditions in addition to the normal End of Character interrupt.

The transmission is serial synchronous by character and bit utilizing a hard-wired "SYNC" character for character synchronization. Any six, seven or eight-bit character code may be used. Operation is half or full duplex. All turn-around timing, control-line coordination and status reporting is automatically handled by the adapter.

Data Terminal Ready and SYNC Search are controlled by the program for automatic call reception, disconnect and lockout. The 201 Adapter may also be used in conjunction with an 801 Automatic Dialer Interface for call origination. Ring, Data Carrier and Data Set Ready are brought into the adapter to provide full Data Set status information. The adapter may operate in the interrupt mode to provide maximum program efficiency.

The information contained herein is intended to be a general product description and should not be utilized as an explicit specification for such product.

## SPECIFICATIONS

The 201 Synchronous Data Set Adapter is a single printed board.

*Dimensions:* 15" x 15"  
*Weight:* 3.5 pounds  
*Power:* + 5V @ 2.0A  
- 15V @ .05A  
+ 15V @ .05A

### *Data Set Interface —*

RS-232 compatible using DIP, with wide hysteresis and line filters to improve noise immunity.

*Mode —* Half or Full Duplex (Strap option).

### *Transmission Speed —*

Up to 9600 baud. Clocking source within the modem.

### *Character Format — (Strap option)*

Character Size: 6, 7 or 8 bits  
Parity\*: Odd, Even, None

### *SYNC Character Recognition —*

Strap option which may include parity, if equipped.

### *Data Set Status —*

(generates interrupt if enabled)

Carrier  
Data Set Ready  
Ring

### *Other Status —*

(set at end of character)

Parity Fail  
Sync Character Detect  
Send and Receive Overflow

\* Parity may be enabled/disabled with a strap option. When parity is enabled, Odd or Even parity is selectable under program control.

### *Data Set Control —*

Request to Send (Half-Duplex Mode)  
Data Terminal Ready

## INTERDATA PRODUCT NUMBER

M47-000

*Note:* The above data set adapters do not include cables to the data set.

M10-054 Data Set Cable, 50 feet

*Note:* There are various options and models available on Western Electric or equivalent 201-Type Data Sets. The user should insure that the options or model he selects are compatible with the selected INTERDATA Adapter and that he understands the programming ramifications, if any. The user may obtain information regarding the data set and network from his local telephone company representative or from the appropriate manuals supplied by the Bell System or the Data Set Manufacturer.