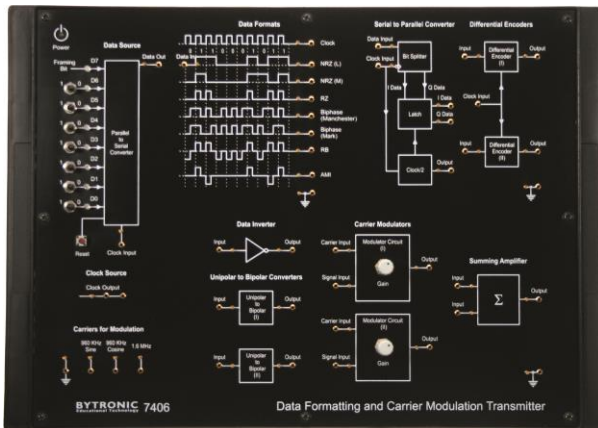


## 7406 – Data Formatting and Carrier Modulation Transmitter



### Key Features:

- Functional blocks indicated via on board mimics
- Test points
- On-board carrier generation circuit (sine waves synchronized to transmitted data)
- On-board in phase and quadrature phase carrier for QPSK modulation
- Different data conditioning formats – NRZ(L), NRZ(M) RZ, biphase (Manchester), biphase (mark), AMI, RB
- FSK, PSK, DPSK, ASK & QPSK and DQPSK carrier modulation
- On-board unipolar to bipolar conversion
- On-board data inverter, clock source and 8-bit data source

The 7406 data formatting and carrier modulation transmitter trainer is a digital communication system which efficiently explains all communication processing steps involved in digital transmission and reception of analogue signals. Various digital modulation techniques such as ASK, FSK, PSK, DPSK, QPSK etc can be implemented using combinations of the 7406 and 7407 trainers.

In order for this unit to work correctly the 7407 carrier demodulation and data reformatting receiver is required.

### Experiments

- Data formats
- Amplitude shift keying
- Frequency shift keying
- Phase shift keying
- Differential phase shift keying
- Quadrature phase shift keying
- Differential quadrature phase shift keying

### Specification

Crystal Frequency	4.096 MHz
Data Formats	NRZ (L), NRZ(M) RZ, AMI, RB Biphase (Manchester), Biphase (Mark),
Carrier Modulation	ASK, FSK, PSK, DPSK and QPSK
On-board carrier	Sine wave Synchronised to transmit data at 1.6 MHz, 960KHz, (0 deg. Phase) 960 KHz (90 deg. Phase)
Test Points	43
Power	110-220V $\pm$ 10% 50/60Hz
Dimensions (mm)	W326, H52, D252
Weight	2Kg (approx.)

## Ordering Information

**Model Number:**

**7406**

*Consists of:*

Data Formatting and Carrier Modulation Transmitter Trainer  
Manual  
Power Cord  
Set of patch cables

**Notes.**

1. *Specification is subject to change without notice.*

2. *All dimensions are in mm unless otherwise stated*

*Bytronic Ltd., reserves the right to make product improvements at any time and without notice and is not responsible for typographical errors. Bytronic Ltd., recognise all product names used herein as trademarks or registered trademarks of their respective holders.*

**Bytronic Limited**

124 Anglesey Court, Towers Business Park,  
Rugeley, Staffordshire, WS15 1UL.

United Kingdom

Tel; +44 (0)3456 123 155 Fax; +44 (0)3456 123 156  
Email: sales@bytronic.net Website: www.bytronic.net