EPROM emulator protocol
14 June 2005

CONVENTIONS:

```
 'X'  ==> Ascii char 'X'
 0x12 ==> Hex value
 12   ==> Decimal value
```

CHECKSUM:

2's complement of the sum of all the data bytes in the packet.
Selected so that the sum of the entire packet = 0.

VERSION REQUEST: ALL H/W AND F/W VERSIONS

```
        _____ _____
       | 'V' | CHK |
       |_____|_____|

       CHK:   Checksum
```

RESPONSE:

```
        _______ _______ _______ _______
       | ERROR | MAJOR | MINOR | HW ID |
       |_______|_______|_______|_______|

       ERROR: Error code.
       MAJOR: Major version
       MINOR: Minor version
       HW ID: Hardware ID (0x4D = 512kbit)
```

GET ID STRING: ALL H/W AND F/W VERSIONS

```
        _____ _____
       | 'G' | CHK |
       |_____|_____|

       CHK:   Checksum
```

RESPONSE:

```
        _______ _____ __...__
       | ERROR | LEN | IDSTR |
       |_______|_____|__...__|

       ERROR: Error code. See list at end of document.
       LEN:   Length of ID string
       IDSTR: ID string
```

BASIC WRITE BLOCK: ALL H/W AND F/W VERSIONS

```
        _____ _______ _______ _______ _  ...  _ _____
       | 'W' | ADDRh | ADDRl | COUNT |   DATA  | CHK |
       |_____|_______|_______|_______|_  ...  _|_____|

       COUNT: Number of DATA bytes - 1 (up to 255 if RTS/CTS used, max 15 if not)
       ADDRh: Base address high byte
       ADDRl: Base address low byte
       DATA:  Data to write
       CHK:   Checksum
```

RESPONSE:

```
        _______ _______
       | ERROR | COUNT |
       |_______|_______|

       ERROR: Error code.
              0x00 = OK (rest of packet sent)
              0x01 = Checksum invalid (only result byte sent)
       COUNT: Number of DATA bytes written - 1
```

SET MODE: ALL H/W AND F/W VERSIONS

```
        _____ ______ ________ _____
       | 'M' | MODE | DEVICE | CHK |
       |_____|______|________|_____|

       MODE:  Mode identifier
              0x00 = LOAD
              0x01 = RUN

       DEVICE:      Device code
              0x00 = 2764  *
              0x01 = 27128
              0x02 = 27256
              0x03 = 27512

       CHK:   Checksum
```

* 2764 = 27128, but data must be loaded twice (as if data had been appended to itself) if a 2764 is being emulated.

RESPONSE:

```
        _______
       | ERROR |
       |_______|

       ERROR: Error code.
```

Command 0x00: NOP (ignored, no response). Can be used to re-synchronize the communications link.

```
ERROR CODES:
       0x00 = OK                      (complete packet sent)
       0x01 = Checksum invalid        (only result byte sent)    [ ANY ]
       0x02 = Unsupported command     (only result byte sent)    [ ANY ]
       0x03 = Invalid mode identifier (only result byte sent)    [ 'SET MODE' ONLY ]
       0x04 = Invalid device code     (only result byte sent)    [ 'SET MODE' ONLY ]
```