Macintosh 7 & 8 bit File Transfer Format - Protocol Independent

Here is a description of the Hqx7 (7 bit format as implemented in BinHex
4.0) and Hqx8 (8 bit format) formats for Macintosh Application and File
transfers. The main features of the formats are:
1) Error checking even using ASCII download (Hqx7 & Hqx8)
2) Compression of repetitive characters   (Hqx7 & Hqx8)
3) 7 bit encoding for ASCII download   (Hqx7)

HQX Format Description (This is not intended to be a programmer's reference).

The format is processed at three different levels:

1) 8 bit encoding of the file:

        Byte: Length of FileName (1->63)
        Bytes: FileName ("Length" bytes)
        Byte: Version
        Long: Type
        Long: Creator
        Word: Flags (And $F800)
        Long: Length of Data Fork
        Long: Length of Resource Fork
        Word: CRC
        Bytes: Data Fork ("Data Length" bytes)
        Word: CRC
        Bytes: Resource Fork ("Rsrc Length" bytes)
        Word: CRC

2) Compression of repetitive characters.

        ($90 is the marker, encoding is made for 3->255 characters)

        00 11 22 33 44 55 66 77   ->   00 11 22 33 44 55 66 77
        11 22 22 22 22 22 22 33   ->   11 22 90 06 33
        11 22 90 33 44   ->   11 22 90 00 33 44

3) 7 bit encoding (Hqx7 only).

   The whole file is considered as a stream of bits. This stream will

be divided in blocks of 6 bits and then converted to one of 64
characters contained in a table. The characters in this table have
been chosen for maximum noise protection.
The format will start with a ":" (first character on a line) and
end with a ":". There will be a maximum of 64 characters on a line.
It can be preceeded by comments for novice users.

Table:
!"#$%&'()*+,-012345689@ABCDEFGHIJKLMNPQRSTUVXYZ[`abcdefhijklmpqr

Comment:
(This file must be converted with BinHex 4.0)

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