

QR Switches (formatted into the ^FD field data)

There are 4 switch fields that are allowed, some with associated parameters and some without. Two of these fields are always present, one is optional, and one's presence depends on the value of another. The switches are always placed in a fixed order. The four switches, in order are:

Mixed mode <D>ijjxx,	Optional (note that this switch ends with a comma “,“)
Error correction level <H, Q, M, L>	Mandatory
Data input <A, M>,	Mandatory (note that this switch ends with a comma “,“)
Character Mode <N, A, Bdddd, K>	Conditional (present if data input is M)

Mixed mode (Optional)

= D – allows mixing of different types of character modes in one code.

ii = code No. – a 2 digit number in the range 01 to 16

Value = subtracted from the Nth number of the divided code (must be two digits).

jj = No. of divisions – a 2 digit number in the range 02 to 16

Number of divisions (must be two digits).

xx = parity data – a 2 digit hexadecimal character in the range 00 to FF

Parity data value is obtained by calculating at the input data (the original input data before divided byte-by-byte through the EX-OR operation).

, = the mixed mode switch, when present, is terminated with a comma

Error correction level (Required)

= H, Q, M, or L

H = ultra-high reliability level

Q = high reliability level

M = standard level (default)

L = high density level

Data input (Required)

= A or M followed by a comma

A = Automatic Input (default). Character Mode is not specified.

Data character string JIS8 unit, Shift JIS. When the input mode is Automatic Input, the binary codes of 0x80 to 0x9F and 0xE0 to 0xFF cannot be set.

M = Manual Input. Character Mode must be specified.

Two types of data input mode exist: Automatic (A) and Manual (M). If A is specified, the character mode does not need to be specified. If M is specified, the character mode must be specified.

Character Mode (Required when data input = M)

= N, A, Bxxxx, or K

N = numeric: digits 0 – 9

A = alphanumeric: digits 0 – 9, upper case letters A – Z, space, and \$%*+-.:/ (45 characters)

Bxxxx = 8-bit byte mode. The ‘xxxx’ is the number of characters and must be exactly 4 decimal digits.

This handles the 8-bit Latin/Kana character set in accordance with JIS X 0201 (character values 0x00 to 0xFF).

K = Kanji — handles only Kanji characters in accordance with the Shift JIS system based on JIS X 0208. This means that all parameters after the character mode K should be 16-bit characters. If there are any 8-bit characters (such as ASCII code), an error occurs.

The data to be encoded follows immediately after the last switch.