

Application Note: R400 Custom Auto strings A&D and Gedge

Application:

The R400 Series Indicators support multiple standard output strings that can also be customised in the case where the PC or remote that it has to connect to requires a different format. This custom format string can be defined to suit the format of another manufactures indicator.

The following pages are sample setups for an R400 indicator to simulate certain strings. Note the baud and bit settings have to be set to suit the application - Gedge and A&D are different from the Rinstrum standard of 9600 baud, No Parity, 8 data bits and 1 stop bit, refer to the manuals for details. Details regarding these format tokens, ASCII tables, serial hardware and general serial setup will be found the reference manual for the version of software that is being used.

A&D standard string:

A&D Stream String:

<HDR1>,<HDR2>,SWWWWWWU<CR><LF>

HDR1 = Header 1 – OL (over/under load), ST (stable) or US (unstable)

HDR2 = Header 2 – GS (Gross mode), NT (Net mode) or TR (tare data)

(Note TR not supported in R420 main display switching, only as a fixed output)

< , > = comma 2CHEX

S = Sign either + or -

W = 7 Character weight data including the decimal point. If no decimal point then last character is a period. Data sent with leading zero's.

R420 String for A&D stream:

HEX: \BE\FA\2C\FB\53\2C\9E\A4\AA\D7\20\74\0D\0A

ASCII: 190,250,044,251,083,044,158,164,170,215,032,116,013,010,000

NOTE:

(1) The R420 does not have a direct token for GS, NT and TR so as the weight sent will only be Gross or Net then the token \FB (251) will show G or N according to the displayed weight. In this example the next character is fixed to S \53 (083), refer to ASCII table if a change is required.

(2) Due to the format of A&D units been two digit and Rinstrum units three digits the units transmitted have to be entered manually in the string. Most remotes will ignore the units but some PC software will require it. \20\74 (032,116) will transmit <SPC>t for units of t. use the following for other types of displayed units \6B\67 (107,103) for kg or \69\62 (105,098) for lb other unit types refer to ASCII table.

Gedge:

Gedge C1 string:

<STX>WWWWWWW<ETX>

<STX> = start character 02HEX

W = these eight characters can include a decimal point and a leading minus sign.

E.g. (00000300) with leading zeroes would represent 300 units.

(00003.00) is another acceptable string, this time with a decimal point instead of one of the characters.

(-0003.00) Here we have the weight with the sign attached.

<ETX> = end character 03HEX

R420 string for C1 format;

HEX: \02\9C\A4\A6\AA\BE\D7\03

ASCII: 002,156,164,166,170,190,215,003,000

Gedge C2 string:

<STX>WWWWWWW<S1><S2><S3><S4><SPC><SPC><ETX>

<STX> = as for C1 string

W = as for C1 string

S1 = Can be G or N to indicate Gross or Net respectively T (tare) not supported by R420.

S2 = Can be M or S to indicate Motion or Stable respectively.

S3 = Can be I, O or U to indicate In scale, Over range or Under range respectively.

S4 = Set to Z representing gross zero or a space to represent not gross zero.

<SPC> = Space character (ASCII 20H).

<ETX> = as for C1 string

R420 string for C2 format;

HEX: \02\9C\A4\AA\BE\D7\FB\F9\F8\E8\20\20\03

ASCII: 002,156,164,166,170,190,215,251,249,248,232,032,032,003,000

Gedge C3 string:

<STX>GGGGGGGGTTTTTTTTNNNNNNNN<S1><S2><S3><S4><SPC><SPC><ETX>

<STX> = as for C1 string

G = Gross weight

T = Tare weight

N = Net weight

S1 = Can be G or N to indicate Gross or Net respectively T (tare) not supported by R420.

S2 = Can be M or S to indicate Motion or Stable respectively.

S3 = Can be I, O or U to indicate In scale, Over range or Under range respectively.

S4 = Set to Z representing gross zero or a space to represent not gross zero.

<SPC> = Space character (ASCII 20H).

<ETX> = as for C1 string

R420 string for C3 format;

HEX: \02\9C\A4\AA\BE\D8\E1\D9\AF\D7\FB\F9\F8\E8\20\20\03

ASCII: 002,156,164,166,170,190,215,255,217,175,215,251,249,248,232,032,032,003,000

For more information refer to the Reference Manual for this product