COLOURBYX

Applies colours to 3D points according to their x coordinates. Colours can be applied by value bands, by quantity bands, minimum and maximum limits, and regular intervals (more meaningful with COLOURBYZ).

Example 1: Points coloured by 7 value bands (each band has the same width)

Example 2: As example 1, but with 3 value bands

Example 3: Points coloured by minimum and maximum limits

Example 4: Points coloured by 7 quantity bands (i.e. roughly same number of points in each band)

Example 5: As example 4, but with 3 quantity bands

(N.B. Vertical lines and annotation have been added to show edge of each band and band parameters. COLOURBYX does not create these lines, but it does display band data in the command text window.)
COLOURBYY

Applies colours to 3D points according to their y coordinates. Colours can be applied by value bands, by quantity bands, minimum and maximum limits, and regular intervals (more meaningful with COLOURBYZ).

Example 1: Points coloured by 7 value bands (each band has the same height)

Example 2: Points coloured by 7 quantity bands (i.e. roughly same number of points in each band)

Example 3: Points coloured by minimum and maximum limits

Example 4: As example 1, but with 3 value bands

Example 5: As example 2, but with 3 quantity bands

(N.B. Horizontal lines and annotation have been added to show edge of each band and band parameters. COLOURBYY does not create these lines, but it does display band data in the command text window)
COLOURBYZ (1 of 3) 

Applies colours to 3D points, 2D polylines, 2D lines and 2D solids according to their z coordinates. Colours can be applied by value bands, by quantity bands, minimum and maximum limits, and regular intervals (useful for contour lines).

Before

Example 1: Points coloured by 7 value bands (each band has the same elevation thickness)

Data returned by Example 1:
Band 1: 7.936 to 8.700
Band 2: 7.171 to 7.936
Band 3: 6.407 to 7.171
Band 4: 5.643 to 6.407
Band 5: 4.879 to 5.643
Band 6: 4.114 to 4.879
Band 7: 3.350 to 4.114

Model is too flat in Example 2 for 7 or 6 quantity bands

Example 2: Points coloured by 5 quantity bands (i.e. roughly same number of points in each band)

Example 3: Points coloured by minimum and maximum limits

Example 4: As example 1, but with 3 value bands

Data returned by Example 4:
Band 1: 6.917 to 8.700
Band 2: 5.133 to 6.917
Band 3: 3.350 to 5.133

Example 5: As example 2, but with 3 quantity bands

Lower limit 4.00
Upper limit 7.50
COLOURBYZ (2 of 3) Applies colours to 3D points, 2D polylines, 2D lines and 2D solids according to their z coordinates. Colours can be applied by value bands, by quantity bands, minimum and maximum limits, and regular intervals (useful for contour lines).

Before

Example 1: 2D polylines coloured by 7 value bands (each band has the same elevation thickness)

Data returned by Example 1:
Band 1: 7.786 to 8.500
Band 2: 7.071 to 7.786
Band 3: 6.357 to 7.071
Band 4: 5.643 to 6.357
Band 5: 4.929 to 5.643
Band 6: 4.214 to 4.929
Band 7: 3.500 to 4.214

Example 2: As example 1, but with 3 value bands

Data returned by Example 2:
Band 1: 6.633 to 8.500
Band 2: 5.167 to 6.633
Band 3: 3.500 to 5.167

Example 3: 2D polylines coloured by minimum and maximum limits

Example 5: 2D polylines coloured by regular intervals

Example 6: 2D polylines coloured by smaller regular intervals and raised interval origin

Lower limit 4.00
Upper limit 7.50

1.0 interval value (for major contours)
Interval origin at 5.0 units

0.5 interval value (for major contours)
Interval origin at 7.0 units
COLOURBYZ (3 of 3) Applies colours to 3D points, 2D polylines, 2D lines and 2D solids according to their z coordinates. Colours can be applied by value bands, by quantity bands, minimum and maximum limits, and regular intervals (useful for contour lines)

Before
(Solids have z coordinates based on average z coordinates of each individual source 3D triangle)

Example 1: 2D solids coloured by 7 value bands to identify higher and lower areas within model

Example 2: As example 1, but with 3 value bands

Before
(Solids have z coordinates based on maximum slope of each individual source 3D triangle)

Example 3: 2D solids coloured by 7 quantity bands to identify steeper and flatter areas within model

Example 4: 2D solids coloured by minimum and maximum limits to identify areas which are steeper or flatter than limits

Lower limit 5.0 (i.e. 5.0% or 1 in 20)
Upper limit 12.5 (i.e. 12.5% of 1 in 8)
COLOURBYCHART  

Example 1: Default colour charts created for 'value' option (same for 'quantity' option) for each 'number of bands' value (from 7 to 2)

- Colour by Value Bands
  - Band 1
  - Band 2
  - Band 3
  - Band 4
  - Band 5
  - Band 6
  - Band 7

COLOURBYSET

Example 2: Default colour charts created for 'interval' and 'limits' options

- Colour by Regular Intervals
  - On Interval (+ve)
  - Off Interval (+ve)
  - Origin
  - Off Interval (−ve)
  - On Interval (−ve)

- Colour by Minimum and Maximum Limits
  - Above Maximum
  - Within Range
  - Below Minimum

Example 3: Default colour chart

- Colour by Quantity Bands
  - Band 1
  - Band 2
  - Band 3

Example 4: Reverse order of colours

- Colour by Quantity Bands
  - Band 1
  - Band 2
  - Band 3

Example 5: Completely different colours

- Colour by Quantity Bands
  - Band 1
  - Band 2
  - Band 3

(i) in COLOURBYSET select the coloured rectangles above, then
(ii) in COLOURBYZ select the solid objects below, 'quantity' option and 3 bands

COLOURBYRESSET

Resets colours to their default values. It will not affect any objects already coloured by COLOURBY... commands.