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HANDY CAD MARK Ⅱ Advance Command

Advanced Commands

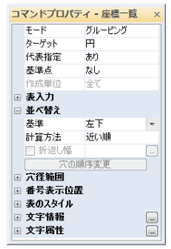
The Advance Command provides highly demanded features that could not be addressed by standard CAD commands.

These include creating circular coordinate tables and summary tables, various corner processing functions, and shape correction commands to adjust coordinate discrepancies when importing other drawings.

■coordinate-related command group.

Coordinate List Creates a list of coordinates for specified points, circles, or symbols. By adding prefixes and sequential numbers, you can match the list with the corresponding elements.

If circles or symbols are selected as targets, the table can be categorized by diameter or symbol type. Additionally, you can adjust the table width and choose whether to include a remarks column.

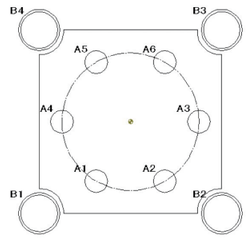


φ10 6個

番号	X座標	Y座標	備考
A1	−15	−25.98	
A2	15	−25.98	
A3	30	0	
A4	−30	0	
A5	−15	25.98	
A6	15	25.98	

φ18 4個

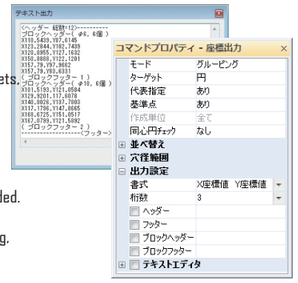
番号	X座標	Y座標	備考
B1	−40	−40	
B2	40	−40	
B3	40	40	
B4	−40	40	



Coordinate Output Generates text output of the coordinates for specified points, circles, or symbols based on a designated format, with optional headers and footers.

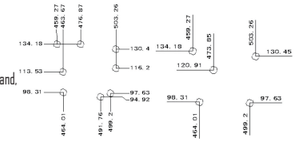
When circles or symbols are selected as targets, block headers and footers can be added for each diameter or symbol category. The coordinates of the selected targets are initially displayed in a text output dialog.

In this dialog, you can edit the content as needed. Once editing is complete, pressing the save button will open a coordinate list output dialog, where the file can be exported.



Coordinate Dimensioning / Orthogonal Coordinates

Each command annotates the dimensions of the specified points, circles, or symbols. By specifying a distribution point, the direction of the leader line can be designated.In the coordinate dimensioning command, if the text overlaps, the leader line is bent to adjust and ensure that the coordinate values do not overlap.



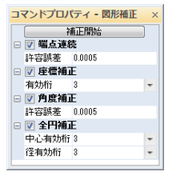
■ Shape Correction

It can correct endpoint errors or angular deviations (horizontal/vertical) in line segments when importing drawings in other formats, as well as adjust misaligned endpoints of continuous elements.

Endpoint Continuity If the distance between the endpoints of two elements is smaller than the specified tolerance, the elements are recognized as continuous, and their endpoints are corrected to the same coordinates.

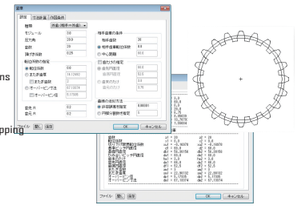
Coordinate Correction For example, if the significant digits are set to 5, the value is rounded by rounding the 6th decimal place, and the coordinate values are adjusted.

Angle Correction If the angle of the line segmen is within the specified angular error range relative to the horizontal/vertical, the angle will be corrected based on the starting point.
※Curves and elliptical elements are excluded from processing.



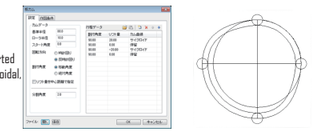
■GEAR

In the dialog, input the specifications and drawing conditions for gears and place them onto the drawing.
The types of gears supported include external teeth, internal teeth, and racks. Along with specifying the pitch coefficient, it also supports other methods such as overlapping tooth thickness and backlash correction.



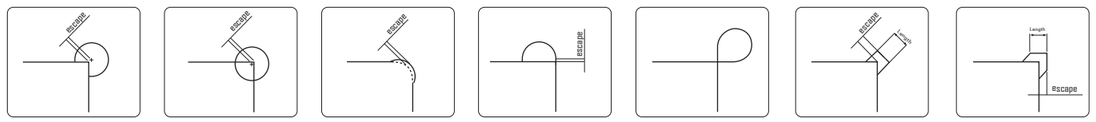
■ Plate Cam

On the dialog, enter the specifications for the plate cam and place it in the drawing. The types of cam curves supported include Cycloidal, Cycloid, Constant Speed, Modified Trapezoidal, Modified Sine, and Modified Constant Speed.



■ Corner processing

You can select a corner processing type from seven different shapes.
Corner expansion or contraction is also possible by specifying options.



Command List.

- **List of coordinates** Create a coordinate list of points/circles/symbols
- **tabulation table** Create a Circle/Symbol Aggregation Chart
- **coordinate inch method** Create coordinate dimension lines for points/circles/symbols
- **orthogonal coordinate** Create a point/circle/symbol orthogonal coordinate dimension line
- **coordinate output force** Text output of point/circle/symbol coordinate data
- **Leader Coordinates** Create point/line/circle/symbol drawer coordinates
- **Corner Processing** Corner processing is done in the specified shape
- **Symbol Escape** Create the shape of the navel escape
- **Circular Placement** Draw the specified number of circles on the reference circle
- **Shape Correction** the angle of an error or line segment between the endpoints of an element (horizontal/vertical) Calibration
- **Origin Entry** Enter the origin marker
- **Area Analysis** Search Loop Analysis of information in a recognized area
- **Gear** Create involute gears
- **Plate Cam** Create a plate cam
- **Trace** We're going to figure it out based on a trace draft
- **Hole Placement** Place the hole arrangement circle/symbol in the specified coordinate
- **Hole Editing** Change the diameter of the placed circle, fill in additional concentric circles, delete/move/copy

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HANDY CAD MARK Ⅱ Raster Application

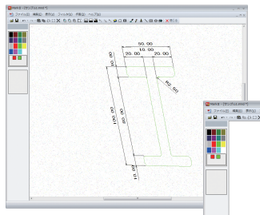
Raster application

By using the raster application, it is possible to directly edit images (raster) such as maps and illustrations on HandyCADMark. Noise commonly generated during scanning or distortion caused by misalignment of the original paper can be easily corrected with powerful correction and filtering functions.
Additionally, by utilizing the vector conversion feature, the images can be used as CAD drawings.

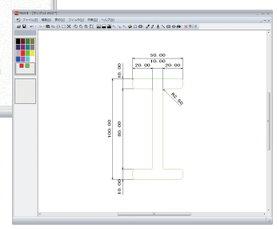
▶ Correct images with noise removal and trapezoidal correction. ▶ Equipped with a wide range of filter functions as standard. ▶ Utilize as CAD drawings through vector conversion. ▶ A set of commands specialized for images.

■ Correct images with noise removal and trapezoidal correction.

It is possible to easily correct distortions caused by noise during scanning or misalignment of the original paper through simple operations.

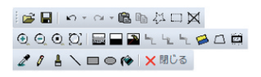


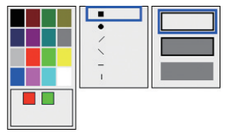
※The image below shows the result of noise removal + trapezoidal correction.



■ A set of commands specialized for images.

We offer a variety of CAD commands specialized for images, including features like partial copy to extract a portion of an image and composition to combine multiple images into one. Additionally, the raster editing screen provides drawing tools such as line segments and text, along with unlimited Undo/Redo support, allowing for stress-free workflow.





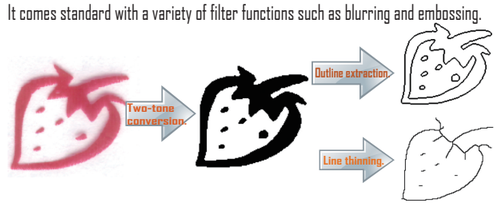
■ Filter function

Thinning:	Reduces the thickness of lines on the image to a width of 1 pixel.
Contour Extraction:	Extracts the contours of lines in the image.
Dilation Processing:	Thickens lines (towards the right). Effective when the image is faded.
Noise Generation:	Generates random noise.
Noise Removal:	Removes noise using a median filter.
Blurring:	Applies a blur effect. Effective when the image is faded.
Edge Extraction:	Performs differential operations to emphasize edge regions.
Embossing:	Applies embossing (edge enhancement).
Data Inversion:	Inverts the numerical values representing the image data.
Vertical Flip:	Flips the image upside down.
Horizontal Flip:	Flips the image left to right.
Rotation Processing:	Rotates the image by a specified angle.
Color Count Adjustment:	Changes the number of bits per pixel without changing the number of pixels in the image.
Resize:	Enlarges or reduces the image size.
Brightness Adjustment:	Adjusts brightness, contrast, and gamma values.
Trapezoidal Correction:	Transforms a trapezoid defined by four specified points into a rectangle.
Four-Point Correction:	Maps an image onto a drawing by specifying four points on the raster and their corresponding points on the drawing.

Equipped with a wide range of filter functions as standard.

■ Standard with a wide range of filter functions.

It comes standard with a variety of filter functions such as blurring and embossing.



■Use as a CAD graphic in vector conversion

Manual vector tracing and raster-to-vector conversion that were previously done with expensive software are now possible with simple operations.

Basic Specifications

- **Image Type** TIFF、JPEG、PNG、BMP
- **Color Count / Number of Colors** 1-bit (2 colors) 4-bit (16 colors) 8-bit (256 colors) 16-bit (32,768 colors) 24-bit (16.7 million colors)
- **Interpolation Method** Black Priority,White Priority,Nearest Neighbor Method Linear Interpolation,Bicubic Interpolation
- **Vector Transformation** Centerline Tracking Shape,Contour Tracking Shape ※After conversion, all become polylines
- **image drawing** dots, brushes, line segments, rectangles, ellipses, strings, fill-out
- **CAD Commands** Move, copy, partial copy, alignment, 4-point correction, synthesis, vector conversion