

JavaScript runlist object definitions

In the convenience functions, or when creating an imposition runlist using nothing but JavaScript objects directly, the following objects can be used.

The "sheet_defs" array

A collection of all defined sheets and its slots, either from the sheet config or dynamic sheets. The `"sheet_defs"` array can contain sheet definition objects. A sheet definition object can contain the following properties:

"id"

- `"id"`: String ID, can be used to reference a sheet definition by name. This property is required.


"rect"

- `"rect"`: A rectangle that defines the size of the sheet. See ["rect"](#) object.

"slots"

- `"slots"` is an array of [slot](#) objects.

```
"sheet_defs":  
  [  
    {  
      "id": "",  
      "rect": {  },  
      "slots":  
        [  
          {  }  
        ]  
    }  
  ],
```

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The "sheets" array

A collection of all generated sheets including their placements. The `"sheets"` array contains sheet objects. A sheet object can contain the following properties:

"sheet_def"


- `"sheet_def"`: Index or string id of reference sheet definition.

"placements"

- `"placements"`: An array of ["placements"](#) objects.

Example

```
"sheets":
[
  {
    "sheet_def": 0,
    "placements":
    [
      { }
    ]
  }
]
```

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The "defaults" object

The "defaults" object is optional. If certain properties are defined here, they will be used if no specifications have been made in the "sheet_defs" array. The `"defaults"` object can contain the following objects:

"unit"

- The default unit for the imposition configuration. All possible `"unit"` values are listed [here](#). Default: "pt".

"slots"

- An array with slot definitions. All `"slots"` properties are listed [here](#).


"shingling"

- Default settings for automatic shingling. Depending on the values specified in the shingling object the engine calculates the value for the shingling automatically. The `"shingling"` object can contain the following properties:
- `"unit"` : see [Unit](#). Default: inherited, "pt"
- `"method"` : String, one of `"shift"`, `"scale"`, `"scale_proportional"`. Default: "scale".
- `"direction"` : String, one of `"inwards"`, `"outwards"`, `"both"`. Default: "inwards"
- `"increment"` : Number. Default: 0
- `"book_size"` : Integer. Default: 0
- `"staple_size"` : Integer. Default: 0

Note: A more detailed explanation of the shingling parameters can be found [in this article](#).

```
"defaults":
{
  "unit": "mm",
  "slots":
    { },
  "shingling": {
    "unit" : "mm",
    "method" : "scale",
    "direction" : "inwards",
    "increment" : 0.12,
    "book_size" : 16,
```

```
    "staple_size" : 4
  }
},
```

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Common objects and strings

"rect" object

Definition of a rectangle. It can be part of the ["sheet_defs"](#) array and of a [slot object](#). The `"rect"` object contains the following properties:

- `"unit"` : see [Unit](#). The unit for all other measurements. Optional. Default: inherited, "pt".
- `"left"` : Number. The left hand side of the rectangle. Default: 0.
- `"bottom"` : Number. The bottom side of the rectangle. Default: 0.
- `"right"` : Number. The right hand side of the rectangle. Default: 0.
- `"top"` : Number. The top side of the rectangle. Default: 0.
- `"width"` : Number. Optional. Overwrites `"right"` with `"left + width"` if present.
- `"height"` : Number. Optional. Overwrites `"top"` with `"bottom + height"` if present.

Example

```
"rect" :
{
  "bottom" : 28.5,
  "height" : 114,
  "left" : 552.5,
  "width" : 171
},
```

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"trim_box" object

Definition of an optional rectangle. It can be part of the ["sheet_defs"](#) array only. The `"trim_box"` object contains the following properties:

- `"unit"`: see [Unit](#). The unit for all other measurements. Optional. Default: inherited, "pt".
- `"left"`: Number. The left hand side of the rectangle. Default: 0.
- `"bottom"`: Number. The bottom side of the rectangle. Default: 0.
- `"right"`: Number. The right hand side of the rectangle. Default: 0.
- `"top"`: Number. The top side of the rectangle. Default: 0.
- `"width"`: Number. Optional. Overwrites `"right"` with `"left + width"` if present.
- `"height"`: Number. Optional. Overwrites `"top"` with `"bottom + height"` if present.

Example

```
"trim_box" :
{
  "left":3,
  "bottom":3,
  "width": 297,
  "height": 210
},
```

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"crop_marks" object


The `"crop_marks"` object can be part of a [slot object](#). It can contain the following properties:

- `"unit"`: see [Unit](#). Default: inherited, "pt"
- `"left_bottom"`: see [Crop Mark Direction](#). Default: "N".
- `"left_top"`: see [Crop Mark Direction](#). Default: "N".

- `"right_bottom"` : see [Crop Mark Direction](#). Default: "N".
- `"right_top"` : see [Crop Mark Direction](#). Default: "N".
- `"length"` : Number. Default: 10
- `"gap"` : Number. Default: 3
- `"width"` : Number. Default: 1
- `"color_space"` : see [Color Space](#). Default: "ALL"
- `"spot_name"` : Name of the spot color
- `"color_components"` : Array of doubles (in percent). Default: [0,0,0,100]
- `"tint_value"` : double [0,100]. Default: 100

Example

```
"crop_marks":
{
  "unit": "pt"
  "left_bottom": "N",
  "right_bottom": "N",
  "right_top": "N",
  "left_top": "N",
  "length": 10,
  "width": 0.04,
  "gap": 2,
  "color_space": "SPOT",
  "spot_name": "Green",
  "color_components": [100,0,100,0],
  "tint_value": 100
},
```

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"text" object


The `"Text"` object can be part of a [slot object](#). It can contain the following properties:

- `"unit"` : see [Unit](#). Default: inherited, "pt"
- `"font"` : String. Default: "Helvetica"
- `"size"` : Number. Default: "12"
- `"color_space"` : see [Color Space](#). Default: "ALL"
- `"color_components"` : Array of doubles (in percent). Default: [0,0,0,100]

- `"spot_name"` : Name of the spot color (if "color_space": "SPOT")
- `"tint_value"` : double [0,100]. Default: 100

Example

```
"text" :
{
  "color_components" : [0,0,0,100],
  "color_space" : "ALL",
  "font" : "Helvetica",
  "size" : 8,
  "unit" : "pt"
},
```

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"bleed" object

The definition of where (and how much) bleed is required for a Rectangle. The `"bleed"` object can be part of a [slot object](#). It can contain the following properties:

- `"unit"` : see [Unit](#). The unit for all other measurements. Optional. Default: inherited, "pt".
- `"left"` : Number. Bleed required on the left. Default: 0.
- `"bottom"` : Number. Bleed required at the bottom. Default: 0.
- `"right"` : Number. Bleed required on the right. Default: 0.
- `"top"` : Number. Bleed required at the top. Default: 0.

Example

```
"bleed" :
{
  "bottom" : 2.5,
  "left" : 2.5,
  "right" : 2.5,
  "top" : 2.5
},
```

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"clip_mode" string

Defines how imposed pages are clipped. The `"clip_mode"` string can be part of a [slot object](#). It can contain the following values:

- `"S"`: Slot. Imposed pages are clipped at the slot boundaries
- `"P"`: Positioned page. Imposed pages are clipped according to their TrimBox plus bleed as set up in the slot.
Default: "P"

Example

```
"clip_mode": "P",
```


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"rotation" string

Page rotates anti-clockwise (value, basic unit of measurement: degrees). The `"rotation"` string can be part of a [slot object](#). It can have the following values: `0`, `90`, `180`, `270`

Example

```
"rotation" : 270,
```

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"scale" object

The `"scale"` object can be part of a [slot object](#). It can be a number or it can contain the following properties:

- `"horizontal"`: Double
- `"vertical"`: Double

Example 1


```
"scale": {"horizontal": -1, "vertical": -1 },  
// the page is scaled proportionally to fit the slot  
// default if no "scale" object is set
```

Example 2


```
"scale": 25,  
// affects the corresponding scaling
```

Example 3

```
"scale": 100,  
// no scaling
```

Example 4

```
"scale" : 0,  
// the page is scaled unproportionally to fill the slot
```

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"binding_margin" string

Binding margin defines the edge on which the creep should be equalized. It is required if shingling shall be applied to a slot and must be set to a value other than "N" in this case.

The `"binding_margin"` string can be part of a [slot object](#). It can have the following values:

- `"L"`: Left
- `"R"`: Right
- `"T"`: Top
- `"B"`: Bottom
- `"N"`: None

Example

```
"binding_margin": "N",
```

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"placement" string

Direction of the margin. The `"placement"` string can be part of a [slot object](#). It can have the following values:

- `"LB"` : align left bottom
- `"LC"` : align left center
- `"LT"` : align left top
- `"CT"` : align center top
- `"RT"` : align right top
- `"RC"` : align right center
- `"RB"` : align right bottom
- `"CB"` : align center bottom
- `"CC"` : align center, i.e. both vertically and horizontally

Example

```
"placement": "CC",
```

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Slot object

A slot object is used in the `"sheet_defs"` array and in the `"defaults"` object (optional). It can contain the following properties:

- `"id"` : String.
- `"isolated"` : Boolean
- `"rect"` : see ["rect"](#)
- `"crop_marks"` : see ["crop_marks"](#)
- `"text"` : see ["text"](#)
- `"bleed"` : see ["bleed"](#)
- `"clip_mode"` : see ["clip_mode"](#)
- `"rotation"` : see ["rotation"](#)
- `"scale"` : see ["scale"](#)
- `"binding_margin"` : see ["binding_margin"](#)
- `"bleed_shingling"` : Boolean
- `"placement"` : see ["placement"](#)

Example

```
{
  "id": "left",
  "isolated": true,
  "rect" : {
    "bottom" : 274,
    "height" : 226,
    "left" : 5.299999999999998,
    "width" : 5
  },
  "bleed": {
    "left": 0,
    "bottom": 0,
    "right": 0,
    "top": 0
  },
  "crop_marks" : {
    "color_components" : [ 100, 0, 100, 0 ],
    "color_space" : "SPOT",
    "gap" : 2,
    "left_bottom" : "B",
    "left_top" : "N",
    "length" : 5,
    "right_bottom" : "RB",
    "right_top" : "R",
    "tint_value" : 100,
    "unit" : "mm"
  },
  "text" :
  {
    "font" : "Helvetica",
    "size" : 8,
    "unit" : "pt"
  },
  "scale" : 100,
  "rotation": 0,
  "clip_mode": "P",
  "placement": "CC",
  "bleed_shingling": false,
  "binding_margin": "N"
},
```

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Placements object

"placements" is an array of placements objects. It is used in the "sheets" array. A placements object can contain the following properties:

- "slot": String or number. Id or index of slot to be used for placement.
- "page": Number, zero based. Page index to be placed in slot.
- "text": A text to be placed in the slot. String.
- "shingling": see [Shingling](#). If a "value" property is defined automatic shingling is disabled and value is used directly.

Example

```
{
  "slot": "middle",
  "page": 0,
  "text": "This is text",
  "shingling":
    {
      "unit": "mm",
      "value": 5
    }
},
```

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Shingling object

The "shingling" object can be part of the "placements" object. It can contain the following properties:

- "unit": see [Unit](#). Default: inherited, "pt"
- "value": Number. If a value is defined, the automatic shingling is disabled. Default: 0

Example

```
"shingling":  
  {  
    "unit": "mm",  
    "value": 5  
  }
```

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Possible values

Unit

A string used to identify the unit of a number:

- one of: `"mm"`, `"cm"`, `"m"`, `"in"`, `"ft"`, `"pt"`
or `"pc"`

Crop Mark Directions

- String. One of:
 - `"N"`: None
 - `"L"`: Left
 - `"R"`: Right
 - `"T"`: Top
 - `"B"`: Bottom
 - `"LT"`: Left and Top
 - `"LB"`: Left and Bottom
 - `"RT"`: Right and Top
 - `"RB"`: Right and Bottom

Color Space

- String. One of: `"ALL"`, `"CMYK"`, `"RGB"`, `"GRAY"`,
`"SPOT"`

Complete JavaScript runlist sample

A very simple sample can be found [here](#), which is just placing the first page into 1 of 3 slots.



JS_Runlist.runlist.js


```
let cfg =
{
  "defaults":
  {
    "unit": "mm",
    "slots":
    {
      "crop_marks":
      {
        "left_bottom": "N",
        "right_bottom": "N",
        "right_top": "N",
        "left_top": "N",
        "length": 10,
        "width": 0.04,
        "gap": 2
      },
      "isolated": true,
      "text":
      {
        "font": "Helvetica",
        "size": 8,
        "unit": "pt"
      }
    }
  },
  "sheet_defs":
  [
    {
      "id": "A4 Landscape",
      "rect":{"width": 297,"height": 210},
      "slots":
      [
        {
          "id": "left",
          "rect":{"left": 0, "bottom": 0, "width": 148.5, "height": 210},
          "bleed":{"left": 0, "bottom": 0, "right": 0, "top": 0},
          "scale":{"horizontal": -1, "vertical":-1},
```

```

        "rotation": 0,
        "placement": "CC",
        "binding_margin": "N",
        "crop_marks": {"left_bottom": "LB", "left_top": "LT",
"right_bottom": "RB", "right_top": "RT"}
    },
    {
        "id": "right",
        "rect":{"left": 148.5, "bottom": 0, "width": 148.5, "height":
210},
        "bleed":{"left": 0, "bottom": 0, "right": 0, "top": 0},
        "scale":25,
        "rotation": 0,
        "placement": "CC",
        "binding_margin": "N",
        "crop_marks": {"left_bottom": "LB", "left_top": "LT",
"right_bottom": "RB", "right_top": "RT"}
    },
    {
        "id": "middle",
        "rect":{"left": 74.25, "bottom": 0, "width": 148.5, "height":
210},
        "bleed":{"left": 0, "bottom": 0, "right": 0, "top": 0},
        "scale":25,
        "rotation": 0,
        "placement": "CC",
        "binding_margin": "N",
        "crop_marks": {"left_bottom": "LB", "left_top": "LT",
"right_bottom": "RB", "right_top": "RT", "length": 2, "color_space": "cmyk", "col-
or_components": [100,0,0,0]}
    },
    {
        "id": "legend",
        "rect":{"left": 10, "bottom": 10 },
        "left": 0,
        "bottom": 0,
        "width": 20,
        "height": 100
    }
]
}
],
"sheets":

```

```
[
  {
    "sheet_def": 0,
    "placements":
    [
      { "slot": "middle", "page": 0},
      { "slot": "legend", "text": "This is text"}
    ]
  }
]
}
cfg;
```

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