metaducks: User manual

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Contents

1 Acknowledgements

Although everybody knows an acknowledgement list will always be incomplete, I want to mention some of the people who made this possible:

Sam Carter for the original idea and the nice package she created and maintains. Paulo Cereda, whose suggestion avoided this module to be called a plain 'ducks' or a more boring possibility. Hans Hagen, Wolfgang Schuster, Aditya Mahajan, Henri Menke and the ConTEXt user base for answering my questions and giving tips and tricks to properly use ConTEXt with its unbeatable tools. And all TEX users, no matter if Plain, LATEX, ConTEXt or another, for such a great and diverse community. All duck lovers around the world, regardless of language, religion or nationality. Ducks rock (and swim)! For all of you is this module.

2 Rationale

I love ducks as much as I love my girlfriend, who is a duck breeder, and almost as much I'm abhorred by TikZ's feature creep, its slowness and its huge manual. Don't misunderstand me, I hugely appreciate the effort users and maintainers put on TikZ and even desire some features/libraries to be implemented in ConTEXt, such as `graphdrawing`; however, I still don't like TikZ. Besides that, TikZ is rather geared to LATEX and keeping things right with ConTEXt sometimes is a toothache. I think some TEX users who migrate from LATEX to ConTEXt or just like ducks and ConTEXt, but are uncomfortable with TikZ, would be pleased with this little module.

(I've just realized that some ConTEXt users were angry because of too many ducks in the TEX community. Sorry, now ducks are in ConTEXt too!)

3 Differences and caveats

Because this is a port from a package written in TikZ, it's worthwhile to explain differences and limitations with respect to LaTeX's TikZducks. There is, for instance, a difference between PGF/TikZ and ConTeXt way of handling with key-value pairs. `pgfkeys` is very happy with the following:

```
\somecommand[option1,key1=value1,key2=value2,option2]
```

ConTeXt, on the other hand, doesn't mix those alternatives, and in order not to overcomplicate this module (after all, MetaPost gives faster results when cautiously exploited), this module is based on a rather straightforward key-value interface. For instance, `body=blue` won't work and you should use `bodycolor=blue` instead. The same applies for eyes, bill and head. Another instance: if you need a crozier for your duck, the way to specify is

```
\definecolor[mybrown][.5(xcolorbrown)]
\ducks
    [
    crozier=yes,%Indispensable
    croziercolor=mybrown
    ]
```

If you only set `crozier=yes`, a default color will be selected.

Additionally, colors should be defined beforehand using **\definecolor** and allies. If you want to mix colors the LaTeX way, you should include **\enabledirectives**[colors.pgf] in your preamble. Like this:
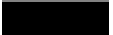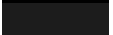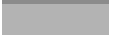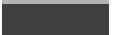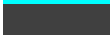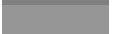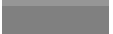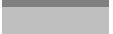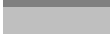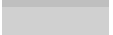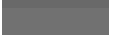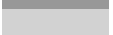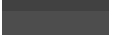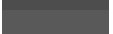
```
\enabledirectives[colors.pgf]
\usecolors[svg]
\usemodule[metaducks]
%EN: Only for two colors!
%ES: ¡Solo funciona con dos colores!
\definecolor[mycolor][gold!50!violet]
\starttext
\ducks[bodycolor=mycolor]
\stoptext
```

Surely a cleverer alternative is possible and I'll have to find out it (possibly guided by Hans and Wolfgang). In the meantime those are your options.

Another point on color: this module includes a companion called xcolor (actually `colo-imp-xcolor.mkiv`) so ducks are roughly the same both in ConTeXt and LaTeX. Because of

this, we're actually using colors named `xcoloryellow`, `xcolorcyan` and so on to avoid clashes with other color schemes in ConTEXt. The complete list is shown above.

		0.509	0.282	0.675	0.235	overleafduck
		0.000	0.000	0.000	0.000	xcolorblack
		0.110	0.000	0.000	1.000	xcolorblue
		0.547	0.750	0.500	0.250	xcolorbrown
		0.700	0.000	1.000	1.000	xcolorcyan
		0.250	0.250	0.250	0.250	xcolordarkgray
		0.250	0.250	0.250	0.250	xcolordarkgrey
		0.500	0.500	0.500	0.500	xcolorgray
		0.590	0.000	1.000	0.000	xcolorgreen
		0.500	0.500	0.500	0.500	xcolorgrey
		0.750	0.750	0.750	0.750	xcolorlightgray
		0.750	0.750	0.750	0.750	xcolorlightgrey
		0.815	0.750	1.000	0.000	xcolorlime
		0.410	1.000	0.000	1.000	xcolormagenta
		0.445	0.500	0.500	0.000	xcolorolive
		0.595	1.000	0.500	0.000	xcolororange
		0.825	1.000	0.750	0.750	xcolorpink
		0.253	0.750	0.000	0.250	xcolorpurple
		0.300	1.000	0.000	0.000	xcolorred
		0.350	0.000	0.500	0.500	xcolorteal
		0.205	0.500	0.000	0.500	xcolorviolet
		1.000	1.000	1.000	1.000	xcolorwhite
		0.890	1.000	1.000	0.000	xcoloryellow

So, you should be able of using something like

```
\usecolors[xwi]
\ducks[bodycolor=gold]
```

and keep the duck color palette the same. Only RGB colors are supported (this is rather an issue than a bug, so be careful not to use other colors or you'll get some grayish coloring).

As for size, and unlike MetaPost, TikZ defaults to centimeters. To adjust that, I've included an `unitsize` key in order to scale your picture accordingly.

Most of TikZducks options are available and I've added some new of them, but don't forget to initialize them via `<option>=yes` and only then `<option>color=...`, when possible. Random ducks are also available.

So far, stripes aren't implemented (but I promise I'll do soon).

Finally, a small legal disclosure. The *chullo* or winter hat has been adapted from art by

Freepik and accordingly attribution has been given both in documentation and code.

4 Usage

Most of the options available here are present in TikZducks, too. However, I made some additions which will be marked as 🎁. You're warned. ;)

4.1 Body parts

Body parts (`body`, `head`, `bill`, `eye`, and `pupil`) have their own color. They are enabled by default and it's impossible to disable any of them, unless users demand for such changes.

A nice duck says hi!

```
%\usecolors[svg]
\ducks
    [headcolor=darkgreen,
    billcolor=darkorange,
    eyecolor=ghostwhite,
    pupilcolor=darkgreen,
    bodycolor=xcolorlightgray,
    wing=yes,
    wingcolor=xcolorblack,
    speech=yes,
    speechtext={%
\translate[en=Hi!,
           es=Hola]}]
```


Additionally, `grumpy`, `laughing` and `parrot` allow to change the bill expression:

Duck expressions

```
\ducks[grumpy=yes]%
\ducks[laughing=yes]%
\ducks[parrot=yes]%
```
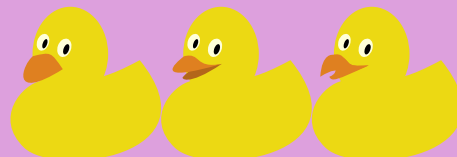

If the duck is too shy, you can also add some blush to it.

```
%\usecolors[svg]
\ducks
    [blush=yes,
    blushcolor=deeppink]
```
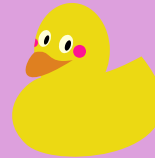
My girlfriend breeds muscovy ducks (*Cairina moschata*), so I decided to include caruncles for her to use them.

Muscovy ducks 🎁

```
\ducks
[caruncle=yes,
bodycolor=xcolorlightgray,
billcolor=xcolorpink,
wing=yes,
wingcolor=xcolorblack]
```

4.2 Hair styles

While ducks don't have actual hair, they can have a "hairdo" on their feathers. Needless to say, ducks have swag. Here some possibilities:

Long hair

```
\ducks[longhair=yes]
```

Short hair

```
\ducks[shorthair=yes]
```

Crazy hair

```
\ducks[crazyhair=yes]
```

Receding hair

```
\ducks[recedinghair=yes]
```

Mohican

```
\ducks[mohican=yes]
```

Mullet

```
\ducks[mullet=yes]
```
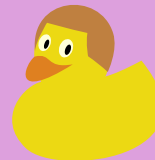
4.3 Clothing

T-shirt

```
\ducks[tshirt=yes]
```
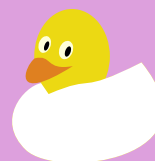
Jacket

```
\ducks[jacket=yes]
```

Áo dài

```
\ducks[aodai=yes]
```
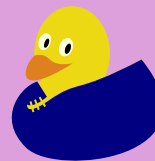
Cape

```
\ducks[cape=yes]
```
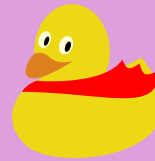
4.4 Accessories

A duck swimming

```
\ducks[water=yes]
```

Alien duck

`\ducks[alien=yes]`

Hat duck

`\ducks[hat=yes]`

Tophat duck

`\ducks[tophat=yes]`

Strawhat duck

`\ducks[strawhat=yes]`

Basecup duck

`\ducks[cap=yes]`

Conical hat duck

```
\ducks[conicalhat=yes]
```

Santa duck

```
\ducks[santa=yes,beard=yes]
```

Graduate duck

```
%\usecolors[svg]
\ducks
    [graduate=yes,
    tassel=paleturquoise]
```

Beret duck

```
\ducks[beret=yes]
```

Peaked cap duck

```
\ducks[peakedcap=yes]
```

Harlequin duck

```
%\usecolors[svg]
\ducks
    [harlequin=yes,
    harlequincolor=black,
    niuqelrah=crimson]
```

Sailor duck

```
\ducks[sailor=yes]
```

Crown ducks

```
\ducks[crown=yes]%
\ducks[kingcrown=yes]%
\ducks[queencrown=yes]
```
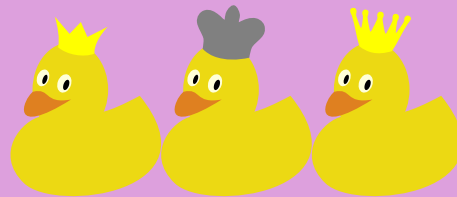
Helmet duck

```
\ducks[helmet=yes]
```

Viking duck

```
\ducks[viking=yes]
```

Devil duck

```
\ducks[devil=yes]
```

Unicorn duck

```
%\usecolors[svg]
\ducks
    [unicorn=yes,
    bodycolor=xcolorpink,
    longhair=yes,
    longhaircolor=orchid]
```

Bunny duck

```
\ducks[bunny=yes]
```

Sheep duck

```
\ducks[sheep=yes]
```

Horse duck

```
\ducks[horsetail=yes]
```
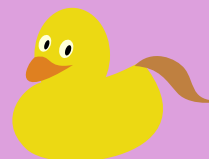
Witch duck

```
\ducks
    [witch=yes,
    magicwand=yes]
```

Glasses duck

```
\ducks[glasses=yes]
```

Sunglasses duck

```
\ducks
    [sunglasses=yes,
    sunglassescolor=blue]
```

Superhero duck

```
\ducks
    [mask=yes,
    maskcolor=darkred,
    cape=yes,
    capecolor=darkred]
```

Signpost ducks

```
\ducks
    [signpost=yes,
    signtext={\tfxx\CONTEXT}]
```

Speaking duck

```
\ducks
    [speech=yes,
    speechtext=\Lua]
```
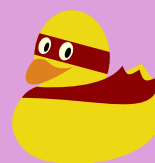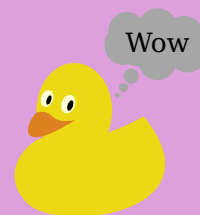
Lua

Thinking duck

```
\ducks
    [think=yes,
    thinktext=Wow]
```
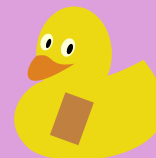
Wow

Buttons ducks

```
\ducks[buttons=yes]%
\ducks
    [jacket=yes,
    buttons=yes]
```
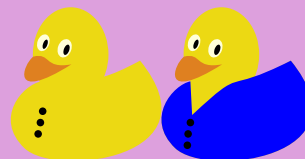
Book duck

```
\ducks[book=yes]
```

Cricket duck

```
\ducks[cricket=yes]
```

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Hockey duck

`\ducks[hockey=yes]`

Football duck

`\ducks[football=yes]`

Lightsaber duck

`\ducks[lightsaber=yes]`

Torch duck

`\ducks[torch=yes]`

Prison duck

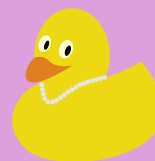`\ducks[prison=yes]`

Crozier duck

```
\ducks[crozier=yes]
```

Necklace duck

```
\ducks[necklace=yes]
```

Icecream ducks

```
\ducks[icecream=yes]%
\ducks
    [icecream=yes,
    flavora=brown,
    flavorb=red,
    flavorc=green]
```
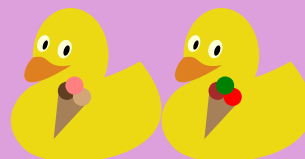
Chef duck

```
\ducks[chef=yes,rollingpin=yes]
```

Cake duck

```
\ducks[cake=yes]
```

Pizza duck

```
\ducks[pizza=yes]
```

Baguette duck

```
\ducks[baguette=yes]
```
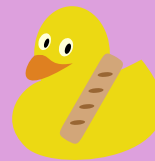
Cheese duck

```
\ducks[cheese=yes]
```
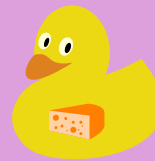
Milkshake duck

```
\ducks[milkshake=yes]
```
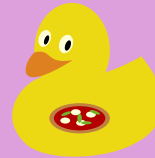
Wine duck

```
\ducks[wine=yes]
```

Cocktail duck

```
\ducks[cocktail=yes]
```


Wing duck

```
%\usecolors[svg]
\ducks
    [wing=yes,
    wingcolor=peru]
```


Basket duck

```
\ducks[basket=yes]
```


Easter duck

```
%\usecolors[svg]
\ducks%
    [bunny=yes,
    easter=yes]%
\ducks%
    [bunny=yes,
    easter=yes,
    egga=teal,
    eggb=deeppink,
    eggc=darkturquoise]
```
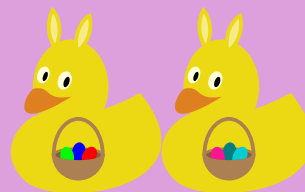
Ducktor

```
\ducks[stethoscope=yes]
```
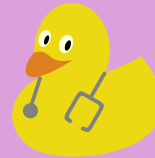
Neckerchief duck

```
\ducks[neckerchief=yes]
```

Snow duck

```
\ducks[snowduck=yes]
```

Vampire duck

```
\ducks[vampire=yes]%
\ducks%
    [laughing=yes,
    vampire=yes]
```
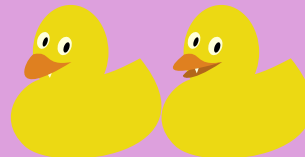
Clairvoyant duck

```
\ducks[crystalball=yes]
```

Shovelling ducks

```
\ducks[shovel=yes]%
\ducks[pickaxe=yes]
```
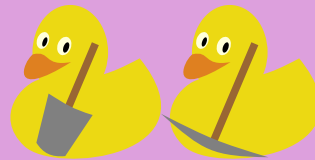
Umbrella ducks

```
\ducks[umbrella=yes]%
\ducks[umbrellaclosed=yes]
```

Overleaf Duck
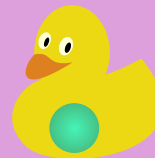
```
\ducks[overleaf=yes]
```

Mug duck 🎁

```
\ducks[mug=yes]
```

Lei duck 🎁

```
\ducks[lei=yes]
```

```
\ducks[shield=yes]
```


For us Peruvian TEX users, I've added a *chullo* (a type of winter hat common in Peru and Bolivia) because, well, it's an easy way of recognizing us.

A Peruvian duck 🐞

```
\ducks
[chullo=yes,
chullocolor=green,
laughing=yes,
think=yes,
thinktext={\tfxx ¡Arriba Perú!}]
```

5 Hooks

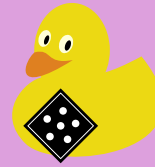Since posibilities to customize ducks are infinite and we cannot include all them here, hooks are available for further customization so we go ahead with our styled ducks. Hooks are the following, respectively.

1. backgroundhook
2. bodyhook
3. clothinghook
4. hathook
5. foregroundhook

An example is shown below:

```
\startuseMPgraphic{mybackground}
fill fullcircle scaled 2 withcolor darkgreen;
\stopuseMPgraphic
\startuseMPgraphic{myforeground}
fill unittriangle scaled 1/2 withcolor "xcolorteal";
\stopuseMPgraphic
\ducks
    [color=darkred,
    pupilcolor=darkblue,
    backgroundhook=mybackground,
    foregroundhook=myforeground,
    lei=yes]
```
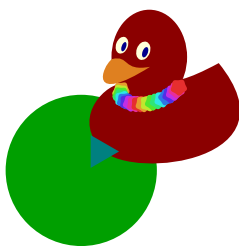
6 Random ducks

It is possible to autogenerate a random duck with `\randomducks`, which in turn chooses a random headpiece with `\randomduckhead` and an additional accessory with `\randomduckaccessory`:

Random duck

```
\randomducks
```

Unlike TikZducks, there's no need to shuffle options, since Lua does it for us. Furthermore, both `\randomduckhead` and `\randomduckaccessory` can be called independently.

Duck with random accessories

```
\ducks
    [\randomduckhead=yes,
    \randomduckaccessory=yes]
```

---

7 To do

- Support for stripes is lacking. I lack motivation for that, because I find football boring, but I know many TEX users don't agree. So I'll do it eventually (adding only one pattern is easy, adding more is cumbersome).