Nipkow Disk Based Digital Display Device © GPL3+

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In 1884 Nipkow invented a method to capture and view a moving image. This project uses the same disk to generate a moving digital image.

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ABOUT THIS PROJECT

I always wanted to do something with a Nipkow disk.

Although it has big drawbacks as a display device, the idea of a small hole scanning and reproducing an image is very simple and works.

This is a YouTube video to show the result and give some more information about how it works.

Nipkow disk display device using Arduino

▶

CODE

Nipkow project Arduino source files Arduino

☁ (HTTPS://HACKSTERIO.S3.AMAZONAWS.COM/UPLOADS/ATTACHMENTS/451353/NIPKOW.ZIP)

SCHEMATICS

Nipkow schematic

DOWNLOAD (HTTPS://HACKSTERIO.S3.AMAZONAWS.COM/UPLOADS/ATTACHMENTS/451354/NIPKOV_SCHEMA_ZQIGMXPQWQ.PDF)

A

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display-device-2cc98a%23comments&source=popup) to comment.

chall (/projecthub/chall)
5 years ago
(/pr
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hub/
Neat! If you can support 30x30, you could do images. Like they did back in the 30's:
chall
http://www.earlytelevision.org/DuPuoy/la-radiovision.fr/a-gallerie1.html (http://www.earlytelevision.org/DuPuoy/la-
radiovision.fr/a-gallerie1.html)
)

christopheArduino (/projecthub/christopheArduino)
5 years ago
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Thanks! The software should support 64 x 32 rows easily. Biggest problem would be the precision drilling of the 32 holes... I
hub/
will give it a try later.
chris
toph
eArd

uino
)

ManuelRojas (/projecthub/ManuelRojas)
5 years ago
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I gues I you can use a laser cutter to do that. Or you can even print the the layout on an A4 and use that as your guide. Don't you think?

christopheArduino (/projecthub/christopheArduino)
5 years ago
(/pr
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hub/
chris
toph
eArd
uino
)

I will try to use an Indexing head (https://en.wikipedia.org/wiki/Indexing_head (https://en.wikipedia.org/wiki/Indexing_head)) mounted on a xy table. That will hopefully give me enough precision. As my disk only has a 19cm diameter, the holes will be 0.4mm diameter, so I need 0.1mm or better precision.

AKJ (/projecthub/AKJ)
5 years ago
(/pr
oject
hub/
AKJ)

Wow! Good job! This is amazing. Respect!

dimchik_b (/projecthub/dimchik_b)
5 years ago
(/pr
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b)

Good job! What soft do you use for the simulation at the end of the video?

christopheArduino (/projecthub/christopheArduino)
5 years ago
(/pr
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hub/
chris
toph
eArd
uino
)

I wanted to do the simulation part in 3D in blender. But the learning curve was rather steep...
So I ended up writing a little program in c# to generate the images.
Like this :
a) Used Coreldraw to create some png files (e.g. the background, the disk, background lighting, slider,..)
b) a first c# program calculated the image for every 0.5° rotation (rotating the disk and merging the other images in the correct position)
c) a second c# program made some sort of running average image, to create the eye latency effect.

Deleted account
5 years ago

respect and well shown in the short video

check me to here i am WannaDuino.

AUTHOR

(/projecthub/christopheArduino)

christopheArduino (/projecthub/christopheArduino)

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March 18, 2018

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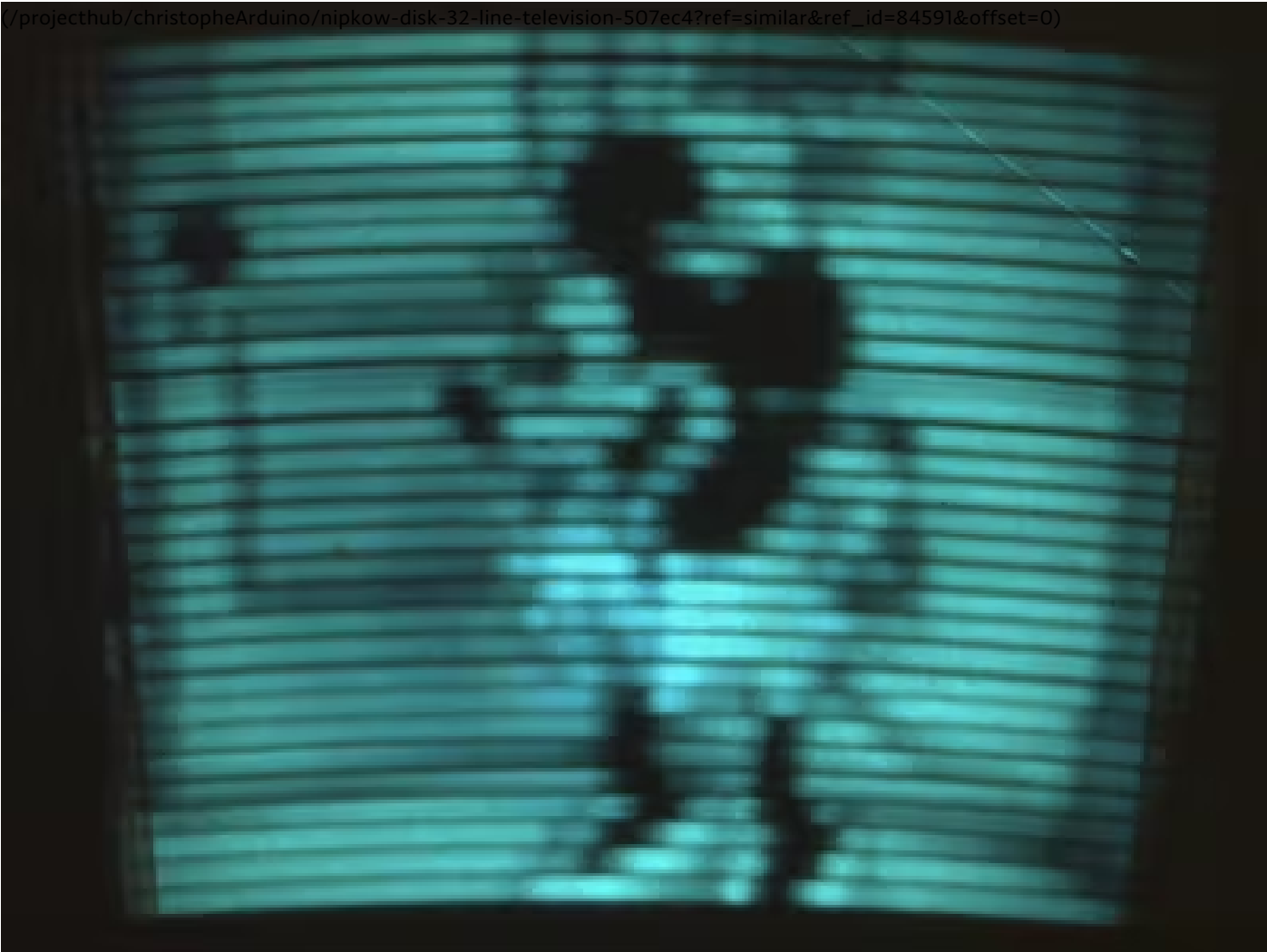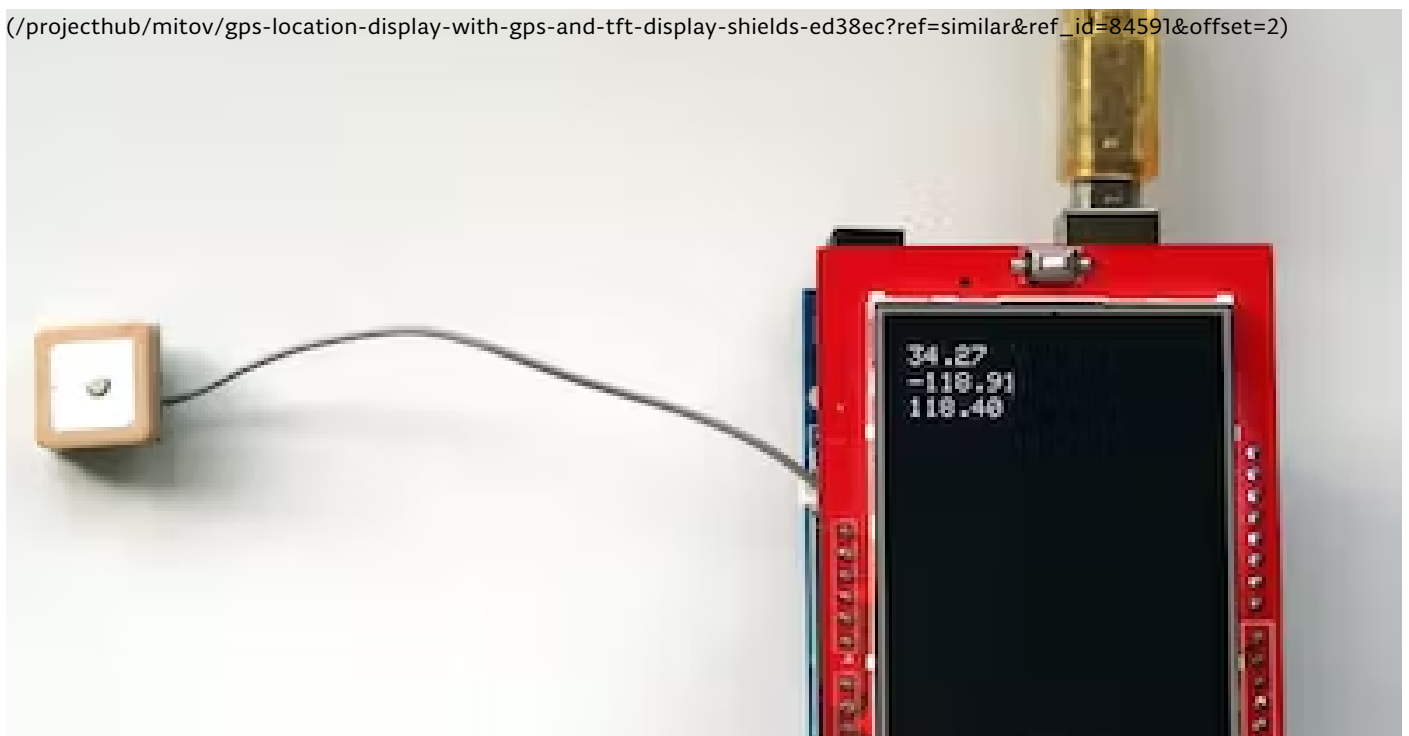(/projecthub/laserbrain)   (/projecthub/fulop-andras)   (/projecthub/rrbaer)   (/projecthub/wers)   (/projecthub/green-moon)   (/projecthub/Empirius)   (/projecthub/morthredd)   (/projecthub/m4rm2duk)

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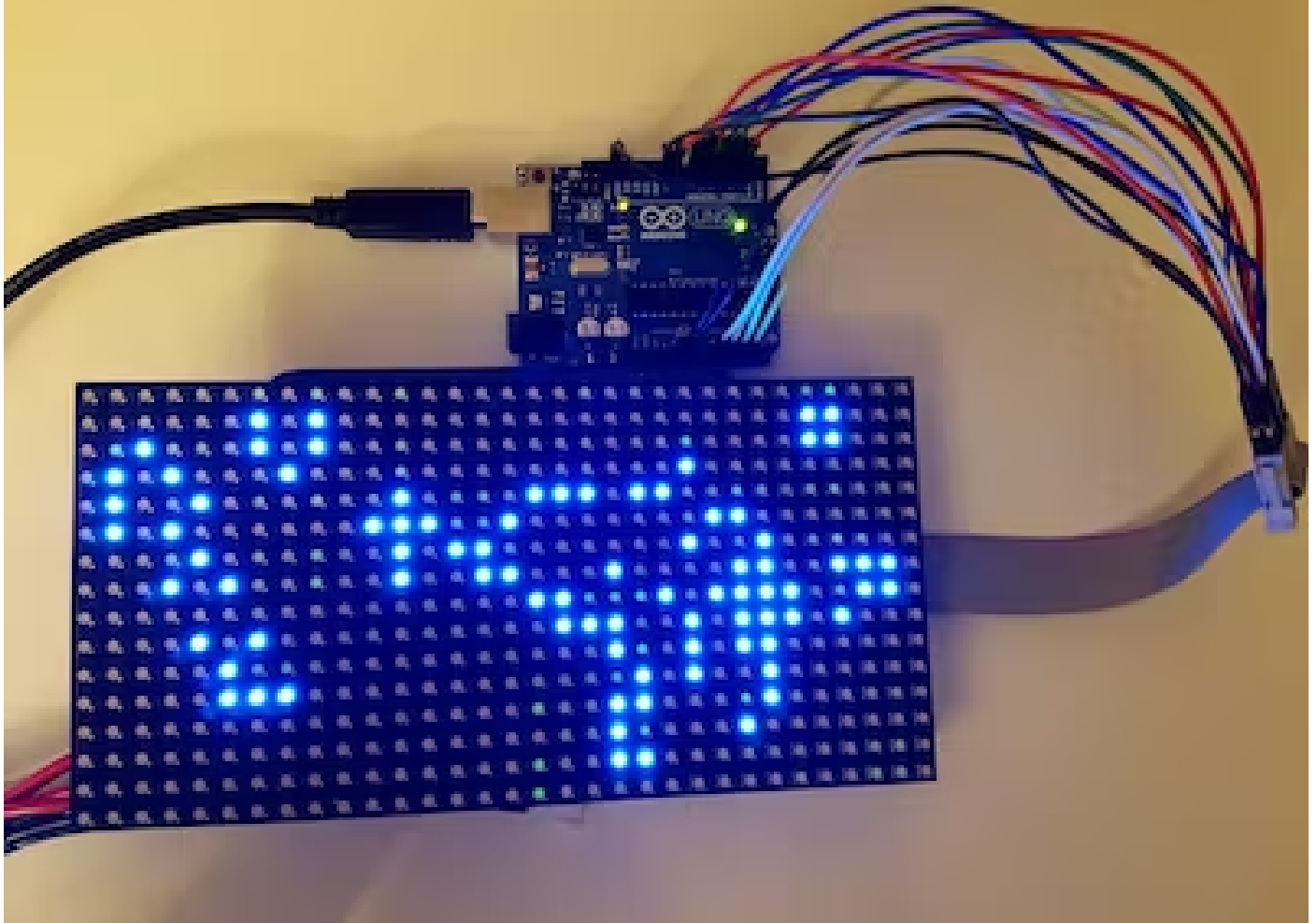
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Project tutorial by **Boian Mitov (/projecthub/mitov)**

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