

INTERNET OF TARGETS

Leif Nixon





Sarcasm

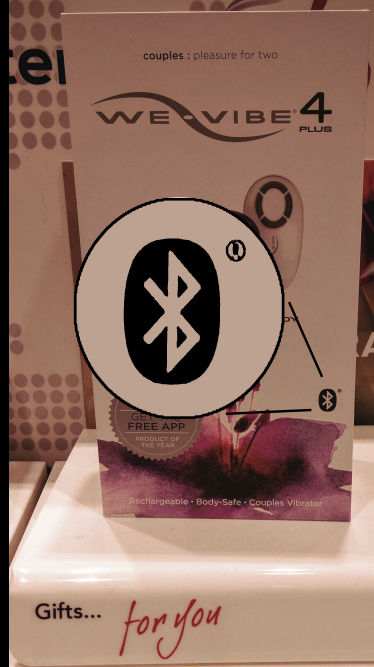
CAPI ELECTRONICS STORE SCHIPHOL AIRPORT



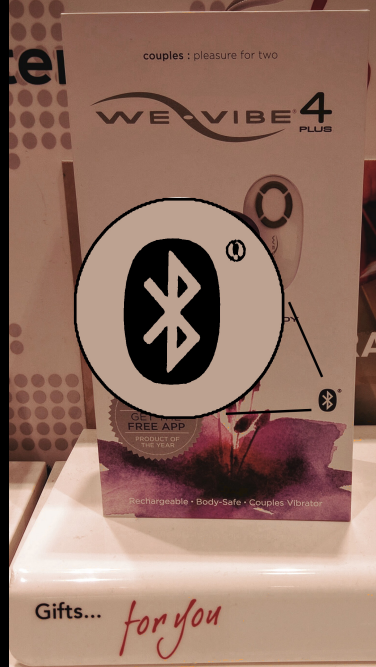
a pair vibrator



with bluetooth



wtf?





Bluetooth



Internet
Wi-Fi/3G/LTE

Play together — even
when you are apart.

WARNING

**DO NOT INSERT
INTERNET INTO
BODY ORIFICE**




Data and computer security

Someone made a smart vibrator, so of course it got hacked

The We-Vibe 4 Plus is a vibrator with a computer inside it – but hackers say it also phones home, telling its makers when it's being used




 Two hackers revealed that the way the vibrator speaks with its controlling app isn't really secure at all.
Photograph: WeVibe

Data protection

Vibrator maker ordered to pay out C\$4m for tracking users' sexual activity

Canadian manufacturer We-Vibe collected data about temperature and vibration intensity, revealing intimate information without customers' knowledge



 The We-Vibe is marketed as a way to 'allow couples to keep their flame ignited - together or apart'. Photograph: Emily Berl for the Guardian



Internet of Shit

@internetofshit

Obviously the best thing to do is put a chip in it. Tips: internetofshit@gmail.com / Key: 6956F195

📍 In your stuff



TWEETS
1,173

FOLLOWING
39

FOLLOWERS
76.5K

LIKES
1,297



Following

Tweets

Tweets & replies

Photos & videos



Pinned Tweet



Internet of Shit @internetofshit · 3 Jul 2015

The Internet of Shitty Things is here. Have all of your best home appliances ruined by putting the internet in them!



753



974



LIXIL

My SATIS



リモコン



トイレ日記

※リモコンは必ずトイレの中でご使用ください。

※スマートフォンをトイレに落とさないようご注意ください。

トップ

うんちカレンダー



2012年10月						
日	月	火	水	木	金	土
30	1	2 	3	4 	5	6
7 	8 	9 	10 	11	12	13
14 	15	16	17	18 	19	20 
21	22 	23 	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10



形状・色



感想



リモコントップ



カレンダー



データ集計



ライブラリ



インフォ

トップ

ミュージック

LIXIL

シャッフル



前



再生



次



リピート

ミュージックライブラリ

アーティスト名 The Rolling Stones

曲名 (I Can't Get No) Satisfaction

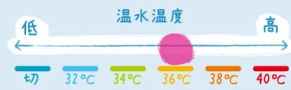
アルバム名 Rolled Gold+: The Very Best...





おしり洗浄 使用中

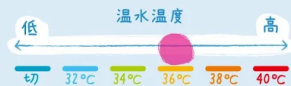
LIXIL





おしり洗浄 使用中

LIXIL



Hackers take control of a TOILET using bog-standard computer skills

12:41, 10 FEB 2016

UPDATED 12:47, 10 FEB 2016

BY JASPER HAMILL

Futuristic high-tech toilets vulnerable to cyber-assaults which could have very messy consequences



THE SMART OVEN THAT MAKES HOME COOKING EASY

✓ What happens if my wifi goes down while my Tovala is cooking?

As long as the power remains on, your Tovala will finish cooking the meal. The Tovala will need to reconnect to the Internet to scan and cook your next meal.

✓ What happens if my wifi goes down while my Tovala is cooking?

As long as the power remains on, your Tovala will finish cooking the meal. The Tovala will need to reconnect to the Internet to scan and cook your next meal.

no wifi – no food

do you have devices that need your wifi to be working?

- security cameras
- smart tv/dvr
- thermostats
- security alarm
- smart appliances
- smart lighting
- smoke alarms
- random crap iot

happily, there is an iot solution for that!

ResetPlug

A smart plug to monitor your WiFi router/modem and reset power if WiFi fails.



Buy Now
\$59.99

ResetPlug

A smart plug to monitor your WiFi router/modem and reset power if WiFi fails.



Buy Now
\$59.99

Smart Lighting

Control your bulbs one at a time or altogether. Find just the right shade of white. Pick that perfect tone to match the moment. Or recreate any color from a photo.



PHILIPS



I WANT / JE VEUX

hue

PERSONAL WIRELESS LIGHTING

Available on the
App Store



philips hue uses *zigbee light link*

**(which is totally different from
zigbee home automation)**

The ZLL pre-installed link key is a secret shared by all certified ZLL devices.

It will be distributed only to certified manufacturers and is bound with a safekeeping contract.

zigbee light link secret master key

9F	55	95	F1	02	57	C8	A4
69	CB	F4	2B	C9	3F	EE	31



Flux

Flux WiFi Smart LED Light Bulb - Works with Alexa - Smartphone Controlled Multicolored Color Changing Lights - Dimmable Night Light



[809 customer reviews](#)

[297 answered questions](#)

Price: **\$34.84**

send udp packet to port 48899:

HF-A11ASSISTHREAD

+ok

AT+WSKEY

returns:

wifi access key

**but you already know the
wifi access key, right?**

**but you already know the
wifi access key, right?**

fun feature:

loss of wifi > 10 mins? start AP!

**if remote control via Internet is
enabled you can do this from
remote**

**single auth factor: the bulb's mac
address – easily bruteforced**

**for some reason, the bulb
provides an http proxy**

**allowing connections to arbitrary
hosts on internal network**

Smart Tooth Brush

The Beam Brush is a connected toothbrush that engages users with their daily hygiene routine.



Security researcher finds smart Oral-B toothbrush leaks sensitive data

Posted 30 November 2015 16:02 CEST by Jan Willem Aldershoff

Security researcher Craig Wright [has found](#) that a smart toothbrush from Oral-B can leak sensitive information. The Oral B Triumph Toothbrush with SmartGuide ProfessionalCare 9900 i wirelessly connects to a smartphone app where it collects data on how often the user brushes his teeth, for how long and which movements are made.



Bluetooth-Enabled Insoles

Shares navigation, directions and orientation.





Olle Angst: Why is the world full of idiots?

Idiot: What do you mean?

why, oh why?

START-UPS

lack of time

lack of funds

abandonware

MASS MARKET

price pressure

no consumer interest

shiny > secure

TRADITIONAL VENDORS

no competence



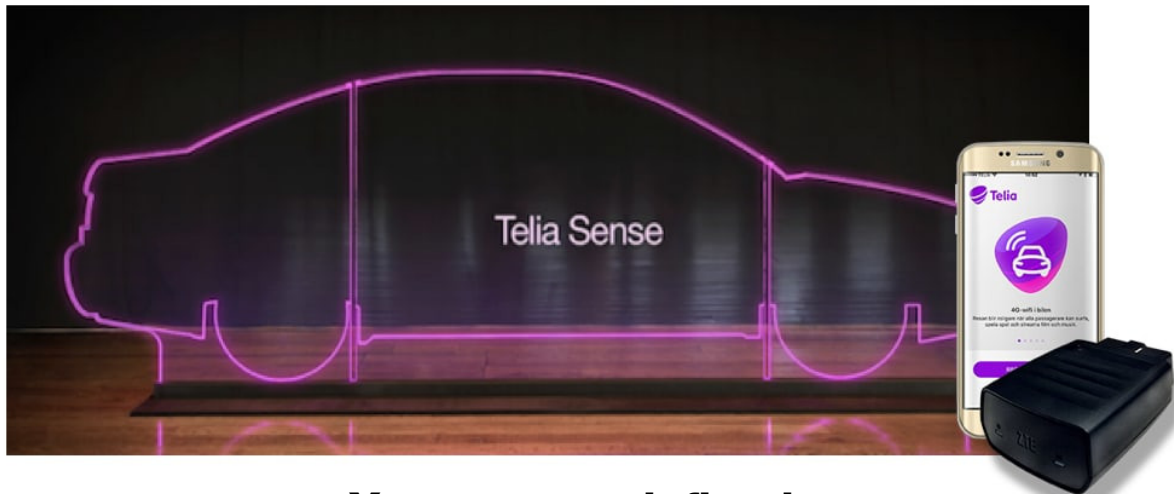
CRITICAL SYSTEMS



SOFTWARE FAULT



SOFTWARE FAULT



Your car – redefined

MARKETING MATERIAL:

Telia Sense connects to your car's onboard computer, giving you access to important data and enabling you to control certain functions remotely.



OBD-II – ONBOARD DIAGNOSTICS



**IS REMOTE ACCESS
TO THE CAN BUS
REALLY A GOOD IDEA?**

SHARE



SHARE



TWEET



COMMENT



EMAIL

ANDY GREENBERG SECURITY 08.11.15 07:00 AM

HACKERS CUT A CORVETTE'S BRAKES VIA A COMMON CAR GADGET



RYAN YOUNG FOR WIRED

THE NIXON PRINCIPLE:

**Things that can kill you
shouldn't be on the Internet.**



The search engine for **Refrigerators**

Shodan is the world's first search engine for Internet-connected devices.

[Create a Free Account](#)[Getting Started](#)

Explore the Internet of Things

Use Shodan to discover which of your devices are connected to the Internet, where they are located and who is using them.



See the Big Picture

Websites are just one part of the Internet. There are power plants, Smart TVs, refrigerators and much more that can be found with Shodan!



Monitor Network Security

Keep track of all the computers on your network that are directly accessible from the Internet. Shodan lets you understand your digital footprint.



Get a Competitive Advantage

Who is using your product? Where are they located? Use Shodan to perform empirical market intelligence.



56% of Fortune 100



1,000+ Universities

❌ 46.245.154.180

467190000244025.powerpro.mobiflex.se

Country	Sweden
Organization	Multicom Security AB
ISP	Multicom Security AB
Last Update	2017-08-11T00:08:37.471705
Hostnames	467190000244025.powerpro.mobiflex.se
ASN	AS43591

❌ Services

8080

tcp

http

Boa HTTPd Version: 0.94.13

HTTP/1.0 401 Unauthorized

Date: Thu, 10 Aug 2017 23:54:34 GMT

Server: Boa/0.94.13

Connection: close

WWW-Authenticate: Basic realm="DCS-2130"

Content-Type: text/html; charset=ISO-8859-1



10001

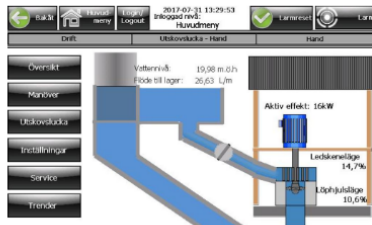
tcp

automated-tank-
gauge

VNC

RFB 003.007

authentication disabled



 Bakåt

 Huvudmeny

Login/Logout

2017-09-29 18:33:16
Inloggad nivå:
Huvudmeny

 Larmreset

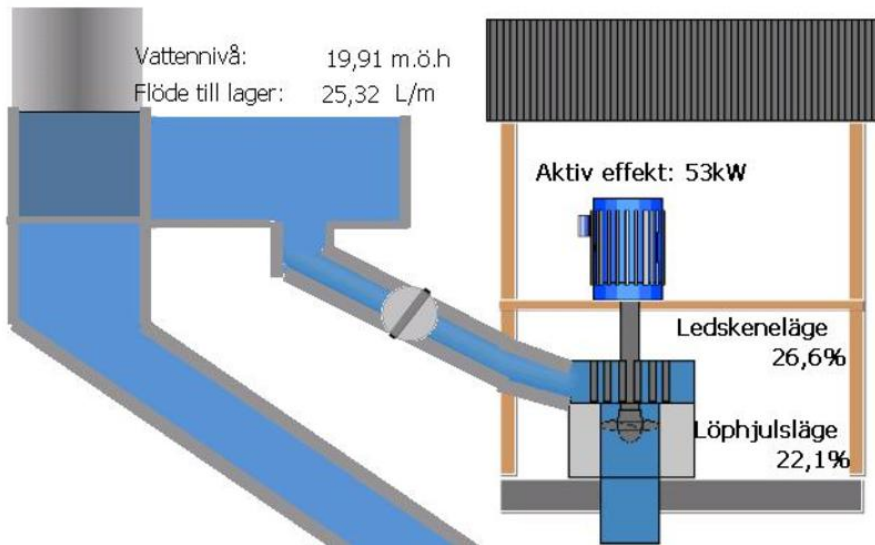
 Larm

Drift

Utskovslucka - Hand

Hand

- Översikt
- Manöver
- Utskovslucka
- Inställningar
- Service
- Trender



City	Randers
Country	Denmark
Organization	TDC Danmark
ISP	TDC Danmark
Last Update	2017-09-22T13:40:56.865586
Hostnames	80-162-121-229-dynamic.dk.customer.tdc.net
ASN	AS3292

21 443 10001

Services

21: sftp
ftp

oftpd

220 Service ready for new user.
530 Anonymous access not allowed.
530 Not logged in.
500 Syntax error, command unrecognized.

443: http
https

HTTP/1.1 200 OK
Server: httpd
Date: Fri, 22 Sep 2017 05:40:55 GMT
Cache-Control: no-cache
Pragma: no-cache
Expires: 0

10001: tftp
automated-
zink-gauge

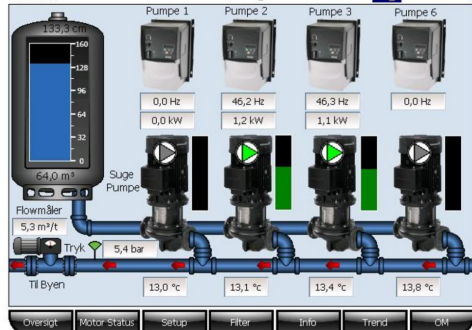
VNC

RFB 003.007

authentication disabled

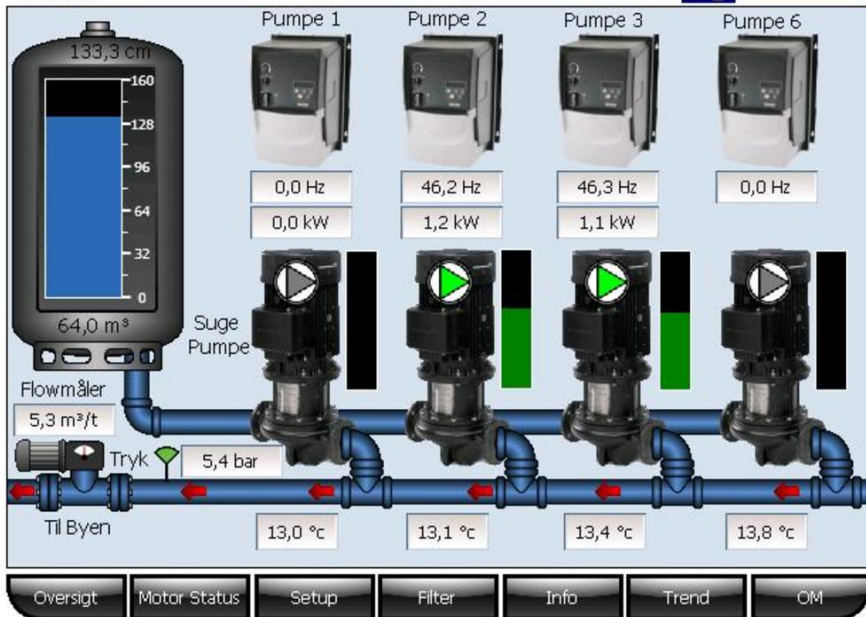
07-09-2017
20:59:08

Oversigt



07-09-2017
20:59:08

Oversigt



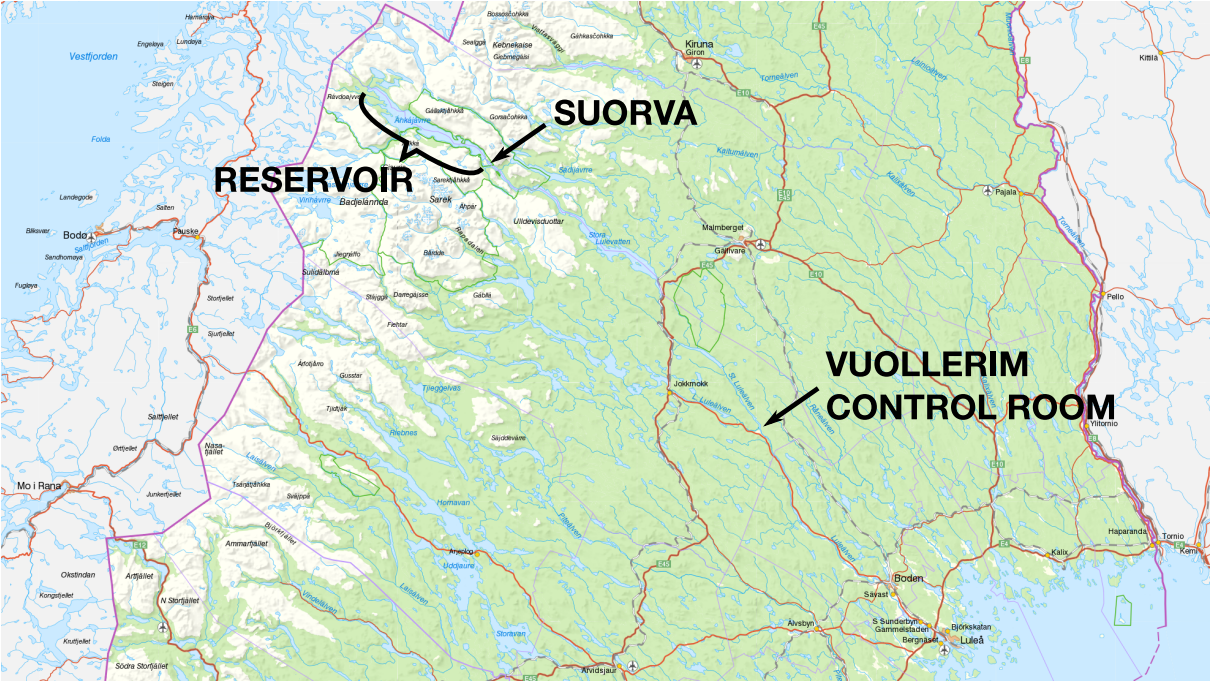


Velkommen til Gjerlev Vandværks hjemmeside!





Suorva hydroelectric dam



SUORVA

RESERVOIR

**VUOLLERIM
CONTROL ROOM**

**OF COURSE IT'S NOT
ON THE BLOODY
INTERNET, ARE YOU
CRAZY?**

**it's perfectly possible to
build good iot systems,
it just takes good
engineering.**



IKEA TRÅDLÖS SMART LIGHTING



Smart Lighting, Smart-Home

IKEA TRÅDFRI: A smart light in the darkness of IoT-Security



April 24, 2017

Maik Morgenstern

Can cheap hardware from the Swedish furniture giant be secure?





Smart Lighting, Smart-Home

IKEA TRÅDFRI: A smart light in the darkness of IoT-Security



April 24, 2017
Maik Morgenstern

From the security point of view IKEA built a solid eco system with no real security issues at the technical side.



SECURITY STATUS
iot-tests.org



**something needs
to be done**

let's do something

for critical systems and services:

REGULATION

Bekendtgørelse om udpegning af drikkevandsressourcer
(bkg. nr. 246 af 15/03/2017)

Bekendtgørelse om vandforsyningsplanlægning (bkg. nr.
831 af 27/06/2016)

Bekendtgørelse om vandindvinding og vandforsyning
(bkg. nr. 832 af 27/06/2016)

Bekendtgørelse om indsatsplaner (bkg. nr. 912 af
27/06/2016)

Bekendtgørelse om kvalitetskrav til miljømålinger (bkg. nr. 914 af 27/06/2016)

Bekendtgørelse om uddannelse af personer, der udfører boringer på land (bkg. nr. 915 af 27/06/2016)

Bekendtgørelse om delegation af miljøministerens beføjelser i ...forskellige ...love til Miljøstyrelsen (bkg. nr. 597 af 02/06/2016)

Bekendtgørelse om vandkvalitet og tilsyn med
vandforsyningsanlæg (bkg. nr. 802 af 01/06/2016)

Bekendtgørelse om passagebidrag (bkg. nr. 160 af
26/02/2016)

Bekendtgørelse om indhentelse af udtalelse om
miljøskade m.v. (bkg. nr. 1460 af 07/12/2015)

Bekendtgørelse om udførelse og sløjfning af boringer og
brønde på land (bkg. nr. 1260 af 28/10/2013)

Bekendtgørelse om kvalitetssikring på almene
vandforsyningsanlæg (bkg. nr. 132 af 08/02/2013)

Bekendtgørelse om miljøgodkendelse og samtidig
sagsbehandling af ferskvandsdambrug (bkg. nr. 130 af
08/02/2012)

Bekendtgørelse om individuel afregning efter målt
vandforbrug (bkg. nr. 837 af 27/11/1998)

HOW ABOUT

**Bekendtgørelse om NOT TO PUT YOUR
WATERWORKS ON THE INTERNET**

for consumer devices:

REGULATION

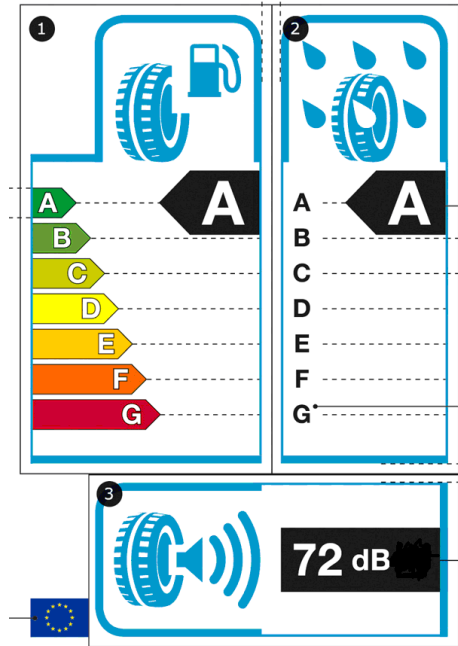
(maybe?)

tires?

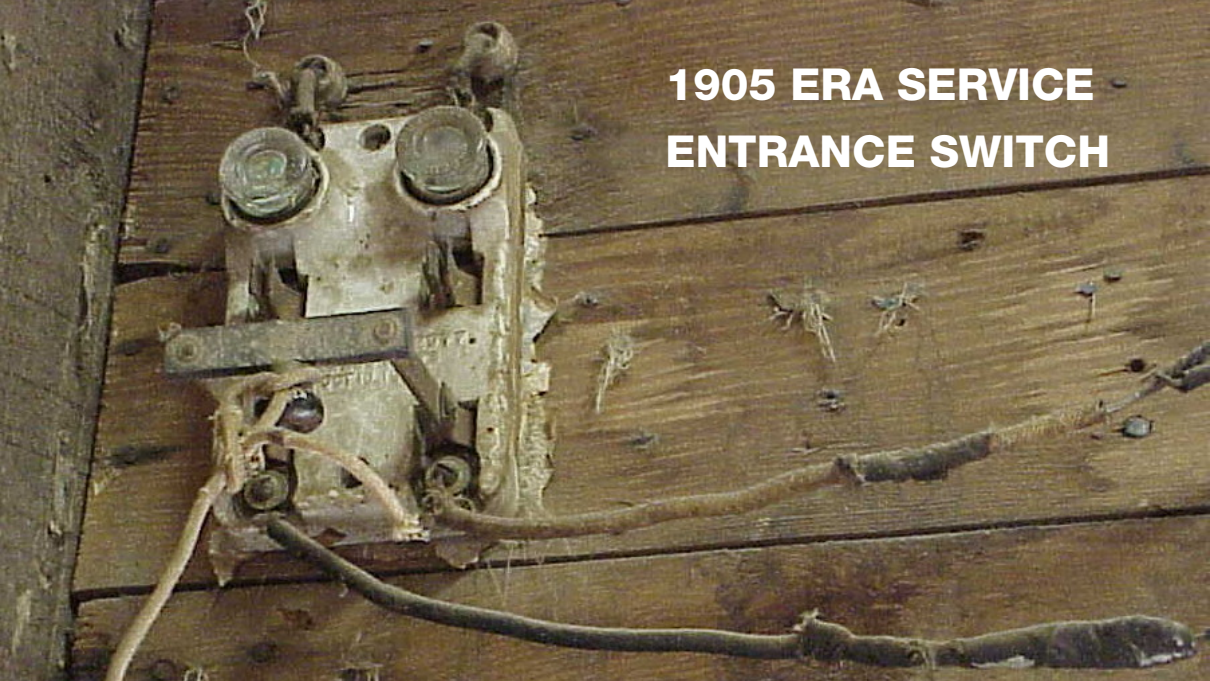
**wtf do i know
about tires?**

tires?

wtf do i know about tires?



**1905 ERA SERVICE
ENTRANCE SWITCH**



**MODERN COUNTERPART.
BORING.**



**MODERN COUNTERPART.
BORING.**

C €



nothing of this is easy

nothing of this is easy

but if we all work together

nothing of this is easy

but if we all work together

we can make iot boring again

THANK YOU

@leifnixon