



# Hacking animals for fun and profit

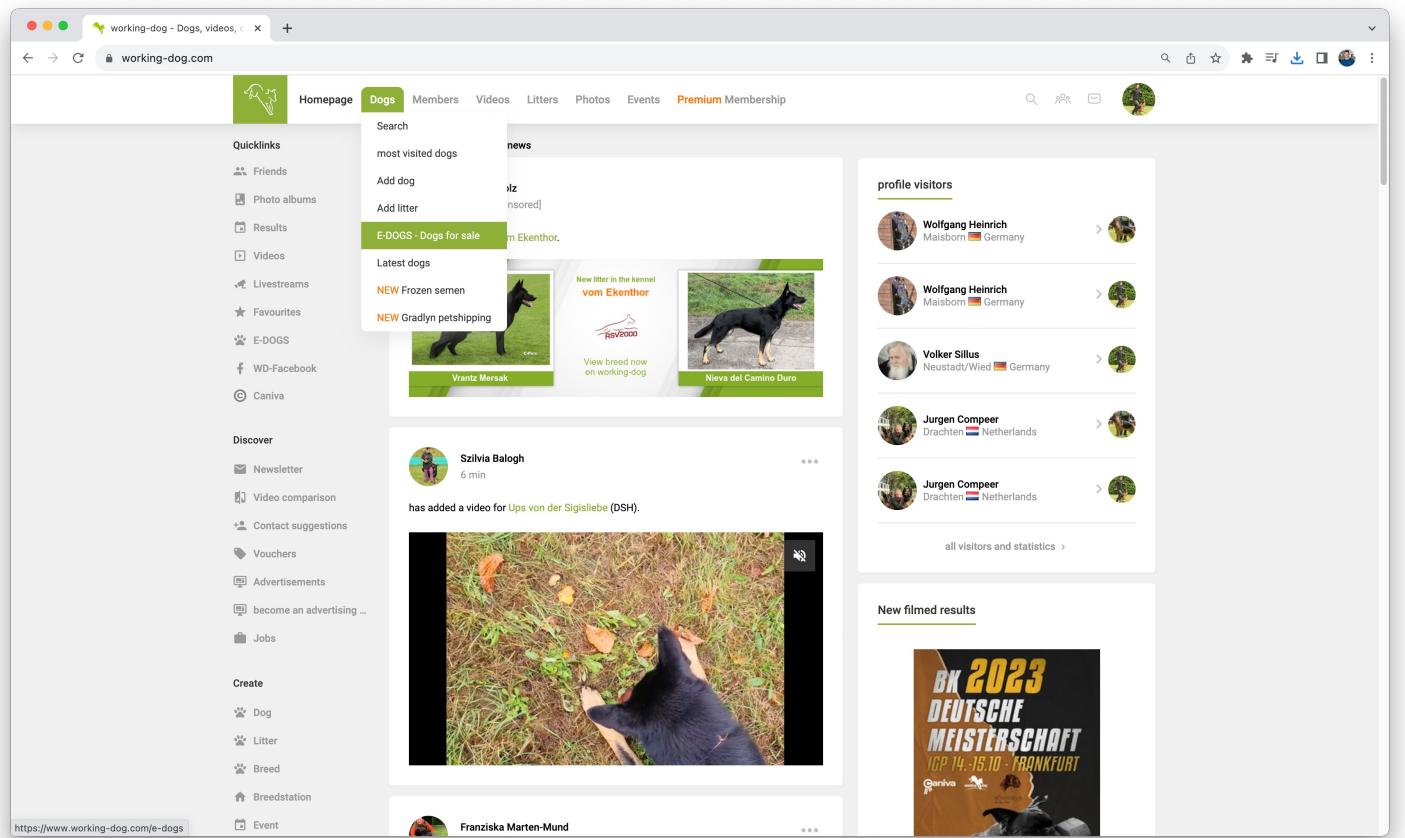
Roald Nefs

A German Shepherd dog is captured in mid-motion, playing with a large, bright green ball on a grassy lawn. The dog's coat is a mix of dark brown and tan. A white line points from the number 528140000795552 to a small black dot on the dog's side, just behind its front leg.

528140000795552

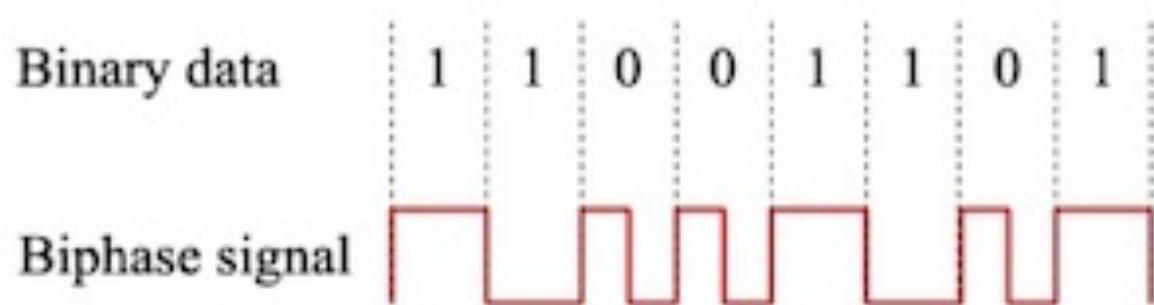
# Profit

- Fraud in sports and trade
- Theft
- Food safety by recording administering of medicine
- Administration of medical treatment by veterinarians



# FDX-B frequency and modulation

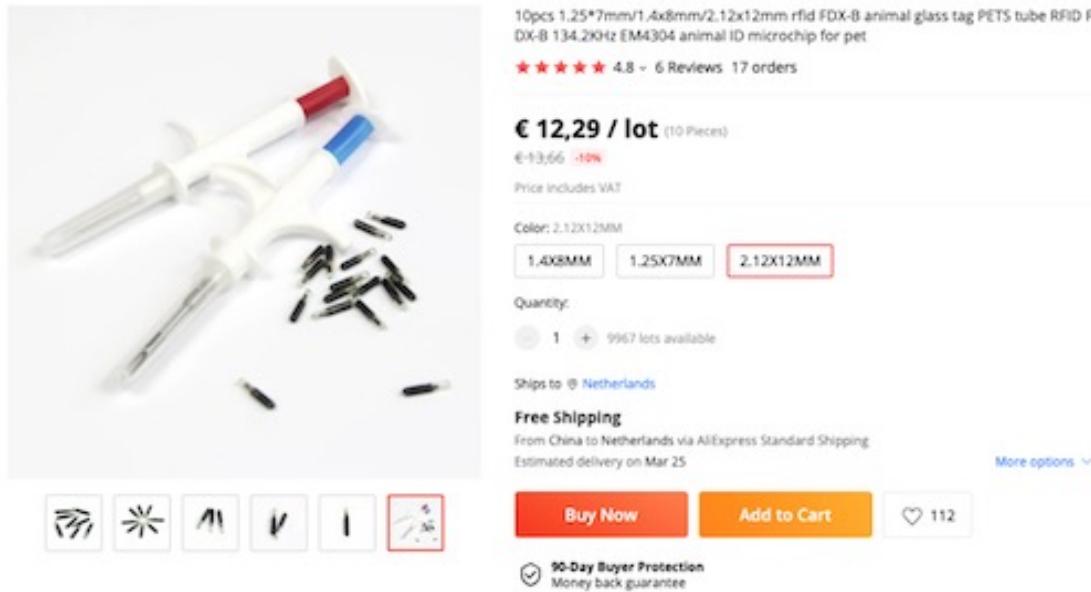
- Band: 134.2kHz
- Encoding: biphase



# FDX-B data structure

| MSB | LSB |   |
|-----|-----|---|
| 1   | 0   | 0 0 0 0 0 0 0 0 0 0 0 11 bit header   |
| 1   | 1   | 0 1 0 0 0 0 0 0 0 0 0 38 bit national code (12 digits) e.g. <b>140000795552</b> (decimal)         |
| 1   | 1   | 0 0 1 1 1 0 1 1 0 0 1 1   |
| 1   | 1   | 0 1 1 0 0 0 1 0 0 1 0   |
| 1   | 1   | 0 0 1 1 0 0 0 0 0 0 0   |
| 1   | 0   | 0 1 0 0 0 0 0 0 0 0 0   |
| 1   | 1   | 0 0 0 0 0 1 0 0 0 0 0 10 bit (3 digit) country code e.g. <b>528</b> (decimal) for the Netherlands |
| 1   | -   | - - - - - - - - 0 1 bit extra application bits  |
| 1   | 1   | - - - - - - - - - 1 bit animal application identicator  |
| 1   | 1   | 0 0 0 0 0 0 0 1 1 1 16 bit checksum   |
| 1   | 1   | 1 1 1 1 0 0 1 0   |
| 1   | 0   | 0 0 0 0 0 0 0 0 0 0 24 bit of extra application data if present                                   |
| 1   | 0   | 0 0 0 0 0 0 0 0 0 0   |
| 1   | 0   | 0 0 0 0 0 0 0 0 0 0   |

# Buying (re)writable microchips



10pcs 1.25\*7mm/1.4x8mm/2.12x12mm rfid FDX-B animal glass tag PETG tube RFID FDX-B 134.2kHz EM4304 animal ID microchip for pet

★★★★★ 4.8 ~ 6 Reviews 17 orders

€ 12,29 / lot (10 Pieces)

€ 13.66 -10%

Price includes VAT

Color: 2.12X12MM

1.4X8MM 1.25X7MM 2.12X12MM

Quantity:

1 + 9967 lots available

Ships to @ Netherlands

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Estimated delivery on Mar 25 More options ▾

Buy Now Add to Cart

90-Day Buyer Protection Money back guarantee

112

# Spoofing

```
pm3 > lf fdxb clone --em  
--country 528  
--national 140000795552  
--animal
```

```
pm3 > lf fdxb reader  
[+] FDX-B / ISO 11784/5 Animal  
[+] Animal ID 528-140000795552  
[+] National Code 140000795552  
(0x2098B29BA0)  
[+] Country Code 528 - Kingdom of the  
Netherlands  
[+] Reserved/RFU 0 (0x0000)  
[+] Animal bit set? True  
[+] Data block? False [value 0x0]  
[+] RUDI bit? False  
[+] User Info? 0 (RFU)  
[+] Replacement No? 0 (RFU)  
[+] CRC-16 0xF283 (ok)  
[+] Raw 05 D9 4D 19 04 21 00 01
```



# Registration

The image displays three separate browser windows side-by-side, each showing a different database search result for a dog with chip number 528140000795552.

**Left Window:** A search interface titled "Zoek in de BackHomeClub databank". It has a search bar with the chip number "528140000795552" and a blue button "Zoek in de databank". Below the search results is a summary card for "Gentle Ghinjo von Haus Gaea". The card includes the chip number, breed (Duitse herder), sex (Reu), and status (Niet gecastreerd/gesteriliseerd). It also lists "Woonplaats: Kollum" and "Naam eigenaar: Niet gepubliceerd".

**Middle Window:** A search interface titled "Zoek eigenaar". It has a search bar with the chip number "528140000795552" and an orange "Zoek" button. The results show a summary for "HOND" and "EIGENAAR". The "HOND" section lists the name "Gentle Ghinjo von Haus Gaea". The "EIGENAAR" section lists the phone number "+31630892299" and email "info@roaldnefs.com". Both the phone number and email are highlighted with red boxes.

**Right Window:** A search interface titled "Zoek eigenaar". It has a search bar with the chip number "528140000795552" and an orange "Zoek" button. The results show a summary for "HOND" and "EIGENAAR". The "HOND" section lists the name "Gentle Ghinjo von Haus Gaea". The "EIGENAAR" section lists the phone number "+31630892299" and email "info@roaldnefs.com". Both the phone number and email are highlighted with red boxes. The page features a large image of a German Shepherd dog and navigation links for the "RAAD VAN BEHEER HOUDEN VAN HONDEN" organization.



VDF  
Diervoederfabriek B.

528140000795552