Equine Endurance Ride - Access Point Information

From your tablet, iPad or phone go to where you would configure a new Wi-Fi Network.

In the list of available Networks you should find one called "Check Point"
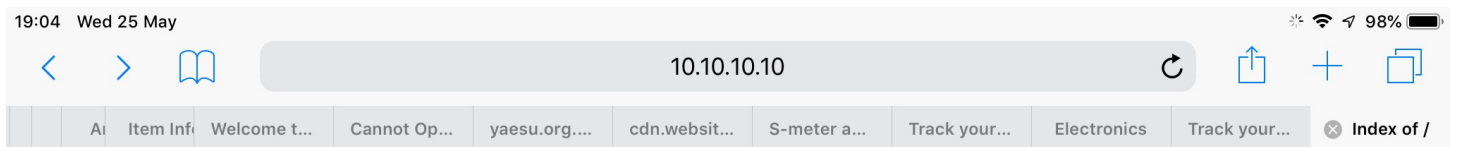
Select this one, and when asked for the password enter "**fredfred**", (without the quotation marks).

Once logged in to this Wi-Fi network open your normal internet browser.

Enter "**10.10.10.10**" into address bar (without the quotation marks).

You should see a list of HTML pages that can be loaded.

It should look something like this.

More than one browser tab can be opened at the one time displaying different information.

- 'cards_live-now.html' tab is automatically updated every three seconds.

- 'cards_log.html' tab is automatically updated every sixty seconds.

- 'heartbeat.html' tab is automatically updated every sixty seconds.

- 'ride_list(x).html' only displays the download that you selected and is not updated.

ride_list(x).html

Select "**ride_list(x).html**" where (x) is incremental number starting at "0". As Ride Base downloads or updates the rider information like Vet outs or withdrawn etc then each new down load is incremented by +1. The higher the number the more up to date the information is. The time stamp next to the file name should also reflect this.

Ride Data file published - Sat Apr 2 11:29:48 2022

Heartbeat ride_time - 2022-04-02 11:28:29

@ride,00,b,50,,

@ride,01,80,1690018413318770,38,Tony,Purton,W,,

@ride,02,,,,,,,

@ride,03,,,,,,,

@ride,04,,,,,,,

@ride,05,80,3660347530581643,80,Noel,Lockhart,C,,

@ride,06,80,2815698099555320,83,Angie,Clark,C,,

@ride,07,80,2534757007291342,90,Angela,Hawke,C

Lines 7 to 48 are removed to save space, but would continue on sequentially.

@ride,49,20,7037493167827030,133,Zali,Taylor,C,,

@ride,50,20,5067803846559835,157,Grace,Mead,C,,

@ride,51,e,,

From last character on Rider Line:-

C - Competing

D - Disqualified

F - Finished

R - Retired

V - Vet Out

W - Withdrawn

@rideline of information is broken up into '@ride, list position number, Ride length, 16 Digit RFID card code, Bib Number or letter, Christian name, Surname, Rider status letter.'
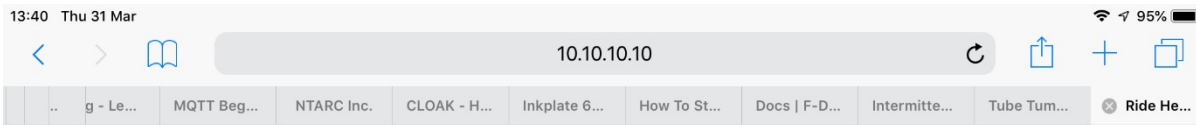
The lines that only have '@ride,xx,,,,,,,' where xx is the line position are a place marker for lost data that did not arrive error free at the check point. In this case we transmitted using a handheld on the receive frequency that the check point was using to mutilate part of the incoming message.

heartbeat.html

Select "**heartbeat.html**" and you will get a communications status of the Check Point.

It automatically updates the browser Tab every twenty seconds.

The **@time** and **@beat** information comes from the Arduino micro controller that is controlling the RFID panel and hopefully communicating with Ride Base. "**@time**" means that there is a 70cm band radio link to Ride Base via the repeater and it now has synchronised time.

The ten digit number in "@time,1648694398,....." is a Unix time stamp (also known as Epoch time) and is the number of seconds that has elapsed since the 1st January 1970 at 00:00

cards_live-now.html

Select "**cards_live-now.html**" and you will get the last twenty riders that have RFID tag scanned at that Check Point in the last ten minutes. Twenty minutes after a rider scanned they drop off this auto updating list. Current time, Communications link status and riders are updated automatically every three seconds. If no riders and or greater than twenty minutes, see next image below.
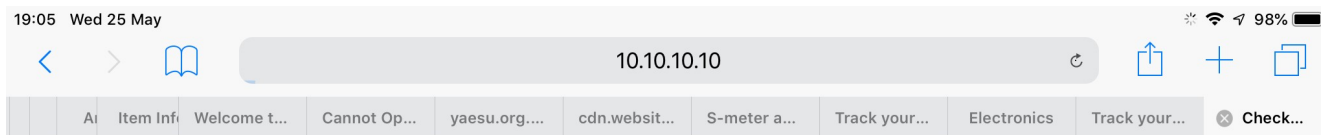

 Rider information that is displayed, time RFID tag was scanned, ride length they are in, their Bib number or letter and their full name. This screen will be updated even if there is a temporary loss of data communications with Ride Base. (If this is the case the actual RFID scanned times are the ones eventually forwarded to base once communication is re-established.)

The "Test RFID" cards that come with the Check Point are pre-programmed into the system and should come up regardless of data link status. If a Base to Checkpoint Event Rider list has not been down loaded then rider RFID cards will come up as not known by system and will list the card number. Also handy if the rider has the wrong card etc as you can tell Ride Base the Bib number from visual sighting of the rider.

See below for an example of Riders having scanned their RFID tags at a Check Point, within the last twenty minutes. They will drop off by the minute after twenty minutes has been reached until all cleared.
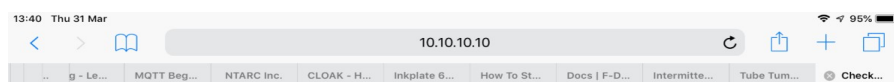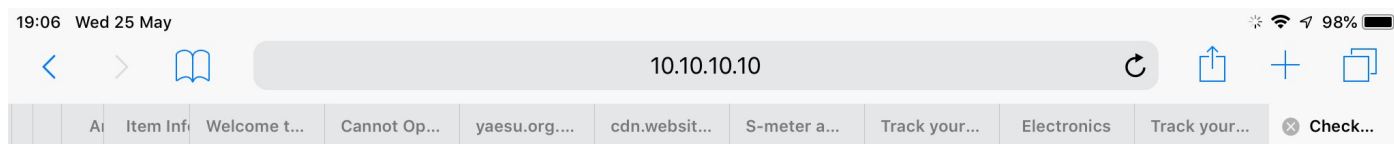

The column are, Time Stamp, Ride Length, Bib Number or Letter, Christian then Surname.

cards_log.html

"cards_log.html" is the html file that will contain ALL RFID tags that have been scanned at that Check Point since it was first powered up that day. Independent of whether the base received them or the Check Point has been powered down again, moved or restarted. Below is the initial page, before any RFID cards have been scanned, even the Test Cards.

19:06 Wed 25 May								☀ 🛜 ⌁ 98% ▬
‹ › 📖			10.10.10.10			⟳ ⬆ + ⧉		
A|	Item Inf	Welcome t…	Cannot Op…	yaesu.org.…	cdn.websit…	S-meter a…	Track your…	Electronics	Track your…	⊗ Check…

Check Point Scanned Cards Log - published - 18:45

Screen will auto update every 60 seconds.

Latest scanned card at top of list.

Oldest scanned card at bottom of list.

"Not in list" error message

- ○ 13:08   50   22   Brooke Brown-Cordell
- ○ 13:08   50   34   Chelsea Cannon
- ○ 13:07   Card:3661683262265815 Not in list

If you see the 'Not in list' message, it means that the riders RFID card has scanned but is not recognised by the system. If you know the Bib number / rider that generated the entry then pass the information on by radio to Ride Base as soon as practicable. (You have the time, Card Number and hopefully the Bib number.) Having the Bib number given to them means they can marry that up with the unknown card number they received and can raise the problem with the Ride Organisers. It is usually caused by the Rider picking up the wrong RFID card at the start.

Pi Zero microcomputer

Below is a picture of the Pi Zero microcomputer and is basically the Access Point you are logging into. Pi Zero is interfaced to the Arduino, which in turn is doing all the RFID and Data Communications heavy lifting work load.

The bottom three red led indicators are:-

- Left hand led - Pi Zero Heartbeat – one second on two seconds off repeated. All is good and programme is running.
- Middle led – Serial data is being received from or sent to the Arduino from the Pi Zero (independent of Radio Data link status)
- Right hand led – HTML web pages are being internally published or updated in the Assess Point

Little green led at top right of Pi Zero board is power on and SD card activity.

Three digit led display on board at top of box is power supply out put voltage.

25/05/2022 Access Point Equine V7.docx