Jenlogix Ltd
Unit 11, 250 Marua Rd
Mt Wellington, Auckland 1051
PO Box 87131 Meadowbank
Auckland 1742
New Zealand
Phone: +64 9 579 6439
Fax: +64 9 820 9447
www.jenlogix.co.nz

PALERT AND PX-01 SYSTEMS WEB CONFIGURATION

USER MANUAL

Version 2

26/01/2018

Status: Released

CONTENTS

DOCUMENT CONTROLS

DOCUMENT HISTORY

This document has undergone the following modifications since it was created:

Revision:	Date:	Author:	Comments:
0.1	17/11/2017	VP/SP/BH	Merge of various docs
2.0	26/01/2018	VP/BH	Updated

REFERENCES AND SUPPORTING DOCUMENTS

Document	Date

Document Stored as Z:\Supplier Brochures and promo\San Lien\Manuals etc\Palert System Web User Manual V2.docx

Last Saved at 26/01/2018 10:09 AM

DOCUMENT CONVENTIONS

INTENDED AUDIENCE AND READING SUGGESTIONS

User and administrators of Palert system

1. PALERT AND PX-01 SYSTEMS

The Palert/PX-01 product range includes a number of systems that have local processing and storage. While the original Palert required connectivity to controllers and networks, these units are designed for a variety of applications and some can be run standalone. Configuration is all based on the same architecture and this manual is designed to provide details for these units.

The devices are :-

1. Palert+
2. Palert+ S3
3. PX-01 Cube
4. PX-01 Controller
5. PX-01 netRelay
6. PX-01 netTower
7. PX-01 netSPeaker

This manual shows the configuration options for all these devices.

NOTE: The basic Palert does not have a web interface. Please use the PC utility as described in Palert System Install and Configuration.pdf

Refer to the individual Setup guides for hardware and other information specific to the units.

1.1 PASSWORDS

All the units have 2 different configuration components. The main access is via a web interface. This is used in the majority of situations. But there is also an underlying Linux operating system. Typically there is no need to access this, with the probable exception of password changing if required.

The systems come with 3 main passwords. 2 are for the web interface and 1 for the operating system.

To change the web interface see next section and to change the Linux password see section Access Operating System

2. WEB INTERFACE FOR SOFTWARE CONFIGURATION:

All Palert units use the same basic Web interface. Where they differ, this is highlighted in RED.

2.1 CONNECTION SETTINGS

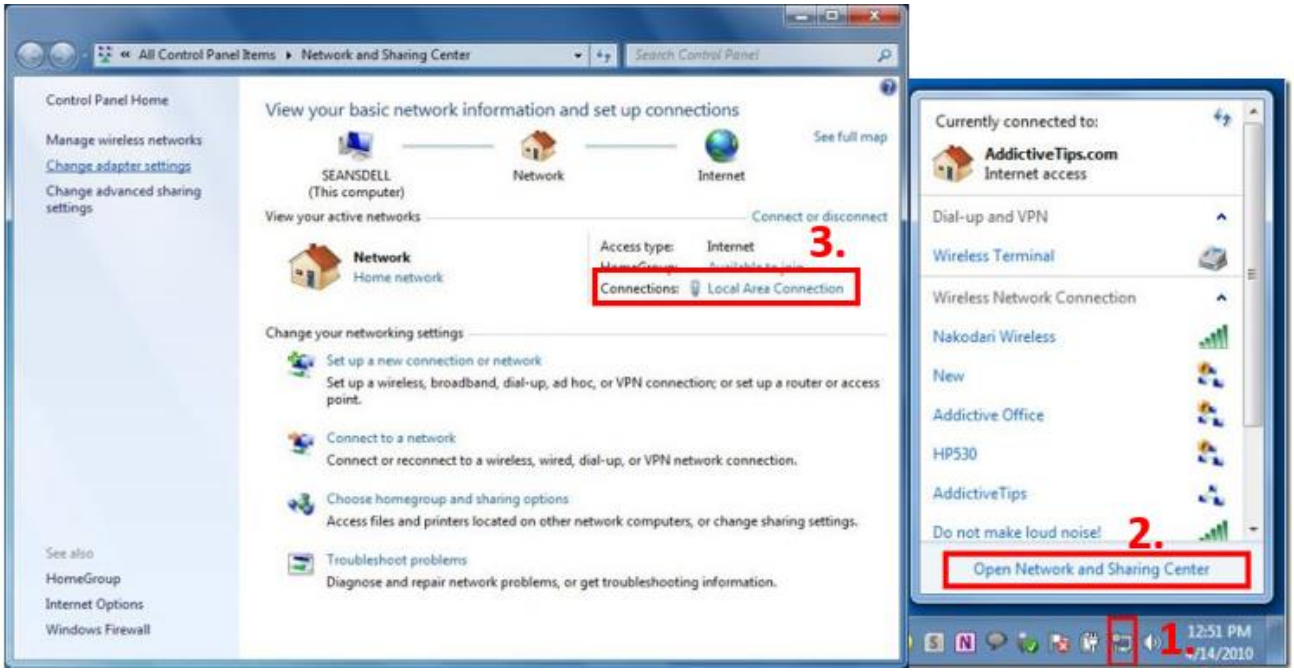
To connect to the unit from a local PC/Laptop it is necessary to change the PC network IP address to match the subnet of the unit.

To find the IP address of the unit press the internal control button – see section: Control Button.

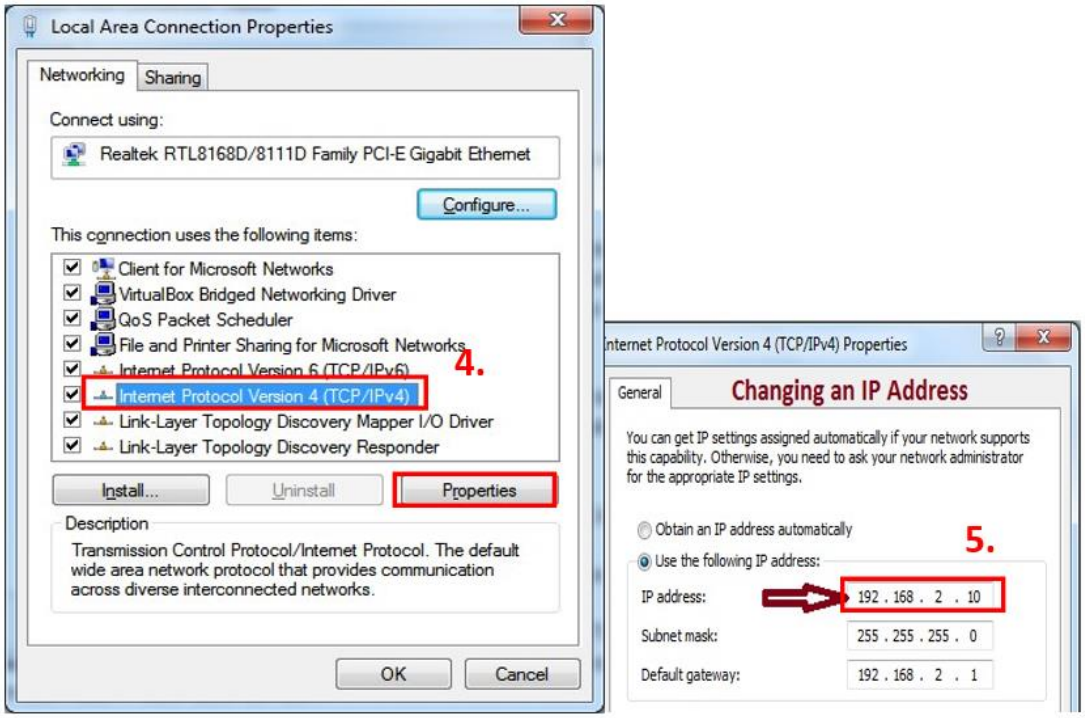
The unit IP address can then be changed using web interface below and so the PC subnet would then need to change to match the new IP to connect subsequently.

Connecting to a Palert from a local PC:

1. Click the network connection icon.
2. Open Network and Sharing Centre.



3. Click Local Area Connection > then Properties > IPv4
4. Change your computer IP subnet to the same as the Unit
   E.g. 192.168.255.xxx



3. WEB INTERFACE

3.1 LOGIN

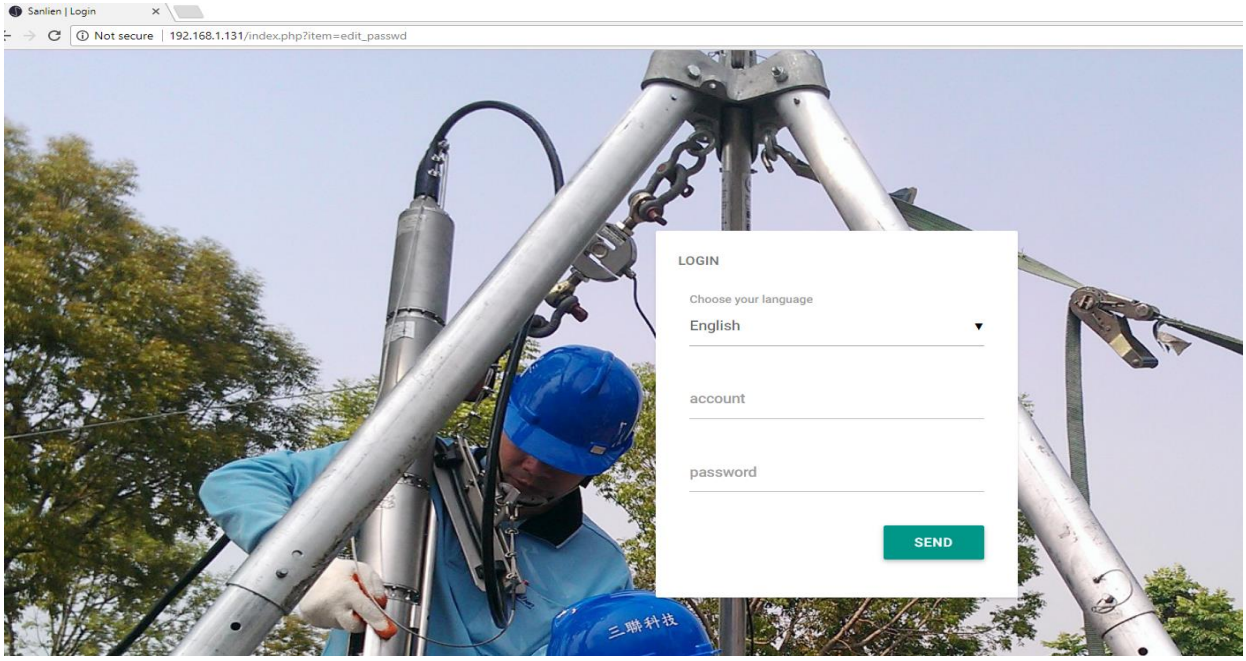
The configuration of the unit is via a web interface.

1. Open a web browser and enter the Unit IP on the address bar. This is found as above.
2. Login to pi account:

Language: Chinese or English

Default User: pi

Default Password: 1111



There is also an Admin user that shows up the system parmeters page. If the tab is not available then please login using this administration user.

User: admin

Password: 1111

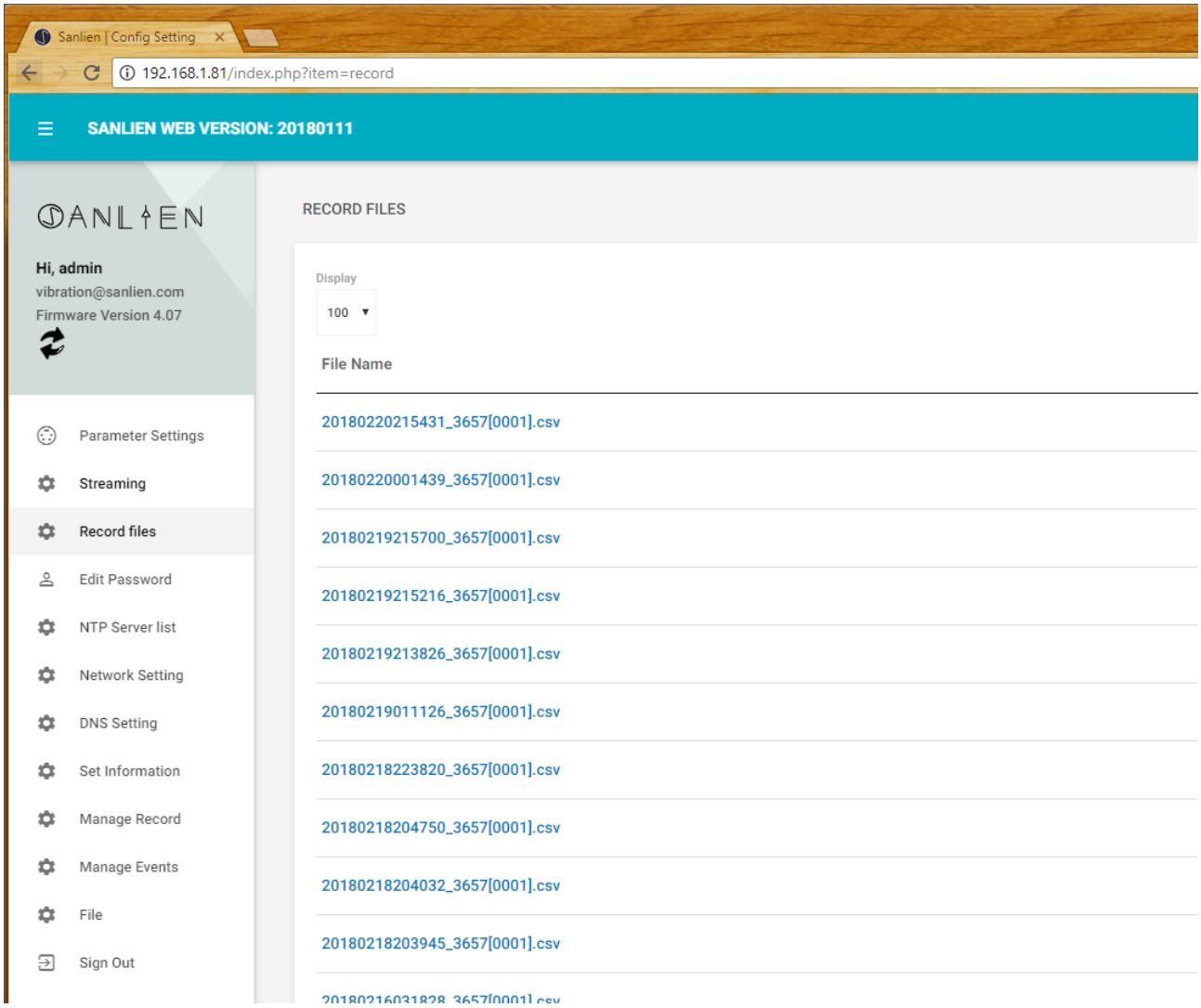
3.2 MENU

Depending on how the units are configured there are different menu options. But the rest of the functionality is very similar.

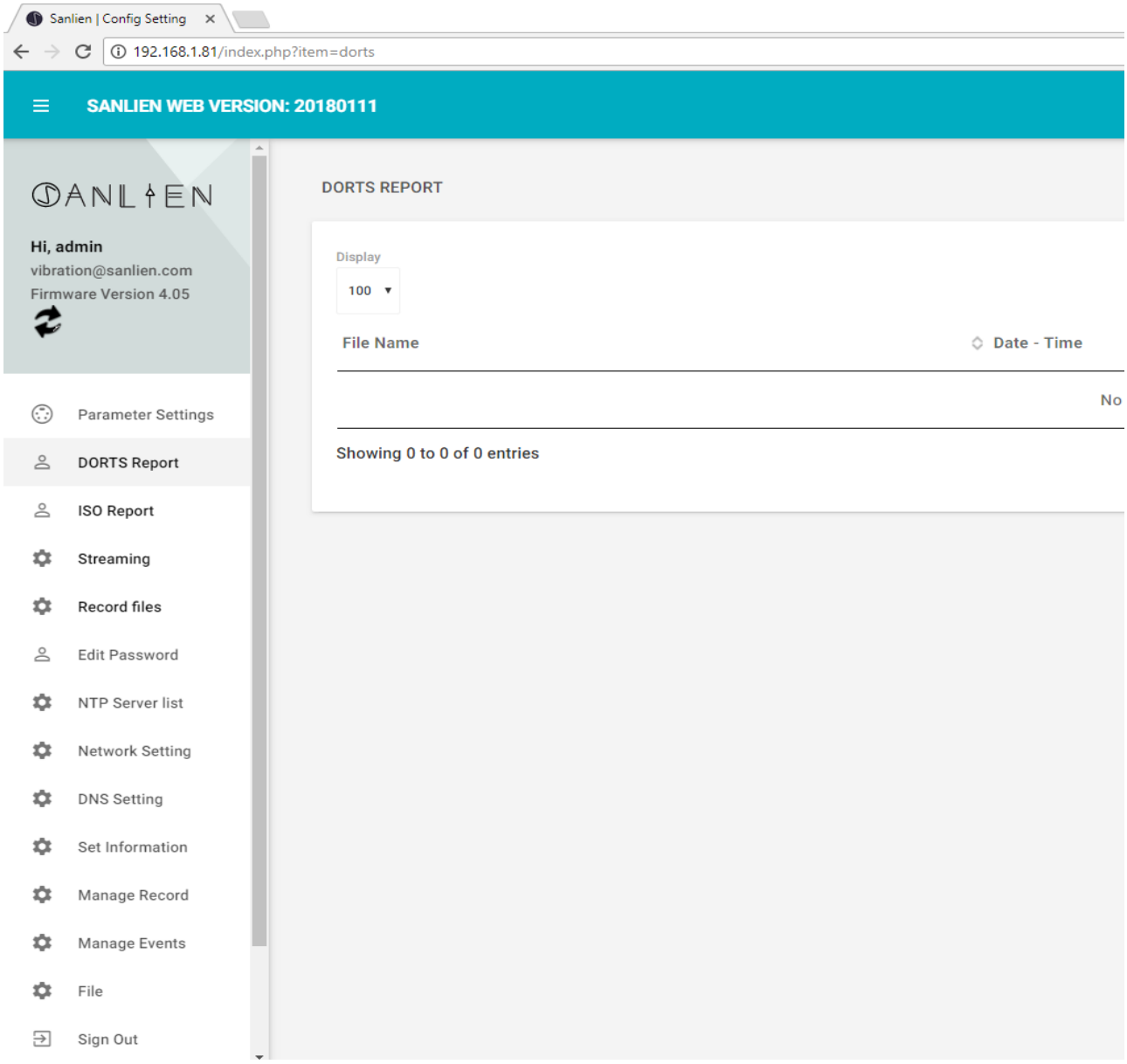
- Palert+ STD
- Palert+ RSHD
- Palert+ DIN
- PX-01

The PX-01 netxx devices - TBA

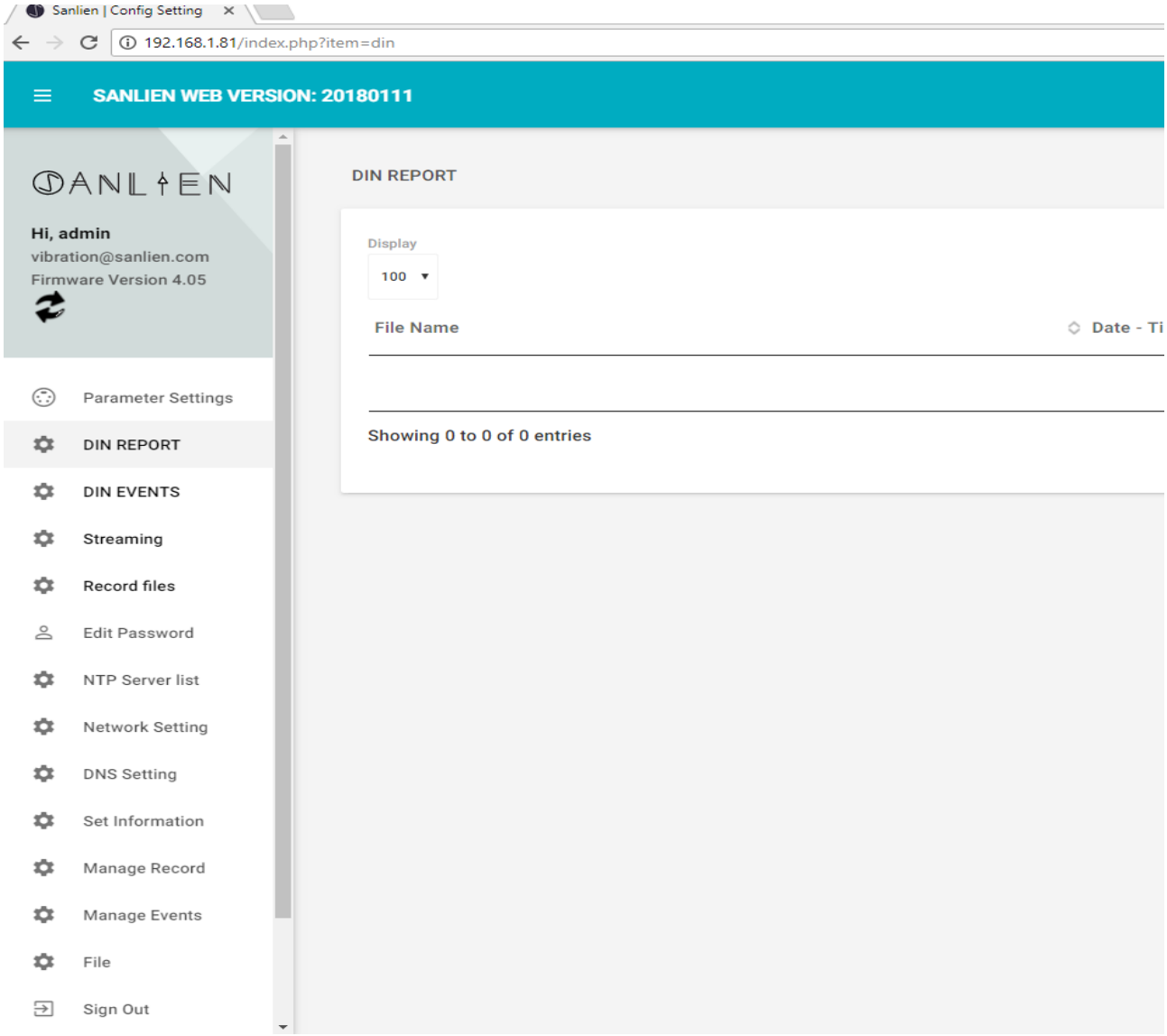
3.2.1 PALERT+ STD, WEB INTERFACE MENU



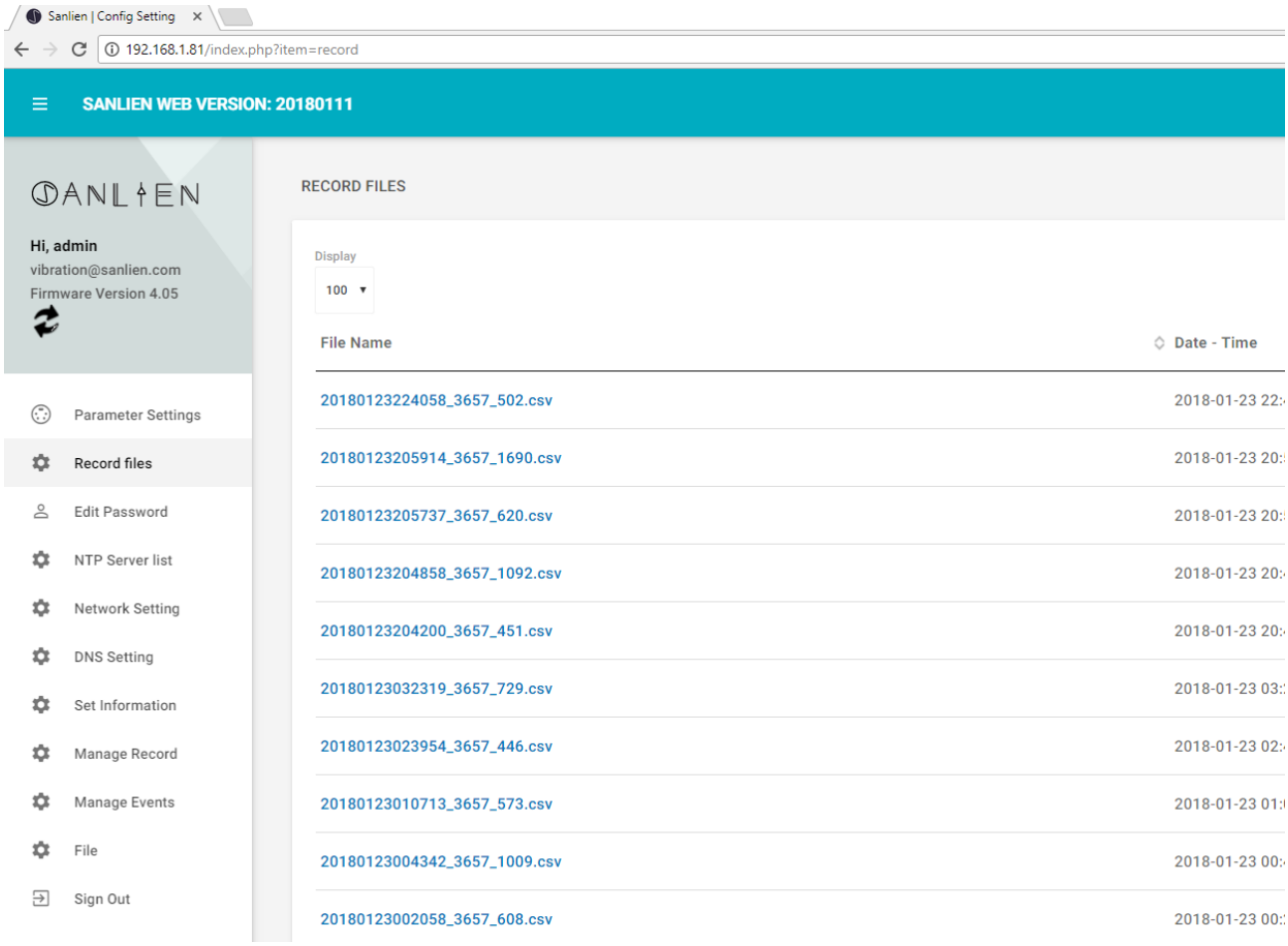
3.2.2 PALERT+ RSHD, WEB INTERFACE MENU



3.2.3 PALERT+ DIN, WEB INTERFACE MENU

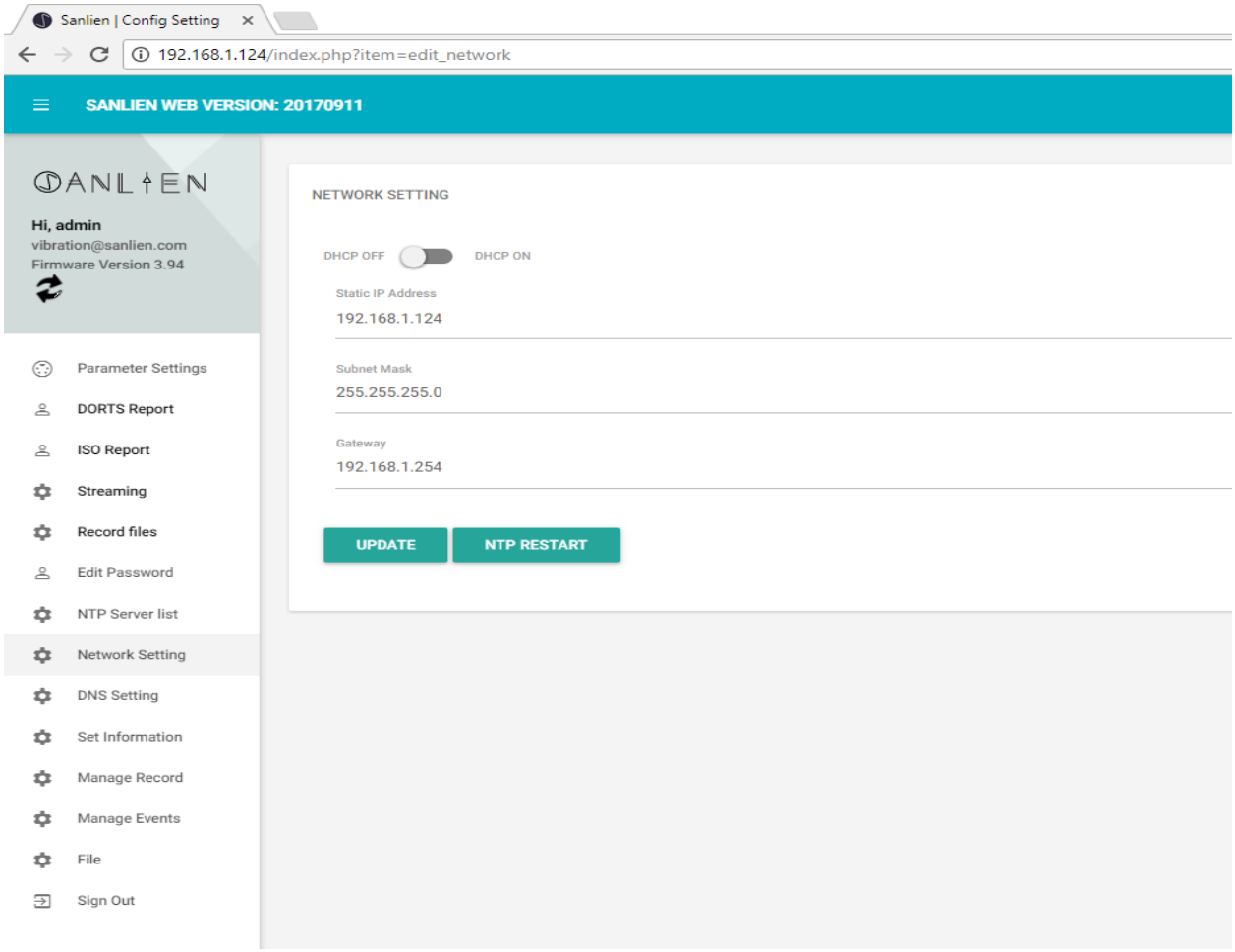


3.2.4 PX-01, WEB INTERFACE MENU



3.3 NETWORK SETTINGS

For changing the IP of the unit and the gateway to enable data to be sent externally

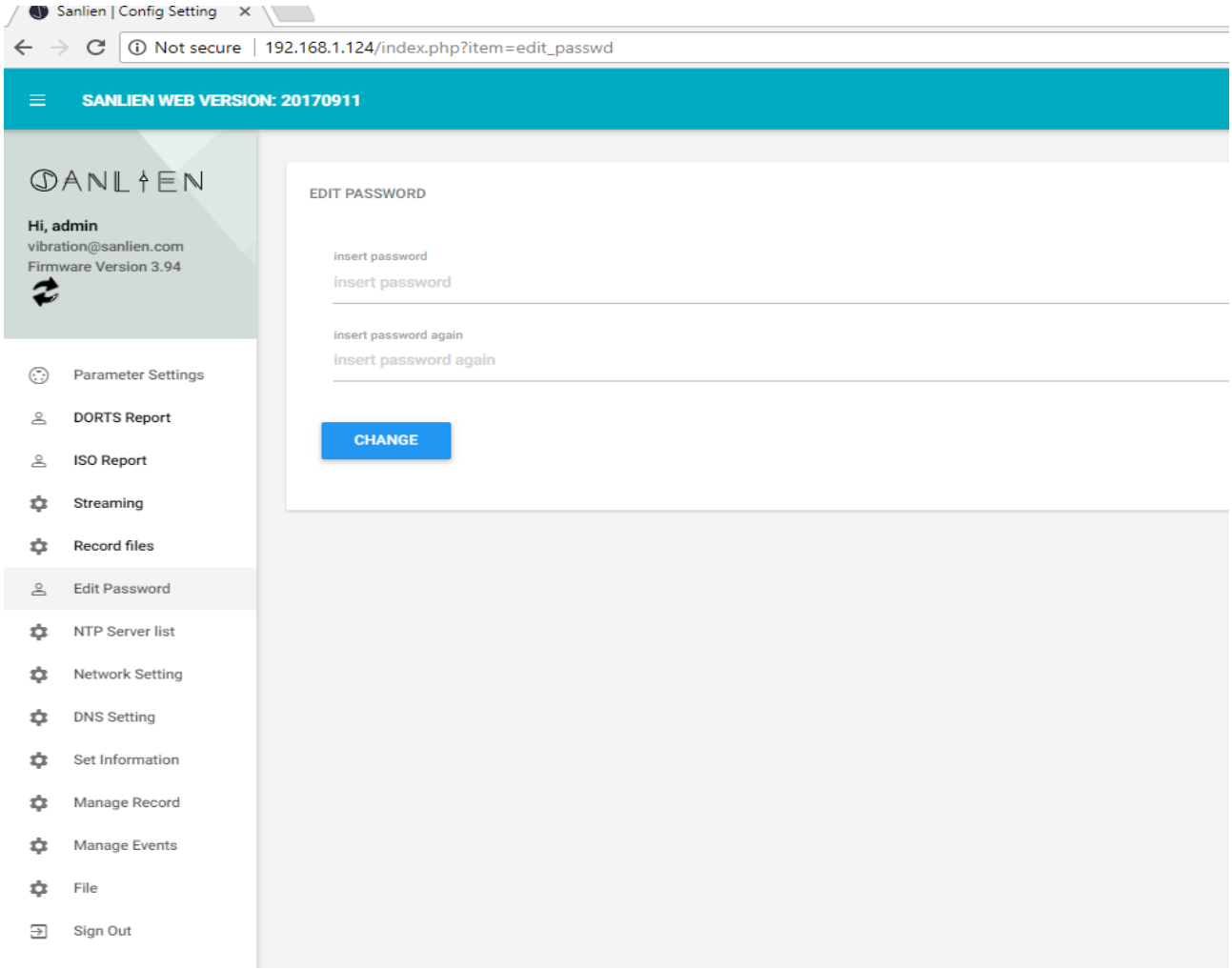


If the unit is being used as data storage, it is recommended to keep the DHCP off if possible if you wish to connect using other utilities. Otherwise the IP address will need to be found before retrieving any data and do any changes. But it is not essential to have a static IP if the unit is being used just as an Alarm system.

This screen provides the ability to change the IP address of the unit. Once changed you may need to reset the subnet of the PC connection to continue.

3.4 RESET PASSWORD

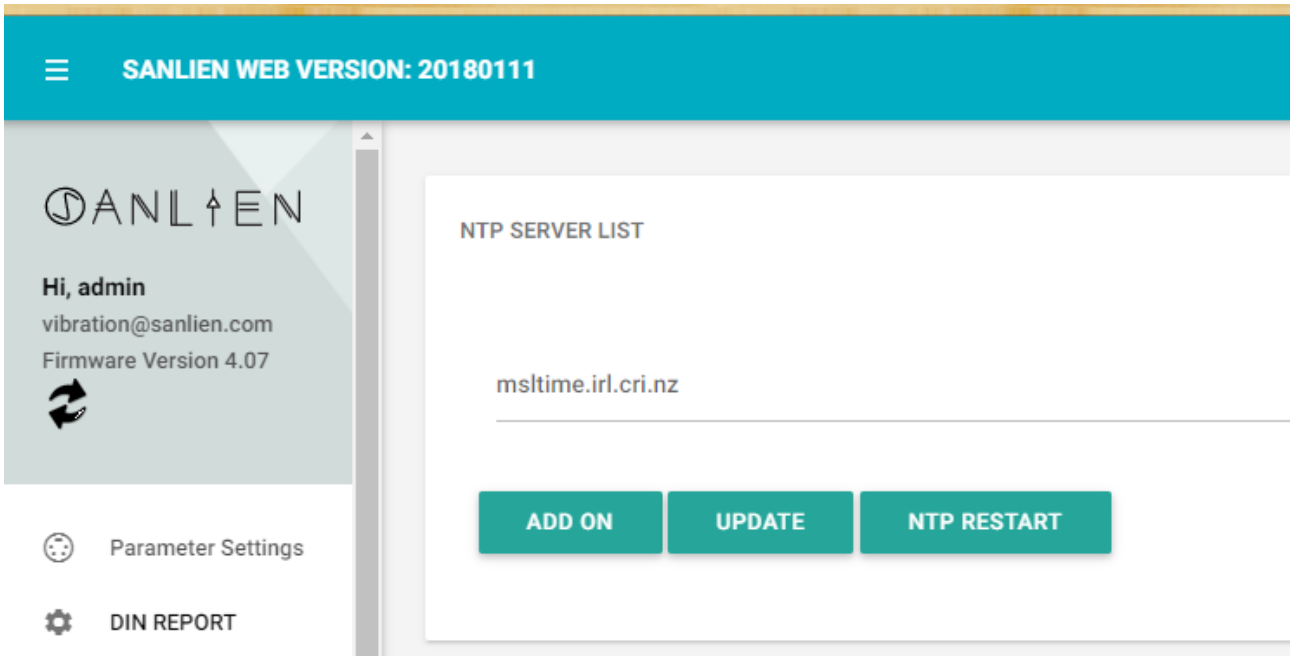
To change the web password, go to edit password tab and set as required.



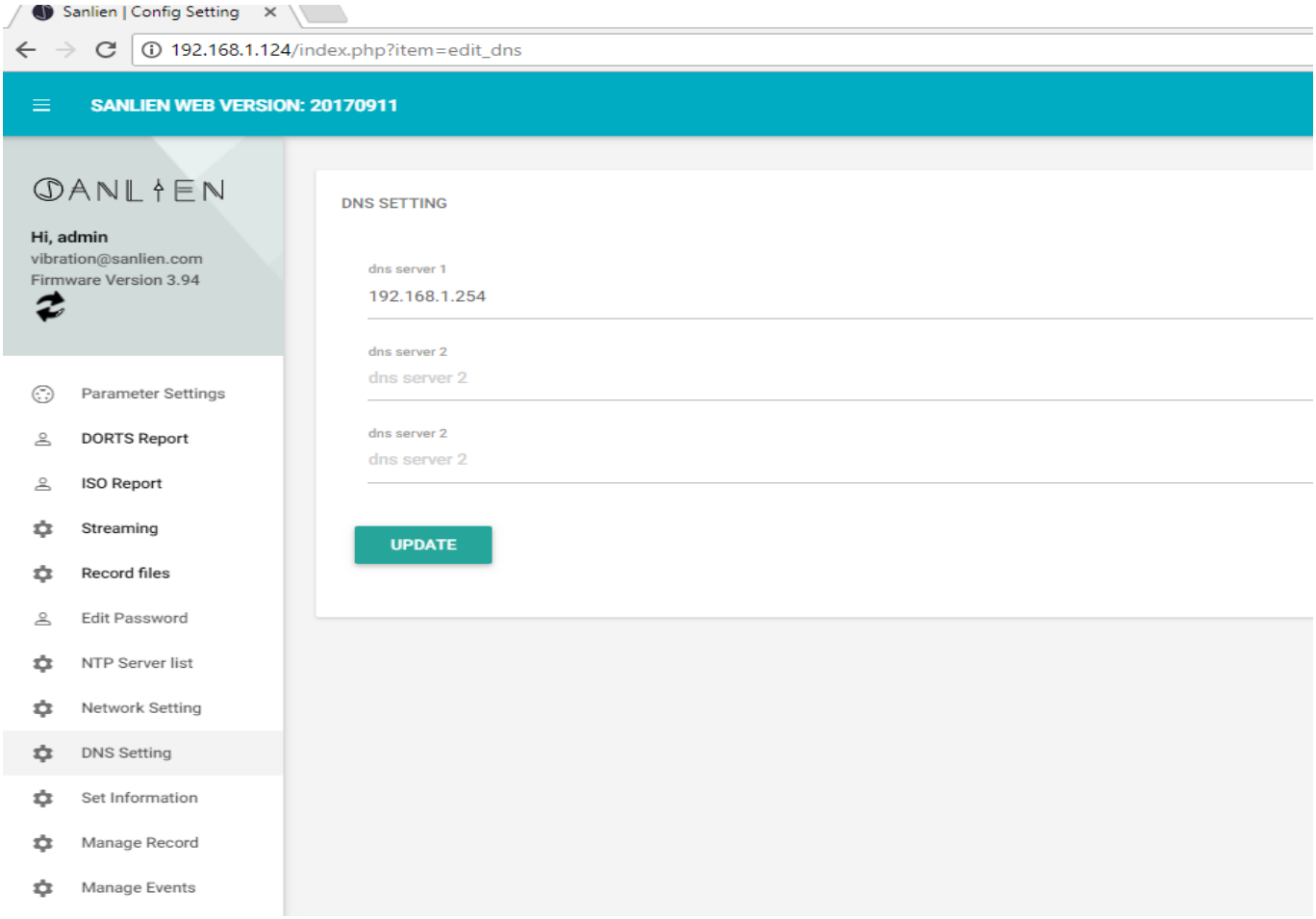
3.5 SETTING THE NTP SERVER

This is required to ensure the time stamp is kept correct. If the unit cannot connect to an NTP server, i.e. is not on a network, then the timestamp of the data will be based on the internal clock.

Multiple NTP servers can be configured.

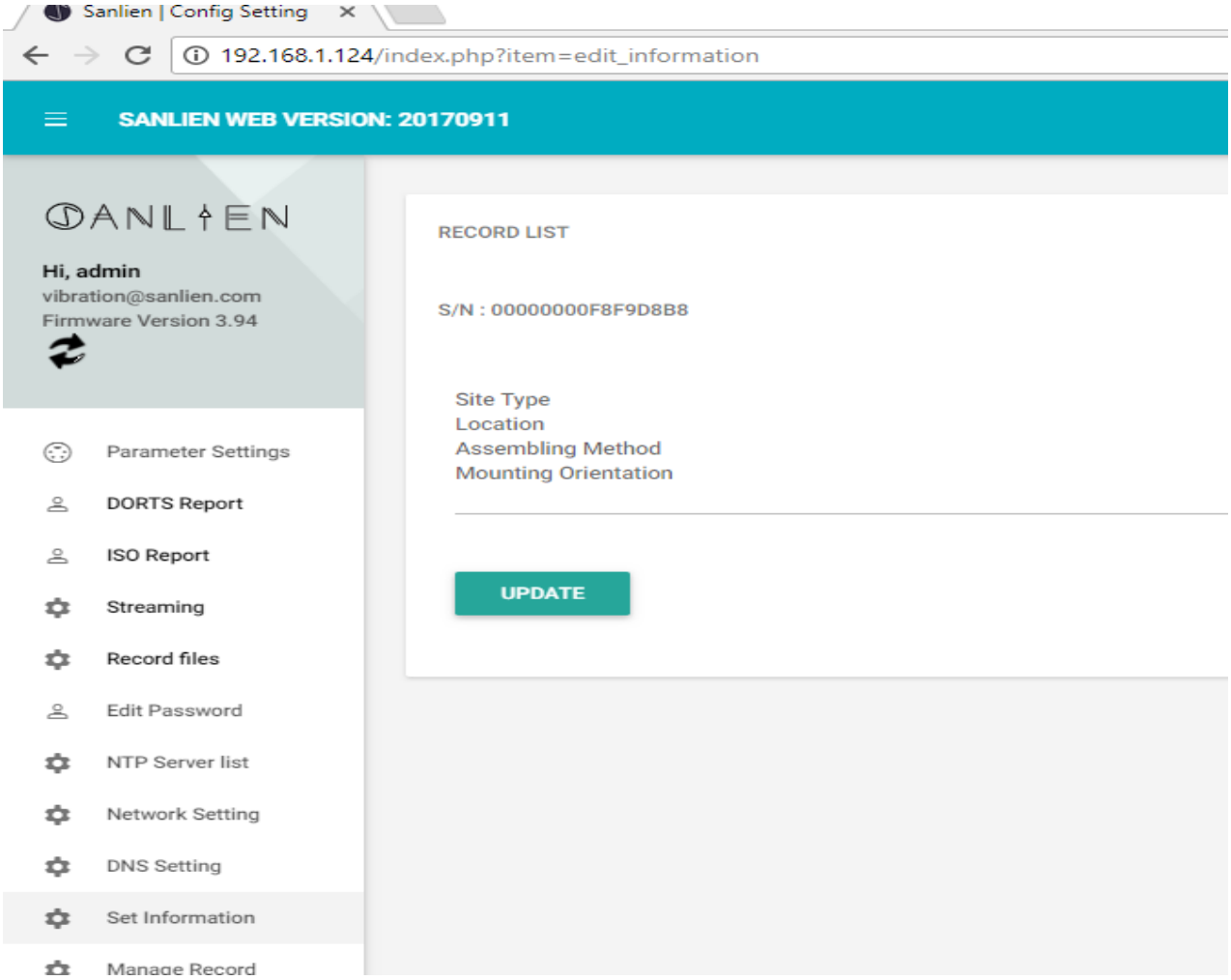


3.6 DNS SETTINGS



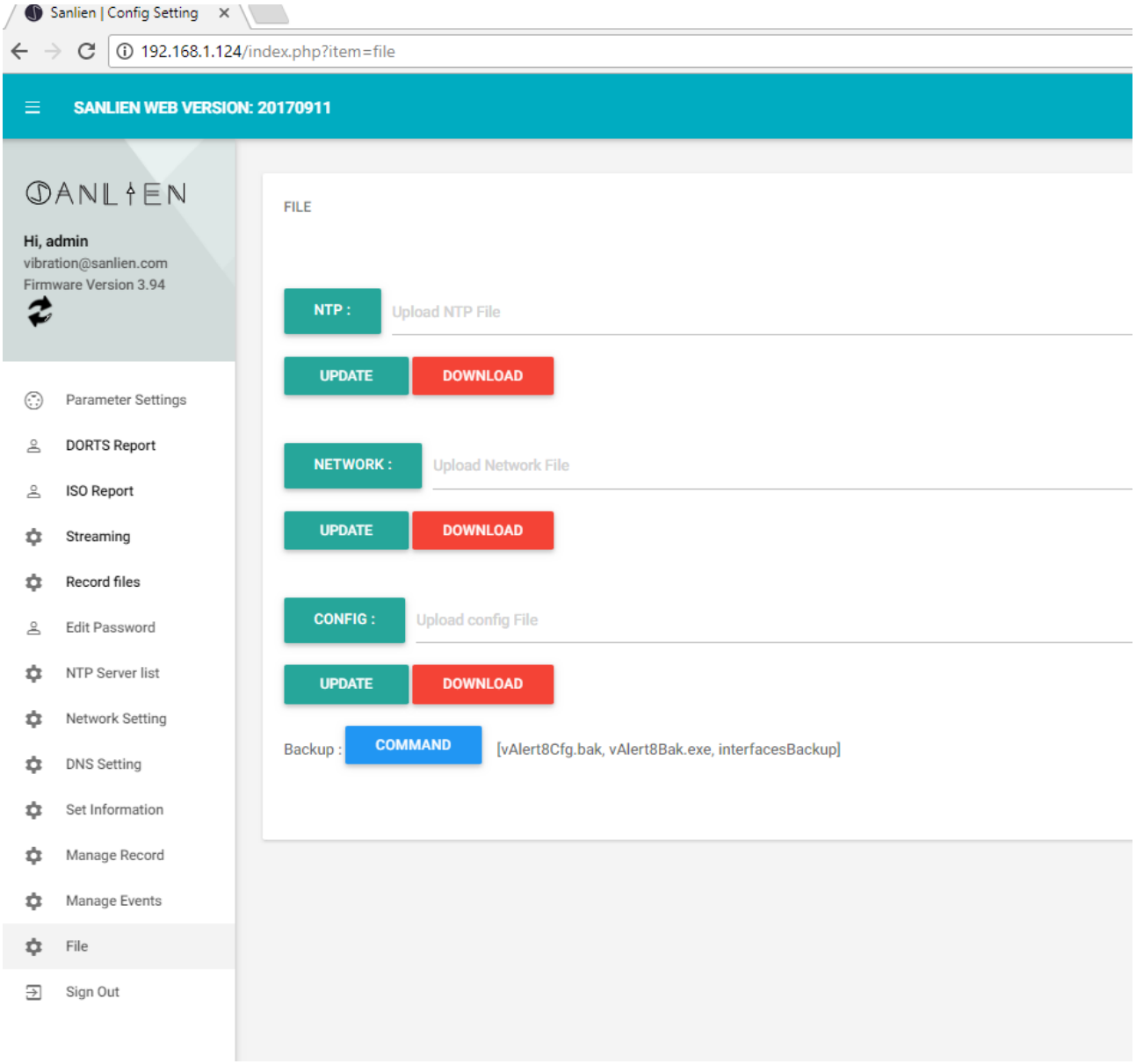
3.7 SET INFORMATION TAB

To change S/N of Unit use this tab – **this should not need to be changed unless directed**.



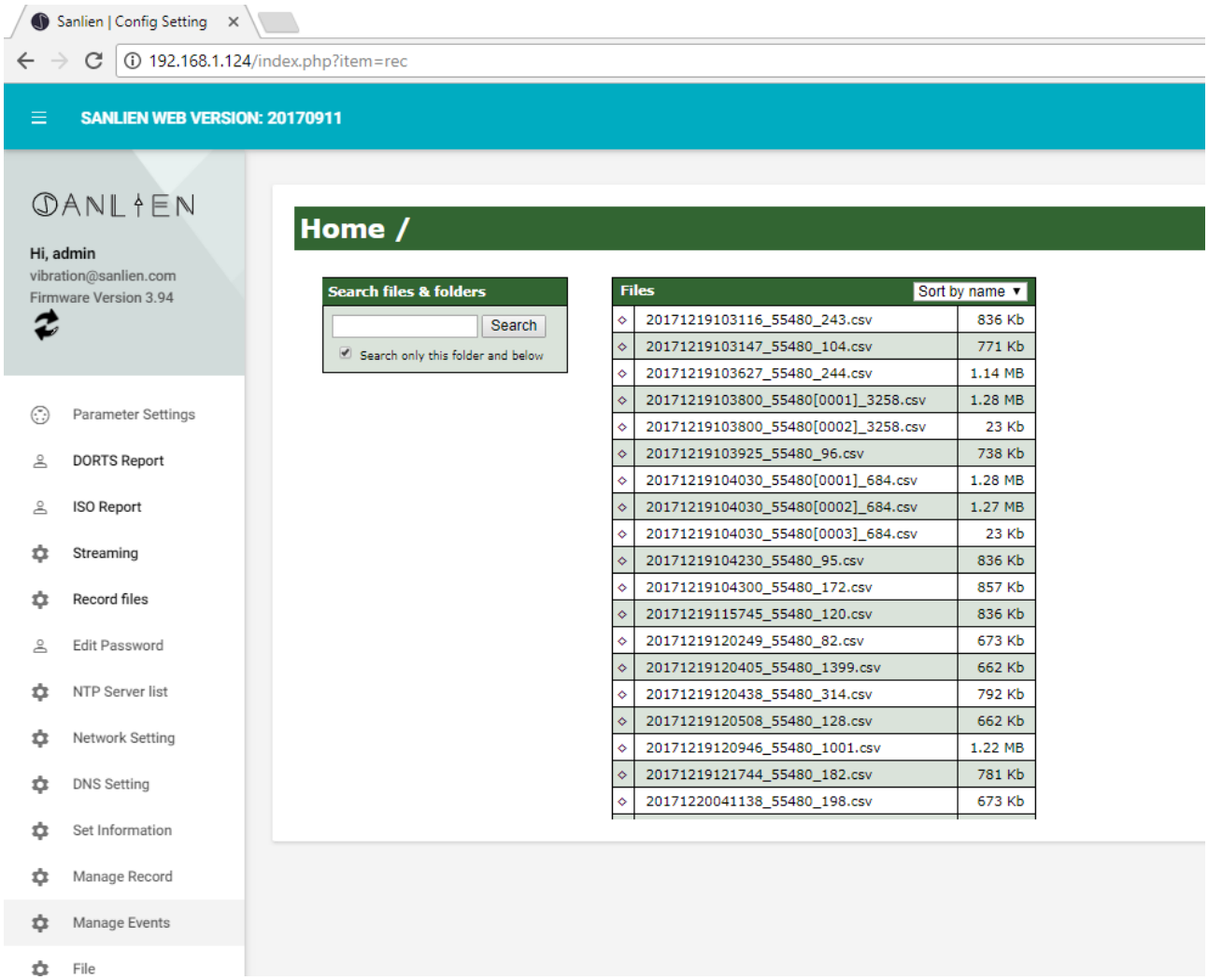
3.8 FILE TAB

This enables file upload and download of configuration information, preloading of settings.



3.9 DOWNLOADING EVENT FILES

For any event the system will store a csv file containing details of movement in the 3 axes. To copy any file, go to Manage Events tab, then click on any event file to download.



3.10 RECORD FILES

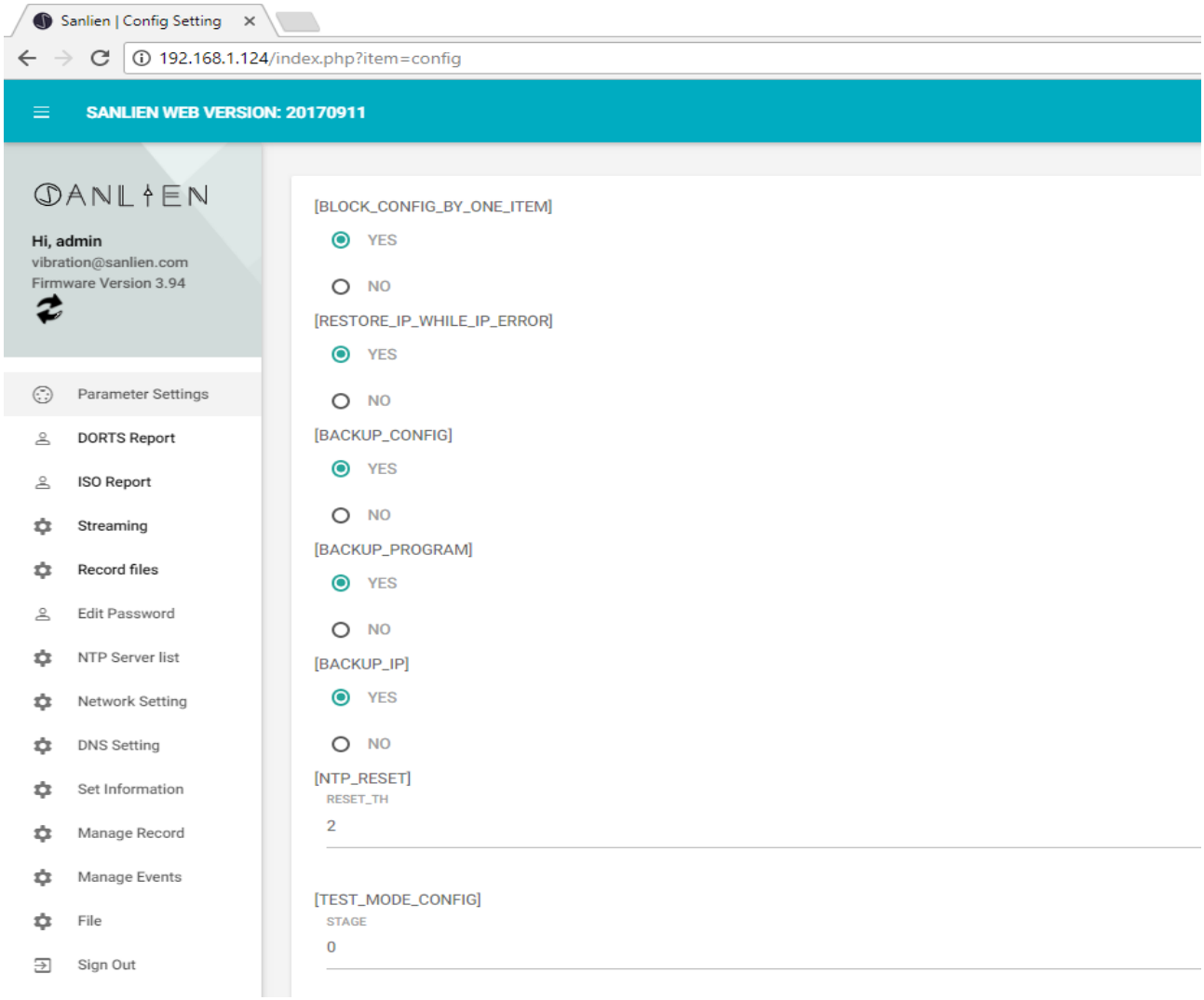
To view event files directly from web interface:

3.11 STREAMING

To check waveforms for all three axis it is possible to stream data. In addition this can be recorded for a specific time.

3.12 PARAMETERS SETTING TAB

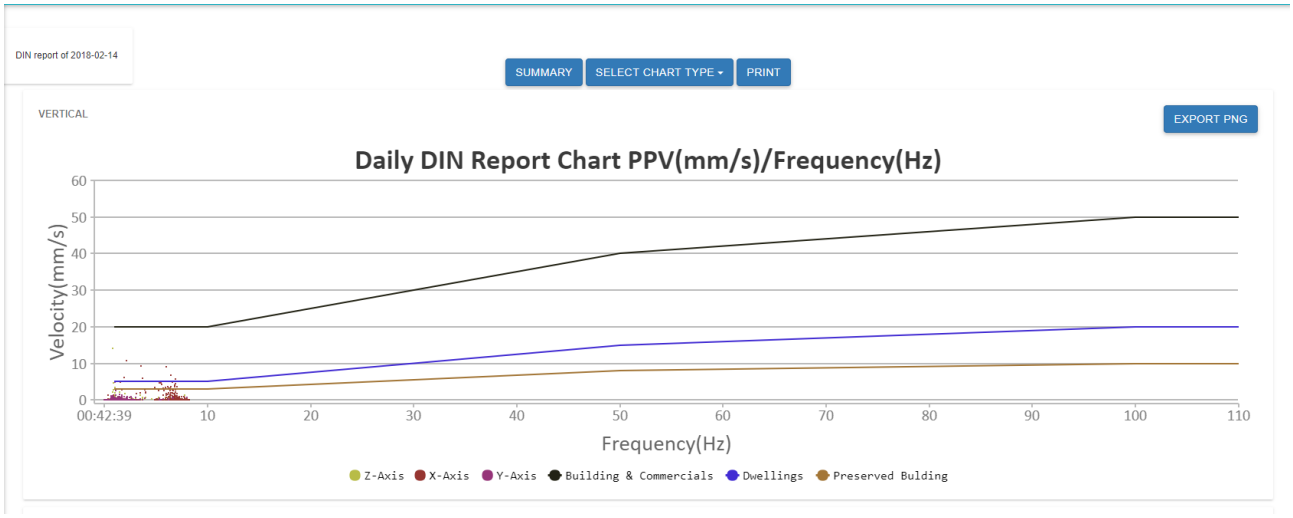
The Parameters menu option is only available to the admin user.

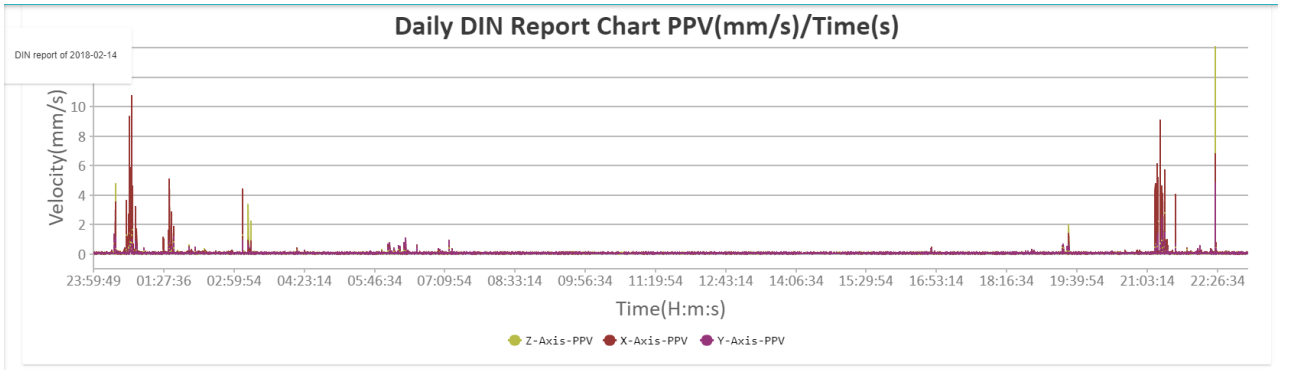


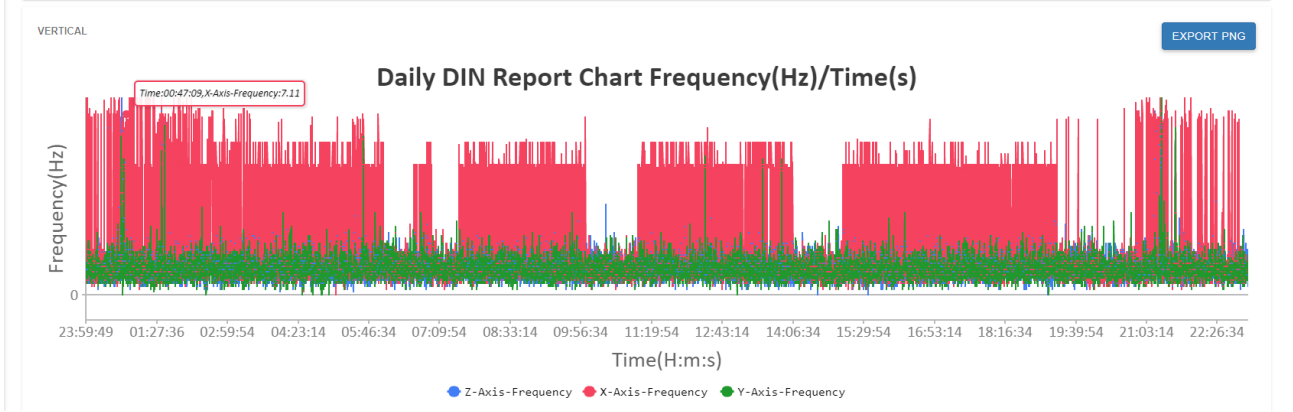
3.13 DIN REPORTS

Din provides details about vibration effects. There are 2 differnet reports – one a daily record and one a specific record. Examples shown below

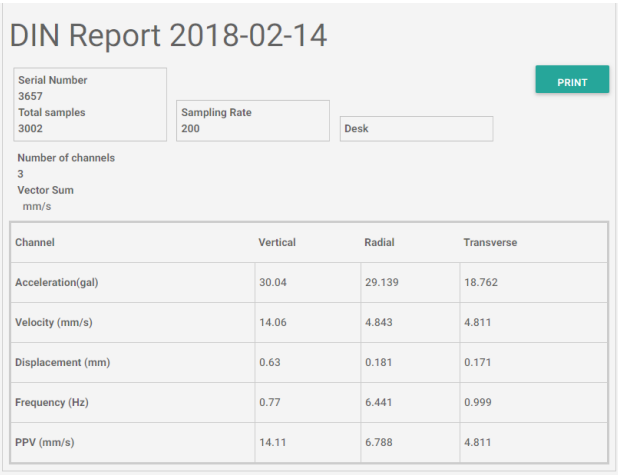
3.13.1 DIN REPORT







3.13.2 DIN EVENT



DIN Report 2018-02-14

PRINT

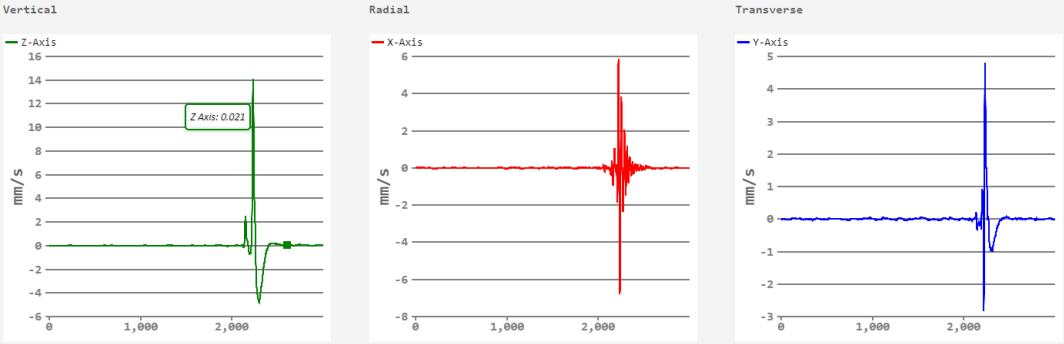
Serial Number
3657
Total samples
3002

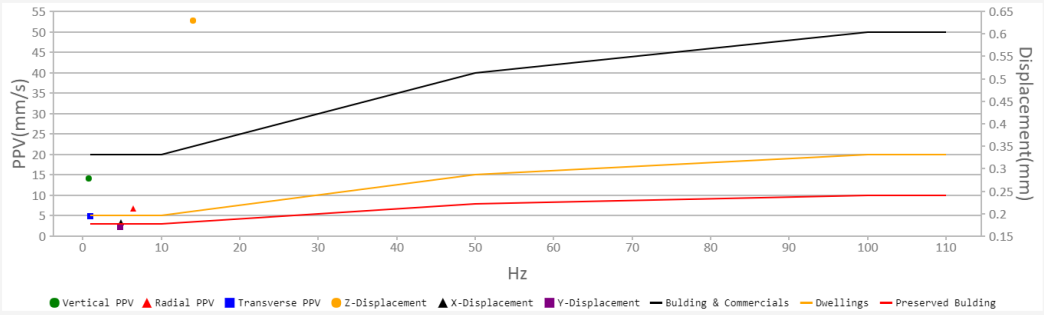
Sampling Rate
200

Desk

Number of channels
3
Vector Sum
mm/s

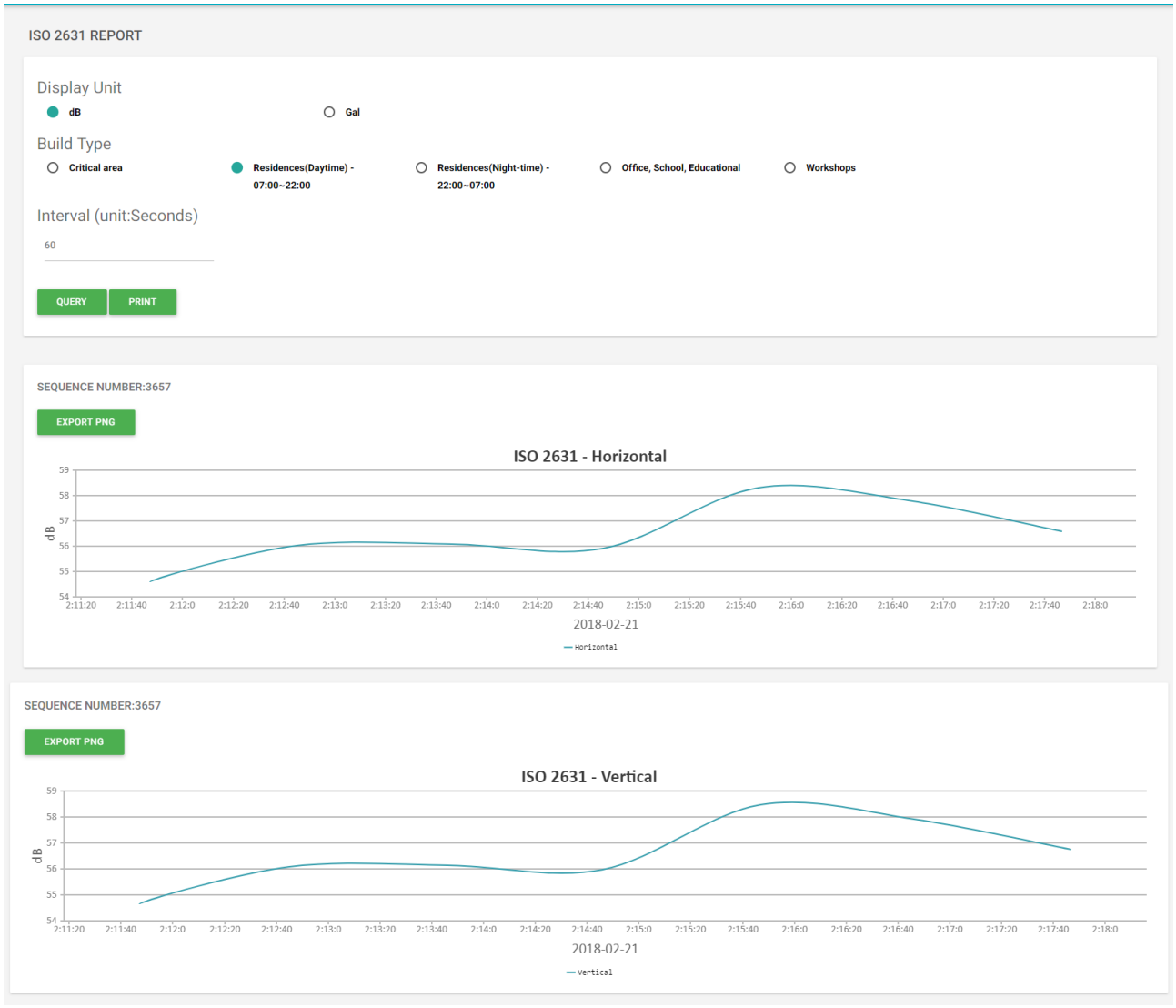
Channel	Vertical	Radial	Transverse
Acceleration(gal)	30.04	29.139	18.762
Velocity (mm/s)	14.06	4.843	4.811
Displacement (mm)	0.63	0.181	0.171
Frequency (Hz)	0.77	6.441	0.999
PPV (mm/s)	14.11	6.788	4.811





3.14 ISO REPORT

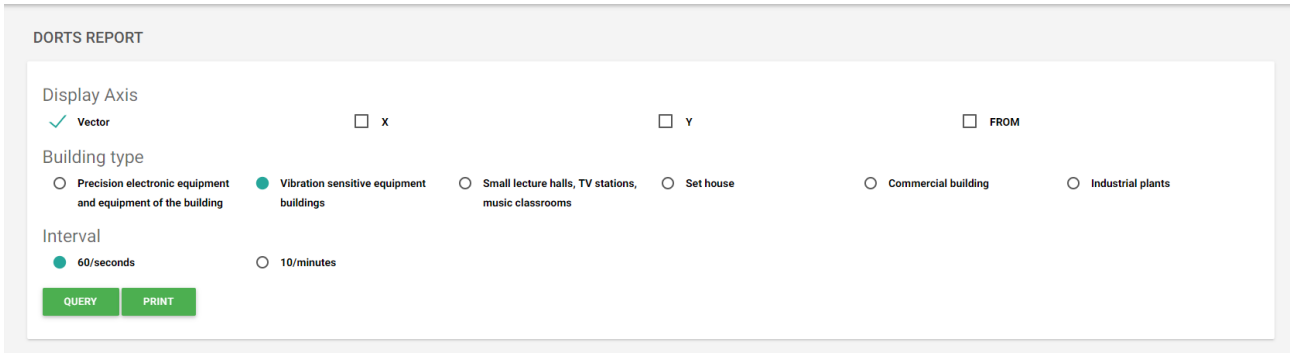
Shows vibrsation against the various standards of the ISO system both horizontal and vertical.



3.15 DORTS REPORT

DORTS is the Dept of Rapid Transport Systems in Taipei and is similar to ISO

This shows various frequency plots 2/4/8/16/31.5/63 Hz, with multiple axis



……..etc.

4. PARAMETERS DESCRIPTION

Parameters can be broadly classified into (A) early warning parameters, (B) regional early warning parameters, (C) parameters related to equipment and applications such as MQTT and firmware updates. Parameter settings are based on vAlert8.cfg file i.e. the main configuration file of the unit. (Engineers Only)

Please refer to Palert Manual for further information on many of these parameters.

4.1.1 EARLY WARNING PARAMETERS

[PALERT_LOCAL_MODE]

SERIAL_NO	Serial number of the unit – normally should not be changed.
LCD_BACK_LIGHT_SECOND	15
SERVER_IP	Server IP:port. Can have up to 3 servers.
MOUNT_MODE (Palert+)	WALL OR NORTHWARD *(Normally not used)* OR EASTWARD
SERVER_STREAM_MODE_TAIWAN	1
SERVER_PASSWORD	Server authentication password for CEB mode.
CEB_SEND_TIMEOUT_USEC	5000
MSEEDFILE_VALID_DAY	90
MODE	The streaming packet format, TAIWAN or CHINA mode.
CEB_MODE	Whether to adopt the China Seismological Bureau protocol, YES / NO.
Station naming parameters for use with miniSeed file format especially	
STATION_NET	Which network is the unit part of. E.g. NZ
STATION_NAME	Station name.

STATION_CH_NAME	Station channel name for central server, such as HL.
STATION_CH_GEO_NAME	Additional name to handle areas
STATION_LOCATION	Station location for central server, such as 01.
STREAM_TRIG_PACKET	Sending trigger message or not.
STREAMING_IN_MSEC	Millisecond stream default 1000
SAMPLING_RATE	Sampling rate 50/100/200 sps.
VECTOR_INTENSITY	YES / NO
SPS_CH0	Samples per second Channel 0 Default 50
SPS_CH1	Samples per second Channel 1 Default 100
0SPS_CH2	Samples per second Channel 2 Default 200
FIR_MODE	Minimum phase filter (Only on low-pass filter) YES / No.
LPF	Low pass filter 10/20/40 Hz.
HPF	High-pass filter 0.1 / 0.3 / 0.5 / 1 Hz.
WATCH_TIME	Alert duration - seconds.
WARNING_TIME	Warning duration - seconds.
PD_TRIG_ENABLE	Use Pd threshold to trigger event YES / NO.
PD_WATCH_THRESHOLD	P-wave Pd displacement (cm) Alert threshold Default 0.2
PD_WARNING_THRESHOLD	P-wave Pd displacement (cm) Warning threshold Default 0.35
PGA_TRIG_ENABLE	Use PGA to trigger event YES / NO
PGA_WATCH_THRESHOLD	PGA (gal) watch threshold

PGA_WARNING_THRESHOLD	PGA (gal) warning threshold
PGA_ACTION_THRESHOLD	PGA (gal) action threshold
STA_LTA_TRIG_ENABLE	Use STA / LTA to trigger event YES / NO.
STA_WIDTH	STA Time window (seconds)
LTA_WIDTH	Stop threshold of STA/LTA (seconds)
STA_LTA_THRESHOLD	STA / LTA ration trigger threshold.
STA_LTA_STOP_THRESHOLD	Time window of LTA (seconds)
STA_LTA_EVENT_TIME	STA / LTA trigger duration (seconds)
STA_LTA_RELAY1	RELAY1 Threshold unit: gal
STA_LTA_RELAY2	RELAY2 Threshold unit: gal
STA_LTA_RELAY3	RELAY3 Threshold unit: gal
S3_MODE	NO
AUTO_OFFSET	Use this function to move the moving average to zero or not. YES/NO
INSTALLATION_ANGLE	Mounting angle correction from north 0 Clockwise is positive.
INT_BATTERY_LOW_TH	Internal battery threshold: Default 3.5v
RTC_BATTERY_LOW_TH	Real Time Clock Battery threshold: Default 2.0v
EXT_POWER_LOW_TH	External Power threshold: Default 10 V
LCD_BACK_LIGHT_SECOND	Length of time backlight stays on
POWEROFF_SECONDS_TO_CPU	Length of time power remains to CPU on power off
CPU_STATUS_DISPLAY_INTERVAL	Length of time between CPU status displays

WALL_MOUNT	Is unit Wall mounted?
RING_SECONDS	30
RING_CHANNELS	3
RING_FILTERED	NO
![WIRELESS_LAN_ENABLE]	NO
[NTP_RESET]	
RESET_TH	2
ERR_IF_TIME_NOT_SYNC	YES
RTC_TO_SYSTEM_TIME	YES
![GEOPHONE]	Uncomment if using GEOPHONE
COMPENSATION	YES
[DISK_MIN_SPACE]	260000
[BACKUP_IP]	YES
[RESTORE_IP_WHILE_IP_ERROR]	YES
[LCD_RW_PIN_ENABLE]	YES

! Commented out optionally

DIN VERSION CONFIG ONLY:

[GEOPHONE]	
!FREQ_START	!3
!FREQ_STOP	!6
!FREQ_STEP	!0.1
!G_START	!28

!D_START	!0.7
!F_START	!4.5
! MASS_KG	0.011
[DIN_VIBRATION]	
FFT_SECONDS	10
STRUCTURE_TYPE	2
DISPLAY_ON_LCD	YES
GEO_PHONE	NO
RECORD	YES
RECORD_ALWAYS	YES
WARNING_DB	-6
PGA_RELAY	NO
RELAY1_ON	NO
MAXIMUM_LATCH	To keep traffic light display on or auto off after 15 seconds YES/NO
!ADMIN_SERVER_IP	!

DORTS VERSION CONFIG ONLY:

[DORTS_VIBRATION]	
BUILDING_TYPE	6
WARNING_DB	-6

MAXIMUM_LATCH	YES

ISO VERSION CONFIG ONLY:

ISO_2631]	
LOCATION_TYPE	2
MAXIMUM_LATCH	YES

4.1.2 OTHER PARAMETERS

[BACKUP_PROGRAM]	YES
SWITCH_UNLOCK_CODE	Key unlock code
ADMIN_SERVER_IP	Future use
MMI_INTENSITY	NO
BROADCAST_PORT	Future use
LCD_TITLE	Title on LCD
POWER_OFF_SWITCH_EXIST	Yes/No – future use
STREAM_TRIG_PACKET	Sending trigger message or not.

4.1.3 N OUT OF M SETTING

Note: Below are settings to add other Palerts for configuring 2 out of 3 system to eliminate the possibility of false alarm (N out of M settings).

Currently N out of M is not implemented in Palert+ but only in PX-01 and Cube.

PALERT IP	Add 1 or multiple Palert or Palert+ IP.
MESSAGE PALERT	Which one will be the main Palert out of M Starting from 0 – M.

N WHERE N OUT OF M	N out of M Palerts, here add value for N.
M WHERE N OUT OF M	N out of M Palerts, here add value for M.
N OUT OF M IN SECOND	Acceptable time gap interval in secs, between the triggered Palerts
N_OUT_OF_M_BY_MIDDLE	Event trigged while the number of trigged Palert + greater than or equal to N.

The system in addition to providing local earthquake warning functions can also provide regional earthquake early warning.

Alerts can be received using the public protocol (Common Alerting Protocol, CAP) earthquake early warning messages.

4.1.4 REGIONAL WARNING SETTING

Parameters for regional early warning, used by Earthquake Early Warning System (EEWS) and shake map central system, are as follows:

LOCAL_LONGITUDE	Longitude Unit: degrees
LOCAL_LATITUDE	Latitude of Unit: degrees
HEIGHT	Elevation of Unit: degrees
SITE EFFECT	To handle the site/geophysics effect. This is a number that is generated from historic data and defaults to 1.931. It should not normally be changed.
EEWS SERVERS IP	EEWS Server IP address.
EEWS RELAY1 INTENSITY	Relay 1 trigger intensity threshold.
EEWS RELAY2 INTENSITY	Relay 2 trigger intensity threshold.
EEWS RELAY3 INTENSITY	Relay 3 trigger intensity threshold.
EEWS_HOLD_SECONDS	Keep alarm status after countdown

4.1.5 VOICE ALARM AND EVENT RECORD

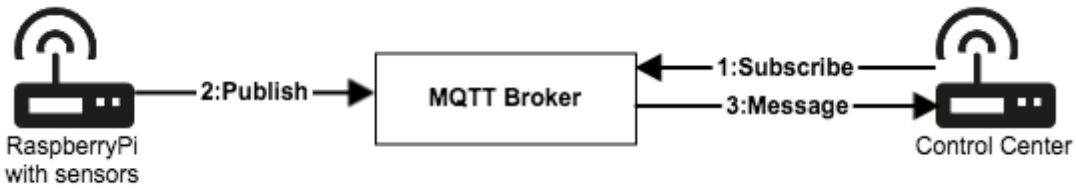
When the current threshold is met or a regional early warning is triggered, the system will start a voice alarm playback. The threshold for the event to be recorded can be adjusted. Different voice alerts will be triggered depending on the daytime / night time settings as follows.

DAY BEGIN MINUTE	Daytime start minute (420/60 = 7am).
DAY END MINUTE	Night starting time (1380/60 = 23 or 11pm).
EEWS DAY VOICE INTENSITY	Regional Day speech warning alert intensity threshold.
EEWS NIGHT VOICE INTENSITY	Regional warning voice alerts night intensity threshold.
DAY VOICEALARM-INTENSITY	Day voice alarm warning threshold intensity.
NIGHT VOICEALARM-INTENSITY	Night voice alarm warning threshold intensity.
VOICEALARM PLAY NUMBER	Number of times Voice broadcast repeats.
RECORD-INTENSITY	Start of recording seismic intensity threshold.
PRE-EVENT SECOND	The length of time before an incident that the data is stored.
POST-EVENT SECOND	The amount of time after the incident that the data is stored.
EVENT FILE MAX LENGTH IN SECOND	Longest time event is recoded. If not set, the default is 60 seconds.

4.1.6 MQTT PARAMETERS

MQTT (formerly Message Queue Telemetry Transport) is an ISO standard (ISO/IEC PRF 20922) publish-subscribe based "light weight" messaging protocol for use on top of the TCP/IP protocol. It is designed for connections with remote locations where a "small code footprint" is required or the network bandwidth is limited.

In addition to local warnings and regional warnings, Palert + can be used as an MQTT publisher, with the earthquake warning message being shared to subscribers.



[MQTT CONFIG]

IP	MQTT broker IP You can use unit as local host 127.0.0.1.
PORT	MQTT Broker port.
USER	MQTT User Account
PASSWORD	MQTT User Password
LOCATION	MQTT location name

4.1.7 TEST MODE

The system can be put into test mode to check correct operation. **This is for use by installation engineers only.**

Test mode parameter (Preset modes, do not modify)

TEST MODE CONFIG	Start test mode parameters
STAGE 0	Mode 0
SWITCH_SECOND 4	Pressing the power key for 4 Seconds enters test mode 0
RELAY_HOLD_SECOND	-5570590 5570590 = 0x0055001e 55-> 85 gal, 1e-> 30 seconds
PLAY_FILE 2.wav	Play audio files2.wav
RELAY2 ON	Drive RELAY2

STAGE 1	Mode 1
SWITCH_SECOND 6	Pressing the power key for 6 Seconds enters test mode 1
RELAY_HOLD_SECOND 6	Drive RELAY for 6 seconds
PLAY_FILE 3.wav	Play audio files3.wav
RELAY1 ON	Drive RELAY1
STAGE 2	Mode 2
SWITCH_SECOND 8	Pressing the power key for 8 Seconds enters test mode 2
RELAY_HOLD_SECOND 8	Drive RELAY for 8 second
PLAY_FILE 4.wav	Play audio files4.wav
RELAY1 ON	Drive RELAY1
STAGE 3	Mode 3
SWITCH_SECOND 3	Pressing the power key for 3 Seconds to cancel the alarm
PLAY_FILE eewsCancel.wav	Plays audio files eewsCancel.wav..

4.1.8 FTP CONFIG

Unit firmware update function, generally do not need to modify.

IP	FTP Server IP
PORT	FTP Server port

USER	FTP Server Username
PASSWORD	FTP Server User Password

4.1.9 SAVED FILE FORMAT

The default file format is csv, but it can be changed to mini seed format.

[EVENT_FILE_FORMAT]	mseed

4.1.10 RELAY CONTROL

(To be implemented)

[RELAY_BLINK_MODE]	To switch relay status on/off every second.
[RELAY_CONTROL_BY_ERR]	While system detects errors, drive the relay
[RELAY_RESET_BY_MANUAL]	Reset relay manually
[SINGLE_RELAY_MODE]	Event trigger after a relay trigger.

4.1.11 API

[API_CONFIG]	setup API parameter
EARTHQUAKE_FALLING_API	After the end of the event, driving API, Upload event with record function.

4.1.12 UPLOAD AN EVENT RECORD

[VWHUB_CONFIG]	Upload an event record set parameter
FTPIP	FTP server IP

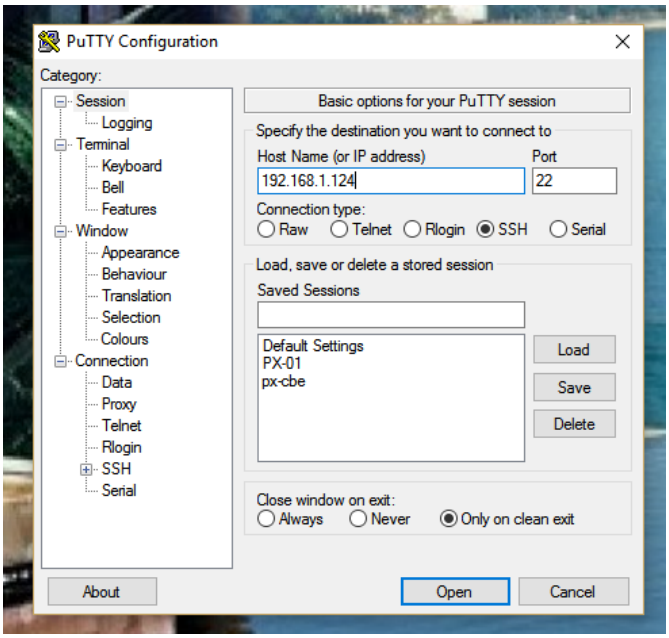
FTPPORT	FTP server Port
USER	FTP server user account
PASSWORD	FTP server user Password

4.1.13 UPLOAD AN EVENT RECORD

[BROADCAST_PORT_INTERFACE]	If it's set, the device will be through UDP Broadcast transmission port area message, by default502.

5. ACCESS OPERATING SYSTEM

To do underlying changes to the operating system configuration requires using terminal access. This can be done with a product like Putty. Instructions as below.



5.1 INSTALL PUTTY OR SIMILAR ON A LAPTOP

http://www.putty.org/

Change laptop IP to same newtwork as device (192.168.255.xx - 20 as example).

Connect laptop to Device with normal Ethernet cable

Run putty and connect using SSH to IP address of unit

Accept security warning message

5.2 PASSWORD CHANGE

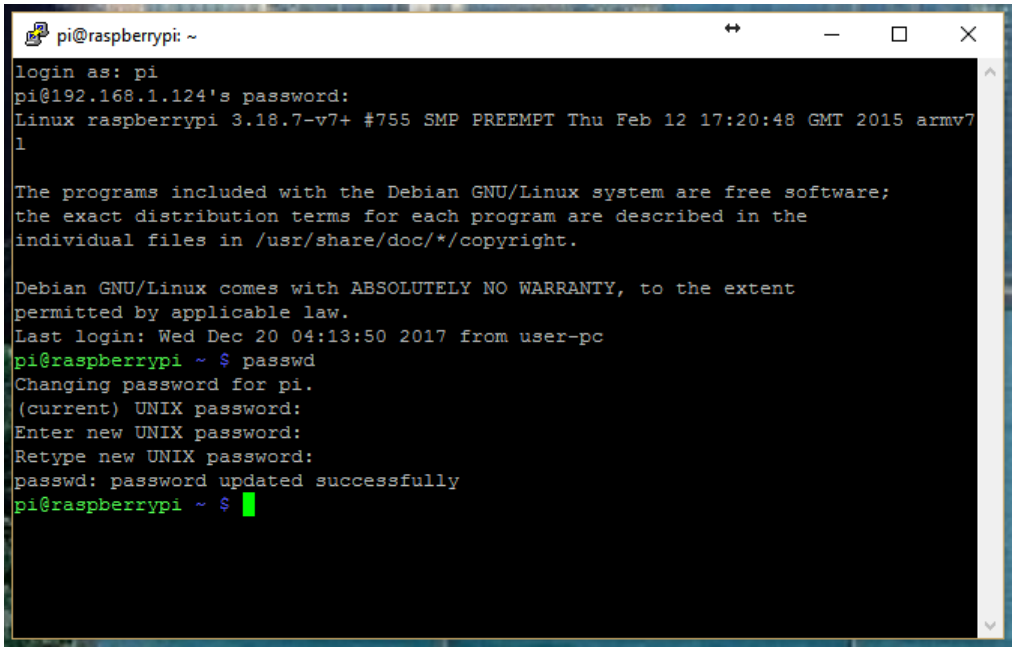
Using PUTTY login to the unit with the pi / 1111 default user and password.

At prompt type **passwd**

Enter existing password

Then enter new password twice. This will need to be failry complex and not similar to previous as there are password policies embedded in the system.

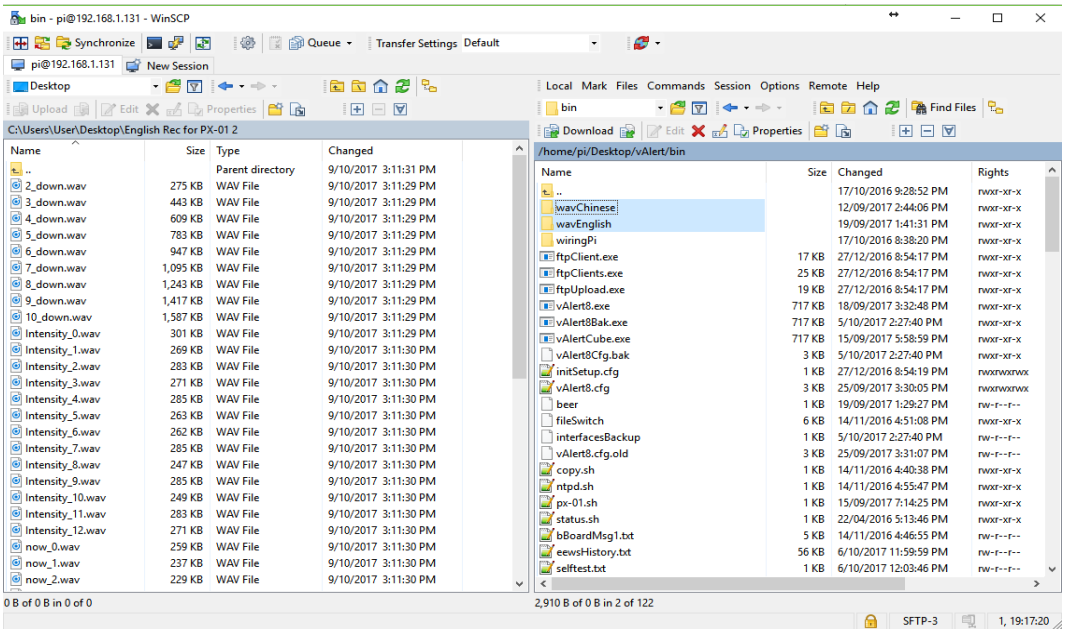
Type exit to leave system



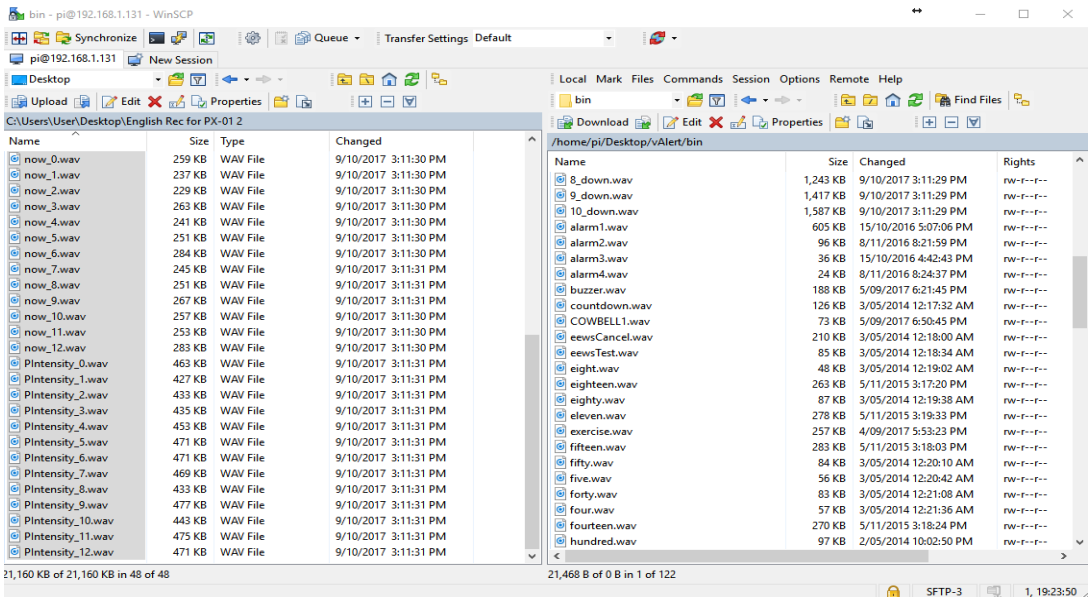
6. CHANGE VOICE ALARMS

On PX-01 devices it is possible to change the alarm messages. This requires using on the laptop/desktop an ftp client like Winscp (https://winscp.net/eng/index.php) or Filezilla. Winscp shown below.

- To change voice alarms, Connect using same user name / password as described in section 5 above with port 22. Then go to folder Desktop/vAlert8/bin.



- Voice alarms are stored in uncompressed .wav format. Optional default voices for Chinese and English are stored in the wavChinese and wavEnglish subfolders.
- Default files can be copied from the subfolders to the bin folder replacing existing files.
- Optionally user can record their own voice alarms to replace the existing files using same file names. e.g. .wav file used for Intensity now are named Intensity_x.wav where x is 1 to 12.



7. CONTROL BUTTON

All devices have a control button that has several options depending how many seconds the button is pressed.

1. Display IP Address
2. Voice Test
3. Reset EEWS / Alarm Cancel
4. Reset Network / Reload by key
5. Test Mode Config Status
6. N/A
7. FTP update
8. N/A
9. Test Mode
10. N/A
11. N/A
12. Shutdown

The position of the boxes

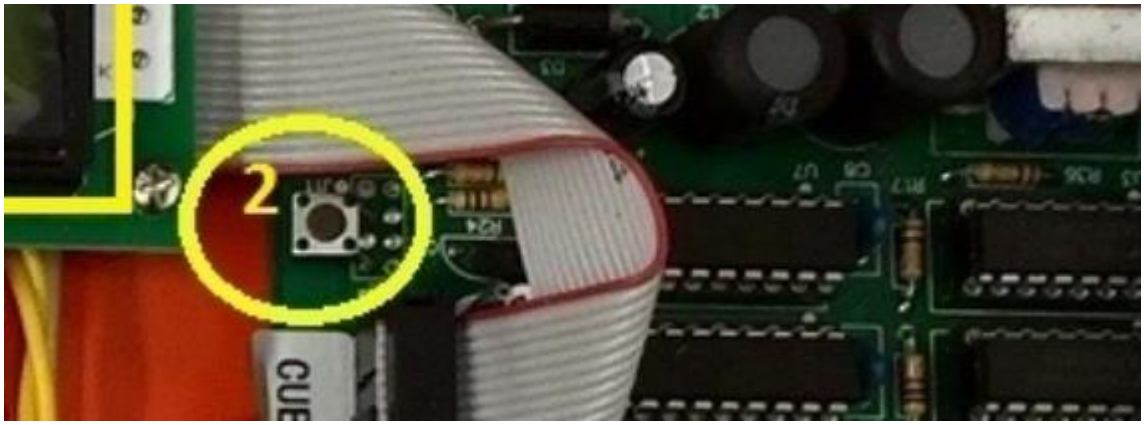
7.1 BOOT INTERNAL DISPLAY

7.2 BOOT COMPLETE

The second line of the display will cycle through various information.

7.3 OPTIONS

Press and hold the control button (2) to perform the functions below:



CUBE

PALERT+

PX-01

7.3.1 HOLD FOR 1 SECONDS. DISPLAY IP

7.3.2 HOLD FOR 2 SEC. RESTART NTP

7.3.3 HOLD FOR 3 SEC. RESET WARNING

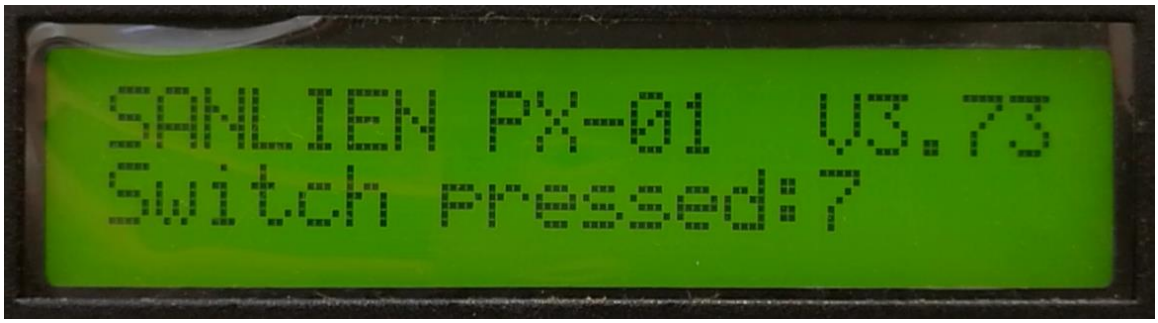
7.3.4 HOLD FOR 4 SEC. RELOAD CONFIGURATION PARAMETERS

7.3.5 HOLD FOR 5 SECS. TEST MODE CONFIG STATUS

7.3.6 HOLD FOR 6 SECS

- No function.

7.3.7 HOLD FOR 7 SECS. USE FTP UPDATE



7.3.8 HOLD FOR 8 SECS.

- **No function.**

7.3.9 HOLD FOR 9 SECS. ENTER TEST MODE

**** This is for engineer usage only ****

Several test modes can be selected.

- Press the button for 4 seconds: test mode 0 – EEWS Test
- Press the button for 6 seconds: test mode 1 - on-site warning test level 3
- Press the button for 8 seconds: test mode 2- on-site warning test level 4
- Press the button for 3 seconds: test mode 3 – cancel
- Press 10 seconds to test all relays – intensity 1,3,5,7

7.3.10 HOLD FOR 10 SECS

- No function.

7.3.11 HOLD FOR 11 SECS.

- No function.

7.3.12 HOLD FOR 12 SECS TO SHUT DOWN.

**** After selecting this option, the power must to be turned off to allow the system to be properly restarted later ****

8. MODBUS REGISTERS

These registers can be changed using a Modbus client for those that are not listed in the configuration file.

8.1 AO REGISTERS

UNIT Modbus AO Address Mapping Table (40XXX)

Register	Description	Note
113	data changed	0x0180 Reload parameters 0x0280 Clear rain gauge data
114	audio relay	
100	EEWS Countdown test	
101	EEWS Intensity test	

8.2 AI REGISTERS

UNIT Modbus AI Address Mapping Table (300XXX)

Register	Description	Note
100	event	
101	intensity now	0 ~ 7
102	PGA now	0.1gal
103	triggered Palerts	[bit map]
104	Digital output status	[bit map]
105	Digital input status	[bit map]
106	system time in year	
107	system time in month	
108	system time in day	
109	system time in weekday	
110	system time in hour	
111	system time in minute	
112	system time in second	
113	event time in year	
114	event time in month	
115	event time in day	
116	event time in weekday	
117	event time in hour	
118	event time in minute	
119	event time in second	
120	connection status of Palert 0 ~ 4	[bit mapping]
121	connection status of fted04 0 ~ 4	[bit mapping]
122	connection status of board 0 ~ 4	[bit mapping]
123	connection status of ba host	[bit mapping] *high nibble for zt2000* *low nibble for ba host*

Register	Description	Note

124 UNIT version
125 connection status of DL-100 v2.06

126 DL-100 real time temperature // DL-100 Temperature and humidity sensor
127 DL-100 real time humidity
128 DL-100 average temperature
129 DL-100 average humidity

130 EEWS server connections status [bit mapping] v2.07
131 EEWS intensity
132 EEWS count down in second

133 zt2000DoStatus0_15 v3.03 Zigbee-based remote DO
134 zt2000DoStatus16_31

500 UNIT serial number 1 / 4 // v2.07
501 UNIT serial number 2 / 4
502 UNIT serial number 3 / 4
503 UNIT serial number 4 / 4

600 rain fall in counts within 1 minutes
601 rain fall in counts within 10 minutes
602 rain fall in counts within 1 hour
603 rain fall in counts within 12 hours
604 rain fall in counts within 1 day
605 rain fall in counts within 2 days
606 rain fall in counts within 3 days
607 rain fall in counts today
608 rain fall in counts yesterday

1000 ~ 1100 Palert0 packet header
2000 ~ 2100 Palert1 packet header
3000 ~ 3100 Palert2 packet header
4000 ~ 4100 Palert3 packet header
5000 ~ 5100 Palert4 packet header
please refer to Palert manual for contents of streaming packet