



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

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DOCUMENT CONTROLS

DOCUMENT HISTORY

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REFERENCES AND SUPPORTING DOCUMENTS

Document	Date

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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

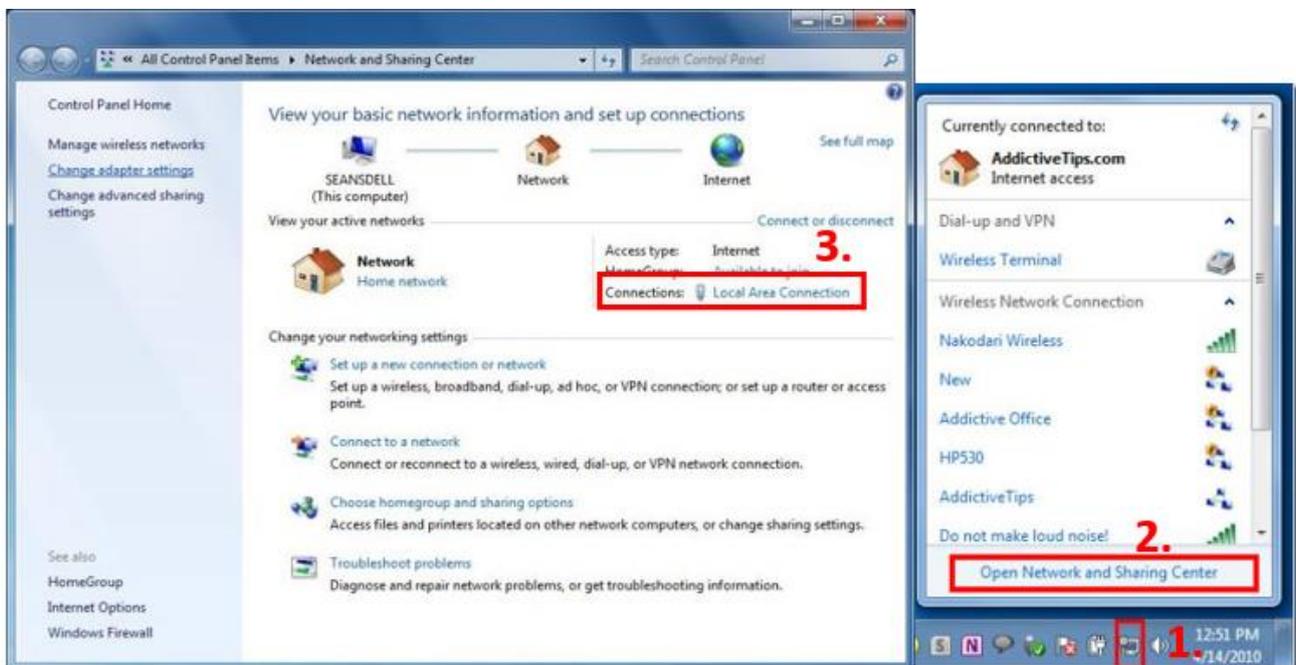
To connect to the unit from a local PC/Laptop it is necessary to change the PC network IP address to match the subnet of the unit.

To find the IP address of the unit press the internal control button – see section: [Control Button](#).

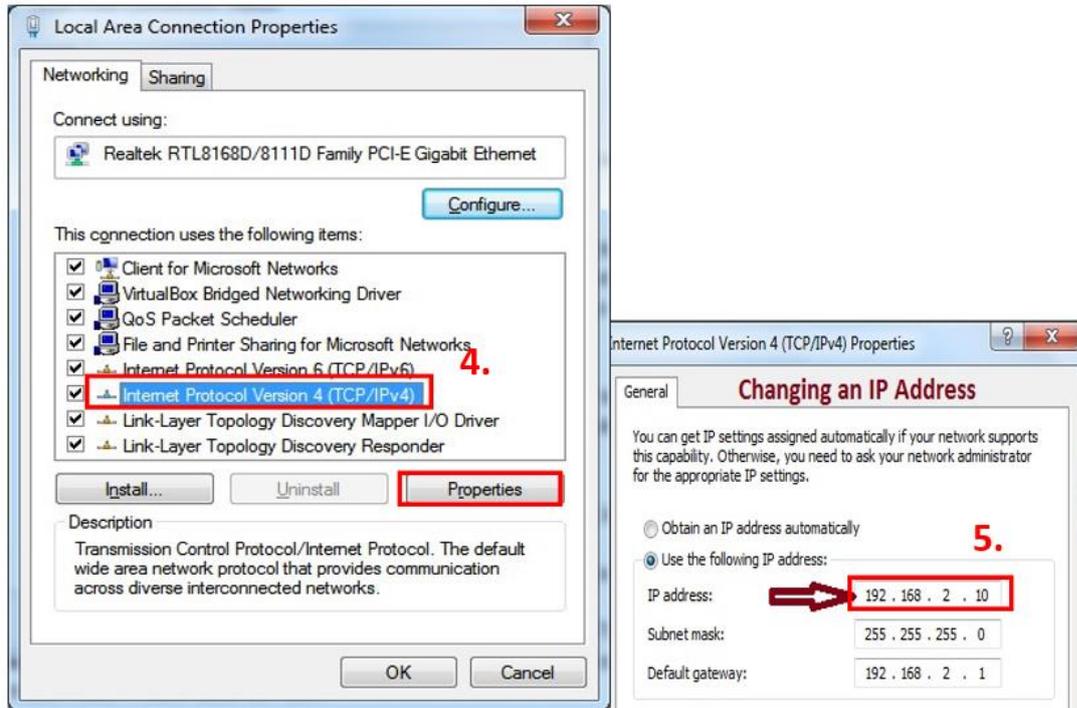
The unit IP address can then be changed using web interface below and so the PC subnet would then need to change to match the new IP to connect subsequently.

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

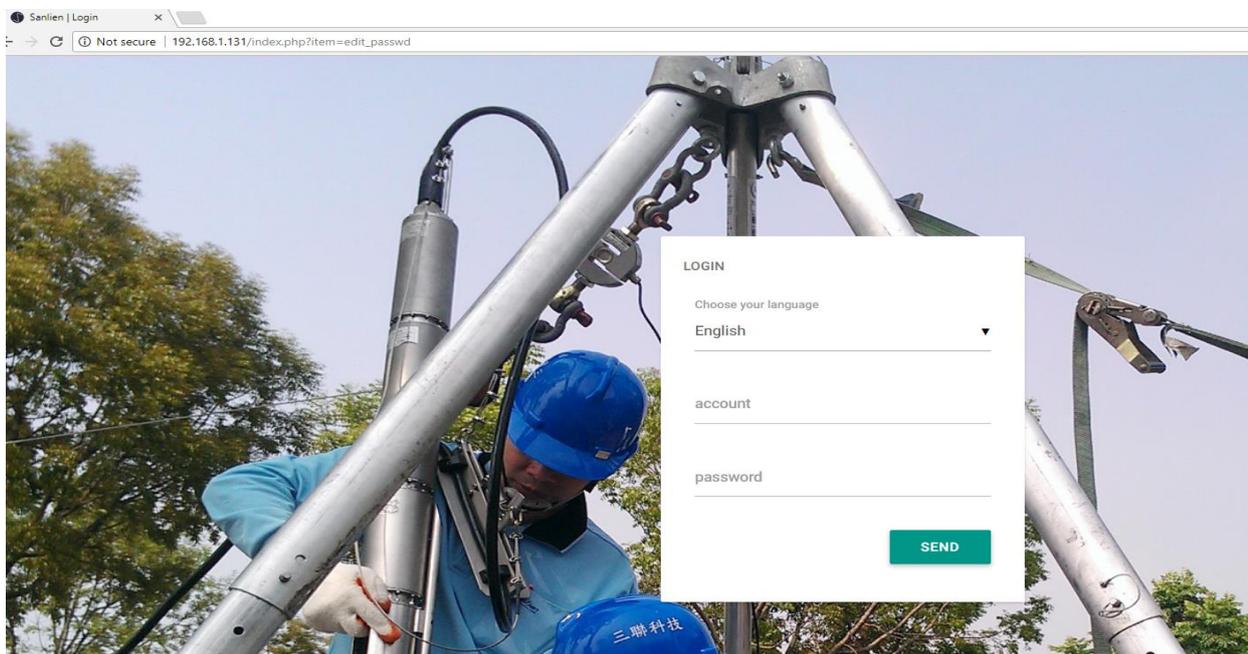
The configuration of the unit is via a web interface.

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 parameters 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

The screenshot shows the Sanlien web interface. The browser address bar indicates the URL is 192.168.1.81/index.php?item=record. The page title is 'SANLIEN WEB VERSION: 20180111'. The user is logged in as 'admin' with email 'vibration@sanlien.com' and firmware version '4.07'. The sidebar menu includes: Parameter Settings, Streaming, Record files (selected), Edit Password, NTP Server list, Network Setting, DNS Setting, Set Information, Manage Record, Manage Events, File, and Sign Out. The main content area is titled 'RECORD FILES' and has a 'Display' dropdown set to '100'. Below this is a table of file names:

File Name
20180220215431_3657[0001].csv
20180220001439_3657[0001].csv
20180219215700_3657[0001].csv
20180219215216_3657[0001].csv
20180219213826_3657[0001].csv
20180219011126_3657[0001].csv
20180218223820_3657[0001].csv
20180218204750_3657[0001].csv
20180218204032_3657[0001].csv
20180218203945_3657[0001].csv
20180216031828_3657[0001].csv

3.2.2 PALERT+ RSHD, WEB INTERFACE MENU

The screenshot shows a web browser window with the URL `192.168.1.81/index.php?item=dorts`. The page title is "SANLIEN WEB VERSION: 20180111". The left sidebar contains a menu with the following items: Parameter Settings, DORTS Report (highlighted), ISO Report, Streaming, Record files, Edit Password, NTP Server list, Network Setting, DNS Setting, Set Information, Manage Record, Manage Events, File, and Sign Out. The main content area is titled "DORTS REPORT" and includes a "Display" dropdown menu set to "100". Below this is a table header with "File Name" and "Date - Time" columns. The table body is empty, and a message at the bottom states "Showing 0 to 0 of 0 entries".

3.2.3 PALERT+ DIN, WEB INTERFACE MENU

The screenshot shows a web browser window with the URL `192.168.1.81/index.php?item=din`. The page header is teal and displays "SANLIEN WEB VERSION: 20180111". On the left, a sidebar menu lists various settings, with "DIN REPORT" highlighted. The main content area is titled "DIN REPORT" and contains a "Display" dropdown menu set to "100". Below this is a table header with "File Name" and "Date - Ti" columns. The table is currently empty, with the text "Showing 0 to 0 of 0 entries" displayed below it.

3.2.4 PX-01, WEB INTERFACE MENU

The screenshot shows the Sanlien web interface for configuration. The browser address bar shows the URL `192.168.1.81/index.php?item=record`. The page title is "SANLIEN WEB VERSION: 20180111".

Left Sidebar:

- Sanlien logo
- Hi, admin
vibration@sanlien.com
Firmware Version 4.05
- Parameter Settings
- Record files**
- Edit Password
- NTP Server list
- Network Setting
- DNS Setting
- Set Information
- Manage Record
- Manage Events
- File
- Sign Out

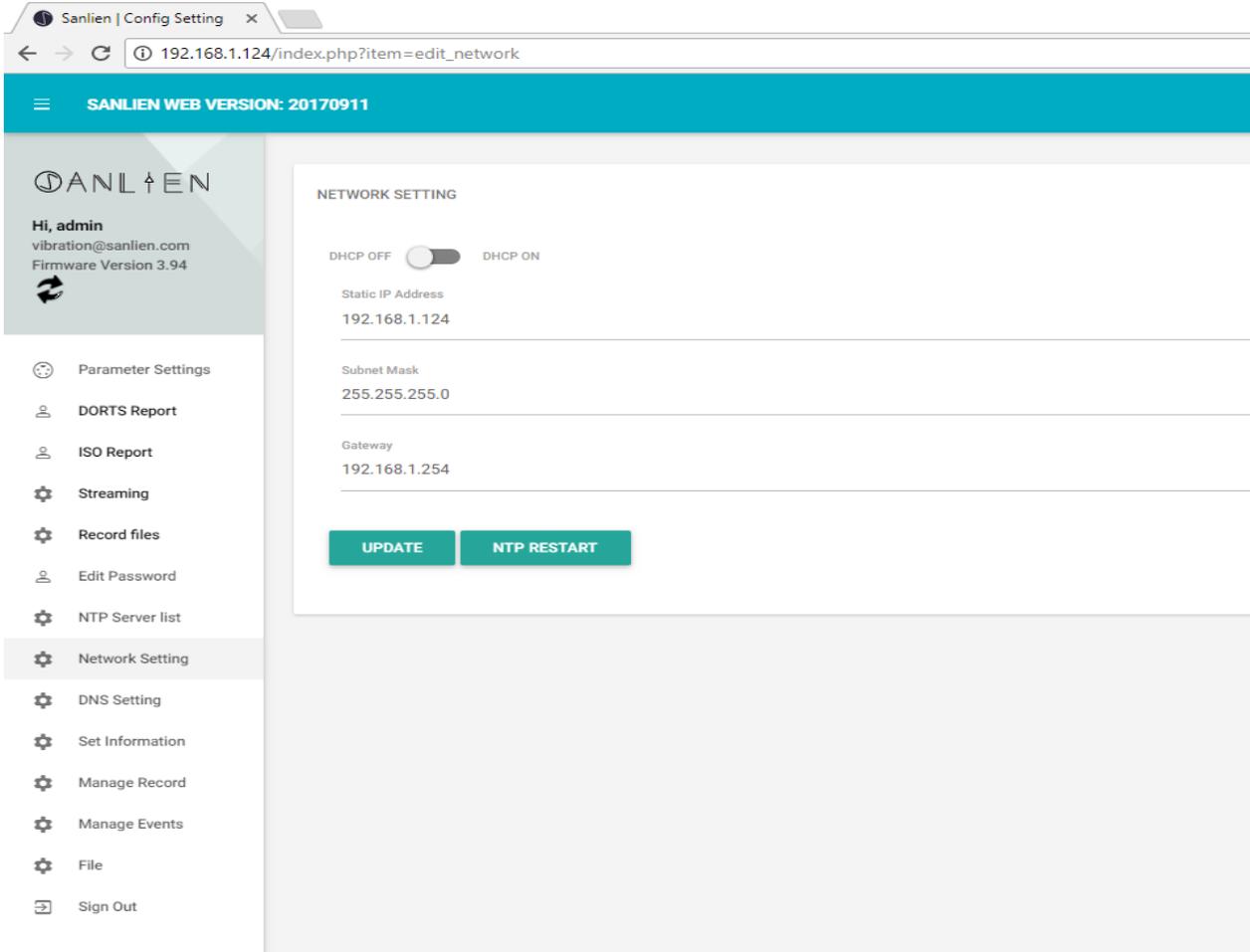
Main Content Area: RECORD FILES

Display: 100

File Name	Date - Time
20180123224058_3657_502.csv	2018-01-23 22:00
20180123205914_3657_1690.csv	2018-01-23 20:00
20180123205737_3657_620.csv	2018-01-23 20:00
20180123204858_3657_1092.csv	2018-01-23 20:00
20180123204200_3657_451.csv	2018-01-23 20:00
20180123032319_3657_729.csv	2018-01-23 03:00
20180123023954_3657_446.csv	2018-01-23 02:00
20180123010713_3657_573.csv	2018-01-23 01:00
20180123004342_3657_1009.csv	2018-01-23 00:00
20180123002058_3657_608.csv	2018-01-23 00:00

3.3 NETWORK SETTINGS

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

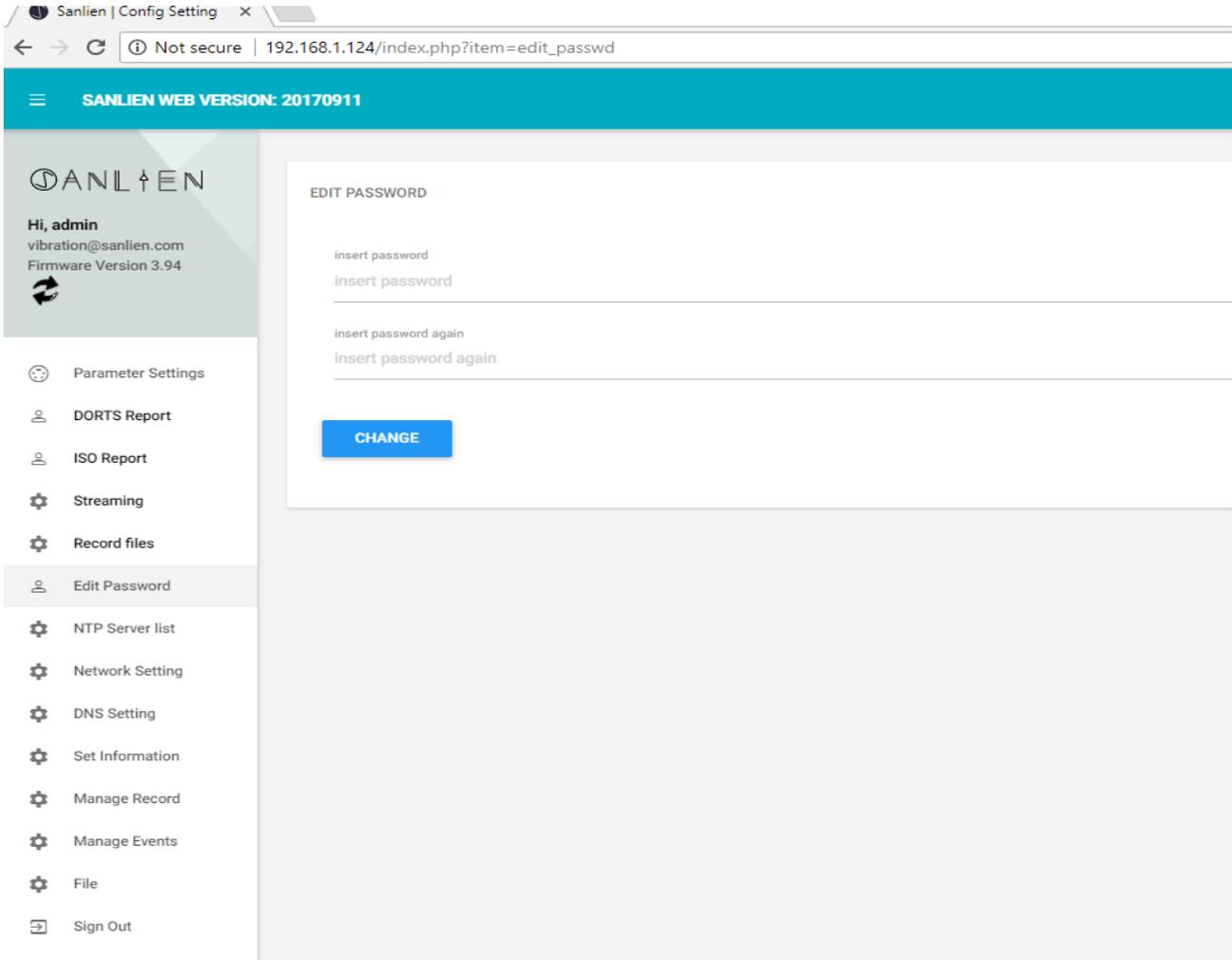


If the unit is being used as data storage, it is recommended to keep the DHCP off if possible if you wish to connect using other utilities. Otherwise the IP address will need to be found before retrieving any data and do any changes. But it is not essential to have a static IP if the unit is being used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

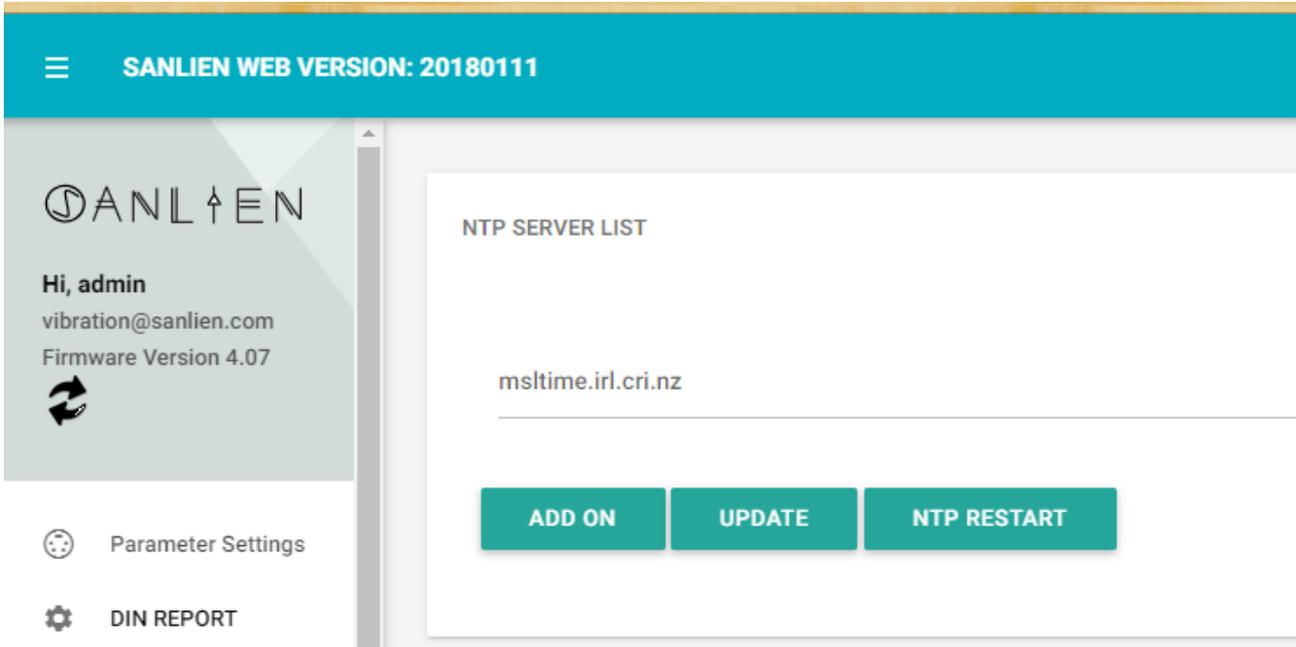
To change the web password, go to edit password tab and set as required.



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

The screenshot shows a web browser window with the URL `192.168.1.124/index.php?item=edit_dns`. The page title is "SANLIEN WEB VERSION: 20170911". On the left, a sidebar menu lists various settings, with "DNS Setting" highlighted. The main content area is titled "DNS SETTING" and contains three input fields for DNS servers. The first field is labeled "dns server 1" and contains the IP address "192.168.1.254". The second and third fields are labeled "dns server 2" and both contain the text "dns server 2". Below the input fields is a green "UPDATE" button.

Sanlien | Config Setting x

192.168.1.124/index.php?item=edit_dns

SANLIEN WEB VERSION: 20170911

SANLIEN

Hi, admin
vibration@sanlien.com
Firmware Version 3.94

- Parameter Settings
- DORTS Report
- ISO Report
- Streaming
- Record files
- Edit Password
- NTP Server list
- Network Setting
- DNS Setting**
- Set Information
- Manage Record
- Manage Events

DNS SETTING

dns server 1
192.168.1.254

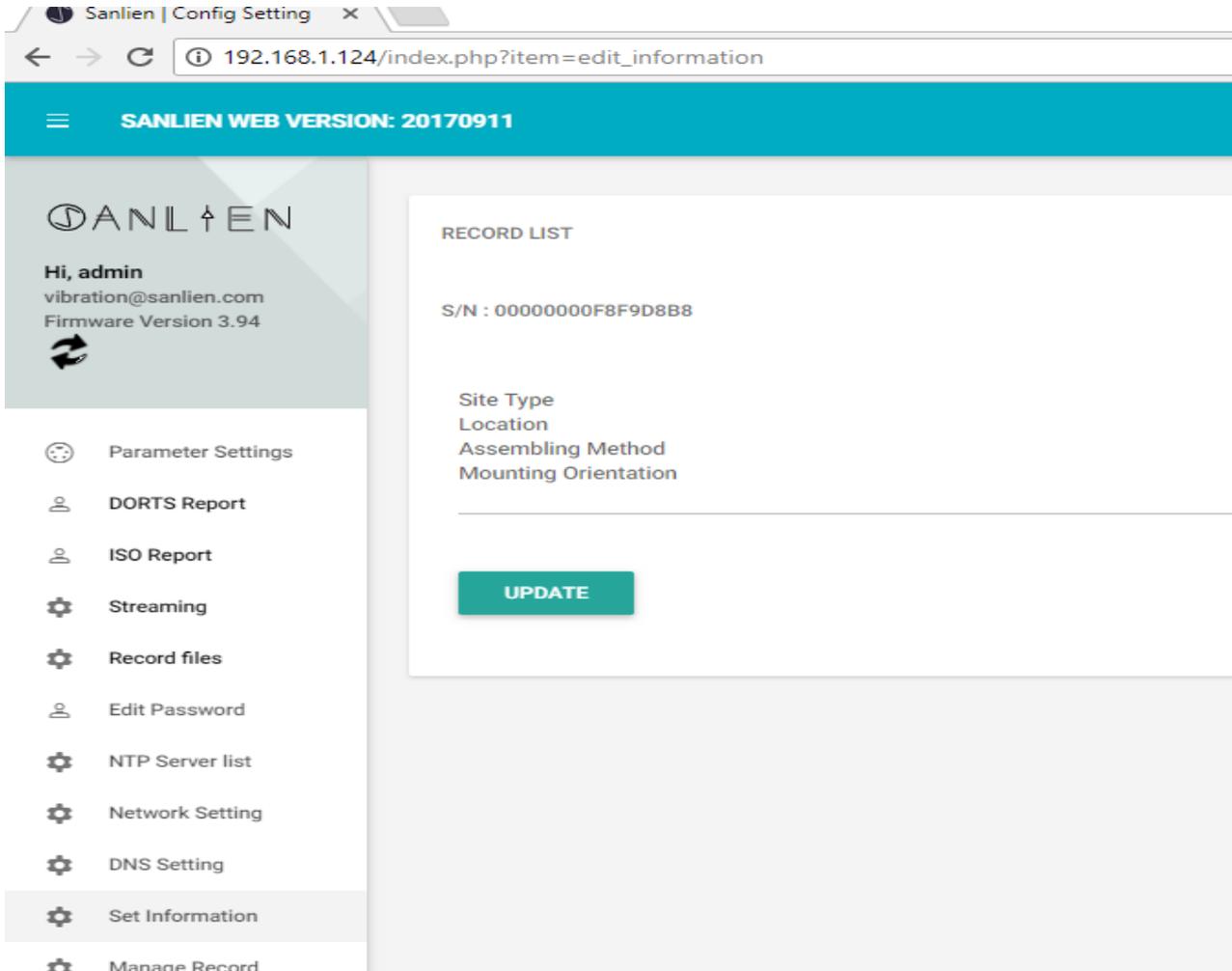
dns server 2
dns server 2

dns server 2
dns server 2

UPDATE

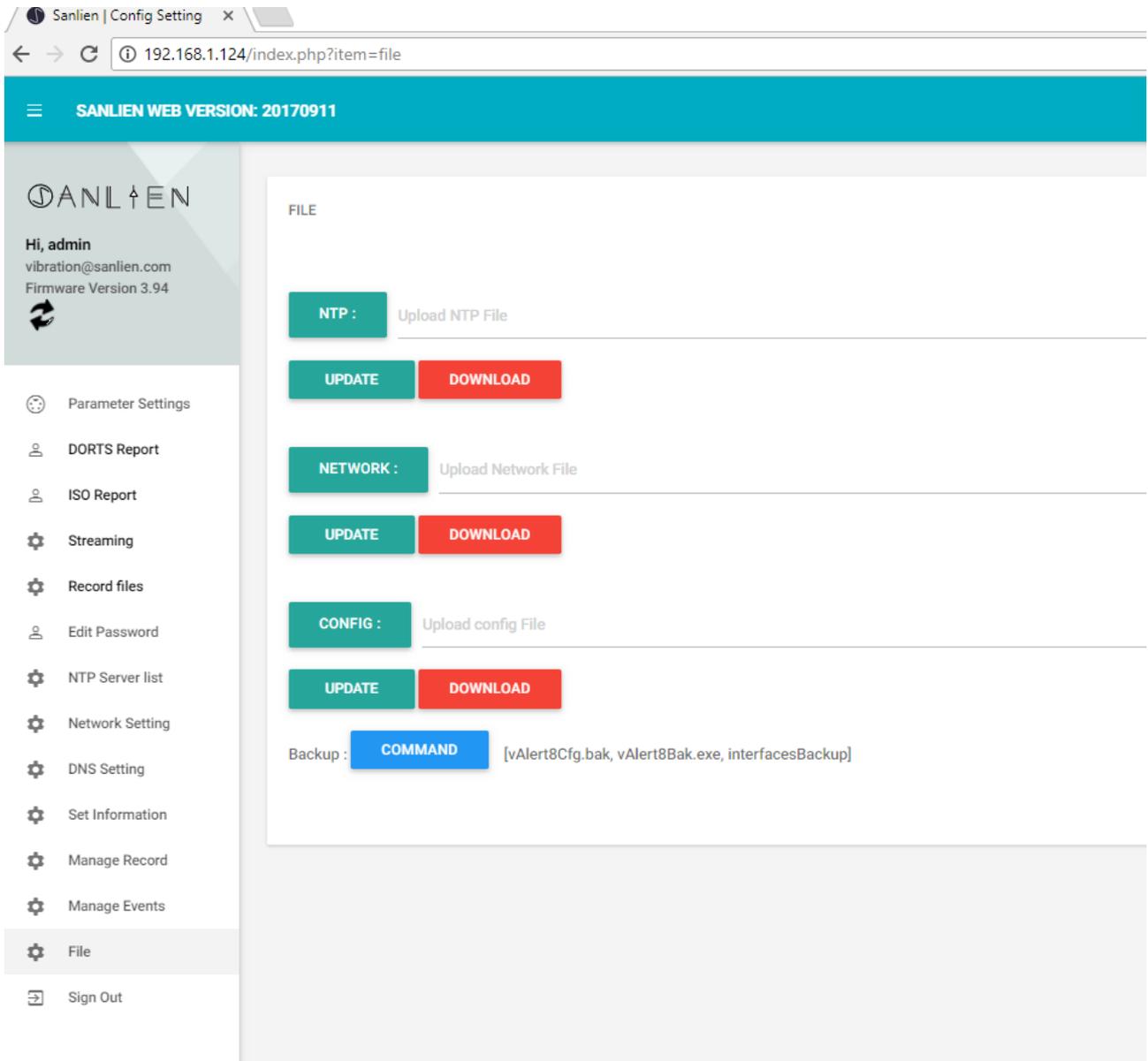
3.7 SET INFORMATION TAB

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

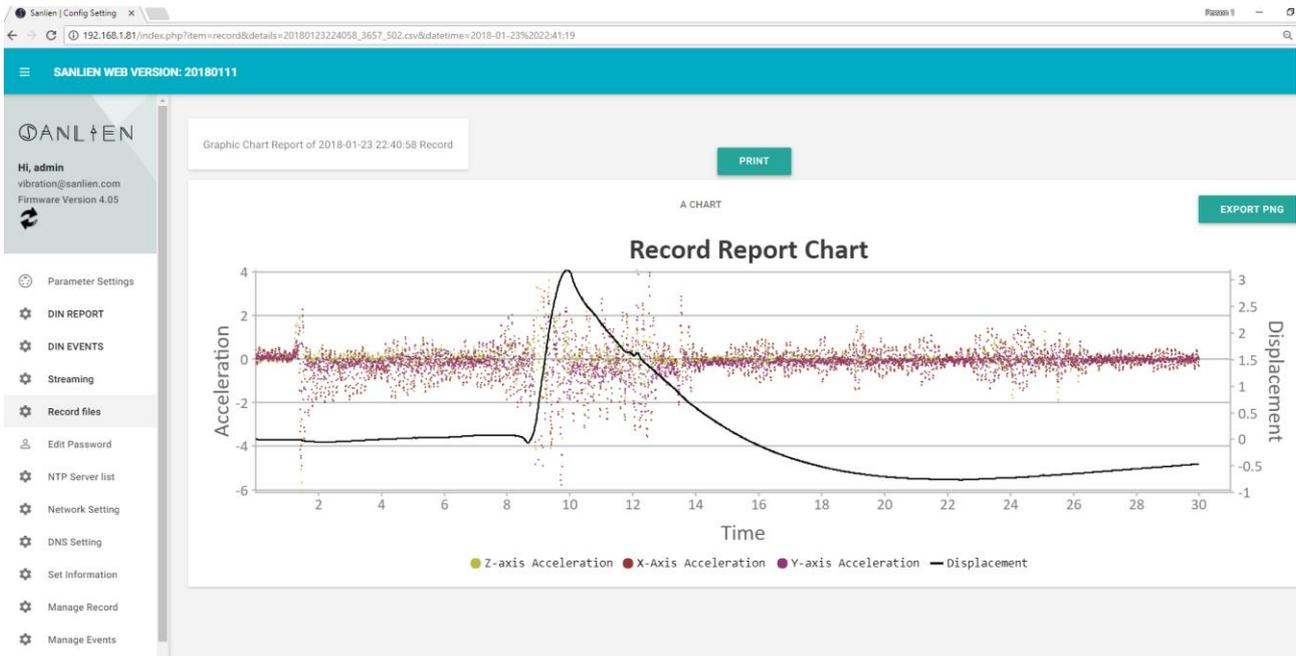
For any event the system will store a csv file containing details of movement in the 3 axes. To copy any file, go to Manage Events tab, then click on any event file to download.

The screenshot shows a web browser window with the URL `192.168.1.124/index.php?item=rec`. The page header indicates 'SANLIEN WEB VERSION: 20170911'. The left sidebar shows the user 'Hi, admin' with email 'vibration@sanlien.com' and 'Firmware Version 3.94'. The main content area is titled 'Home /' and contains a 'Search files & folders' box and a 'Files' table. The 'Files' table lists 18 CSV files with their names and sizes.

Files	Sort by name ▼
20171219103116_55480_243.csv	836 Kb
20171219103147_55480_104.csv	771 Kb
20171219103627_55480_244.csv	1.14 MB
20171219103800_55480[0001]_3258.csv	1.28 MB
20171219103800_55480[0002]_3258.csv	23 Kb
20171219103925_55480_96.csv	738 Kb
20171219104030_55480[0001]_684.csv	1.28 MB
20171219104030_55480[0002]_684.csv	1.27 MB
20171219104030_55480[0003]_684.csv	23 Kb
20171219104230_55480_95.csv	836 Kb
20171219104300_55480_172.csv	857 Kb
20171219115745_55480_120.csv	836 Kb
20171219120249_55480_82.csv	673 Kb
20171219120405_55480_1399.csv	662 Kb
20171219120438_55480_314.csv	792 Kb
20171219120508_55480_128.csv	662 Kb
20171219120946_55480_1001.csv	1.22 MB
20171219121744_55480_182.csv	781 Kb
20171220041138_55480_198.csv	673 Kb

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.

The screenshot shows a web browser window with the URL `192.168.1.124/index.php?item=config`. The page header indicates 'SANLIEN WEB VERSION: 20170911'. On the left, a sidebar menu lists various settings, with 'Parameter Settings' selected. The main content area displays several configuration parameters, each with a radio button for 'YES' or 'NO'.

Parameter Name	Value
[BLOCK_CONFIG_BY_ONE_ITEM]	YES
[RESTORE_IP_WHILE_IP_ERROR]	YES
[BACKUP_CONFIG]	YES
[BACKUP_PROGRAM]	YES
[BACKUP_IP]	YES
[NTP_RESET]	RESET_TH: 2
[TEST_MODE_CONFIG]	STAGE: 0

3.13 DIN REPORTS

Din provides details about vibration effects. There are 2 different 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

Serial Number
3657

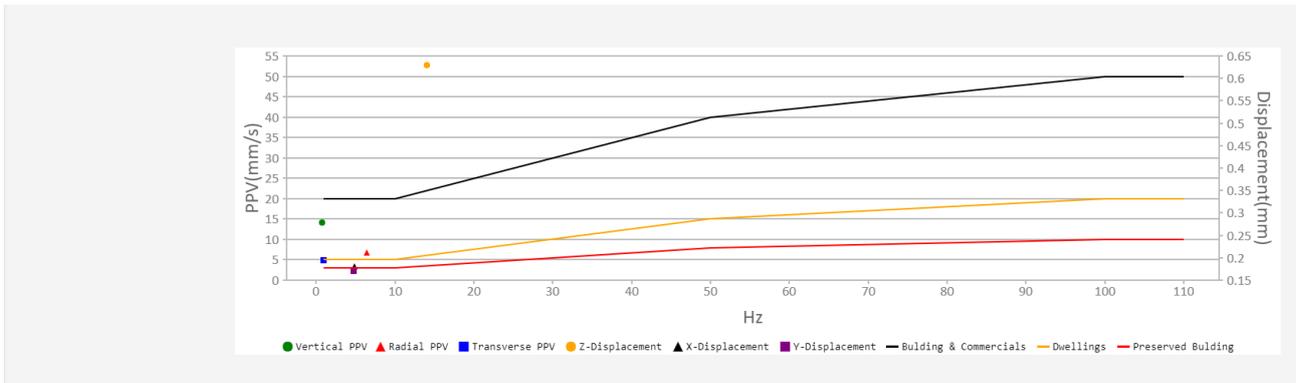
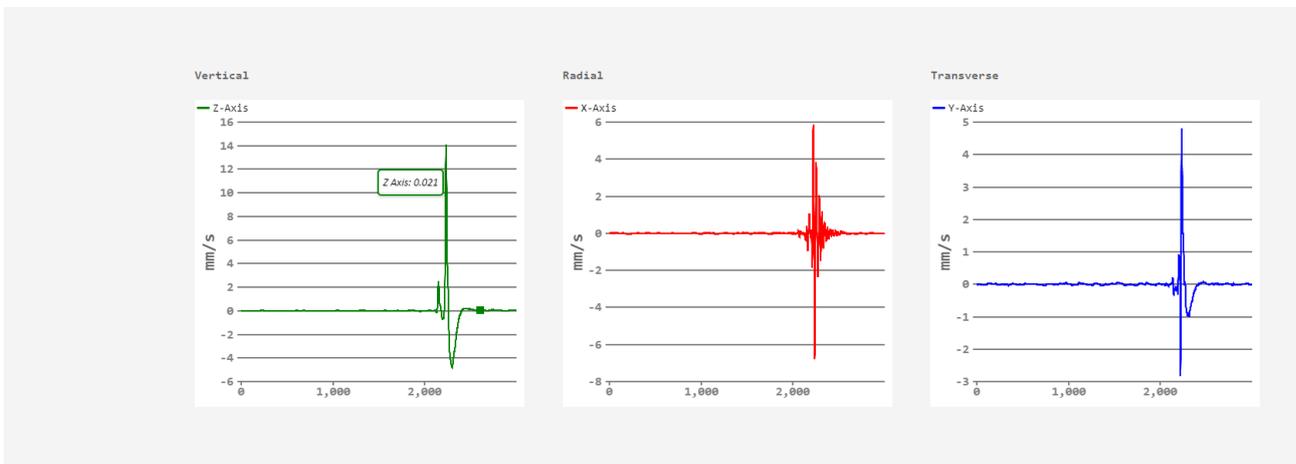
Total samples
3002

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

ISO 2631 REPORT

Display Unit
 dB Gal

Build Type
 Critical area
 Residences(Daytime) - 07:00-22:00
 Residences(Night-time) - 22:00-07:00
 Office, School, Educational
 Workshops

Interval (unit:Seconds)
 60

SEQUENCE NUMBER:3657

ISO 2631 - Horizontal

2018-02-21

— Horizontal

SEQUENCE NUMBER:3657

ISO 2631 - Vertical

2018-02-21

— Vertical

3.15 DORTS REPORT

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

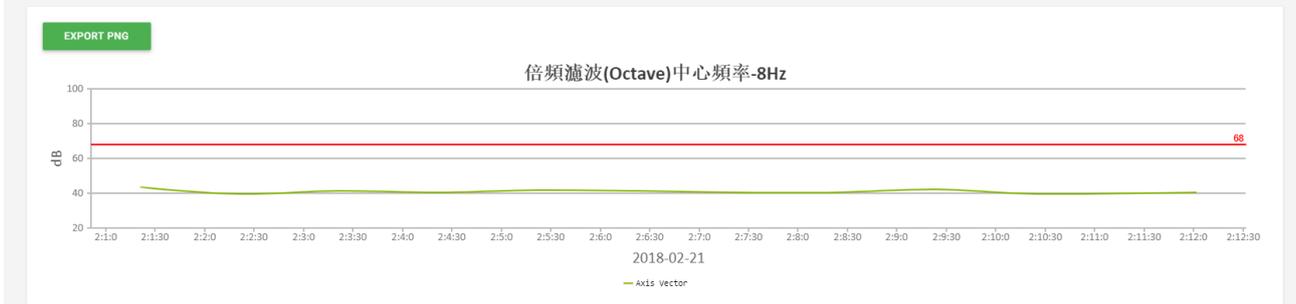
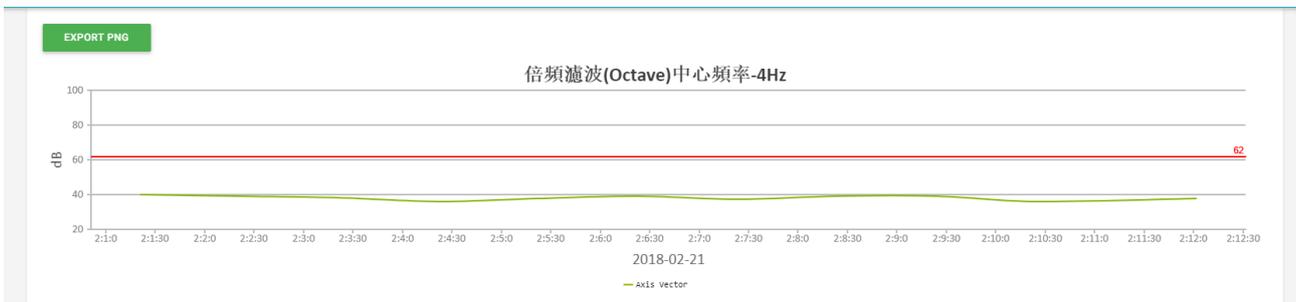
This shows various frequency plots 2/4/8/16/31.5/63 Hz, with multiple axis

DORTS REPORT

Display Axis
 Vector X Y FROM

Building type
 Precision electronic equipment and equipment of the building
 Vibration sensitive equipment buildings
 Small lecture halls, TV stations, music classrooms
 Set house
 Commercial building
 Industrial plants

Interval
 60/seconds 10/minutes



.....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 (<i>Normally not used</i>) 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
SPS_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

ID_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

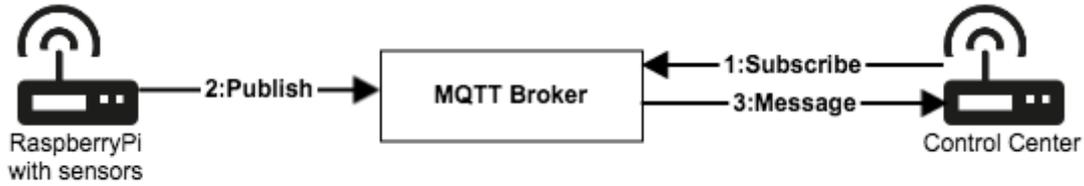
When the current threshold is met or a regional early warning is triggered, the system will start a voice alarm playback. The threshold for the event to be recorded can be adjusted. Different voice alerts will be triggered depending on the daytime / night time settings as follows.

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.
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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

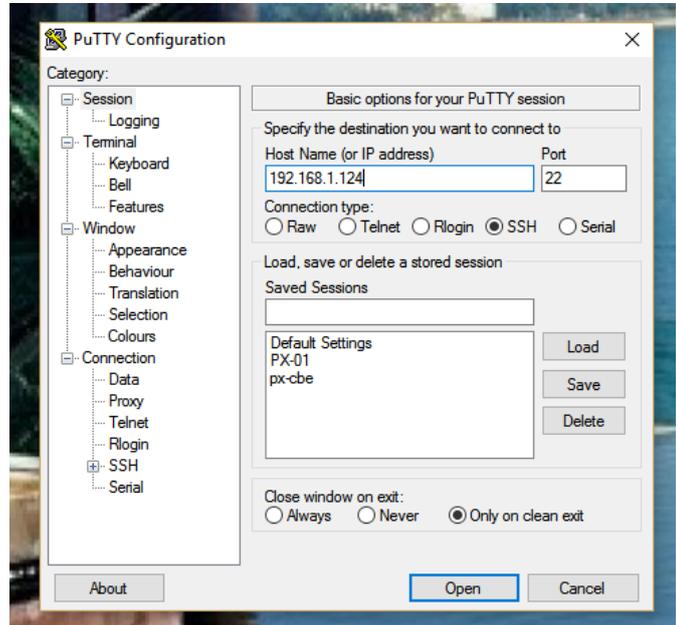
<http://www.putty.org/>

Change laptop IP to same network 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 fairly complex and not similar to previous as there are password policies embedded in the system.

Type exit to leave system

```

pi@raspberrypi: ~
login as: pi
pi@192.168.1.124's password:
Linux raspberrypi 3.18.7-v7+ #755 SMP PREEMPT Thu Feb 12 17:20:48 GMT 2015 armv7
l

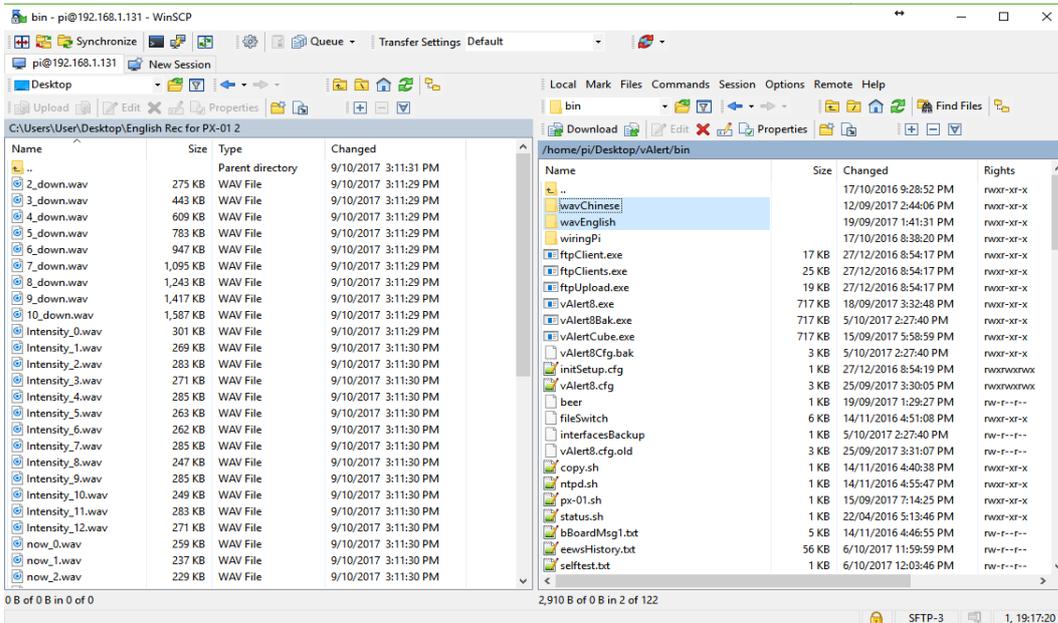
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed Dec 20 04:13:50 2017 from user-pc
pi@raspberrypi ~ $ passwd
Changing password for pi.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
pi@raspberrypi ~ $
    
```

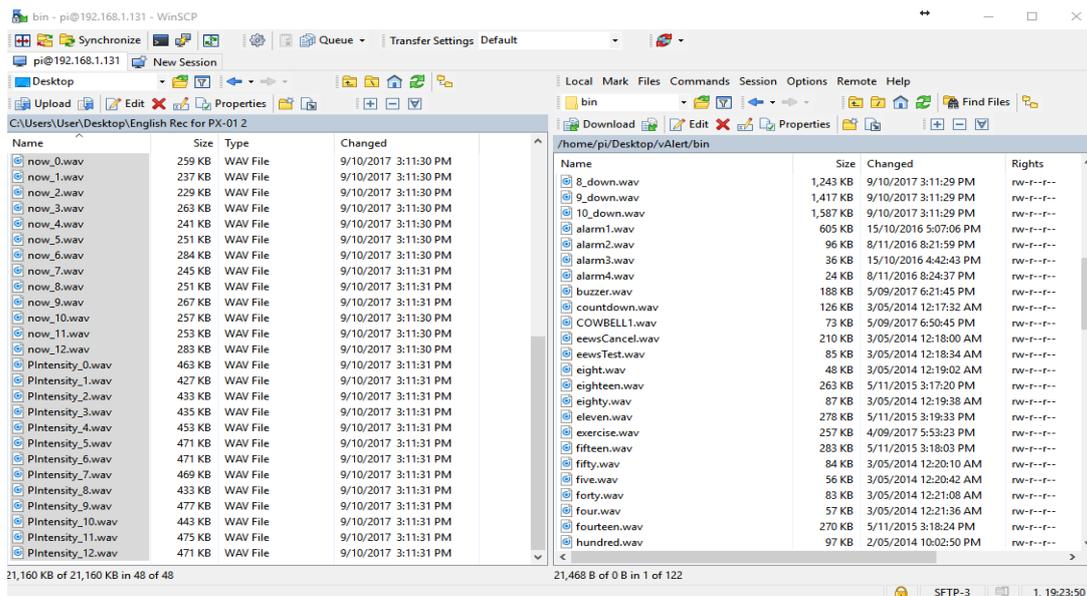
6. CHANGE VOICE ALARMS

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



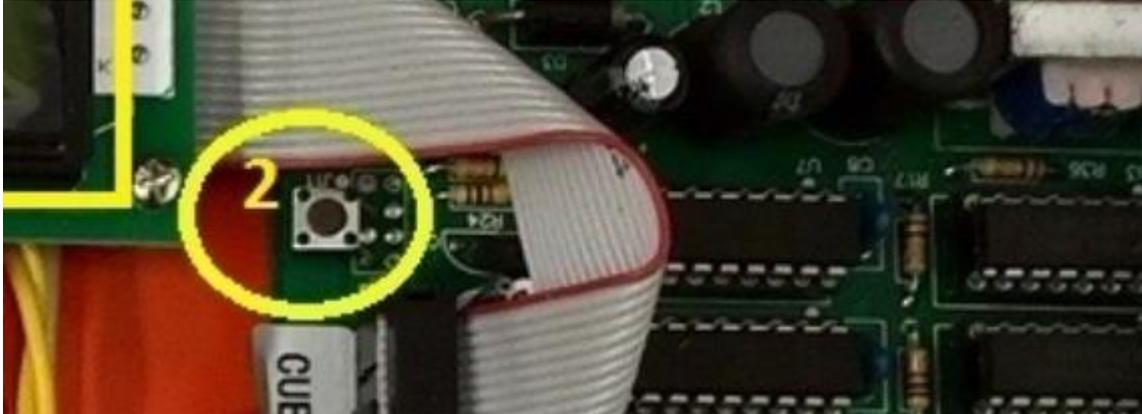
7.2 BOOT COMPLETE

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



7.3 OPTIONS

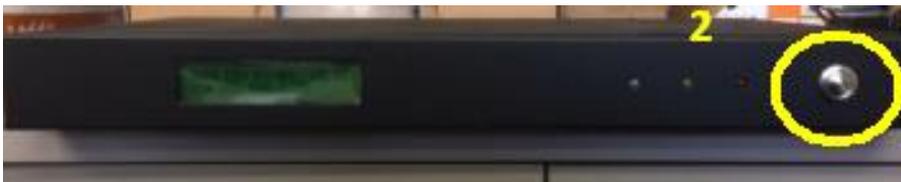
Press and hold the control button (2) to perform the functions below:



CUBE



PALERT+

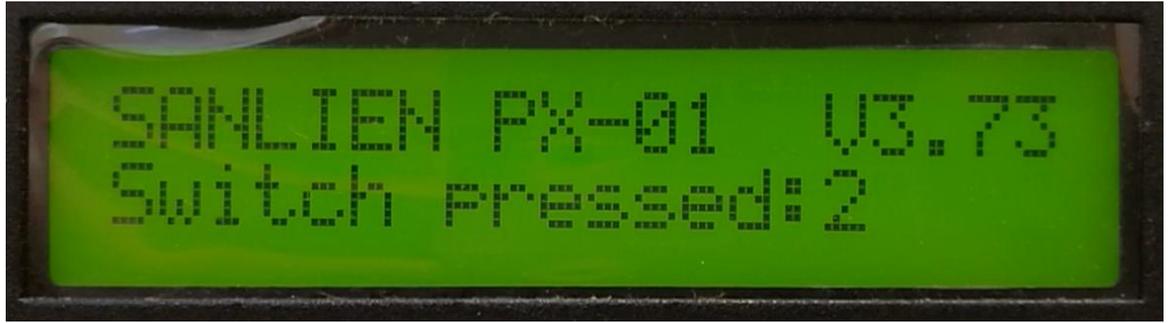


PX-01

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] <i>high nibble for zt2000</i> <i>low nibble for ba host</i>

Register	Description	Note
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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