

P-alert
Earthquake P-wave Detector
PC Utility Software Installation Instruction

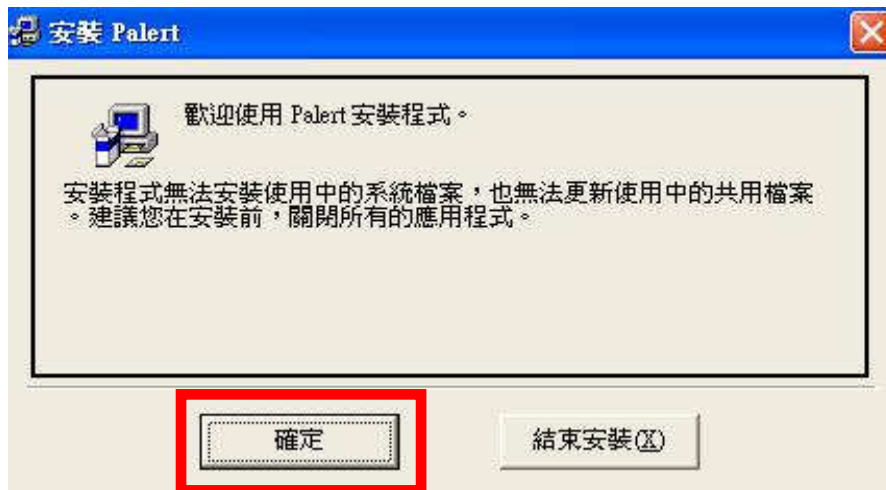
- ✧ Version : 1.11 2022/06
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- ✧ 3F, No.190, Sec. 2, Zhongxing Rd., Xindian Dist.,
New Taipei City, 23146 Taiwan.
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Install P-alert Software

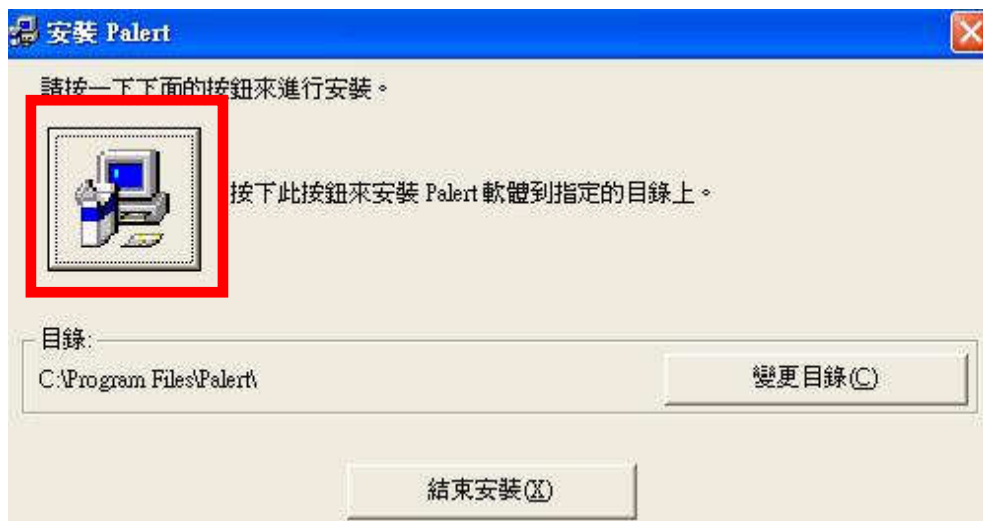
- Click “SETUP. exe” to install the software.



- Click “確定” to begin the process



- Click “變更目錄” to change SETUP route or click the computer icon to start process. Click “結束安裝” to terminate SETUP.



- The process will generate a program group in advance. P-alert software will be installed inside it. Click “繼續” to continue the installation.



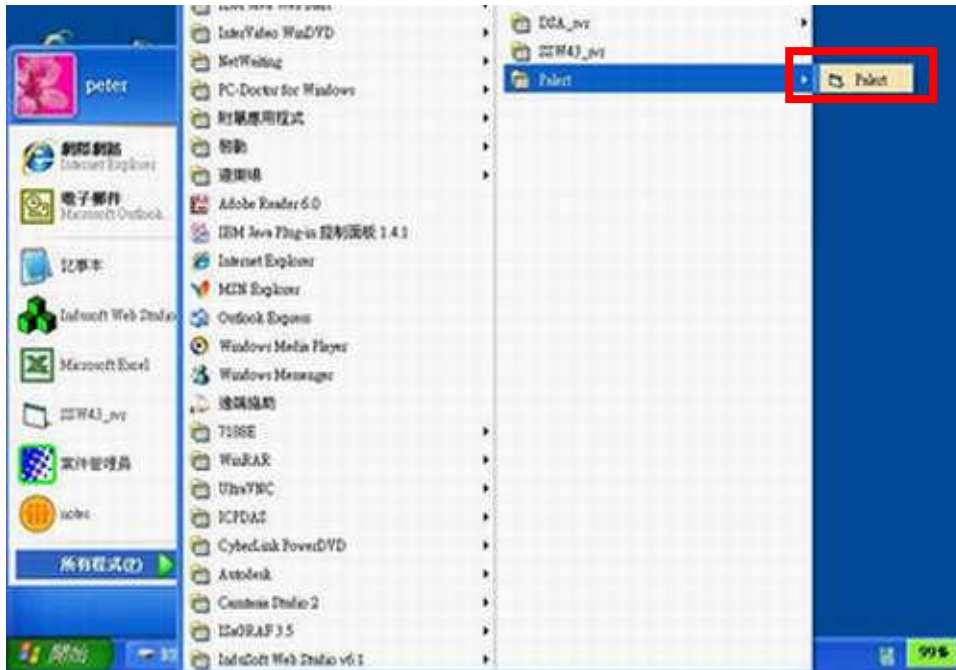
- Program is being installed as shown below.



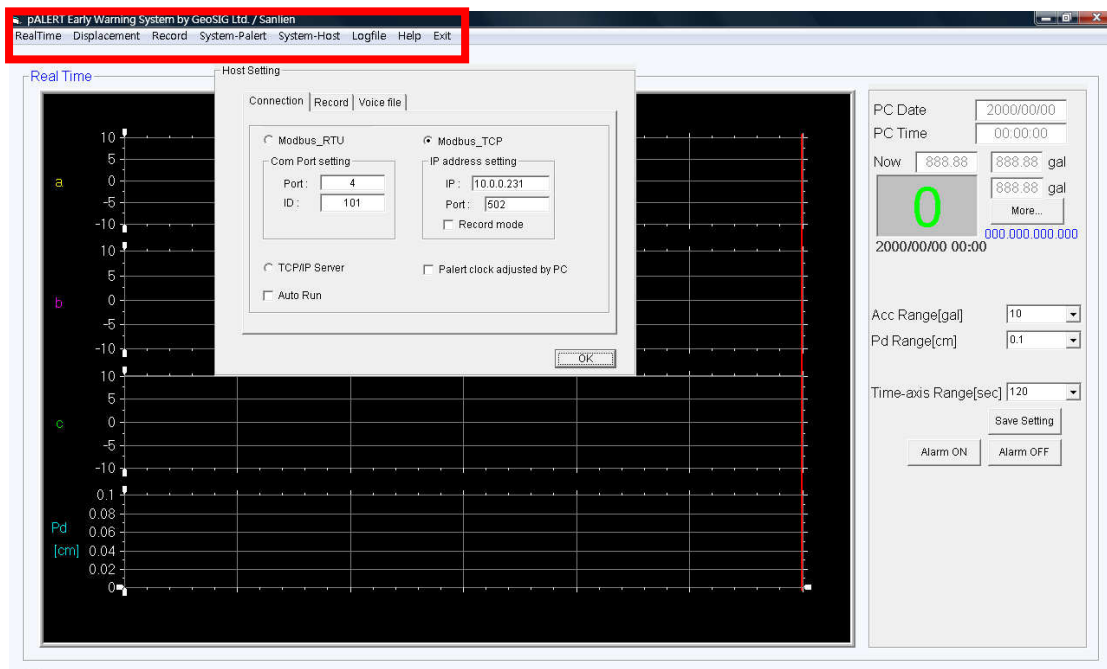
- Click “確定” to complete the installation as soon as the below icon is shown on the screen.



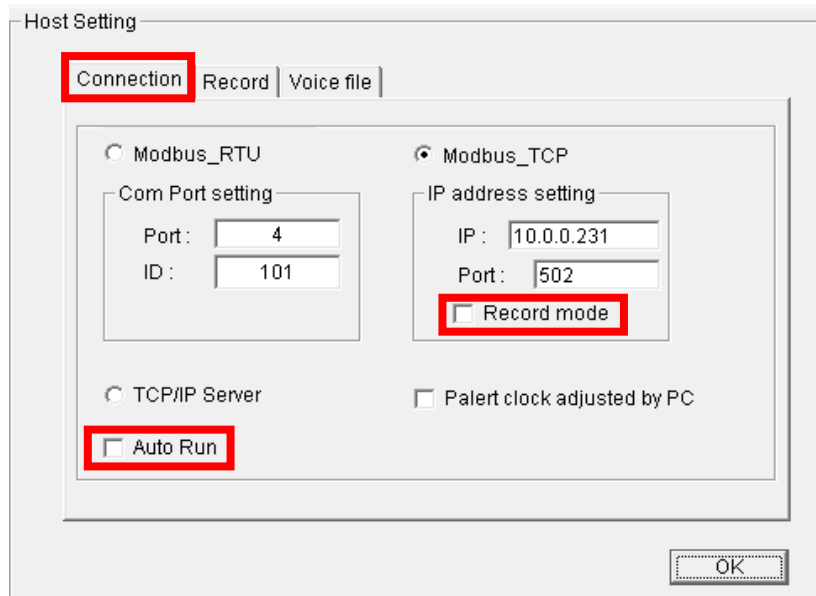
- Unzip “Update exe. file”. Copy and paste it into P-alert folder and replace the original one. The latest version is 1.15.
- Find Palert icon in program files.



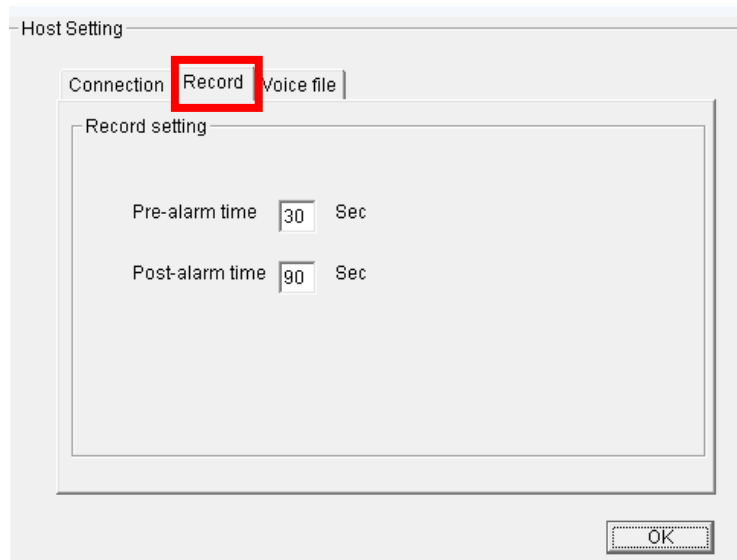
- Run “Palert. exe.” Primary functions include: Real Time 、 Displacement 、 Record 、 System-Palert 、 System-Host 、 Log file 、 Help 、 Exit. (P-alert default IP: 192.168.255.1)



- First, confirm the system connection option in System-Host. There are 3 ways to connect to P-alert: by RS-232 or RS-485 Com Ports (Modbus/RTU), and TCP/IP (Modbus/TCP). TCP/IP is suggested. Record Mode is only provided for TCP/IP Client. The program has event record function after users check “Record mode” to activate. When record mode is on, the event data can be recorded to computer without MCU(Main Control Unit, Ex: PX-01 or Cube). “Auto Run” allows users to skip Host Setting and to move into real time waveform window after running it. Total record time of pre- and post-event is 120 seconds which is user configurable. The event will be saved into CSV file format once P-alert is triggered (Fig. 1&2).

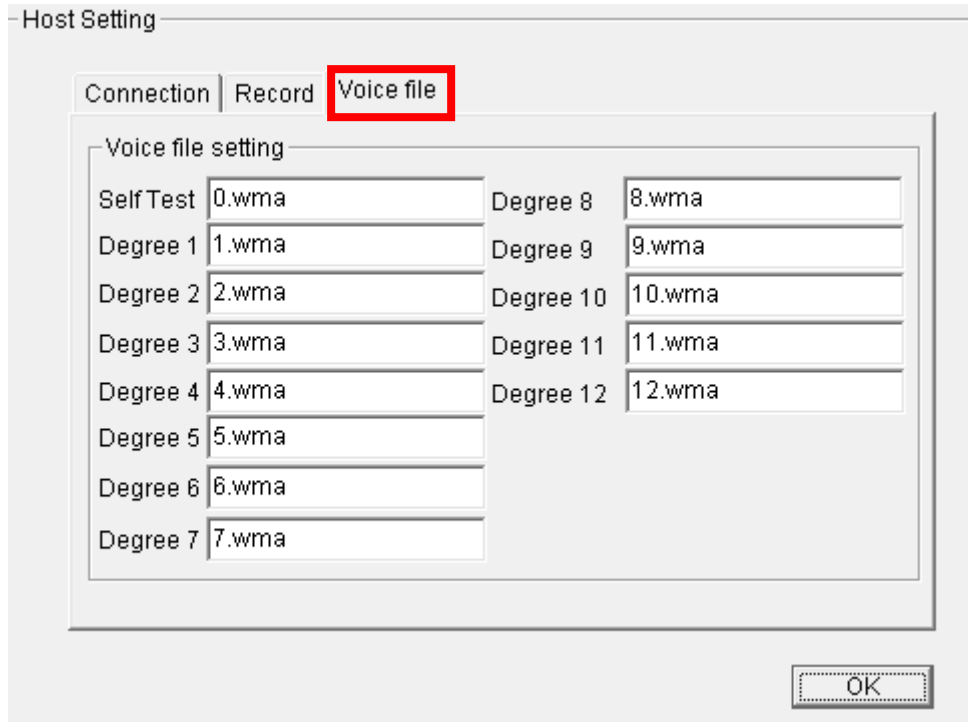


(Fig. 1)



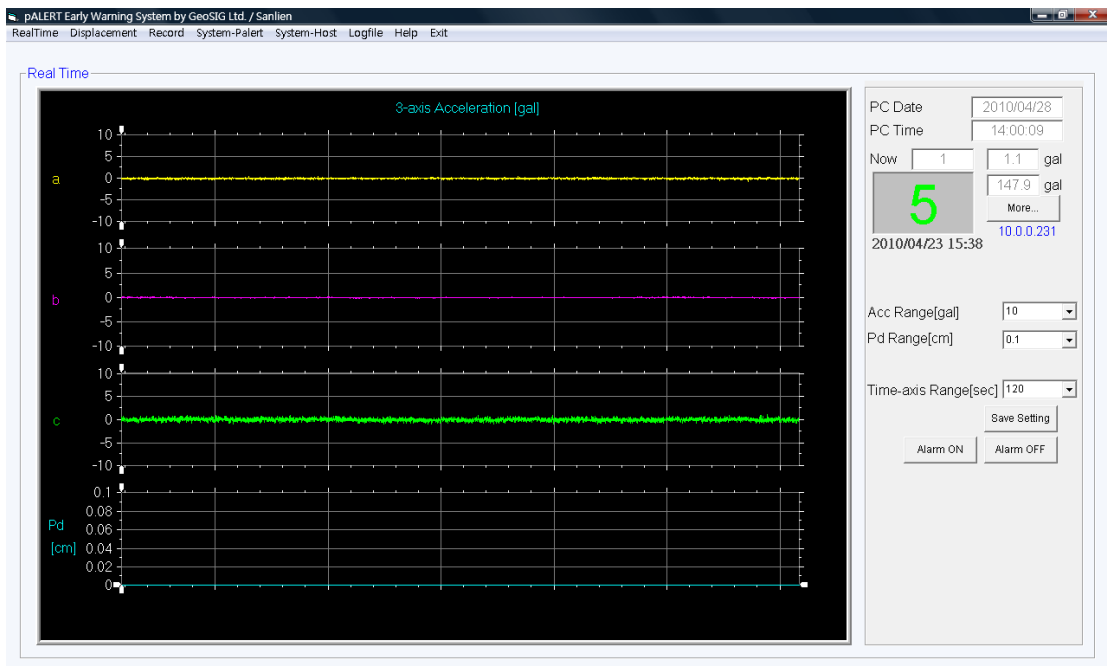
(Fig. 2)

- Earthquake intensities can be broadcasted via speakers. Voice files are allowed to be customized by users as “wma file” To replace default files, just paste new files into the P-alert folder and modify the file names to different intensities which users want to categorize (Fig. 3).

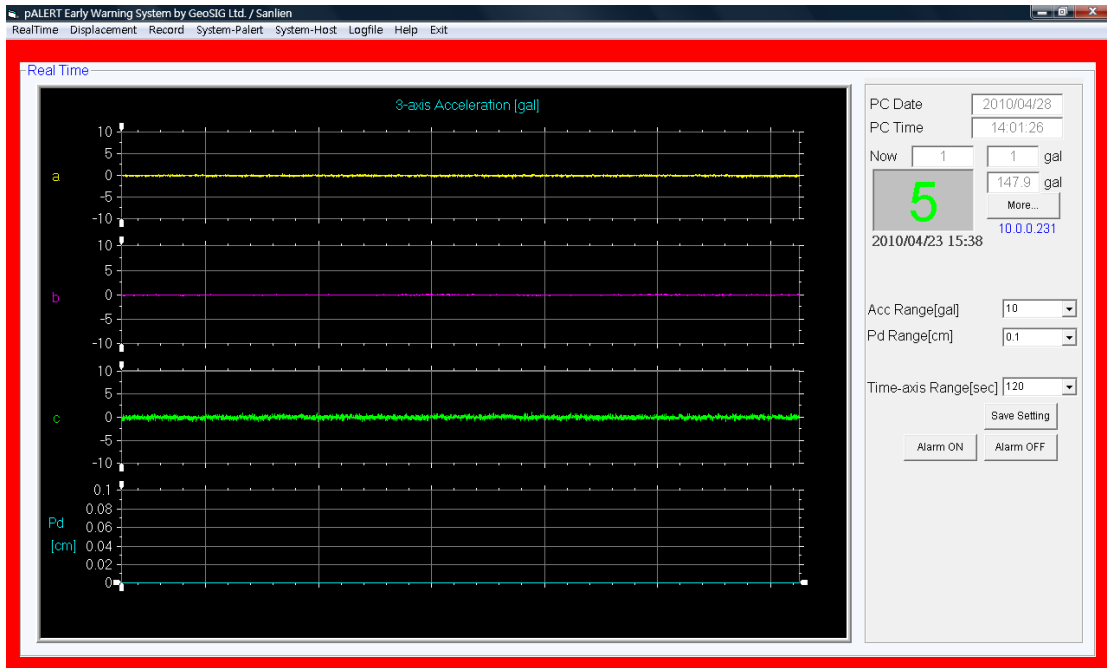


(Fig. 3)

- When the connection is correct, the P-alert real-time monitoring software (PC Utility) will display waveforms on the screen.



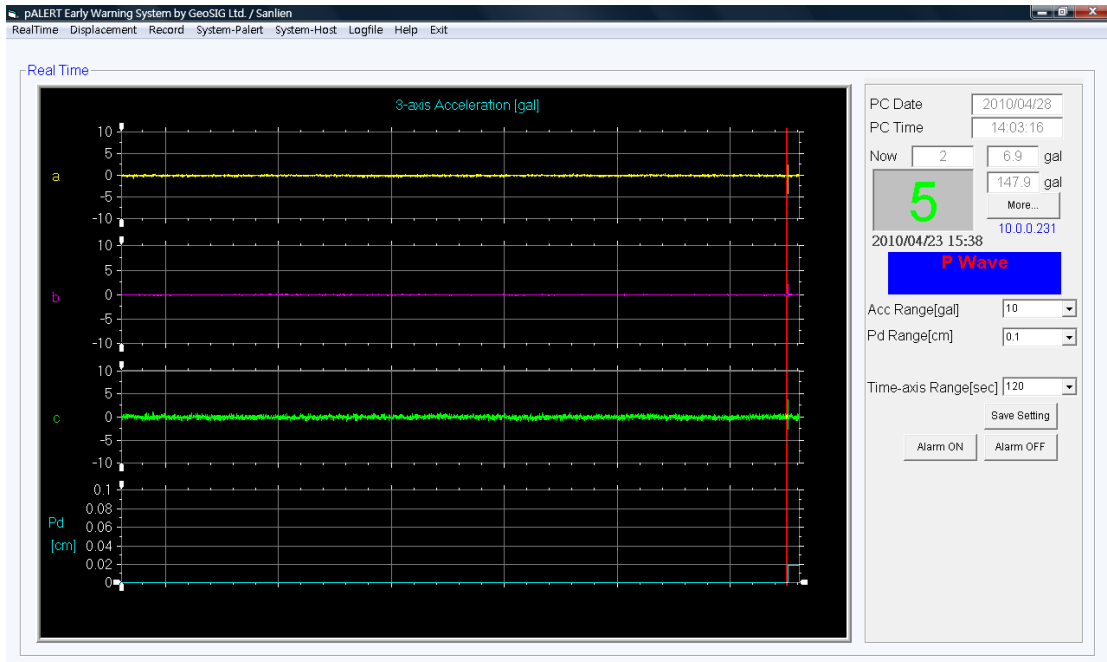
- If the connection fails, the screen will be shown in a red frame.



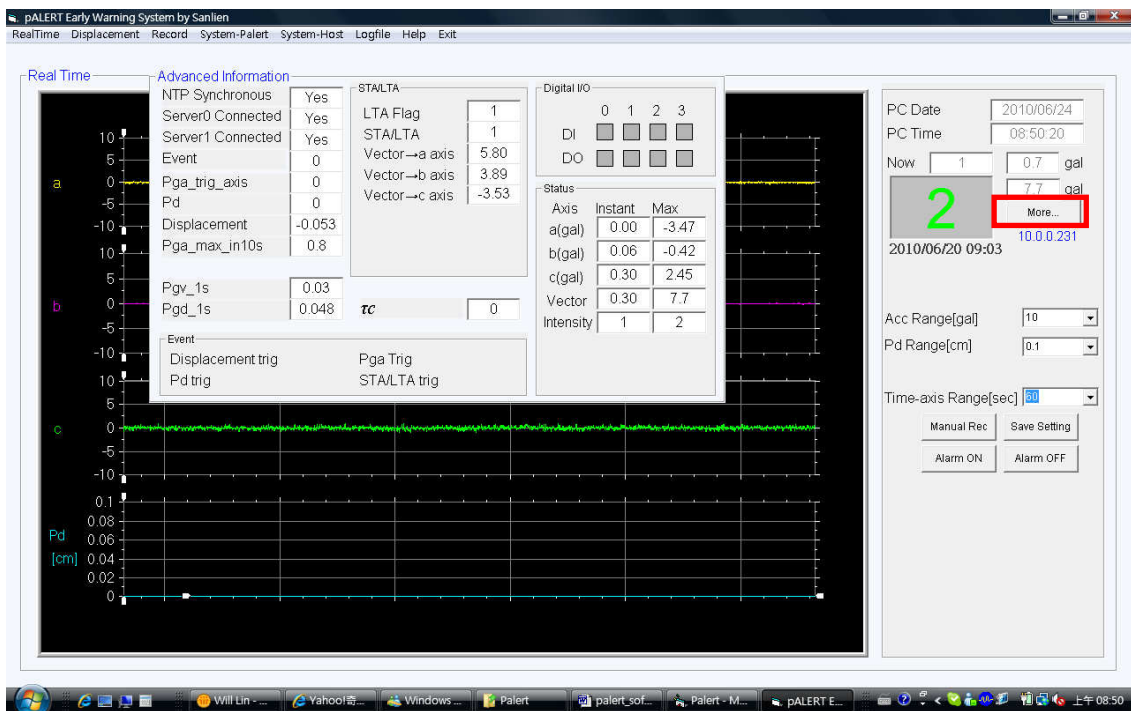
Operating Instruction

- **Real Time Function**

The function displays the tri-axial acceleration and P displacements. On the right side, users can set waveform range (acceleration in gals, Pd in cms). Other information of PC time/Date, P-alert IP, last event time, current intensity, and maximum intensity of last event is displayed as well (a: vertical component; b: north/south; c: east/west).



- **Click "More" to see other parameters.**



- **System-Alert function:**

To see P-alert internal parameters, click General · Connection · System to configure.

Alert setting

General | Connection | System

System Date/Time : 2022 / 6 / 24 12 : 5 : 12 5 [Weekday]
 Event Date/Time : 2022 / 6 / 24 4 : 23 : 3 NTP
 Available Hosts : -1 Modbus RTU Port (1 or 2): 2 2

	Watch		Warning		
Pd_th :	0.3	0.3	0.35	0.35	[cm]
Pga_th :	4.0	4	80.0	80	[gal]
Disp_th :	0.2	0.2	0.35	0.35	[cm]
Duration :	5	5	20	20	[sec]
Pgv_th :	-0.01	-0.01	-0.01	-0.01	[cm/s]

Firmware Version : 2117 2117 firmware update
 Serial No. : 227 227

GBT enable
 MMI enable
 GAS mode
 NTP enable
 DHCP enable
 Vector based Intensity
 KMA enable
 Server0
 Server1 conn enable
 FTE-D04 enable
 Service disable
 Modbus TCP Client

 white IP control
 Plain fix
 cwb2019Standard

trig mode
 Displacement trig
 Pd trig
 Pga trig
 Sta/Lta trig
 10Hz LPF
 20Hz LPF

Save as default OK

- **System Date/Time** : P-alert internal time.
- **Event Date/Time** : Event time of the latest earthquake.
- **Available Host Left** : Total client number for linking to host.
- **Disp_th** : Displacement warning value, minimum unit is 0.1 cm.
- **Pd_th** : P wave displacement warning value, minimum unit is 0.1 cm.
- **Pga_th** : P wave 2-phase acceleration warning value, minimum unit is 1 gal.
- **Duration** : 2-phase DO duration time, minimum unit is one second.
- **Firmware Version** : Current firmware Version.
- **Serial No** : Instrument Serial Number.
- **GBT enable** : Compatible with China standard seismic level GB 17742-2008.
- **MMI enable**: Compatible with Mercalli magnitude seismic intensity level.
- **GAS mode** : Gas pipe emergent shutdown function.
- **NTP enable** : Network Time Protocol.

- **DNCP enable** : Enable dynamic IP.
- **Vector Based Intensity** : Based on vector value.
- **KMA enable** Compatible with Korea's KMA seismic intensity level.
- **Vector Based Intensity** : Based on vector value.
- **Server0** : Enable the sever 0 function (P-alert will send data to host PC IP automatically).
- **Server1**: Enable the sever 1 function (P-alert will send data to host PC IP automatically).
- **FTE-D04 enable**: This function was be halted, please ignore it.
- **Service Disable**: Click it to stop service from Sanlien's server (This is recommended in isolated IP area like privacy company case).
- **white IP control**: A list of IP to allow the security from server.
- **Modbus TCP Client**: This function was be halted, please ignore it.
- **Plain fix**: Enable in horizontal installation of Palert.
- **cwb2019Standard**: Compatible with Taiwan's seismic intensity level.
- **Trig mode(more than 1 option available)** :
 - a. **Displacement trig** : Displacement trigger mode.
 - b. **Pd trig** : P wave displacement trigger mode.
 - c. **Pga trig** : P wave accelerating trigger mode.
 - d. **Sta/Lta** : Short/long term average trigger mode.
 - e. **Low-pass filter**: 10Hz / 20Hz

Palert setting

General **Connection** System

IP address	10	0	0	231	
	10	0	0	231	
Subnet Mask	255	255	255	0	
	255	255	255	0	
Gateway	10	0	0	254	Modify
	10	0	0	254	Write
Modbus RTU Addr :	101	101			
TCP Server IP_0	140	112	57	46	
	140	112	57	46	
TCP Server IP_1	211	20	66	150	Modify
	211	20	66	150	Write
NTP Server IP	192	43	244	18	Modify
	192	43	244	18	Write

OK

- **IP address**: Set P-alert IP.

- **Subnet Mask:** Set P-alert IP Mask.
- **Gateway:** Set P-alert IP Gateway.
- **Modbus RTU Addr:** Set P-alert Modbus/RTU ID (Ignore if using TCP/IP).
- **TCP Server IP:** Set server IPs.
- **NTP Server IP:** Set NTP Server.
- **Modify:** Temporary alternation. Restart P-alert will return to primal setting.
- **Write:** Write-in alternation. Restart P-alert leads to the latest setting.

Palert setting

General | Connection | **System**

Time Zone	8	8
STA Length [0.1 sec]	20	20
LTA Length [0.1 sec]	400	400
Threshold STA/LTA	3	3
Seismic Alarm Time	20	20
Offset Records	200	200
DO 0 Trig[gal]	8	8
DO 1 Trig[gal]	25	25

ews DO 0 Intensity	10	10
ews DO 1 Intensity	5	5
Mounting Angle(0.1°)	0	0

Palert simulation
 Palert+ simulation

gal
 cnt
 Vector

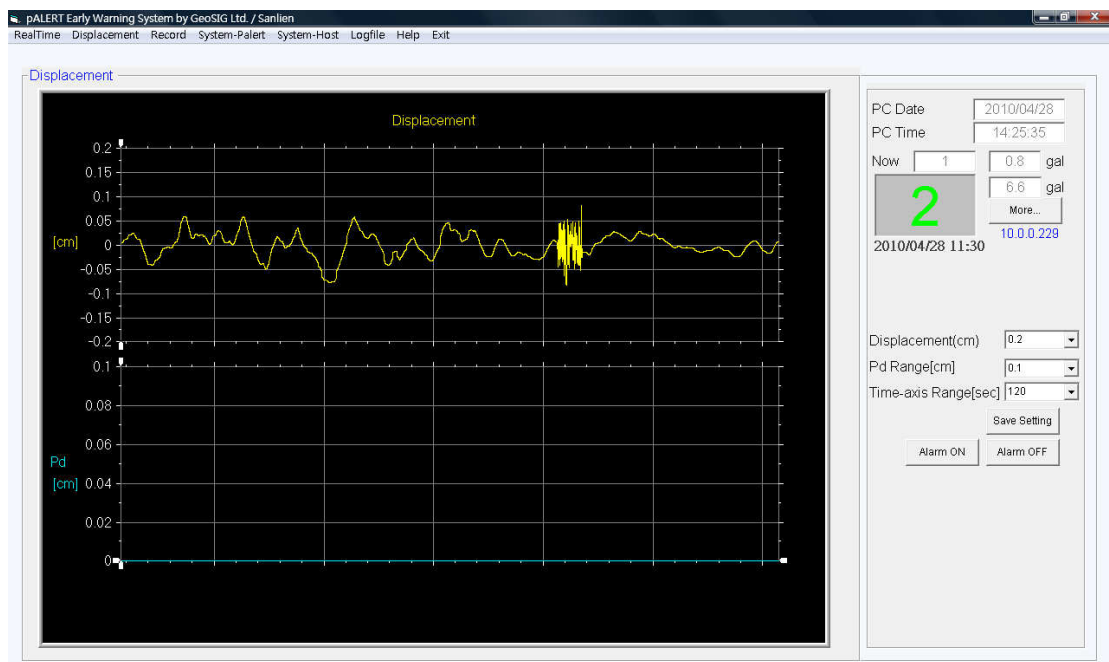
- **Seismic parameter setup**

- **Time Zone :** Time Zone setting.
- **STA Length :** Short term average setting, minimum unit is 0.1 second.
- **LTA Length :** Long term average setting, minimum unit is 0.1 second.
- **Threshold STA/LTA :** STA/LTA trigger ratio.
- **Seismic Alarm Time :** Length for seismic alarm.
- **Offset Records :** Offset calibration sampling rate.

- **DO0 Trig** : DO0 trigger point setting (gal).
- **DO1 Trig** : DO1 trigger point setting (gal).
- **Mounting Angle**: Software method of adjust the 3 axels north pointing.
The unit is 0.1 degree (This would be applied in “0” if Palert already mounted in real frame).
- **Palert(Plus) simulation**: To simulate a real time spike to test the system, the intensity can be adjusted in “gal” option, the triggered time duration can be adjusted in “cnt” option, the time unit is 0.01 second(40 should be recommended to a spike for triggering test).

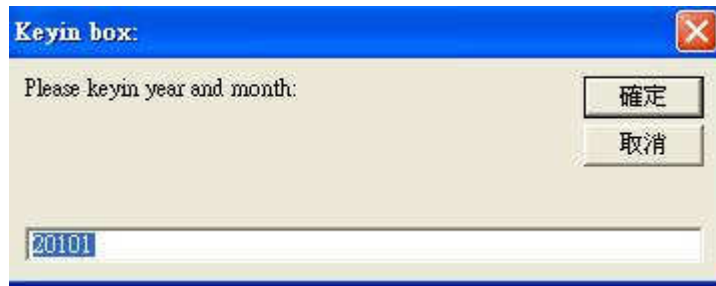
- **Displacement function**

Displacement function shows displacement trend. Set the range on the right of the screen (displacement, Pd value), seismic information (seismic time, current intensity, maximum intensity for last event).



- **Logfile function**

Record the operating information (linking length, off-line time, P wave status, Pd status, Pga status). Key in month / year to check the information. Files are set in groups by month.



- **Help**

Click "Help" to open the technical information file "Palert_manual_e01.pdf"