User Manual
IR37 Temperature Measuring Camera

For the measurement of human fever

pulsar
Instruments Plc

1 Contents

2 Overview

2.1 Introduction

Welcome to the IR37, Pulsar Instruments' new touchless, innovative access control device with advanced facial recognition and fever detection.

Heimann thermometer sensor

Camera LED backlight

Himax camera

7-inch Android touchscreen

Ultrasonic distance sensor
(do not touch/press)

Desktop mount/base

The IR37 is supplied with the following parts as standard:

- Access control device with integrated Infra-red fever detection module
- Powers supply
- Small Allen key

- Desktop stand

3 Assembly

3.1 Desk top stand assembly

Complete the following steps to assemble the IR37 with desktop stand.

1. Unscrew and remove black collar from mounting column pole as shown below, ensure large vinyl washer remains on the mounting column.

2. Thread the captive cables through the base aperture.

3. Fit the mounting column to the base.

4. Thread cables through black threaded collar and thread collar onto the mounting column.

5. Tighten clamping column and base together – ensure base is orientated such that the cable entry is to the rear.
6. Position the IR Sentry ensuring the cables exit the base from the cable entry at the rear of the stand.

7. Remove any protective wrapping and connect the power supply cable
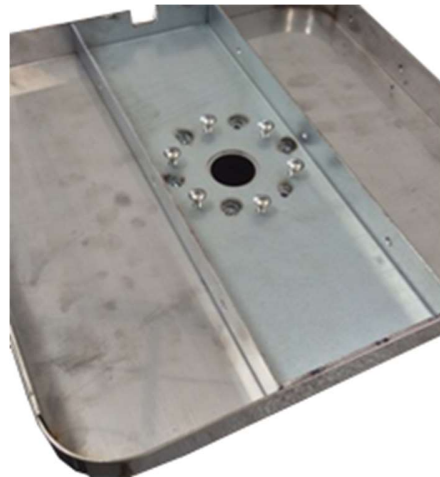8. Your IR37 is now assembled and ready for use.

3.2 Pedestal Assembly

The pedestal stand is supplied in two boxes

1. Box A contains the polished steel column.
2. Box B Contains:
   a. Polished steel base
   b. Screw pack with
      i. 6 x dome cross head bolts
      ii. 5 x cross head countersunk bolts
   c. Polished steel top plate with pre-drilled and countersunk holes

Complete the following steps to assemble the IR37 with the pedestal stand.

1. Remove the pole, base, screw pack and top plate from the packaging.
2. Remove the outer protective bubble wrap from the pole.
3. For added protection the pole is wrapped in a protective film wrap, remove enough protective wrap to expose each end of the pole.
4. Unwrap base plate and remove the protective film around the central aperture.
5. Invert the base and place on the pole end with 6 pre-drilled and tapped holes –Insert the 6 dome cross headed bolts a couple of turns as shown below.

6. Tighten with a cross head/ Phillips screwdriver – tighten opposites in order.
7. lay the assembled pole and base down and thread the power cord from bottom to top.
8. Stand the pole the up on its base.
9. Unscrew and remove black collar from mounting column as shown below.

10. Thread the captive cables through the polished steel top plate-ensure the polished side is upward facing.
11. Thread the captive cables through the black mounting collar, thread the black collar back onto the mounting column, tighten but not fully.
12. Connect power, contact closure and network cables.
13. Place the assembly on top of the pillar, line up predrilled holes of the polished steel top plate with the pedestal mounting holes-check alignment of the IR37. When satisfied with alignment fully tighten the black collar
14. Insert countersunk screws and tighten.
15. Remove any remaining protective film from the pedestal and base.
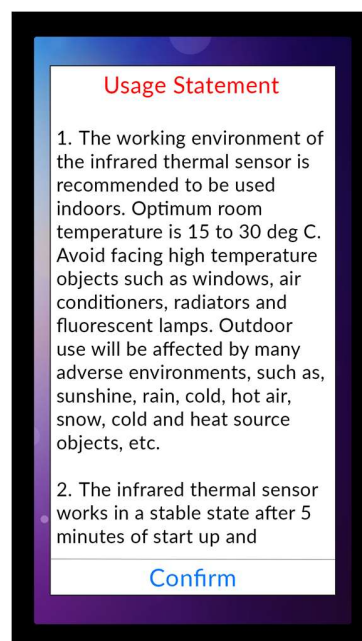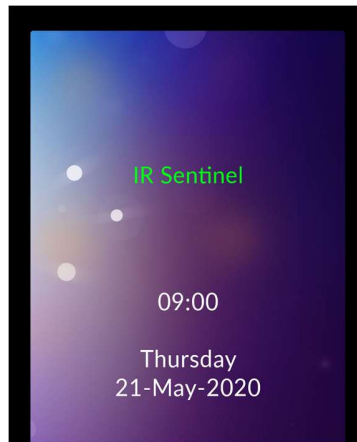
16. The IR37 is now ready for use.

4 Set Up

When first powered on the IR37 will display the following usage statement:

1.   The working environment of the infrared thermal sensor is recommended to be used indoors. Optimum room temperature is 15 to 30 deg C. Avoid facing high temperature objects such as windows, air conditioners, radiators and fluorescent lamps. Outdoor use will be affected by many adverse environments, such as, sunshine, rain, cold, hot air, snow, cold and heat source objects, etc.

2.   The infrared thermal sensor works in a stable state after 5 minutes of start up and operation.

3.   The product is a non-medical device. The temperature measurement function of this equipment is only to assist rapid self-help rapid body screening. Once the abnormal body temperature shows, it is recommended to use medical temperature measurement equipment to measure and confirm again.

4.   The circle button under the screen is the ultrasonic module, which is used to detect the most effective temperature measurement distance of 50cm. when using, please make sure there is no obstruction object within 1.5m in front of the screen. DO NOT touch or press with your hand or fingers." Tap "confirm" if this is understood and accepted. The IR37 will then display the default screen.
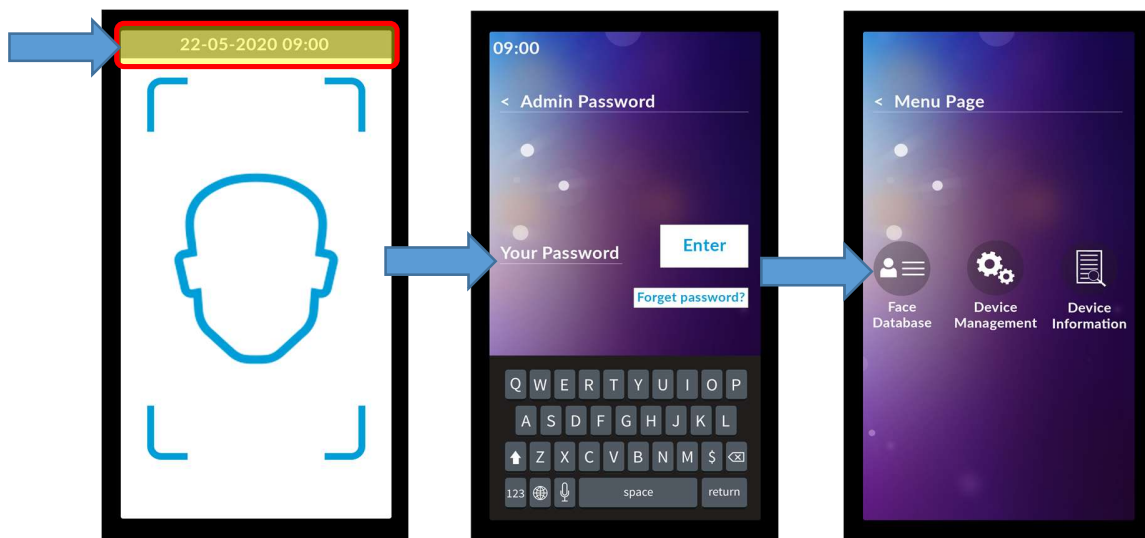
This screen may be customized to display organization specific messages, see section 4.2.3.8 of this guide.

The following sections descried the various settings and customization options of the IR37.
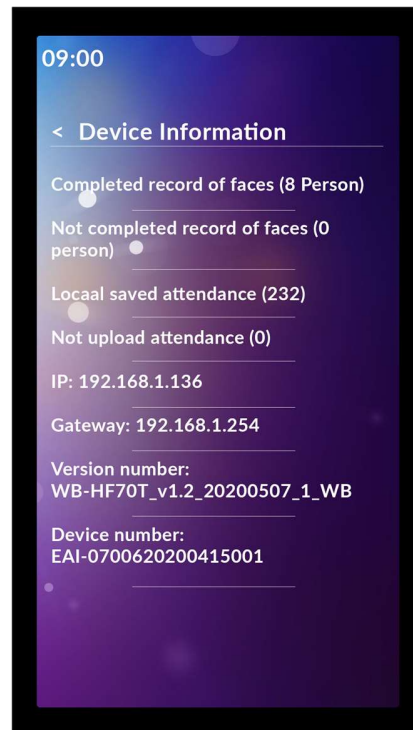
To access the IR37's top-level settings menu, tap the date and time bar at the top of the screen, highlighted below.

Enter the admin password, then tap enter. The default password is 6666. This should be changed during set up procedure, see section 4.2.3.5 of this guide.

4.1 Device Information

Tap the 'Device Information' to display the following information, it is read only and cannot be edited:

a. Complete Record of faces (xx person)
b. Shows the number of profiles on the device registered for facial recognition
c. Not completed record of faces (xx person)
d. Records for facial recognition which are incomplete
e. Local saved attendance (xxx)
f. Total number of temperature scans completed
g. Not uploaded attendance (xxx)
h. Number of scans with no photo ID (i.e. generic anonymous visitors)
i. IP – allocated IP address or blank/"check network" if none – only required for networked deployment NOT as a standalone device
j. Gateway – allocated gateway or blank/"check network" if none – only required for networked deployment NOT as a standalone device.
k. Version number – firmware version on device
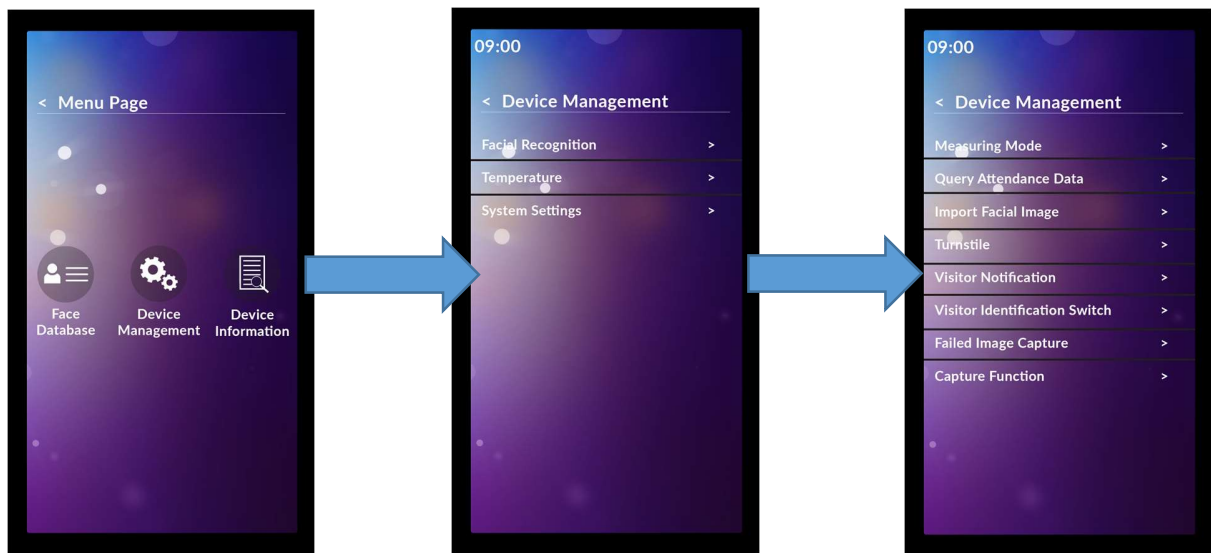l. Device number – unique serial number of the device.

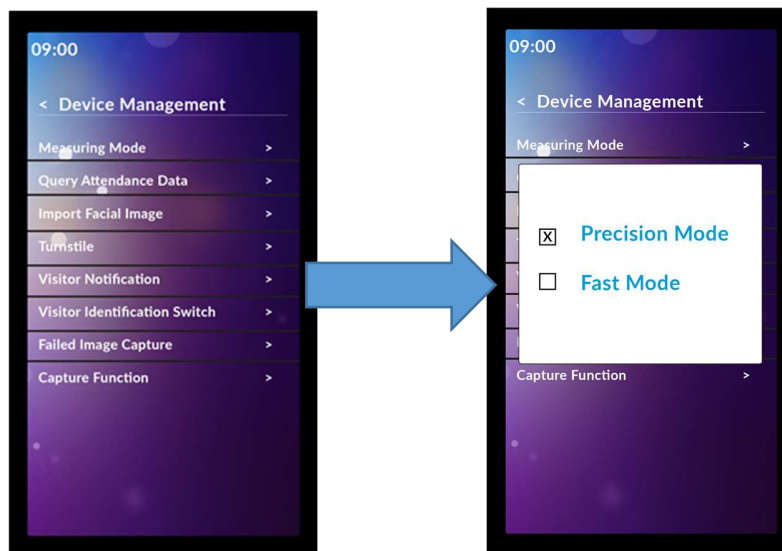Tap the back arrow to return to the top-level menu.

4.2 Device Management

Tap 'Device Management' icon to access the facial recognition, infra-red thermometer and system settings'.

4.2.1 Facial Recognition

Tap the 'Facial recognition' icon from the device management menu to access the facial recognition settings of the IR37.

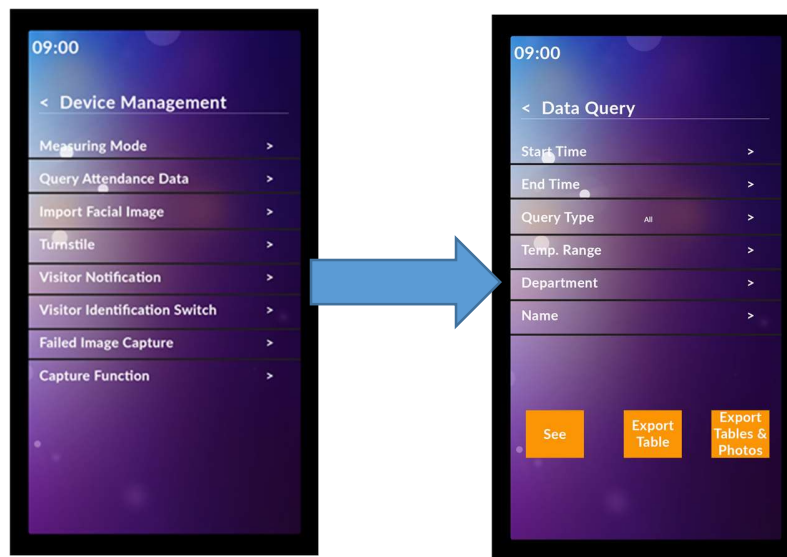## 4.2.1.1 Measuring Mode

Precision Mode (default):

    a. Enables facial recognition

    b. Places a head outline on the screen

    c. User needs to be 300 to 600mm distant

    d. User positions their face image within the outline

    e. Screen prompts if too close or too far way

f. Suitable to log individual staff members from a known data set.

g. Still enables visitors to be scanned

Fast Mode:

a. No facial recognition

b. Suitable for fast scanning at a greater distance of individuals for temperature.

c. Social distancing between users is advised to ensure quick reading

d. Users need to be 500 to 800mm distant

e. Screen prompt if too close or too far way

f. Suitable for use where individual identification is not required

4.2.1.2   Query Attendance Data

See:

a. Will list every person scanned with name (if facial recognition ON) and date, time and temperature

b. Tapping any entry on list will bring up further detail

Export Table:

a. Exports to USB in encrypted format the list without any images, but includes all other data

Export tables and Photos:

a. Exports to USB in encrypted format the list of all scans and their photos (if enabled) at time of scan

b. The query can be narrowed by:
  - Time – from and to
  - Temp range
  - User group if users are on the database
  - By name, search for an individual's scans from the database

NOTE – All of this data can be uploaded via the network if enabled – see Server Software Manual.

4.2.1.3   Import facial Image

Allows datasets to uploaded to the IR37 via USB, the dataset must be in presented in the correct format, see Server Software Manual for details.
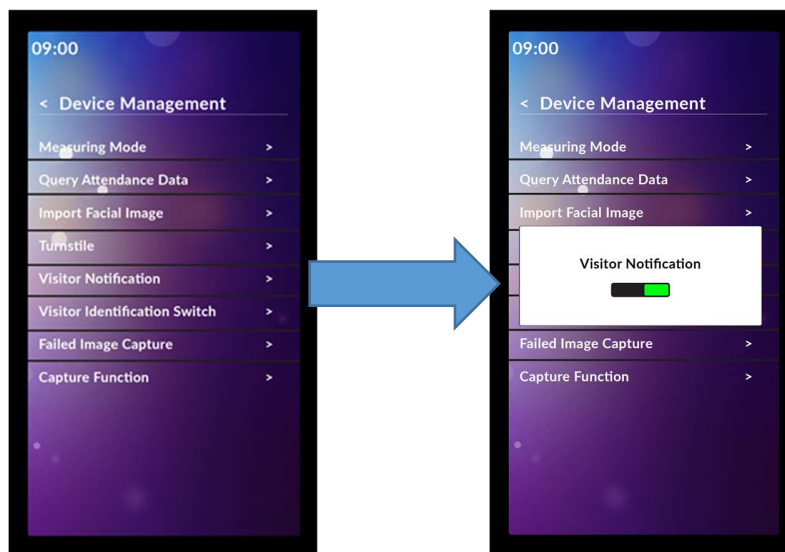
4.2.1.4   Turnstile

Allows the IR37 to remotely trigger a turnstile of door entry system via the RS 485 interface. Works in conjunction with the 'Gate Opening Settings' function, see section XX of this manual.

        a.   ON – Enables remote gate operation via the RS 485 interface

        b.   OFF – (Default) Disables remote gate operation via the RS 485 interface

4.2.1.5   Visitor Notifications

Will create record of non-identified (visitor) facial recognition event, see Server Software Manual for further details.

      a.   ON – Enables visitor records
      b.   OFF – Disables visitor records
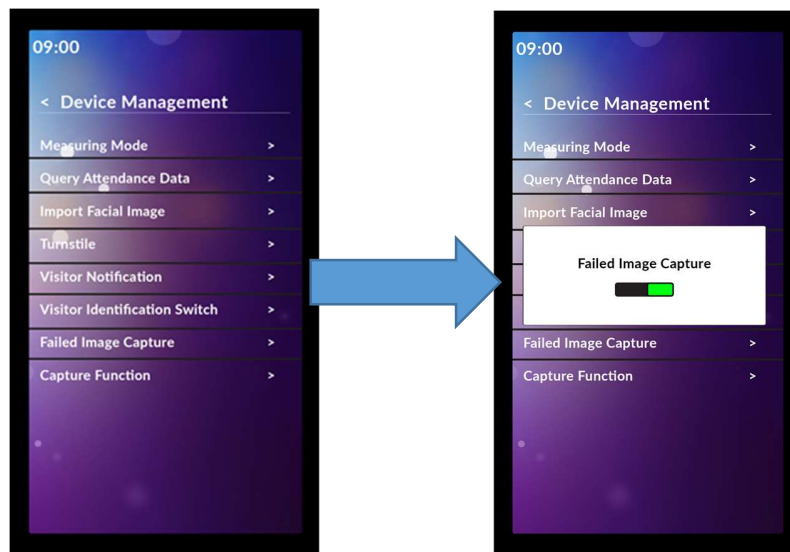
4.2.1.6   *Visitor Identification switch*

Captures an image of visitors.

      a.   ON – Enable image capture of visitors
      b.   OFF – Disables image capture of visitors

4.2.1.7   Failed Image Capture

Captures an image when the infra-red thermometer detects elevated body temperature.

      a.   ON – Enable image capture of potential fever victim

      b.   OFF – Disables image capture of potential fever victim

4.2.1.8   Capture Function

The IR37 will capture an image at every scan.

      a.   ON – Enable universal image capture

      b.   OFF – Disables universal image capture

4.2.2 Temperature

Tap the 'Temperature' icon from the device management menu to access the temperature settings of the IR37.

4.2.2.1 High Temp Alarm Settings

Sets the temperature at which the IR37 will trigger a failed scan. The default value is 37.3 degrees Centigrade. To set tap and enter required value.
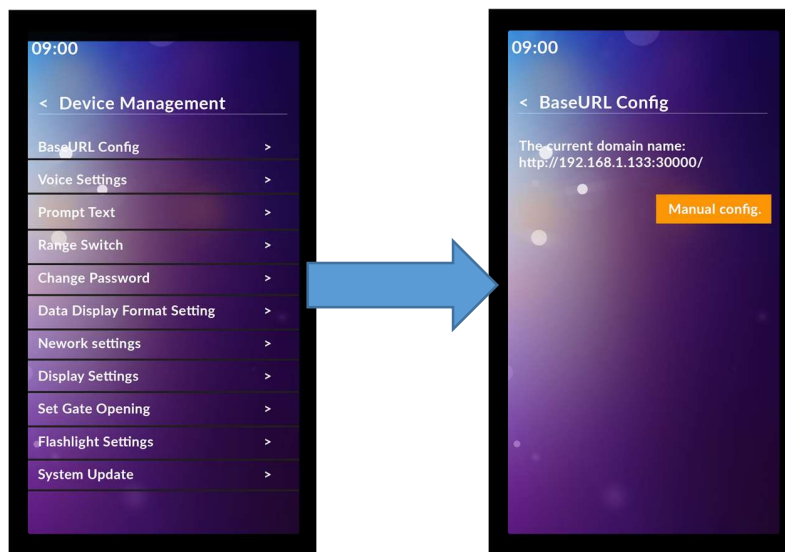
4.2.2.2 Temp Display Format Switch

Select temperature readings to be displayed as Centigrade or Fahrenheit.

4.2.3 System settings

Tap the 'System Settings' icon from the device management menu to access system settings of the IR37

The base URL setting provides the IR37 with the IP address of server software-only used when connected to a wired or wireless network. See Server Software Manual for further details.

Following a scan, the IR37 will play an audio file dependent on the result. The Voice Settings menu allow the voice prompts of the IR37 to be configured. The IR37 is pre-configured with several selectable voice prompts. Custom voice prompts can be created and uploaded using the USB import option.

Normal Voice

    a. On a successful scan the normal voice prompt is used.
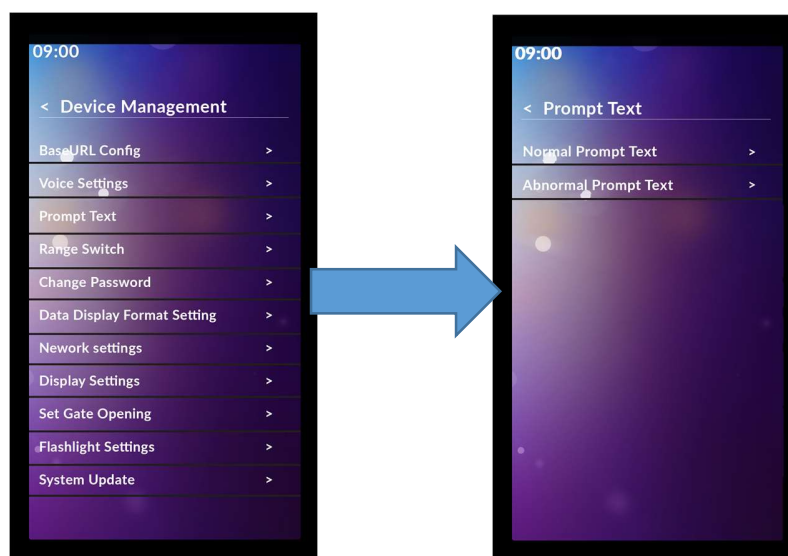
Abnormal Voice

    a. On a failed scan the abnormal voice prompt is used.

USB Import Voice

To upload custom voice files:

     a. On a USB sick create a directory titled 'face-voice'
     b. Within this directory create two sub-directories titled 'normal' and 'abnormal'
     c. Create custom voice prompts in mp3 format and save them to the relevant directories
     d. Insert USB stick into USB socket
     e. Tap 'USB Import Voice'
     f. Select files
     g. Tap OK

4.2.3.3   Prompt Text

Following a scan, in addition to the voice prompt the IR37 will display text on screen dependent on the result of the scan. These messages can be defined in the Prompt Text menu.

Normal Prompt Text

     a. Displayed message is green with a green border
     b. Default text is 'Normal'
     c. Text is configurable, tap the text to input custom message

Abnormal Prompt Text

     a. Displayed message is red with a red border
     b. Default text is 'Denied'
     c. Text is configurable, tap the text to input custom message

4.2.3.4   Range Switch

The range switch controls the ultrasonic distance sensor.

      a.   ON – (Default), enables ultrasonic distance sensor

      b.   OFF – Disables ultrasonic distance sensor, removes prompt to move closer or further away during scan

4.2.3.5   Change Password

Allows the management of the IR37s password.

Old Password

      a.   Enter existing password (6666 by default) to enable new password to be inputted
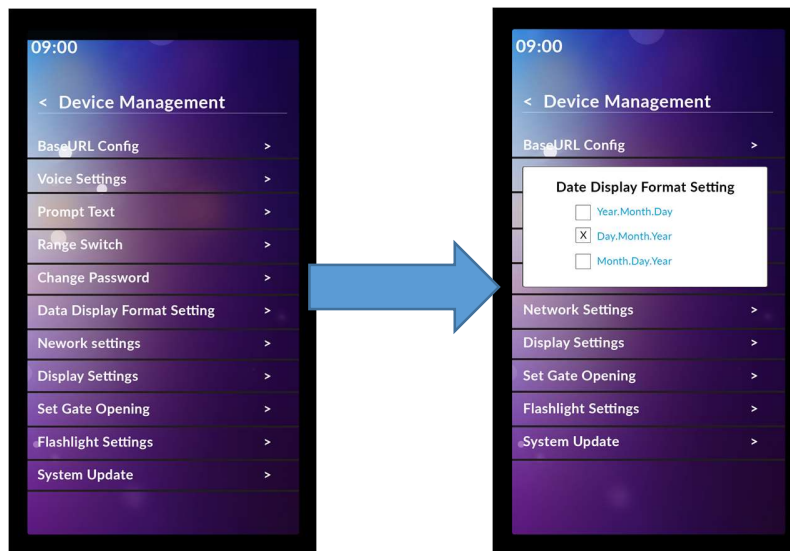
New Password

      a. Enter new password

Confirm Password

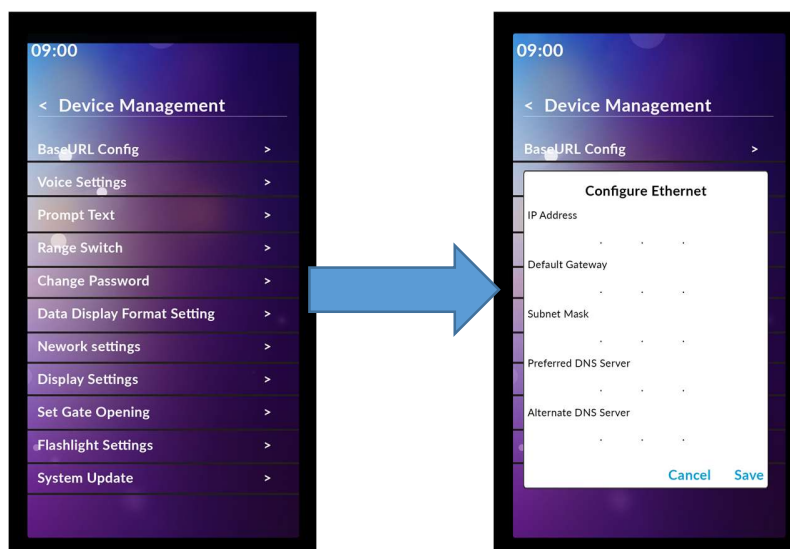   a. Re-enter new password to confirm the change

4.2.3.6 Date Display Format

Select the time and date format the IR37 displays.

      a. Year-Month-Date (yyyy-mmm-dd)
      b. Day-Month-Year (dd-mmm-yyyy)
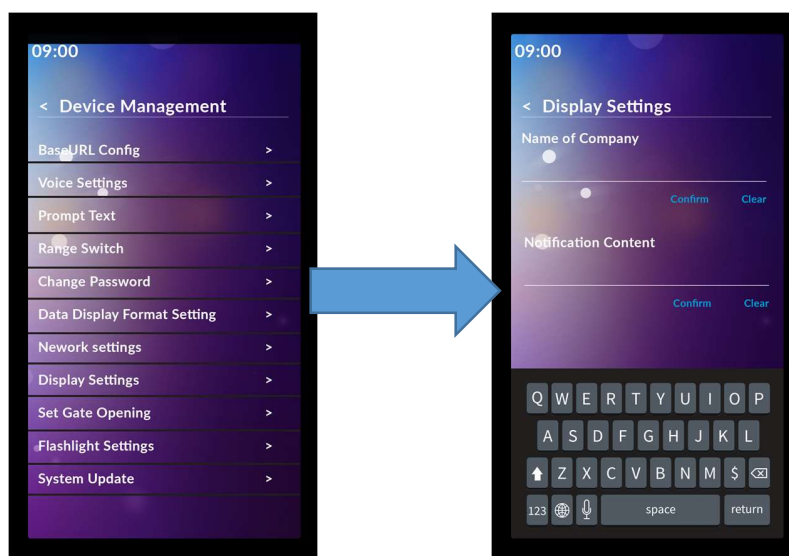   c. Month-Day-Year (mmm-dd-yyyy)

4.2.3.7 Network Settings

The ethernet network settings are configured in the network settings menu. See Server Software Manual for further information. All network settings are blank by default. There is no requirement to set up the network settings if the IR37 is connected via a wireless network or is operating in autonomous mode.

  a. IP Address, the IR37s IP address
  b. Default gateway, typically the IP address of the primary network router
  c. Subnet mask, typically 255.255.255.1
  d. Primary DNS server, Server Software Manual for configuration advice
  e. Secondary DNS server, Server Software Manual for configuration advice

4.2.3.8   Display Settings

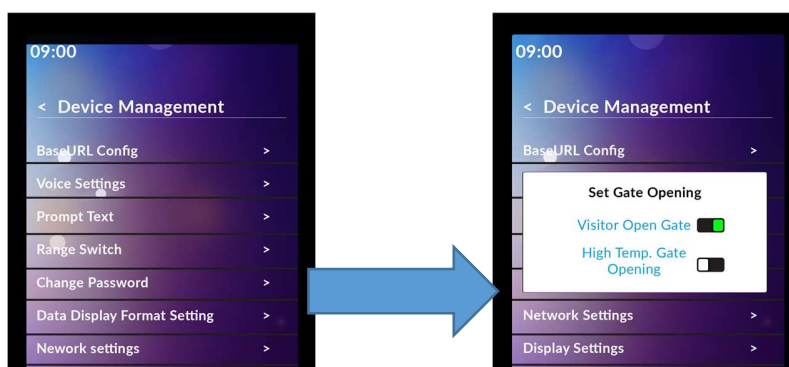Text displayed by the IR37 when in standby mode is configured in the Display Settings menu.

Name of Company

  a. Enter text to be displayed
  b. Text appears as a single line, centre justified at the top of the screen
  c. Tap 'Confirm' to save a change

Notification Content

  a. Additional text
  b. Text appears at the bottom of the screen, text that does not fit on a single line will scroll
  c. Tap 'Confirm' to save a change

4.2.3.9   Set Gate Opening

In conjunction with the 'Turnstile' settings, see section 4.2.1.4 of this manual, the Set Gate Opening settings configures the operation of the remote gate opening function of the IR37.
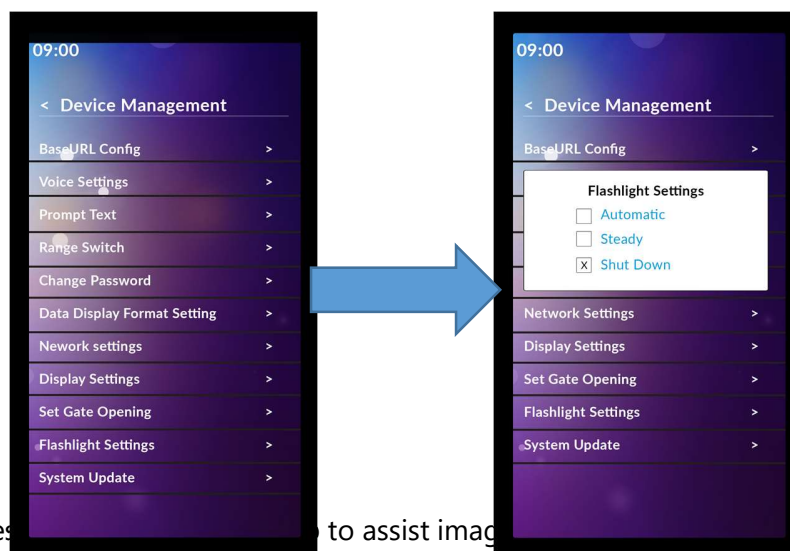
Visitor Open Gate

      a. ON – A successful scan of a visitor will open a connected gate or turnstile

      b. OFF – A connected gate or turnstile will not open following a successful scan of a visitor

High Temp Gate Opening

      a. ON – A connected gate or turnstile will open following a failed scan

      b. OFF - A connected gate or turnstile will not open following a failed scan
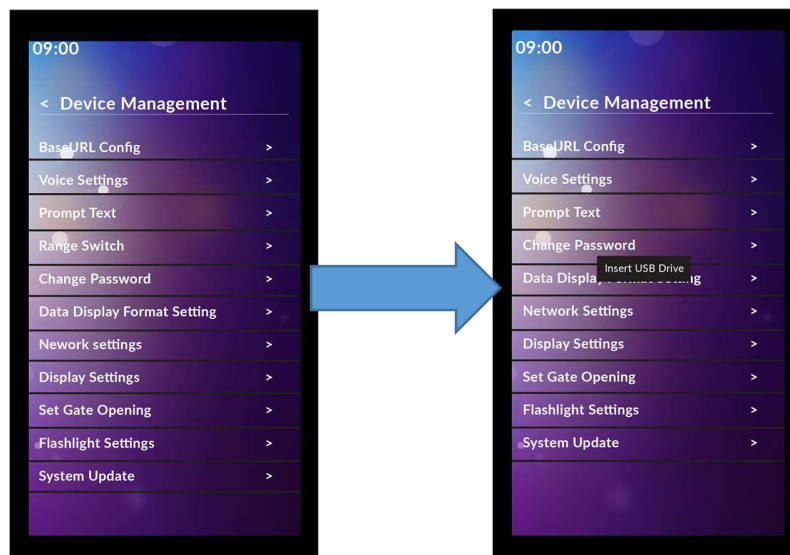
4.2.3.10   Flashlight Setting

The IR37 features an integrated LED lamp to assist image capture in low light conditions. Three settings are available.

      a. Automatic - prior and during image capture the integrated LED lamp will illuminate in low ambient light

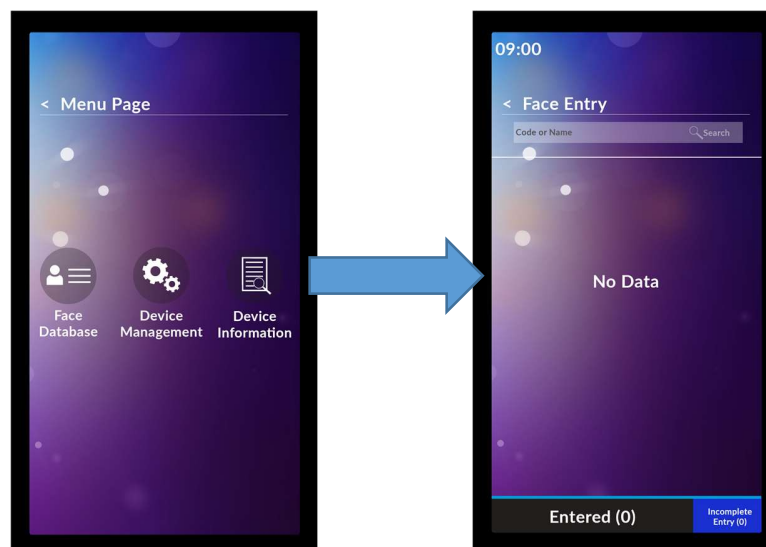   b. Steady - the integrated LED lamp is permanently illuminated

    c.   Shut Down – the integrated LED lamp is disabled
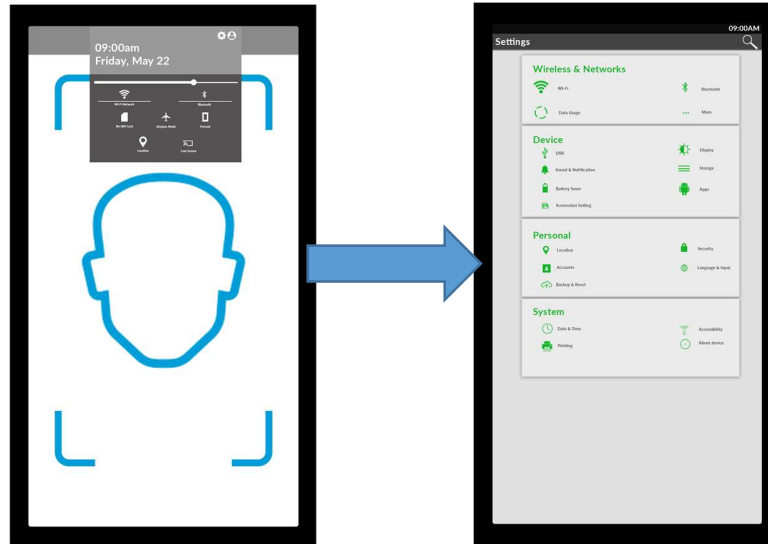
4.2.3.11 System Update

From time to time it may be necessary to update the firmware of the IR37. Tap 'System Update' and insert a USB stick with the firmware update file installed on its root directory. The update will commence automatically.

4.3 Face Database

From the top-level menu tap 'Face Database' to view all registered users stored on the IR37. If no user's data is stored the list will be empty.

4.4 Local Time and Date Settings

Local time and date settings are configured in the Android menu. To access the time and date settings via the Android menu:

        a.   Swipe down twice from the top of the screen
        b.   Tap Gear Wheel
        c.   Tap Time/Date