

Paradox Insight

Designed for your lifestyle

# Paradox Insight™ HD77

# Installation Guide

Version 1.2



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# CONTENTS

Chapter 1	Introduction	5
1.	1 Overview	5
1.:	2 HD77 Camera Front Cover Description	5
1.	3 LED Status Indicators	5
Chapter 2	Installing Hardware	7
2.	1 Overview	7
2.2	2 Installation Requirements	7
2.:	3 Wiring	8
2.4	4 Mounting the HD77	10
Chapter 3	Configuring the HD77 Camera Settings	19
3.	1 Overview	19
3.	2 Configuration Requirements	19
3.:	Accessing the Programming Window	
3.4	4 Configuring HD77 Server Settings	
3.	5 Configuring PIR Settings	30
3.0	6 Saving Settings	38
3.1	7 Registering the HD77 Camera with the IP Receiver	38
Chapter 4	Configuring a ParadoxMyHome (PMH) Account	39
4.	1 Creating a ParadoxMyHome Account	39
4.2	2 Registering the HD77 Camera with ParadoxMyHome	39
4.:	3 Deleting a HD77 Camera from ParadoxMyHome	41
Chapter 5	Upgrading Firmware	43
Appendix: A	Troubleshooting	45
Appendix: B	Specifications	
Appendix: C	PIR Detector Beam Pattern	
Appendix: D	Certifications	53
Appendix: E	Reference Guide - Configuring an IP Router	55
Appendix: F	List of Figures	61
Appendix: G	Index	63

# Chapter 1 Introduction

# 1.1 Overview

The Paradox HD77 camera ('HD77 camera') is part of the Paradox Insight<sup>™</sup> suite enabling users to manage their security systems from their smartphones.

The HD77 camera is a highly reliable HD video and high-quality audio PIR camera with multiple recording functions, delivering unlimited live HD video and audio streaming of events directly to authorized User smartphones and to a Control Monitoring System (CMS).

The HD77 camera is fully compliant with CE and EN 50131 certifications.

This guide describes how to install the HD77 camera.

# 1.2 HD77 Camera Front Cover Description

The following graphic describes the HD77 camera front cover features.



Figure 1.1 – HD77 Camera Front View

# 1.3 LED Status Indicators

The following graphic displays the LED status indicators on the HD77 camera.



Figure 1.2 – LED Arrangement

LEDs 1, 2, 4, and 5 are installer diagnostic indicators that are active when the lock mechanism is open. LED 3 displays various system functionalities. The following table displays the HD77 camera LED status indicator functionality.

LED	Functionality	LED Display
LED 1	Digiplex Data TX	Flashing green: Data transmission Off: No data transmission
LED 2	Digiplex Data RX	Flashing green: Data reception Off: No data reception
	<ul> <li>HD77 camera is powered-up and functioning. There are currently no PIR detections or VOD streaming</li> <li>Unit has no power</li> </ul>	Off
	Firmware upgrade in progress.	Flashing purple
LED 3 (with front	VOD	Blue on
cover locked	Power-up	Flashing blue
or un-locked)	Locate mode	Flashing blue
	General Combus failure, wiring or communication problem	Flashing red
	Bus low power	Flashing red
	PIR detection	Red on for 3 seconds
LED 4	Active Web connection	Green on
LED 5	LAN 10/100Mb link LAN 10100Mb data TX or RX	Green on: LAN active Off: No connection Flashing green: Data transfer Flashing red: UPnP failure

#### Table 1: LED Assignment

#### Note: For LED 3:

- The PIR indicator can be set On/Off by the installer
- The VOD indicator can only be turned-off by the master user using the Paradox Insight<sup>™</sup> application.

IMPORTANT: Turning the VOD indicator off may be considered a violation of applicable laws in some countries. Install the HD77 camera according to local laws.

# Chapter 2 Installing Hardware

This section includes:

- Overview on page 7
- Installation Requirements on page 7
- Wiring on page 8
- Mounting the HD77 on page 10

# 2.1 Overview

This section describes how to install the HD77 camera hardware.

The following diagram displays the EVOHD system including the HD77 camera.





# 2.2 Installation Requirements

The following hardware is required to install the HD77 camera.

- Router
- Cables

## 2.2.1 Router

The router must include sufficient ports to connect to:

• All HD77 cameras in the system (one port for each camera)

- The IP150 connection (if required)
- The installer PC
- An Internet connection

#### Note:

- For wireless connection: One less port is required
- An Ethernet switch is required if the router does not have enough ports

## 2.2.2 Cables

Wire the HD77 camera with the following cables:

• A Cat5e (and above) cable for both 4-wire Combus and Ethernet connection

Note: The maximum Cat5e cable length is 50m.

Two separate cables: One cable for the 4-wire Combus, the other cable for an Ethernet connection
 Note: The maximum cable length is 70m.

# 2.3 Wiring

This section includes:

- Wiring the HD77 Camera with a CAT5e Cable
- Wiring the HD77 Camera with Dual Cables

# 2.3.1 Wiring the HD77 Camera with a CAT5e Cable

Wire the HD77 camera with a single CAT5e or higher cable including two twisted pairs for the 4-wire Combus and two twisted pairs for the Ethernet lines as displayed below.



Figure 2.2 - HD77 Camera - CAT5e Cable Wiring

The following table displays Cat 5e cable wiring connectivity.

Recommended Wir	ing Assignment	Ethernet Conn	ector
Bus Label	Wire Color	Ethernet Wire Assignment	Wire Color
R	Brown	1	Green Striped
В	Blue	2	Green
G	Blue striped	3	Orange Striped
Y	Brown striped	4	
RX-	Orange	5	
RX+	Orange striped	6	Orange
TX-	Green	7	
TX+	Green striped	8	

Table 1: Cat 5e Cable Wiring Connectivity

# 2.3.2 Wiring the HD77 Camera with Dual Cables

Wire the 4-wire Combus cable (A) to the EVOHD control panel and the Ethernet cable (B) to the Ethernet router or switch as displayed below.



Figure 2.3 – HD77 Camera - Dual Cable Wiring

The following table displays dual cable wiring connectivity.

Recommended	Wiring Assignment	Ethernet	Connector
Bus Label	Wire Color	Ethernet Wire Assignment	Wire Color
R	Red	1	Green Striped
В	Black	2	Green
G	Green	3	Orange Striped
Y	Yellow	4	
RX-	Orange	5	
RX+	Orange striped	6	Orange
TX-	Green	7	
TX+	Green striped	8	

# 2.4 Mounting the HD77

This section includes:

- Overview on page 10
- Mounting Requirements on page 10
- Warning on page 11
- Mounting the HD77 Camera on a Swivel Bracket attached to the Wall on page 11
- Mounting the HD77 Camera on a Wall or Corner on page 15

## 2.4.1 Overview

Mount the HD77 camera:

- On a swivel bracket attached to the wall **OR**:
- Attach directly to the wall

# 2.4.2 Mounting Requirements

Fulfill the following requirements before mounting the HD77 on the wall.

- Install the HD77 camera on the wall at a height between 2.1m to 2.7m (7ft to 9ft)
- Ensure a minimum gap of 2cm (~1 in) between the HD77 camera and the ceiling (to open/close the cover)



Figure 2.4 – Mounting Guidelines

- Install the device in a location where the detector and camera's field of view is clear of any obstacles
- Mount the module so that walking traffic cuts across the beam pattern

# 2.4.3 Warning

- **Do not** install the HD77 camera:
  - Near objects causing environmental temperature changes such as heaters, refrigerators and ovens
  - In the path of air flow from air conditioning / heating vents, fans or windows
  - In the path of reflective surfaces, direct sunlight or infrared light
  - Where exposed to oil vapors or steam
- Do not touch the sensor surface or the camera lens as this could result in detector malfunction

# 2.4.4 Mounting the HD77 Camera on a Swivel Bracket attached to the Wall

The swivel bracket features include:

- 90° horizontal sweep angle (left to right)
- 15° declination angle (down)

The following diagram describes the swivel mount components and mounting instructions.



Figure 2.5 – Mounting HD77 Camera with Swivel Brackets

The following table describes the swivel bracket mounting components.

#### Table 3: Swivel Bracket Components

Number	Description	Number	Description
1	Wall Plate	5	Adaptor Plate
2	Cable	6	Angle Bracket
3	Swivel Hinge Housing	7	HD77 Camera Front Plate
4	Swivel Hinge		

#### To attach the HD77 camera on the wall with a swivel bracket:

- 1. Run the cable(s) (2) through the wall plate (1).
- 2. Secure the flat side of the wall plate to the wall with supplied screws.



Figure 2.6 – Attaching the Wall Plate to the Wall

#### Note:

- Use wall anchors if required (not supplied).
- Distance the top of the wall plate no less than 3" (8cm) from the ceiling.
- 3. Run the cable(s) through the bottom of the swivel hinge housing (3), swivel hinge (4) and adapter plate (5).
- 4. Attach the swivel housing to the swivel hinge ensure that it clicks closed.



Figure 2.7 – Attaching Swivel Hinge to Swivel Plate

5. Secure the swivel housing to the wall plate: Snap the bracket assembly to the wall plate by placing it on top of the wall plate and sliding it down until it locks.



Figure 2.8 – Attaching the Swivel Mount to the Wall

6. Determine the HD77 camera angle of view and secure the angle by attaching the angle bracket (6) to the adaptor plate and inserting a pan head screw #6-32 through the angle bracket and adaptor plate, attaching them to the swivel hinge.





Figure 2.9 – Angle Bracket

- 7. Remove the HD77 camera front cover:
  - a. Unlock the HD77 at the bottom of the HD77 camera with a screwdriver.
  - b. Pry the front cover apart from the back plate starting from the bottom.



Figure 2.10 – HD77 Camera Lock

- **Note:** Record the serial number (found on the inner side of the front cover) and location of the of the HD77 camera to identify it by its serial number and to add its location and label details in the BabyWare application (see Labeling HD77 Cameras and their Locations on page 24).
- 8. Run the cable(s) through the wiring slot in the HD77 camera back plate (7).

9. Wire the terminal board on the HD77 camera back plate.

Note: For terminal board wiring instructions see Wiring on page 8.



Figure 2.11 – Wiring the HD77 Camera Terminal Board

10. Mount the HD77 camera back plate (7) on the adaptor plate with a screw through each knock out hole and through the anti-tamper spacer.



Figure 2.12 – HD77 Camera Back Plate

11. Attach the front cover to the back plate (do not lock).

- 12. Connect the wires to the EVOHD panel and router (if not already connected).
- Note: Ensure that the metal box and EVOHD panel are connected to a valid ground connection.
- Power up the system: Connecting the power lines from the 16V AC transformer to a power outlet.
   The LED3 indicator flashes blue until the boot-up process is complete (boot-up can take up to 3 minutes).
- 14. Adjust the angle of the swivel bracket to suit requirements and secure the angle adjustment screw.



Figure 2.13 – Angle Adjustment Screw

15. Close the lock (see Figure 2.10 on page 13). The installer diagnostic LEDs switch- off.

#### 2.4.4.1 Adjusting the HD77 Camera Angle

Adjust the HD77 camera angle to suit requirements.

#### To adjust the HD77 camera angle:

- 1. Open the lock (see **Figure 2.10** on page 13).
- 2. Loosen the angle bracket screw (see Figure 2.13 on page 15).
- 3. Adjust the HD77 camera angle as required.
- 4. Tighten the screw.
- 5. Replace the front cover.

## 2.4.5 Mounting the HD77 Camera on a Wall or Corner

#### To mount the HD77 camera directly on a wall or corner:

- 1. Separate the front from the back plate of the HD77 camera:
  - a. Open the lock mechanism at the bottom of the device.
  - b. Pry the cover off from the bottom of the unit.



- 1. Knock-out hole for wall
- 2. Knock-out hole for corner
- 3. Terminal Board

Figure 2.14 – HD77 Camera Back-Plate

- 2. Insert the cables through the wiring slot of the back plate.
- 3. Attach the HD77 camera back-plate to the wall with screws.

Note: Screws and anchors are not supplied.

- 4. Run the cable(s) through the camera back plate (7).
- 5. Wire the terminal board on the HD77 camera back plate.

Note: For terminal board wiring instructions see Wiring on page 8.



Figure 2.15 – Wire the HD77

- 6. Close and lock the HD77 onto the camera back plate:
  - a. Attach the HD77 camera to the back plate.
  - b. Close the HD77 onto the back plate.
  - c. Close the lock mechanism at the bottom of the HD77 camera (see Figure 2.10 on page 13).

**Note:** Locking the camera switches the installer diagnostic LEDs off.

- 7. Connect the Ethernet line to the router (if not already connected). Make sure the router is turned on.
- Power up the system: Connecting the power lines from the 16V AC transformer to a power outlet.
   The LED3 indicator flashes blue until the boot-up process is complete (boot-up can take up to 3 minutes).

# Chapter 3 Configuring the HD77 Camera Settings

This section includes:

- Overview on page 19
- Configuration Requirements on page 19
- Configuring Server Settings on page 25
- Configuring PIR Settings on page 30
- Saving Settings on page 38
- Registering the HD77 Camera with the IP Receiver on page 38
- Verifying HD77 Camera Functionality on page 38

# 3.1 Overview

Configure the HD77 camera settings with the Paradox BabyWare V 2.8 or higher application (BabyWare).

The following workflow describes how to configure the HD77 camera with BabyWare.



Figure 3.1 – BabyWare Configuration Workflow

**Note:** PIR settings can also be configured through the TM50 Touchpad and supported K641 series and K656 Keypads (see Configuring PIR Settings with the TM50 Touchpad on page 32, Configuring PIR Settings with Keypads on page 36).

# 3.2 Configuration Requirements

Fulfill the following requirements before configuring the HD77 settings:

- Hardware Requirements on page 19
- Downloading and Installing the Paradox BabyWare Application on page 20
- Creating an Account in BabyWare on page 20
- Updating Configuration Parameters on page 23
- Labeling HD77 Cameras and their Locations on page 24

#### 3.2.1 Hardware Requirements

The following hardware is required.

- A PC with Windows 7 and above
- A connection from the PC to the EVOHD including:
  - A 307USB Direct Connect Interface

OR:

An IP150 Internet module connecting the EVOHD serial port and an Internet connection to the PC

# 3.2.2 Downloading and Installing the Paradox BabyWare Application

#### To download and install the Paradox BabyWare application:

- 1. Download the BabyWare application (BabyWare):
  - a. Open the Paradox website: www.paradox.com.
  - b. Login with a username and password provided by Paradox.
  - c. Select the **Software** field in the left pane.

The Software menu opens, displaying available software downloads.

d. Select Download.

The **BabyWare Download** window opens.

e. Select **Download**.

BabyWare is downloaded to the PC.

2. Install BabyWare: Open BabyWare on the PC and follow the installation instructions.

## 3.2.3 Creating an Account in BabyWare

#### To create an account:

1. Open BabyWare.

The **Accounts** window opens.

Grw Accounts V2.9.9				
Eile Edit Database Schedule/Batch Help				
Welcome, Admin (1 Accounts)	🛛 Refresh	🗿 Open 😿 Save 🔇 Co	nnect 🔒 My Profile 🦂	Operators
Acc 🔺 Label 🔍 Group	Panel Type Version	Connection Opti Contact	s System Login / Pane	System / PC Passw
🖨 0001 Account 1 New 🗸	EVOHD 01.11.005	IP/Static	0000	***
Add				
				+

Figure 3.2 – Accounts Window

- 2. Add a new account:
  - a. Select the **Add** button (see Accounts Window on page 20).

A new account opens.

- b. Fill in the required information in the new account provided fields:
  - Account name
  - Label
  - Group
  - Panel Type
  - Version
  - Connection Options
  - Contacts
  - System Login/Panel name
  - System/PC password

#### 3. Configure **IP150** settings:

a. Select the Additional Info box in the new account Connection window.

Gaw Ac	counts	s V2.9.9												
Eile	<u>E</u> dit	<u>D</u> atabase	Schedu	le/Batch	<u>H</u> elp									
Wel	come	e, Admin (:	2 Ассоц	unts)				(	Refresh 崖	) Open 🙀	Save	🔇 Conn	ect 🔒 My Profile 🧳	Operators
Acco	unt	Label	Q	Group			Panel Type		Version	Connection	n 🔻	Contacts	System Login / Pane	System / PC Passw
0	0009	Account 9		New		•	EVOHD	•	01.1x 🔹	IP/Static	·,		0000	****
0	011	Account 11		New		•	Auto Detect	•	01.00.000	Select	<b>•</b>			
Add														
•	_		_					m			_			

Figure 3.3 – Accounts Window

The Settings window opens displaying the Connection tab settings.

b. Select the **IP Locator** icon **P**.

<ul> <li>Automatically upload panel of</li> <li>Programming changes</li> <li>New events</li> <li>Panel status (RAM)</li> </ul>	hanges to Babyware upon connection			
IP/Static     IP Address     IP Port     IP Module Password	10 . 0 . 0 . 2 P () 15001	<ul> <li>Serial</li> <li>COM Port</li> <li>Baud Rate</li> </ul>	Autodetect	v
DIPIDNS Site ID IP Module Password		Modem COM Port Modem Type * Modem init, string for Contri * Modem init.	See Instruction	on v
GPRS/Public Network IP Address IP Port GPRS Module Password Own Public IP Address Call Back Port	192.168.0.1       10000       192.168.0.1       192.168.0.1	Panel Phone # Modern Response Advanced Test Answering Machine Override Ring Cycle Duration	Telephone number	s
GPRS/Static IP Address IP Port GPRS Module Password	192.168.0.1)	GPRS/Private Network Call Back Port GPRS Module Password SMS Initiation String	15000 Refresh	

Figure 3.4 – Settings Window

The Locate IP Device on Network window opens, displaying a list of all IP150 devices.

c. Select the required IP150 device from the list and click Configure.

w Locate IP Device on Netwo	rk	1.00						3.1		
Please select the IP Device y	ou want to connect to									
Site Name	Device	IP Address	Port	MacAddress	Serial #	DHCP	Control Panel			
EVO VHD Noam	IP150	10.40.1.94	10099	00:19:BA:01:9D:2B	71000EE4	yes	n/a			
mickeyevoHD	IP150	10.0.0.2	15001	00:19:BA:03:C8:14	710169C5	yes	n/a			
Evgeny Lab	IP150	10.0.0.1	10000	00:19:BA:03:2E:52	7100FC52	yes	n/a			
BigEvgeny	IP150	10.0.0.8	10000	00:19:BA:02:FC:A8	7100DD4A	yes	n/a			
IP Device Detected: 4								$\rightarrow$	Configure	Refresh
X Cancel										🖌 ок

Figure 3.5 – Locate IP Device on Network window

The IP Device Configuration window opens.

Grave IP Device Configuration	
Site Name	David (D450
Site Marrie	Paul_IP150
MacAddress	00:19:BA:01:FA:1C
Sofware Version	1.00.005
DHCP	🔿 Yes 💿 No
IP Address	10.0.0.118
Netmask	255.255.255.0
Gateway	0.0.0.0
DNSAddress	0.0.0.0
HTTP Port	10118
Use HTTPS	
HTTPS Port	443
PC Port	10119
DNS Service   paradoxmy	home.com
1. Create a login (e-mail j	password) at <u>paradoxmyhome.com</u>
2. Register the panel to p	aradoxmyhome.com
<ol><li>Enable service and set</li></ol>	polling time (see below)
Enable service	O Yes   No
Polling time	1 Minute(s)
X Cancel	✓ <u>о</u> к

Figure 3.6 – IP Device Configuration Window

d. In the **DHCP** pane:

Select the Yes radio button to configure Dynamic IP DHCP

OR:

Select the **No** radio button and configure a Static IP address: Fill in the IP Address, Netmask, Gateway and DNS Address settings in the provided fields

e. In the HTTP Port pane: Configure the HTTP, HTTPS port and PC port settings in the provided fields

**Note:** HTTP Port pane configurations are optional if DHCP is selected.

f. Select **OK**.

The Security Dialog Box opens.

Please enter your module pa Device.	assword to Login to the IP
System Login:	
Password.	<u> </u>

Figure 3.7 – Security Dialog Box

g. Enter the IP 150 module password in the Password field and click OK.

The IP 150 module settings are configured and the Security Dialog box closes.

4. Connect the account: Click **Connect** in the Accounts window.

Welcom	e, Admin (3 Accou	ints)		10	Refresh	Dpen 🗽	s	ave	🕲 Conn	ect 🔒 My Profile 🧣	🕻 Operators 🖕
Account	Label 🔍	Group	 Panel Type		Version	Connection	۱	T	Contacts	System Login / Pane	System / PC Passw.
0009	Account 9	New -	 EVOHD		01.11.005	IP/Static	•			0000	****
0011	Account 11	New -	 EVOHD		01.10.010	IP/Static	•				
0013	Account 13	New -	 Auto Detect	-	01.00.000	IP/Static	•			0000	****

Figure 3.8 – Accounts Window

The account is created.

**Note:** Click the link below to view a video explaining how to create an account in BabyWare: http://www.paradox-insight.com/learning/configuration-createanewaccount

## 3.2.4 Updating Configuration Parameters

Ensure that the HD77 configurations are up-to-date before configuring HD77 camera settings.

#### To update configuration parameters:

- Stand on the HD77 camera in the Security Module field and double-click or right-click. The Security Module drop-down menu opens.
- 2. Select the **Receive Programming** field from the drop-down menu.

The configurations are automatically updated (if required).

📾 BabyWare V2.	9.9 - Account 1							
Eile View To	ols <u>E</u> vents <u>C</u> ommunication <u>H</u> elp							
Accounts	🝺 Save	Disconnect 🧿	Refresh 👩 Send	底 Receive 💧 📥 In	-Field 🌔 Tran	slate 💂		
Add Item	🚍 Modules 🌍 Areas 🔘 Zones 🗍	Doors O <sub>6</sub> P	GMs 💂 🍰 Users	🔇 Reporting 📡	Profiles + Lang	juages 🗸 📮 🕻	> =	
Category  Control Panel	Serial # 🔍 # Volt	Auto I	_abel	٩	Location		QI	Manual Contro
EVOHD	07001111 1		Enter Label		Enter Location			n/u n
E DGP-AC	M12 18B90272 2 🙍	1	Module 002		Enter Location			n/u e
Security Modul	es (4 ltems)							=
. HD77	E0002095 4 🔗	- I	Module 004		Enter Location			1
, HD	Properties	1	Module 001		Enter Location			2
TM5	View Picture	1	Module 003		Enter Location			3
€ NV	Rename	1	Module 005		Enter Location			n/u n
IP1	Сору	1	Enter Label		Enter Location			
•	View event history							÷.
Legend:	Show Dependencies	)utput anual) / in alarm	Alarm Memory	🔲 Tamper/Trouble	Bypassed	🔲 Bypass Mem	ory 🔳 Te	st Mode
	Receive Programming		<b>V</b>					
All Events	Send Programming	Iters	Print Events	Show Deleted	Events	2		
Date+Time	Register to PMH (ParadoxMyHome)	Туре	Location	Q Description		Additional Ir	nformation C	User Labe
Feb 05,	See Module Instruction	Module		Trouble: IP F	ail To Commun	ic		
Feb 05, 201	5 15:10:00 EVOHD	System		Software Ac	cess			-
€		I	П,					Þ
Live Events B	uffered Events /							
Connected RX	TX NUM 2/5/2015, 3:11 PM	Account: Account 1	Operator: Admin 5	2 Events	Batt 13.8V 🗖	DC 14.4V 🙍 AC	17.4V 🙍 🧳	AUX 0.63A 🙍

Figure 3.9 – HD77 Receive Programming

IMPORTANT: Ensure that all HD77 cameras in the system are updated.

# 3.2.5 Labeling HD77 Cameras and their Locations

Label HD77 cameras and their locations to identify them in the system.

#### To label HD77 cameras and their locations:

1. Open BabyWare.

The Home window opens.

2. In the **Security Modules** field: Locate each device by its serial number and add a **Label** (for example motion detector with camera) and **Location** (for example living room) in the provided fields.

Note: Serial numbers are acquired through the module scan and automatically inserted by BabyWare.

Gw BabyWare V2.9.9 -	Account 9	Case - August	at 1 Property links (1)	or a special college Print P	
File View Tools	Events Communie	cation Help			
Accounts	Save A Print	Trach A	Disconned ( Refresh	Sand Receive A In Field 4	atala
	Sale Brinn	a maan 🚽	Sisconnect O Renesh D	Cento IC recente 1 minimum 1 mai	isiaie
🖸 Add Item 🧲	💭 Modules 🕞 An	eas 🔘 Zones 🛛	Doors 🔾 PGMs 🖕 🍰	Users 🔇 Reporting 🙀 Profiles - Lan	guages - 🛒 🔇 🔪 🖕
E Category V	Serial #	# Volt	Auto Label		Q Manual Controls and Status
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Access Modules (1	(Items)			E	and here and the second states and the second states and
+ ME DGP-ACM12	18890272	6 7	Module 006	Enter Location	n/u (1)
Security Modules (	4 Items)				
HD77	E0002095	3 🌈	Module 003	Enter Location	1 🔳
HD77	E0001D81	1 🔗	Module 001	Enter Location	2
12 TM50	D5113ABE	2 7	Module 002	Enter Location	3
	27003703	4 7	Module 004	Enter Location	n/u n/u n/u
Communication Mo	dules (1 Items)				
IP150	710169C5	5 🌈	Enter Label	Enter Location	
Areas (1 Items)					
🗉 🜍 Area		1	Area 1		<b>x</b> - <b>1 2</b> 3 5
Zones (4 Items) - S	orted by: None 🔚 T	fest Zones			
2 Zone 002	1 Zone 001	5 Zone (	05 3 Zone 003		
Doors					
•					
Legend: Zor	ne / closed 📕 On (auto	) / open On (n	Output nanual) / in alarm 🛛 🔲 Alarm N	lemory 📃 Tamper/Trouble 📒 Bypassed	Bypass Memory 🔳 Test Mode 🔷 Status Unavailabl
		-	10		
All Events		Custom F	ilters Print Events	Show Deleted Events	<b>C</b>
Date+Time ▼	Q Labe	н 🤇	Type Q Location	Q Description	Additional Information User Label Q Orde
Troubles / Alarm	s: 6				
Jan 14, 2015 14	1:05:00 IP15	50	Module	Trouble: IP Fail To Commun	iic 702
Jall 14, 2015 14	105.00 EVC	OHD	System	Soltware Access	101.
Live Events (Buffer	ed Events /				
Canadad Dy	AURA ETT		Assessment Assessment O. Or contract	Ideale 708 Cuante	Dem 42 (W 10) DO 44 2W 10) AD 48 8W 10) HIN A 64 10
Connected RX IX	NUM (*)	1/14/2015, 2:16 PM	Account: Account 9 Operator:	Admin 726 Events	Balt 13.9V 💇 DC 14.3V 💇 AC 16.6V 💇 AUX 0.64A 🖉

Figure 3.10 – BabyWare Home Window

IMPORTANT: Assign all HD cameras to the same area.

# 3.3 Configuring Server Settings

This section includes:

- Overview on page 25
- Configuring Installer Parameters on page 26
- Configuring Central Monitoring Station Parameters on page 26
- Configuring HD77 Receiver Settings on page 26
- Configuring TCP/IP Parameters on page 26

#### 3.3.1 Overview

Configure HD77 camera Server settings from the BabyWare **Programming** window.

#### To access the Programming window:

1. Open BabyWare.

The **Accounts** window opens.

2. Select the required account and click **Connect**.

The HD77 camera is connected.

Welcom	e, Admin (3 Acco	ounts)			(	Refresh	📄 Open 🍃	0	Save	🔇 Conr	iect 🚨 My Profile 🧣	Operators
Account	Label C	Group		Panel Type		Version	Connectio	n	v	Contacts	System Login / Pane	System / PC Passw
0009	Account 9	New	•	EVOHD		01.11.005	IP/Static	•			0000	****
0011	Account 11	New	•	EVOHD		01.10.010	IP/Static	•				
0013	Account 13	New	•	Auto Detect	•	01.00.000	IP/Static	•			0000	****

Figure 3.11 – Accounts Window

- 3. Navigate to the HD77 camera Programing window:
  - a. Double-click on the required HD77 camera in the **Security Modules** pane of the Home window (see *Figure 3.10* on page 24) OR:

Right-click on the HD77 camera> select Programming from the drop-down menu.

The Security Modules drop-down menu opens.

b. Select **Properties** from the drop-down menu.

The HD77 **Programming** window opens.

Zone Label Zone 008	Serial #         MAC Address         IP Address         HTTP Port           E0002FE3         00.19 BA:04:6C:2E         192.168.0.204         10204	
Programming Communication Set	ngs Video	
Feature	Q Value	Q
Server Parameters		
Installer Parameters		
Installer Email Address		
Installer Phone #		
Installer Name		
Central Monitoring Station Para	neters	
- Central Monitoring Station P	none # 123456	
Central Monitoring Station E	nail Address paradox push@gmail.com	
<ul> <li>Reporting Enabled</li> </ul>	V	
Receiver Parameters		
Receiver IP Address	005.102.225.043	
Receiver IP Port	10007	
<ul> <li>Receiver Password</li> </ul>	123456	
<ul> <li>Receiver Account #</li> </ul>	1204	
Receiver Profile ID	254	
TCP/IP Parameters		
- HTTP Port	10204	
DHCP Enabled		
Primary DNS	000.000.000.000	
<ul> <li>Secondary DNS</li> </ul>	000.000.000.000	
- IP Address	192 168 000 204	
- Gateway	192.168.000.002	
- Netmask	255.255.255.000	
Site Name		
UPnP (Universal Plug and P	lay)	
UPnP status	UPnP port forwarding is turned off	
Poli PMH (ParadoxMyHome)		
DNLINE Static IP: 192.168.0.204.102	Reporting: Registration Error PMH: Unregistered UPnP: Disabled	
Date/Time         Log           //19/2015         2:30:39 PM         Validat           7/19/2015         2:30:49 PM         Read)           7/19/2015         2:30:50 PM         Read)           7/19/2015         2:30:50 PM         Save p	ng Programming - successtul rogramming - start rogramming - successtul gramming - successtul	
		English and

Figure 3.12 – Programming Window

## 3.3.2 Configuring Installer Parameters

#### To configure Installer parameters:

In the Installer Parameters pane: Enter the relevant Installer parameter settings in the provided fields.

## 3.3.3 Configuring Central Monitoring Station Parameters

#### To configure Central Monitoring Station parameters:

#### In the Central Monitoring Station pane:

- 1. Configure Central Monitoring Station parameters received from the Central Monitoring Station in the provided fields.
- 2. Check the **Reporting Enabled** box to enable the HD77 to report events to IPRS7 software.

#### 3.3.4 Configuring HD77 Receiver Settings

#### To configure Receiver parameters:

In the **Receiver Parameters** pane: Configure Receiver parameters received from the Central Monitoring Station in the provided fields.

## 3.3.5 Configuring TCP/IP Parameters

This section includes:

- Overview on page 27
- Configuring Dynamic TCP/IP Settings on page 27
- Configuring Static TCP/IP Settings on page 27

#### 3.3.5.1 Overview

When supported by your router, enabling UPnP (Universal Plug&Play), configuring dynamic TCP/IP settings and installing the ParadoxMyHome (PMH) application is recommended for easy and fast network installation.

Configure static IP settings if the router does not support UPnP.

#### 3.3.5.2 Configuring Dynamic TCP/IP Settings

A dynamic IP address is an address that occasionally changes. Instead of one static IP address, a dynamic IP address is pulled from a pool of addresses and then assigned to an address. After a while that number gets put back into the pool and a new address number is assigned.

UPnP technology dynamically negotiates device port-forwarding directly to a router. When connected to a network, UPnP devices automatically establish working configurations with other devices. UPnP takes care of the port forwarding automatically, setting the port for the IP address.

When configuring Dynamic IP settings, configure UPnP, register the HD77 camera to the ParadoxMyHome (PMH) site to track changes to the HD77 camera's dynamic IP address and to associate the HD77 camera's current IP address to the Site ID (for PMH see **Configuring a ParadoxMyHome (PMH) Account on page 41**).

#### Requirement

The router must support UPnP. Check with the router manufacturer whether UPnP is supported.

#### To configure Dynamic IP settings:

- 1. Navigate to the **Programing** window (see Configuring Server Settings on page 25).
- 2. Scroll down to the TCP/IP pane.
  - a. Check the **UPnP** box in the UPnP field.
  - b. Check the **DHCP** box in the DHCP field.
- 3. Scroll down to the **Poll PMH (ParadoxMyHome)** field and check the box.
- 4. Configure **Auto Detect:** 
  - a. Select the **Communication Settings** tab in the Programming window.

The Communication Settings pane opens.

- b. Check the Auto Detect box and select OK.
- 5. Register the HD77 camera to the PMH site (see **Registering the HD77 Camera with ParadoxMyHome** on page 41).
- 6. Configure the Paradox Insight<sup>™</sup> App for a Dynamic IP WAN address (see the Paradox Insight<sup>™</sup> App User Manual).

#### 3.3.5.3 Configuring Static TCP/IP Settings

We **HIGHLY** recommend configuring static TCP/IP settings when one of the key parameters needs to be fixed, such as working with a static WAN IP, not using PMH or if UPnP is not supported (or fails) in your router. Set a Static IP address for the HD77 camera (either with static LAN IP or by binding a MAC address (recommended) that always assigns the same IP address to the HD77 camera: Configure Gateway, Subnet mask, Primary and

Secondary DNS Server settings. Configure static port settings to enable port-forwarding, which prevents loss of connection due to port or IP modifications.

When not enabling PMH, acquire a static WAN IP from your ISP. Configure the static IP address settings in the Paradox Insight<sup>™</sup> Application and BabyWare application HD77 programming page and ensure that the **Poll PMH (ParadoxMyHome)** box in the TCP/IP parameters pane of the Programming window is unchecked.

Configure the static WAN IP address provided by the ISP as the static IP (see the Paradox<sup>™</sup> Insight Application User manual to configure static WAN IP).

#### To configure reserved/static LAN IP settings:

- 1. Acquire the router IP address:
  - a. Select the MS Windows **Start** button. The Windows menu opens
  - b. Type cmd in the search programs and files field and click Enter.

The **Command Prompt** window opens.

c. Type **ipconfig** in the **Command Prompt** window and select **Enter**.

The LAN IP address, Subnet Mask and Default Gateway are displayed.

an Administrator: Command Prompt	
Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved.	
C:\Users\Paul>ipconfig 🔶	E
Windows IP Configuration	
Ethernet adapter Local Area Connection:	
Connection-specific DNS Suffix . : lan Link-local IPv6 Address : fe80::e19e:9a4c:3816:ee84x11 IPv4 Address 100.0.17 Subnet Mask 255.255.0 Default Gateway 10.0.0.138	
Tunnel adapter isatap.lan:	
Media State : Media disconnected Connection-specific DNS Suffix . : lan	
Tunnel adapter Local Area Connection* 11:	
Media State : Media disconnected Connection-specific DNS Suffix . :	
Tunnel adapter Teredo Tunneling Pseudo-Interface:	
Connection-specific DNS Suffix .: IPv6 Address	f:ffee
C:\Users\Paul>_	
	( <b>1</b> )

Figure 3.13 – Command Prompt Window

- d. Record the Ethernet adapter LAN Connection/ Wireless network connection details.
- 2. Access the router configuration window.

#### Note:

- To access the router configuration window refer to the router manual for the exact procedure
- In most cases access the enter router's IP address in the address bar of the web browser to access the router configuration window
- The router IP address may be displayed in the router instruction manual or on a sticker on the router
- For this reference example, use 192.168.1.1 as the IP address as it is a commonly used default router IP address

- 3. Configure the HD77 camera **DHCP** settings (**NOT** the Router settings):
  - a. Enable **DHCP** settings for **Reserved IP Addresses**.

If the router supports reserved IP addresses:

- Enable DHCP. The reserved IP address must be within the DHCP range
- Bind the MAC address to a reserved IP address for the LAN

OR:

- b. Disable DHCP settings for Static IP addresses:
  - · Disable DHCP if configuring a static IP address
  - Verify that the IP address range leaves at least one IP address available outside of the DHCP range. The static IP address must be outside of the DHCP range.
  - Record one of the addresses outside the DHCP range as the one you will use for the HD77 camera.

**EXAMPLE:** The following DHCP range enables configuring addresses 2-4 and 101 to 254 available (all numbers in an IP address are between 1 and 254).

Starting ID Address	102		160		4		c
otarting in Address	196	•	100	J•	-	•	3
Ending IP Address	192		168	1	1		100



#### 4. Configure Port-Forwarding:

- a. Navigate to the **Port Forwarding** section (also known as Port Mapping or Port Redirection) in the router configuration page.
- a. Add a service/item.
- b. Set the **Port** value >50000 (for example 50001).

Note:

- If a selected port is in use configure an alternative port (such as port 50002 or 50003)
- Each camera needs a unique port number. Do not use the same port number more than once
- c. Enter the IP address selected in the previous step (see Figure 3.14 on page 29).
- d. Update the HD77 camera port configuration in BabyWare.

The following window displays router Port Forwarding settings (screen-shots may differ depending on type of router used).

Service Name	Intern	et Module	
Service Type	TCP/	UDP 🔽	
Starting Port	80	(1~65534)	
Ending Port	80	(1~65534)	8
Server IP Address	192	168 1	101

Figure 3.15 – Port Numbering

Note: The Starting port and Ending port configurations are identical.

- 5. Configure HD77 static IP parameters: Enter HD77 Programming window (see Figure 3.12 on page 26) and enter the required settings in the provided fields:
- Primary DNS
- Secondary DNS
- IP Address
- Gateway
- Netmask
- 6. Test Configurations: Verify the HD77 camera functionality (see Adjusting the HD77 Camera Angle on page 15).

# 3.4 Configuring PIR Settings

This section includes:

- Overview on page 30
- Configuring PIR Settings with BabyWare on page 31
- Configuring PIR Settings with the TM50 Touchpad on page 32
- Configuring PIR Settings with Keypads on page 36

## 3.4.1 Overview

Configure PIR display, sensitivity and security level settings with BabyWare, TM50 Touchpad or supported K641 series and K656 Keypads.

#### Requirement

Ensure that HD77 camera configurations are up-to-date before configuring PIR settings with BabyWare (see Updating Configuration Parameters on page 23).

The following table displays PIR settings and details for BabyWare, the TM50 Touchpad and supported keypads.

Description	Section	Setting	Setting Details	Example
PIR LED Display	[001]	[*] Off [1] On	PIR LED Off PIR LED On <b>Default</b>	(1******)
PIR Sensitivity	[002]	[0]	Low (Sensitivity level)	(002) 000-005
Level		[1]		as displayed on the TM50
		[2]	Default	as displayed on the
		[3]		K641series keypads
		[4]	High (Sensitivity level)	

Table 1: PIR Settings

Table	1: PIR	Settings
-------	--------	----------

Description	Section	Setting	Setting Details	Example
PIR Security Level	[003]	[0] Normal	(Mild environment) <b>Default</b>	(003) 000-002 as displayed on the TM50
		[1]	Medium	as displayed on the
		[2]	High (Harsh environment)	K641series keypads

# 3.4.2 Configuring PIR Settings with BabyWare

#### To configure PIR settings in BabyWare:

- 1. Access HD77 **Programming** window (see Configuring Server Settings on page 25).
- 2. Configure the following PIR settings in the PIR **Parameters** branch of the Programming window:
  - a. Configure PIR LED Display settings:
    - Check the box in the **Show PIR LED** field. The PIR LED #3 lights up red when PIR motion is detected

OR:

• Uncheck the box. The PIR LED #3 stays off when PIR motion is detected.

Note: The default PIR LED Display setting is On (that is box checked).

- b. Configure the PIR **Sensitivity** level settings:
  - (1) Select the arrow in the PIR Sensitivity field.

The drop down menu opens.

(2) Select a value ranging between **0** to **4 f**rom the drop-down menu.

#### Note:

- The default PIR Sensitivity Level setting is 2
- Configuring the PIR Sensitivity level as **0** sets low PIR sensitivity levels, reducing false alarms caused by environmental circumstances. Low sensitivity is useful for a room with large windows. Configuring the PIR Sensitivity level as **4** configures high PIR sensitivity levels, useful for a room with small windows due to the reduced risk of false alarms caused by environmental circumstances
- c. Configure the PIR **Security** level settings:
  - (1) Select the arrow in the PIR **Security** level field.

The drop down menu opens.

(2) Select a value **Normal**, **Medium** or **High** from the drop-down menu.

#### Note:

- The **default** PIR Security Level is **Normal**
- The security level Normal is for rooms with curtains, regular sized windows and little direct sunlight entering the room. The security level High is useful for a room with large windows, light curtains that may move when the window is open, or a room with windows on the sunny side of the house
- 3. Save PIR configurations (see Saving Settings on page 38).

4. Test PIR configurations (see Adjusting the HD77 Camera Angle on page 15).

# 3.4.3 Configuring PIR Settings with the TM50 Touchpad

PIR settings can be configured through the TM50 Touchpad. Configure additional HD77 camera settings with BabyWare.

Note: See Table 1 on page 30 for a description of PIR setting options.

#### Requirement

Disconnect BabyWare before programming PIR settings with the TM50 Touchpad.

#### 3.4.3.1 Overview

The following flow chart displays how to configure PIR settings with the TM50 Touchpad.



Figure 3.16 – Configuring PIR Settings with the TM50 Touchscreen

#### To configure PIR settings with the TM50 Touchpad:

1. Select the **Menu** field.

The Menu window opens.



Figure 3.17 – TM50 Main Window

Back
Menu

Security Functions

System Settings

User Codes

System Settings

System Settings

Advanced

Advanced





Figure 3.19 – Advanced Window



Figure 3.20 – Installer Code



Figure 3.21 – Installer Programming Window

Select the Advanced field.
 The Advanced window opens.

Select the Installer Programming field.
 The Installer Code window opens.

 Key-in the [Installer Code] in the provided field. The Installer Programming window opens.
 Note: The default installer code is 000000.

5. Select the **System Programming** field.

The Enter Section field of the Installer Programming window opens. 6. Key-in [**4003**].

7.

Next.

The Module Programing window opens.

Back	Installe	r Programming	
[ ]		Enter Sectior	n # < 🗲
1	2	3	Backspace
4	5	6	V Evit
7	8	9	
	0		Special Functions

Figure 3.22 – Installer Programming Window

Cancel Module Program	mming Next
(0000000)	Serial # < >
1 2 3	F Backspace
4 5 6	E
7 8 9	D Exit
<b>A 0 B</b>	С

#### 8. Configure PIR LED Display settings:

The Module Section window opens.

Note: The serial number is displayed in BabyWare or on

a. Key-in [001].

the HD77 back cover.

The Module Section [001] window opens.

Key-in the HD77 camera [Serial Number] and click

 b. To display the PIR LED (LED light #3) when motion is detected: Select **Option 1**. The Option 1 key is highlighted and the value **1** is displayed in the Module Data field.

#### OR:

To not display the PIR LED when motion is detected: **Do not** select Option 1. The Option 1 key is not highlighted and no value (that is \*\*\*\*\*\*\*\*) is displayed in the Module Data field.

#### Note:

- The default PIR LED Display value is On
- Do not configure Options 2 8
- c. Select Next.

The Module Section [002] window opens.

Figure 3.23 – Module Programming Window

<b>(</b>	Back	Module Se	ction [001]	Prev	Next
(****	*****)		Module	Data	$\langle \rangle$
1	Option 1	5	Option 5	•	E Backspace
2	Option 2	6	Option 6		
3	Option 3	7	Option 7	L	
4	Option 4	8	Option 8		

Figure 3.24 – Module Section [001] Window

- 9. Configure PIR Sensitivity Level settings:
  - a. Key-in [002] to open the Module Section
     [002] window if you have returned to the Module Section window

OR:

Skip to step **b** below if the Module Section [**002**] window is displayed.

b. Select the required PIR sensitivity level value between 000-004.

#### Note: The default PIR sensitivity level is 002.

c. Select Next.

The Module Section [003] window opens.

- 10. Configure PIR Security Level settings:
  - a. Key-in [003] to open the Module Section
     [003] window if you have returned to the Module Section window

OR:

Skip to step **b** below if the Module Section [**003**] window is displayed.

b. Select required PIR security level value between 0-2.

Note: The default PIR security level is 0.

c. Select the **Home** icon to return to the menu. The PIR settings are configured.

#### Configuring PIR Settings with Keypads 3.4.4

PIR settings for the HD77 camera can be configured through the K641 series keypads and the K656 keypad. Configure additional HD77 camera settings with BabyWare.

Note: See PIR Settings on page 30 for a description of PIR setting options.

#### Requirement

Disconnect BabyWare when programming with Keypads.

#### Keypad Programming Table 3.4.4.1

Programming key-ins include A-F hexadecimal values. The following tables describe the keypad programming values for the K641 and K656 keypad series.

Table 2: K641,K641+, K641R, and K641LX Keypad Decimal and Hexadecimal Values

Кеу	Value/Action
0 to 9	0 to 9 (hex and decimal)
STAY	A (hex only)
FORCE	B (hex only)
ARM	C (hex only)
DISARM	D (hex only)
ВҮР	E (hex only)
MEM	F (hex only)

#### Table 3: K656 Keypad Decimal and Hexadecimal Values

Кеу	Value/Action
0 to 9	0 to 9 (hex and decimal)
Arm	A (hex only)
Sleep	B (hex only)
Stay	C (hex only)
Off	D (hex only)
Menu	E (hex only)
	F (hex only)

#### To configure PIR settings with Keypads:

1. Press and hold the [**0**] key.

The Installer Code screen opens in the LCD prompting to enter an Installer Code.

2. Enter your **Installer Code**.

The Section screen opens.

- Note: The default installer code is **000000**.
- 3. Key- in [**4003**].

The Module Programming screen opens.

- Key-in the HD77 camera Serial Number.
   The Module Section screen opens.
- 5. Configure **PIR LED Display** settings:
  - a. Key-in Section [001].

The 001 Module Data screen opens.

Key-in the value 1 (On) to display the LED #3 red indicator when PIR motion is detected OR:
 Do not enter a value. The PIR LED Display indicator will not light up when PIR motion is detected.

#### Note:

- The **default** PIR LED Display value is **1** (**On**).
- Do not configure Options 2 8
- c. Select Enter.

The 002 Module Data screen (sensitivity levels) opens.

- 6. Configure PIR **Sensitivity Level** settings:
  - a. Key-in Section [002].
  - b. Select the required PIR sensitivity level value: between **000-004** with the up/down arrows.

#### Note: The **default** PIR sensitivity level is **002**.

c. Select Enter.

The 003 Module Data screen (security levels) opens.

- 7. Configure PIR **Security Level** settings:
  - a. Key-in Section [003].
  - b. Select the required PIR security level value between **0-2** with the up/down arrows.

#### Note: The default PIR security level is 0.

c. Select Enter save the settings.

The PIR settings are configured.

# 3.5 Saving Settings

Save HD77 camera settings after configuring/modifying parameter settings.

#### To save settings:

1. Select the **Write** button in the Programming window

The configurations are saved.

w HD77 Programming							- • ×	
File View Communication								
Save 📄 Import - 💽 Write	💼 Save 📄 Import 🗸 💼 Write 📄 Register 🗸 🍐 Update 🛛 😭 Picture 🔔 Instruction							
Zone Label	Serial #	MAC Address	IP Address	HTTP Port				
Zone 001	E0001C45	00:19:BA:03:7A:D0	192.168.1.116	50073				
Programming Communication Settings Video								
Feature	🔍 Valu	9					Q	

Figure 3.25 - Write Button

# 3.6 Registering the HD77 Camera with the IP Receiver

Register the HD77 camera with the IP receiver (IPRS7 software) after saving initial configurations enabling the camera to report events to the CMS.

#### To register the HD77 camera with the IP Receiver :

1. Select the **Register** tab from the top menu bar of the Programing window.

The Register drop-down menu opens.

2. Select **Register to IP Receiver** from the Register drop down menu.

w HD77 Programming				
File View Communication				
Save 📄 Import 🗸 🔂 Write	Register 🗸 🍐 Update 🛛 🍄 Picture 🚊	Instruc	ction	
Zone Label	Register to IP Receiver	s	HTTP Port	
Zone 001	Register to PMH (ParadoxMyHome)	116	50073	
Programming Communication Settings	Unregister from PMH (ParadoxMyHome)			
Feature	Q Value			Q

Figure 3.26 – Communication Drop Down Menu

3. Click OK.

The HD77 camera is registered with the IP receiver.

4. Select **Write** to save settings.

# 3.7 Verifying HD77 Camera Functionality

Verify the HD77 camera functionality after mounting it on the wall.

#### To verify HD77 camera functionality:

- 1. Open the BabyWare application.
- 2. Select an account and click **Connect** (to create an account see Creating an Account in BabyWare on page 20).

3. In the **Security Modules** field: Double click (or right click and select Properties from the drop-down menu) on the required HD77 camera.

The HD77 Programming window opens.

- 4. Select the **Video** tab.
- 5. Select the **Play** button.
- 6. Test functionality: Perform a walk-around in front the HD77 camera view to verify that the HD77 camera records the test, is programmed according to requirements and functioning.

Gu HD77 Programming						
File View Communication						
Save 📄 Import 🗸 📘	🔂 Write 🛛 🗋 Register 🗸 🤞	🔶 Update 🛛 🎴 Pict	ure 🔔 Instructio	n		
Zone Label	Serial # M	IAC Address IF	Address	HTTP Port		
Zone 001	E0002095 0	0:19:BA:03:CB:27	0.0.0.5	50032		
Programming Communicatio	n Settings Video	_				
Log Video Stre	aming				0	
ONLINE LAN: 10.0.0.5:50032	PMH: 93.172.137.154:50032	Reporting: Registered	PMH: Registered	<mark>UPnP: OK</mark>		
Date/Time ▲ L	og					
1/20/2015 10:12:39 AM F	'olling HD// - successful					
1/20/2015 10:12:40 AM F	Read programming - successfu	ul				
1/20/2015 10:12:40 AM S	Save programming - successfu	1				
1/20/2015 10:13:12 AM F	olling HD77 - successful					
X Cancel		Previous	Next 🔶			🖌 ОК

Figure 3.27 – Programming Window

IMPORTANT: Connect to an external 3G network in order to verify that port forwarding is functioning. **Do not** perform the test when connected to the wireless network through the installation site WIFI router.

# Chapter 4 Configuring a ParadoxMyHome (PMH) Account

ParadoxMyHome ("PMH") is a Paradox Domain Name System (DNS) service, enabling an authorized user to remotely access Paradox Reporting Devices, including the HD77camera. PMH tracks changes to the Reporting Device's dynamic IP address and associates the Reporting Device's current IP address to the Site ID.

This section includes:

- Creating a ParadoxMyHome Account on page 41
- Registering the HD77 Camera with ParadoxMyHome on page 41
- Deleting a HD77 Camera from ParadoxMyHome on page 43

# 4.1 Creating a ParadoxMyHome Account

#### To open a ParadoxMyHome Account:

- 1. Enter **www.ParadoxMyHome.com** in your browser address.
- 2. Select **Create Login** and follow the directions.

# 4.2 Registering the HD77 Camera with ParadoxMyHome

Register the HD77 camera with ParadoxMyHome after creating a ParadoxMyHome account.

#### To register the HD77 cameras with ParadoxMyHome:

- 1. Log-on to BabyWare.
- 2. Double-click or right-click on the required HD77 camera in the Security Module field of the Home window.

Patrick Marca M200	A	Contract of Contraction of	Successive Name (sound )	Annual Contractor & Name of Street or	
File View Teele	Fuenda Communia	ation Liste			
File view Tools	Evenus Communic	auon neip	0		
Accounts 🕰	Save 🗎 🚔 Print	Trash 🔁 Disc	onnect 🥑 Refresh 📷 Send	💼 Receive 🛛 📥 In-Field 🍋 Translate 💂	
Add Item	💭 Modules 🌘 Ar	eas 🗍 Zones 🚊 D	loors 🗛 PGMs 🖕 🚨 User	rs 🚯 Reporting 📷 Profiles 🔹 Languages 🔹 🛒	< > <sub>=</sub>
田 Category 🔻	Serial # 🔍	# Volt	Auto Label	Q Location	Manual Controls and Status
Control Panel					
EVOHD	07001111	1	Enter Label	Enter Location	n/u n/u n/u 5 n/u n/u n/u n
Access Modules (*	1 Items)				
DGP-ACM12	18B90272	6 🙍	Module 006	Enter Location	n/u (1)
Security Modules (	(4 Items)				
HD77	E0002095	3 🙍	Module 003	Enter Location	
HD77	E0001D81	1 🧖	Module 001	Enter Location	2
112 TM50	D5113ABE	2 7	Module 002	Enter Location	3
NVX80	27003703	4	Module 004	Enter Location	n/u n/u n/u n/u
Communication Mo	odules (1 Items)				
IP150	710169C5	5 🌈	Enter Label	Enter Location	
Areas (1 Items)					
🗉 😱 Area		1	Area 1		<b>≝ → 1 2</b> 3 5
Zones (4 Items) - S	Sorted by: None 📃 T	est Zones			
2 Zone 002	Zone 001	5 Zone 005	3 Zone 003		
Doors					
•					4
Legend: Zor	ne	C PGM Out	ut		
Off	/ closed 📕 On (auto	) / open 📕 On (manu	ial) / in alarm 🛛 🔲 Alarm Memory	🔲 Tamper/Trouble 📃 Bypassed 🔲 Bypass I.	lemory 📕 Test Mode 🛛 🔿 Status Unavailable
			<b>T</b>		
All Events		Custom Filter	s Print Events	Show Deleted Events	
Date+Time ▼	🔍 Labe	и Q, т	/pe 🔍 Location	Q Description Q Addition	al Information 🔍 User Label 🔍 Orde
Troubles / Alarm	is: 6				A
Jan 14, 2015 14	1:05:00 IP15	I N	lodule	Trouble: IP Fail To Communic	702
Jan 14, 2015 14	1:05:00 EVC		ystem	Sonware Access	/01 -
Like Events (Buffer	ad Events /				F.
Live Events / Buller					
Connected RX TX	NUM	1/14/2015, 2:16 PM Acc	ount: Account 9 Operator: Admin	726 Events Batt 13	.9V 💇 DC 14.3V 💇 AC 16.6V 💇 AUX 0.64A 💇

Figure 4.1 – Select an HD77 to Register

The Security Module drop-down menu opens.

3. Select **Properties**.

The Programming window opens.

4. Select the **Register** tab from the top menu bar.

The Register drop-down menu opens.

5. Select **Register to PMH** (ParadoxMyHome) from the Register drop down menu.

📾 HD77 Programming					- • ×
File View Communication					
Save 📄 Import 🗸 🐻 Write		Register 🗸 🍐 Update 🛛 🔓 Picture 🛫	Instru	ction	
Zone Label		Register to IP Receiver	s	HTTP Port	
Zone 001	-	Register to PMH (ParadoxMyHome)	116	50073	
		Unregister from PMH (ParadoxMyHome)			
Programming Communication Settings		IGEO			 
Feature		🔍 Value			Q

Figure 4.2 – Programming Window

The Registration to paradoxmyhome.com dialog box opens.

Registration to paradox	myhome.com
Installer ID from w	ww.paradox.com
Installer Name:	
Password:	
Choose site ID for	www.paradoxmyhome.com
Site ID:	
× Cancel	🗸 ок

Figure 4.3 – ParadoxMyHome Registration Dialog Box

- 6. Enter the required information in the provided fields:
  - Installer Name: Provided when creating a PMH account
  - Password: Provided when creating a PMH account
  - Site ID: Enter a site name to associate with the HD77 camera

#### Note:

- Provide the end-user with the Site ID to enable access to the HD77 camera through the Paradox Insight<sup>™</sup> application
- Associate up to four HD77 cameras to a Site ID
- 7. Click **OK**.

The HD77 camera is registered at PMH.



Figure 4.4 - Registration Successful Window

8. Verify that the HD77 camera is registered: Log-on to PMH and c heck status, public IP address and ports data.

# 4.3 Deleting a HD77 Camera from ParadoxMyHome

Delete a HD77 camera from PMH in either of the following manners:

- Through BabyWare
- Through the PMH site

#### To delete a HD77 camera from the PMH site through BabyWare:

- 1. Execute steps 1-5 of Registering the HD77 Camera with ParadoxMyHome on page 41.
- 2. Select **Unregister from PMH (ParadoxMyHome)** from the Register drop down menu (see **Figure 4.2** on page 42).
- 3. Select OK.

The HD77 camera is deleted from the PMH site.

#### To delete a HD77 camera directly from the PMH site:

1. Open the PMH site.

The **Registered Devices** tab of the PMH site is displayed.

- 2. Scroll down to the required HD77 camera and select **Delete**.
- 3. Select the **Deleted Devices** tab.

The Deleted Devices tab opens.

A Parado	🚡 Paradox - Headquartes x 🗅 Paradox/Heme x																
← ⇒ 0	← → C 🗋 www.paradoxmyhome.com/Modules/RegisteredModules.aspx													☆ 🔘 🗉	=		
Р 🔺	R	<b>A</b> D	D O X°												Welcome, Mora	an Yona   Parado Logo	)X Ut
Home I	Home IP Management My Profile																
Registered	Devices I	History Log De	leted Devic	es E-Mail													
Registered Devices = 63												Â					
STATUS	ACTIVE	MODUL	E NAME	CONTACT NAME	LOCATION	IP ADDRESS	MAC ADDRESS	WEB	PORT	SOFTWARE POR	r PRODUCT	VERSION	POLLING	LAST POLLING			
																	ĩ
SITE:	YINONB (YIN	ONB) ( GROUP C	ONTINUED F	ROM THE PREVI	OUS PAGE. SHOW	VING 4 OF 2 ITE	MS.)										
8	V	Bed I	Room			5.102.225.4	43 00:19:BA:0	4:6C:2C	50148	0	HD77	1.21.0	3 min	2/4/2015 12:47:38 PM		Delete	
8		Living	Room			5.102.225.4	43 00:19:BA:0	04:3D:8D	50149	0	HD77	1.21.0	3 min	2/4/2015 12:47:32 PM		Delete	
<ul> <li>Del</li> </ul>	ete Site	SITE:															
	Copyright © 2012 Paradox. All rights reserved. Version 1.0.4 Terms   webmader@paradoum.home.com																

Figure 4.5 – ParadoxMyHome Site

4. Scroll down to the required HD77 camera and select **Delete**. The HD77 camera is deleted from the PMH site.

# Chapter 5 Upgrading Firmware

Upgrade HD77 camera firmware with BabyWare V2.8 or higher.

#### To upgrade firmware:

- 1. Log-on to BabyWare.
- 2. In the **Security Modules** pane of the Home window: Double click or right-click on the required HD77 camera.

Elle Yew Tools	Events Com	munication	Help			10 M
Accounts	Save 🖨	Print 🗟	Trash 🔁 D	isconnect 🕢 Refresh 👩 Send	Receive A In-Field Translate	
O Add item	🗇 Modules 🌘	🖗 Areas	🗇 Zones 📱	Doors 🔾 PGMs 🖕 🔒 User	s 🚯 Reporting 📪 Profiles - Languages - 💡 🔇	2
E Category A	Serial #	0.	Volt	Auto Label	Q Location	A Manual Controls and Status
Control Panel						
EVOHO	0700084D	1		Paul 1	My desk	niu niu niu niu niu niu niu
Access Modules						
Security Modules	(4 Items)					
DM60	21880395	8	199	Module 008	My Desk	anha .
NVX80	270032CE	9	170	Module 009	My Desk	miu miu miu miu
TM50	D5105DE3	1	175	Module 001	MyDesk	intu
	E0000714	11	77	Paul 1	My Desk	niu

Figure 1 – BabyWare Home Window

The Security Modules drop-down menu opens.

3. Select **Properties** from the drop-down menu.

The HD77 Programming window opens.

4. Select the **Update** tab.

The Update window opens displaying the current firmware version installed on the HD77 camera and the available update version.

Gw HD77	7 - Update					
<b>R</b>	efresh 🚺 Update	🔾 Settings	Ŧ	↓	Ļ	
Label	▲ Q	Serial # 🔍	Status	Current Version	<b>Q</b> Latest Version	Q
HD77		E0001D81	ONLINE	1.20.004	1.11.017	
HD77		E0002095	ONLINE	1.20.004	1.11.017	
					<ul> <li>Image: A start of the start of</li></ul>	Close

Figure 2 – C Update Window

#### 5. Click **Update**.

The firmware is updated and the HD77 camera re-boots.

Note: The update takes up to 10 minutes.

- 6. Verify successful firmware update:
  - a. After the HD77 camera re-boots, hover the mouse over the HD77 camera in the BabyWare Home window.

The FW version is displayed.

b. Ensure that the HD77 camera includes the updated firmware version.

Gw Bab	Ware V2.9.9	9 - Account 9		Transmission (State	No. of Concession, Name	And Address of Concentration of Concentration of State	
<u>F</u> ile	/iew <u>T</u> ools	s <u>E</u> vents <u>C</u> om	munication	<u>H</u> elp			
	Accounts	Save 🔒	Print 🛜	Trash 🛛 😑 Di:	sconnect 🧿 Refresh 📩 Send	底 Receive 🔺 In-Field 🌓 Translate 👳	
0	Add Item	C Modules	📦 Areas	🗍 Zones 📱	Doors 🔾 PGMs 💂 🚨 Users	🔇 Reporting 🙀 Profiles 🗸 Languages 🗸 👳 🔇	
E Cat	egory 🔻	Serial #	Q #	Volt	Auto Label	Q Location	Manual Controls and Status
Contr	ol Panel						
+ 🚟	EVOHD	07001111	1		Enter Label	Enter Location	n/u n/u n/u 5 n/u n/u n/u n/
Acce	ss Modules	(1 Items)					
•	DGP-ACM1	12 18B90272	6	$\sim$	Module 006	Enter Location	n/u (1)
Secu	rity Modules	(4 Items)					ם באולבים הביו אומים בביו אניים אביי אופים בביו המשנה אינים להם להיינים באונים להיבור הישראת הביו היבים הביו ה הייני
0	HD77	E0002095	3	5	Module 003	Enter Location	1
0	HD77	E0001D81	1	<u>v</u>	Module 001	Enter Location	2
125	TM50 Mod	dule 003 (#3)		1	Module 002	Enter Location	3
•	NVX80 V1.	20.004	_	1	Module 004	Enter Location	n/u n/u n/u
Comr	nunicati Volt	age: OK					
	IP150 46.	H (www.paradoxn 116.145.222 :500	nynome.con 32	11). I	Enter Label	Enter Location	
Areas	(1 Item LAN	V (Local Area Net	work): 10.0.0	0.5 :50032			
E 🍞	Area MAC	C Address: 00:19:	BA:03:CB:2	7	Area 1		<b>1</b> 235

Figure 3 – BabyWare Home Window

# Appendix A Troubleshooting

This section includes:

- Troubleshooting Dynamic IP Issues on page 47
- Troubleshooting Static IP Issues on page 48

#### A1.1 Troubleshooting Dynamic IP Issues

Perform the following procedure if BabyWare does not automatically find the IP address and port numbers for the HD77 camera.

#### To troubleshoot dynamic IP settings:

- 1. Open BabyWare.
- 2. Navigate to the **Programming** window (see Configuring Server Settings on page 25).
- 3. Select the **Communication Settings** tab.

The Communication Settings tab opens.

HD77 Programming		
ile View Communication		
💽 Save 🛛 📄 Import 🔹 🔂 Wr	ite 📄 Register 🗸 🔶 Update 🛛 🔓 Picture 🔔 Instruction	
Zone Label	Serial # MAC Address IP Address HTTP Port	
Zone 001	E0002095 00:19:BA:03:CB:27 10.0.0.74 50066	
Programming Communication Set	ings Video	
Refresh	If the HD77 was not reachable then use the Refresh button to search for it again.	
Auto Detect	By default the HD77 is automatically discovered on the network.	
ID/Static	Use this option if the HD77 cannot be discoverable on the network and the IP address and	
() II / Stude	port is known.	
IP Address	10.0.74 Decate	
HTTP Port	50066 Apply	
PMH (ParadoxMyHome)	Use this option if the HD77 is register to PMH and that you are accessing it outside of the	
	local network.	
Site ID	N/A Qti	
NLINE LAN: 10.0.0.74:50066 PMH	93.172.191.95:50066 Reporting: Registered PMH: Registered	
late/Time 🔺 🛛 Log		
Cancel	Previous     Next	🖌 ок

Figure 1 – Programming Window

- 4. Check the **Auto Detect** box.
- 5. Click the **Refresh** icon 📿 .
- 6. Click **OK**.
- 7. Verify HD77 camera functionality (see Adjusting the HD77 Camera Angle on page 15).
- **Note:** Verify streaming through an external network in order to ensure that port- forwarding functions. Using the wireless network from the property's WIFI router does not fulfill requirements.

#### A2.1 Troubleshooting Static IP Issues

#### To troubleshoot Static IP issues:

- 1. Open BabyWare.
- 2. Navigate to the **Programming** window (see Configuring Server Settings on page 25).
- 3. Select the **Communication Settings** tab.

The Communication Settings tab opens.

- 4. Select the **IP/Static** radio button.
- 5. Locate the IP device:
  - a. Select the **Locate** icon

W HD77 Programming		
File View Communication		
Save 📄 Import 🗸 📑 Writ	e 🛛 🔁 Register 🗸 📣 Update 🛛 😭 Picture 🔔 Instruction	
Zone Label	Serial # MAC Address IP Address HTTP Port	
Zone 001	E0002095 00:19:BA:03:CB:27 10.0.0.74 50066	
Programming Communication Setti	ngs (Video	
IP/Static	Use this option if the HD77 cannot be discoverable on the network and the IP address and port is known.	
IP Address HTTP Port	10.0.74         Locate           50066         Apply	

Figure 2 – Programming Window

The Located IP device on Network window opens.

te Name	Device	IP Address	Port	MacAddress	Serial #	DHCP	Control Panel	
	HD77	10.40.1.112	80	00:19:ba:02:f1:3f	E0000870	yes	n/a	
	HD77	10.40.1.200	80	00:19:ba:04:39:b6	E0002609	yes	n/a	
	HD77	10.40.199.199	80	00:19:ba:04:69:39	E0002FC3	no	n/a	
	HD77	10.0.0.74	50066	00:19:ba:03:cb:27	E0002095	yes	07001111	
	HD77	10.0.0.82	50082	00:19:ba:03:8f:91	E0001D81	yes	07001111	

Figure 3 – Locate IP Device on Network Window

- b. Locate the IP address that matches the Default Gateway.
- c. Confirm that the Port # matches the port number assigned in the router port forwarding.
- 6. Ensure that the router is correctly connected according to the router manufacturer instructions.
- 7. Configure IP/Static configurations for the HD77 camera:
  - a. Un-check the DHCP Enabled box in the TCP/IP pane of the Programming window (see **Figure 3.2** on page 20.
  - b. Locate the IP Device see step 5 above.
  - c. Record the IP Address, Port, MAC address and Serial number values.
  - d. Select Configure.

The IP Device Configuration window opens.

Gw IP Device Configuration	
Site Name	JOHN SMITH'S HOUS
MacAddress	00:19:ba:03:04:53
Sofware Version	1.2
DHCP IP Address Netmask	○ Yes  No       10.0.0.132       255.255.25
Gateway	10.0.0.138
DNSAddress	0.0.0.0
HTTP Port	50083
X Cancel	✓ <u>Q</u> K

Figure 4 – IP Device Configuration Window

- e. Ensure that the **No** radio button in the DHCP is selected.
- f. Click OK.

The Security dialog box opens.

g. Enter a password and click **OK**.

#### Note: The default password is paradox.

- 8. Click **OK** on each following window until returning to the **Programming** window.
- 9. Configure router settings:
  - a. Access the router Administration window.
  - b. Type the Default Gateway IP address from the PC command prompt window into the browser.
  - c. Enter a user name and password (provided by the ISP).
  - d. Bind (Reserve) the Mac address to its IP address for each HD77.
  - e. Assign the port number from the Locate Devices window to forward the IP address port to the HD77 camera.
- 10. Register the HD77 camera to ParadoxMyHome (see Configuring a ParadoxMyHome (PMH) Account on page 41).

The IP Static HD77 camera server settings for LAN are configured.

11. Verify HD77 camera functionality (see Adjusting the HD77 Camera Angle on page 15).

# Appendix B Specifications

The following table displays the HD77 camera specifications.

#### Table 1: HD77 Camera Specifications

Specification	Description
Voltage Input	Nominal: 12VDC Range 9-16VDC
Maximum Current Consumption	200 mA without IR illumination LEDs 330 mA with IR illumination LEDs lit
Installation Height	2.1 m - 2.7 m (7 ft - 9 ft)
Purchase Options	IR illumination LEDs
Installation Options	<ul> <li>Wall or corner</li> <li>Optional swivel bracket</li> <li>One CAT5E cable/ two separate cables - one Ethernet and one Combus cable</li> </ul>
Coverage	12 m x 12 m (40 ft x 40 ft) / 110°
PIR Type	Quad PIR, auto pulse, auto dual edge, digital detector
Micro SD Card Size	4GB
Camera Recording Resolution	720p
Video On Demand Recording Time	2 minutes each
Number Of VOD Files that can be stored	~ 12 files
Alarm/Motion Recording Time	10 seconds each
Pre-event Recording	3 seconds prior to PIR activation / alarm
Number of Alarm/Motion Recording files that can be saved on the Micro SD Card	~40 files
PIR and Video linked files	The file naming conventions link the PIR file with its corresponding video file
Detection Speed	0.2 m/s to 2.5 m/s (0.6 ft/s to 11.5 ft/s)
Image Sensor Type	1.4 Mega pixel, CMOS sensor
Angle of View (Camera)	62.7° (V) x 91.4° (H) x 121.4° (D)
Video Image Resolution	1280 x 720 pixels
Facial Identification	4.5 meters
Facial Recognition	7 meters
Video Streaming	360p H.264 10 FPS
Audio	16 bit, 16KHz sampling rate, 32Kb/s mono
Weight	166g (5.86OZ)
Physical Size	H x W x D: 15 cm x 7.5 cm x 5 cm (6 in x 3 in x 2 in)

#### Table 1: HD77 Camera Specifications

Specification	Description
Environmental	See <b>Certifications</b> on page 55 and the Paradox website for the latest product certifications: http://www.paradox.com/terms/
Operating Temperature	-10° C to +40° C (14° F to 104° F)

# Appendix C PIR Detector Beam Pattern

The following diagram displays the PIR detector beam pattern.



Figure 1 – PIR Detector Beam Pattern

Note: EN 50131 testing has been performed for 100°.

54

# Appendix D Certifications

The following table displays the certifications applicable to the HD77 camera.

Mark	Area/Country	Level/Grade/Class
CE	European Economic Area (EEA)	
	European Economic Area (EEA)	WEEE
		EN 50131-2-2 Grade 2 Environmental Class II Certification Body: Applica Test and Certification

#### Table 1: Certifications

#### FCC and Industry Canada Compliance Statement

This device complies with FCC Rules Part 15 and with Industry Canada license exempt RSS standard(s). Operation is subject to two conditions:

- 1. This device may not cause harmful interference
- 2. This device must accept any interference that may be received or that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. l'appareil ne doit pas produire de brouillage, et
- 2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Paradox Security Systems Ltd.) could void the user's authority to operate the equipment.

# Appendix E Reference Guide - Configuring an IP Router

The following reference guide describes how to configure static IP settings for a router in order to be compatible with the static IP Paradox system settings.

The following reference provides an example for one type of router. Procedures can differ depending on the individual router and network security. Refer to the router manufacturer's documentation for detailed instructions. Router documentation you can also be found on-line.

Static IP configuration includes setting-up port forwarding and reserving the IP addresses of the IP150 and the HD77camera.

#### Requirement

Wire the system IP150 and HD77 camera to the router before configuring the router.

## Setting Up the Router for Port Forwarding

#### To set up port forwarding:

- 1. Connect the router according to manufacturer instructions.
- 2. Access the router configurations:
  - a. Refer to the router's manual for the exact procedure. Usually access the router configurations by entering the router's IP address in the web browser address bar. The router IP address may be indicated in the router's instructions or on a sticker on the router.
  - b. If the IP address of the router cannot be located, try the following from the Windows screen:
    - (i) Select the windows **Start** button to open the **Command Prompt** window.
    - (ii Type Command in the search programs and files window
    - (iii) At the prompt type **ipconfig**
    - (iv) Press Enter.

The router IP address is displayed as the **Default Gateway** . . . . . .:xx.xx.xxx

an Administrator: Command Prompt		x	
Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved.		1	Ī
C:\Users\Paul>ipconfig		=	
Windows IP Configuration			
Ethernet adapter Local Area Connection: Connection-specific DNS Suffix . : lan			
Link-local Pvb Hadress : fe80:e19e:7446:3815:ee84211 IPv4 Address : 18, 8, 8, 216 Subnet Mask : 255.255.255.9 Default Gateway : 18, 8, 8, 138			
Tunnel adapter isatap.lan:			
Media State : Media disconnected Connection-specific DNS Suffix . : lan			
Tunnel adapter Local Area Connection* 11:			
Media State : Media disconnected Connection-specific DNS Suffix . :			
Tunnel adapter Teredo Tunneling Pseudo-Interface:			
Connection-specific DNS Suffix .: IPv6 Address 2001:0:5ef5:79fb:812:2fc4:f5ff Link-Local IPv6 Address :fe80::812:2fc4:f5ff:ff27%14 Default Gateway ::	ff27:		
C:\Users\Paul>			
			_

Figure 1 – Administrator Command Prompt Window

(v) Enter the router IP address into the address bar at the top of the browser page.

- P 🔺 R 🔺 D O X<sup>~</sup>
  - (vi) Select Enter.

(vii) Enter the user name and password.

The LAN General Setup window opens.

Note:

- If you do not know the user name and password, browse to the site www.routerpasswords.com and select your router manufacturer and model. The default user name and password should be listed
- Many routers' IP address is 192.168.1.1
- 3. Enable **DHCP**: Check the **Enable Server** radio button in the DHCP Server Configuration pane.
- **Note:** If DHCP is not enabled, verify that the IP address range is large enough to accommodate all of HD77 cameras. Four HD77 cameras require 4 IP addresses.

thernet TCP / IP and DHCP	Setup		
LAN IP Network Configural For NAT Usage IP Address Subnet Mask For IP Routing Usage O E IP Address Subnet Mask Fast-Forward	tion 10.0.0.138 255 255 255.0 nable © Disable 192.168.2.1 255 255 255.0 ○ Enable © Disable	DHCP Server Configurati DHCP Server O Disal Enable Server O Disal Enable Relay Agent Start IP Address IP Pool Counts Lease Time Force DNS manual settin Force DNS manual settin	ion ble Server 10.0.0.1 250 1 minutes 19
PPPoE Passthrough	Enable Disable	Primary IP Address - Secondary IP Address	0.0.0.0

Figure 2 – LAN General Setup Window

- c. Record one address at the upper end of the DHCP range for each HD77 in your system.
- 4. Set up port forwarding for the IP address:
  - a. Select the **Port Forwarding** section (also known as "port mapping", "NAT", (network address translation), or "port redirection") in the router's configuration page.
  - b. Select an available port above #50000 on the router and assign it to the HD77 camera.

dit Port Forwarding Entry	
Enable	
Name	Paul1
Protocol	TCP+UDP V
WAN IP	ALL 🔻
Start Port	50042
End Port (optional)	50042
Local Host	10.0.0.132
Local Port (optional)	50042

Figure 3 – Port Forwarding Window

File View Co									
	ommunication								
C Save	Settings	51	Reg	gister - 🔶 Update	Picture	1nstructio	n		
Label	Read All Programming		riol#		ID Addross		ort		
	Write All Programming		000010	00-19-BA-03-04-53	10.0.0.132	50042			
	Write Programming (changes on	y)		00.13.DA.03.04.33	10.0.0.132	50042			
Programmi	Register to IP Receiver								
Feature	Pagister to DMU (DaradovMullion	-					(	2	
E PIR Par	Upregister from PMH (ParadoxM)	(Home)							
- Shov	onicgister nonin i win (r anadoxiw)	(nome)	-						
- PIR :	Update module		Grw	HD77 - Settings				-	
PIR	Refresh Status			Auto Data at				-	
Server F	Refresh IP Address		0	Auto Detect		0 0 100			
	Parameters			IP Address	10	0.0.132		=	
- Insta	ller Email Address			IP Port	5004	2			
- Insta	ller Phone #								
- Insta	ller Name			IP/Static					
Central Monitoring Station Parameters			IP Address	10 .	0.0.132	P			
Cent	ral Monitoring Station Phone #			HTTP Port	5004	2			
Cent	ral Monitoring Station Email Addres	s							
Reportin	ng Enabled		0	PMH (ParadoxMyH	ome)				
- Receive	r Parameters			Site ID n/a					
- Rece	eiver IP Address	127.000.000.	000						
- Rece	eiver IP Port	0		Cancel			OK		
- Rece	eiver Password	123456		Calicer					
	40.0.0.400-500.40 DULL 00.470.44	0.0.500 40 Day						-	
	10.0.0.132.50042 PMH. 93.172.1	22.9.50042 Repo	orung. Onre	gistered PMH. Regis	lered UPhP. OK				
w Locate IP Devi	ce on Network								
O Please se	elect the IP Device you want to conn	ect to			Net	work Adapter	10.0.0.110		
Site Name	Device	IP Address	Port	MacAddress	Serial #	DHCP	Control Panel		
ELI_CAM2	HD77	10.0.0.100	31096	00:19:ba:03:06:89	E0000021	yes	n/a		
	HD77	10.0.0.166	50030	00:19:ba:02:e9:e8	E0000714	yes	07100C41		
	HD77	10.0.0.132	50042	00:19:ba:03:04:53	E000001D	yes	07100C41		
		10.0.0.99	310/8	00:19:ba:03:06:a7	E000102B	yes	n/a n/a		
	וזעח	10.0.0.80	ou	00.19.0a.05.0l.1C	E0001425	yes	ind		
IP Device Detect	ed: 5						Conf	igure	Refresh
X Cancel									OK

Figure 4 – BabyWare Port Forwarding

#### EXAMPLE:

The following example displays IP addresses and ports for 4 HD77 cameras.

HD77 Camera Name	Location	IP Address	HTTP Port
Living room	Facing front door	10.0.0.132	50042
Den	Facing sliding rear door	10.0.0.133	50053
Safe room	Facing the safe	10.0.0.134	50063
2nd floor	Looking down the staircase	10.0.0.135	50073

#### Table 1: IP Addresses and Port for 4 HD77 Cameras

**Note:** Each camera requires separate IP address and matching external port.

# Reserving the IP Address or Binding the IP Address to a MAC

- 1. Bind the HD77s mac address to an IP address in the router DHCP range (this is called reserving an IP address or binding an IP address). Bind the IP address through the router LAN properties.
- **Note:** As each router is different you may need to use the router user manual or search on-line for instructions for your particular router.

Auto Logout 🗸	LAN >> Bind IP t	o MAC		
Duick Start Wizard	Bind IP to MAC			
Online Status	Note: IP-MAC If you se	binding presets DHCP Allocations. lect Strict Bind, unspecified LAN clier	nts cannot access the Intern	et.
General Setup     Ports	Enable      C	Disable O Strict Bind		
MAC Address Table	ARP Table	Select All Sort Refresh	IP Bind List	Select All Sort
VLAN	10.0.0.8	E4:92:FB:D0:A4:D4	Index IP Address	Mac Address
Monitor Port	10.0.0.5	9C:02:98:0B:91:3D ^	1 10.0.0.166	00:19:BA:02:E9:E8
Static Route	10.0.0.19	88:30:8A:58:F0:A1		
Policy Route	10.0.0.166	00:19:BA:02:E9:E8		
Bind IP to MAC	10.0.0.7	44:8A:5B:0C:DE:C6		
Web Portal	10.0.0.10	50:E5:49:57:73:35 V		
AT	10.0.0.143	90:FB:A6:08:31:49		
irewall				
SM	Add or Update			
andwidth Management	IP Address			
pplications	IF Address			
PN and Remote Access	Mac Address			
ertificate Management	Commont			
Vireless LAN	Comment			
Admin mode			L	

Figure 5 – Binding or Reserving a Port Router Window

- 2. Bind the HD77 Camera IP address:
  - a. Right click the HD77 camera.
  - b. Navigate to **Communications** > **Settings**.

The HD77 Settings window opens.

Gw HD77 - Settings	
Auto Detect IP Address IP Port	10 0 0 132 C
IP/Static IP Address HTTP Port	10.0.0.132 50042
PMH (ParadoxMyHome)	
Site ID n/a	
X Cancel	🗸 ок

Figure 6 – HD77 Settings Window

- c. Select IP Static radio button.
- d. Enter the IP address and port number identical to the IP address and port number in the router binding and port forwarding.
- e. Select the 🔎 icon.

The Locate IP Device on Network window opens.

w Locate IP Device on Net	twork				_			<u> </u>
Please select the IP Device you want to connect to					Network Adapter 10.0.0.110			•
Site Name	▲ Device	IP Address	Port	MacAddress	Serial #	DHCP	Control Panel	
ELI_CAM2	HD77	10.0.0.100	31096	00:19:ba:03:06:89	E0000021	yes	n/a	
	HD77	10.0.0.166	50030	00:19:ba:02:e9:e8	E0000714	yes	07100C41	
	HD77	10.0.0.132	50042	00:19:ba:03:04:53	E000001D	yes	07100C41	
	HD77	10.0.0.99	31078	00:19:ba:03:06:a7	E000102B	yes	n/a	
	HD77	10.0.0.95	80	00:19:ba:03:0f:1c	E0001425	yes	n/a	
IP Device Detected: 5							Configure	Refresh
X Cancel								🗸 ок

Figure 7 – Locate Static IP Address on Network

- f. Select the IP address with port for your static IP.
- g. Click **Configure**.
- h. Click **OK**.
- i. Repeat the process for each HD77 camera.

# List of Figures

Figure 1	Front View9
Figure 2	LED Arrangement9
Figure 3	HD77 Hardware Connections 11
Figure 4	Recommended Wiring Option#1 12
Figure 5	Recommended Wiring Option#2 12
Figure 6	Ethernet Cable Wiring 13
Figure 7	Mounting Guidelines
Figure 8	HD77 Swivel Bracket Parts 14
Figure 9	Separating the Module from the HD77 Housing
Figure 10	Install the Wall Plate (part #1) 14
Figure 11	Run the Cable through the Swivel Assembly
Figure 12	Connect the Bracket Assembly to the Wall
Figure 13	Screw on HD77 Back Plate to Swivel 15
Figure 14	Screw Location to Adjust Camera Angle 16
Figure 15	Wire the HD77
Figure 16	Knockout Locations 17
Figure 17	Wire the HD77         18
Figure 18	BabyWare Account Window 19
Figure 19	IP150 Settings Window 20
Figure 20	Locate IP Device on Network 20
Figure 21	IP Device Configuration 21
Figure 22	BabyWare Homepage 22
Figure 23	HD77 Receive Programming 23
Figure 24	Write Button 23
Figure 25	Communication Drop Down Menu 24
Figure 26	HD77 — Settings 25
Figure 27	HD77 Settings Window 25
Figure 28	Server Parameters
Figure 29	Command Prompt ipconfig 27
Figure 30	DHCP Settings

Figure 31	Port Numbering
Figure 32	HD77 — Settings Update Graphic 29
Figure 33	HD77 Settings Window Update Graphic 29
Figure 34	Locates Devices Window
Figure 35	IP Device Configuration Window
Figure 36	PIR Parameters
Figure 37	HD77 Video Stream in BabyWare 33
Figure 38	Flow Through the TM50 Touchscreen 34
Figure 39	Main Screen
Figure 40	Menu Selections Screen
Figure 41	Advanced Screen
Figure 42	Installer Code
Figure 43	Installer Programming Screen
Figure 44	Installer Programming Screen
Figure 45	Module Serial Number Screen
Figure 46	Programming Section
Figure 47	Options Selection Screen
Figure 48	Select an HD77 to Register
Figure 49	Registration to PMH
Figure 50	Register/Unregister to PMH
Figure 51	ParadoxMyHome Registration Page 39
Figure 52	Registration Successful
Figure 53	ParadoxMyHome Site
Figure 54	Poll PMH
Figure 55	Select HD77
Figure 56	Update button
Figure 57	Click Update
Figure 58	PIR Detector Beam Pattern
Figure 59	HD77 Swivel Bracket Parts
Figure 60	Assembled Swivel Bracket
Figure 61	Screw the Slider, HD77 Camera Housing and Back Housing Together 47
Figure 62	Separating the Module from the Camera Housing

Figure 63	Install the Wall Plate (part #1) and Wall Housing (part #2	17
Figure 64	Screw the Slider, HD77 Camera Housing and Back Housing Together	18
Figure 65	Screw on Camera Back Plate to Swivel	18
Figure 66	Wire the Camera	19
Figure 67	Command Prompt ipconfig	51
Figure 68	DHCP Enable	52
Figure 69	Fill in the Port Forwarding Information	52
Figure 70	Port Forwarding	53
Figure 71	Binding or Reserving a Port	54
Figure 72	HD77 Settings	54
Figure 73	Locate Static IP Addresses	55

# Index

#### А

Accessing the Programming Window 24 С Certifications 53 **Configuration Requirements 19** Configuring a ParadoxMyHome (PMH) Account 39 Configuring Central Monitoring Station Parameters 26 Configuring Dynamic TCP/IP Settings 27 Configuring HD77 Receiver Settings 26 Configuring HD77 Server Settings 26 **Configuring Installer Parameters 26 Configuring PIR Settings 30** Configuring PIR Settings with BabyWare 30 Configuring PIR Settings with Keypads 36 Configuring PIR Settings with the TM50 Touchpad 31 Configuring Static TCP/IP Settings 27 Configuring TCP/IP Parameters 26 Creating a ParadoxMyHome Account 39 Creating an Account in BabyWare 20 D Deleting a HD77 Camera from ParadoxMyHome 41 Downloading and Installing the Paradox BabyWare Application 20 Н Hardware 19 HD77 Camera Key Features 5 Κ Keypad Programming Table 36 L Labeling HD77 Cameras and their Locations 24 Μ Mounting the HD77 Camera on a Wall or Corner 16 Ρ PIR Detector Beam Pattern 51 R Reference Guide - Configuring an IP Router 55 Registering the HD77 Camera with ParadoxMyHome 39 Registering the IP Receiver 38 Reserving the IP Address or Binding the IP Address to a MAC 58

#### S

Saving Settings 38

Setting Up the Router for Port Forwarding 55 T Trouble Shooting 45 U Updating Configuration Parameters 23 Upgrading Firmware 43

# Support Information

## **Before you call Technical Support:**

- Read this guide
- Verify power supply / backup battery voltages
- Check wiring connections
- Read the FAQs on the Paradox website
- Note the product name and serial number

#### For support:

- Please contact your local distributor or:
- Contact Paradox
  - Tel: +1 450 491 7444, Monday to Friday from 8:00 a.m. to 5:00 p.m. EST
  - Email: support@paradox.com

Additional information can be found on our website: www.paradox.com.

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