

# SUREFLAP™



## **MICROCHIP CAT FLAP USER GUIDE**

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## 1. Contents



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## 2. Introduction

Congratulations on your purchase of SureFlap™. This cat flap has been designed to recognise the ID chip already implanted in your cat, allowing access to your pet and keeping out marauding intruders. Your home becomes a secure environment for your pet, leading to a happier, more relaxed animal.

Operation of SureFlap™ couldn't be simpler. Once the unit is installed and the batteries put in place, the flap can be put into learn mode. The next time your cat passes through the flap, the unique ID code of its chip is put into memory. Now SureFlap™ unlocks whenever your cat wants to come into the house.

Multiple cats are no problem. Up to 32 cats can be programmed into the flap at the same time – more than enough for most people's needs!

SureFlap™ has all the features you would expect from a high quality cat flap, including:

- Robust and elegant design
- Learn mode for programming multiple cats
- 4-way manual lock
- Low battery indicator
- Typical battery lifetime at least 6 months<sup>1</sup>

We wish you years of trouble free operation with SureFlap™ and hope you enjoy the benefits it brings to your home and pet.

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<sup>1</sup> Based on normal usage. Note that heavy usage by many cats may reduce battery lifetime.

### 3. Microchip Type

SureFlap™ has been designed to work with by far the most common type of microchip, the FDX-B. In order to confirm that your cat has this chip then please check your registration certificate - the FDX-B has 15-digits such as 985.120007381291. If in doubt then consult your vet on the microchip type in your animal.

Extensive tests have shown that SureFlap™ works perfectly with the vast majority of FDX-B microchips. However a very small percentage of cats have a microchip without the required range for SureFlap™ – this does not mean there is a problem with the microchip as your vet can still pick it up with their handheld scanner close to the microchip. In these rare cases SureFlap™ can only be used as a normal cat flap without selective entry.

If a new hole is being cut for installation we strongly advise testing SureFlap™ with your cat(s) first. In order to test that SureFlap™ works with your cat please carry out both the learn mode (see section 6) and then test normal operation (see section 7).

### 4. Installation



DIY installation may involve the use of power tools or cut glass. Safety equipment (gloves, eye protection, etc.) should be used and if in doubt consult a professional to carry out the installation.

#### *Suitable door types*

Instructions are provided for installation in all door types, including wooden, plastic, glass, and metal. Before installing in a door with unknown construction please check for a metal plate in case a larger hole is required, as described in the metal door section on page 9.

Note, a simple test for the presence of a steel plate in the door is with a magnet. If the magnet is attracted to the door then there is a steel plate within, and you must follow the instructions for mounting in a metal door. However, even if a magnet is not attracted to the door then still check for the presence of other metals, such as aluminium, which require the same mounting conditions. If you can only be sure of the construction of the door by drilling a hole in it, make a trial hole anywhere covered by the proposed hole for SureFlap™.

#### *SureFlap™ positioning*

The ideal height of SureFlap™ is such that the base of the tunnel is the same height above the ground as your cat's stomach. In practice, however, mounting is normally dictated by the door in which the unit is installed e.g. sill height. In these circumstances, it is usual to mount SureFlap™ as low as possible – your cat won't mind a little step up.

#### **Installation in wooden doors, plastic doors, or plasterboard walls.**

1. Place the rear cover face down as in figure 1. Attach a ball of Blu Tack in each of the four corners. These should allow you to stick the frame to most doors.
2. Choose the position on the door at which you want to mount SureFlap and stick the frame to the door. To ensure that SureFlap is level we recommend you use a spirit level as shown in figure 2.
3. Using a sharpened pencil or pen mark where the inside of the frame touches the door as well as the two screw holes. You need to make a legible line as this will be used for cutting against.
4. Remove the frame from the door and check you have a solid line and dots where the screw holes are, as in figure 4.
5. Using a drill with a 6mm diameter bit, drill the two holes for the screws. It is vital these holes are drilled straight to ensure the two halves of SureFlap connect properly.
6. Before you cut out the hole for the tunnel drill holes in all the corners large enough to allow your jigsaw blade through. See figure 6.
7. Cut out the tunnel hole with an electric jigsaw – ensure you **cut 3mm outside the line** you have marked for the hole to allow enough clearance for the tunnel. Make sure that your jigsaw is sitting flat on the door at all times while cutting. See figure 6.
8. Clean off any loose debris, dust and dirt from the door before you install SureFlap, see figure 7.
9. Mount SureFlap™ in the hole with the main assembly (battery door) **inside** the house. See figure 8.
10. Mount the external frame on the *outside* of the house. Depending on the thickness of the door, the tunnel will protrude through the frame by differing amounts. **Under no circumstances should you cut the tunnel as this contains the microchip reader and will destroy the unit.** Three different lengths of screw have been provided for your use. Choose the correct screw length to suit the thickness of your door. If you are not sure. Use the smallest first, if this is too short use the next size up. Take care not to use a longer screw than needed, as this may damage the main assembly front face. Screw the external frame to the main assembly. See figure 9.
11. When SureFlap™ has been mounted correctly, place the screw caps over the screw holes on the external frame. Align the screw caps with the slot pointing inwards and then push firmly into place. To remove the screw caps slide a flat blade screwdriver into the side slot and lever the cap out of the hole. See figure 10.



**Figure 1**



**Figure 2**



**Figure 3**



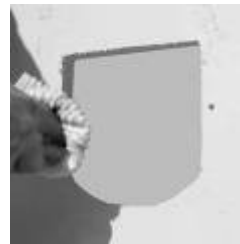
**Figure 4**



**Figure 5**



**Figure 6**



**Figure 7**



**Figure 8**



**Figure 9**



**Figure 10**

**Installation in glass doors or windows.**

Cutting holes in glass is a skilled job and should only be carried out by a professional glazier. They will cut a circular hole in a fresh pane of glass and install this in your door or window. Note that toughened glass cannot be cut after the toughening process. Your glazier will cut the hole to size and then put the pane through the toughening process.



When working with cut glass always wear protective gloves as the edges may be sharp.

In order to aid installation into glass doors or windows SureFlap also produces a glass mount adaptor. For details of where to purchase this adaptor see our website [www.sureflap.co.uk](http://www.sureflap.co.uk). This adaptor is used as follows:

1. A circular hole 210mm in diameter is required in order to accommodate the tunnel. See figure 11.
2. If installing SureFlap™ in a double glazed panel you may choose to seal between the panels around the circular hole to avoid moisture collecting inside. Avoid the use of metal in any such seal.
3. Slide one of the glass mount adaptor rings over the main assembly, see figure 12.
4. From inside the house slide the tunnel of the main assembly through the hole in the glass.
5. Mount the second glass mount adaptor and then the external frame to the *outside* of the tunnel, see figure 14.
6. If mounting in a single pane use the shortest of the three pairs of screws to screw the two halves of SureFlap™ together. A double glazed panel may require the mid-sized screw, depending on its thickness. See figure 15.
7. From the inside of the house you will now see your cat's stylish new entrance as in figure 16.

If installing SureFlap™ in a pre-existing hole then diameters in the range 210mm to 260mm may be accommodated with the glass mount adaptor.



**Figure 11**



**Figure 12**



**Figure 13**



**Figure 14**



**Figure 15**



**Figure 16**

Alternatively, SureFlap™ may be installed in the recommended 210mm diameter hole without use of the glass mount adaptor. However, a small gap at the top of the unit (6mm) will require sealing with glazing putty, and we would recommend all 4 sides to be sealed in order to ensure that the unit is weather tight.

#### **Installation in metal doors**

Microchipping is based on the use of radio waves that are absorbed by metal. As a result SureFlap™ is not suitable for direct mounting in metal doors. This includes the following:

- Metal skin doors
- Security doors
- Metal garage doors
- UPVC coated metal doors

In order to mount into these doors a spacer panel is required that separates SureFlap™ from the surrounding metal.

1. Cut a hole for the spacer panel with minimum dimensions 300mm x 300mm - see figure 17.
2. Insert a wooden panel with the same dimensions as the hole and fix into place with screws and/or glue. See figure 18. (Alternatively wooden batons may be used to reduce the hole size).
3. Mount SureFlap™ in the centre of the spacer panel, as described in the wooden door mounting installation guide. See figures 19 and 20.

#### **Installation in brick walls**

SureFlap may be installed in a brick wall. First cut a hole in the wall the appropriate size for the tunnel.

The SureFlap™ tunnel will extend approximately 7cm into the wall from the inside of the house. The region of the wall between the tunnel end and the outside of the house may be left bare brick or lined with cement, etc. If installing in a cavity wall, pre-lining the hole may be advisable to avoid moisture collecting in the cavity - if in doubt consult a qualified builder. Avoid the use of metal in any lining used.

Mounting holes can be drilled in the wall with a 5mm diameter drill bit. However, to use the screws provided with thick walls, the mounting holes should be drilled again from the outside of the house with a drill bit 8mm in

diameter or larger. Drill to a depth 25mm less than the wall thickness. The mid-size screw is now suitable for mounting the main assembly from the outside. Alternatively the main assembly may be glued to the inside wall of the house.

*Electrical Interference:*

SureFlap™ contains a sensitive radio receiver to pick up the signal from your cat's microchip. Excessive levels of electrical interference can cause the range of the system to degrade. Avoid the following situations:

1. SureFlap™ should not be used in the vicinity of other microchip readers or similar low frequency devices. These are particularly detrimental to performance and may prevent normal operation.
2. Avoid obvious sources of electrical noise such as faulty, flickering lights.
3. Avoid trailing mains cables and dc mains adaptors very close to SureFlap™.



**Figure 17**



**Figure 18**



**Figure 19**



**Figure 20**

## 5. Batteries

Now your flap is installed, insert the batteries to start operation. The unit requires 4 x AA 1.5V batteries. With normal usage, one set of batteries will typically last for at least 6 months<sup>2</sup>. A low battery indicator tells you when the batteries have run out and is described in section 8.



After inserting the batteries, leave the unit for about 10 seconds before allowing a cat into the tunnel - this allows the electronic sensors to settle properly.

We recommend the use of good quality non-rechargeable batteries with SureFlap™ in order to give the longest lifetime. Rechargeable batteries may also be used, however they generally produce a lower voltage and will not last as long. You may need to recharge such batteries every few months.

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<sup>2</sup> Based on normal usage. Note that heavy usage by many cats may reduce battery lifetime.

## 6. Learn Mode

To start operation, first SureFlap™ needs to learn the unique ID code of your cat's microchip. This process is only required once for each cat, as the code is permanently stored even if batteries are removed. Follow the simple step-by-step guide below to carry out this process:

- 1) Initially the unit will be locked and no cat will be allowed to enter the house. Make sure the manual lock is set to position 1, allowing the door to open freely. See figure 21.
- 2) Remove the battery cover. Press the memory button for around 1 second and release. See figure 22.
- 3) The latch will open, allowing a cat to pass through the flap in either direction. A further indication that the unit is in learn mode is the indicator lamp which will flash every second. See figure 23.
- 4) The next cat to pass through the flap from either direction will be remembered if they have a microchip implant.
- 5) Once a cat has been successfully learnt, the flap reverts back to normal operation. The indicator lamp stops flashing and the latch will close a couple of seconds after they have passed through the flap.

For multiple cats, repeat the process until all cats have been learnt. Up to 32 different cats may be held in memory at once. Replace the battery cover after all cats have been learnt.

This method of learning is particularly convenient for uncooperative cats! Rather than having to find your cat and pass them through the flap, you can simply set to learn mode and leave until he next decides to go through of his own free will.

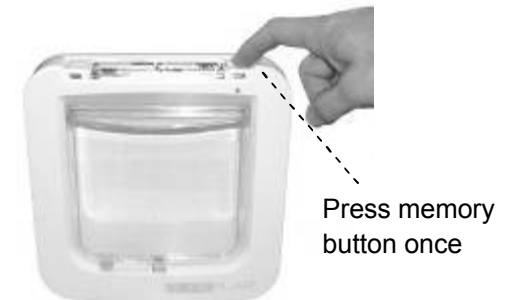
To cancel learn mode (e.g. after pressing the memory button accidentally) simply press the memory button again for around 1 second and the unit will revert back to normal operation.



In order to learn a cat, it is important that they pass through the flap. There is a sensor that detects the cat's presence in the tunnel that needs to be triggered and no amount of waving your cat in front of the flap will have an effect.



**Figure 21**



**Figure 22**



**Figure 23**

## 7. Normal Operation

Normal operation couldn't be simpler. Once programmed, SureFlap™ will only allow entry for your cat(s), denying access to intruder animals.

To enter the house, the cat puts their head in the tunnel to push the flap open. A sensor detects the cat's presence and then quickly reads the microchip, opening the latch if required. Note that SureFlap™ does not activate if your cat is just wandering in front of the flap, inside or outside the house.

SureFlap™ is designed for one-way operation only. Any animal inside the house is allowed to leave, but only your animals are allowed to enter. This is a useful fail-safe to allow exit under rare circumstances - if your cat is followed inside before the flap has time to close, you don't want the intruder trapped inside! If you need to control exit from the house then use the 4-way manual lock described in section 8.

After the SureFlap™ has opened, it will stay unlocked until after your cat has passed through the tunnel. The latch will close a couple of seconds later. Note that the latch will also open when your cat leaves the house, although this is not absolutely necessary.

One further feature of the flap is a magnetic catch that keeps the door closed when not in use.



If testing SureFlap™ before installation then your cat will need to push their head against the flap from the tunnel side of the unit. There is a sensor that detects the cat's presence in the tunnel that needs to be triggered and no amount of waving your cat in front of the flap will have an effect.

## 8. 4-way Manual Lock

The manual lock has 4 positions which control the opening of the flap in either direction. Note that the unit is shipped in position 4 (locked both directions) to keep the flap secure in transit. This should be changed to position 1 after installation.

**Position 1** – see figure 24

Open both directions. This is the standard position for normal operation of the flap and also in learn mode.



**Position 2**– see figure 25

Cat allowed to enter the house, locked from exiting the house. This mode is useful if you need to keep your cat in e.g. to take him to the vet the next day.



**Position 3** – see figure 26

Cat allowed to exit the house, locked from entering the house.



**Position 4** – see figure 27

Locked for both directions. No cats allowed to enter or exit the house.



**Figure 24**



**Figure 25**



**Figure 26**



**Figure 27**

## 9. Low Battery Indicator

Batteries last typically for at least 6 months under normal levels of use. When the batteries are nearing the end of their life, the low battery indicator comes on. This is a slow flash of the indicator lamp, once every 5 seconds. The unit will continue to operate when the low battery indicator is on, however the batteries should be replaced at the earliest opportunity.

Note the slow flash of the lamp (every 5s) for the low battery indicator is different from the fast flashing (every 1s) in learn mode. Learn mode should not be used when the batteries are low – replace the batteries before learning a new cat.

## 10. Memory Wipe

You are very unlikely to need to wipe a cat's ID code from the memory of SureFlap™. Up to 32 different codes may be stored in memory, and if more additional codes are learnt these simply replace the earliest ones stored. However, in the unlikely circumstance that you need to wipe the memory (e.g. you accidentally program for next door's cat!) then follow the process below.

1. Press and hold the memory button for at least 10s.
2. The Indicator lamp will stay on for the duration that the button is held down.
3. When the memory is wiped, the latch will open and close once.
4. At this point the memory is clear and SureFlap™ can re-learn your cat(s), as required. See section 6.

## 11. Turning SureFlap™ Off

In the event that you want to turn SureFlap™ off and revert to a standard cat flap then follow the four steps below:

1. Remove the battery cover and make sure batteries are installed.
2. Press the memory button once to put the SureFlap™ into learn mode. The latch will open and the indicator lamp will flash.
3. Remove the batteries and replace the battery cover.
4. The latch will stay open and SureFlap™ can now be used as a standard cat flap.

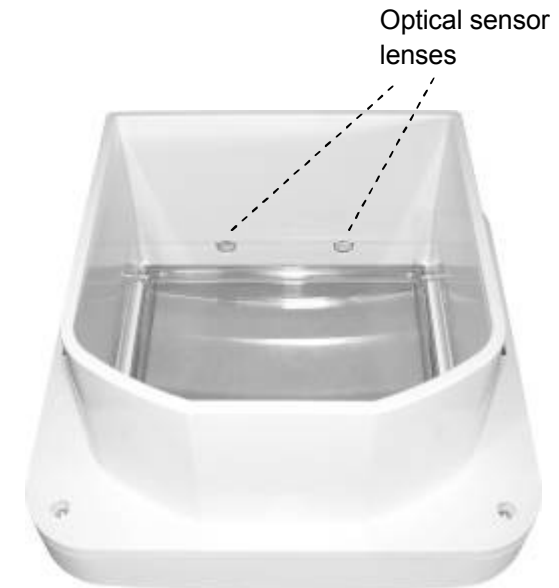
This mode may be useful if you have purchased SureFlap™ before your cat has been microchipped or while your cat is getting used to the presence of their new cat flap (see trouble shooting guide).

## 12. Maintenance

The sensor that detects the presence of a cat in the tunnel is optical and is situated on the inside roof of the tunnel, close to the flap. The position of the sensor is shown in figure 28. If these lenses become obscured by dirt then unreliable operation and/or shortened battery lifetime may result. Wipe these lenses with a damp cloth every couple of months.

Operation of the sensor relies on a reflection from the base of the tunnel, which should also be kept reasonably clean.

After cleaning, leave SureFlap™ for approximately 10s for the unit to settle before normal operation returns.



**Figure 28**

## 13. Trouble shooting

*Symptom: SureFlap™ does not learn your cat correctly*

- Check batteries are fitted the right way round and are not run down.
- Check that SureFlap™ is mounted correctly away from metal surfaces, as described in section 4.
- Check whether your cat has the correct type of microchip fitted. SureFlap™ is designed to work with standard FDX-B microchips - if in doubt check with your vet, who can also verify that the chip is working correctly.
- Ensure the tunnel and sensor lenses are reasonably clean (see section 12).
- After inserting batteries did you leave SureFlap™ for around 10s before allowing a cat into the tunnel? If not then remove batteries for at least 2 minutes to reset the unit.
- Check that there are no obvious sources of electrical noise in the area e.g. faulty flickering lights, other similar microchip readers, etc (see section 4)

*Symptom: SureFlap™ completes the learn process but then fails to open for your cat*

- Check batteries are fitted the right way round and are not run down.
- Check the learning process was carried out correctly for each of the cats you own. For example, when you have put SureFlap™ into learn mode for the second of two cats make sure that the first cat doesn't go through the flap instead. If in doubt repeat the learn process for your cats.
- Check that SureFlap™ is mounted correctly away from metal surfaces, as described in section 4.
- Ensure the tunnel and sensor lenses are reasonably clean (see section 12).
- After inserting batteries did you leave SureFlap™ for around 10s before allowing a cat into the tunnel? If not then remove batteries for at least 2 minutes to reset the unit.
- Check that there are no obvious sources of electrical noise in the area e.g. faulty flickering lights, other similar microchip readers, etc (see section 4)

- Under rare circumstances the microchip range is not enough for SureFlap™ to operate. If all other trouble shooting has been carried out without finding the source of the problem then this is likely to be the remaining cause. In this situation SureFlap can only be used as a normal cat flap without selective entry.

*Symptom: Short battery lifetime*

- Ensure the tunnel and sensor lenses are clean (see section 12).
- Check that there are no obvious sources of electrical noise in the area e.g. faulty flickering lights, etc (see section 4).

*Symptom: Latch takes about 10 seconds to close*

- Occasionally the sensor that detects the presence of the cat in the tunnel needs to reset itself, which takes approximately 10 seconds to register. This is quite normal, however if this starts to happen often then check that the lenses and tunnel are clean (see section 12).

*Symptom: Cat is put off by the noise of the latch*

- Your cat will learn to love their SureFlap™, however a small proportion are initially put off by the noise of the latch opening, particularly if they are not used to using a selective entry flap. If they do not adjust immediately to the use of SureFlap™ then follow the following process to coax them into using it. With a bit of persistence all cats will learn to use the flap.
- First follow the instructions in section 11 and leave SureFlap™ turned off. This will allow them to start using it without any noise from the latch.
- Once your cats are used to SureFlap™ being there then replace the batteries. If they are still unwilling to use it then prop the flap open with the door facing *inside* the house. A simple method here is to use tape between the bottom of the flap and the top of the main assembly. This will allow them to get used to the opening click while also having an inviting open hole to go through.
- Finally let the door swing shut and allow them to start using the flap. Strategic positioning of food inside/outside the house can also help encourage the initial use of the flap.

### *Factory Reset*

In the unlikely event that the unit needs resetting to a known state then follow the following instructions to reset back to the factory settings.

- Carry out the memory wipe function from section 10.
- Remove the batteries for at least 2 minutes.
- The unit is now completely reset.

