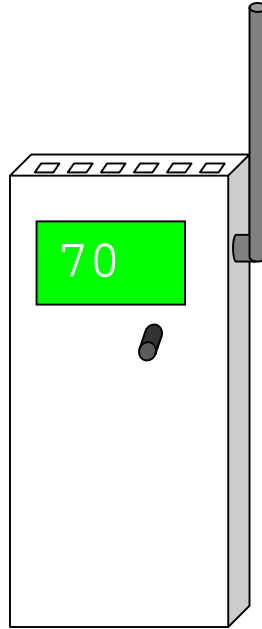


Intelligent Comfort Inc.

# Portable Thermostat



**Business Plan**

**October 28, 2003**

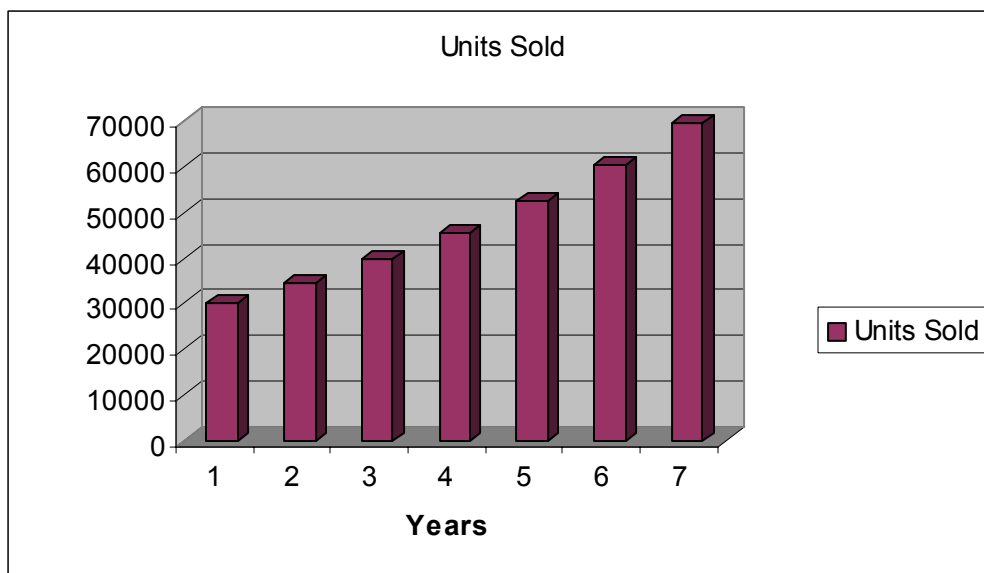
## 1 Executive Summary

Intelligent Comfort Inc. is committed to providing convenient products that makes chores and other everyday troubles less complicated to finish. Our latest product to hit the market involves simplifying the HVAC market. InComfort has developed a portable thermostat that is simple, efficient, and very reliable. Our product will allow the consumer to move throughout their house and change the temperature and controls of their thermostat without having to find a permanent thermostat. InComfort's portable thermostat will also house a precise digital thermometer that will measure the current temperature depending on your current location instead of one specific spot inside a household.

The two primary markets for the portable thermostat include:

- The elderly and disabled would benefit from our product due to its convenience and the fact that the user would not have to move in order to change his/her HVAC settings
- Apartment complexes that have two or three stories would also benefit from our product due to the large difference in temperature between floors

InComfort Inc. is projecting first year sales of 30,000 units. At a price of \$200 per unit, this will generate first year sales of \$6,000,000. The graph below shows the estimated number of units to be sold over the next 7 years. InComfort Inc. expects a growth of 15% in sales each year. This will produce sales of \$13,878,364 in the seventh year of business. The growth of units sold per year is shown in the graph below:



Graph 1 - Expected Sales

## **2 Company Summary**

Intelligent Comfort, Inc. (InComfort) is a company that provides consumers with accessories to alleviate the stresses and inconveniences of everyday life. Our customers are the hard working public and deserve nothing less than the best. We are currently trying to get our company started in the residential heating and cooling controls industry.

### **2.1 Advantages**

The thermostat market has seen few changes recently, leaving most systems today operating under the same inefficient and inaccurate controls as their counterparts did twenty years ago. This leads to poor performance of the entire heating and cooling system, but it also leaves a market for improvements. We intend to take advantage of this market and provide users with a quality solution at a reasonable price. Our portable thermostat will give users the option of choosing the location from which to measure the temperature and allow them to maintain an accurate temperature in their location without guessing what is sufficient, wasting time and using excess energy.

### **2.2 Company Location and Facilities**

InComfort is headquartered in a 6,000 square foot facility in Starkville, MS. This facility consists of 1,000 square feet of office space, leaving the remaining space for manufacturing.

### **2.3 Company Ownership**

InComfort is a limited-liability corporation, founded by and owned by four partners: Joseph Baugh, Brian Chapman, Adnan Mulkana, and Gray Williams.

### **2.4 Contact Information**

InComfort can be contacted by the following means:

267 Comfort Lane  
Starkville MS 39759  
(662) 555-REST  
Website: [www.incomfort.com](http://www.incomfort.com)  
E-mail: [contact@incomfort.com](mailto:contact@incomfort.com)

### **3 Product Summary**

Presently, InComfort's primary product is the Portable Thermostat. This product allows a user to remotely adjust a thermostat's settings. Additionally, the temperature is measured wherever the remote unit is located, helping to keep the temperature consistent wherever the user is. This eliminates the need for the user to return to the wall-mounted thermostat each time an adjustment needs to be made, making it especially convenient for the elderly and disabled.

This product consists of a base unit, remote unit, and computer software. The remote unit allows the user to set the desired temperature and the mode of operation (AC or Heat). A temperature sensor is included in the remote that allows the temperature to be measured at the remote's location. The remote transmits the needed HVAC settings to the base station through a radio link. The base station will then adjust the HVAC for the desired settings. When the remote is turned off or is out of range, the base station and computer will take control of the system. A temperature sensor is included in the base unit to determine the temperature when it has control. Additionally, the user is able to set the desired temperature through the PC when the base unit has control.

This product is very beneficial to the average homeowner. By having the ability to measure the temperature at the remote unit's location, temperature variations can be reduced. For example, a house may have a room that cools off faster than other rooms during the winter. If the user is using this room, then the remote will sense that the temperature is below the set level and turn the heat on. Comparably, a traditional thermostat would wait until the temperature dropped below the threshold at the thermostat.

Elderly and disabled individuals will also benefit from this device. For elderly or disabled people that have a hard time being mobile, the Portable Thermostat will allow the user to stay where they are. They will not have to go to the wall-mounted unit to make adjustments. Additionally, the large "joystick" interface on the remote unit makes it easy to operate.

Currently, the only direct competition is the Carrier Wireless Programmable Thermostat. This thermostat retails for \$300. Our portable thermostat will be manufactured for under \$200 which is competitive with Carrier's. Although our thermostat is not programmable, future models could be. Other future improvements include removing the PC for a more simplistic design, and upgrading the software to allow for off-site control of the HVAC system. Multiple units could be added to account for multiple users and multiple HVAC systems within a house. The number of batteries and the size of the RF transceiver could also be reduced.

## **4 Marketing Analysis**

This section contains information on who we perceive our potential customers to be and why they might buy our product. Additional information is provided on competitors and their products. Methods of product distribution will also be discussed.

### **4.1 Market Types**

InComfort's Portable Thermostat is geared towards four distinct markets. The largest of these markets is the homeowner, followed by the general contractor, then the apartment property owner and finally the elderly and disabled.

The average homeowner is the largest market. This type of customer will purchase our product for one of two reasons. The first reason is that the homeowner's current thermostat is no longer operational and a new one is needed. When the homeowner goes to buy a replacement at a home improvement store, it is hopeful that they will see our product and want to buy it due to the convenience it offers. The second reason a homeowner will purchase our product is because they are specifically looking for a portable thermostat. This type of customer will most likely find our product on the internet while looking for portable thermostat products.

The home builder/contractor market is growing steadily due to the abundant number of houses being built at this time. Interest rates are at an all time low causing an incline in the purchasing and building of new houses. Each of these new houses will need thermostats so there is a large opportunity for expansion in this market. Eventually, InComfort hopes to sell mass quantities of portable thermostats to builders who can directly install the product when the house is originally built.

The apartment property owner is a combination of the home owner and builder/contractor. Portable thermostats can be placed in apartments being constructed. They can also be used as replacements in older apartments when new thermostats are needed.

The final group that would be interested in our product is the elderly and disabled. This type of customer would purchase our portable thermostat for very practical reasons. This type of customer does not see our product as a convenience, but as a necessity. Although this market may have the smallest population at 45,000, it may yield the greatest profit, especially for first year sales.

### **4.2 Market Competition**

The direct competition for InComfort in the portable thermostat market is very slim. Carrier offers a programmable wireless thermostat for \$300. Honeywell offers a

programmable remote for around \$320. However this product does not measure the temperature from a remote location. These are the only two products that directly compete with InComfort's portable thermostat. Indirectly, Robert Shaw and Honeywell make traditional thermostats that are not portable. These products control the majority of the market. In order to increase market share, InComfort must convince the potential customers who own traditional thermostats (those without remote capabilities) that the InComfort portable thermostat is worth the price.

The following table shows the price breakdown for an InComfort portable thermostat.

<b>Parts/Eng. Cost</b>	<b>\$79.85</b>
<b>Cost 50% Cost</b>	<b>\$119.78</b>
<b>Retail Cost</b>	<b>\$200.00</b>

### **4.3 Product Distribution**

InComfort's portable thermostat will be distributed directly to consumers through the internet and sold to consumers and contractors at Lowe's Home Improvement stores. Initially they will be sold in stores across the Southeast. If the product does well over a one-year period of time, Lowe's will begin selling the product nationwide. This will give InComfort ample time to build up its production capability to be able to produce enough products for a nationwide market. Direct sales to consumers and contractors will also occur through the company's website.

## **5 Marketing Strategy and Implementation**

Our main goal during the first year is to create a name for our product and company. This will be done through a four-part strategy:

- Market to the home contractor/builder industry as well as the apartment owner/management industry
- Market through the internet
- Create sales through home improvement stores
- Market to the elderly and disabled

The architecture and home contractor industries will be targeted through industry publications such as "Architect Builder Contractor and Developer" and "Contracting Business." We will also attend as many trade shows as possible to showcase and answer questions about our product. This will get the product and company name into the home building and apartment industry.

The internet provides direct access to our product for people that may be looking for a portable thermostat. Through direct marketing, consumers and contractors will be able to buy a portable thermostat and have it shipped directly to them. The website will be

designed to target people that are specifically looking for a portable thermostat type product or for contractors that need to place large or small orders.

Our contract with Lowe's will allow us to directly market consumers that need to replace or upgrade an existing thermostat. Additionally, advertisements will be placed in home magazines such as "This Old House" and "Better Homes and Gardens."

The elderly and disabled will be targeted through the internet and magazines. Additionally, advertisements will be placed in a number of magazines relating to healthcare for the elderly and disabled. Direct sales by the marketing department will also occur for sometime to help push this product into the market.

After the first year, more niche markets will be pursued. These markets include homeowners who enjoy having "the latest and greatest electronic toys". New products will also be developed and marketed during this time.

## **6 Management Summary**

InComfort consists of three departments: Marketing, Hardware Engineering, and Software Engineering. Marketing is responsible for finding ways to advertise our product and better-inform contractors, repairmen, and do-it-yourselfers. Hardware Engineering is responsible for designing and manufacturing the hardware needed for our products. Lastly, Software Engineering is responsible for microcontroller programming as well as computer software that might be needed to operate our products. A founder manages each of these departments, and each founder reports to the CEO. The position descriptions are as follows:

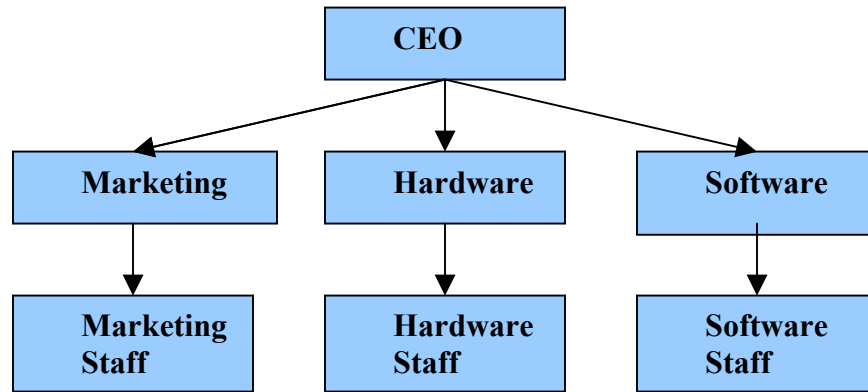
### **6.1 Management Team**

***Gray Williams, CEO*** – In addition to having a significant amount of knowledge in hardware development and systems integration, Gray also has great leadership skills. As our CEO, he is responsible for plotting the future direction of our company and making executive decisions. Gray has a staff of one.

***Joseph Baugh, Marketing*** – Joseph is an electronics and embedded systems expert. He is additionally tireless, charismatic, and creative, giving him the skills needed to interact with customers and market our products. His key responsibilities include creating methods to draw customer interest and to manage finances for the company. Joseph has a staff of three.

***Brian Chapman, Hardware Engineering*** – Brian is our resident hardware expert. Due to his expertise in designing, simulating, and testing circuits and models, he serves as our Hardware Engineering Manager. He will work to ensure that InComfort is creating the most advanced designs possible and make sure that they are being produced to match our specifications. Brian manages a team of three.

**Adnan Mulkana, Software Engineering** – Adnan has vast amounts of experience with developing software and devising algorithms. For this reason, he serves as our Software Engineering Manager. As the Software Engineering Manager, Adnan is responsible for making sure that our software is robust and compatible with our hardware. Adnan manages a team of three.



**Figure 1: Organizational Structure of InComfort, Inc.**

## **7 FINANCIAL PLAN**

At startup, InComfort’s financial plan is to borrow \$700,000 to be paid off in three years at 12% interest. This will allow an initial balance to cover startup costs and fixed costs for the first two months until sales and full production can begin. Once the influx of cash flow has begun, all expenses will be covered by generated sales.

### **7.1 Financial Assumptions**

For InComfort to develop a reasonably accurate financial plan, the following assumptions had to be made:

- The U.S. economy may stay stagnant or experience slow growth without any major changes.
- No new technologies will come upfront that may make our product obsolete.
- The U.S. will not suffer from any energy crisis that may restrict HVAC uses or operations.

### **7.2 Financial Indicators**

Key indicators as to InComfort’s success will be represented by a steady growth in sales with costs of parts and manufacturing being no more than 40% of the sales cost of our product. Also, a turnover ratio of at least 5 will be necessary to insure that inventory does not build-up at a rate quicker than shipment of products causing for a reevaluation of the financial planning.

### 7.3 Break-Even Analysis

For InComfort to stay a viable business, it must perform in a manner to stay ahead of the break-even point. The break-even point is found by determining the total fixed costs for the company and dividing this amount by the difference in the price per unit to the cost per unit. The table below shows a monthly break-even analysis.

Fixed Cost	Monthly
Salaries	85,000
Advertising	5,000
Rent	2,000
Utilities	1,000
Insurance	2,500
Maintenance	500
Miscellaneous	1,500
Total Fixed Cost	97,500

**Table 1 – Monthly Fixed Costs**

For InComfort to break-even, selling each unit for \$200 after an \$80 production cost per unit, approximately 813 units will need to be sold. As InComfort is expecting sales of 2,500 units per month, it is expected to easily stay ahead of the break-even point.

### 7.4 Projected Profit and Loss

Net Sales for each year are projected to show a steady growth. This growth will be the true indicator of the success of the company. Following a period of 3 to 5 years, InComfort plans to expand its product line using the earnings that will be produced prior to that time.

	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Sales</b>	<b>6,000,000</b>	<b>6,900,000</b>	<b>7,935,000</b>
<b>Cost of Sales</b>	<b>2,400,000</b>	<b>2,660,000</b>	<b>3,054,000</b>
<b>Gross Margin</b>	<b>3,600,000</b>	<b>4,240,000</b>	<b>4,881,000</b>
<b>Gross Margin %</b>	<b>60%</b>	<b>61.4%</b>	<b>61.5%</b>
Startup Expenses			
<b>Legal</b>	<b>3,500</b>		
<b>Consultant</b>	<b>7,000</b>		
<b>Stationary</b>	<b>1,500</b>		
<b>Rent Deposit</b>	<b>2,500</b>		
<b>Equipment</b>	<b>237,590</b>	<b>11,090</b>	<b>14,745</b>
Fixed Expenses			
<b>Salary</b>	<b>1,020,000</b>	<b>1,085,000</b>	<b>1,115,000</b>
<b>Advertising</b>	<b>60,000</b>	<b>65,000</b>	<b>70,000</b>
<b>Rent</b>	<b>24,000</b>	<b>24,000</b>	<b>24,000</b>
<b>Utilities</b>	<b>12,000</b>	<b>13,100</b>	<b>14,000</b>
<b>Insurance</b>	<b>30,000</b>	<b>30,000</b>	<b>30,000</b>
<b>Maintenance</b>	<b>6,000</b>	<b>6,000</b>	<b>6,100</b>
<b>Miscellaneous</b>	<b>18,000</b>	<b>20,000</b>	<b>21,000</b>
<b>Total Expenses</b>	<b>1,686,690</b>	<b>1,517,690</b>	<b>1,558,345</b>
<b>Net Sales Profit</b>	<b>1,913,310</b>	<b>2,722,310</b>	<b>3,322,655</b>

Table 2 – Projected Profit and Loss

## 7.5 Cash Flow

The cash flow chart below shows initial cash availability as \$200,000. This amount represents money pooled by the four charter members of the company. A change to this amount would change the cash total. This represents our expected cash flow and may not be exact.

	<b>2004</b>	<b>2005</b>	<b>2006</b>
Cash Received			
<b>Startup Loan</b>	<b>700,000</b>	<b>0</b>	<b>0</b>
<b>Cash Available</b>	<b>200,000</b>	<b>2,165,400</b>	<b>2,733,400</b>
<b>Cash Sales</b>	<b>6,000,000</b>	<b>6,900,000</b>	<b>7,935,000</b>
Cash Total	<b>6,900,000</b>	<b>9,065,400</b>	<b>10,668,400</b>
Cash Paid Out			
<b>Salary</b>	<b>1,020,000</b>	<b>1,085,000</b>	<b>1,115,000</b>
<b>Advertising</b>	<b>60,000</b>	<b>65,000</b>	<b>70,000</b>
<b>Rent</b>	<b>24,000</b>	<b>24,000</b>	<b>24,000</b>
<b>Utilities</b>	<b>12,000</b>	<b>13,100</b>	<b>14,000</b>
<b>Insurance</b>	<b>30,000</b>	<b>30,000</b>	<b>30,000</b>
<b>Maintenance</b>	<b>6,000</b>	<b>6,000</b>	<b>6,100</b>
<b>Miscellaneous</b>	<b>18,000</b>	<b>20,000</b>	<b>21,000</b>
<b>Legal</b>	<b>3,500</b>		
<b>Consultant</b>	<b>7,000</b>		
<b>Stationary</b>	<b>1,500</b>		
<b>Rent Deposit</b>	<b>2,500</b>		
<b>Equipment</b>	<b>237,590</b>	<b>11,090</b>	<b>14,745</b>
Subtotal	<b>1,686,690</b>	<b>1,517,690</b>	<b>1,558,345</b>
<b>Loan payments: 36 months at 12%</b>	<b>279,000</b>	<b>279,000</b>	<b>279,000</b>
Total Cash Paid	<b>1,965,690</b>	<b>1,796,690</b>	<b>1,837,345</b>
Cash Balance	<b>4,948,810</b>	<b>7,268,710</b>	<b>8,831,055</b>

**Table 3 – Cash Flow and Balance**

## **7.6 Balance Sheet**

InComfort expects for the net worth of the company to grow rather quickly. After the first year of business, InComfort's retained earnings will carry over to the next year, quickly adding to the net worth of the company.

	2004	2005	2006
Assets			
<b>Current</b>			
<b>Cash</b>	200,000	4,948,810	7,268,710
<b>Long-Term</b>			
<b>Equipment</b>	237,590	11,090	14,745
<b>Depreciation</b>	41,000	2,176	4,100
Total Assets	1,096,590	4,957,724	7,279,355
Capital			
<b>Liabilities</b>			
<b>Primary loan</b>	700,000	0	0
<b>Retained Earnings</b>	4,948,810	7,268,710	8,831,055
<b>Cash Balance</b>			
Total Capital			
Net Worth	395,590	4,957,724	7,279,355

**Table 4 – Balance Sheet Showing Net Worth**