

# High SPEED Baking Oven

**Cooks and Browns**

like a **Gas** or **Electric Oven** In **Half the Time**

Rev. 3

## Reinventing Microwave Cooking

**Fact Sheet:**

Half Time Oven Features **P.2,3**

Apollo Technology **P.4**

### High Speed Solutions

The Half Time oven is a project developed by Apollo USA to reduce conventional cooking speeds by 50% for the residential markets without sacrificing food quality.

### Ease of use

User only needs to enter conventional time and temperature.

No preheat required.

### How it was done

These results are achieved by adding Apollo's patented microwave power control system to the product, along with a custom tailored algorithm.



# Half Time Oven

## Baking

Apollo has established food items that are sensitive to the high speed process to demonstrate how well the technology works.

Breads are a great test food due to the fact that the bread's cell structure is very sensitive to microwave exposure.

The picture to the right shows one loaf baked in the halftime oven and the other in a standard range. Can you tell which is which?

## French Loaf:

Baked in excess of 50% of conventional time with excellent results.

**No Preheat required!**



## French Loaf:

Mix: Pillsbury French Bread

Outstanding results were achieved.

HTO:

**Bake Time: 17 minutes**

**Bake Temp: 325° – 400°F**

Conventional Oven:

Bake Time: 28 minutes + Preheat

Bake Temp: 350°F



## Markets

Apollo sees market potential in the domestic and international RV, boating markets, and Asian kitchen markets where space is at a premium and electrical power is limited.

## History

Thousands of units were sold in one day on QVC

## Technology behind the cooking

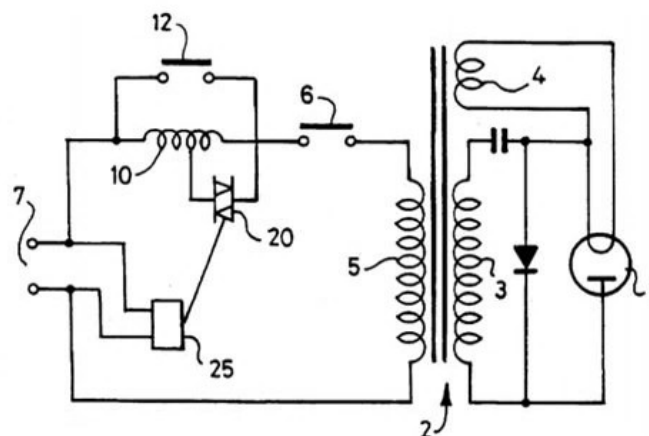
### Apollo's Balanced Energy Invention:

We combine all three energies simultaneously during the cooking cycle.

Convection Heat

Radiant heat

Microwave



### How this is done:

#### In-Line Impedance:

This system comprises a re-designed high voltage transformer such that a resistive component in series with an inductive section of the high voltage transformer provides a power factor of one and as such maintains control of the magnetron's operation.

European Patent #: 0,764,390

USA Patent #: 5,742,032

## Specification

120 / 240v AC

15A / 20A circuit

50 / 60Hz

## Result

Baked in excess of 50% of conventional time with excellent results.

## Operation

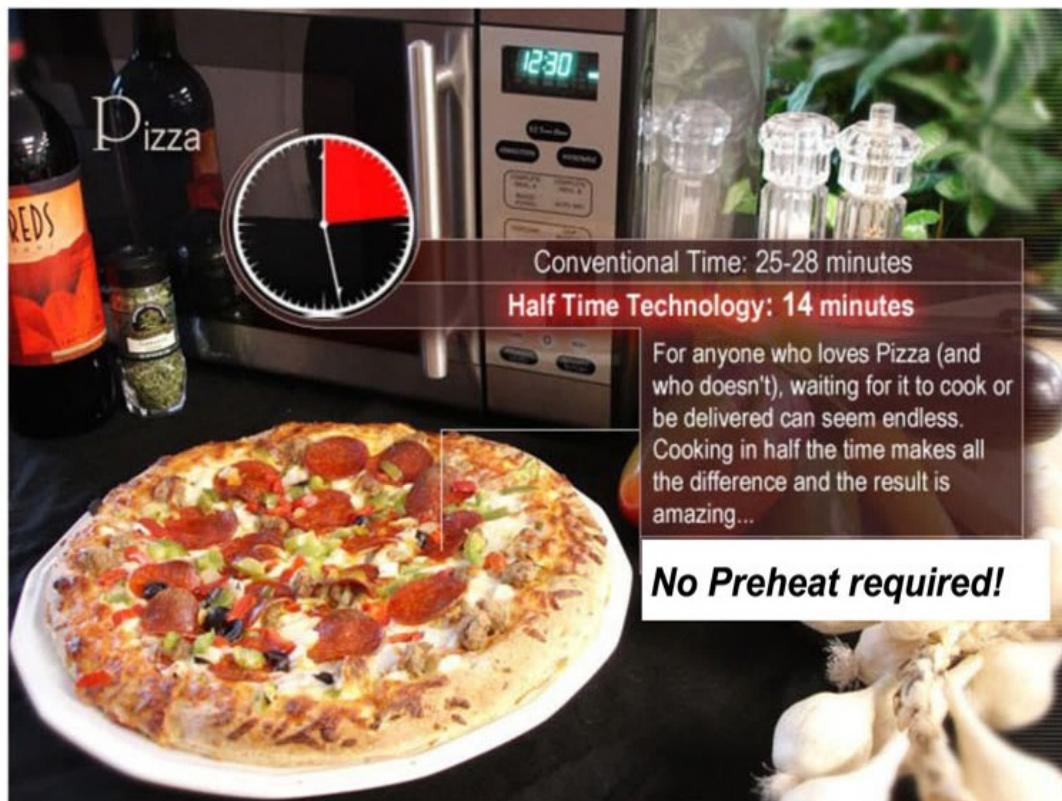
Select "**Half Time**"

Set **Temperature**

Enter the STANDARD cooking time

Push "**START**"

## Frozen Pizza:

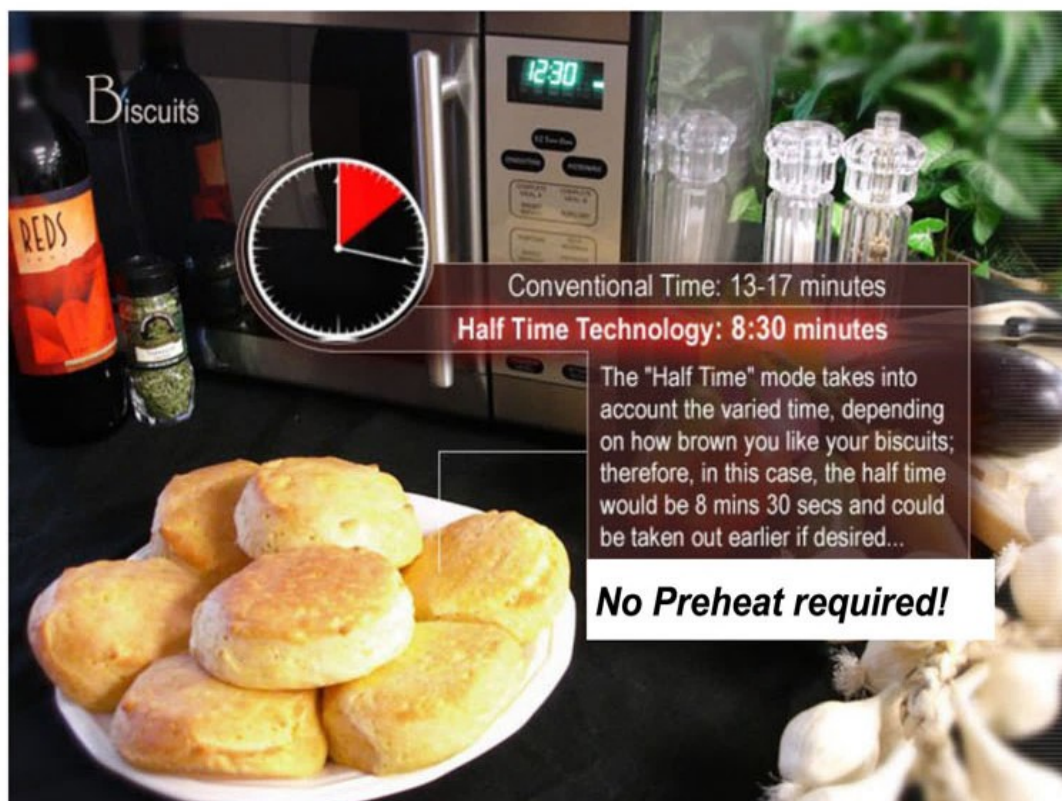


Conventional Time: 25-28 minutes  
**Half Time Technology: 14 minutes**

For anyone who loves Pizza (and who doesn't), waiting for it to cook or be delivered can seem endless. Cooking in half the time makes all the difference and the result is amazing...

**No Preheat required!**

## Refrigerated Biscuits:



Conventional Time: 13-17 minutes  
**Half Time Technology: 8:30 minutes**

The "Half Time" mode takes into account the varied time, depending on how brown you like your biscuits; therefore, in this case, the half time would be 8 mins 30 secs and could be taken out earlier if desired...

**No Preheat required!**

## Apollo Customers:

Brother  
Belling  
Delongi  
Electrolux  
GE  
Maytag  
Middleby  
RICCAR  
Stoves

## Contact Information:

**Ken Eke** – C.Eng., MIEE,  
CEO/Microwave Engineer

[ken.eke@apollomicrowave.com](mailto:ken.eke@apollomicrowave.com)

**Mark Boyer** - BSEE, MBA,  
Director of Operations

[mark.boyer@apollomicrowave.com](mailto:mark.boyer@apollomicrowave.com)

**Graham Eke** - RF expert,  
Director of R&D

[graham.eke@apollomicrowave.com](mailto:graham.eke@apollomicrowave.com)

Apollo USA, Inc  
256 Seaboard Lane,  
Suite G-105, Franklin, TN

## • Technology:

For the past 40 years, CEO Ken Eke has directed Apollo to become an innovation leader in the field of microwave cooking technology for the residential, commercial and industrial sectors. Apollo technology has been used by most of the major appliance manufactures world wide.

- With over 75 international patents globally to Apollo's name spanning from automated cooking, microwave power control to best in class energy distribution, we have done it all. Apollo's technology made it possible for Brother Industries to produce the first combination oven in the world back in the mid 1980s. Ultimately Brother went on to sell over 1.2 million products that used Apollo's patented technology. The GE Trivection oven was showcased by Alton Brown and also by Alec Baldwin during a Third Rock episode.
- The first generation of the Half Time Oven has seen considerable success. This product sold thousands of units in one day at QVC. Why has this product had such success? There are three primary reasons. First, the technology works. The food quality is equal to what is expected from a standard radiant oven but in half the time. Second, the user does not have to use special lookup tables or codes. All the user needs to do is input the standard package time and temperature and the oven does the rest. No other oven can claim that level of ease of use, none! Third, all food is cooked in half the conventional time!

## Why Invest into the Apollo Half Time Oven (HTO):

- Time: Cooks most foods in 50% of the conventional recipe time.
- Quality: High Quality results, equal to that of conventional ovens.
- Ease of use: User only needs to enter convectional recipe time and temperature.
- Size: Same package size as a standard Convection / Microwave countertop oven.
- Scalable: Technology can be placed in any size Convection / Microwave oven.
- Markets: US / International Kitchen, RV, Boating (where space is at a premium)
- Demand: Proven demand — Thousands sold on QVC in one day.
- Delta cost add: \$10 to \$20 USD to place technology on a current production unit.
- No Special Electrical needs: 120 / 220v AC 15A—20A circuits.