

# **Automatic Telephone Answering Machine**

## **Abstract:**

An automatic telephone answering machine or system is an electronic device that answers automatically to an incoming telephone call and plays a prerecorded message and is capable of recording a message the caller want to leave. These systems include message recording system having remote access to message playback, automatic dialing, equipment to receive an alarm, automatic data entry-answering systems and other common telephone devices being used along with modem equipments. The microcontroller typically controls a number of peripherals, components of the answering machine such as an LCD or LED display, an indicator light for recording and playback options, a DTMF receiver and an audio controller. A telephone answering machine must be capable of being remotely activated consisting of:

- A switch deciding the mode of operation either automatic or normal mode.
- Provision for receiving the calls automatically when in automatic mode.
- Provision for recording the message to be delivered to the incoming user and also to record his message
- Storage for the message
- Microcontroller to deliver control signal as per the mode of operation.

Commonly used telephone answering devices comprises of a number of features which allow a user to examine the

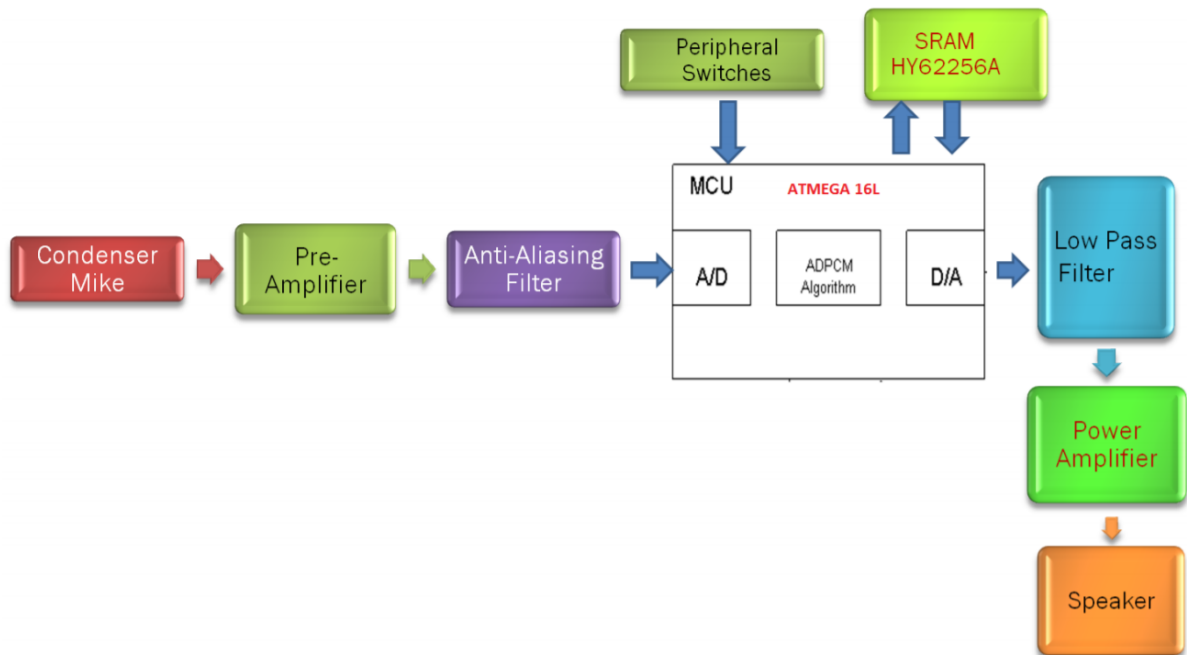
presence of a call, seize calls, play back recorded voice messages, record an announcement etc. Triggering of a telephone answering machine done by counting the incoming ring signals and when the count surpass a preset number set by the user. The machine is programmed in such a way that if the user does not attain his telephone within a specified time period which is the function of number of ring signals, the call is automatically answered and a message is played back to the caller as well as asks him to leave a message.

### **Introduction:**

With the development of new technologies different additional features are being added to the basic telephone. These functions include a wide range of new application which allows automation also. Starting from shortening of dialing time to answer a call automatically are some of the recent features developed. In the world of personal telecommunication this automatic answering machine has become very popular and worldwide. It is becoming the part of every house hold for communication basically to receive message in the absence of the user of the machine.

An automatic telephone answering machine can be identified as an electronic device which has the basic feature of answering a call in the absence of the receiving user. It has some added features like plying back a prerecorded audio message to the caller. If the caller wants to leave a voice message he can do so by accepting the option to record a message. The answering machine or system can be described as data processing system.

## Block Diagram:



## Components:

- Condenser Mike
- Pre-amplifier
- Anti-aliasing filter
- Microcontroller
- External memory
- Peripheral switches
- Low pass filter
- Power Amplifier
- Speaker