

A Free eBook Provided By: United Mechanical, Inc.

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#1 - Set your programmable thermostat

There is an easy way to begin lowering your air conditioning costs...let your thermostat do it for you! Install a programmable thermostat, so that you can vary the temperature, according to when you're home.

For cooling, our advice is to program your thermostat to be at 78 degrees while you are home, and 80-85 when you are at work or if you'll be away for more than an hour or two.





The temperature setting can vary based on user preference and comfort.

We recommend that you do research on the best type of energy efficient programmable thermostat and the best temperatures.

We stock a wide a variety of programmable thermostats to suit your specific needs.

The pre-programmed settings that come with most programmable thermostats are intended to deliver savings without sacrificing comfort.

Depending on your family's schedule, you can see significant savings by sticking with those settings or adjust them as appropriate for your family.

Also, don't forget to reprogram your thermostat when you go on vacation!

To start saving money on your air conditioning bill:

<u>Contact</u> United Mechanical, Inc. online or call (239) 939-2032 to discuss which programmable thermostat best suits your specific needs.

#2 - Change your air filter at regular intervals



One of the easiest, but often neglected, ways to keep your air conditioning cost down is to make sure your filters are replaced at regular intervals. You should change your **air filter** once a month or as needed based on the manufacturer's recommendations. Several highly efficient filters are available that can extend the useful life.

As the filter becomes loaded with dust and particulate, the air conditioning unit has to work harder, which means the power consumption increases. This bogs down the motor and can decrease the life of the unit.

If you want your air conditioner to last longer and run more efficiently in the long run, it is very important to replace and clean your air conditioning filters regularly. Generally speaking, for home air conditioners, it's good to clean or replace them every month depending on your air conditioner usage.

Another important part of maintaining your air filter is to purchase the proper size filter, and make sure it is installed properly.

If you neglect to regularly maintain your air filter, you will probably realize that your air conditioner will take a longer time to cool and will consume more electrical power.

#3 - Practice preventative maintenance

An ounce of prevention is worth a pound of cure (or, at least it's worth a few more ounces in your wallet when you save on your electric bill!) <u>Preventative maintenance</u> is essential if you own an air conditioning unit.

Below you'll find our Preventative Maintenance Checklist, which is our proven method to keep your system running efficiently, your home in constant comfort, and your electric bill low.

Outdoor units

You should expect your service technician to:

- Inspect unit for proper refrigerant level and adjust if necessary
- Clean dirt, leaves and debris from inside cabinet
- Inspect base pan for restricted drain openings and remove obstructions as necessary
- Inspect coil & cabinet and clean as needed
- Inspect fan motor and fan blades for wear and damage. On older models lubricate as needed
- Inspect control box, associated controls/ accessories, wiring and connections. Controls may include contractors, relays, circuit boards, capacitors, sump heat and other accessories. All control box and electrical parts should be checked for wear or damage.
- Inspect compressor and associated tubing for damage



Indoor units

You should expect your service technician to:

- Inspect and clean blower assembly (includes blower housing, blower wheel and motor)
- On older models, lubricate motor and inspect and replace fan belt if needed
- Test safety controls including drain pan overflow switch
- Calibrate thermostat
- Clean condensate drain lines
- Measure temperature differential for proper heat transfer
- · Inspect evaporator coil, drain pan and condensate drain lines. Clean as needed
- Inspect control box, associated controls, wiring and connections
- Clean or replace air filters
- Inspect conditioned airflow system (ductwork)—check for leaks

To save money on your A/C costs, always make sure you have a Preventative Maintenance Agreement for your air conditioning unit.

Here are 6 Reasons why a Preventative Maintenance Agreement will save you money:

- · No service call fee
- 15% discount on Products
- Flat Rate Pricing so there are no surprises
- No Overtime or Holiday Charges
- Free Estimate on new equipment
- Your unit will be maintained properly to reduce energy costs & help prevent untimely unit breakdown

#4 - Air conditioning cleaning service

Your outdoor air conditioning unit performs a tough job in warm weather!

It takes the concentrated heat collected from your home and dumps it into the hot outdoor air. To get rid of the collected heat, your outdoor condenser coil has to move a lot of air.

If the coil is dirty or if plants or other objects are too close to the air conditioning unit, the fan in the outdoor coil can't move as much air as required for good performance and efficiency.



This raises your electricity cost for air conditioning and may shorten the life of your a/c unit. To make sure your outdoor a/c unit is only dumping hot air, and not money, follow these precautions:

- Make sure your unit is free of leaves and brush. Remove plants and other debris from within 3 feet of the unit in all directions.
- Make sure the air's upward path in leaving the unit is unrestricted for at least 5 feet.
- Remove surrounding grass or bushes.
- Consider privacy fencing to help keep debris away.
- If your outdoor unit is installed under a deck or if someone built a trellis or some other structure above it, either move that structure or hire an air-conditioning contractor to move the outdoor unit.

Even if your air conditioning unit appears to be clean, most are loaded with pollen and dust. The longest a condenser should go without cleaning is 1 year, depending on how much it operates during the summer. If your cooling season is 4 months or more, annual air conditioning cleaning service is an excellent idea.

#5 - Seal your doors and ductwork

If any air (either for heating or cooling) is escaping your home, it is taking your money with it! So, if your home is not properly sealed, then air is leaking out and causing your air conditioning bill to rise. To prevent this, make sure all doors and windows are sealed properly.

Since every window and door is essentially a giant hole in your home, there are plenty of opportunities for air to escape!

Even though today's doors and windows may offer the best insulated glass that money can buy, it is a futile effort if the hole they are hanging in is not insulated and sealed properly.

Here's a little inspection you can do:

On the next cold day, run your hand over the interior casing of a window. Is the woodwork cold? It shouldn't be. If it is cold to the touch, gently remove a piece of the

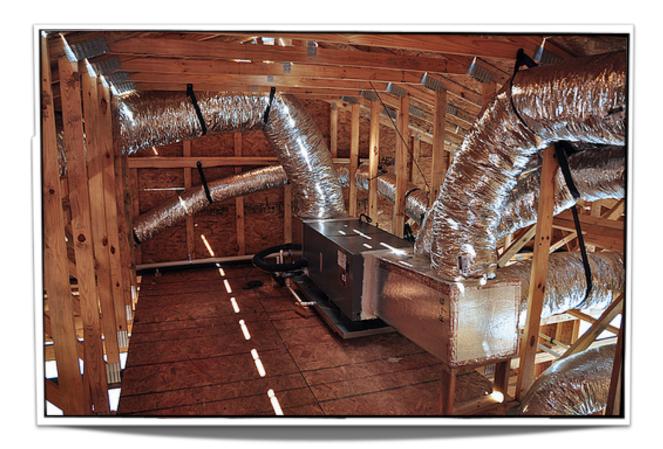


casing and take a look behind. You may be surprised to see just how "un-insulated" the space between the frame of the house and the frame of the window is. If one casing was not installed correctly, most likely none of them were and you are losing some of your cool or warm air...and money!

Repairing your door and window casings is a fairly easy fix.

- 1. Go to your local home improvement store and get a small roll of fiberglass insulation. You can usually buy small handy rolls that are made just for this purpose so you don't have to buy an entire package of batts.
- 2. Use a pair of shears to cut the insulation into small enough pieces to fill the gaps.
- 3. Put insulation into the gaps of your window and door casings. (Don't over stuff the openings insulation works best when it is allowed to expand to its natural size. If you over stuff the spaces, the compact pieces of fiberglass will forfeit their ability to capture the cold air.)

This technique can be used around all of your windows and exterior doors.



Have your ductwork checked:

Your home's air ducting system is a branching network of tubes in the walls, floors, and ceilings. It carries the air from the furnace and central air conditioner to each room. Ducts are typically made of sheet metal in more recent times and fiberglass or other materials in older homes.

Sometimes poor installation or lower quality standards cause duct systems to be poorly insulated, thereby costing you money! Ducts that leak heated or cooled air into attic spaces can add hundreds of dollars a year to your heating and cooling bills. Insulating ducts that are in unconditioned spaces is usually very cost effective.

Sealing your ducts to prevent leaks is even more important if the ducts are located in an unconditioned area such as an attic or vented crawl space. If the supply ducts are leaking, heated or cooled air can be forced out unsealed joints and lost. Unconditioned air can also be drawn into return ducts through unsealed joints.

In the summer, hot attic air can be drawn in, increasing the load on the air conditioner. Ducts in unconditioned spaces should be sealed and insulated by qualified professionals using the appropriate sealing materials.

#6 - Get your air conditioner inspected

So, you've been diligently reading our eBook...you've been taking all the proper precautions...yet, you still feel that your air conditioning bill is too high. Well, there is a chance that your system isn't running up to par. You may want to consider having a full diagnostic system check to ensure that everything is running correctly.

Below are some common operating defects and possible problems:

- The air conditioning system will not operate at all: power may be off, controls may be improperly set, or the system may be inoperative. (Confirm that the system has electrical power and that all of its control switches and thermostat are set to "on" and "cooling" positions.)
- The air conditioning system operates but does not produce cool air: It's important to identify the problem as specifically as you can: is the fan or compressor running without the other? Does the unit work sometimes, but not



always? Be sure to take a second to observe operation before you cut power to the unit.

Here are some additional problems that may require a professional diagnostic:

- The compressor is short-cycling, that is, turning itself on and off rapidly, perhaps every few seconds or minutes rather than producing a normal on-cycle of 10 minutes or longer.
- The compressor is noisy, during startup, indicating an operating problem.
- The compressor squeals at startup, indicating that service may be needed promptly to prevent possibly costly damage to the system.
- Inside cooling or evaporator coil defects that can be seen by eye: dirty coil, blocked coil, frost on the coil, improperly sized evaporator coil, improper evaporator or cooling coil placement in the system.
- Air flow across the air conditioning evaporator coil: if airflow is weak for any reason (dirty coil, duct system defects, blower fan defects, dirty blower squirrel cage fan), the air conditioning system will not operate properly.

#7 - Hire an air conditioning specialist

In addition to saving you money on your electric bill, we also want to make sure we save you money on any necessary repair costs related to your air conditioning unit! It is important that your air conditioning company is <u>only</u> concerned with making sure that your unit is functioning correctly...not concerned with trying to make a sale.

When hiring an Air Conditioning Company, make sure they use technicians that are NOT paid on commissions. We feel that a technician needs to be looking out for your best interest. Typically, this is not the case if they are being paid a commission for selling you equipment you may or may not need.

What Does An Air Conditioning Technician Do?

Technicians work to install, maintain and service air conditioning systems and support. These systems can be found anywhere from small residential homes to large commercial or industrial buildings. Technicians working in this field are trained in both service and repair, capable of identifying problems and the maintenance and repair of equipment. They work with various types of tools, including acetylene torches, measuring gauges, pipe cutters, drills, voltmeters, pressure gauges, metal snips, wrenches and hammers. Air Conditioning Technicians have the option of working independently or as employees of larger companies.

The following are typical job functions for an Air Conditioning Technician, according to the Bureau of Labor Statistics:

- Reading blueprints for installing air-conditioning systems.
- Installing water supply lines, air ducts and vents, pumps, and other components.
- Connecting electrical wiring and controls and checking the units for proper operation.
- Performing routine maintenance and repair work.
- Installing and maintaining heat pumps.
- Inspecting air-conditioning systems in the winter and completing required maintenance, such as overhauling compressors.
- Installing motors, compressors, condensing units, evaporators, piping and other components in refrigerator units.
- Conserving, recovering and recycling the refrigerants used in air-conditioning and refrigeration systems, which can be harmful to the environment.
- Installing or repairing cooling systems.

At United Mechanical, our technicians are professional, well-trained air conditioning specialist, and have only your best interest and the functioning of your air conditioning unit in mind!