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## EC74-2034 Portable Electrical Appliances...Your Servants at Home

Mary Dale Christensen

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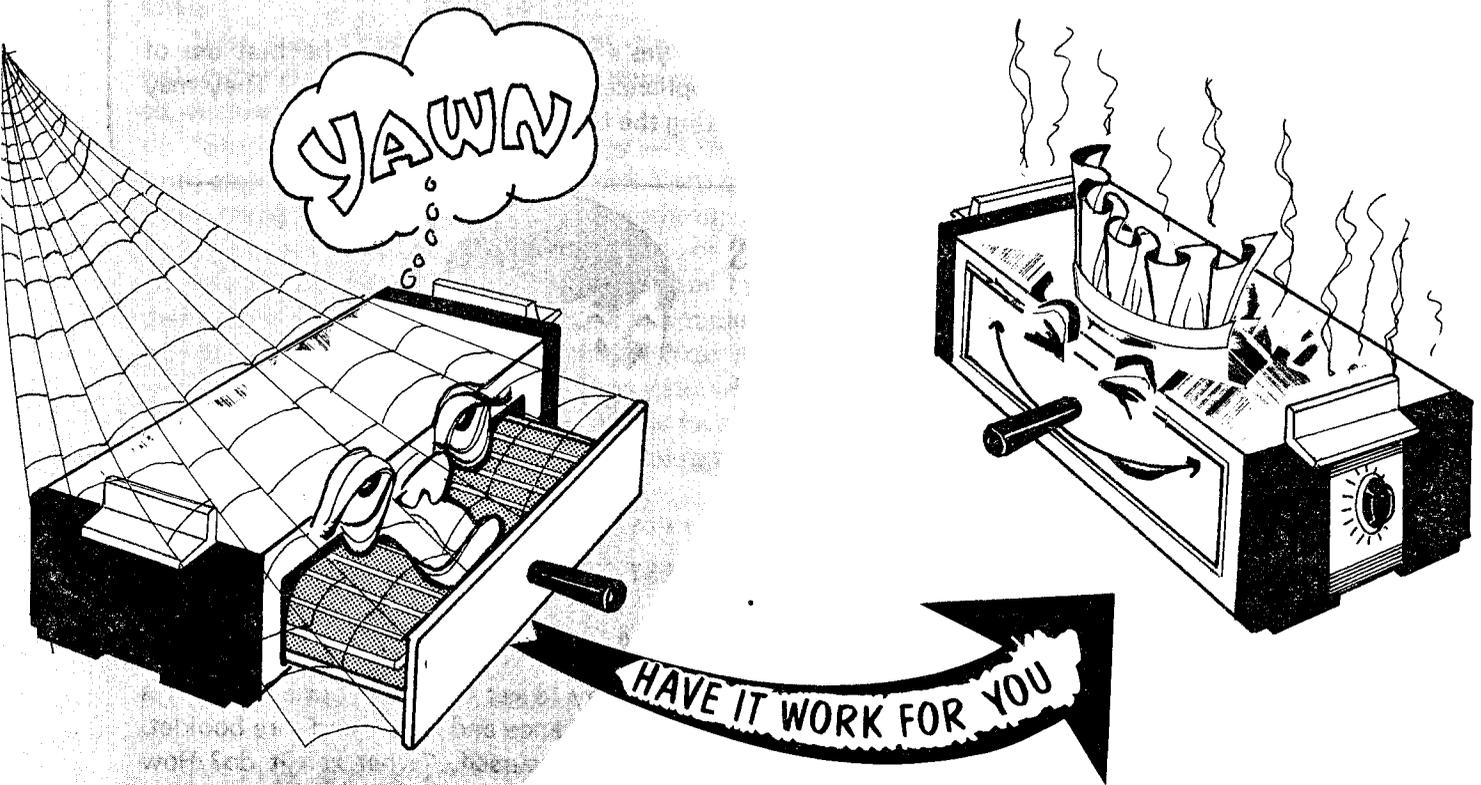
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EC 74-2034

# Portable Electrical Appliances....

## Your Servants at Home



Extension Service  
 University of Nebraska-Lincoln College of Agriculture Cooperating with the  
 U. S. Department of Agriculture and the College of Home Economics  
 E. F. Frolik, Dean J. L. Adams, Director

## PORTABLE ELECTRICAL APPLIANCES—YOUR SERVANTS AT HOME

Mary Dale Christensen  
Extension Specialist (Housing)

Today's modern homes are housing many small electrical appliances—potential servants. Some are well used. Others are misused, and some are not used at all.

### HOW'S YOUR A Q? (APPLIANCE QUOTIENT)

\_\_\_\*Do you know exactly where the use and care bulletin is for each appliance?

\_\_\_\*Do you have an attractive and convenient place to keep each appliance?

\_\_\_\*Do you know how to use *all* the features on *all* of your appliances?

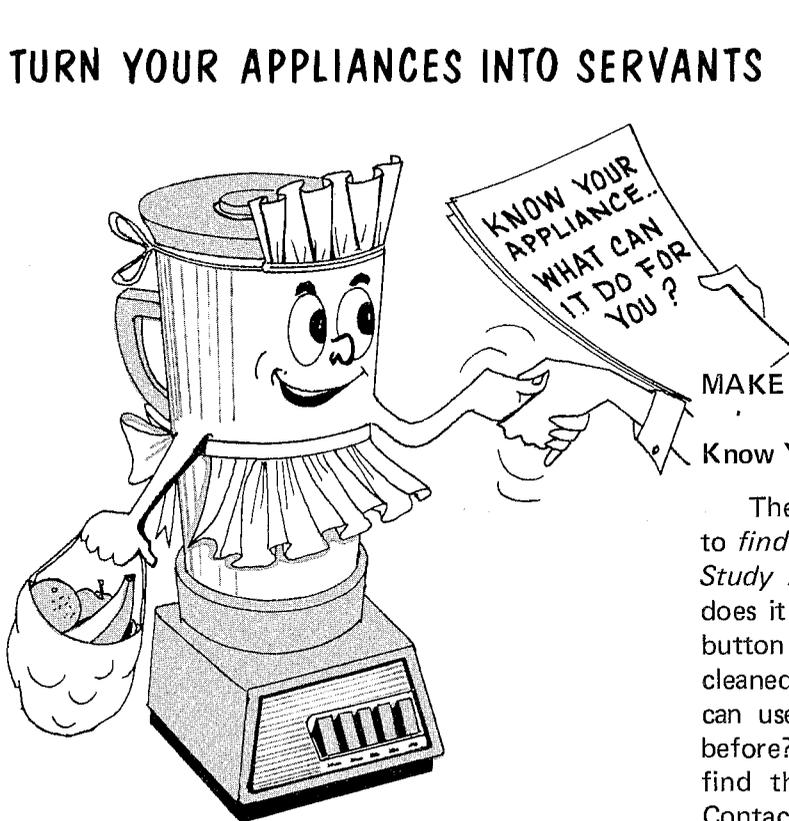
\_\_\_\*Are the appliances easy to keep clean?

\_\_\_\*Have you *used* all the features?

\_\_\_\*Have you used all your appliances in the last month?

Six "yes's"? You are getting the best use of your appliances. Three or fewer "yes's"? They may be getting the best of you.

## TURN YOUR APPLIANCES INTO SERVANTS



### MAKE BEST USE OF YOUR SMALL APPLIANCES

#### Know Your Appliances

The best way to get to know your appliances is to *find* each appliance and its use and care booklet. *Study both.* Ask yourself, "What can it do? How does it work? What are its limitations? What is each button or dial for? How should each part be cleaned? What are some of the best ways my family can use this? Why has it not been effectively used before? How can I use it today?" If you cannot find the use and care booklet, get another one. Contact a store that has the identical model or write the manufacturer for another copy.

1. What can you do to insure your best use of the appliances you *already* have?

2. What can you do to insure good decisions in purchasing small appliances in the future?

#### Have Storage for Your Appliances

If you had difficulty finding or getting to either the appliances or the booklet, that may be why the

appliance hasn't been used frequently. Start a file for the use and care booklets and warranties for all your appliances. (Send in all warranty cards.) Keep the file current and within easy reach, preferably in the kitchen area where most small appliances are located. Then you will have it handy to answer any questions you may have.

Storage for small appliances can be a big problem. Keeping them in easy reach, in sight, and in condition to use is vital *if* they are to be used.

\*Store appliances close to the place where they will be used.

\*Store appliances so that they are seen and not forgotten.

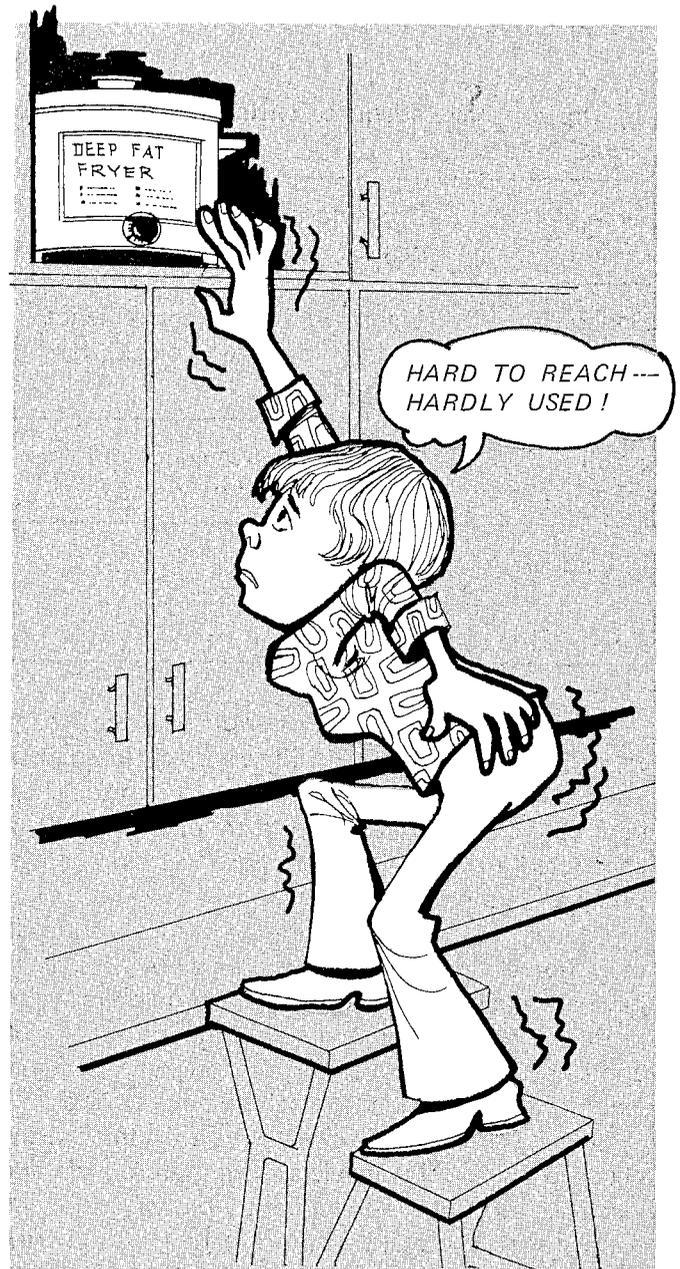
\*Keep heavy appliances at counter top height or slightly below. (Do not put on top shelves of wall cabinets. They are too heavy to be reached safely.)

\*Use the storage space between counter and wall cupboards for appliances. They may be covered, enclosed or left in view.

\*Store appliance cords where they will be free from grease and sticky particles of food. Keep cords from being twisted, entangled and knotted, and becoming a hazard on the counter top or in a drawer. Slide them into cardboard tubes or hang them from wooden spools, hooks, or a couple of parallel bars of noncorrosive material. You may want to color code which cord goes with which appliance by using various colors of plastic tape.

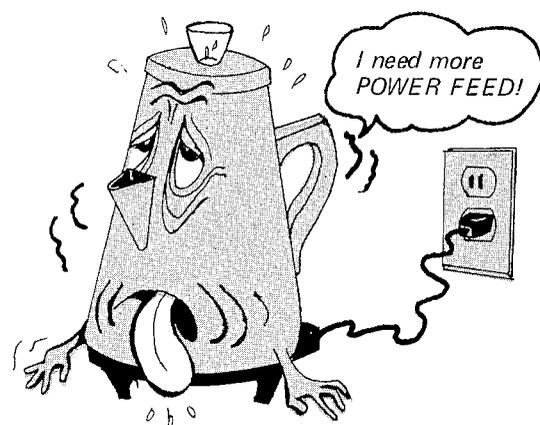
\*Keep appliances (especially if kept plugged in) away from reach of small children.

\*When storing appliances turn controls to "off" position.



### Provide Electrical Requirements of Your Appliances

Are you getting poor performance from an appliance? Inadequate wiring could be the villain. To get the best performance from your electrical appliances, you must have adequate wiring in your home. The great increase in electrical appliances used today has made the wiring of many homes—even those wired as recently as 10 years ago—inadequate. Even the minimum wiring standards call for at least two small appliance circuits in the kitchen-dining room service area. These circuits have larger wire than regular lighting circuits because the small appliances have higher wattages. The following wiring chart may be used to determine whether your home is safely wired.



## Adequate Wiring

Do you have adequate wiring for your appliances; For convenient reference, note the following table:

<i>Type of Circuit</i>	<i>Appliances that may be used</i>	<i>Capacity of fuse or circuit breaker</i>	<i>Maximum wattage</i>
General purpose	Lights in house, convenience outlets for radio, clock, fan, and vacuum.	15 ampere, for use with No. 14 wire.	1800
Small appliance	Grounded convenience outlets for electrical housewares.	20 ampere—No. 12 wire must be used on small appliance circuit	2400
Individual	Major appliances	Varies with each appliance.	Wattage of specific appliance.

Some typical wattages of appliances are: toaster, 1250 watts; waffle, 1350 watts; coffee maker, 1000 watts; and hand iron, 1100 watts. In the chart you can see that if more than one of these is connected to a "general purpose" circuit at one time the wiring will be overloaded.

General purpose circuits are those found in most homes and are served with No. 14 wire. They have a capacity of 1800 watts and should always be protected with a 15-ampere fuse. In contrast, small appliance circuits use larger diameter wire (usually No. 12) and are protected with 20-ampere fuses.

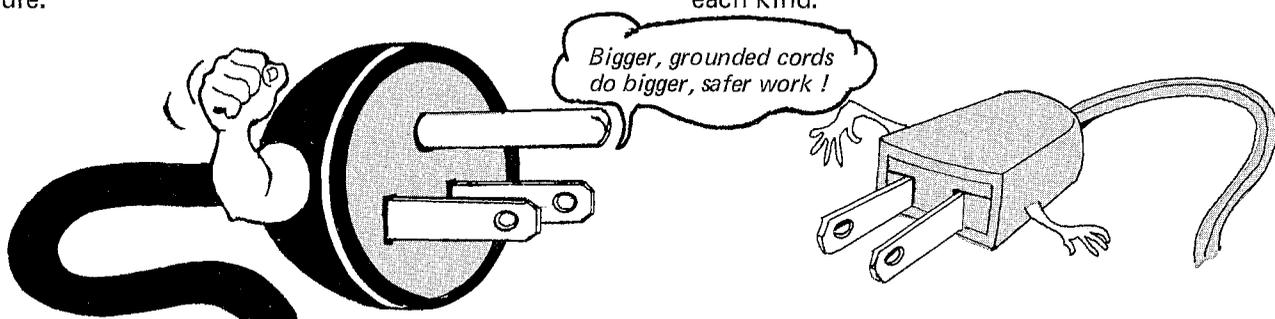
It's a good idea to have your home wiring checked by a reliable electrician before you add electrical appliances. Frequently-blown fuses and tripped circuit breakers indicate that your wiring needs attention. Always be sure that the proper size of fuse or breaker is used.

Outlets should be grounded. Connect your appliances to appliance or wall outlets only. If an extension cord is necessary, purchase or make a short, heavy-duty cord. Appliances with 1500 or more watts may need to be used alone on one circuit. Read your appliance direction book to be sure.

If you have a number of portable appliances which you use at the same time there are some possible solutions. Use a control panel which takes four to six appliances; or an appliance work center which will handle a number of portable appliances and has both adequate wiring and storage space. These control panels or work centers have much heavier wire, leading directly from the home's wiring distribution box.

The U.L. seal on an appliance means it has met standards of the Underwriters' Laboratories, Inc., an organization for testing electrical materials, devices, and equipment construction. The seal will be on the body of the appliance if it has been approved. The cord will also have a U.L. seal if it has been listed. However, if there is a seal on the cord only, this may mean that the appliance has not met U.L. standards.

Appliances may be divided into three categories: motor driven, heat producing, and motorized heating. The wattage for heat producing appliances is generally more than that of small motor-driven ones. The motor-heating ones have the highest wattage. Here are some examples of each kind.



## Type of Appliances and Typical Wattage Used

<i>Motor-Driven</i>	<i>Heat-Producing</i>	<i>Motorized Heating Unit</i>
Non-heating blender— 250 watts	Coffee maker— 440-1000 watts	Rotisserie-Broiler— —1500 watts
Can Opener—150 watts	Frypan—1150 watts	
Clock— 2 watts	Griddle—1500 watts	
Knife sharpener— 105 watts	Automatic toaster— 1250 watts	
Mixer—100 - 200 watts	Waffle iron and/or grill—1350 watts	
	Broiler—1650 watts	

### Use Appliances Safely

Many homemakers are actually afraid to use their appliances. The best assurance to safety is to know how to use the appliance, follow manufacturer's directions and use common sense. Here are a few hints that might help you:

1. Never use electric appliances in an area close to the sink.
2. Be sure the appliance *and* cord have an Underwriters' Laboratory seal.
3. If it is necessary to use an extension cord, use a short, heavy-duty size 16 or larger. (The smaller the number, the bigger the cord.)
4. Keep cords intact and untangled on the counter.
5. Use a grounded (three-pronged) outlet for three-pronged appliances when such an outlet is available. Be sure any new outlets are grounded.
6. Do not try to use the appliance for uses other than those recommended by the manufacturer.
7. Always disconnect, turn controls to "off," and let an appliance cool before washing it.
8. When storing an appliance, turn controls to "off."
9. Here are some simple and safe methods of handling appliances:

To connect the appliance to the electric current—

- 1) Turn the appliance to "off" position
- 2) Attach cord to the appliance
- 3) Attach plug to the wall outlet
- 4) Set control position

To disconnect the appliance—

- 1) Turn the control to "off" position
- 2) Disconnect the cord from the wall outlet (grasp the plug, don't pull the cord)

- 3) Disconnect the cord from the appliance but *not before* the appliance has cooled, if it has a separate probe control.

### CARE FOR YOUR APPLIANCES

Is cleaning the appliance your problem? Again, you must know your appliance. What material is the appliance made of? Can the appliance be immersed in water? Can parts be put in the dishwasher? These are questions whose answers are usually found in the use and care booklet. Most appliances can be cleaned with modern cleaning agents including mild detergents, water and a soft, damp cloth. Abrasives should be avoided as they may mar the finish.

Many appliances can be immersed in water. Other cannot. *Know which you have.* With many appliances the thermostat can be easily removed (it often forms the handle), and the main part of the appliance can be put into water.

What can be used to clean an appliance where a simple clean-up is not sufficient? Here are guides for cleaning different materials:

*Aluminum* is a common metal used. Avoid baking soda or alkaline cleaners as they will darken aluminum. On the other hand, acid foods or a vinegar solution cooked or boiled in an aluminum pan will help brighten the color. Soaped steel wool pads dampened with water also clean darkened interiors.

Salt or other brine solutions will pit aluminum if allowed to stand for a long time. Harsh abrasives also damage highly polished exteriors by permanently scratching them.

*Stainless steel*, resistant to food or water staining, seldom needs more care than washing in sudsy,

hot water. The metal does darken if overheated, but commercial cleaners and soaped steel wool pads will help restore its bright appearance. Avoid harsh scouring powders and coarse steel wool in highly polished exterior surfaces as they may permanently scratch the finish.

*Glass or ceramics*—soaking in hot, sudsy water or adding two tablespoons baking soda to one quart boiling water in the pan, and then soaking, will help loosen crusted food. As a scouring aid, use a plastic pad but never use harsh scouring powders or steel wool. To prevent build-up of brownish stains, clean thoroughly after each use.

*Chrome-plated exterior finishes* are common on electric appliances. Wiping with a soft cloth wrung out of fresh, hot sudsy water—followed by a damp cloth wrung out of clear water—then buffed dry with a soft cloth usually is all they need. Make sure the appliance is disconnected before cleaning.

To help remove burned-on residue, use whiting ( $\text{CaCO}_3$ ), a non-abrasive cleaner available in drug or hardware stores. Salad oil rubbed on the warm appliance with a soft cloth may help to remove residues. Polish with a dry cloth.

*Porcelain enamel on metal* usually only needs cleaning with a soft cloth wrung out of fresh, hot sudsy water. If food sticks, try soda solution recommended for glass or ceramics. If scouring is necessary, use only plastic scouring pads.

*Non-stick finish*—Teflon is a common non-stick finish. Many manufacturers recommend pretreating the finish by wiping with salad oil. In use, be careful not to cut or scratch the non-stick finish with sharp objects. Although this does not generally affect the performance of the finish, it does detract from the pan's appearance.

Staining may occur from overheating or improper washing. To lighten the stain, boil this solution in the appliance for 5 to 10 minutes:

2 tablespoons baking soda  
½ cup liquid household bleach  
1 cup water

Then wash in sudsy water, rinse well and wipe with salad oil before using again.

**Cords:** Cords may also need attention. Have damaged cords replaced before using the appliance. Check plugs carefully and replace those that are cracked or chipped. Take care of cords. Keep them away from grease and sticky particles of food. Do not wrap them tightly around hot or cold appliances and do not drop them. Cords with detachable probe-type thermostatic controls need more care than other types. Be especially careful not to drop

these since they are easily damaged.

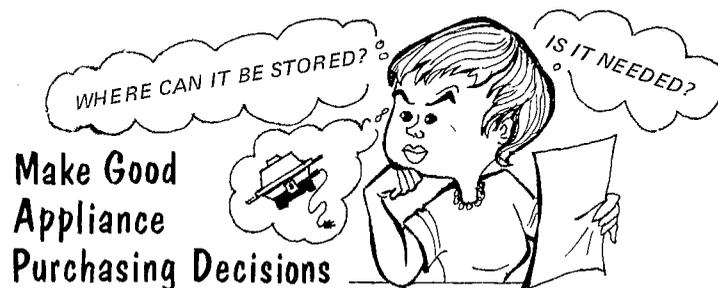
**Batteries:** Many cordless appliances have rechargeable bases rather than batteries. However, if you have a battery-operated appliance, it needs special attention following use. Before storing for a period of time, remove the battery if it is the disposable kind. Otherwise it might corrode and ruin the appliance. Store batteries separately in a plastic bag, preferably in a cool, dry place.

**Repairs:** Maybe your appliances are not in use due to poor repair. If repairs are needed, check to see what would be covered under the guarantee. If covered by a guarantee, be sure that you do not void it by tampering with the appliance yourself. Take it to a qualified repair service.

Often if parts are required the repair may cost more than a new appliance. Or it may just be more than the appliance is worth to you. Check costs before you commit yourself.



Before taking it to a service center, be sure that you go over the directions for the appliance. Is the equipment plugged in? Is it turned on? Is the fuse or circuit breaker all right? Is the cord securely attached to the appliance? There are many needless service calls that add to the cost of the valid ones. Do yourself a favor—be sure!



The old adage of an ounce of prevention applies to portable appliances. We need to be thoughtful about their selection as well as in their use and care. Think and question before you buy.

**1. Is it needed?** Do other available appliances do the same thing? Don't buy on an impulse. If an appliance doesn't do something presently impossible to do, or contain new features that save time,

increase convenience or safety, then it is not needed and will soon become a burden.

**2. How often would it be used?** Weigh its advantages against space, expense, and care. Is it worth it for the amount of use it will have?

**3. Are instructions easily read and understood?** The print must be large enough to be easily read. (Older people may need larger print than some booklets have.) The booklet should be arranged so that you could quickly find the answer to a question. Instructions should be easily understood—clear, precise, short and illustrated.

**4. Are controls easy to read and operate?** Check dials, buttons, and levers. Some are much easier to operate than others. Could someone with arthritis operate it? Are controls easily read by the homemaker who wears bifocals or trifocals or by the person who has difficulty reading small numbers?

**5. How easy would it be to clean and take care of?** What care is required? Are there small crevices that could get clogged with grease or batter? Are handles, knobs, and feet removable? Can the entire appliance be immersed in water? Can parts be put in a dishwasher?

**6. How durable is it?** Are knobs, controls, and handles sturdy? Metal housing is best for heating appliances or ones that will be used near heat. Plastic, if not used next to heat, is usually as durable as metal.

**7. Where could it be repaired?** Check the warranty to see restrictions on what would be covered by the company. Does it have to be returned to the factory for repair? Is there a qualified repair service available in the store or in the community?

**8. What does the warranty cover?** Is there a time limit? What parts and services are included?

**9. Where can it be stored?** If it is not conveniently stored it will not be well used. Be sure that it is not more trouble than it is worth.

**10. Is there a place where it could be used?** Often appliances are designed for use at the table and there is no outlet available at that point. Is there an outlet where the appliance should be used?

Is there sufficient electrical power for it to be used to its capacity? Is there sufficient counter space available?

**11. Are both the dealer and the manufacturer reliable?** The best protection the consumer has is a dealer and manufacturer who stand behind their products. A "bargain" that does not have that assurance may not be much of a bargain. Know the terms of the warranty.

**12. How safe would the appliance be to operate?** Does it have the Underwriters' Laboratory seal on both the cord and the appliance? Is the appliance steady with no tendency to tip? Can you get a good grasp on the handles? Are steam vents in lids away from the handle? Are there safety controls, lights, alarms when necessary? Could all members of the family use it safely?

**13. Is the appliance the right size for your use?** Is the skillet too big or too little? Is the mixer heavy enough for your use? (In motor driven appliances, a higher wattage generally means it can handle a heavier load.)

**14. What degree of portability is available and desired?** Is the appliance attractive enough to be enjoyed? Would feet of the appliance mar good dining room furniture? Would too much heat be generated for it to be placed on a nice wood finish? Is there a cord? Cordless appliances are usually more expensive and heavier, yet more flexible in use. Solid state controlled appliances are lighter in weight and therefore more portable. (Solid state controls may also allow infinite variations in control and are longer lasting since they do not have many moving parts.) Plastic housing is lighter than metal but may break more easily.

**15. Is the price competitive?** There can be considerable price difference among brands. Different stores may charge different prices for the same item.

**16. Does the particular appliance have the features you want?** Comparison shopping is the only way to answer these questions. The following is a list of questions you may want to ask about a particular appliance. Some features may be more important to you than others.

## SHOPPING GUIDE FOR APPLIANCES

### Heating Appliances

#### Coffee Maker

1. Which type of coffee maker do you prefer—percolator, vacuum, or dripolator?
2. What is the wattage? Models with high wattage will make coffee faster than those with low wattage.
3. Is the finish non-tarnishable?
4. Does the lid fit tightly?
5. Is the coffee maker easy to assemble?
6. Is the capacity adequate for your needs yet usable for smaller quantities?
7. Is there an automatic shut-off switch to keep the coffee warm?
8. Is the handle heat proof and large enough to prevent touching the hot urn?
9. Are the handle and the serving pot properly balanced?
10. What is the coffee-making selection time? Percolating time may be pre-set at the factory, so if a stronger or weaker brew is desired you use more or less coffee. Some coffee makers offer brew selection.
11. Does an indicator tell when coffee is done?
12. If it has a spout, is it "no drip" type and easy to clean?
13. Do you want an immersible coffee maker for ease of cleaning?
14. Is there a large enough opening for easy cleaning?
15. Is the interior finish smooth and free of crevices that might collect coffee deposits?

#### Corn Poppers

1. Is it the size you need?
2. Will it be attractive in the area where it will be used?
3. Is the lid clear and unbreakable?
4. Can the lid be used as a server?
5. Is it fully automatic?
6. Are legs and handles heat proof?
7. Are handles large enough to be easy to use?

#### Deep Fat Fryer

1. Will the round or rectangular size fit your storage space best?
2. Is the interior surface curved for easier cleaning?

3. Is the fryer easy to empty and clean? Some models have spigots that help in emptying fat. However, these may become clogged easily.

4. Is the heating element automatically controlled?

5. Is the wattage high enough to provide quick recovery when cold food is added?

6. Are the fryer and its handles of sturdy construction?

7. Is it well-balanced to prevent tipping?

8. Are handles and feet of heat resistant materials?

9. Is the heat selector dial easy to read and adjust?

10. Is the signal light easy to see?

#### Electric Fondue Pot

1. Is it the size you need?
2. Will it be attractive and appropriate for the area in which it will be used?
3. Are forks included?
4. Is there a splatter guard cover?
5. Is it the material you want? (Pottery is best for cheese fondue.)
6. Is it thermostatically controlled?
7. Is there a wide range in temperatures (warm to 425° F.)?
8. Is there an indicator light?
9. Are the handles designed for convenient use?
10. Will the base and the pot have other uses?
11. Is it immersible for easy cleaning?

#### Frypan

1. Do you want a model designed for table and buffet service?
2. Is it attractive (especially important for buffet service)?
3. Do you like the style and finish?
4. Do you like the metal it is made of? Check the cleaning section of this bulletin. Aluminum heats more evenly but requires care. Stainless steel needs little care but doesn't conduct heat as well.
5. Is the pan made of strong lightweight metal?
6. Does the interior have a smooth finish? Do you want a non-stick finish?

7. What size do you need?
8. Is the height of the sides enough to take care of cooking needs?
9. Is the lid of a dome type high enough to accommodate larger items in the frypan?
10. What shape is it? Square and rectangular ones give more cooking space than round ones.
11. Does the lid have vents? Are the vents away from the lid handles?
12. Do you want a lid with a heating element (for broiling)?
13. Can the lid tilt on the edge of the pan?
14. Is the heat control knob easy to reach and large enough to use easily?
15. Are the heat control knobs, handles, and feet heatproof? They should not get too hot to handle while the frypan is in operation.
16. Are handles large enough to use easily without touching the pan?
17. Are there handles on two sides to make handling and pouring easier?
18. Does the automatically controlled heating element give fast, even heat?
19. Does the heating element cover a large area of the frypan for efficient heating?
20. Is there an indicator light to tell when the pan is at the temperature selected on the control?
21. Is there a device to tilt the frypan so grease can drain to one side?
22. Will the heat given off from the bottom surface mar a table top or counter?
23. Do you want an immersible model?
24. Is the pan easy to wash and store?

### Griddle

1. Is the surface large enough?
2. Is there a vented cover?
3. Do you have enough counter and/or storage space for it?
4. Is the construction sturdy?
5. Is there a device to catch the excess fat?
6. Is the fat well large enough, protected from heat and easy to clean?
7. Is the griddle immersible?
8. Can the heat be adjusted to higher or lower temperatures?
9. Are the controls easy to read and to use?
10. Is there an indicator light?
11. Are handles insulated and of good size to fit your hands and to make carrying easier?
12. Are feet of griddle heat resistant and long enough to provide air circulation under the griddle?
13. Is it attractive?

### Pressure Pan or Cooker Canner

1. What capacity will meet your needs?
2. Is the heat automatically controlled?
3. Does the gauge easily indicate when the correct pressure is reached?
4. Is the pressure maintained automatically?
5. Is the pan easy to clean and wash?
6. Is the appliance too heavy for use when filled?
7. Is the cover easily locked in position?
8. Is there a pressure release device?
9. Are the feet long enough to give good ventilation between the pan and the counter?

### Roaster-Oven

1. Does the capacity meet your intended use?
2. Is the insulation adequate to insure good cooking results and to protect the area around the roaster?
3. Are the handles and feet heat resistant?
4. Is the lid hinged, or is there a hook to hang it?
5. Is there a look-in heatproof glass panel in the lid?
6. Is there an indicator light?
7. Is the outer frame made of welded steel which has been treated to prevent rust, and then finished with baked enamel?
8. Does it have a grill attachment?
9. Does it have an automatic clock and timer?
10. Is there a temperature chart on the control panel?
11. Do you have a place to use and store this large piece of equipment? Some manufacturers have tables built for the roaster—is there room in your kitchen for this?

### Rotisserie

1. Do you have space for this appliance at the place in your home where it will be used? A large space is needed as a large area of this appliance is not insulated.
2. Is the back of the rotisserie enclosed to prevent heat rays from blistering or drying out cupboard walls and work surfaces?
3. Is there a spatter shield? (Some type is desirable.)
4. How much equipment is included in the cost?
5. Can it be used for baking?
6. Is it easy to clean and use?

## Rotisserie (cont.)

7. What kind of time control does the appliance have?
  - a. Motor on-off switch?
  - b. Thermostat only?
8. Is the spit adjustable in height?

## Saucepan, Dutch Oven, Casserole, Slow-Cooker

1. Does the temperature range indicate that many types of cooking may be done?
2. Is the lid vented?
3. Is there a light indicator to show when the desired temperature has been reached?
4. Does it have a rack and/or basket?
5. Is the appliance at least partially immersible?
6. Is the appliance well balanced, both when empty and when in use?
7. Are legs insulated and long enough to allow for air circulation?
8. Are sides well insulated?

## Automatic Toaster

1. Do you want the "pop-up" type of toaster?
2. Do you want a model that automatically lowers the bread?
3. Is there a hand operated release to use if the automatic "pop-up" device fails to function?
4. How many slices of bread can be toasted at one time? Does this fit your needs?
5. Can you toast less than a full load in two- or four-slice toaster?
6. In a four-slice toaster can you get more than one shade of brownness at one time?
7. Will the toaster take varying slices of bread, toaster pastries, and English muffins?
8. Will small articles in the toaster rise above the body of the toaster when finished?
9. Will bread brown evenly? How is brownness controlled?
  - a. By timer?
  - b. By bread temperature and thermostat? (A thermostat combined with timer assures desired degree of testing.)
10. Are the handles heatproof and non-tarnishable?
11. Is the toaster base well insulated and smooth to prevent table damage?
12. Are wires under the bread rack concealed?
13. Is the exterior attractive and easy to clean?
14. Is the crumb tray easy to remove and clean?

## Toaster-Oven

1. Is it the right size for your needs?
2. Can it be used for broiling?
3. Are the handles well insulated and large enough for safe use?
4. Is the whole appliance well insulated?
5. Is it easy to clean?
6. Are controls easy to operate?

## Waffle Iron

1. What kind of waffles do you want? The grid placement can be the key to the question.
  - a. Grids shallow and close together make crisp waffles.
  - b. Smaller, deeper grids, further apart make softer waffles.
  - c. Various designs are available.
2. How is doneness of waffle indicated?
3. Will your storage space take a square, oblong, or round appliance?
4. What is the size and design of the handle attached to the upper grid? This has much to do with the safe use of the appliance. It may get too hot to hold if it is hinged or if built too close to the framework.
5. Is the heat control heat resistant, easy to use without touching the hot parts of the waffle iron, and far enough from the framework not to get hot?
6. Are the feet heat resistant?
7. Most waffle irons have cord connections in the lower grid construction. This makes it necessary for the heating element wire to be carried up through the expansion hinge between the upper and lower grid units. Are these well-protected from hinge-wear and from possible contact with batter overflow and/or fat drippings?

## Combination Waffle Iron-Grill

1. Is it easy to interchange the grids and grills?
2. Are both units level when the appliance is open?
3. Will the hinges expand enough for sandwiches?
4. How is excess fat drained off when the grill is in use?
5. Is the base constructed to catch excess batter? Check with the sections on griddles and waffle iron for additional features to look for.

## Warming Tray

1. Is it the size you need?
2. Is it attractive and in harmony with decor in the area where it will be used?
3. Is there a dome or "bubble" top available?
4. Does it have "keep warm" drawers?
5. Does it have a "hot spot" with more heat

for sauces, tea pots, coffee pots, etc.?

6. Does it have an additional section for food not being kept warm?
7. Is the tray well-balanced and easy to carry?
8. Is the frame made of a heat-resistant material?
9. Is the tray easy to clean?

## Motor Driven Appliances

### Blender

1. Is the capacity adequate for the use planned?
2. Do you want a glass, plastic or metal container?
9. Is the lid of a dome type high enough to accommodate larger items in the frypan?
4. Is there a handle on the container for more convenient use—or is the exterior surface easy to grasp and hold for pouring?
5. Are standard screw-top canning jars usable as a substitute container for additional convenience?
6. Does the container have a pouring lip?
7. Does jar material obstruct view of food in action?
8. Can food be added without removing the entire top?
9. Which attachments are available and/or needed?
10. Are blades removable or stationary—which will be easier to clean?
11. Are the blades of rust-resistant steel?
12. Is there a heating element?
13. Do you want a timer on your blender?
14. Does the blender operate by controls that are easily read and used?
15. Are the base and container easy to clean?
16. Is it dishwasher safe?
17. Will the feet slip or mar the counter?
18. Are two or more speeds available? (How many speeds would be useful to you?)
19. Is the motor permanently lubricated?
20. Is the motor at least one-fourth horse power?
21. What height blender would fit in the area where it would be stored?
22. Is it attractive?

### Can Opener

1. Will the can opener take all sizes and shapes of cans?
2. Can the opener be used when wall-mounted as well as on the counter?
3. Is there a magnetic "lid hold" for convenience and safety?
4. When stand or wall-mounted, will the can opener still take all can sizes?
5. Will the opener hold a full can during operation?
6. How much effort is required to puncture the can?
7. Is it tip proof and well balanced?
8. Is the cutting wheel or blade cutter of non-corrosive material and easy to clean?
9. Do you want additional uses on your can opener—such as an ice crusher or juicer?
10. Is there built-in cord storage?
11. Is there a non-marking base?

### Carving Knife

1. Do you want a plug-in or cordless type?
2. Is the cord long enough for mobility? Is the cord detachable?
3. Does the handle fit your hand?
4. Is the appliance well balanced, lightweight, and easy to handle?
5. Is there a lock switch to use when the knife is not in operation? This is a must.
6. Is the "on" switch easy to operate?
7. Is the handle heat and grease resistant?
8. Do the blades each have a grease guard?
9. Is the length of blades suitable for the carving and slicing you plan? Are other blades available for different tasks?
10. Do the blades lock in firmly, yet remove easily for cleaning?

## Carving Knife (cont.)

11. What guarantee is on the blades and on the motor?
12. Do you have a cutting board of adequate size to use with the electric knife?
13. Do you have a good and safe storage place for the knife? Does it have a storage case with it?

## Mixers

### Portables:

1. The portable, or hand mixer, does not have as much reserve power as the standard—will it meet your needs?
2. Does the wattage indicate enough motor power?
3. Is the mixer light weight?
4. Is the handle large enough for you to hold the mixer easily?
5. Is the mixer well balanced both in use and when on the heel rest?
6. Will there be drip back when the mixer is on the heel rest?
7. How many speeds does it have?
8. Are the controls easy to use, read, and find while operating the beater?
9. Is the beater ejector easy to use?
10. For safer use, is the beater ejector away from the control device?
11. Are the beaters large enough to work efficiently? Are the beaters easy to clean? (Beaters with smooth edges and without center shaft are easiest to clean.)
12. Are the vents located where dry ingredients will not be drawn into the motor? (Example: on the bottom of the portable would be a poor feature.)
13. Do you want a removable cord?
14. Is the motor permanently lubricated?
15. Do you want a portable type with a stand and turntable?
16. Is it easy to store? Some are wall hung.

### Standard:

1. Is it the right height to fit the place where it will be stored?
2. Is there a detachable cord?
3. Is the mixer well balanced both as a unit and when used as a portable?
4. Is the motor easily removed from the stand for portable use?
5. Is it too heavy?
6. Is there a tilt-back position for draining the beaters and removing the bowl?
7. Is there a bowl shift lever for correct bowl position?
8. Is the bowl turn-table adjustable, heavy enough to create friction, and does it rotate with the batter?
9. Is the starting switch and speed control easy to locate, use, and read?
10. Is the beater ejector easy to use and efficient and safely placed?
11. Do you want bowls of frosted glass, clear glass, or stainless steel?
12. Do bowls have straight sides to minimize need for scraping?
13. Do the beaters cover the full diameter and fit the contour of the mixing bowl? The beaters should just barely clear the bottom of the bowl.
14. Is there a wide range of speeds with steady full power at all speeds?
15. Is the motor quiet?
16. Does the motor have a radio-interference eliminator?
17. Is the motor permanently lubricated?
18. Is it easy to clean?

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