



THE APPLIANCE OF SCIENCE

HALACHIC CHALLENGES IN THE
21ST CENTURY KITCHEN



RABBI YISROEL MOSHE GUTTENTAG
RABBINIC COORDINATOR, KF KOSHER, AND FEDERATION SHAILATEX

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Shopping for a new household appliance was once a relatively simple exercise. But in the 21st century it has become something of a logistical nightmare. Energy efficient and technologically advanced as they are, how is it possible for the average householder to truly comprehend the inner operations of his fridge-freezer or oven, and know whether it is fully compliant with the rigorous *halachic* demands of *shemiras* Shabbos?

With a finger on the communal pulse via its popular ShailaText service, it has become evident to the Federation that many members of the *kehilloh* struggle for clarity in this area. And in response to this demand, the organisation is launching an online resource offering pre-purchase advice, aiming to assist the kosher consumer in identifying appliances which are usable on Shabbos.

For an initial insight into the challenges we all face as we step out into the commercial world of appliance purchase, read on. What should we be on the lookout for, how can potential pitfalls be avoided, and what future challenges await us in this increasingly complex area?

THE SIMPLE FRIDGE?

The advent of the digital age has created vast numbers of *halachic shailos* regarding our use of household appliances, but contemporary questions in fact represent the second wave of *halachic* challenges raised with regard the use of appliances. Early fridges also led to some tough questions being posed.

Opening the door and finding that the internal light was lit was the first of many unwanted surprises, and it became universally accepted that one must sidestep the question by unscrewing the light and neutralising it.

Less redeemable a quandary were the *halachic* questions presented by the effects on the operation of the machinery itself. Allowing hot air to enter the fridge cavity, the fridge would receive warning that the temperature had risen and thus begin to run the compressor – setting in motion the process which would cool the fridge.

Rav Shlomo Zalman Auerbach *zt"l*, applying multi-levelled reasoning, allowed for opening and closing the door although it could be possible that the fridge would begin to operate earlier than

would otherwise have been the case. This became the accepted norm in vast portions of the Jewish world.

OPENING THE DOOR TO NEW HALACHIC QUESTIONS

But how has fridge purchase been complicated in recent years?

One quickly detectable issue is that of the lighting. Incandescent light bulbs have been replaced by state of the art LEDs. From the perspective of practical *halochoh*, like their predecessors, these lights must not be operated on Shabbos. To complicate the matter, they generally cannot be unscrewed.

LED display screens present a further complication. While some appliances may run with an unchanging display, on others, the display will be altered as the door opens. This presents a serious issue of *koseiv* – writing - and should be avoided on Shabbos.

Even the means to prevent electronic activity from taking place when the doors open has changed. Replacing visible plunger switches, manufacturers have instead concealed magnets, building



them into the casing of the appliance. Though in some cases, the location of the magnets is predictable and common knowledge, this is by no means guaranteed, and a struggle to find the right location can be the cause of some consternation.

On opening the door, the magnet is separated, breaking an electric circuit, thus indicating to the fridge that the door is open. Placing and sticking down a powerful magnet next to the fridge's own hidden one will convince the appliance that it is in fact permanently closed.

Whilst this trick almost always works, in some devices, the magnets have been hidden in a way which makes them elusively difficult to locate. It is also possible that not all fridge activity is controlled by one single set of magnets but that others remain hidden away. Worse still, even when magnets have been installed but not located entirely precisely, in some cases the lights will flicker momentarily as the doors close and open.

With the current rapid-fire development of technology, it will be no surprise if in years to come, the appliances that are offered for sale are even more sensitive and reactive to our actions than is currently the case. It isn't difficult to imagine fridges which are controlled with infrared sensors and video technology, feeding information to the appliance on matters such as how full the shelves are and carefully controlling the way in which cool air is distributed around the fridge cavity.

CURRENT HALACHIC DEBATE

Is it time to revisit Rav Shlomo Zalman's ruling with regards to the hidden effects of opening the fridge door?

Whilst the presence of some of the issues highlighted in the previous section can be detected through a visual inspection of the fridge, others remain buried in the small-print of fridge specification. An understanding of the workings of recent fridge models has caused consternation in some circles in recent years.

The terms 'thermostat' and 'thermistor' may seem as though they refer to the same product, but in truth, they represent two distinctly different methods of regulating climate control. Whilst the traditional 'thermostat' controlled the working of the fridge apparatus through mechanical means, today's appliances are commonly controlled by sensitive digital technology known as

I have bought a fridge recently and have removed the light bulbs. I am concerned that the fridge seems to make a noise when the door closes – is this a problem with regards to Shabbos and what can I do to resolve this?

Listen carefully – is it a whooshing sound – as though air is being suctioned out - or does it sound like a soft humming sound? Does it start instantaneously when the door closes?

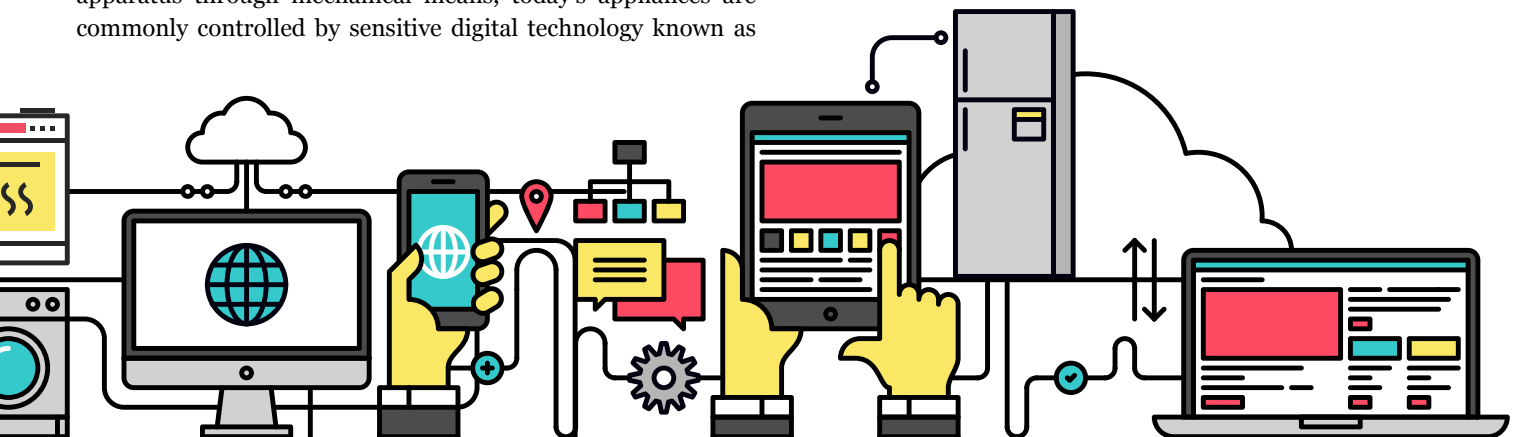
Sounds like a soft humming sound, and happens as the door closes.

From your description it sounds as though the motor is activated by a (hidden) switch as the door closes and this does present a problem with regards to opening and closing the door on Shabbos. You need to try neutralising the door switch. We recommend screwing the light bulb back in so that you can find the door switch and close it. Try taping down the plunger switch (if appropriate) or alternatively you may need to do this with the aid of a magnet . For instructions on this, take a look at our new online buying guides at www.federation.org.uk. Contact ShailaText if you need further guidance .

'thermistors' – these devices provide a constant stream of digital readings 'written' to a microchip concealed in the fridge's modern design.

In a similar vein, the word 'inverter' – used to describe technology capable of making minute changes to a fridge compressor speed to achieve the desired effect on the temperature – is on the tip of those *halachically* in the know. According to some, the concept, which has slipped into many prevalent fridges, spells the end of blanket permission to open a fridge door on Shabbos.

Questions surrounding 'inverter' technology and of invisible digital readings are a development of the 21st century, but they have already spawned the creation of innovative new Shabbos compliant solutions.



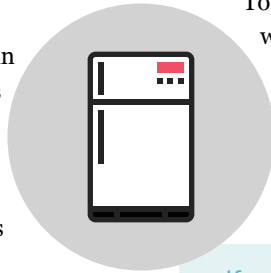
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SHABBOS SOLUTIONS FOR FRIDGES

Companies such as 'Mishmeres HaShabbos' and 'Zman Technologies' have created bespoke electronic solutions designed to ensure appliances can be used without *shemiras* Shabbos concerns. Some of these devices need to be installed professionally once a fridge is purchased; others are now being embedded into the fridge design. Is this the future of fridge technology here in the UK?

Whereas in Eretz Yisroel and the USA, the huge Jewish communities leverage their buying power to bear influence on the design of appliances, here in the UK we are generally left to grapple with appliances as they are manufactured for the wider public.

Of course, digital readings are not uniquely found in fridges and freezers but in fact are present in many devices we encounter over the course of Shabbos. And, whereas some question their use on Shabbos, others have ruled that their existence – embedded as they are into the technology - is of no *halachic* concern.



is detected – this to avoid the damaging effects of too frequent changes to the motor.

To conclude this section, it would be ideal if a Shabbos mode was embedded into our fridges removing any concerns regarding electronic activity; however, as long as this has not been made possible, there remain strong grounds for leniency in opening the door of a fridge which is running on Shabbos as long as questions of direct visible activity have been resolved.

If you are about to buy a fridge it is worth consulting with our new online buying guides. Read up on what to be aware of when making a purchase, to ensure you are fully informed. Find practical tips on how to neutralise the lights, fan and other functions by placing magnets in the correct location.

YOUR FRIDGE, OUR ADVICE, LOCAL REALITY

The Federation Beis Din advises that appliances which employ a thermistor, making digital readings, may be used on Shabbos, **as long as the function of the appliance is not altered with immediate effect** as a result of these readings. A similar ruling from Rabbi Osher Weisz - a renowned *posek* in Yerusholayim - can be found in his *sefer* Minchas Osher.

This ruling is helpful only once one can establish that the specific appliance does not immediately react in other ways when it detects temperature. Some have voiced the opinion that this is exactly the function of 'inverter technology'. Although to date this question remains largely the subject of speculation, according to Mr Jonah Ottensoser, a senior technician in the USA who advises *rabbonim* on areas of *halochoh* and technology, it is safe to assume that the compressor speed is only rarely changed when temperature change

SHABBOS MODE OVEN

The world of the oven is another example of how ever-changing technology affects our daily *halachic* lives.

Although equally susceptible to features which are *halachically* problematic, the oven remains an appliance which for many is not required on Shabbos. Easily replaceable with a hotplate or *blech* on the stovetop, not all families use an oven at all on Shabbos.

However, some have come to rely on their trusty oven which faithfully heats their Shabbos food week in, week out. When the 1990s model finally fails and is replaced by its 2017 counterpart, the challenge of the modern oven – replete with lights, fans and LED screens which react to door openings - becomes keenly felt. To this backdrop, the arrival on the scene of the 'Shabbos mode' is cause for a sigh of relief – but not before checking that the self-proclaimed Shabbos mode is indeed compliant with our rigorous demands.

Unless its design team was assisted by *rabbinic* advice, the term 'Shabbos mode' is unjustified and remains a misnomer; often,



many real *halachic* concerns will not have been addressed. It is to fill this gap that pre-purchase advice is now being offered by the Federation's new online service.

But even an oven built to the most robust of *halachic* specifications can affect only the permission to open and close the door. Inserting food both on and before Shabbos remains problematic – in light of the *halochos* of *bishul*, *shehiya* and *chazoroh*.

Our buyer's guides will provide vital *halachic* guidance for those who have purchased a Sabbath mode oven. Look online to find out whether food may be heated up in it, and whether the door can be opened and closed when the oven is operating.

KASHRUS ISSUES: OVENS

Shabbos being in many cases only a fraction of the time during which an oven is used, we have sought to address the commonly-queried *kashrus* questions surrounding oven use.

Kashering – the means through which a utensil can be purged of flavours absorbed in its walls – is an area which is commonly questioned in relation to purchase of an oven.

Cutlery, bowls and pots which absorb non-kosher food flavour can be cleaned through dipping into bubbling hot water; as an alternative, one can choose to burn these items lightly with a blow torch (*libun kal*) until they are so hot that they will brown a straw/tissue touched to them.

Halachic considerations dictate that this is not the case with regards non-kosher ovens. Dry heat - the more potent means by which they absorbed the non-kosher food substances – must be employed to now extract that flavour. *Halachically*, one is required to burn the metal until sparks fly from it - in practical terms, the material would need to reach 490°C.

Can my oven be *kashered*? This is a question which would-be purchasers seek to address prior to swiping their credit cards – this so that they can be assured that they can *kasher* their appliance both from meaty to milky and if it becomes *treif*.

Many seek to buy self-*kashering* ovens. Reference to our online guides will empower the consumer with advice on topics such as whether the intense pyrolytic mode need be run and will point to self-cleaning ovens which do not satisfy *halachic kashering* requirements.

Double ovens, which boast maximum kitchen output and efficiency, raise alarm bells with regards *kashrus* concerns. How is the consumer to know whether steam is transferred from one compartment to the other? Is flavour imparted from one compartment to the other by any other means?

FORWARD THINKING AND COMMUNAL PLANNING

Technology changes fast, and as a community we tend to react to these changes only once they are already upon us. In today's climate, many appliances are indeed compatible with our lifestyle - or with slight modification can be commandeered to compatibility.

In launching this resource, the Federation is preparing for a not so distant future, where an increasing number of appliances will be difficult to adapt for Shabbos use. With visions of a digital revolution which becomes a digital onslaught, we are going online - with the intention of drawing the attention of manufacturers and designers to the needs and sensitivities of our communities.

For buyers' guides visit www.federation.org.uk

