

Refrigerators and Freezers on the Sabbath



Digital Water Meters



זכור את יום השבת לקדשו



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מהדורת תשע"ד

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לעם מקדשי שביעי

רוב המקררים המצויים כיום (וכן מזגני אינוורטר) פועלים ע"י חיישנים המורכבים במכשירים אלו, ודבר זה גורם שבכל פתיחת דלת נעשים שינויים חשמליים, הן ע"י תוספת זרמים חשמליים והן ע"י רישומים דיגיטליים ועוד פעולות שונות אשר כבר פרסמו גדולי הדור במכתבם ש"הם אסורים בשבת".

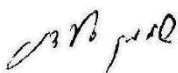
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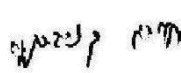
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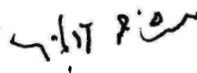
וע"כ מחובת כל מי שקונה את המקררים והמזגנים הנ"ל להתקין בהם התקן שמנטרל את כל הרישומים הדיגיטליים.

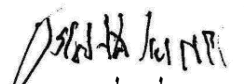
פשוט הדבר שכיון שחיבור ההתקן הנ"ל הוא הכרח מבחינה הלכתית הרי שהוצאות הרכישה הינם בכלל הוצאות שבת אשר הבטיחו חז"ל שאם מוסיף מוסיפין לו.

ובזכות שמירת השבת נזכה להגאל במהרה


שמעון בעדני


חיים קניבסקי


נסים קרליין


שמואל הלוי ואזנר


א.ל. שטיינמן

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Foreword

The present brochure is meant to explain and make clear a serious and painful practical problem **According to our generation's main poskim, anyone using advanced technology refrigerators and freezers (even those 15 years old – in some cases) is at risk of transgressing a Torah commandment – or at least a rabbinical one – just by opening or closing a refrigerator even one with a "Sabbath Mode".**

Hand in hand with recent technological advancements new problems have arisen concerning the use of electrical appliances on Sabbath. Today's refrigerators are very different from the ones used thirty years ago. Accelerated technological developments have brought along the production of much more advanced refrigerators, the operation of which is totally different from older models. The former ones constitute in fact a new kind of appliance. It is then understandable that whole new questions arise as to the use of these appliances on Shabbat.

There are on the market "Shabbat attachments (Sabbath mode)" developed by different labs with the specific purpose of making the use of refrigerators possible on Sabbath. Some companies market refrigerator models with a "Shabbat attachment", and many users think therefore that there is no problem in using the latter on Shabbat. Let it be known that some of these attachments (sabbath mode) are based on leniency and authorizations that are acceptable only according to the opinion of the Rabbis employed by the developing labs, yet the most eminent poskim of our generation do not agree with their opinion and do not sanction the use of such refrigerators on the Shabbat, which – in some cases – implicates a Torah transgression. We shall thus hereafter expound the opinion of the leading poskim concerning the use of refrigerators without Shabbat attachments, and that concerning the use of those with attachment provided by the different labs.

☞ **Please note that the problems discussed in the present booklet concern the opening of refrigerators' doors while the motor is on, as well as while it is off, as explained on page 10 (5).**



We found it proper to explain in short a few concepts relative to the Halachic issues involved in the use of electrical appliances on the Sabbath.

1. Digital data: Most of today's refrigerators use an "electronic card" to control the activity of the compressor, fan and other components. (In many appliances, this consists of some kind of green electric board. See picture on back cover). A chip on this board contains millions of electronic cells, and is meant to receive data from sensors (small attachments that react to heat and cold, see picture on back cover). The card adapts electric flow inside the card from one cell to the other according to these data, which in turn activates the various elements of the refrigerator as necessary, like initiating the compressor or the thawing process.

These sensors are very sensitive to changes in temperature. Even small changes are susceptible to affect the flow of electric current inside the cells of the chip. For instance: when the temperature inside the refrigerator rises a tenth of a degree – the sensors feel it and the change is registered by the chip. These reactions are not always instantly perceptible to the eye, like when the registered change does not yet require boosting the motor's activity.

This explains how the slightest opening or closing of the refrigerator's door causes immediate electric flow changes inside the cells, and the controls use these data to measure temperatures and activate the refrigerator's components.

Our Rabbis have ruled that this constitutes a Torah violation of the Sabbath, as shown in the letters below.

2. Digital and mechanical refrigerators: The definition of a refrigerator as mechanical or digital has nothing to do with the presence on it of screens or buttons, mechanical or digital, or with the fact that the refrigerator has one or two doors. The difference lies in the use of a control center, whose internal card sends commands to the different parts of the refrigerator, or that of mechanical switches connecting or disconnecting circuits, like in thermostats or timers. (One can find nowadays refrigerators that look externally exactly like the old timers, but are digitally controlled, through the use of a computerized control card, so that the user cannot see the difference. As said before, the card is extremely sensitive to any ambient change, and affects electricity flow accordingly).

3. Closing of electrical circuits: It is well known that our Rabbis have ruled that the closing of an electric circuit on Shabbat constitutes a Shabbat violation, as stipulated by the Chazon Ish zatsa'l, and therefore, whoever activates a switch or plugs in an appliance, causing in so doing the passage of electric current, is transgressing a Torah commandment¹.

4. Increasing current: i.e. increasing electric tension inside an appliance. In many appliances, electric current can be applied in various degrees of tension, which are

¹ Usually, electric current flows by connecting wires to one another, allowing current from the grid to reach appliances and light fixtures. Besides that, some appliances contain advanced electric switches (transistors) which contain wires made of a certain material, called semi – conductor, that passes on current under some circumstances, but not under other circumstances. The switch works by making this material pass from a non – conducting to a conducting state. In such switches, the electrical circuit is connected at all times, while the wire goes over from one state to the other through an external influence. As far as Shabbos is concerned, there is no difference between the various kinds of switches. The closing of a circuit by the passing of wire from one state to another, even without the connecting together of different elements, is forbidden by the Torah, since the very change inside the wire from "dead" to "alive" is considered a "melachah".

responsible for the appliances performance; like in fans, food processors etc. Some appliances are so planned, that they consume a low current of electricity at all times, which is cranked up when the appliance is activated. One lab has developed an electrical wheelchair, designed for the circulation of the disabled on Sabbath, which operates according to this principle. The wheelchair's motors receives constantly a low electrical current, and when the user desires to circulate, he pushes a lever to increase the current. The Gedoley Haposkim have ruled that any significant electric current increment can possibly constitute a Torah violation.

The above mentioned principles, as well as the other explanations brought in this booklet were written succinctly to make easier the understanding of the problems they generate. Whoever desires to deepen his knowledge, from a halachic point of view as well as from a technical one, will find extensive information in the books: "**Shvuth Yitzchak**" [שבות יצחק] by Hagaon Rabbi Yitzchak Darzi shlit'a, and "**Electronic appliances on Shabbos**" by Rabbi Israel Meir Morgenstern shlit'a.



The present booklet is divided into five chapters:

Chapter 1: lists the facts and numerable risks involved in the use of refrigerators and freezers. All technical knowledge was given to us by experienced, Torah observant technicians who toiled to check out the various kinds of refrigerators available on the market.

Chapter 2: Letters by eminent Rabbis concerning the prohibition to cause digital readings, and other halachic problems brought up by the use of refrigerators and other appliances on Shabbos.

Chapter 3: Solutions and attachments (Sabbath mode) that allow the use of electrical appliances without risking the desecration of the Shabbos according to all points of view.

Chapter 4: Description of the problems involved in the use of digital and inverter air conditioners.

Chapter 5: Digital water meters on Shabbos: problems and their solution.

Quotation from the book "Teshuvot Vehanhagot" ח"א סי' רכ part 1 (שר"ת תשובות והנהגות ח"א סי' רכ)

"You should know that it is a Mitzvah to let it be known that one should check out about any refrigerator or freezer of what type it is, since I heard that there are refrigerators that you cannot hear the motor's noise, even when it is on, and you violate the Shabbos when closing their door, since they contain a fan which is activated every time you close the door. Many people do not know this. Everyone should check with a technician as to what type of refrigerator he owns, to avoid Shabbos transgressions".

Quotation from the book "Orchos Shabbos" Chapter 26 (ספר ארחות שבת פכ"ו)

Risks involved in the use of refrigerators and freezers: "One who plans to purchase a refrigerator or freezer should inquire if that model implies risks of Shabbos desecration, as mentioned in the introduction to the present paragraph. This inquiry should be made with a Torah observant and expert technician".

Chapter 1

Description of facts and risks relative to refrigerators and freezers



Refrigerators and freezers are divided into two categories: mechanical and digital. From the outside, it is difficult to distinguish between them. Some refrigerators were originally mechanical, yet the producers changed them to digital, without affecting their outer appearance.

All that is mentioned below is true to the present situation, but things change with the advancement of technology.

☞ Be aware that in both types of refrigerators new problems have recently arisen ☞

We shall succinctly explain below the main risks, then we shall explain them more in detail.
(Look at the picture on next page for reference)

Mechanical refrigerators

- 1) Lighting a bulb
- 2) Activating the compressor (refrigeration) through the introduction of hot air.
- 3) Turning off the fan through opening by way of the release of a button (or magnetic, concealed button - see picture).
- 4) Initiating the running of the heating unit.

Presently, most existing attachment/shabbath modes have not taken care of all these risks, see page 13.

Digital refrigerators

(besides the above mentioned risks)

5. Immediate digital recordings upon the introduction of warm air.
6. Activation of a bulb or buzz at the time of loosening of door button.
7. Counting of door openings by internal mechanism.
8. Activating damper by opening the door.
9. Inverter motor.

In these refrigerators too, the Sabbath attachments do not eliminate all the risks involved in their use



The abovementioned risks are discussed in detail on the following page

1. Lighting a bulb

Everyone knows that opening the refrigerator's door causes a light bulb to go on. The light bulb should be disconnected before Shabbos. Some poskim though say this is not enough, since the door continues to push and release the button when being opened or closed, which could represent a problem of "Boneh" a half circuit (i.e. the electrons are being activated without being released through the circuitry. This is similar to plugging the extension chord in the outlet, without connecting it to any appliance. To avoid this problem, one should tape down the door's button so that it should not be either pushed or released by opening or closing the door).

2. Activating the compressor

The compressor's activity depends upon the thermostat: when the temperature drops below a certain level, the thermostat cuts off the electricity supply to the compressor, which will then stop. When the temperature rises again, the material of the thermostat will expand, causing the closure of the circuit in so doing, and restarting the compressor. When the door is opened, warm air enters the refrigerator and causes the compressor to start working (if it was not working yet). Gedoley Haposkim, and amongst them the Chazon Ich (חזון איש) – [Chapter 14 of Dinim Ve Hanhagot (ספר דינים והנהגות פי"ד), and in Menuchoh Nechonoh (מנוחה נכונה)] - warned about that matter. So do the Igross Moshe (אגרות משה) [Orach Chaim part 2 par. 69: "The Gri'a Henkin (הגר"י הענקין) already ruled that one should open the refrigerator only when the motor is already running"] the Minchat Yitzchok [part 2 par. 67] the Gri'sh Elyashiv (זצ"ל) [Shvut Yitzchok (שבות יצחק) part 12 par. 8] the Gr'a Kotlar [Mishnat Rabbi Aharon Orach Chaim par. 4 who also forbids to close the refrigerator when it works, because this causes the motor to stop earlier]. Still, the Garshz'a zatsa'l (גרשז"א) allows this, though not for frost free refrigerators, as he writes in Minchas Shlomo part 1 par. 10, in the footnote: **"You should note that all that was said in this article concerns only refrigerators working upon compression and release of gasses, and not absorption refrigerators which contain a heating unit, and not frost free refrigerators, in which the problems are of a different nature"**.

3. Turning off the fan

The freezing compartment contains a fan, which spreads the cold air from the cooling unit to the whole freezing compartment. Some refrigerators have such a fan in the refrigerating compartment as well. In many such refrigerators, the fan stops working when the door is opened. The button for that purpose can be visible or concealed and activated by a magnet inside the door. See what was said above in the name of the 'Teshuvot ve hanhagot' (תשובות והנהגות).

4. Initiating the running of the heating unit.

We still have to consider what already existed in mechanical refrigerators as a no – frost program. (This feature is present in all refrigerators, mechanical or digital, free of ice in the freezer compartment). In this program, the thermostat runs a timer that keeps track after the duration of operation of the compressor, and after a total of six hours, the thermostat activates a heating unit to defrost the ice. Heat that is allowed into the refrigerator will prolong the running time of the compressor, which in turn will precipitate the onset of the defrost by the hot wire. All this means that, even while the refrigerator is already running, opening the door and letting heat in by so doing, precipitates the activation of the heating unit (it is possible that this cannot be considered as the prolonging of an existing condition). See “Orchos Shabbos” (ארחות שבת ח"ג) part 3, page 61, and the directives of the Bada'ts (letter below).

5. Digital recording.

As mentioned before, all digital refrigerators contain sensors connected to an internal control card (see picture on back cover). These electronic sensors are very sensitive to the slightest change in temperature. The introduction of even a minimal amount of hot or cold air produces instantly a digital record inside the control card.

Note, that these recordings occur permanently, even while one can hear the compressor humming. Therefore even one who was accustomed to open the refrigerator's door while the compressor is running, should not do so with digital refrigerators (many models do not have a screen at all) as the Gedoley Ha Poskim have ruled in the letters shown below.

6. Warning system. (light or buzz)

Some refrigerators and freezers have a warning system using a beep or a flashing light - The warning systems goes into action when the door has been left open, or when any kind of complication or malfunction of the refrigerator has occurred. The problem with the use of such refrigerator does not arise when the system produces a warning, yet already from the very moment the door is being opened, since from that moment, the opening time of the door is being timed (by the electronic card). This may mean the closure or some other influence upon an electrical circuit.

7. Counting door openings

Some refrigerators have a mechanism that counts door openings, and activates the defrosting process after 5 or 6 openings. The Shabbos violation here is evident. Even before the quota of openings for the defrost activation has been reached, each separate opening is being registered inside the control card. This represents a violation, just like any straightforward operation of an electrical appliance on Shabbos.

8. Damper activation

Some models of refrigerators do not have a separate cooling system for the refrigerator and freezer compartment. They only have a damper (i.e. a vent situated between the freezer and refrigerator) that allows cool air to flow from the freezer to the refrigerator. In some models, a thermostat operates a small motor that controls the damper vent, closing it whenever the temperature inside the refrigerator drops below a certain level, and reopening it when the temperature has gone up.

This thermostat too is influenced by incoming warm air, due to the opening of the door, and operates the damper's motor accordingly. This kind of thermostats is found in digital refrigerators, while in mechanical ones, the damper works by mechanically releasing springs, which does not constitute any problem on Sabbath.

9. Inverter Motor

Some refrigerators have a motor of the "inverter" type. This kind of motor never shuts off. It just modifies its working level according to the need. The motor is connected to sensors that the opening of the door can influence them to boost the motor's activity right away, or after a short while, because of a change in temperature.

One should refrain from using inverter motors on Shabbos, as shown in the Rabbis' letters on the use of **inverter a/c** on Shabbos:

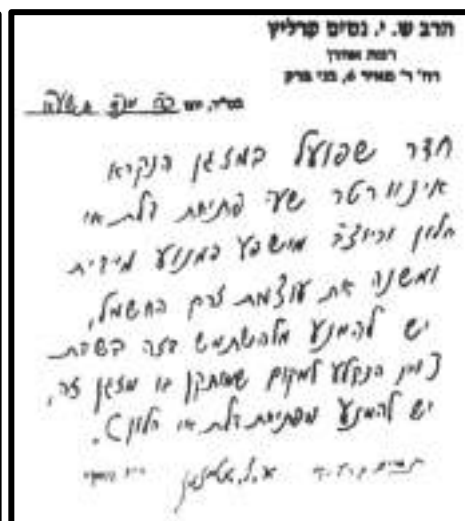
"One should not use on Shabbos Inverter air conditioners, because their motor is immediately influenced by the opening of doors or windows, which has an influence on the flow and force of electricity. (So too, one who stays in a place where such an air conditioner is operated, should refrain from opening a door or a window)."

(Signed) :

Nissim Karelitz

A.L. Steinman

Chaiom Kanyeovsky



Star-K Shabbath Mode

Based upon an article by Rabbi Avrohom Yosef Gordon, author of “Halichoth Shabbath” and dean of “Hilchoth Shabbath” Collel.

There are refrigerators, mainly abroad, that are fitted with Star-K Shabbath mode. In an article written by Star-K they explain the basis and principles underpinning this attachment (Shabbath mode), and the way it works (this has not been confirmed by an independent source). They wrote that the attachment annuls all lights, icons, tones, beeps, digital readouts, solenoids and most alarms are deactivated. The ice maker and cold water dispenser are deactivated (most). Fans are disconnected from the door switch.

The defrost system is independent from the compressor’s activity and the door opening count and works exclusively according to a preset timer.

Yet the compressor still works according to the thermostat, even though the latter is influenced by warm air entering the refrigerator upon the opening of the door. For this reason, they have added a “delay” function to the attachment causing the compressor not to instantly react when the thermostat senses a rise in temperature, which would normally cause it to go into action, but only 15 to 25 seconds later. This is halachically consider a “grama” (indirect cause). Although even a “grama” is forbidden on the Sabbath, inconjunction with the fact that the compressor’s activation represents a “Psik reishah delo niche leih” (unwanted consequence - פסיק רישא דלא ניהא ליה), this is allowed. **This is the essence of said article.**

When they were asked concerning the fact that there are immediate digital recordings constantly occurring, and it is not caused by a “grama” (see above, in the detailed risks present in digital refrigerators), they answered that it is their Rabbi’s opinion that any digital recording that does not appear onto a screen, or any other visual mean, is not considered a “Melochoh” (Sabbath violation) at all (even though, as a consequence of it, the compressor will start working some 20 seconds later, this is still considered a “Grama”).

The two abovementioned “heterim” are not sanctioned by the Poskim. First of all, since a 15-25 second delay is not necessarily considered a “grama” instead of a direct act, as mentioned in “Shvuth Yitzchok” (שבות יצחק) by Rabbi Derzi shlit’a, an eminent student of Rabbi Y. Sh. Elyashiv Zatsa’l, Vol. 12 page 112, where he states that he heard from Rabbi Elyashiv Zatsa’l that even if the compressor starts working

only after a full minute, it is still considered a direct act. So too, the Gaon Rabbi E. Beifuss shlit'a, a talmid of Rabbi Nissim Karelitz shlit'a, writes in the name of Rabbi Karelitz that only a delay of over a full minute can be considered a "grama", any shorted one is still considered a direct act. (The "Minchat Shlomoh" part 1 [שו"ת מנחת שלמה], who allows the opening of refrigerators, writes that it is considered a "grama", since he heard from an expert that a compressor will not go into action because of warm air within less than a minute, and there is no indication from his words concerning a 20 second delay).

It is in fact quite clear that such a system cannot be considered a "grama", because the digital thermostats present in most refrigerators, causes the immediate closure of an electrical circuit (in case incoming warm air has significantly affected the thermostat), and said closure of an electrical circuit represents the start of the ignition of the compressor, which comprises a few stages. This is comparable to the functioning of a tractor, in which the first ignition causes one system to go on, followed by a chain reaction, until the tractor actually starts moving. When the first consequence of a human action is immediate, all ensuing ones are considered direct results of that same action. This is in no way similar to the "grama" as mentioned in the Gemorah and Poskim, where a human action has no immediate consequence at all, as mentioned also in "Orchoth Shabbath" (ספר ארחות שבת ח"ג) Vol. 3 ch. 29, note 55.

In "Achiezer" (שו"ת אחיעזר ח"ג סי' ס) Vol. 3 par. 60 we find a ruling prohibiting the above, concerning the use of a switch that closes a circuit through "grama". It is explained there, that since this is the normal way to execute a precise "melachah", it is considered a "melecheth machasheveth" (a premeditated action) by the "Even Haozer" (אבן העוזר) and other poskim. These are his words: "This is not similar to what is mentioned in Shabbath 120 (קכ) (שבת קכ), concerning the indirect extinction of fire, which occurs by chance, and in such case we say: "Thou shalt not perform any work", but a "grama" is allowed in such circumstances, since it is not considered a Melachah/work. But when the "grama" is always the natural consequence of a particular action, it is considered a premeditated act". It is also mentioned there that even though that action could have been performed in a direct way, this is still considered to be an action prohibited by the Torah. At the end of the same response, the author rules that this is indeed considered a Torah prohibition.

The above is applicable to these refrigerators, since the "delay" does not take care of the problem, since it is programmed to permanently function in that way, and this is then considered the normal way of doing things, as defined by the Achiezer (concerning the switch) a "melachah" always performed by way of a "grama".

Besides that, a “grama” together with a “psik reishah delo niche leih” (unwanted consequence), is forbidden by many authorities. Indeed, all the poskim mentioned above on page 9 (2), (i.e. the Chazon Ish, Igroth Mosheh, Minchat Yitzchok, the Gaon Rabbi Kotlar and Rabbi Y. Sh. Elyashiv Zatsa’l), who do not allow the opening of the refrigerator while it is running, do so even in the case when the opening turns the compressor on by way of a “grama” together with a “psik reishah”. The same is indicated in Orchoth Shabbat (ארחות שבת ח"ג) Vol. 3 page 239, in the note.

Secondly, about their authorization concerning digital recordings that do not appear on a screen, see letters below (and page 1 above), in which the Guedoley Hador warn against digital markings/ recording. These are signed by:

Rabbi Y. SH. Elyashiv zatsa’l, Rabbi A.Y. Steiman shlit’a, Rabbi Sh. Halevy Wozner shlit’a, Rabbi Sh. Baadani shlit’a, Rabbi N. Karelitz shlit’a, Rabbi Ch. Kanyevsky shlit’a, and others.

Star-K 'Sabbath mode' for ovens: For some ovens with attachment sanctioned by the Star-K hechsher, it is mentioned in the directions, and explained as well in the article: **they allow to push manually the electric switch on Yomtov**, to raise the temperature inside the oven. The authorization is based on a “grama” on Yomtov (as allowed by some poskim). This attachment works similarly to that of the refrigerators, yet not exactly like them. The pushing of the switch causes an immediate electric change inside the **command card**, even though it does not cause an immediate reaction in the heating unit, but well after 15-25 seconds, when the system scans for changes in the command card. If such changes are detected, it will react accordingly. Their opinion is that this manner of operation falls into the definition of a “grama” and is allowed on Yomtov. We have already demonstrated (as brought up as well in the abovementioned excerpt from Orchoth Shabbath) that any such procedure cannot be considered a “grama”. **This case, in fact, is even more stringent, since the digital recording happens instantly and manually.**

It has to be pointed out that, according to many Gedoley Haposkim, increasing the heat on Yomtov by way of a manually operated switch is potentially a severe Yomtov transgression.

Chapter 2

Letters by the most eminent Poskim concerning digital markings and the risks inherent to the use of electrical appliances on Sabbath



To remove a stumbling block from the House of Israel

I hereby publicly announce, concerning electric systems whose use involves the activation or increment of electric current, or digital recordings and the like, that these are forbidden on Sabbath, and one should exercise caution in relying upon authorizations based upon doubts concerning “Psik Reishah” or “Grama” and the like, through the use of flimsy comparisons.

And in the merit of the respect of Sabbath laws, we shall be soon redeemed.

(Signed): Rabbi Nissim Karelitz; Rabbi A.L. Steinman; Rabbi Elyashiv; Rabbi Chaim Kanyeovsky; Rabbi Sh. Wozner; Rabbi Sh. Auerbach; Rabbi Shimon Baadani.



קובץ טבית לוי - פסקים ובירורי הלכה טבית מדרשו
של מרן בעל שבט הלוי שליט"א

טבית לוי

מקרים ומקפאים - בשנים האחרונות מובאים מהו"ל ויש שינויים בין
דגם לדגם ובין שנת ייצור אחת לחבירתה, ובחלק גדול יש איסור
בפתיחת הדלת (גם בשעה שפועל), ובשימוש במתקנים הנוספים כגון
קרה, וא"א להשתמש בהם בלי התקן מיוחד לשבת.

Kovets Mibeth Levy – Rulings and Halachic considerations from the Beis Medrash of the Baal Sheveth Ha-Levy shlit'a

Nowadays, refrigerators and freezers are imported from abroad and each model is different, as is each year's production. In many models, the opening of the door involves a Sabbath violation (even while the motor runs), or when additional equipment is being used, like for ice, and cannot be used without special equipment for the Sabbath



To the people that sanctifies the 7th day

Digital refrigerators, as marketed today, have control systems totally different from those in the old types of refrigerators. Therefore questions relative to their use on Sabbath are much more involved, since by each opening of the door, warm air comes in, which **directly** causes digital recordings. As

Gedolim have pointed out, every action causing a digital recording is forbidden. The special attachments (Sabbath mode) available today do not prevent digital markings. Therefore there is a risk of desecrating a Torah ordination concerning the Sabbath or Yom Tov when using them on these days. For this reason, everyone should find out if the model in his possession can be used on Sabbath and Yom Tov. (All this is beside the other effects of opening the door, like lighting a bulb or fan and the like).

Thank Heaven, there are halachic solutions to digital recordings, and the other problems involved, and the "Glatt Sabbath" attachment produced by the Mishmereth Hashabbath can be used a priori. It is therefore compulsory to install such attachments to allow the use of refrigerators on the Sabbath.

Sarel Rosenberg Shevach Tsvi Rosenblat Menachem Mendel Lubin
Natan Hacoheh Kopschit I have signed the present letter for the sake of the
sanctity of the Sabbath,
Shammai Kehat Hacoheh Gross

Sariel Rozenberg
Rabbi of Ramat David neighborhood
Bene Berak

66, Chazon Ish Street, apt.2
 (Kiryat Moshe)
 Tel.:03-6184743 Fax:03-6161319

Sabbath eve of Vayakhel Pekoodey 5772

לעם מקדשי שביעי

To the people that sanctifies the 7th day

The problems with appliances, using thermostats, and in which human interference cause temperature changes setting off various electrical reactions, are well known. Especially with the new digital thermostats. Gedoley Israel have already warned about the use of appliances involving the increment of electric current and digital recordings.

In fact, the problematic systems can be disconnected on the Sabbath (while connecting the appliance to an independent timer, so as not to strain the motor), allowing the use of these appliances without worry. Yet some companies annul their warranty when this is done, saying that this is considered as foreign interference with the appliance.

The Rabbis of Mishmereth Hashabbath have convinced some companies to add an attachment solving this problem, without invalidating the warranty (Samsung, Normende, Teka and Sharp for refrigerators; LG, Mitsubishi and Samsung for air conditioners).

Any G-dfearing person should install this attachment (for information call 072-2164422) and in the merit of the sanctification of the Sabbath, they shall be blessed forever, since Sabbath is the source of all blessings.

Sariel Rozenberg

Rabbi of Ramat David Neighborhood

הראשון לציון תשס"ג
 רבי שביע

I hereby join into the reinforcement of the sanctification of the Sabbath.

Nissim Karelitz

Maran Ha'Gaon Harav Nissim Karelitz Shlit'a**מרן הגר"נ קרליץ שליט"א****“Chut Shani” (ספר חוט שני) on Electricity**

a. Lately the functioning of electric appliances is affected by new developments causing e.g. purposely added cold, even though this does not involve connecting elements or restarting a unit, only added power, yet it is forbidden on Sabbath and Yom Tov.

Likewise it is forbidden to open doors or activate elements through the use of a magnetic card.

b. In new refrigerators, there is a risk of activating a defrost fan by opening the door.

This also influences the digital thermostat that registers data and issues commands, even though the motor is already running.

יום ה', כ"ב כסלו תשע"ב

היות ולאחרונה עם התקדמות הטכנולוגיה נוצרו שאלות חמורות בהלכות שבת בהגברת זרם או רישומים דיגיטליים, שנאסרו ע"י גדולי ישראל במכשירי השמל במשאבות מים, במקררים, במזגנים וכדו'.

אי לכך הוקמה ועדת "משמרת השבת" בראשות ת"ח מובהקים שידם רב להם בהלכות שבת החמורות, בס"ד זוכים לברר את המותר והאסור בשבת.

א. ל. שטיינמן
נ"י כ"ב כסלו תשע"ב

ח. קאניבסקי
נ"י כ"ב כסלו תשע"ב

ש. אורבך
נ"י כ"ב כסלו תשע"ב

Thursday, 26 Kislev 5772

Recent technological developments have created new problems concerning the increment of current and the recording of digital data on Sabbath, which are forbidden by Gedoley Israel. Like in refrigerators, water pumps, air conditioners etc.

The “Mishmereth Hashabbath” has therefore been instituted by eminent scholars, knowledgeable of all aspects of Sabbath Halachoth, who will investigate and rule upon what is allowed and what is not on Sabbath.

A. L. Steinman

Ch. Kanyevsky

Nissim Karelitz

Y. Sh. Elyashiv

Sh. Auerbach



Badats' directives concerning refrigerators with Sabbath attachments authorized by the Badats

Halachic questions prone to appear in refrigerators that are not fitted with the special Sabbath attachment and special directives of the Badats Eidah Chareidith concerning such attachments

Operating the light

Every refrigerator has a light that is operated by a switch in the door. When the door is opened, the switch is released and lights up the bulb. When the door is closed, it presses the switch, turning the light off. This is of course forbidden on Sabbath, and most Poskim rule that it represents a Torah violation. Badats sanctioned refrigerators have a special switch that neutralizes the light.

Thermostat

In refrigerators, a thermostat controls the compressor's activity. When the temperature rises, the compressor is switched on to lower it. When it rises, the compressor switches off. The thermostat checks the temperature and activates the compressor accordingly.

When one opens the door, warm air comes in, which sets the compressor on. In Badats sanctioned refrigerators, the thermostat is neutralized and its function is taken over by a timer which operates the compressor at set intervals.

Digital thermostat

Many new models contain digital thermostats.

When the thermostat expands due to heat, electronic currents rise. When it reaches a certain temperature, the electronic currents close a circuit inside a transistor and the computerized card receives a command to activate the compressor. In some refrigerators meant for use on Sabbath, the computerized card is – so to speak –put to sleep, so that it cannot issue commands to activate the compressor.

The Badats requires that the thermostat itself should be neutralized, not only the computerized card. The refrigerator's temperature is then controlled by a timer, independently of how many times the door is being opened

Cooling and defrosting

According to compressor activity or digital recording. Air contains moisture, which condenses when cooled. Thus air penetrating the cool refrigerator turns to water. That water could freeze around the refrigerator's coils and impede its proper functioning. A heating unit which defrosts the ice is fitted inside refrigerators to avoid this problem.

Since opening the refrigerator's door allow moisture in and increases the working time of the compressor, most units have a sensor that keeps track of the compressor's working lapse and activates a heating unit (usually after 6 hours) to defrost the cooling coils of the refrigerator. Even when the compressor is not directly turned on by the opening of the door, it certainly works longer because of it, which in turn activates the defrosting system.

More modern refrigerators contain a computerized system that counts the door openings. Every opening is recorded and when a certain quota is reached, the computerized card issues a command turning on the defrosting system.

Thus, the opening of the door causes the counting sensors to register data.

In refrigerators sanctioned by the Badats, all control and digital recording of data or door opening is neutralized and the defrosting system operates according to preset periods, so that the opening of the door has no effect on the refrigerators defrosting system.

Orchoth Shabbos – chapter 26 | ספר ארחות שבת פרק כו

The use of electrical refrigerators and freezers

The use of electrical refrigerators on Sabbath entails many risks and, as will be explained below, some of them are already known for a long time but, with the advent of new kinds of refrigerators, new risks have appeared as well, to the point that some of them cannot be opened in any way unless a special Sabbath attachment (Sabbath mode) is provided for them. We shall now explain some of these risks.

a) By opening the refrigerator's door, one lets in warm air, which affects the functioning of the cooling motor. If the door is opened while the motor is off, this will precipitate its going on. On the other hand, if this is done while the motor is already on, it will prolong its working period. These changes are due to the presence of a thermostat that activates the refrigerator's motor when the air heats up.

b) When the door is opened, a light goes on.

c) Some refrigerators have automatic no-frost programs. In some instances, the defrosting depends upon how long the motor has been on, so that the opening of the door causes – indirectly – the earlier onset of the defrosting. The defrosting is done by a heating unit, in which a wire can become hot red, which represents the violation of Mav'ir (lighting מבטיר) on Shabbos. Besides that, there is a risk of a violation of Boneh (building) when the heating unit's electrical circuit is being closed.

d) In some refrigerators a fan prevents the building up of ice in the freezer compartment. When the door of the freezer is opened, this fan stops working.

e) In some freezers there is a buzz when the door has been left open for a few minutes, and sometimes a warning light too. In some instances, the minute the door is opened, a circuit is closed activating a timer that will cause the buzz or light signal after a while. In other instances, this is done by the thermostat. (Each case has to be checked separately).

f) Some refrigerators have a digital screen that shows the temperature inside. The opening of the door will instantly change the reading on the screen when warm air is allowed in.

One should know as well that there are differences between models of a same company and it is important to check the matter with an expert technician. Technical changes are frequent in this field, and new risks are bound to come up regularly.

The Gaon Rabbi Moshe Mordechai Karp shlit'a
Foremost Student of Mara'n Rabbi Y.Sh. Elyashiv zatsa'l

Shabbos Halochos on Shabbos | ספר הלכות שבת בשבת (עמ' רלח)

All the above is about old refrigerators. Today's new refrigerators come with problematic questions about their use, like the causing of a fan to go on or off, just by opening or closing the door, activating the no-frost system (containing a heating unit hot wire) and other problems renewing themselves daily without our knowledge. It is therefore imperative in new models, to completely disconnect all peripheral systems. If one is not able to do so by himself, the only way to go about is to use an external timer that periodically turn the refrigerator on and off, and to open the door exclusively when the motor is off (and even this is not sufficient for refrigerators with an application that allows them to continue to work even during a power cut). Alternatively, one can use refrigerators with a special command panel for Shabbos that removes all risks of "Havarah" (burning) and "Kibbuy" (extinguishing), directly or indirectly.

All the above is about old refrigerators, but in today's new refrigerators there are new problems which have not yet been dealt with, **like the turning on of fans just by opening or closing the door, which is forbidden, even while the motor is on**, since the opening of the door activates it and the closing turns it off. Also, every 8 hours, the compressor lights up the automatic defrosting system that includes a red hot wire. This is also caused by the opening and closing of the door (although this may be questionable, since it is not frequent that one should open the door right before the defrosting has to go on). It is also possible that there is a memory card in the refrigerator that activates all kinds of systems, and one should beware of that. Therefore, one should only open a refrigerator only by way of a timer that cuts off its operation completely, and when the motor is off. Alternatively, one can use a refrigerator with a built in "Shabbos mode", removing all risks.

The Gaon Rabbi David Aryeh Morgenstern shlit'a Rabbi of Ramat Shlomoh – Jerusalem
Foremost Student of Mara'n Rabbi Y.Sh. Elyashiv zatsa'l

בס"ד מרחשון תשע"ג

בנידון המקררים והמקפאים החדשים המיוצרים בתקופה אחרונה המצויים כיום אצל רוב הציבור, תכנית ואופן פעולתם שונה לחלוטין מהמקררים שיוצרו בעבר, וברוב הדגמים שנבדקו קיימת השפעה ישירה של המשתמש על פעילות המקרר דבר הכרוך בשאלות חמורות של חילול שבת רח"ל. ואף הפתרונות המוצעים כיום אינם פותרים את כל השאלות ההלכתיות הכרוכות בשימוש במקרר.

ועכשיו לאחר מאמץ מרובה וחקירה מקיפה פיתחו ועד "משמרת השבת" התקן מיוחד המכונה "גלאט שבת", על ידי התקן זה אין השפעה לפתיחת המקרר על פעילות המקרר ועי"ז המקרר ראוי לשימוש לכתחילה בשבת.

213 א"ח מרחשון תשע"ג

Jews have always done their utmost to sanctify the Shabbos, without faltering in any way by desecrating it. There is no need to delve on this, as it is well known to all.

Nowadays, technological advancements have brought with them all kinds of problematic situations, like current increments, digital records, as is found in water meters and the new refrigerators, which can cause real Torah violations. Many of these problems are not visible to the lay person, but only to expert technicians. Their common denominator is that they represent true stumbling blocks.

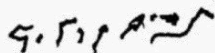
As is well known, the Shabbos Melachos require profound insight to be properly understood, especially as far as the new technological developments are concerned. The latter cannot be considered lightly, since that by deepening research, unsuspected stumbling blocks are usually uncovered.

One cannot rely on the authorizations of all kinds of baseless “Heterim” that are commonly spread, because they present no valid Torah argument and they can snowball into boundless permissiveness, even to the point of erasing the whole idea of the Shabbos.

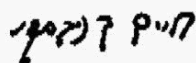
Some eminent scholars have taken upon themselves, with great devotion, to remove the stumbling blocks that lay before the public, even G-dfearing unsuspecting individuals, who use these problematic appliances.

It is the “Mishmeret Hashabbath”’s task to define what is allowed and what is not in all these matters and to find suitable solutions to all problems, to remove any risks of Sabbath violations.

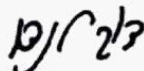
The merit of the sanctification of the Shabbos will cause all heedful people to be blessed in all their endeavors.



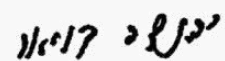
Nissim Karelitz



Chaim Kanyeovsky



Dov Landau



Yehudah Bauer

Chapter 3

Mishmereth Hashabbath's solutions for refrigerators and freezers



We shall detail hereafter the possibilities and attachments (Sabbath mode) suitable for the use of digital refrigerators and freezers on Sabbath (as mentioned, all halachic and technical guidelines are from the Mishmereth Hashabbath). The attachments mentioned below are suitable only for digital refrigerators and freezers.

To receive information on solutions for other appliances, like mechanical refrigerators, air conditioners, water meters etc. please, contact the **Mishmereth Hashabbath**.

Today, the transition to digital equipment has rendered the use of refrigerators on Shabbos problematic, and the whole halachic approach to them has changed.

- a) These refrigerators usually contain a number of temperature sensors, each responsible for the control of a different system of the refrigerator. It is therefore meaningless to say that one hears that the compressor is running.
- b) The sensors are able to instantly react to any change in temperature.
- c) In mechanical thermostats, there are only two possibilities: or the desirable temperature has not yet been reached, and then the thermostat lets the compressor run; or it has been reached, and then the thermostat turns the compressor off². This thermostat does not actually distinguish small changes in temperature. This is not so in a digital thermostat whose sensors register any change in temperature and record it digitally. This has been forbidden by our Rabbis, as mentioned earlier.
- d) The doors buttons usually have a few different purposes (like lighting a bulb, turning off the fan, flashing a warning light or buzz, counting door openings to operate the defrosting unit etc.). Usually, there is a separate button for each door (even when there is no light in the freezer compartment, there is still a button). Sometimes there are even two buttons on one door³. In many models, the buttons are replaced by hidden magnets and there is no way to neutralize them – if not by using a qualified technician.

² There is still another possibility for refrigerators with a mechanical thermostat, i.e. to turn the cold control dial to the maximum, so that the thermostat will cut off electricity only when the minimum temperature has been reached, and to connect the refrigerator to a Shabbos timer that will turn the refrigerator on and off regularly, so that it cannot reach the minimum temperature. Even so, it is preferable to disconnect the thermostat.

³ In refrigerators with an ice/cold water dispenser.

There is therefore no Heter (היתר) to open a digital refrigerator while it is connected to a source of electricity, unless a special attachment has been added, that disconnects all sensors and voids all human interference with the refrigerator's activity⁴.

Therefore, even for refrigerators fitted with Shabbos attachments (Sabbath mode), it is necessary to find out if the attachment really annuls the influence of the opening of the door on the refrigerator. **It is necessary** to do so using the service of a professional, expert in this matter. One cannot rely on storekeepers or plain technicians.

Some mechanical refrigerators have been converted into digital ones, without any outside, visible clue to that.

Therefore, mistakes are common (even by expert, G-dfearing storekeepers).

How does the “Mishmereth Hashabbat” attachment/sabbath-mode work

- a. The attachment disconnects all the sensors from the “command card”. Instead of them, sensors have been connected that simulate heat and cold, and cause the command card to turn on the refrigerator at set intervals, without any influence from the change in temperatures caused while the door is being opened and closed.
 - b. The attachment disconnects as well the door's buttons and they do not influence the refrigerator's way of working.
 - c. In refrigerators in which the defrosting happens after a certain number of door openings, the attachment simulates one door opening every hour.
 - d. There are 9 cold levels. 01 is the minimum cold level (i.e. warmer) and 09 is the maximum (i.e. coolest). 0 is for weekdays.
- A picture of the attachment appears on the back cover.

- Information sheet on the next page -

⁴ While a special Shabbos attachment has not yet been installed, the refrigerator should be connected to an external Shabbos timer, and the door be opened only when the timer has disconnected the motor from the electricity (so as not to allow foodstuffs to deteriorate, it is advisable to let the refrigerator work 70% of the time in summer, and 50% in winter).

Information about installation of the Sabbath attachment (Sabbath mode), and purchase of a refrigerator, free of any Sabbath desecration:

1. It is possible to receive any information as to a refrigerator being mechanical or digital, as well as other details, from the expert technicians of the “Mishmereth Hashabbath”.
2. Please note that only technician that have been briefed by Torah scholars are knowledgeable in these matters, know if a refrigerator is considered totally mechanical or digital, or only partly. No salesperson can be trusted for that.
3. Some attachments/Sabbath modes do not provide an adequate response to all halachic requirements. This can be checked with us.
4. It is possible to verify if a refrigerator is mechanical by checking the blueprint on its back (looks like a family tree). Copy and send it to Fax: 072-2164423, or to Email: a0573191077@okmail.co.il, adding your name, tel. # and the model.
5. Mishmereth Hashabbath’s attachments are suitable for most types of refrigerators.

For models that do not affect the company’s warranty, this can be done within 14 working days. For other models, this will be done at the first opportunity, according to availability.

It is possible to contact Mishmereth Hashabbath to order a certified technician who will install an attachment that allows the refrigerator to be opened at all times, without risk of any Sabbath transgression, according to all opinions. The attachment disconnects all interference between humans and the refrigerator, switching the latter to a timer with preset working periods.

Mishmereth Hashabbath’s phone (Israel) :

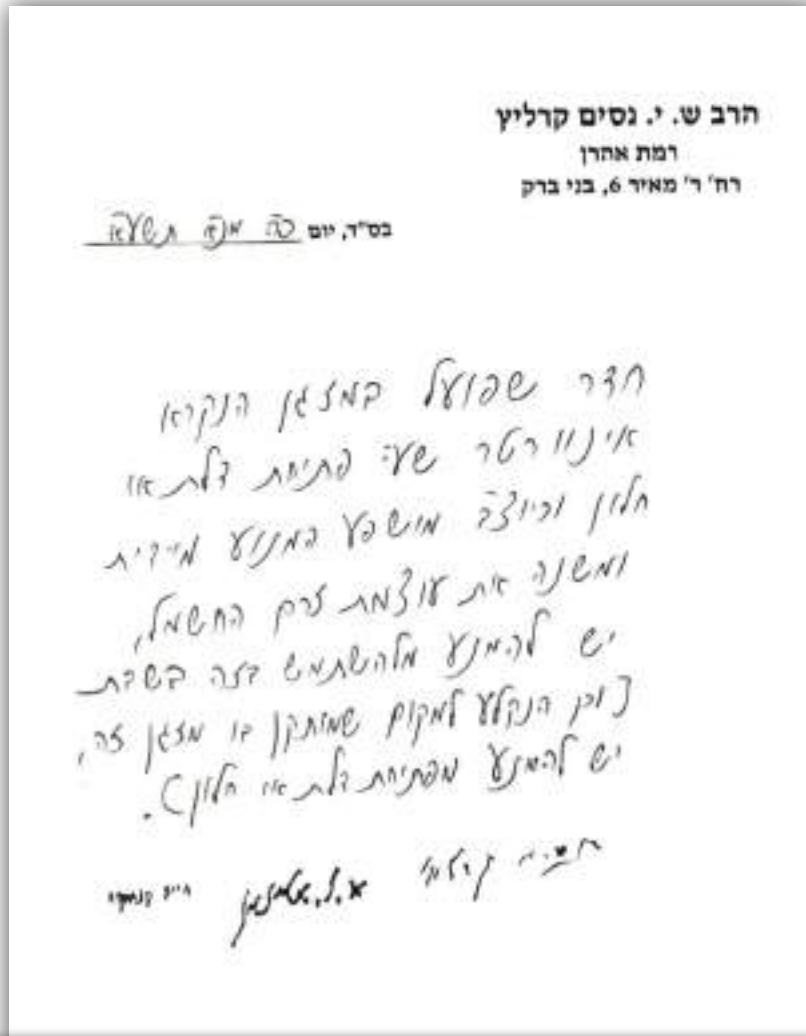
072-2164422

From out of israel +972-72216-4422

Chapter 4

Digital and Inverter Air Conditioners





Rabbi Sh. Y. Nissim Karelitz
Ramat Aharon
6 Rabbi Meir Street, Bne Brak

28 M. Av 5771

One should not use on Shabbos inverter air conditioners, because their motor is immediately influenced by the opening of doors or windows, which has an influence on the flow of electricity. (So too, one who stays in a place where such an air conditioner is working, should refrain from opening a door or a window).

(Signed): Nissim Karelitz

A.L. Steinman

Chaiom Kanyevisky

Sabbath attachments/mode for regular or Inverter air conditioners can be ordered from 'Mishmereth Hashabbath'

Quotation from the "Shvuth Yitzchok" (ספר שבות יצחק)

Written by Hagaon Rabbi Yitzchak Darzi shlit'a

Foremost Student of Mara'n Rabbi Y.Sh. Elyashiv zatsa'l

Chapter 9

Inverter motor, digital thermostat, closure of semi circuit

A. Air conditioner with inverter motor

Operating an air conditioning unit that runs by way of a thermostat that stops and restarts the unit upon 2 degree change, while the opening of the door does not directly cause such restart, unless the ambient air has warmed up, is allowed, because it is considered a "Grama de Psik Reisha", as explained above.

This is not the case with an inverter, where the motor runs constantly, while the temperature is regulated by sensors that affect power supply. The speed and intensity of reaction depend upon the model used, its location and the measure of opposition to its workings.

The use of the above is forbidden, when the opening of the door is sure to affect the a/c activity by introducing warm air that is felt by the sensors. It is like opening a door in front of a fire. (For the definition of "directly" – Koach Rishon – see above).

Even if one who does not care about the change, and even according to the opinion of the Aruch, that a "Psik Reisha delo nicha leih" is allowed, this is just like opening a door in front of a flame, which is forbidden, as will be explained.

א. דהנה איתא בשו"ע¹ אסור לפתוח דלת כנגד המדורה אפי' ברוח מצויה שאין דרכה ללכות את האש, דגזרינן אטו רוח שאינה מצויה שמבעירה את המדורה. והכי נמי הכא יש לדון דגם אם במקרה זה לא איכפת ליה תוספת מועטת, הרי יש מקרים אחרים שבהם התוספת ניכרת וניחא ליה, כגון שבא ממקום חם וניחא ליה גם תוספת מועטת, או שמכניס עמו אויר חם והתוספת היא גדולה ומשמעותית ובודאי ניחא ליה בה, והוא בודאי לא יתן דעתו להמנע מלהכנס לבית גם במקרים אלו.

ב. עוד מקור לאסור בזה, ממה שאסרו לפתוח דלת כנגד הנר שמא יכבנו הרוח^א, וביאר הגר"ז^ב [ע"פ המג"א] דאסרו אף בשעה שאין רוח מנשב בחוץ, שמא יתחיל לנשב מיד שיתחיל לפתוח ונמצא עושה איסור כשהוא ודאי פסיק רישיה, והוא לא ידע ואשם שסבור כשמתחיל שאין רוח.

והוסיף דכהאי גוונא י"ל בנקיטת הדלת דאיתא בשו"ע שאם נר קבוע בכותל שאחורי הדלת אסור לפתוח הדלת ולנועלו כדרכו שמא תהא הדלת נוקשת עליו ויכבנו אלא יזהר לפתוח בנחת, וביאר הגר"ז^ב דהגזירה היא שמא ינקש בידיים בחווק ויהיה אז פס"ר שאז אין ספק כלל והספק הוא כשפותח כדרכו בלא זהירות שמא ינקש פעם אחת בחווק לכך צריך לזהר לעולם^א.

כלומר פעולה שרגילות לעשותה גם באופן של פס"ר של עשיית מלאכה, ולולי שימת לב מיוחדת וזהירות בכל פעם שעושה את הפעולה בודאי יעשה גם באופן שהוא פס"ר של עשיית מלאכה, גזרינן כשעושה כהרגלו שמא יעשה את הפעולה באופן של פס"ר דניחא ליה^א.

[וע"ע במאירי^א באיסור פתיחת דלת כשהנר קרוב לדלת, דכל שהוא בקרוב לפסיק רישיה ושהדבר מצוי נקרא העושה פורץ גדר וראוי לקללה].

וכל שכן הכא במקום שפועל בו מזגן כזה, שאין הדבר בשליטתו ובידיעתו כ"כ כמו בפתיחת דלת כשאין רוח מנשב, ובודאי לא ימנע מלהכנס לבית או לחדר גם כשדעתו על הצינון או החימום, וגם כשיגרום לתוספת ניכרת ובפס"ר דניחא ליה^ב.

"As a matter of fact, I have heard from the Gaon Rabbi Y. Sh. Elyashiv Zatsa'l that the proper thing to do is to install a Sabbath attachment that neutralizes all human interference with the appliance's way of work "

B. Air Conditioners with Digital Thermostats

With air conditioners fitted with a digital thermostats that switches them on and off in the presence of a 2 degree change, entering the room does not affects the thermostat and is not a “psik reisha” i.e. an inevitable occurrence. Still, the digital thermostat records changes of 0.1 degrees, and restarts the unit after 10 such consecutive readings. Thus, the restarting occurs through a combination of “Grama” (indirect cause) and “psik reisha” (inevitability), but the recordings themselves constitute a true “psik reisha”. Some people turn the a/c dial to such temperature that will never cause the motor to start running and use a timer to turn it on and off periodically. I have heard though, from Rabbi Elyashiv Zatsa’l that, even when the a/c is operated in this manner, the sensors produce constantly digital recordings that should be considered as half a melachah, or half a measure of a melachah. Therefore, one should install a special Sabbath attachment, to avoid such recordings.

ויעורי' בחזו"א" שכתב דהמחמם את הכרזול ליד סולדת נראה דאיסורא איכא, ואפשר דאסור מהתורה כעין חצי שיעור".

ואמנם מיירי התם במקום שיכול לבא לידי ריכוך, ובקדירה מלאה שאינו יכול לבא לידי ריכוך שרי", ולכאורה כמו"כ הכא נימא דשרי לכתחילה כיון שאינו יכול להביא לידי הפעלה.

יש לחלק, כי חימום ברזל אין בו מצד עצמו שום איסור אלא א"כ מביא לתוצאת מלאכה, משא"כ רישום דיגיטלי עצמו הוא פעולת איסור וגם נעשה ע"י יצירת זרם, אלא שחשיבותו היא כחצי שיעור או חצי מלאכה כיון שאינו מביא תוצאה של הפעלה.

וכמו"כ נתבאר לעיל פרק ו' שהגרי"ש אלישיב זצ"ל הורה לבטל פעולת החיישנים בכניסה לבית גם כשאין מביאים לתוצאה של רישום כי מתחדשת פעולת איסור. [נע"ע שם בגדרי פס"ר דלא ניחא ליה היכא שאינו מחדש תוצאה].

Chapter 5

Digital Water meters



Digital Water Meters on the Sabbath

Presented by the 'Mishmereth Hashabbath'

A water meter is installed on the main water supplying pipe of each home, whose task it is to measure the quantity of water being used. Every other month, the water company sends someone to read out the numbers from the meter. The owner is then charged accordingly.

Besides that, there is another meter on the pipe that supplies the water for the whole building, which measures the total quantity of water used by all the inhabitants. The charge for the difference in reading between these two meters is being equally divided between all the occupants of the building.

Until recently, all meters were mechanical. In these, the incoming water would swivel a cogwheel that would make other, numbered wheels turn, recording in so doing the amount of water that went through the pipe.

The Israeli Water Authority, like that of other countries (USA, France, Great Britain), is presently pushing ahead the transition to remote controlled digital meters. The amount of water being used is measured by way of an electrical meter having its own battery. The data are collected in memory chips and transmitted to a receiving station, a few hundred meters away, or to a passing vehicle (e.g. in Great Britain), that further the information to the main station.

Advantages of the digital water meters:

- a. It can easily detect an unusual usage that points out to a probable leakage, and locate the latter. Leakages are the cause of the yearly loss of millions of shekels, which of course end up being paid for by the consumer.
- b. The fact that the meter transmits data directly to the main station represents a nominal saving in manpower.
- c. Mechanical meters can be inverted, so as not to register water passage and allowing the user to cheat. This is not possible with digital meters that sense the direction of the water. Besides that, the meter's sensor can feel any movement, as well as the juxtaposition of a magnet.

d. The mechanical meter does not react to a very light passage of water, the latter being insufficient to rotate the wheels. Most digital meters do.

What the Gedoley Israel say

Before we discuss the different types of meters in detail, let us bring the words of the Gedoley Israel on this matter.

In an announcement on the subject, made in Tammuz 5771, under the title: “To remove a stumbling block from before the House of Israel,” we can read as follows: **“There are plans lately to install in all homes water meters connected to electronic devices in which sensors, activated by turning on faucets, transmit data to a computerized disc (this way, no employees will have to be hired to record meter readings, since these will automatically appear on the supplying company’s computer). This will create the risk of desecrating the Sabbath just by using water at home. We therefore ask from all people involved in this matter, not to do so and to find other solutions, free of any Sabbath related problems. In the merit of the sanctification of the Sabbath, we shall soon see the redemption of the people of Israel and the coming of Messiah, Amen.”**

This was signed by: **Rabbi Y. Sh. Elyashiv Zatsa’t; Rabbi Sh. Wozner shlit’a; Rabbi N. Karelitz shlit’a; Rabbi A.L. Steiman shlit’a; Rabbi Ch. Kanyevsky shlit’a; Rabbi Sh. Auerbach shlit’a; Rabbi Sh. Cohen shlit’a; Rabbi Sh. Baadani shlit’a and Rabbi M. Tsedakah shlit’a.**

In a later announcement we read: **“To remove a stumbling block from before the House of Israel: I would hereby like to publicly announce that any device containing any electric system the use of which turn them on, raise the current passing through them, or record digital data, cannot be used on Sabbath. One should be**

cautious in relying upon Heterim based on dubious explanations of Psik Reisha (inevitability) or Grama (indirect cause) and the like. In the merit of the sanctification of the Sabbath, we shall soon see the redemption of the people of Israel.”

This too was signed by: Rabbi Y. Sh. Elyashiv Zatsa't; Rabbi Sh. Wozner shlit'a; Rabbi N. Karelitz shlit'a; Rabbi A.L. Steiman shlit'a; Rabbi Ch. Kanyeovsky shlit'a; Rabbi Sh. Auerbach shlit'a and Rabbi Sh. Baadani shlit'a.

Just like the advancement of technology gives rise to new problems concerning the Sabbath, so too it provides the solutions.

A sample of a meter proper to be used on the Sabbath was brought to Rabbi Y. Sh. Elyashiv zatsa'l, just a few months before he passed away, and he added his signature (the last) to the letter calling people to use this kosher meter.

Detailed description of a digital meter:

Digital meters do not use any external power source. They use a long life battery (5 – 10 years) which lasts until the meter has to be changed anyway. The different kinds of meters transmit wireless data to the company's computerized central, through a regional transmitter situated a few hundred meters away.

A few types that are in use in Israel:

a. The type most used in Israel is manufactured by the Arad company and is called Dialog G3. In their publicity, they state under e.a.: “The meter identifies and warns about problems like inverted flow – including quantity - damage to the meter, leakage in an apartment, ever so small (toilet). The two-way communication unit allows instant meter readings.”

The unit contains a regular mechanical meter (the water make a propeller turn, which activates a series of cogwheels for mechanical counting). One of the wheels, controlled by a micro-processor, is coupled to an electronic system that reads its position twice per second (using light, mirrors and electronic eyes). This way, the electronic system controls and registers into the memory data about the flow of water. From time to time, the data are transmitted. This model has no digital screen.

Turning on a faucet causes an immediate electric reaction in the electronic eye. The computer then interprets these changes as motion in the wheels. (It seems that the usage data are updated only after the passage of tens of liters of water, but this might change. Besides that, all kinds of data can be retrieved regularly).

The Arad Company has lately developed a more advanced model called Dialog G3 2012. As far as we know, nothing has changed as far as Shabbath is concerned (on the contrary, things looks even worse).

b. The Arad Company manufactures another model, called Interpreter, also with cogwheels and mechanically operated dials (no digital screen), but here the propeller is not connected to the cogwheels but to a partly colored disc, whose revolutions are counted by way of a light source and an electronic eye. The disc, in turn, activates a tiny electric motor that makes the cogwheel spin. At the same time, the information coming from the disc's revolution is passed on to a micro-processor that keeps the data and computes the usage. These data are transmitted from time to time. This kind of meter reacts to the slightest movement of water, since water power is needed only to put the propeller in motion, and not the cogwheels. Every turning on of the faucet activates the electric motor which represents a Sabbath violation. This is besides the problem with digital recording of data in the micro-processor.

We have found some Interpreter models with a Dialog G3 tag.

c. The Arad Company also produces the Octave model, which it markets the world over. This model is much more advanced, since it does not use any mechanical cogwheels at all, only sound waves emitted on one side of the pipe and received further down on the other side of it (i.e. they are not situated vis-à-vis one another). When water flows, it speeds up the passage

of the sound waves between these two points. The lapse between emission and receipt allows the computer to calculate the speed of the passing water, which in turn informs it of the quantity being consumed. This kind of meter computes accurately any amount of water being used, even the smallest. A digital screen shows the speed and the quantity of the passing water, expressed in cubic meters per hour, as well as a few other data. This kind of meter is usually used as main meter for buildings or institutions etc.

Line 1: quantity in US gallons (1 gallon = 3.78 liters). The numbers on the right are tenths and hundredths of gallons, so that the data exposed are true to 38 ml.



Line 2: flow speed. One can choose between a ratio of cubes or liters per second. There are signs for battery level, malfunctions and flow direction.

Line 3: Signs for leakage, active transmission and emission indication.

d. In some places overseas, mechanical meters are installed that are coupled to transmitters capable of reading data from the screen. These meters count water usage mechanically, and only from time to time, the data are transmitted to a remote device. This system is compatible with Sabbath requirements.

e. Other models used overseas read data every four hours. A scholar should be asked as to the compatibility of these with Sabbath requirements.

Please note: Like all electrical appliances, water meters undergo changes and improvements, and today's meters are very different from the old ones. The meters used today in Israel are much more advanced and work differently than their predecessors, so that past Halachic publications are no more up to date (it could be that the present brochure will eventually go down the same way).

For instance: Some books have dealt with the problem of water meters, but they only mention the "Read - Switch" system that adds hundreds of liters in a primitive manner, and the experts dealt on the fact that it does not represent a Psik Reisha (inevitability). Today though, this model does not

exist anymore in Israel, and all existing models register the smallest quantity of water, in different ways.

Geographical update:

We bring hereafter a partial list of localities who have installed meters incompatible with Sabbath observance (in some instances the change is not general):

Bar Yochai; Dalton; Hazor Hagalilit; Tiberias; Yerucham (except for the Chareidy neighborhood); Yokneam (check the main meter); Maalot; Savyon; Petach – Tikvah; Safed; Katzrin; Ramat – Gan; and part of the Sharon.

Partial list of localities with old meters:

Ofakim; Ohr Hagannuz; Ohr Yehudah; Elad; Ashkelon; Beit Chilkyah; Bnei Brak; Beer Sheba; Zichron Yacov; Hadera; Haifa (Check main meter); Jerusalem; Netivoh; Netanyah; Kiryat Gat; Rosh Pinah; Rechassim; Tifrach;; the South (some places in Tel Aviv have external emitters).

In Beth Shemesh, kosher digital meters have been installed by the local Water Authority.

In some places, it is possible to request from the local authorities to replace digital meters with mechanical ones. This is feasible for instance in Petach Tikvah, by calling the information center whose phone number is: 1800-20-20-39. For other localities, you can contact 03-9321065 for information, or the Mishmereth Hashabbath at 072-2164422.

When vacationing in any of the abovementioned places, one should inquire beforehand about what kind of meter is in place there. For people living in apartments connected to digital meters, the proper solution is to install a water tank on the roof, to fill it up before the Sabbath and use on the Sabbath only water from the tank. Another possibility, for those who cannot

have a tank on the roof, would be to install a small water tank inside the apartment, that gets filled constantly during preset hours, and the remaining water should be spilled. (You can call Mishmereth Hashabbath at the abovementioned number to find out how to install such water tanks or how to contact professional installers).

If someone gets stuck in a place where the water meter is digital, he should prepare enough water before the Sabbath, or leave the faucet running slightly the whole Sabbath and use that water.

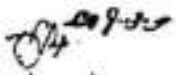
ביה, תמו תשע"א לפ"ק

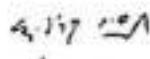
להסיר מכשול מבית ישראל

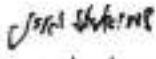
הנה לאחרונה רוצים להתקין בשעוני מים שבבתים וכדומה שיהא מחובר למכשיר אלקטרוני אשר ע"י פתיחת ברז המים יופעלו חיישנים אלקטרוניים אשר ימסרו מידע לדיסק של מחשב את כמות צריכת המים וועי"ז לא יצטרכו להעסיק עובדים לבא לרשום את צריכת המים, כי כל הנתונים יהיו במחשב של החברה המספקת מים, אמנם על ידי זה יש חששות של חילול שבת בשעת השימוש במים בבית, אשר על כן באנו לבקש מכל הנוגעים שלא יחברו מכשיר הנ"ל לשעוני המים. וימצאו פתרונות אחרים שאין בהם חשש חילול שבת.

ובזכות שמירת שבת כהלכתה נזכה להגאל גאולת עולם בביאת משיח צדקינו במהרה בימינו אמן

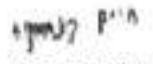
ועי"ז באנו עה"ח


יוסף שלום אלישבי


נסים קרלין

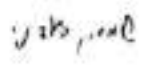

שמואל הלוי וואזנר

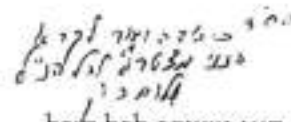

א.ל. שטינמן


חיים קניבסקי


שמואל אויערבאך


משה צדקה


שמוען בעדני


הנני מצטרף לכל הנ"ל
שלום כהן



About Mishmereth Hashabbath

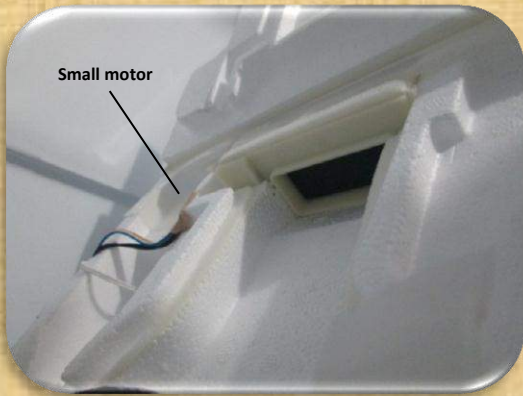
The Rabbinical Council "Mishmereth Hashabbath" was founded and runs according to recommendations by the Gedoley Israel: Rabbi Y. SH. Elyashiv zatsa'l, who warmly recommended that the council should be founded and actually directed its activities, Rabbi A. L. Steinman shlit'a, Rabbi N. Karelitz shlit'a, Rabbi Ch. Kanyeovski shlit'a, and Rabbi Sh. Baadani shlit'a.

The Gedoley Israel saw the importance of the stumbling blocks that the newly developed electric appliances represent, many of whom are the cause of real Sabbath desecration. They foresaw that these appliances would corrupt the aspect of the Sabbath. Therefore they instigated the creation of a council of Rabbis, the Mishmereth Hashabbath, as they wrote themselves in a special letter: "to ensure the observance of the Sabbath". The Mishmereth Hashabbath council consists of eminent Torah scholars who are expert in the laws of Sabbath observance and who are able, with the help of the Almighty, to decide what is allowed on Sabbath and Yom Tov, and what is not.

Presiding over the council are the Rabbis: Rabbi Moshe Shaul Klein shlit'a, Rabbi Sarel Rosenberg shlit'a, Rabbi Shevach Tsvi Rosenblat shlit'a and Rabbi Yitzchak Derzi shlit'a, the author of the book Shvuth Yitzchak and a prominent student of Rabbi Y. Sh. Elyashiv zatsa'l, who had the merit to analyze, polish and determine the laws of the Sabbath before Rabbi Elyashiv zatsa'l during thirty years, and Rabbi Elyashiv showed him how to deal with these matters in practice.

The Rabbis of the Mishmereth Hashabbath work in unison with G-dfearing professionals to very precisely define how new appliances affect the observance of the Sabbath.

Besides that, they research and compile data about tens of different kinds of refrigerators (mechanical, digital, pushbutton etc.), as well as other technological products to analyze the implications of their use on the Sabbath. The Rabbis of Mishmereth hashabbath answer daily all kinds of questions concerning the use on the Sabbath of different kinds of electrical appliances, like refrigerators, freezers, inverter air conditioners, water heaters, elevators, carousel entrances to the Mikveh, boilers, water meters, water pumps, sleep supporting appliances etc.



Electrical damper - closed



Electrical damper - open



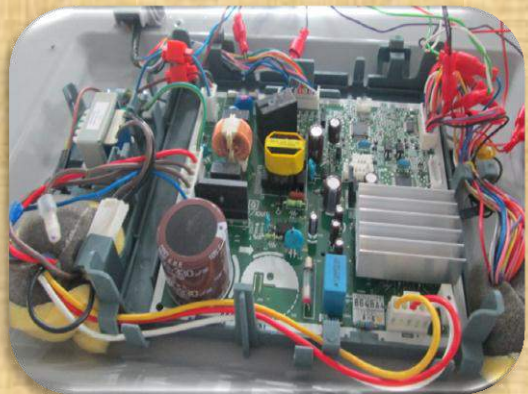
**Digital temperature sensor
of a refrigerator**



**Mishmeret Ha Shabbat's
Shabbat mode/switch**

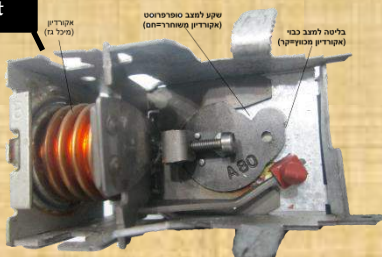


Cooling system



**Digital command card of an
advanced refrigerator**

Mechanical thermostat



Digital temperature sensor (thermostat)

