

# ENGEL

## DUAL VOLTAGE REFRIGERATOR

**120 VOLTS A.C. & 12/24 VOLTS D.C.**

### MODELS

MT17F-U1 (16 QUARTS)  
MT27F-U1 (22 QUARTS)  
MT35F-U1 (34 QUARTS)  
MT45F-U1 (43 QUARTS)  
MT60F-U1 (64 QUARTS)  
MT60F-U1-C (COMBI MODEL)  
MT80F-U1 (84 QUARTS)

## OWNER'S GUIDE

SAWAFUJI ELECTRIC CO.,LTD.

This appliance has been designed for refrigeration or freezing purposes, and can be operated on both A.C. and D.C. power supplies. The internal power supply will automatically switch from DC to AC power, and back.

MODEL NO. ....

SERIAL NO. ....

The model and serial number may be found on the compressor cover on the side of the unit.

Before using your unit, record and retain the model and serial number for future reference and warranty purposes.

### **GENERAL**

- Your ENGEL Portable Fridge should be placed on a level and solid surface. The compressor is shock mounted for in-transit operation.
- Be sure your refrigerator is not in direct sunlight, near a gas stove, heater or any other heat-generating appliances.
- Provide adequate ventilation for your refrigerator by keeping it at least 6 inches away from solid walls. This will result in maximum cooling efficiency and minimum electric current consumption.
- Avoid placing it in an area in which it may be accidentally splashed or sprayed with water or other substance that might enter the electrical compartment.
- Your refrigerator has been thoroughly cleaned before shipment from the factory. It is advisable, however, to clean the interior once more before use.
- Clean the interior with a cloth moistened in warm water and wipe with a dry cloth.
- After cleaning, replace interior components.

### **CAUTION**

1. Never store gasoline or other flammable vapours and liquids in, or near, your refrigerator as these could cause an explosion.
2. Do not touch the evaporator or other metal parts inside the cabinet with a wet hand, as this may cause frostbite.
3. Do not remove or modify any of the product's electrical components.

## **INSTALLING HANDLES**

Lifting handles are furnished with larger models (MT17F-U1, MT27F-U1, MT35F-U1, MT45F-U1, MT60F-U1, MT60F-U1-C, MT80F-U1), and are packed loose inside the refrigerator. They are to be installed using the screws and tapped holes provided.

## **CONNECTING TO POWER SOURCE**

### **120 VOLTS A.C. OPERATION IN YOUR HOME;**

Your refrigerator needs so little power that it may be connected to any A.C. receptacle in your home. To do this, set the thermostat control knob to "OFF" and insert the square plug of the A.C. cord in the connector on the refrigerator and the standard plug in a wall socket in your home. The power consumption is less than a standard light bulb.

### **12/24 VOLT D.C. OPERATION IN YOUR FOUR WHEEL DRIVE, CAR, BOAT, TRAILER, RV. ETC.**

Battery voltage varies with the type of car you own. Most cars, trucks and boats use a 12 volt system. Your refrigerator needs either a 12 volt or a 24 volt battery with a negative ground.

### **FOR MODELS MT17F-U1 and MT27F-U1 and MT35F-U1 and MT45F-U1**

Set the thermostat control knob to "OFF" and insert one end of the D.C. cord (provided with the refrigerator) into the connector and the other end into the cigarette lighter socket of your car. In most passenger cars, the lighter is on the dashboard. Pull out the lighter and insert the refrigerator plug.

NOTE : When not using the refrigerator, remove the plug from the cigarette lighter socket to prevent discharge of your car battery.

Most 4-wheelers install a dedicated power socket in the rear of the vehicle to make connecting the refrigerator easier. Some SUV's and mini vans already have these installed.

### **FOR MODEL MT60F-U1, MT60F-U1-C and MT80F-U1 only**

Set the thermostat control knob to "OFF" and insert one end of the D.C. cord (provided with the refrigerator) into the connector of the refrigerator and connect two wires from the battery to the other end of the D.C. cord. The MT60F-U1, MT60F-U1-C and MT80F-U1 do not come standard with a cigarette lighter adaptor.

**IMPORTANT:**

NEVER USE WIRING LESS THAN AWG # 12 BETWEEN THE BATTERY AND REFRIGERATOR.

INSTALL A 10 AMP FUSE IN THE POWER SUPPLY CIRCUIT.

BE SURE THE POWER SUPPLY POLARITY IS CORRECT.

In the event that the green refrigerator light fails to glow inspect the power source for proper voltage and correct polarity. The inner contact point of the DC power source adapter must be positive and the outer contact negative (ground).

CONNECT REFRIGERATOR DIRECTLY TO THE BATTERY TO REDUCE RADIO NOISE INTERFERENCE.

Reducing radio noise interference can be accomplished by twisting the power supply wires together and attaching them directly to the battery, adding an 10 AMP fuse near the positive battery connection. Avoid splicing other devices into this circuit as interference may occur.

QUICK CHARGING THE BATTERY.

Never hook the freezer up to a battery charger directly. It must only be attached to a battery.

OPERATING YOUR REFRIGERATOR USING A PORTABLE GENERATOR UNIT.

The internal refrigerator power supply unit may be damaged if powered by an older style generator units without automatic voltage regulation. The only acceptable generators to use are those which are "inverter style" or those with over-voltage protection. Please contact your ENGEL dealer for additional instruction on safe use when powering your refrigerator with a portable generator unit.

**MAINTENANCE OF YOUR BATTERY IS IMPORTANT**

1. MAINTENANCE OF THE BATTERY IS IMPORTANT. If your battery is old (more than 3 years) or not properly charged a decline in the cooling performance of your refrigerator can be expected.
2. NEVER USE A BATTERY CHARGER, A.C./D.C. CONVERTER, OR RECTIFIER ETC. IN LIEU OF A BATTERY. These electrical supplies generate high ripples or surge voltages, which could result in damaging your Engel's power supply.
3. NEVER USE A COMMERCIAL INVERTER OR CONVERTER for operating your refrigerator on A.C. since these devices do not hold the required constant frequency. It is safer and more economical to run your refrigerator directly off DC power.

## OPERATION

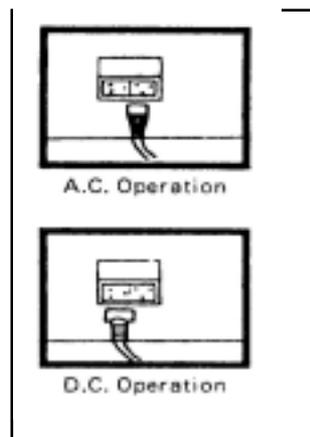
To start your refrigerator, set the thermostat control knob to "ON". Your refrigerator should start operating. The interior should start getting cool to touch within a few minutes.

## PROTECTION SYSTEM

The D.C. power cord is made for negative (-) ground system. Your refrigerator has a high current protection system incorporated in the electronic circuit to prevent damage to its power supply, which may occur due to a reverse connection.

If your refrigerator does not operate and the power lamp does not go on, you may have:

- connected the refrigerator with the incorrect polarity
  - blown a fuse in the cigarette lighter plug
  - have insufficient voltage from the power source
- or - a problem may exist in the inverter, so call your ENGEL dealer for advice.



## CAUTION

FOR MODELS MT17F-U1 and MT27-U1 and MT35F-U1 and MT45F-U1

A fuse is located in the cigarette lighter plug body of the D.C. cord (provided with the refrigerator), and if the fuse blows, replace the glass fuse with a new 10 Amp fuse.

## DIAL SETTING

Refrigerating temperature can be controlled by means of the thermostat control knob. The interior temperature drops as the knob position is changed from "1" ("REFRIGERATOR") to "5" ("FREEZE"). In this way, interior temperature can be regulated freely.

When it is desired to preserve frozen food, set the thermostat control knob at "3, 4 or 5" ("FREEZE"). To switch off your refrigerator, set the thermostat control knob to "OFF". The knob does not turn clockwise beyond "5" ("FREEZE"). For efficient operation, regulate the temperature according to the types of food stored.

## **STORING FOOD IN THE REFRIGERATOR**

The following simple instructions on storage of food in the refrigerator will enable you get the best results when using your ENGEL PORTABLE FRIDGE.

To prevent the drying out and transfer of odours from one food to another, foods should always be stored in covered dishes, sealed plastic bags, or wrapped in foil or wax paper.

### **FROZEN FOOD**

An ordinary packet of frozen food can be stored, in the freezing compartment for several days with the thermostat set to "5". If frozen food is allowed to thaw, under no circumstances should you attempt to refreeze it.

### **DEFROSTING**

Set the thermostat control knob to "OFF". When the frost has melted, wipe down the interior of your refrigerator with a soft, dry cloth. Never use a sharp object to chip or scratch at the frost. This may result in puncturing the side evaporator walls, which will allow all the refrigerant gas to escape.

## **MAINTENANCE FOR YOUR REFRIGERATOR**

### **CLEANING BOX AND DOOR:**

Wipe with a soft, dry cloth. To remove dirt, use a cloth moistened by a warm neutral detergent solution. Never use hot water. After cleaning, wipe with a dry cloth.

### **LID GASKET (door cushion):**

Wipe away dirt with a soft cloth moistened by a mild detergent. Do not soak the cloth excessively. If water gets inside the side walls of your refrigerator, the insulating effect may become temporarily impaired.

### **ATTACHMENTS:**

Wash all attachments in soapsuds. Rinse and wipe clean with a dry cloth.

**CAUTION:** Never use a brush, powder soap, cleanser, acid, benzene, gasoline, or mineral thinners. These tend to leave scratches on the plastic coating.

For more information contact Engel USA on Tel: 888-272-9838  
[www.engel-usa.com](http://www.engel-usa.com)

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