Road CHEF 2.0 P BY CAMP EASY

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DIGITAL 12 VOLT OVEN

THE SMARTER WAY TO COOK

INSTRUCTIONS

Thank you and Congratulations on your purchase of the Digital Road Chef 12 volt oven. We hope you really enjoy using your oven and that it brings you many great meals in some of the most awesome places on earth! Please read this operating manual carefully before starting the device. Keep it in a safe place for future reference. If the device is handed over to another person, this operating manual must be handed over along with the device.

WARNING!

The oven, its outer surfaces and contents that have been in the oven may be hot. Ensure that appropriate precautions are taken before handling the oven, its outer surfaces or contents.

POWER SUPPLY

The Digital Road Chef Oven runs from a 12 volt power supply. The oven will draw 8.3 Amps / 100 Watts when it is operating fully.
You have three options of how to plug your oven in. Via:

1. Anderson Plug,
2. Cigarette Lighter Plug &
3. Merit Plug.

Most vehicles cigarette lighter plugs are designed to take a maximum of 10 Amp, so while the oven is only drawing 8.3 Amp, this is close to its limit so we suggest you hardwire it directly to your battery using the Anderson plug. If you are using the oven regularly or if the cigarette lighter socket is old, worn or loose then there is a higher chance of failure, especially when driving on rough or uneven ground. The Anderson plug provides a superior connection and will reduce the chance of a poor connection heating up and potentially melting the cigarette/merit plugs. If you do choose to use thee the Cigarette/Merrit plug please ensure it is pushed very hard into the socket to achieve full connection. If it melts it is usually because it is not pushed in far enough.

The oven cord is fitted with an inline 15A fuse as well as a secondary 15A fuse within the cigarette/merit plug. If either fuse does blow then there is most likely a problem that you should diagnose and rectify before replacing the fuse.

The Digital Road Chef Oven has a number of settings making it the Smarter Way To Cook.

When the oven first receives power it goes into Standby Mode for 10 seconds. When in Standby Mode the light is Red. After 10 Seconds the light will turn green indicating the oven has automatically turned to Cooking Mode with the start-up settings at 180°C for 20 minutes.

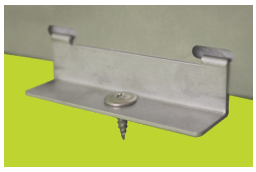
Once in Cooking Mode the user can Press either the Temperature or Timer button causing the LCD screen to change to show the ovens current settings. Through using the + or – buttons adjustments the user can adjust either settings at the start or at any point during the cook. The temperature can be set in 1°C increments between 50 and 180°C. The timer can be adjusted in 1 minute lots to a maximum of 180 minutes, showing the time left as it counts down. When the timer is up the oven automatically switches into Standby Mode with the light changing from Green to Red. During a cook the ovens thermostat will turn the element on and off to regulate the internal temperature of the oven while remaining in Cooking Mode.

At any point in either Cooking or Standby Mode , by long pressing the Power button, the oven will go into Off Mode and the light will turn off. When in Off Mode by long pressing the Power button the oven will enter Standby Mode and then automatically Cooking Mode after 10 seconds

As the oven turns from Standby to Cooking Mode when it first receives power, it allows the Digital Road Chef Oven to be turned on remotely using relevant 12V Management systems. The 20 minute period is great for preheating before cooking.

SET UP

Setting up and installation of your Digital Road Chef oven is simple.



1. Your oven comes with a set of 'tie down' clamps that can be used to securely attach it in your vehicle or the like. There are slots at the top and bottom of the oven allowing you to secure it to a shelf or roof of your vehicle. Simply insert the two prongs into the slots in the side of the oven and screw the brackets down. Periodically check the attachment to ensure it has not become loose.
2. The baking racks can slide in and out of the oven making it easier for you to reach your food. Be aware that the baking racks get very hot and appropriate hand protection should be used when handling them. The trays do not have a stopper on them, however they should ONLY be extended so that 1/3rd of the rack is out of the oven. If you extend it further than this the tray may buckle and/or fall out causing injury.

3. If the oven is 'rattling' when you are driving, when the oven and racks are cool, you can gently pinch down the arms on the sides of the racks so that they hold tightly onto the arms inside the oven.
4. The Digital Road Chef Oven requires some level of ventilation around the front half of the oven due to the heat susceptibility of the LCD Screen and controls. The oven can be recessed but it the front of the oven must have good ventilation at all tiems when ON
5. The oven is insulated on 5 sides using fibreglass insulation. This should keep the outside temperature below 40°C although this can vary depending on the ambient temperature. The door is insulated through a double wall which only allows convection to heat it up.

COOKING

To turn your oven on either turn the power supply on or long press the Power button, that will iniate the Standby and then Cooking mode for 20 minutes at 180oC. Most modern recipes and instructions provide cooking time for a fan forced oven. As the Digital Road Chef is not fan forced it will take longer to create similar results. To achieve the best results, we suggest you preheat the oven for 20-30 minutes, especially if you are cooking with fresh ingredients. To give you a rough idea it will take you about 30 minutes preheating for the oven to get to 150 degrees. The Digital Road Chef oven's heat source is on the bottom of the inside of the oven and heat is transferred throughout the oven through conduction of the metal and convection in the air.

During cooking at high temperatures, it is natural for the bottom of the oven to 'bow' up. Your oven's heating element is attached directly to the base of the oven and with a high amount of heat required the base metal naturally expands. As the four corners of the base are turned at 90 degrees the expansion is restricted focusing the expansion, with the height of the racks designed to take into account the bowing. Over time the metal will temper and harden reducing the bowing effect. Like all ovens there are hot and cool spots, so we recommend moving the items being cooked around during the cook for optimal results. Tips include: Place a silicone baking mat (approximately 170 x 170mm) in the centre of the oven base. Or place the top rack (or similar rack) on top of the bottom rack to help the heat circulate around the oven more evenly.

We recommend that you do not over fill the oven, which reduces air flow and to rotate your food between shelves and on the shelves through out the cook to avoid hot spots. Food in baking trays and alfoil or similar coverings can be placed directly onto the bottom of the oven however you should check it regularly as it is easy to burn food using this method. If you are reheating or cooking frozen food we suggest that you rotate your food between shelves and on the shelves throughout the cook to avoid the outside burning before the middle is defrosted.

12 VOLT TIPS AND TRICKS

Operating the Digital Road Chef 12 volt oven is very different from using your 240 volt oven you have at home. One of the biggest differences is that many people are willing to 'have a go' at wiring up a 12 volt system, where as, unless you are a qualified electrician, you shouldn't even think about tinkering with your 240 volt wiring. 12 volt isn't as simple as it used to be, with alternators moving from fixed voltage to smart alternators to reduce emissions, people using secondary batteries with an array of in vehicle battery chargers and battery chemistries changing regularly as we chase the ideal energy storage unit. There are a lot of factors that will affect the Digital Road Chef oven and its ability to produce heat over an extended period of time that aren't obvious to people 'having a go'. While we encourage you to 'have a go' we have attempted to list some of the main issues you may experience below to help you to understand them using layman's terms and what you might be able to do to rectify the problem.

Voltage Of Your Battery

What voltage is your battery at when you start using your Digital Road Chef oven? Traditionally 12 v batteries at full charge sit around the 12.6v mark indicating they are 'full' as the energy drains out of them their voltage drops lower until when they are really flat they are sitting around the 10.5-11 volts – or lower! If you are starting from a lower voltage point then this will significantly affect the ability of the oven to get to its top temperature as the battery is struggling to pump out enough energy to allow it to heat up.

A good analogy is if a dam is 100% full then when you lower the flood gates then the maximum amount of water is flowing out when the gates are at a certain level. If the dam is only 80% full then when the gates are at the same point less water will flow out even though the gate is in the same place.

Ongoing charge of battery

Many people use the Digital Road Chef oven when they are driving, others use it while their engine isn't running relying on the energy stored in a battery bank or something similar. Whilst your battery is connected to a (traditional) running vehicle it is being continuously recharged and will sit around 13.7-14.7 volts, while a battery bank is not. When a battery is being recharged it is (usually) able to pass on the highest amount of energy to appliances like the Digital Road Chef so it can operate at its full potential. If the battery isn't receiving charge then its ability to continuously operate at its full potential decreases over time, especially if more than one appliance is being used, like a fridge or lights, at the same time.

Size/type of battery

The 'size' or Amp hour and battery type or chemistry also influence the ability of the battery to store energy and release it over an extended period of time. We suggest a minimum of a fully charged 120 Ah deep cell battery to ensure a consistent 2+ hour cook.

Age of battery

Like most things in life, the older something gets the harder it finds it to perform at its optimum. An AGM glass battery will last anywhere from four to seven years, while a deep cycle gel cell battery can last from two to five years.

Connection quality

The quality of connections is a much under rated element in the transfer of energy in a 12v system. The optimum connection for a Digital Road Chef Oven is through the supplied Anderson Plug connection.

However, we understand that not everyone has access to this in their vehicle, so we have included a cigarette style plug. The challenge with using the cigarette style plug to run your Digital Road Chef is the quality and age of the female part of the cigarette plug is variable. In older vehicles it is likely the plug has become loose due to having phone, DVD and other kinds of plugs put in and out of them numerous times. As it becomes loose the connection between the metal parts isn't as 'tight' so this reduces the ability of the connection to efficiently transfer the required amount of energy. When the unit is only drawing 1 or 2 Amps like a phone charger this is no problem, however when using the Digital Road Chef you are looking at 8+ Amps so it starts to really test the connection. Any poor connection results in the connection heating up, rather than your oven! Many cars, especially later model ones have reduced the size of the wiring running to the plugs, as they are only expecting people to run their phones not ovens through them. As such this has reduced the ability of the plug to provide the required energy to run the Digital Road Chef. The plug you use should have a minimum 10A.

Length of cable from Battery to Digital Road Chef

All cables used to transfer voltage have resistance, or friction, so some of the energy that you started with at the start of the cable is used up before it gets to the end of the cable. The longer the cable the more 'voltage drop' there is per metre. So if your battery is under the bonnet of your vehicle and the connection to the Digital Road Chef is at the back of the vehicle then you may have 3-5m+ of cable that is lowering the amount of voltage and as such the amount of Amps that can be used by the oven to create heat.

Size of cable from Battery to Digital Road Chef

Carrying on from above, using the wrong size cable can also influence the voltage drop. If the wire is too thin, or made from the wrong material (copper is best), then this can lower the voltage at the connection to the oven. Similarly, if the wire size is too big, then this can also cause voltage drop. Your 12 Volt expert or auto electrician should be able to help you select the right size wire to get optimal results.

Running multiple appliances

When you are running multiple appliances you again need to consider the cabling that you are using. Using an analogy, if you have a 10cm pipe that can supply your pump 100l per minute you can not then go and add another pump that also requires 100l per minute. To do this you will need to increase the size of the pipe or you will have 2 pumps only getting 50l per minute. So, if you want to run your phone, a fridge, UHF, maybe a dashcam or GPS and then try and add the Digital Road Chef to it you will need to increase the size of the wiring, or the pipe, from the battery.

What you put into the oven

What you put in the Digital Road Chef significantly affects the amount of time it takes to cook it. The time required to cook a roast isn't always the same! Even in your home oven it will take 1.5 hrs to do a 1kg pork roast but it will take 3.5 hrs to do a 3 kg roast. So, if you put 2 frozen pies into the Digital Road Chef it will take longer than 2 defrosted pies. Similarly, if you put in 4 frozen pies it will also take longer than the 2 frozen ones. A few good rules of thumb are to try not to 'overload' the oven, if you are 'loading it up' then try defrost the items before putting them into the oven and also rotate them between the top and bottom shelves and the front and back throughout the cook.

Oven temperature

While the Digital Road Chef is an oven, it is a 12 volt oven, not a 240 volt oven like you have in your house. While it is very efficient at turning 12 volts of energy into heat so that you can bake, roast and reheat, on the road, it isn't a 240 volt oven so it is important not to expect the same performance. It will take about 30 minutes to preheat your oven to 150 degrees C. After the first 30 minutes the incremental increase in temperature reduces to about 10 degrees per 10 minutes with the maximum temperature achieved after about 50—60 minutes. The more food you put in your oven, and the lower the temperature (if its frozen or room temperature) the longer the cooking time will be.

How you measure temperature

There are lots of different methods people will use to measure the temperature of an oven. What you are looking to measure is the air temperature, not the surface temperature inside the oven. The oven does have a thermostat that will turn the oven on and off when it reaches/falls below temperatures. This cannot be accurately used as a temperature gauge. If you are keen to check the temperature, we recommend using one of the small gauges that come with a stand that can be purchased at most camping, hardware, BBQ and kitchen shops. Get a smaller one and place it on the bottom tray of the oven.

12 MONTH OVEN GUARANTEE

Please take the time to read about what your guarantee offers you.

The Digital Road Chef oven comes with a guarantee designed to protect you as our valued customer. RPM Innovations Pty Ltd; will repair or replace the oven, at their discretion should it fail due to faulty materials or manufacture for a period of 1 year from the date of sale.

1. The Guarantee is subject to the following conditions:
2. The Guarantee only applies to the original purchaser who purchased the oven from an approved retailer in Australia or New Zealand.
3. The Guarantee does not apply if the oven has been used for anything other than reasonable personal cooking. Commercial or continuous use are expressly excluded.
4. Damage due to normal wear and tear, accidents, acts of God, negligence or failure by the purchaser to ensure that instructions for use and care are observed, and any other cause reasonably beyond the control of RPM Innovations Pty Ltd are not covered.
5. If redress is sought under the terms of this Guarantee, then the oven and all of its associated parts must be returned by the purchaser to the outlet from where it was purchased, within the Guarantee period, in a clean and acceptable manner and with proof of purchase.
6. All transport costs and any other indirect costs are excluded from the Guarantee.
7. RPM Innovations Pty Ltd; reserves the right to make a reasonable charge for repairs which it determines are not within the scope of the Guarantee.
8. The Guarantee does not limit, modify or exclude any rights under any law if doing so would contravene that law or make any part of this Guarantee invalid. However, RPM Innovations:

a. Excludes (to the extent permitted by applicable law) all conditions and warranties that might otherwise be implied; and

b. Limits its liability for breach of any such condition or Guarantee that it cannot exclude together with its liability under the Guarantee, to repairing or replacing the Goods, or paying the cost of having the Goods repaired or replaced (at RPM Innovations Pty Ltd option).

This oven has been made with meticulous care and attention to detail. Providing it is properly looked after, it will bring you many great meals in some of the most amazing places on earth!



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