

G6R REMOTE ELECTRONIC IGNITION AND CONTROL SYSTEM

GENERAL NOTES

Radio Frequency Handset

433.92 MHz for Europe; 315 MHz for U.S. (FCC ID: RTD-G6R) and for Canada (IC: 4943A-G6R).

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTICE

Wiring of valve and receiver must be completed before starting ignition. Failure to do so could damage the electronics.

Batteries – Handset

- 1 x 9 V (quality alkaline recommended).
- Low battery indicator on handsets with display.
- Handsets without display: the red LED gets darker.
- Battery replacement is recommended after 2 years.

Batteries – Receiver

- 4 x 1.5 V "AA" (quality alkaline recommended).
- Low battery indication: frequent beeps for 3 seconds when motor turns.
- An AC Mains Adapter may be used instead of batteries.

NOTICE

Only the Mertik Maxitrol AC Mains Adapter or one preapproved by Mertik Maxitrol can be used. Use of other adaptors can render the system inoperable.

- The module for fan speed control and light/dimmer includes mains power together with batteries in the receiver for automatic backup in case of power outage.
- Without using a mains adapter, battery replacement is recommended at the beginning of each heating season.

NOTICE

The handsets and receivers, are not interchangeable with previous electronics. See Figure 17.



Figure 15

NOTICE

Replacement handsets for CSA models must have the same part number (see label).

SETTING THE ELECTRONICS CODE

(First time use only.)

Radio Frequency Handset

A code is selected automatically for all Mertik Maxitrol electronics from among 65,000 random codes available.

The receiver has to learn the code of the handset:

- Press and hold the receiver's reset button (see figure 16) until you hear two (2) beeps. The first beep is short and the second beep is long. After the second beep, release the reset button.
- Within the subsequent 20 seconds press the (small flame) button on the handset until you hear two additional short beeps confirming the code is set. If you hear one long beep, this indicates the code learning sequence has failed or the wiring is incorrect.

NOTE: This is a one time setting only, and is not required after changing the batteries of the handset or receiver.

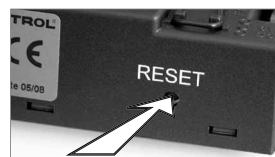


Figure 16

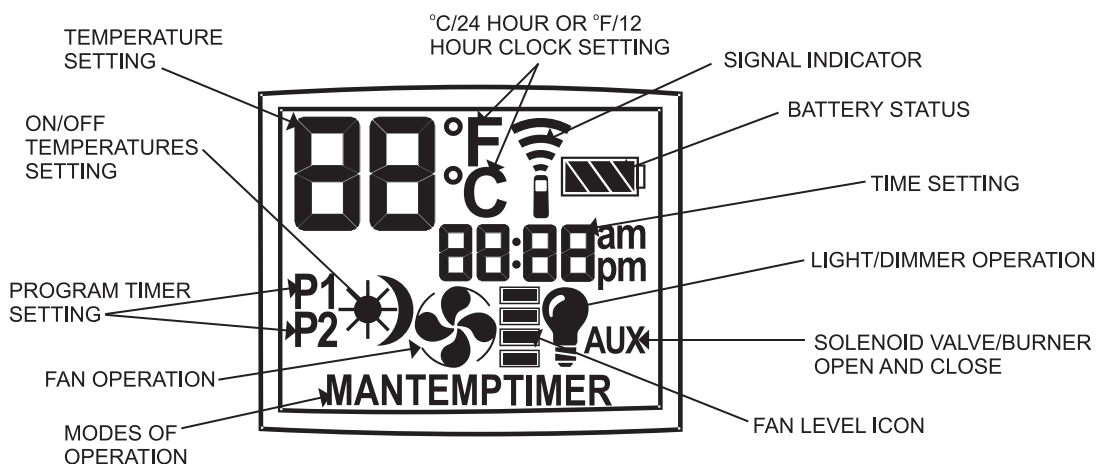



Figure 17

G6R REMOTE ELECTRONIC IGNITION AND CONTROL SYSTEM

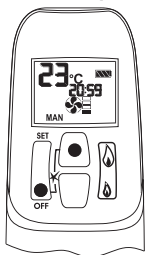
TO TURN ON APPLIANCE


WARNING

When pilot ignition is confirmed, motor turns automatically to maximum flame height.

- Turn MANUAL knob to the **ON**, full  counterclockwise position.
- Place ON/OFF switch (if equipped) in **I (ON)** position).

HANDSET



- Simultaneously press the OFF and  (large flame) buttons until a short beep confirms the start sequence has begun; release buttons.
- Continuing beeps confirm the ignition is in process.
- Once pilot ignition is confirmed, there is main gas flow.
- After main burner ignition the handset will automatically go into manual mode (CSA version, CE version).

WARNING

If the pilot does not stay lit after several tries, turn the main valve knob to off and follow the instructions "TURN OFF GAS TO APPLIANCE".

STANDBY MODE (Pilot Flame)

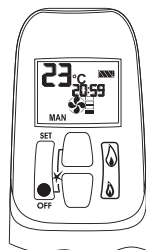
Handset

- Press and hold  (small flame) to set appliance at pilot flame.

TO TURN OFF APPLIANCE


Handset

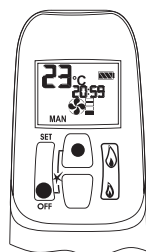
- Press OFF button




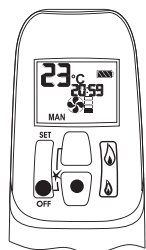
FLAME HEIGHT ADJUSTMENT



Handset

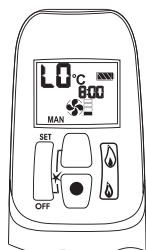
- In standby mode: Press and hold  (large flame) button to increase flame height.




- Press and hold  (small flame) button to decrease flame height or to set appliance at pilot flame.



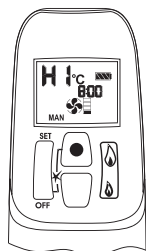
- For fine adjustment tap the  (large flame) or  (small flame) buttons.




Designated Low Fire and High Fire

- Double-click  (small flame) button. "LO" will be displayed.

NOTE: Flame goes to high fire first before going to designated low fire.



- Double-click  (large flame) button. Flame automatically goes to high fire. "HI" will be displayed.

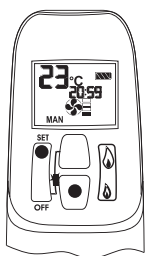
WARNING

If the appliance will not operate, follow the instructions "TURN OFF GAS TO APPLIANCE" on page 14.

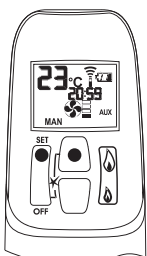
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TO OPEN AND CLOSE SOLENOID VALVE/BURNER



NOTE: The latching solenoid valve cannot operate manually. If the battery runs down it will remain in the last operating position. During normal operation the solenoid valve will be reset to the On position when the GV60 is switched OFF remotely.



Burner OFF



Burner ON

- Upon ignition Main Burner and Decorative Burner are On.
- Simultaneously press SET and  (small flame) buttons to switch the Burner OFF. Printed instructions are on the battery cover. See Figure 18.
- Simultaneously press SET and  (large flame) buttons to switch Burner On. (The AUX symbol on the display indicates the solenoid valve is OPEN.)


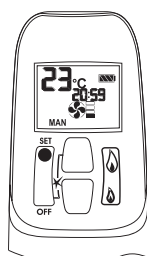
NOTE: The operation of the AUX is blocked in timer OFF mode, when the setting of the  nighttime setback Temperature is





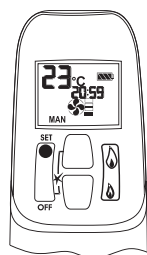
Figure 18


MODES OF OPERATION

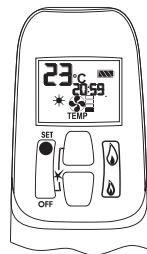
- Briefly pressing the SET button changes the mode of operation in the following order:




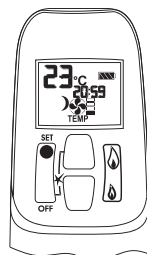
NOTE: Manual mode can also be reached by pressing either the  (large flame) or the  (small flame) button.




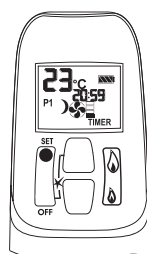
-  **Manual Mode**
Manual flame height adjustment.




-  **Daytime Temperature Mode**
(Appliance must be in standby mode; pilot ignited)
The room temperature is measured and compared to the set temperature. The flame height is then automatically adjusted to achieve the Daytime Set Temperature.



-  **Nighttime Setback Temperature Mode**
(Appliance must be in standby mode; pilot ignited)
The room temperature is measured and compared to the nighttime setback Temperature. The flame height is then automatically adjusted to achieve the nighttime setback Temperature.

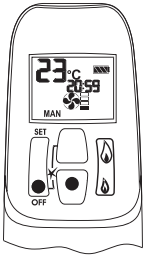



-  **Timer Mode**
(Appliance must be in standby mode; pilot ignited)
The Timers P1 and P2 (Program 1, Program 2) each can be programmed to go ON and OFF at specific times. For instructions see Timer Programming Mode.

NOTE: The display shows the set temperature every 30 seconds.

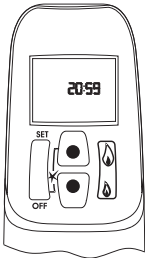
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SETTING °C/24 HOUR OR °F/12 HOUR CLOCK



- Press OFF and  (small flame) button until display changes from Fahrenheit/12 hour clock to Celsius/24 hour clock and vice versa.

SETTING THE TIME

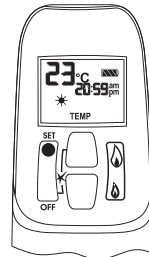



- The Time display will flash after either:
 - Installing the battery or
 - Simultaneously pressing the (large flame) and (small flame) buttons.
- Press  (large flame) button to set the hour.
- Press  (small flame) button to set the minute.
- Press **OFF** or simply wait to return to manual mode.

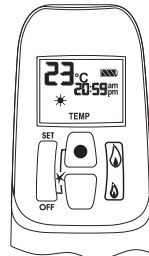
SETTING THE ON/OFF TEMPERATURES



Setting the "DAYTIME" Temperature

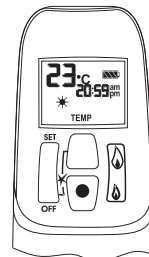
DEFAULT SETTINGS:  TEMP (SUN), 23°C/74°F





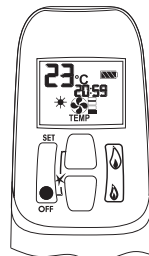
- Briefly press SET button to scroll to TEMP  TEMP (sun) mode. Hold the **SET** button until the TEMP flashes.



- Press  (large flame) button to increase  Daytime Set Temperature.



- Press  (small flame) button to decrease  Daytime Set Temperature.

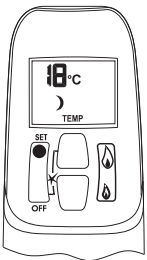



- Press **OFF** or simply wait to complete programming.

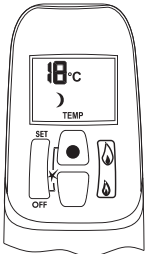
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Setting the "NIGHTTIME SETBACK" Temperature

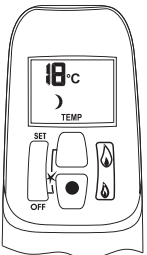
DEFAULT SETTINGS:  TEMP (MOON), "--" (OFF)





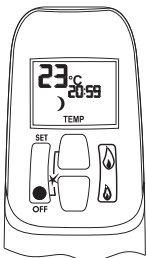
- Briefly press **SET** button to scroll to TEMP  TEMP (moon) mode. Hold the **SET** button until the TEMP flashes.



- Press  (large flame) button to increase the  Nighttime Setback Temperature.



- Press  (small flame) button to decrease the  Nighttime Setback Temperature.



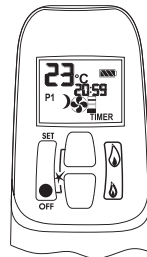
- Press **OFF** or simply wait to complete the programming.

SETTING PROGRAM TIMERS

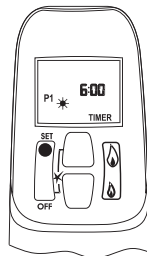
Default Settings

CE: Program 1: P1 *:6:00am P1 >:8:00am
CSA: Program 2: P2 *:11:50pm P2 >:11:50pm


- 2 ON times can be programmed * per day.
- CE: The day starts at 0:00, ends at 23:50.
- CSA: The day starts at 12:00am, ends at 11:50pm
- The ON/OFF times have to be programmed in the order $P1 * \leq P1 > < P2 * \leq P2 >$.
- If $P1 * = P1 >$ or $P2 * = P2 >$ the timer is deactivated.
- To have the fire over night, it can be set:
CE: P2 > 23:50 and P1 * 0:00
CSA: P2 > 11:50am and P1 * 12:00am

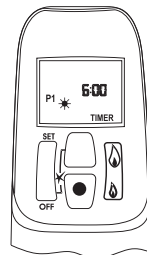



- Select Timer Mode by briefly pressing the **SET** button.



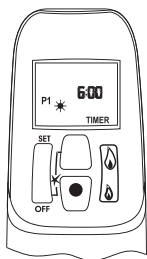
Setting P1 ON Time


- Hold the **SET** button until P1  (sun) is displayed and the time flashes.

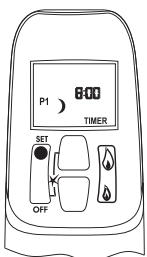


- Set the hour by pressing the  (large flame) button.

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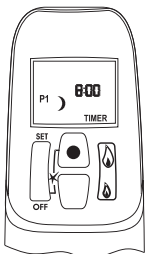



- Set the minutes by pressing the  (small flame) button.

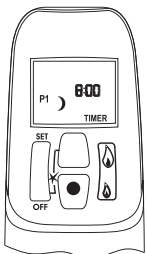



Setting P1 OFF Time

- Briefly press SET button to scroll to setting P1 OFF time. P1  (moon) is displayed and the time flashes.




- Set the hour by pressing the  (large flame) button.




- Set the minutes by pressing the  (small flame) button.

Setting P2 ON Time

- Briefly press SET button to scroll to setting P2 ON time. P2  (sun) is displayed and the time flashes.
- See instructions SETTING P1 ON TIME.



Setting P2 OFF Time

- Briefly press SET button to scroll to setting P2 OFF time. P1  (moon) is displayed and the time flashes.
- See instructions SETTING P1 OFF TIME.
- This concludes programming Timers P1 and P2. Press OFF or wait. The handset will automatically save your changes.

MANUAL OPERATION

(Only possible, when MANUAL knob is used)

Access to the pilot burner is only required for ignition with a match. When turning main valve knob, do not force. Knob has a slip clutch that clicks until the end stops are reached. This allows for manual flame height adjustment as well as adjustment to pilot standby position.

- Stop! Read the safety information included before proceeding.
- Turn main valve knob to the off, full clockwise  position.
- Turn MANUAL knob to the man, full clockwise  position.
- Place ON/OFF switch (if equipped) in O (OFF position).
- Wait five (5) minutes to clear out any gas. Verify that no gas is in the area around the appliance, including near the floor. If you detect gas stop! Follow "What to do if you smell gas" in the safety information on page 14. If no gas is present, proceed to step 6.
- Place ON/OFF switch (if equipped) in I (On position).
- With the MANUAL knob in man position a manual pilot valve operator and piezo ignitor (optional) are accessible.
- Fully push down manual pilot valve operator and hold in, to start pilot gas flow (see figure 19, page 22).

Ignition with match:



Immediately light the pilot with a match, while continuing to hold in the manual pilot valve operator for about one (1) minute after the pilot is lit. Release manual pilot valve operator. If pilot does not stay lit, wait five (5) minutes and repeat.

Ignition with piezo ignitor:

Change the ignition cable from the receiver to the valve (see figure 19, page 22). Push in the piezo ignitor to ignite. If pilot does not stay lit, wait five (5) minutes and repeat.

WARNING

If the pilot does not stay lit after several tries, turn the gas control knob (main valve knob) to OFF and proceed to step 12.

- If applicable, replace pilot access panel before proceeding.
- Turn MANUAL knob to the on, full counterclockwise  position.
- Turn main valve knob to the full on, full  counterclockwise position.
- If the appliance will not operate, follow the instructions "TURN OFF GAS TO APPLIANCE" (page 14).

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TO TURN OFF GAS TO APPLIANCE

1. Place ON/OFF switch (if equipped) in **O** (OFF position).
2. If gas control is accessible turn main valve knob to the off full clockwise position.
3. Replace appliance access cover (if applicable).

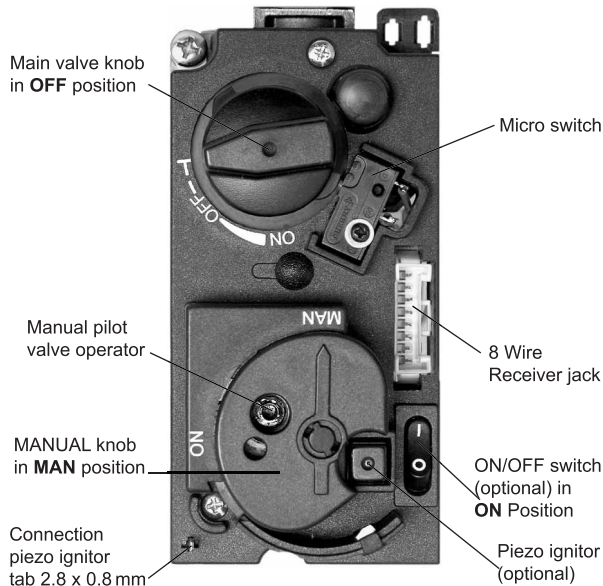


Figure 19

AUTOMATIC SHUT OFF

Low Battery Receiver

- With low battery power in the receiver the system shuts off the fire completely. This will not happen if the power supply is interrupted.

Five day shut off

(CSA version)

- The system shuts off the fire completely if there is no change in flame height for 5 days.

Second Thermocouple Shut Off

- Second Thermocouple Option: The system shuts off the fire if the main burner does not completely ignite approximately 20 seconds after ignition or after pushing the (large flame) button.

NOTE: Before the next ignition there is a 2 minute waiting period.

AUTOMATIC TURN DOWN

6 hour no motor movement

(CSA version)

- Manual Mode/Temperature/Timer Mode: The valve will turn to pilot flame if there is no change in flame height for a 6 hour period. In Temperature/Timer Mode if the ambient room temperature changes, the flame height will adjust automatically to maintain set temperature, and the fire will continue to function normally. The valve will turn to pilot flame if the set temperature and the ambient room temperature remain the same over a 6 hour period.

Receiver Overheating

(only if module is connected)




- Valve turns to pilot flame if the temperature in the receiver is higher than 140 °F (60 °C). The main burner comes back on only when the temperature is below 140 °F (60 °C).

1 Hour Turn Down for Special Receiver

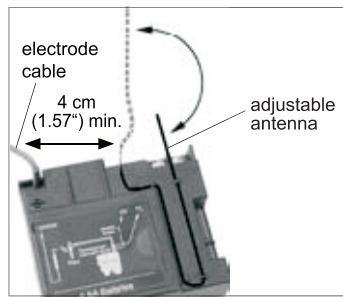

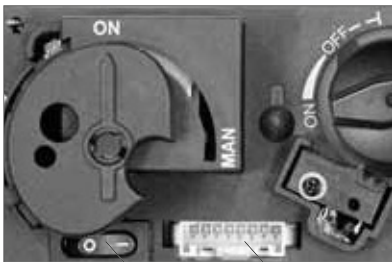
(bedroom fireplaces only)

- The valve will turn to pilot flame if there is no change in flame height over a 1 hour period.

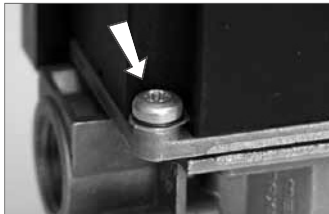


INTERMITTENT TROUBLESHOOTING

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Will not operate with Handset	1. Transmitter batteries low	Replace Transmitter batteries. Quality alkaline recommended.
	2. Receiver batteries low	Replace Receiver batteries with 1.5V "AA" quality alkaline batteries.
	3. Optional Mains Adapter not operating properly	Check Mains Adapter.
	4. Check coding of Transmitter and Receiver (Initial sync.)	Learn new code (reset). See label on receiver.
	5. Transmitter distance limited	1. Straighten the antenna. 2. Replace Receiver. See wiring diagram page 15.
No transmission: (motor does not turn)	1. Dead batteries	<p>Replace the batteries in the Receiver and/or Remote Handset (quality Alkaline recommended).</p> <div> <p>WARNING</p> <p>Do not use metal tools to remove batteries. Doing so will render the Receiver inoperable. See Figure 15.</p> </div> <div>  <p>Figure 20</p> <p>Application with internal and external battery box:</p> <div> <p>WARNING</p> <p>Battery clip (see Figure 21) must not come into contact with metal parts after unplugging the external battery holder, because there is voltage stored in the Receiver.</p> </div> <div>  <p>Figure 21</p> </div> </div>
	2. Receiver must learn new code	<p>Press and hold the Receiver's reset button (see figure 22) until you hear 2 acoustic signals. After the second, longer acoustic signal, release the reset button. Within the subsequent 20 seconds press the (small flame) button on the Remote Handset until you hear an additional long acoustic signal confirming the new code is set.</p> <div>  <p>Figure 22</p> </div>

INTERMITTENT TROUBLESHOOTING

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
No transmission: (motor does not turn) (continued)	3. The Receiver is surrounded by metal, reducing the transmission range.	Change the position of the adjustable antenna. WARNING Make sure that the adjustable antenna is not too close to the electrode cable and ignition coil (beneath the cover) It will damage the Receiver (see Figure 22).  Figure 22
	4. Receiver	Replace receiver and reprogram code
	5. Transmitter	Replace the Transmitter and reprogram code
	6. Bent pins on 8 Wire Connector on the Valve and Receiver (See Figures 23.)	Straighten pins on 8 Wire Connector  Figure 23
	7. Wiring at Valve damaged	Replace valve.
	8. IR-Eye (Infrared remote only)	Replace (check and change).
No Ignition; no tone	1. Receiver	Replace Receiver and reprogram code.
No Ignition; one 5 second continuous tone:	1. ON/OFF switch is in (O) OFF position	Push switch to (-) ON position (see Figure 24)  ON/OFF Switch 8 Wire Connector Figure 24
	2. Loose wire	Secure wire
	3. Receiver	Replace Receiver and reprogram code
	4. Bent pins on 8 wire Connector on the Valve and Receiver (See Figures 23.)	Straighten pins on 8 Wire Connector
	5. Valve	Replace Valve. Do not overtighten the Thermocouple Interrupter

INTERMITTENT TROUBLESHOOTING

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Ignition stops after the first spark	1. Loose ground connection at the valve	Check ground connection at the Valve and tighten screw. See Figure 25.
		
No pilot flame but spark	Figure 25	
	1. No gas supply	Check the gas supply
	2. Air in the pilot supply line	Purge the line or start ignition several times
	3. No spark and Pilot Burner	Check pilot setup, page 14. Check wiring connections. Check for spark in location along cable.
	4. Valve	Replace Valve. Do not overtighten the Thermocouple Interrupter.
	5. Receiver	Replace Receiver and reprogram code
Pilot is lit and sparking stops. Valve shuts off after 10 to 60 seconds. Valve does not operate manually: NOTE: For manual operation turn the Valve knob to the manual position and hold the safety magnet open with a pen for approximately 60 seconds (see Figure 26).	6. Thermocouple circuit wire incorrectly	Check polarity of the Thermocouple wires
	1. Not enough voltage generated from the Thermocouple or too much resistance in the circuit. NOTE: To find which part of the circuit is causing the problem, a checklist for each application can be prepared using an Excel calculation available from Mertik Maxitrol. Possible parts causing excessive resistance are: ON-OFF Switch, Temperature Switches, Thermocurrent Connections, Receiver.	Use a digital multimeter set in the mV range and measure the voltage by connecting the test leads to the spade connector. Spade connector is located on the outer surface, directly beside the magnet nut (see Figure 27). The available voltage must be at least 5 mV. The manufacturer must specify the drop time for the application. The drop time can be measured after the Thermocouple is heated.
		
	Figure 26	Figure 27
	2. Thermocouple	Replace Thermocouple
	3. Low inlet pressure to Valve	Confirm sufficient inlet pressure to the Valve. Adjust or replace inlet regulator if necessary.
	4. Valve	Replace Valve. Do not overtighten the Thermocouple Interrupter
Frequent beeps for 3 seconds while motor turns	1. Batteries (Receiver) are low	Replace the batteries in the Receiver and/or Remote Handset (quality Alkaline recommended).
		WARNING Do not use metal tools to remove batteries. Doing so will render the Receiver inoperable. See Figure 20.

INTERMITTENT TROUBLESHOOTING

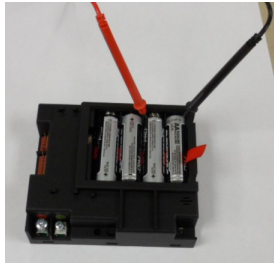

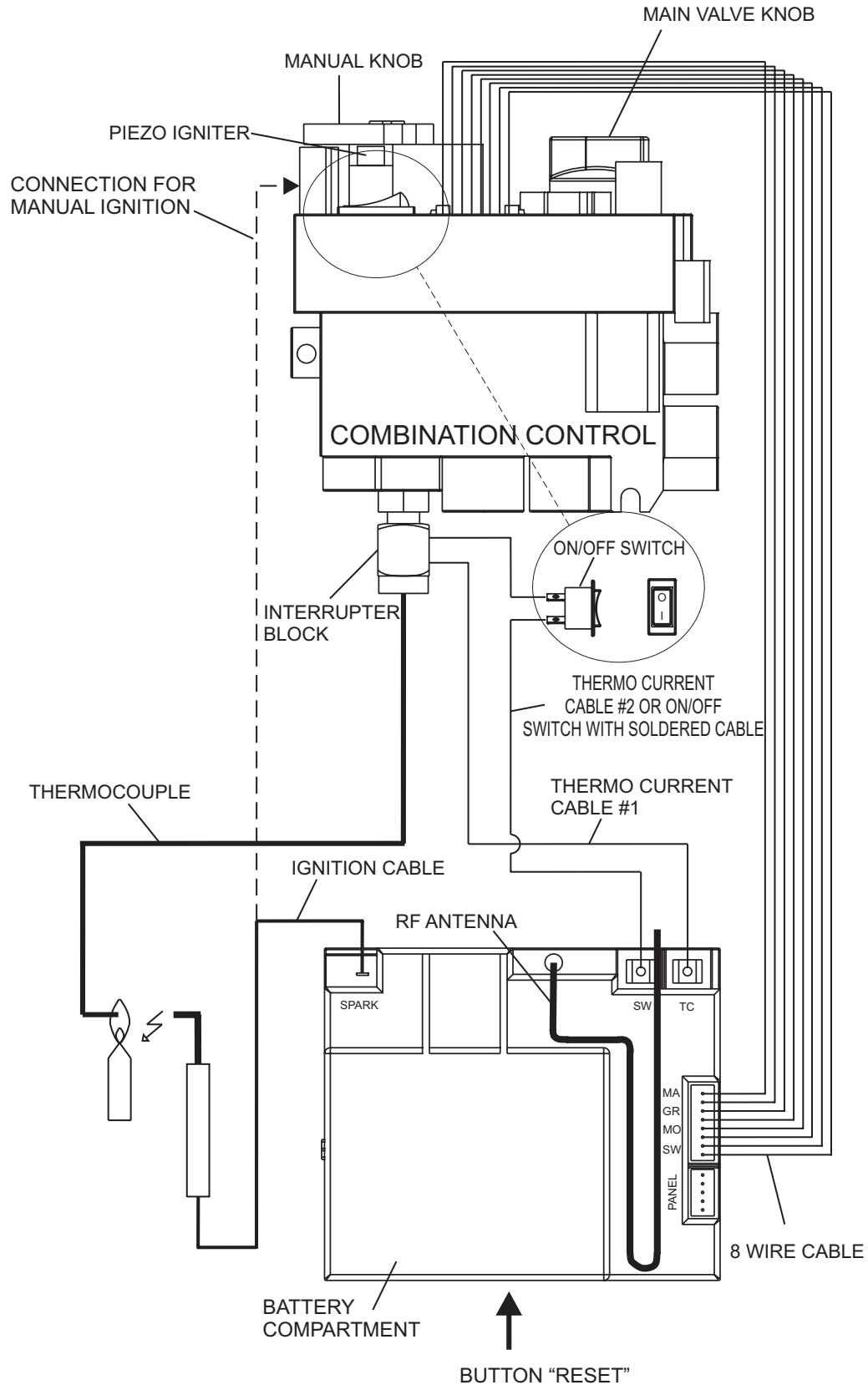
OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Pilot flame lights but there is no main gas flow	1. Manual override knob (if equipped) is in MAN position.	Turn manual override knob to ON position (See Figure 19).
	2. Valve turned down to pilot flow.	Turn flame to high fire by pressing up button on remote handset.
	3. Valve	Replace Valve. Do not overtighten the Thermocouple Interrupter
Latching Solenoid does not work.	1. Loose connection	Check connection is tight and pins are straight
	2. Latching Solenoid	Replace Latching Solenoid
	3. Receiver	Replace Receiver and reprogram code
	4. Handset	Check that the Handset shows the AUX-symbol if you press SET + UP
The remote receiver is responding and the pilot is lighting, but then quickly drops out followed by three fast acoustic signals	1. Weak batteries - between 5.5 volts to 5 volts	<p>Check battery voltage. See Figure 28. Note: The red probe is on the second battery from the right, and the black probe is on the far right battery in Figure 28. If the voltage is low, replace Receiver batteries with 1.5V "AA" quality alkaline batteries.</p> 
The remote receiver is beeping but not lighting the pilot	1. Weak batteries - below 5 volts	<p>Check battery voltage. See Figure 28. If the voltage is low, replace Receiver batteries with 1.5V "AA" quality alkaline batteries.</p>

Figure 28

INTERMITTENT TROUBLESHOOTING

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
New remote receiver batteries have been installed, but the receiver is not responding to the handheld remote	1. Receiver must learn new code	<p>Press and hold the Receiver's reset button (see figure 29) until you hear 2 acoustic signals. After the second, longer acoustic signal, release the reset button. Within the subsequent 20 seconds press the (small flame) button on the Remote Handset until you hear an additional long acoustic signal confirming the new code is set.</p>  <p>Figure 29</p> <p>Note: It may take several attempts for the receiver to learn the code. Let a minute pass between each attempt to reset the receiver. If after three attempts the receiver has not programmed a code, remove the batteries for two minutes. Replace the batteries and restart the learning process.</p> <p>Note: A long continuous acoustic signal after any step in this process means the remote has failed to pick up the signal. Restart the learning process.</p> <p>Note: If pushing the high flame and Off on the receiver results in a long acoustic signal, make sure the on/off switch is in the "ON" position on the valve.</p> <p>Note: If the valve is beeping and the motor drive makes a slight movement, then back but there is no spark, check to make sure the spark wire is connected to the receiver box pin location.</p> <p>Note: Continuous acoustic signaling means the module is attempting ignition. Three short, fast acoustic signals mean failed ignition.</p>

G6R REMOTE ELECTRONIC IGNITION AND CONTROL SYSTEM



Wiring Diagram