OWNER'S MANUAL

BLUEARC GENESIS 200 MIX AC/DC WELDING MACHINE



NOTE: Please read this manual carefully before use.

Product Specifications and features are subject to change without notice. While every attempt has been made to provide the most accurate and current information possible at the time of publication, this manual is intended to be a general guide.

CE



1. GENERAL COMMENTS

Start-up and operation of the device should only be done after carefully reading this Operator's Manual.

Damage to the device due to improper handling will result in the loss of warranty rights.

It is forbidden to modify devices and interfere in its construction.



ATTENTION



Welding may endanger the safety of the operator and other persons in the vicinity. Therefore, special precautions should be taken during welding. Before welding, read the occupational health and safety regulations in force at the workplace.

During electric welding with MMA and TIG methods, there are the following hazards:

- **o ELECTRIC SHOCK**
- NEGATIVE EFFECT OF ARROW ON EYES AND SKIN OF HUMAN
- o POISON AND GAS DAMAGE
- o BURNS
- NOISE

Prevention of electric shock:

- Connect the device to a correct electrical installation with proper protection.
- Assemble current wires with the device switched off.
- Do not use handles and power cables with damaged insulation.
- While in adverse conditions with the danger of electric shock (environments with high humidity and closed tanks), work with a helper supporting the work of the welder and watching over safety. Use clothing and gloves with good insulating properties.
- If you notice any irregularities, you should ask a helper to handle them.
- Do not operate the device with covers removed.
- Do not touch the output terminals when the device is connected and press the trigger, do not touch the electrode head when initiating arc.

Prevention of damage from electric arc on the eyes and human skin:

- Wear protective clothing (gloves, apron, leather shoes).
- Use shields or protective shields with a properly selected filter.
- Use protective covers made of non-combustible materials and use a color of the lens that absorbs harmful radiation.

Prevention of poisoning by vapors and gases emitted during welding from electrode lagging and metal evaporation:

- Use proper ventilation devices at work stations.
- Use fan to provide fresh air when working in a confined space.

Prevention of burns:

- Use appropriate protective clothing and footwear to protect against burns from arc radiation and spatter
- Use clothes free of lubricants and oils that may lead to ignition of the clothing.

Prevention of negative impact of noise:

- Use earplugs or other noise protection measures,
- Warn of the dangers of nearby people.

Before starting the device:

- Check the condition of electrical and mechanical connections. Do not use handles and power cables with damaged insulation. Improper insulation of holders and power cords may result in electric shock.
- Ensure proper working conditions, temperature, humidity and ventilation in the workplace. When in use outside, protect against rain.

Operator of the welder should:

- Know how to weld electrodes, coated electrodes and TIG.
- Know and follow the health and safety regulations applicable while welding.
- Use appropriate, specialist protective equipment: Gloves, apron, rubber boots, shield or welding helmet with a properly selected filter.
- Be familiar with the contents of these operating instructions and operate the welder for its intended purpose.

Any repairs/adjustments to the device may only be made after disconnecting the power. When the device is connected to the power do not allow it to touch any bare hands, damp or soiled clothing. Do not remove the external covers when the device is connected to the power. Maintenance and repair work may only be carried out by authorized persons subject to the safety and operating conditions applicable to electrical equipment.

2. GENERAL DESCRIPTION

This welding machine is used for manual welding by direct current and alternating current using Manual Metal Arc (MMA) and Gas Tungsten Arc Welding (GTAW), also known as Tungsten Inert Gas (TIG) welding. In the design and construction of the device the latest developments in the field of PWM technology (pulse width modulation) and IGBT modules (bipolar transistors with an insulated gate) were used, thanks to which the welder is characterized by small size and low weight.

The ARC FORCE function is available during MMA welding. During TIG welding it is possible to regulate the rise and fall of current, pre-outflow and gas outflow as well as pulse and AC current parameters. The device has a memory of 10 sets of parameter settings for the TIG HF and MMA methods.

Model HTIG-200P MIX AC/DC Input Voltage(V) 1*220V-240V+1*110-120V Frequency (Hz) 50/60 Power Capacity (KVA) 7.1 Max Input Current (A) 43 No-load Voltage(V) 74V(230V) 70V(110V) Rated Duty Cycle (%) 60 TIG/MMA Current range(A) 5~200 / 20~180 ARC Force Current range (%) 0-150 Hot Start Range (%) 0-150 Base Current (%) 10-100 DC Pulse MMA Pulse Frequency (Hz) 0.2-500 Duty Cycle (%) 5-95 (>200Hz Duty 50%) AC MMA Frequency (Hz) 20~250 (Duty 50%) 1.6, 2.0, 2.5, 3.2, 4.0 Electrode Dia (mm) Sync AC/DC MMA Offset Current(A) ±20A 0.2~500 Pulse TIG Frequency (Hz) Pulse TIG Duty (%) 5-95 (>200Hz Duty 50%) Sync TIG Offset Current(A) ±35A Base Current (%) 10-100 Initial / Final Current (%) 10-100 Up / Down Slope Time (S) 0.0~15.0 Pre / Post Flow Time (S) 0.1~15.0 / 0.5~15.0

3. TECHNICAL PARAMETERS

Spot / Dead (Interval) Time (S)		0.1~15.0 / 0.0~15.0	
TIG Tungsten [Dia (mm)	1.0, 1.6, 2.0, 2.4, 3.2	
AC TIG	Frequency (Hz)	20~250	
	Balance (%)	Sync Set ±10% Adjust	
MIX TIG	Frequency (Hz)	0.5-20	
	Ratio	5-95	
Efficiency (%)		85	
Power Factor		0.93	
Protection Class(S) IP23		IP23	
Insulation Class		F	
Dimension(mm)		400*150*230	
Weight (Kgs)		10	

Level of security

IP determines to what extent the device is resistant to solid and water contamination. IP23 means that the device is designed to work indoors and is not suitable for use in the rain.

4. Panel Instruction



4.1 Mode option (In the non-welding working state)

MMA MODE LIFT MODE HF	ΜΜΑ
MMA • MODE LIFT • MODE HF •	LIFT TIG
MMA • LIFT • MODE HF •	HF TIG

4.2 POLAR option (In the non-welding working state)

DC POLAR	DC output * DC MMA can weld a variety of electrodes such as basic electrode, acid electrode
	* DC TIG can be used for welding most metals except aluminum, magnesium and its alloys.
	AC output
AG POLAR	AC MMA is generally suitable for acid electrode and can also be used for welding workplace that need to reduce ARC blow.
	AC TIG can be used for aluminum, magnesium and its alloys.
	MIX DC and AC output
DC • POLAR	MIX TIG is generally suitable for aluminum, magnesium and its alloys. The working principle is by mixing DC TIG arc on the basis of AC TIG. AC and DC alternate output can minimize tungsten loss.
	The arc concentration is good, the penetration is deep, and a neat corrugated weld can be formed.
	MIX MMA: N/A

4.3 PULSE option (In the non-welding working state)

PULSE	ON PULSE OFF OFF
PULSE	ON PULSE ON OFF MIX TIG: N/A

4.4 Welding torch on/off option (In the non-welding working state)



2T: Pressing the switch in the grip handle will activate the ionizer and ignite the arc. Welding is carried out with the switch pressed. Releasing the switch will end welding.

Note:Foot Pedal is valid only 2T mode.

(1) Press and hold the handle button. The outflow of protective gas begins. Arc ignition, welding current increases from the minimum value to the set welding current value. During welding, the handle button should remain pressed.

(2) Release the torch button, the welding current begins to drop. Welding current falls to the minimum value, the arc is extinguished; The solenoid valve closes the gas flow, completing welding.



Note: I means press handle button; T means release handle button

OPER 02T	4T: Pressing the switch in the grip handle will activate the ionizer and ignite the arc, then release the switch and conduct the welding with the released switch. Pressing the switch again will end welding.
SPOT	(1) Press and hold the handle button. The outflow of protective gas begins and keep in the arc ignition phase.
	(2) Release the handle button, welding current increases from the minimum value to the set welding current value.

	(3) Press the handle button, the welding current drop to the value of the crater current.
	(4) Release the handle button. The arc is extinguished, shielding gas flows out; The solenoid valve closes the gas flow, completing welding.
	\downarrow \uparrow \downarrow \uparrow
	Note: ↓means press handle button; ↑means release handle button
●2T	SPOT: The welding time is limited by the settled time, and the other is same as 2T.
OPER 4T SPOT	The "SPOT" method is mostly used for spot welding of thin plates. For materials that are easily deformed, the heat input can be precisely controlled.
	(1) Press and hold the handle button. The outflow of protective gas begins. Arc ignition, welding current increases from the minimum value to the set welding current value.
	(2) Wait for the spot welding time to automatically extinguish the arc.
	*If set spot time"0", then starts Single spot welding function. Release the handle button and into "post gas".
	(3) If don't set spot time"0", then start Continuous spot welding function. When arrive in set spot time, arc will initiate again.
	(4) It is time to finish spot welding, the welding current begins to Drop the minimum value, the arc is extinguished, shielding gas flows out. The solenoid valve closes the gas flow, release the button, completing welding.
	↓ <u>↑</u>
	Note: ↓means press handle button; ↑means release handle button
	Note: PULSE ON: N/A
	LIFT TIG:N/A

4.5 TIG Welding current adjustment (In the non-welding working state, press and hold "PULSE" for 2 seconds to enter choose panel or remote)

	Panel adjustment (REM is off)
REM VRD CH	In this mode, a remote amperage control cannot be used. The welding current is determined by the panel welding current setting value.
	Foot pedal adjustment (REM is on)
	Note: Foot pedal is default REM value.
	A foot pedal is needed in this mode.
	The maximum welding current output is determined by the panel welding current setting value. The foot movement on pedal regulates the welding current output.
	In this way, the up slope time and down slope time set on the panel are invalid, and the up slope and down slope time is controlled by the pedal.
	Digital push-button welding torch adjustment (REM is on)
OPER ALARM REM VRD CH	Note: In the non-welding working state, press and hold "OPER" for 2 seconds to enter choose foot pedal or digital welding torch as remote control. In this way, the maximum welding current output is determined by the panel welding current setting value. Press button + and - on torch to regulate the welding current output.

4.6 MMA VRD OPTION (In the non-welding working state, press and hold "POLAR" for 2 seconds)

			VRD OFF
POLAR YRD 28	AMP SEC % Hz	ALARM REM VRD CH	The most commonly used method of MMA. After the machine is turned on, the machine outputs the maximum open circuit voltage, which is easy to start ARC.



VRD ON

Generally used in damp or enclosed workplace. After turning on the VRD function, the Open circuit voltage is less than 15V, which minimizes the risk of electric shock caused by a higher open circuit.

4.7 WELDING CURRENT SYNC (In the non-welding working state, press"SYNC")

SYNC Manual	Manual The mode is suitable for professional welders, who know how to adjust the parameter to achieve the best welding.
SYNC Sync Manual	SYNC In this mode, the welder presets the electrode diameter, and the welding machine automatically matches the welding current value required by the corresponding electrode diameter.
AMP SEC % Hz Hz	 (1) In this mode, the display shows the currently selected electrode diameter (mm), press the knob to select the actual electrode diameter. The welding machine will automatically match a suitable welding current value according to the selected electrode diameter. (2) When welding, if the user needs to fine-tune the welding current, then turn the knob to adjust. (3) Electrode diameter: Φ1.6mm Φ2.0mm Φ2.5mm Φ3.2mm Φ4.0mm (4) Tungsten diameter: Φ1.0mm Φ1.6mm Φ2.0mm Φ2.4mm Φ3.2mm Note: When use remote ways to adjust the current, such as remote torch, remote foot pedal

4.8 Programs SAVE AND LOAD (In the non-welding working state, press "MEMORY" to save or load program)

	Program SAVE
SAVE LOAD • MEMORY LOAD • Alarm • Rem • VRD • CH	 (1) When want to save the welding parameters, firstly press the "MEMORY" button and "SAVE" light. And the "CH" light is also on and the display shows the channel number. (2) Adjusting knob to select the channel number to be stored, the channel range is CH0~CH9. (3) Press and hold the "MEMORY" for 2 seconds. When the display shows "SUC", the program has been saved successfully.
	Program LOAD
	(1) When the welder needs to use the stored program, firstly press the "MEMORY" and "LOAD" light. The "CH" light is also on and display shows the channel number.
LOAD	 (1) When the welder needs to use the stored program, firstly press the "MEMORY" and "LOAD" light. The "CH" light is also on and display shows the channel number. (2) Adjusting knob to select the channel number. (3) Press and hold the "MEMORY" for 2 seconds .When the display shows "SUC", the program load is successfully.

5.SETTING



HOT START & ARC FORCE - Allows you to adjust the dynamics of the welding arc during MMA welding. The shortening of the arc length is accompanied by an increase in the welding current, which results in stabilization of the arc. Decreasing the value gives a soft curve and a smaller depth of penetration, while increasing the value causes deeper penetration and the possibility of short arc welding. When the large value of the ARC FORCE function is set, you can weld while maintaining an arc with a minimum length and high melting rate of the electrode. The adjustment range: $0 \sim 150\%$

PRE-FLOW - Time from pressing the button in the grip handle and opening the gas valve until the arc is ignited. Usually should be more than 0,5s. Adjustment range: 0.1~15.0s

INITIAL CURRENT - The current appearing in the circuit after pressing the button in the grip handle. The higher the initial current, the easier it is to ignite the arc. Adjustment range(%): 10%~100%

UP SLOPE (Time of current increase) - Welding current rise time from the initial current to the set welding current value. Adjustment range: 0.0~15.0 s

WELDING CURRENT (Peak Amp) – Main welding current Adjustment range: 5 ~ Max Current

SPOT TIME (time of spot welding) – Spot welding time

Adjustment range: 0.1~15.0 s

DUTY CYCLE (pulse duty) - Duration of the impulse, allows you to adjust the depth of the penetration. The increase in width increases the depth of penetration, the reduction reduces the amount of heat entering the material, reducing the risk of burning thinner sheets or smaller elements.

Adjustment range: 5~95% (>200Hz Duty 50%)

PULSE FREQUENCY - The frequency with which the value of the current pulse between the welding current and the base current changes. Adjustment range: 0.2~250Hz / suggest at 200Hz

BASE CURRENT (Base Amp) - The current responsible for maintaining the welding process, the lower value of the current pulse. It makes it easier to control the amount of heat entering the material.

The base current adjustment is only possible during pulse welding. Adjustment range: 10%~100%

AC FREQUENCY - This function is useful when welding aluminum. The higher the frequency, the more focused the arc will be. (It's not a better quality weld with higher frequency)

Adjustment range: 20~ 250 Hz/ suggest at 60Hz

AC BALANCE - The ratio of the duration of the positive to negative phase. The reduction of the balance results in the introduction of more heat into the material, resulting in a narrower weld and deeper penetration, and at the same time reduces the heat load of the tungsten electrode. Increasing the balance results in the introduction of less heat into the material, resulting in better cleaning, a broad joint and a shallower penetration, however, it significantly weighs the tungsten electrode.

Adjustment range: Sync Set ±10% Adjust

DOWN SLOPE (Time of current descent) - Time of transition current from the welding current to the final current. Adjustment range: $0.0 \sim 15.0$ s

FINAL CURRENT - Current at the end of the weld sequence. Adjustment range: 10%~100%

POST FLOW - Time from quenching the arc to closing the gas valve to cover the solidifying weld pool from the air and to cool the tungsten electrode. Too short time of outflow may result in oxidation of the weld,

Adjustment range: 0.5~15.0s



MIX FREQ - III is used to adjust the exchange frequency of AC ARC and DC ARC, that is, the length of time for the arc combination of AC arc and DC arc to weld pool.

For example: MIX FREQ is set to 5Hz, which means that the AC ARC and the DC ARC must be switched 5 times within one second, and the duration of each time is 1/5 second, that is, the mixing period is 200 milliseconds.

Adjusting MIX FREQ is equivalent to adjusting the time that the arc combination of AC arc and DC arc acts on the molten pool, which is shown as the density of the weld ripple on the weld.

Adjustment range:0.5-20HZ

MIX RATIO - It is used to adjust the time ratio of the AC ARC to the entire mixing period.

For example: MIX freq set to 5 Hz (that is, the AC ARC and the DC ARC must be switched 5 times in one second, and the duration of each time is 1/5 second, the mixing period is 200 milliseconds), and MIX RATIO is set to 40 %, that is, the time that the AC ARC acts on the welding pool in a mixing cycle accounts for 40% of the mixing cycle (80ms); the time that the DC ARC acts on the welding pool accounts for 60% of the mixing cycle(120ms).

Adjusting MIX ratio is equivalent to adjusting the proportion of the AC ARC in a mixing cycle. The greater the mixing ratio, the greater the proportion of the AC arc, the smaller the proportion of the DC arc, and the welding effect tends to be ACTIG.

The smaller the MIX ratio, the smaller the proportion of the AC arc, the greater the proportion of the DC arc, and the welding effect tends to be DCTIG.

Adjusting MIX ratio is to balance the ratio of AC arc and DC arc action to achieve performance welding effect.

Adjustment range:5-95%

Note: MIX FREQ & MIX RATIO are only for MIX TIG .

MIX TIG working principle: When welding, the oxide film on the surface of the workpiece is cleaned by AC ARC first, and then DC ARC is used to increase the penetration depth of the weld, improve welding efficiency and reduce tungsten loss.

The welding effect is most obvious when welding thick plates. When the welding efficiency of welding aluminum, magnesium and its alloys needs to be improved. MIX TIG can also be used.

MIX TIG working instruction: When the welder chooses to use MIX TIG , first set the welding parameters such as "welding current", "AC frequency", "AC Balance" and so on like using AC TIG, and then set the "MIX freq" and "MIX ratio".

*Adjusting MIX Freq can control the tightness of the seam corrugation.

For example: If the welder wants the weld corrugation to be denser, the MIX Freq can be adjusted higher.

*Adjusting the MIX ratio can control the strength of the AC ARC and the weld penetration.

For example: When the welder wants to increase the penetration depth to improve the weld quality when welding thick plates, he can set the MIX ratio to be smaller and use DC ARC to increase the penetration depth.

6. PREPARATION OF THE DEVICE FOR WORK

If the device is stored or transported in low temperatures, the device should be brought to the right temperature before starting work.



6.1 DESCRIPTION OF OPERATION



- (1) Negative polarization socket"-" (2) Gas connector
- (3) Remote socket (4) Positive polarization socket"+"
- (5) Supply power wire (6) Ground terminal (7) Switch on/off (8) Spigot shield gas

6.1 MMA Method

The ends of the welding cables should be connected to the sockets (1) and (4) on the front panel, so that the polarity of the electrode is on the electrode holder. The polarity of the welding cable connection depends on the type of electrode used and is given on the electrode packaging. The ground cable clamp must be securely attached to the welded material. Connect the device's plug to a 230V 50Hz mains socket.



6.2 Tig Method

The tig torch should be connected to gas connector (2) and remote socket (3).

The gas pipe from the reducer should be led and attached to the gas connector (8) located on the back of the housing.

Connect the positive polarization socket (4) to the material to be welded with a wire with a earth clamp.

Connect the device's plug to a 230V 50Hz mains socket.



Note: If use lift tig torch, the torch will connect Negative polarization socket"-" (1) and gas connector (2).

Connect the positive polarization socket (4) to the material to be welded with a wire with a ground clamp.

7. PROBLEM AND SOLUTION

In case of malfunction of the device, before sending the welder to the service, check the list of basic failures and try to resolve them yourself.

Any repairs to the device may only be made after disconnecting the plug from the mains socket.

SYMPTOMS	SOLUTION
The control panel does not	1. Make sure that the switch is in the ON position
light up, the fan does not	2. Check the protection and voltage in the network
work, no output voltage	3. Remove the housing and check the connection of all electrical plugs inside the device
The control panel is on,	1. Check whether the device has been connected to a higher voltage
the fan is not working, no	network. If so, connect to the 230V grid and turn it on again
output voltage.	protection to be activated. Switch the device off for 2-3 minutes and switch it on again
	3. The short-term switching on and off of the switch has triggered the overvoltage protection. Switch the device off for 2-3 minutes and
	Switch it on again
	service center
The control panel is on,	Check the TIG torch, replace the consumables if they are worn
the fan is running,	
problems with arc ignition	
The control panel is on,	1. Check the terminals and the correct electrical conductivity of the
the fan is running,	electrode and ground wires
problems with arc ignition	that the pins in the socket are not broken or jammed.
	3. Unscrew the handle of the TIG torch and check that the switch in the holder is working
Unsatisfactory weld quality	1. Check the polarity of the welding cable connections
during MMA welding, the	2. Check that the electrode is not wet. Replace the electrode.
electrode is bonded to the	3. The weider is powered from a generator set or a long extension with too small a cable cross section. Connect the device directly to
material being welded	the mains
Unsatisfactory weld quality	1. Replace consumable parts. Change the tungsten electrode or gas
for TIG welding	cylinder with higher quality materials
	2. Check the gas supply hose improve the hose and couplings
	connection and the condition of quick couplers
	4. Check reducer.

List of codes:



Over current protection

The main power device of the welding machine is in the over-current working state, at this time the welding machine cuts off the output and the display shows "ALARM".

Over heating protection



The welding machine is in an overload working state and the temperature of the main power device is too high. At this time, the welding machine cuts off the output and the display shows "ALARM". There is no need to turn off the welding machine at this time, it will automatically return to normal state after the internal temperature of the welding machine drops.



Temperature detection failure

The internal temperature detection device of the welder is faulty or the contact is poor, the welder cuts off the output and the display shows "ALARM". At this time, please turn off the welding machine and contact qualified maintenance personnel to inspect and repair the welding machine.



NOTE: During each shut down, E06 on the display is a normal shutdown operation!

Under voltage protection

When the internal auxiliary power supply of the welding machine plus 15V voltage is lower than the set undervoltage protection point, the under voltage protection will be triggered, and and the display shows "ALARM".

This fault is an internal auxiliary power output failure. Please turn off the welding machine and contact qualified maintenance personnel for inspection and repair the welding machine.

8. WELDING PARAMETERS RESTORE TO THE FACTORY SETTINGS

If you need to reset all welding parameters to the factory default values, you can do the following operations:

together, and then

hold for 5 seconds until all the indicators on the panel are off, the display show



In the non-welding state, press both buttons

and panel has illuminated again. The factory setting of the welding parameters is restored!

9. OPERATING INSTRUCTIONS

Operation of the device should take place in an atmosphere free from corrosive ingredients and high levels of dust. Do not place the device in dusty places, near grinders, etc. Dust and contamination with metal filings of control boards, wires and connections inside the device can lead to an electrical short circuit and consequent damage to the welder.

Avoid operation in environments with high humidity, in particular in situations of condensation on metal elements.

In the case of condensation on metal elements, for example, after entering a cool device into a warm room, wait until the condensation disappears. It is recommended that when the machine is used outdoors, it should be placed under the roof in order to protect it from adverse weather conditions.

10. MAINTENANCE INSTRUCTIONS

As part of everyday service, keep the welder clean, check the condition of external connections and the condition of wires and electric cables.

Replace consumable parts regularly.

Periodically clean the device inside by blowing with compressed air to remove dust and metallic filings from the control plates as well as wires and electrical connections.

At least once every six months a general review and condition of electrical connections should be made, in particular:

- Protection against electric shock
- Insulation condition
- Security system status
- Correct operation of the cooling system

11. STORAGE AND TRANSPORT INSTRUCTIONS

The device should be stored at -10 °C to + 40 °C and relative humidity up to 80% free from corrosive fumes and dust. The transportation of packaged devices should take place in covered transport. During transport, the packed device should be secured against shifting.

IGBT Equipment Warranty

Welding Material Sales Effective Jan 1, 2019

Limited Warranty

This warranty applies to the original purchaser and is subject to the terms and conditions listed below.

This Limited Warranty is for new equipment sold after the above date, providing coverage for defects in material and workmanship at the time it is shipped from the factory.

Limited to the warranty periods listed below, Welding Material Sales will repair or replace the item under warranty that fails due to defects in material and workmanship. Welding Material Sales, Inc. must be notified within 30 days of the failure, so as to provide instructions on how to proceed with the repair of your welder and warranty claim processing. Warranty period begins at the time the welder is purchased from an authorized Welding Material Sales, Inc. distributor and/ or retailer. Proof of purchase will be required for Welding Material Sales to proceed with any and all warranty claims, no exceptions.

Warranty Periods

Limited Warranty is divided into two categories: No warranty and 1 year.

No Warranty

Normal wear items including but not limited to MIG gun parts (contact tips, nozzle, adapter, liner), TIG torch parts (collet, cup, back cap, torch body) drive roll, contactor, and electrode holder are not covered under warranty.

1 Year

Solenoid valve, PC board, controls, gas valve, drive motor, and drive system. Parts and labor performed by authorized repair center with original equipment repair parts. Call 888-905-6737 for a repair center near you.