



www.r-techwelding.co.uk

email: sales@r-techwelding.co.uk

Tel: 01452 733933 Fax 01452 733939



POWER MTS210D MIG - TIG - MMA WELDING MACHINE OPERATION INSTRUCTIONS



Version 2014-1

Thank you for selecting the R-Tech MTS210D Inverter Mig - MMA - TIG Welder.

The MTS210D has many benefits over traditional transformer welders including infinite power control, adjustable arc force and features a heavy duty wire feed mechanism to provide very smooth wire feed and weld characteristics

Ideal for automotive work with its minimum current of 25-30 Amps and industrial welding with its maximum output of 200 Amps (MIG/TIG) and 175 amps (MMA)

PLEASE EXAMINE THE CARTON AND EQUIPMENT FOR DAMAGE IMMEDIATELY

If your machine is damaged please call our sales team on 01452 733933.

Please record your equipment identification below for future reference. This information can be found on the data plate at rear of machine.

Product POWER MTS210D

Serial No. _____

Date of Purchase _____

Where Purchased _____

Whenever you request replacement parts or information on this equipment please always supply the information you have recorded above.

This product is covered by a 2 year parts and labour warranty, we will cover the cost of collection, repair and returning the item to you within mainland UK (other area are RTB warranty). External items, torch, earth lead etc... are covered by a 3 month warranty. Any faults/damage found caused by a customer will be charged.

Please read this operators manual completely before attempting to use this equipment. Pay particular attention to the safety instructions we have provided you for your protection.

The level of seriousness to be applied to each section is explained below

WARNING



This statement appears where the information must be followed exactly to avoid serious personal injury.

CAUTION

This statement appears where the information must be following to avoid a minor personal injury or damage to this equipment.

Product Description

Premium features include:-

- Inverter power source – more efficient to operate, provides smoother weld characteristics.
- Heavy duty wire feed unit for long working life and consistent wire feeding.
- MIG - MMA - DC Tig welding modes
- Infinite welding voltage to allow fine tuning of weld characteristics
- Adjustable arc force – controls splatter – ideal for thin materials
- Mig Operation with from 25 amps to 200 amps - ideal for very thin and thick materials
- Digital amp & volts meters
- 9 memory job stores - Easily switch between stored settings for job in hand
- Euro type torch fittings for easy torch fitment/replacement
- 35% Duty cycle at maximum amps @ 40°C

Recommended Processes

The R-Tech is recommended for the MIG welding processes within its output capacity of 200 Amps DC

Equipment Limitations

The R-Tech POWER MTS210D is protected from overloads beyond the output ratings and duty cycle as per machine specifications with thermostat protection of the output coils and rectifiers.

Welding Capability Duty Cycle

The R-Tech MTS210D is rated at 200 Amps(MIG) at 35% duty cycle on a ten minute basis. If the duty cycle is exceeded a thermal protector will shut machine off until the machine cools.

The R-Tech MTS210D is rated at 175Amps(MMA) at 35% duty cycle on a ten minute basis. If the duty cycle is exceeded a thermal protector will shut machine off until the machine cools.

The R-Tech MTS210D is rated at 200 Amps(TIG) at 35% duty cycle on a ten minute basis. If the duty cycle is exceeded a thermal protector will shut machine off until the machine cools.

Installation

Technical Specifications

Model No.	R-Tech POWER MTS210D	
Input		240V 1 ~ AC 50/60Hz
Operation	Rated Input Power	8.2 KVA
	Rated Input Current	I-Max 34AMPS / I-Eff 20AMPS
	Fuse rating	20 AMPS
	Rated Output Current	200 AMPS TIG/MIG – 175 AMPS MMA
	Duty Cycle 35% @ 40°C	200A MIG/TIG ,175A MMA
	Duty Cycle 100% @ 40°C	130A MIG/TIG,100A MMA
	Output current Range	MIG: 25-200 AMPS MMA: 10-175 AMPS TIG: 10-200 AMPS
	No Load Voltage	60~80V
	MIG Voltage Adjustment Range	14V - 26V± 3V
	Suitable Wire Diameter	0.6mm 0.8mm 1.0mm
Insulation		Class F

Read entire section before starting installation

WARNING!



Electric Shock can kill Only qualified personnel should perform this installation. Turn off input power at the fuse box before working on this equipment. Do not touch electrically live parts. Always connect the machine to an earthed mains supply as per national recommended standards.

Select suitable location

Place the welder where clean cooling air can freely circulate in and out of the front & rear louvre vents. Dirt, dust or any foreign material that can be drawn through vents into welder must be kept to a minimum. Failure to observe these precautions can result in excessive operating temperatures which can lead to plant failure.

Grinding

Do not direct grinding particles towards the welder. An abundance of conductive material can cause plant failure.

Stacking

This machine cannot be stacked.

Transport & Unloading

Never underestimate the weight of equipment, never move or leave suspended in the air above people. Use recommended lifting equipment at all times.

WARNING!



Falling Equipment can cause injury. Never lift welder with gas bottle attached. Never lift above personnel.

Tilting

Machine must be placed on a secure level surface or on a recommended undercarriage/trolley. This machine may topple over if this procedure is not followed.

Environmental Rating

The welding power source carries the IP21S rating. It may be used in normal industrial and commercial environments. Avoid using in areas where water / rain is around.

Read and follow the Electric Shock Warnings in the safety section if welding must be performed under electrically hazardous conditions such as welding in wet areas or water on the work piece.

Machine grounding and High Frequency Interference Protection

This welder must be grounded to earth. See national electrical codes for proper grounding methods.

The high frequency generator being similar to a radio transmitter may cause interference to radio, TV and other electronic equipment. These problems may be the result of radiated interference. Proper grounding methods can reduce or eliminate this.

Radiated interference can develop in the following ways

- Direct interference from welder power source
- Direct interference from the welding leads
- Direct interference radiated from feedback into power lines
- Interference from re-radiation by un-grounded metallic objects.

Keeping these contributing factors in mind, installing equipment as per following instructions should minimize problems.

- Keep the welder input power lines as short as possible and enclose as much of them as possible in metal conduit or equivalent shielding. There should be a good electrical contact between this conduit and ground (Earth).
- Keep the work and electrode leads as short as possible. Tape the leads together where practical.
- Be sure the torch and earth leads rubber coverings are free from cuts and cracks that allow welding power leakage
- Keep earth lead connection to work in good condition. Clean area on workbench where earth clamp is situated on a regular basis.

Input Connections

Make sure the voltage, phase and frequency of input power is as specified on machine rating plate located at rear of machine.

Have a qualified electrician provide suitable input power as per national electrical codes. Make sure machine is earthed / grounded.

Make sure fuse or circuit breaker is correct rating for machine. Using fuses or circuit breakers smaller than recommended will result in nuisance shut off from welder inrush currents even if welding at low amperages.

On multiple voltage input welders, be sure the machine is connected as per the instructions for the voltage being supplied to welder. Failure to follow these instructions can cause immediate failure within the welder and void machines warranty.

WARNING!



ELECTRIC SHOCK CAN KILL

Turn the input power OFF at the mains switch & fuse box before working on this equipment.

Have a qualified electrician install & service this equipment.

Allow machine to sit for 5 minutes minimum to allow the power capacitors to discharge before working inside this equipment. Do not touch electrically live parts

The POWER MTS210D Inverter TIG Welder requires a 240V 50/60Hz 20 amp fused supply. It comes with a 3 metre mains cable attached.

Connect wires according to national coding. (Below states UK coding)

Brown wire - Live, Blue wire - Neutral, Green/Yellow Wire - Earth (Ground)

Connecting to a mains electrical supply

THIS MACHINE IS OF AN INDUSTRIAL SPECIFICATION AND MUST BE FITTED TO A 20AMP 240V MAINS INPUT

Connecting to an Engine Driven Generator

If connecting this machine to an engine driven generator please ensure the following Minimum Generator KVA Output – 7.2 KVA continuous. Generator to be fitted with AVR (automatic voltage regulation)

DO NOT USE ON A GENERATOR WITHOUT AVR. Connecting to a generator without the above minimum requirements will invalidate your warranty.

Controls and Settings

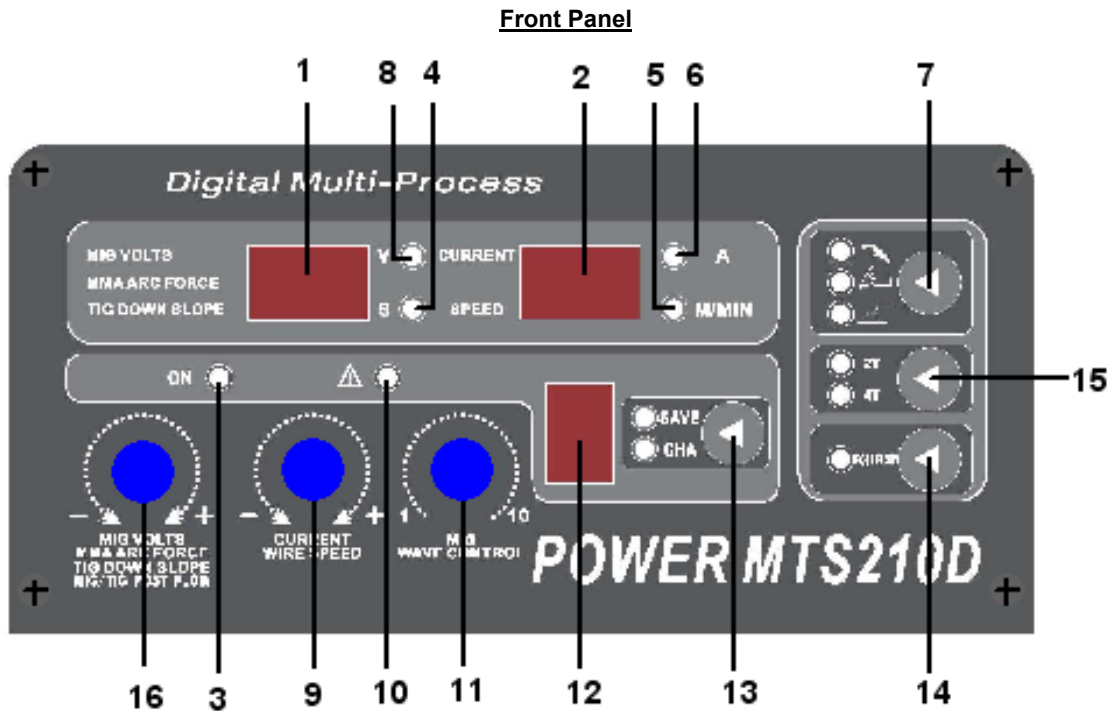


Fig 1

1) Voltage / MMA Arcforce/TIG down slope Display

- The meter on the front panel can indicate the actual welding voltage or preset MIG voltage. The indicating number has the precision of 0.1V .The meter indicates the preset during no welding.
- Display MMA Arcforce
- Display TIG down slope time

2) Current / Wire speed indicating

The current indicating meter on the front panel indicates the actual welding current during the welding, indicates the wire speed during no welding.

3) Power indicator

Lights up when 240v power is connected to machine and on/off switch is in the on position

4) TIG down slope time or post flow time

5) Wire speed - When lit LED display will show wire feed speed

6) Current - When lit LED display will show amperage

7) MIG/TIG/STICK Process Selector

Each icon graphically represents each process. The top function represents MIG. The middle function represents TIG. The bottom function represents Stick.

8) Voltage - When lit LED display will show welding voltage

9) Tig & MMA Amp / MIG Wire Speed Adjustment Knob

For Stick and TIG function, this adjusts the amps. For MIG operation, the amps are directly tied to the wire speed feed. Increasing the speed increases the amps and vice versa. While the unit displays in m/min for MIG operation, a change in this control also results in a change of amps.

10) Duty Cycle / Over current Warning

When the duty cycle has been exceeded or an over current condition will occur, the L.E.D. will light. Allow the unit to cool while running until the light goes off or for 10 minutes before resetting the welder. If the condition persists check for loose wires or voltage supply problems or call R-Tech support.

11) MIG Wave Form Control

Varies the slope of the current rise time during short circuit MIG operation. This affects the actual point where the current has risen sufficiently to melt the wire.

12) Memory channel LED

13) CH (channel) / SAVE Process Selector

Pressing button will change memory store number and show values stored. To set up a new memory store first select number to be programmed, then enter setup parameters as required and then press save for 3 seconds to program current setting to shown memory number.

14) MIG /TIG post flow selector

Press to select post flow, this will be shown in LED (1) and can be adjusted with knob (16)

15) 2T/4T Torch Switch Selector

The torch trigger function is designed to operate for both MIG and TIG functions. To operate in 2T mode, the trigger on either the MIG or TIG torch should be simply held down. The 4T function operates as a torch "latch" in MIG mode that locks the MIG torch on without needing to hold the trigger.

To operate 4T in MIG mode, simply press the torch trigger and hold it down until the arc starts. To lock it on, release the trigger and you can then weld without holding the trigger down. To stop, the trigger must be pressed again and then released.

The 4T function in TIG mode acts similarly, but in conjunction with the down slope timer. As the torch trigger is pressed for the second time, the trigger should be held in until the downslope timer completes its cycle. The trigger may then be released to end the arc. Releasing before the down slope is finished will terminate the arc immediately.

16 MIG Volt / TIG Down Slope / MMA Arc Force Control / MIG TIG post flow

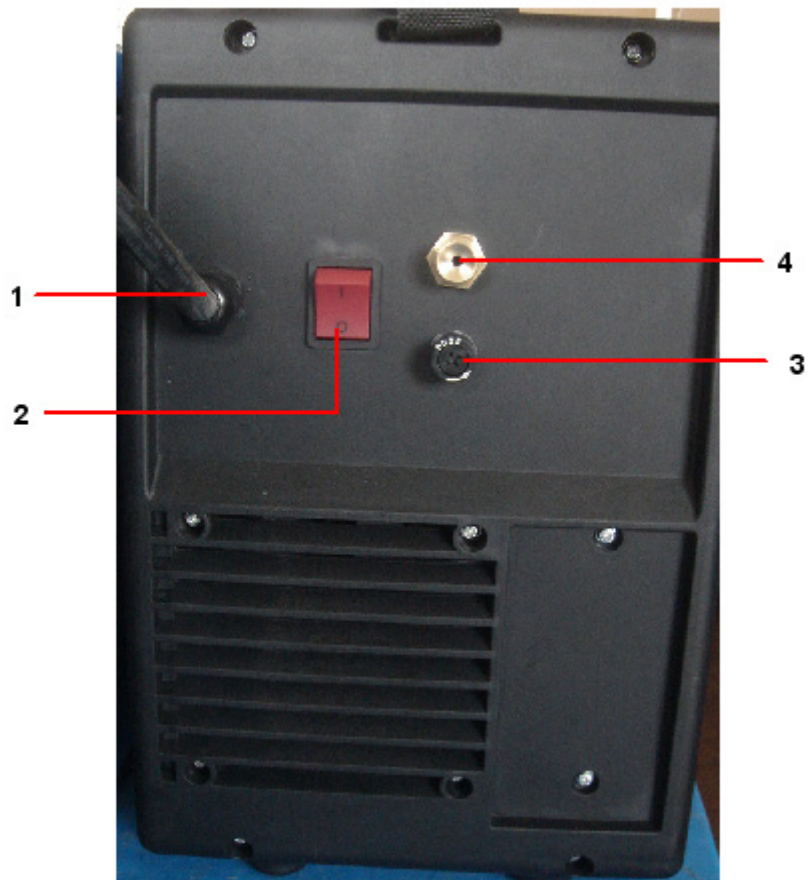
In each mode the function of the control changes.

In MIG mode, the control is used to adjust the arc voltage (power)

While in TIG mode it functions to adjust the down slope of the arc current.

In Stick mode, the control is used to vary the automatic arc force current response. When used for stick welding the arc force is also known as “dig”, the current is increased as the volts fall off due to a short arc length. This helps maintain the arc by providing more power.

Rear machine connections



- 1 Mains input cable (240V AC input)**
Fit the required plug as per your electrical installation
- 2 On/Off Switch**
- 3 Fuse Holder**
5A fuse for wire speed
- 4 Gas input connector**
Connect input gas hose ensuring connection is tight

Connections for TIG (GTAW) Welding

TIG MODE



Fig 3

- 1) **Gas outlet**
Connect the TIG torch gas hose quick release connector
- 2) MIG Torch Euro Connector (NOT used in TIG mode)
- 3) **Positive power connector**
Connect the earth lead to by inserting and twisting until tight and the earth clamp to work/bench
- 4) **Torch control socket 7-Pin**
Connect torch control plug or Remote Foot Pedal plug.
- 5) **Negative power connector +**
Connect TIG Torch Dinse to power connector by inserting and twisting until tight

Connect the gas input hose to gas regulator and use 'Pure Argon' Gas, available from local suppliers. Set gas flow/pressure to 8-12 LPM. Make sure the gas bottle is secured to avoid injury.

STICK/MMA MODE



Connections for STICK MMA Welding

Fig 4

- 1 Positive power outlet – Connect electrode holder lead
- 2 Negative power outlet – Connect earth lead

MIG MODE

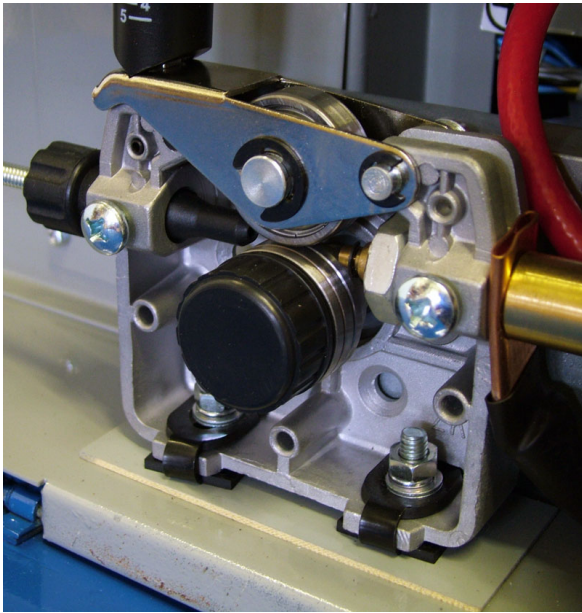


Connections for MIG Welding

Fig 5

- 1 Gas outlet (not used for TIG mode only)
- 2 Euro torch connection – Connect Mig torch – ensure tight
- 3 Positive - Not normally used unless using gasless wire (reverse polarity)
- 4 Negative power outlet – Connect earth lead

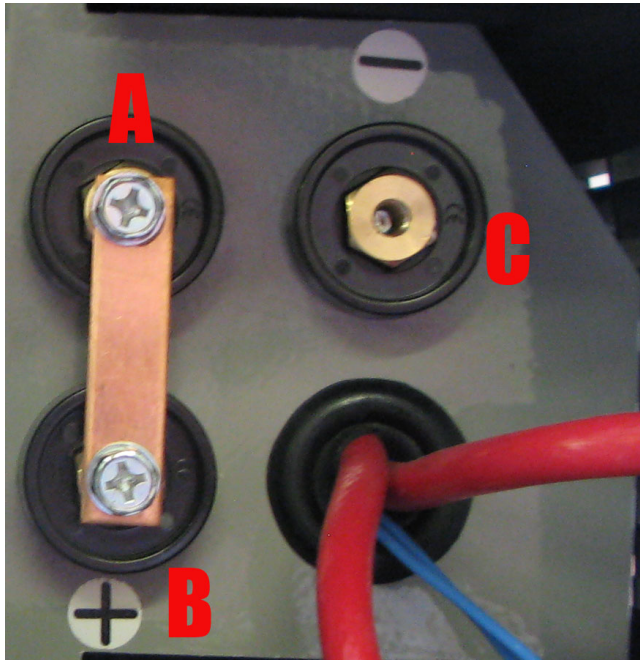
USING THE WIRE FEED UNIT



TO INSTALL WIRE:

1. Loosen top tensioner arm, rotating counter-clockwise
2. Flip tensioner down, releasing top drive rolls.
3. Raise top drive rolls.
4. Inspect the drive roll to make sure that the groove size matches the wire diameter. Reversal of the lower roller may be necessary. To reverse the roller, remove the thumb screw securing the drive roll. Pull the drive roll off, and flip the drive roll over. Reassemble and tighten roller. If larger roller is needed, contact R-Tech. Be careful to replace the woodruff key between outer roller and shaft.
5. Thread straightened welding wire over grooves in lower drive roll fully through until it begins to start threading into the gun section. Lower upper drive rolls onto lower drive roll, keeping wire in the groove.
6. Raise tensioner back into place. Tighten slightly so wire will feed. Notice markings on tensioner for future reference.
7. Hold torch straight out as possible. Press gun trigger to feed wire until the wire exits the end of the torch.
8. Adjust tensioner clockwise until drive rolls will not slip when wire comes into contact with surface and the wire will curl up on end. Remember to keep wire away from metal that is attached to the work clamp to prevent the wire from arcing

Connections for using gas/gasless wire



1. Gas type wire

Connect as per diagram above, A is power outlet, B is + to torch

Fit earth lead to - negative connector on front of machine

2. Gasless type wire (reverse polarity required for gasless wire)

Connect brass bar from A to C so torch is negative

Fit earth lead to + positive connector on front of machine

Note:

Ensure machine is disconnected from mains before changing torch polarity

Operation

SAFETY PRECAUTIONS

WARNING!



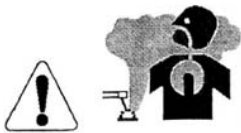
ELECTRIC SHOCK CAN KILL

Do not touch electrically live parts or electrode with skin or wet clothing.

Insulate yourself from work and ground

Always wear dry insulating gloves

WARNING!



FUMES AND GASES can be dangerous

Keep your head out of fumes & gases produced from welding.

Use ventilation or exhaust to remove fumes & gases from breathing zone and general area.

WARNING!



WELDING SPARKS can cause fire or explosion

Keep flammable material away from work area.

Do not weld on containers that have held combustibles

WARNING!



ARC RAYS can burn

Wear eye, ear and body protection . Make sure work area is protected by proper shielding to avoid injury to passers by.

Welding in MIG /MAG Mode

- 1 Connect the MIG Torch to machine, connect earth lead to machine & work piece.
- 2 Set the TIG/MMA/MIG switch to MIG
- 3 Select 2/4 way torch operation
- 4 Set Gas post flow to 1 Seconds, for special applications this can be set to max 10 seconds.
- 5 Select desired welding voltage
- 6 Select desired wire feed speed

Adjust wire feed speed to suit voltage/wire diameter chosen.

Wire reel holder - remove retainer screw cap and fit wire reel and refit securing screw cap. The reel holder features an internal adjustable braking system so that reel of wire stops quickly when the torch trigger released, otherwise the wire reel would continue for a few seconds causing wire to come off the sides.

Wire feed assembly - make sure the rollers are the correct size for the wire diameter selected. To change the rollers release the retaining knurled head screw and fit the rollers onto the shafts making sure the right size groove is in line with the wire and refit retaining screws. Do not over tighten the wire feed pressure rollers as this can cause premature motor and roller failure. TIP: Correct way to adjust tensioner is to slacken off pressure so that the wire does not feed, slowly adjust pressure until wire feeds smoothly, you should be able to stop wire feeding by holding wire and it should slip on rollers. If you have too little pressure the wire will slip when welding causing unwanted burn back into tips, if you have too much pressure wire can snag in rollers when wire hits work and cause wire tangle by rollers.

Welding operation

Once you have set the machine up as per above instructions press the torch trigger to start welding, gas will flow from the torch and main welding power will start and wire feed will start and once wire has touched work piece welding will start, to stop welding release torch trigger.

Adjust the wire feed speed to give the desired weld characteristics

More wire / Less voltage = Dip transfer

Less wire / More voltage = Spray transfer

Welding in TIG mode - No remote foot pedal

- 1 Connect the TIG torch and earth lead to machine & work piece.
- 2 Set the TIG/MMA/MIG switch to TIG
- 3 Select 2 or 4 way torch operation
- 4 Connect Argon gas and set flow to approx 8-12 LPM
- 5 Set Gas post flow to 6 - 10 Seconds, higher amperage requires more post flow.
- 6 Adjust current to desired welding current
- 7 Press the TIG torch switch to start welding

Welding in TIG mode - with Remote foot pedal

- 1 Connect the TIG Torch to machine, connect earth lead to machine & work piece.
- 2 Connect remote foot pedal to machine
- 3 Set the TIG/MMA/MIG switch to TIG
- 4 Select 2 way torch operation
- 5 Connect Argon gas and set flow to approx 8-12 LPM
- 6 Set Gas post flow to 6 - 10 Seconds, higher amperage requires more post flow.
- 7 Press the foot pedal to start welding.

Note: When welding with the remote foot pedal

Upon pressing of foot pedal welding arc will start, if you find it hard to start an arc push the pedal down a bit further to aid starting.

The benefits of welding with a remote foot pedal is that of greater control of the amount of heat going into the work

- Press the pedal fully to start welding; upon weld pool formation you can slightly release the pedal to decrease the amperage to sustain a perfect weld pool and increase it again as required to sustain the weld characteristics.

Welding in STICK MMA (SMAW) Mode - no remote foot pedal

- 1 Fit MMA electrode holder to machine
- 2 Fit earth lead to machine and to work piece
- 3 Select MMA on MMA/TIG/MIG switch
- 4 Place electrode in holder
- 5 Select desired welding current
- 6 Select desired Arc Force
- 7 Strike arc and weld

Welding in STICK MMA (SMAW) Mode - with remote foot pedal

- 1 Fit MMA electrode holder to machine
- 2 Fit earth lead to machine and to work piece
- 3 Select MMA on MMA/TIG/MIG switch
- 4 Place electrode in holder
- 5 Select desired Arc Force
- 6 Connect remote foot pedal to machine
- 7 Select desired welding current
- 8 Strike arc and weld

Maintenance

Routine and periodic maintenance

WARNING!



ELECTRIC SHOCK CAN KILL

Turn the input power OFF at the mains switch & fuse box before working on this equipment.

Have a qualified electrician install & service this equipment.

Allow machine to sit for 5 minutes minimum to allow the power capacitors to discharge before working inside this equipment.

Do not touch electrically live parts

- 1) Periodically remove the side/top panels of machine and clean out machine with a low pressure dry air line paying particular attention to PC Boards, Fan blades.
- 2) Inspect input and output cables & hoses for fraying, cuts & bare spots
- 3) Keep TIG torch and cables in good condition
- 4) Clean air vents to ensure proper air flow and cooling
- 5) The fan motor has sealed bearings which requires no maintenance

Troubleshooting

Service & repair should only be performed by R-Tech welding trained personnel. Unauthorized repairs performed on this equipment may result in danger to the technician and machine operator and will invalidate your warranty. For your safety and to avoid electric shock, please observe all safety notes and precautions detailed throughout this manual

The troubleshooting guide is provided to help you locate possible machine malfunctions, Simply follow the 3 step procedure below

Step 1 Locate problem (symptom)

Look under the column labeled Problem (symptoms). This column describes possible symptoms that the machine may exhibit. Find the listing that best describes the symptom that the machine is exhibiting

Step 2 Possible Cause

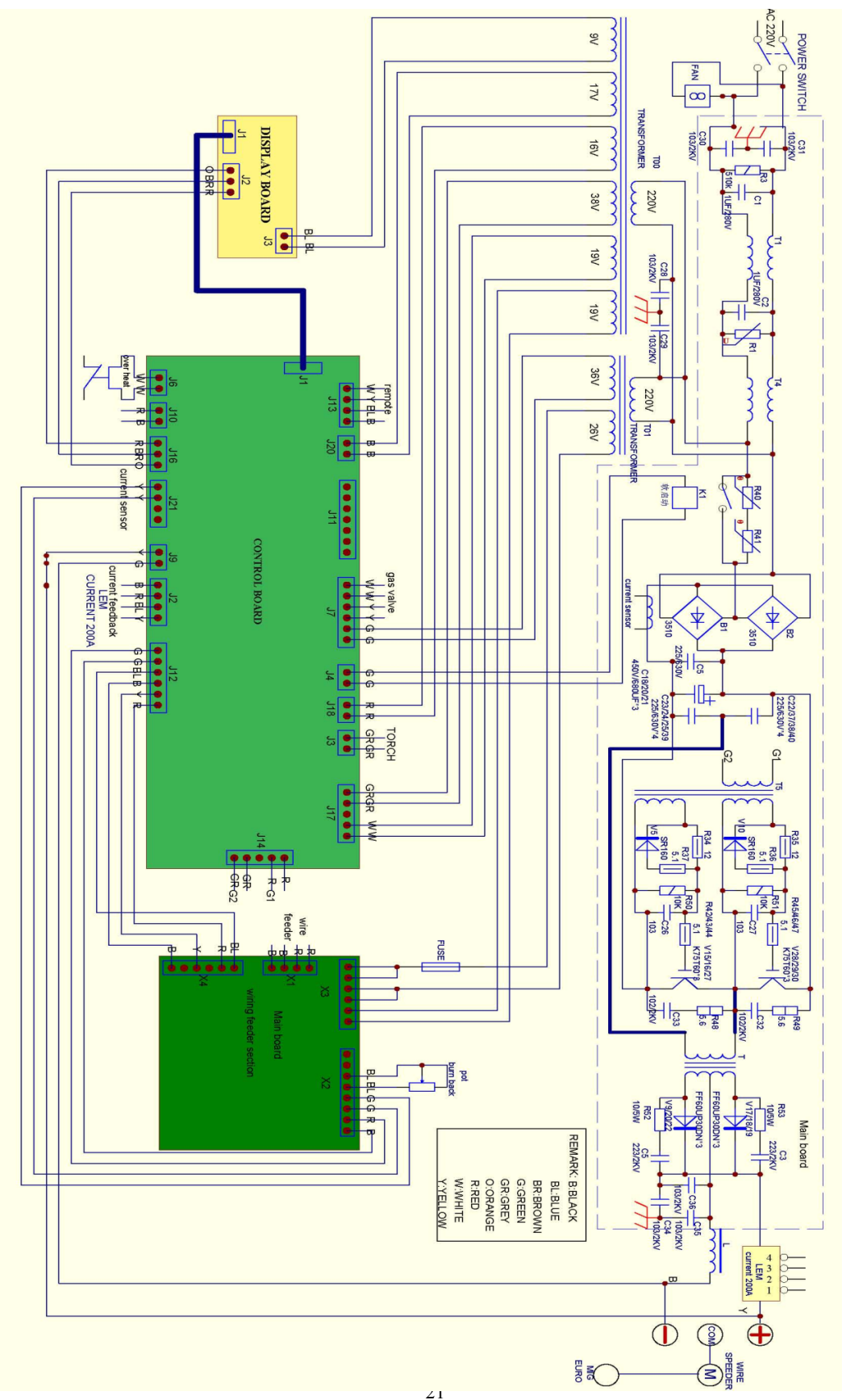
The second column labeled possible cause lists the obvious external possibilities that may contribute to the machine symptom

Step 3 Recommended course of action

This column provides a course of action for the possible cause, generally it states to contact R-Tech welding for repair of machine.

Troubles	Cause	Remedy
1.Fan not working properly	1.fan wire lose 2.Fan breakage	1.Connect the line 2.Change the fan
2.No indication on the front panel	1.Power cable loose 2.Fuse or IGBT broken	1.Check the power cable connections 2.Change the fuse 5A/250V fuse or contact R-Tech.
3.Overheating light on (warning led lights red or yellow color)	1.Poor airflow 2.Over-load use 3.Thermostat broken	1.Ensure vents are not blocked 2.Let machine cool and check duty cycle. 3.Change the thermostat
4.Over-current light ON (warning led lights green color)	1.IGBT broken 2.Output diode broken 3.Drive plate broken 4.Control PCB faulty 5.Over current welding	Contact the R-Tech on 01452 733933
5.Wire feeder not working (welding current not adjustable)	1.Fuse broken 2.Potentiometer faulty 3.Welding torch blocked 4.Drive circuit broken	1.Change the fuse 5A/250V (on left panel, open wire feeder case) 2.Check / replace potentiometer 3.Check the welding torch 4.Change the control panel PCB
6.Welding Voltage not adjustable	1.Potentiometer faulty 2. PCB faulty	1. Check / replace potentiometer 2. Replace PCB
7.Welding stops, and warning light is on	Self-protection has engaged 1.Display "801" 2.Display "802" 3.Display "804" 4.Display "805"	1. Over-voltage, lower-voltage 2. Over-temperature, 3. Over-current, 4. Torch switch always close

Wiring diagram



WARNING	<ul style="list-style-type: none"> Do not touch electrically live parts or electrode with skin or wet clothing. Insulate yourself from work and ground. 	<ul style="list-style-type: none"> Keep flammable materials away. 	<ul style="list-style-type: none"> Wear eye, ear and body protection.
Spanish AVISO DE PRECAUCION	<ul style="list-style-type: none"> No toque las partes o los electrodos bajo carga con la piel o ropa mojada. Aíselese del trabajo y de la tierra. 	<ul style="list-style-type: none"> Mantenga el material combustible fuera del área de trabajo. 	<ul style="list-style-type: none"> Protéjase los ojos, los oídos y el cuerpo.
French ATTENTION	<ul style="list-style-type: none"> Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. Isolez-vous du travail et de la terre. 	<ul style="list-style-type: none"> Gardez à l'écart de tout matériel inflammable. 	<ul style="list-style-type: none"> Protégez vos yeux, vos oreilles et votre corps.
German WARNUNG	<ul style="list-style-type: none"> Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! Isolieren Sie sich von den Elektroden und dem Erdboden! 	<ul style="list-style-type: none"> Entfernen Sie brennbares Material! 	<ul style="list-style-type: none"> Tragen Sie Augen-, Ohren- und Körperschutz!
Portuguese ATENÇÃO	<ul style="list-style-type: none"> Não toque partes elétricas e electrodos com a pele ou roupa molhada. Isole-se da peça e terra. 	<ul style="list-style-type: none"> Mantenha inflamáveis bem guardados. 	<ul style="list-style-type: none"> Use proteção para a vista, ouvido e corpo.
Japanese 注意事項	<ul style="list-style-type: none"> 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。 施工物やアースから身体が絶縁されている様にして下さい。 	<ul style="list-style-type: none"> 燃えやすいものの側での溶接作業は絶対にしてはなりません。 	<ul style="list-style-type: none"> 目、耳及び身体に保護具をして下さい。
Chinese 警告	<ul style="list-style-type: none"> 皮肤或湿衣物切勿接觸帶電部件及鉗條。 使你自已與地面和工件絕緣。 	<ul style="list-style-type: none"> 把一切易燃物品移離工作場所。 	<ul style="list-style-type: none"> 佩戴眼、耳及身體勞動保護用具。
Korean 위험	<ul style="list-style-type: none"> 전도체나 움직임을 젖은 형갑 또는 피부로 절대 접촉치 마십시오. 모재와 접지를 접촉치 마십시오. 	<ul style="list-style-type: none"> 인화성 물질을 접근 시키지 마십시오. 	<ul style="list-style-type: none"> 눈, 귀와 몸에 보호장구를 착용하십시오.
Arabic تحذير	<ul style="list-style-type: none"> لا تلمس الاجزاء التي يسري فيها التيار الكهربائي أو الألتروتود بجلد الجسم أو بالملابس المبللة بالماء. ضع عازلا على جميعك خلال العمل. 	<ul style="list-style-type: none"> ضع المواد القابلة للاشتعال في مكان بعيد. 	<ul style="list-style-type: none"> ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

			
<ul style="list-style-type: none"> ● Keep your head out of fumes. ● Use ventilation or exhaust to remove fumes from breathing zone. 	<ul style="list-style-type: none"> ● Turn power off before servicing. 	<ul style="list-style-type: none"> ● Do not operate with panel open or guards off. 	WARNING
<ul style="list-style-type: none"> ● Los humos fuera de la zona de respiración. ● Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases. 	<ul style="list-style-type: none"> ● Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio. 	<ul style="list-style-type: none"> ● No operar con panel abierto o guardas quitadas. 	Spanish AVISO DE PRECAUCION
<ul style="list-style-type: none"> ● Gardez la tête à l'écart des fumées. ● Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail. 	<ul style="list-style-type: none"> ● Débranchez le courant avant l'entretien. 	<ul style="list-style-type: none"> ● N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés. 	French ATTENTION
<ul style="list-style-type: none"> ● Vermeiden Sie das Einatmen von Schweißrauch! ● Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes! 	<ul style="list-style-type: none"> ● Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!) 	<ul style="list-style-type: none"> ● Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen! 	German WARNUNG
<ul style="list-style-type: none"> ● Mantenha seu rosto da fumaça. ● Use ventilação e exaustão para remover fumo da zona respiratória. 	<ul style="list-style-type: none"> ● Não opere com as tampas removidas. ● Desligue a corrente antes de fazer serviço. ● Não toque as partes elétricas nuas. 	<ul style="list-style-type: none"> ● Mantenha-se afastado das partes moventes. ● Não opere com os painéis abertos ou guardas removidas. 	Portuguese ATENÇÃO
<ul style="list-style-type: none"> ● ヒュームから顔を離すようにして下さい。 ● 換気や排煙に十分留意して下さい。 	<ul style="list-style-type: none"> ● メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切して下さい。 	<ul style="list-style-type: none"> ● パネルやカバーを取り外したまま機械操作をしないで下さい。 	Japanese 注意事項
<ul style="list-style-type: none"> ● 頭部遠離煙霧。 ● 在呼吸區使用通風或排風器除煙。 	<ul style="list-style-type: none"> ● 維修前切斷電源。 	<ul style="list-style-type: none"> ● 儀表板打開或沒有安全罩時不準作業。 	Chinese 警告
<ul style="list-style-type: none"> ● 얼굴로부터 용접가스를 멀리하십시오. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시오. 	<ul style="list-style-type: none"> ● 보수전에 전원을 차단하십시오. 	<ul style="list-style-type: none"> ● 관널이 열린 상태로 작동치 마십시오. 	Korean 위험
<ul style="list-style-type: none"> ● ابعء رأسك بعيداً عن الدخان. ● استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعء الدخان عن المنطقة التي تتنفس فيها. 	<ul style="list-style-type: none"> ● اقطع التيار الكهربائي قبل القيام بأية صيانة. 	<ul style="list-style-type: none"> ● لا تشغيل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه. 	Arabic تحذير

LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的說明以及應該使用的銀焊材料，並請遵守貴方的有關勞動保護規定。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다.

اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتبع تعليمات الوقاية لصاحب العمل.