



WELDSKILL®

AUTO-DARKENING WELDING HELMETS



Operating Manual



LEADER IN ARC WELDING TECHNOLOGY

We appreciate your business!

Congratulations on your new CIGWELD product. We are proud to have you as our customer and will strive to provide you with the best service and reliability in the industry. This product is backed by our extensive warranty and world-wide service network. To locate your nearest distributor or service agency call 1300-654-674, or visit us on the web at www.thermadyne.com.au

This Operating Manual has been designed to instruct you on the correct use and operation of your CIGWELD product. Your satisfaction with this product and its safe operation is our ultimate concern. Therefore please take the time to read the entire manual, especially the Safety Precautions. They will help you to avoid potential hazards that may exist when working with this product.

YOU ARE IN GOOD COMPANY

The Brand of Choice for Contractors and Fabricators. CIGWELD is the Market Leading Brand of Arc Welding Products for Thermadyne Industries Inc.

We are a mainline supplier to major welding industry sectors in the Asia Pacific and emerging global markets including; Manufacturing, Construction, Mining, Automotive, Engineering, Rural and DIY.

We distinguish ourselves from our competition through market leading dependable brands that have stood the test of time, technical innovation, competitive prices, excellent delivery, superior customer service and technical support, together with excellence in sales and marketing expertise.

We are committed to develop technologically advanced products to achieve a safer working environment for industry operators.



Read and understand this entire Manual and your employer's safety practices before installing, operating, or servicing this product.

While the information contained in this Manual represents the Manufacturer's best judgment, the Manufacturer assumes no liability for its use.

Auto-Darkening Welding Helmet
Instruction Manual Number 38481010-01-907 for:

WeldSkill Fixed Shade 11 (Black)	Auto-Darkening Welding Helmet	Part Number	454304
WeldSkill Variable Shade 9-13 (Blue)	Auto- Darkening Welding Helmet	Part Number	454305
WeldSkill Variable Shade 9-13 (Carbon Fibre Graphic)	Auto- Darkening Welding Helmet	Part Number	454314
WeldSkill Variable Shade 9-13 (Racer)	Auto- Darkening Welding Helmet	Part Number	454321
WeldSkill Variable Shade 9-13 (Tribal)	Auto- Darkening Welding Helmet	Part Number	454322
WeldSkill Variable Shade 9-13 (White Carbon)	Auto- Darkening Welding Helmet	Part Number	454323
WeldSkill Variable Shade 9-13 (Oz Flag)	Auto- Darkening Welding Helmet	Part Number	454324

Published by:
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71 Gower Street
Preston, Victoria, Australia, 3072

www.thermadyne.com.au

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Record the following information for Warranty purposes:

Where Purchased: _____

Purchase Date: _____

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SECTION 1: Arc Welding Safety Instructions and Warnings



ARC WELDING can be hazardous.

Protect yourself and others from possible serious injury or death. Keep children away. Do not lose these instructions. Read operating / instruction manual before installing, operating or servicing this product.

Welding products and welding processes can cause serious injury or death, or damage to other equipment or property, if the operator does not strictly observe all safety rules and take precautionary actions.

Safe practices have developed from past experience in the use of welding and cutting. These practices must be learned through study and training before using this equipment. Anyone not having extensive training in welding and cutting practices should not attempt to weld. Certain practices apply to equipment connected to power lines; other practices apply to engine driven equipment.

Safe practices are outlined in the American National Standard Z49.1 entitled: SAFETY IN WELDING AND CUTTING. This publication and other guides to what you should learn before operating this equipment are listed at the end of these safety precautions.

HAVE ALL INSTALLATION, OPERATION, MAINTENANCE, AND REPAIR WORK PERFORMED ONLY BY QUALIFIED PEOPLE.



ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine terminal circuits are also live when power is on.

In semiautomatic or automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.

1. Do not touch live electrical parts.
2. Wear dry, hole-free insulating gloves and body protection.
3. Insulate yourself from work and ground using dry insulating mats or covers.
4. Disconnect input power or stop engine before installing or servicing this equipment. Lock input power disconnect switch open, or remove line fuses so power cannot be turned on accidentally.
5. Properly install and ground this equipment according to its Owner's Manual and national, state, and 10 cal codes.
6. Turn off all equipment when not in use. Disconnect power to equipment if it will be left unattended or out of service.
7. Use fully insulated electrode holders. Never dip holder in water to cool it or lay it down on the ground or the work surface. Do not touch holders connected to two welding machines at the same time or touch other people with the holder or electrode.
8. Do not use worn, damaged, under sized or poorly spliced cables.
9. Do not wrap cables around your body.
10. Ground the workpiece to a good electrical (earth) ground.
11. Do not touch electrode while in contact with the work (ground) circuit.
12. Use only well-maintained equipment. Repair or replace damaged parts at once.
13. In confined spaces or damp locations, do not use a welder with AC output unless it is equipped with a voltage reducer. Use equipment with DC output.
14. Wear a safety harness to prevent falling if working above floor level.
15. Keep all panels and covers securely in place.



ARC RAYS can burn eyes and skin; NOISE can damage hearing.

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin. Noise from some processes can damage

hearing.

1. Wear a welding helmet fitted with a proper shade of filter (see ANSI 249.1 listed in Safety Standards) to protect your face and eyes when welding or watching.
2. Wear approved safety glasses. Side shields recommended.
3. Use protective screens or barriers to protect others from flash and glare; warn others not to watch the arc.
4. Wear protective clothing made from durable, flame-resistant material (wool and leather) and foot protection.
5. Use approved earplugs or earmuffs if noise level is high.



FUMES AND GASES can be hazardous to your health.

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

1. Keep your head out of the fumes. Do not breathe the fumes.
2. If inside, ventilate the area and/or use exhaust at the arc to remove welding fumes and gases.
3. If ventilation is poor, use an approved air-supplied respirator.
4. Read the Material Safety Data Sheets (MSDS) and the manufacturer's instruction for metals, consumables, coatings, and cleaners.
5. Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Shielding gases used for welding can displace air causing injury or death. Be sure the breathing air is safe.
6. Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapours to form highly toxic and irritating gases.
7. Do not weld on coated metals, such as galvanized lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and if necessary, while wearing an air supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.



WELDING can cause fire or explosion.

Sparks and spatter fly off from the welding arc. The flying sparks and hot metal, weld spatter, hot work piece, and hot equipment can cause fires and burns. Accidental contact of electrode or welding wire to metal objects can cause sparks,

over heating, or fire.

1. Protect yourself and others from flying sparks and hot metal.
2. Do not weld where flying sparks can strike flammable material. Remove all flammables within 35ft (10.7 m) of the welding arc. If this is not possible, tightly cover them with approved covers.

3. Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas.
4. Watch for fire, and keep a fire extinguisher nearby.
5. Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
6. Do not weld on closed containers such as tanks or drums.
7. Connect work cable to the work as close to the welding area as practical to prevent welding current from travelling long, possibly unknown paths and causing electric shock and fire hazards.
8. Do not use welder to thaw frozen pipes.
9. Remove stick electrode from holder or cut off welding wire at contact tip when not in use.



Flying sparks and hot metal can cause Injury

Chipping and grinding cause flying metal. As welds cool, they can throw off slag.

1. Wear approved face shield or safety goggles. Side shields recommended.
2. Wear proper body protection to protect skin.



CYLINDERS can explode if damaged.

Shielding gas cylinders contain gas under high pressure. If damaged, a cylinder can explode.

Since gas cylinders are normally part of the welding process, be sure to treat them carefully.

1. Protect compressed gas cylinders from excessive heat, mechanical shocks, and arcs.
2. Install and secure cylinders in an upright position by chaining them to a stationary support or equipment cylinder rack to prevent falling or tipping.
3. Keep cylinders away from any welding or other electrical circuits.

4. Never allow a welding electrode to touch any cylinder.
5. Use only correct shielding gas cylinders, regulators, hoses and fittings designed for the specific application; maintain them and associated parts in good condition.
6. Turn face away from valve outlet when opening cylinder valve.
7. Keep protective cap in place over valve except when cylinder is in use or connected for use.
8. Read and follow instructions on compressed gas cylinders, associated equipment, and CGA publication P-1 listed in Safety Standards.

WeldSkill Auto-Darkening Welding Helmets

1.01 Declaration of Conformity

Manufacturer and Merchandiser of Quality Consumables and Equipment: CIGWELD
Address: 71 Gower St, Preston
Victoria 3072
Australia

Description of equipment: Safety Equipment. CIGWELD WeldSkill Auto-Darkening Welding Helmet.

National Standard and Technical Specifications

The product is designed and manufactured to a number of standards and technical requirements among them are:

- a. AS/NZS 1337:1992 Section 4 - Eye Protectors for industrial applications.
- b. AS/NZS 1338.1:1992 Filters for Eye Protectors

* Extensive product design verification is conducted at the manufacturing facility as part of the routine design and manufacturing process, to ensure the product is safe and performs as specified. Rigorous testing is incorporated into the manufacturing process to ensure the manufactured product meets or exceeds all design specifications.

CIGWELD has been manufacturing and merchandising an extensive equipment range with superior performance, ultra safe operation and world class quality for more than 30 years and will continue to achieve excellence.

1.02 Limited Warranty

LIMITED WARRANTY: CIGWELD, A Thermadyne Company, hereafter, "CIGWELD" warrants to customers of its authorized distributors hereafter "Purchaser" that its products will be free of defects in workmanship or material. Should any failure to conform to this warranty appear within the time period applicable to the CIGWELD products as stated below, CIGWELD shall, upon notification thereof and substantiation that the product has been stored, installed, operated, and maintained in accordance with CIGWELD's specifications, instructions, recommendations and recognized standard industry practice, and not subject to misuse, repair, neglect, alteration, or accident, correct such defects by suitable repair or replacement, at CIGWELD's sole option, of any components or parts of the product determined by CIGWELD to be defective.

CIGWELD MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHERS, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

LIMITATION OF LIABILITY: CIGWELD SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, LOST PROFITS AND BUSINESS INTERRUPTION. The remedies of the Purchaser set forth herein are exclusive and the liability of CIGWELD with respect to any contract, or anything done in connection therewith such as the performance or breach thereof, or from the manufacture, sale, delivery, resale, or use of any goods covered by or furnished by CIGWELD whether arising out of contract, negligence, strict tort, or under any warranty, or otherwise, shall not, except as expressly provided herein, exceed the price of the goods upon which such liability is based. No employee, agent, or representative of CIGWELD is authorized to change this warranty in any way or grant any other warranty.

PURCHASER'S RIGHTS UNDER THIS WARRANTY ARE VOID IF REPLACEMENT PARTS OR ACCESSORIES ARE USED WHICH IN CIGWELD'S SOLE JUDGEMENT MAY IMPAIR THE SAFETY OR PERFORMANCE OF ANY CIGWELD PRODUCT.
PURCHASER'S RIGHTS UNDER THIS WARRANTY ARE VOID IF THE PRODUCT IS SOLD TO PURCHASER BY NON-AUTHORIZED PERSONS.

The warranty is effective for the time stated below beginning on the date that the authorized distributor delivers the products to the Purchaser. Notwithstanding the foregoing, in no event shall the warranty period extend more than the time stated plus one year from the date CIGWELD delivered the product to the authorized distributor.

Terms of Warranty – July 2007

1. The Trade Practices Act 1974 (Commonwealth) and similar State Territory legislation relating to the supply of goods and services, protects consumers' interests by ensuring that consumers are entitled in certain situations to the benefit of various conditions, warranties, guarantees, rights and remedies (including warranties as to merchantability and fitness for purpose) associated with the supply of goods and services. A consumer should seek legal advice as to the nature and extent of these protected interests. In some circumstances, the supplier of goods and services may legally stipulate that the said conditions, warranties, guarantees, rights and remedies are limited or entirely excluded. The warranties set out in

Clause 2 shall be additional to any non-excludable warranties to which the Customer may be entitled pursuant to any statute.

2. Subject to Clause 3. CIGWELD gives the following warranties to the Customer:

Insofar as they are manufactured or imported by CIGWELD, goods will upon delivery be of merchantable quality and reasonably fit for the purpose for which they are supplied by CIGWELD.

CIGWELD will repair or, at its option, replace those of the goods which, upon examination, are found by CIGWELD to be defective in workmanship and/or materials.

CIGWELD reserves the right to request documented evidence of date of purchase.

3. The Warranty in Clause 2;

Is conditional upon:

The Customer notifying CIGWELD or our Accredited Distributor in writing of its claim within seven (7) days of becoming aware of the basis thereof, and at its own expense returning the goods which are the subject of the claim to CIGWELD or nominated Accredited Distributor/Accredited Service Provider.

The goods being used in accordance with the Manufacturer's Operating Manuals, and under competent supervision.

Does not apply to:

Obsolete goods sold at auction, second-hand goods and prototype goods.

Breakdown or malfunction caused by accident, misuse or normal wear and tear.

Repairs or replacement made other than by CIGWELD or Accredited Service Providers, unless by prior arrangement with CIGWELD.

Replacement parts or accessories which may affect product safety or performance and which are not manufactured, distributed or approved by CIGWELD.

4. CIGWELD declares that, to the extent permitted by law, it hereby limits its liability in respect of the supply of goods which are not of a kind ordinarily acquired for personal, domestic or household use or consumption to any one or more of the following (the choice of which shall be at the option of CIGWELD).

The replacement of the goods or the supply of equivalent goods.

The repair of goods.

The payment of cost of replacing the goods or acquiring equivalent goods.

The payment of the cost of having goods repaired.

5. Except as provided in Clauses 2 to 4 above, to the extent permitted by statute, CIGWELD hereby excludes all liability for any loss, damage, death or injury of any kind whatsoever occasioned to the Customer in respect of the supply of goods including direct, indirect, consequential or incidental loss, damage or injury of any kind.

Warranty Schedule – January 2007

These warranty periods relate to the warranty conditions in clause 2. All warranty periods are from date of sale from the Accredited Distributor of the equipment. Notwithstanding the foregoing, in no event shall the warranty period extend more than the time stated plus one year from the date CIGWELD delivered the product to the Accredited Distributor. Unless otherwise stated the warranty period includes parts and labour.

CIGWELD reserves the right to request documented evidence of date of purchase.

CIGWELD SAFETY EQUIPMENT	WARRANTY PERIOD
WeldSkill Auto-Darkening Welding Helmet	1 year
ACCESSORIES	
Cover Lenses	1 month
Sweat Band	1 month

Please note that the information detailed in this statement supersedes any prior published data produced by CIGWELD.



For the purpose of safety and performance and to protect your CIGWELD Equipment Warranty always use genuine CIGWELD replacement parts and accessories.

SECTION 2: Introduction

2.01 How to Use This Manual

This Owner's Manual usually applies to just the underlined specification or part numbers listed on page ii. If none are underlined, they are all covered by this manual.

To ensure safe operation, read the entire manual, including the chapter on safety instructions and warnings.

Throughout this manual, the word **WARNING**, **CAUTION** and **NOTE** may appear. Pay particular attention to the information provided under these headings. These special annotations are easily recognized as follows:



Gives information regarding possible personal injury. Warnings will be enclosed in a box such as this.



Refers to possible equipment damage. Cautions will be shown in bold type.

NOTE

Offers helpful information concerning certain operating procedures. Notes will be shown in italics.

2.02 Equipment Identification

The product identification number is printed on the outer shipping carton. Record this number for future reference.

2.03 Receipt of Equipment

When you receive the equipment, check it against the invoice to make sure it is complete and inspect the equipment for possible damage due to shipping. If there is any damage, notify the carrier immediately to file a claim. Furnish complete information concerning damage claims or shipping errors to:

CIGWELD, Customer Care Department, 71 Gower St, Preston, Victoria, Australia, 3072.

Include all equipment identification numbers as described above along with a full description of the parts in error.

Additional copies of this manual may be purchased by contacting CIGWELD, Customer Care Department, at the address given above. Include the Owner's Manual number and equipment identification numbers.

SECTION 3: General Information

3.01 WeldSkill Auto-Darkening Welding Helmet.

The WeldSkill Auto-Darkening Welding Helmet is a product manufactured specifically for welding comfort, versatility, performance and fume deflection. Seven models are available in the WeldSkill range: An Auto-Darkening Fixed Shade 11 Version, Part Number 454304 (Black) and six Auto-Darkening Variable Shade 9-13 Version, Part Number 454305 (Blue), Part Number 454314 (Carbon Fibre Graphic), Part Number 454321 (Racer), Part Number 454322 (Tribal), Part Number 454323 (White Carbon), Part Number 454324 (Oz Flag). To ensure your complete satisfaction with your new WeldSkill Auto-Darkening Welding Helmet and to realise a safer work environment, we ask that you read the following Operating Manual thoroughly before use.

3.02 User Responsibility

This product will perform as per the information contained herein when installed, operated, maintained and repaired in accordance with the instructions provided. This equipment must be checked periodically. Defective equipment should not be used. Parts that are broken, missing, plainly worn, distorted or contaminated, should be replaced immediately. Should such repairs or replacements become necessary, it is recommended that such repairs be carried out by appropriately qualified persons approved by CIGWELD. Advice in this regard can be obtained by contacting an accredited CIGWELD Distributor.

This product or any of its parts should not be altered from standard specification without prior written approval of CIGWELD. The user of this product shall have the sole responsibility for any malfunction which results from improper use or unauthorised modification from standard specification, faulty maintenance, damage or improper repair by anyone other than appropriately qualified persons approved by CIGWELD.

SECTION 4: Personal Protection

Prior to welding check operation of the filter lens, if the lens does not darken DO NOT COMMENCE WELDING. If during welding the filter does not darken IMMEDIATELY STOP WELDING.

The radiation from an electric arc during the welding process can seriously harm eyes and skin. It is essential that the following precautions be taken:

When electric arc welding, it is a requirement to use a welding helmet or welding handshield that complies to a relevant standard. Protective filter lenses are provided to reduce the intensity of radiation entering the eye thus filtering out harmful infra-red, ultra-violet radiation and a percentage of the visible light. Such filter lenses are incorporated into this Welding Helmet. To prevent damage to the filter lenses from molten or hard particles an additional hard clear glass or special plastic external cover lens is provided. This cover lens should always be kept in place and replaced before the damage impairs your vision while welding.

It is important to ensure that the correct shade level is selected prior to the commencement of welding. Please Note that WeldSkill Welding Helmet Part Number 454304 (Black) is fitted with an Auto-Darkening Fixed Shade 11 (Non adjustable) Filter Lens. WeldSkill Welding Helmet Part Number 454305 (Blue), Part Number 454314 (Carbon Fibre Graphic), Part Number 454321 (Racer), Part Number 454322 (Tribal), Part Number 454323 (White Carbon) and Part Number 454324 (Oz Flag) are fitted with an Auto-Darkening Variable Shade 9-13 Filter Lens. The table below can be used as a guide to select the filter lens shade level for differing applications..



For machine disc cutting, scaling, grinding and machining of metals and the like, additional eyeshields or faceshields with appropriate impact rating should be used. Refer to AS/NZS1336 for full details of the appropriate protection for industrial applications.



The indicated filter lens shade numbers are minimum. If any discomfort is felt, higher shade numbers should be selected.

Recognised standards for recommended practices for occupational eye protection include AS/NZS 1336 and EN 175.

Gloves should be flameproof gauntlet type to protect hands and wrists from heat burns and harmful radiations. They should be kept dry and in good repair.

Protective clothing must protect the operator from burns, spatter and harmful radiation. Woollen clothing is preferable to cotton because of its greater flame resistance. Clothing should be free from oil or grease. Wear leggings and spats to protect the lower portion of the legs and to prevent slag and molten metal from falling into boots or shoes.

Recommended Protective Filters for Electric Welding		
Description of Process	Approximate range of Welding Current in Amps	Minimum Shade Number of Filter(s)
Manual Metal Arc Welding - covered electrodes (MMAW)	Less than or equal to 100	8
	100 to 200	10
	200 to 300	11
	300 to 400	12
	Greater than 400	13
Gas Metal Arc Welding (GMAW) (MIG) other than Aluminium and Stainless Steel	Less than or equal to 150	10
	150 to 250	11
	250 to 300	12
	300 to 400	13
	Greater than 400	14
Gas Metal Arc Welding (GMAW) (MIG) Aluminium and Stainless Steel	Less than or equal to 250	12
	250 to 350	13
Gas Tungsten Arc Welding (GTAW) (TIG)	Less than or equal to 100	10
	100 to 200	11
	200 to 250	12
	250 to 350	13
	Greater than 350	14
Flux-cored Arc Welding (FCAW) -with or without shielding gas.	Less than or equal to 300	11
	300 to 400	12
	400 to 500	13
	Greater than 500	14
Air – Arc Gouging	Less than or equal to 400	12
Plasma-Arc Cutting	50 to 100	10
	100 to 400	12
	400 to 800	14
Plasma-Arc Spraying	—	15
Plasma-Arc Welding	Less than or equal to 20	8
	20 to 100	10
	100 to 400	12
	400 to 800	14
Submerged-Arc Welding	—	2(5)
Resistance Welding	—	Safety Spectacles or eye shield

Table 1 – Recommended Filter Lens Shade Settings.

Refer to standard AS/NZS 1338.1:1992 for comprehensive information regarding Table 1

SECTION 5: Specifications**5.01 WeldSkill Auto-Darkening Filter Lens**

Description (Refer Note 1)	Fixed Shade 11 (454304)	Variable Shade 9-13 (454305, 454314, 454321, 454322, 454323 & 454324)
Auto-Darkening Filter Lens Part Number	454306 <small>(Note: Fixed Shade 11 Auto-Darkening Lens Part Number 454306 is fitted to the WeldSkill Auto-Darkening Welding Helmet Product Part Number: 454304).</small>	454307 <small>(Note: Variable Shade 9-13 Auto-Darkening Lens Part Number 454307 is fitted to the WeldSkill Auto-Darkening Welding Helmet Product Part Number: 454305, 454314, 454321, 454322, 454323 and 454324).</small>
Filter Lens Dimensions	110mm x 90mm x 9mm	110mm x 90mm x 9mm
Viewing Area Dimensions	98mm x 43mm	98mm x 43mm
Reaction Time	1/30,000 second	1/30,000 second
Sensors	2 Optical Sensors	2 Optical Sensors
Power Supply	Solar Cells, No Battery change required	Solar Cells, No Battery change required
Unactivated Shade Level	4	4
Variable Shade Level	Not Fitted (Fixed Shade 11)	9 - 13
Operating Temperature	-5°C to +55°C	-5°C to +55°C
Storing Temperature	-20°C to +70°C	-20°C to +70°C
Sensitivity Range (Light to Dark)	Low to High	Low to High
Delay (Dark to Light)	Short (0.25 sec) – Long (0.6 sec)	Min (0.25 sec) – Max (0.8 sec)
On/Off Control	Automatic	Automatic
Weight	110g	124g

Note:

Due to variations that can occur in manufactured products, claimed performance, voltages, ratings, all capacities, measurements, dimensions and weights quoted are approximate only. Achievable capacities and ratings in use and operation will depend upon correct installation, use, applications, maintenance and service.

5.02 Contents

CONTENTS - WELDSKILL WELDING HELMET	
Description	Quantity
WeldSkill Auto-Darkening Welding Helmet	1
Front Cover Lens	1
Rear Cover Lens	1
Operating Manual	1

SECTION 6: Harness Adjustment

Prior to use, the Welding Helmet must be adjusted for maximum comfort and protection.



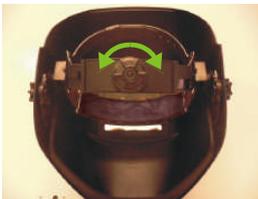
The Helmet should be adjusted such that it is effectively positioned over the eyes and face to ensure adequate protection and comfort whilst welding.

Please refer to the Harness adjustment instructions below.



1. Top Head Band

To adjust the top of Head Band move the Head Band in the direction of either arrow (as pictured) to align the centre of the harness with centre of the Filter Lens viewing window.



2. Back of Head Band.

To adjust the back of Head Band push down the Knob and turn to the left or right to adjust to size.



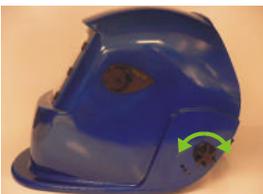
3. Distance of Harness from Filter Lens.

There are 3 positions possible that the Harness can be set upon to achieve the desired distance between the welder's eyes and the Filter Lens.



4. Incline Angle Adjustment.

There are 3 positions available (as pictured) for adjusting the angle from the welder's eyes to the Filter lens.



5. Helmet Tilt Position.

The Helmet is designed to be tilted and fixed into position whilst not welding. Loosen the adjustment knobs (as pictured) located on either side of the helmet, once in desired position tighten adjustment knobs to fix into place.

SECTION 7: Installation of Magnification Lens (Optional)

CIGWELD magnification lenses magnify the work area substantially to assist the welder in maintaining the high standard required.



Before installing the magnification lens, ensure that the rear cover lens is in place.



1. Magnification Lens Frame

Magnification lens frame shown on left without magnification lens installed.



2. Installing Magnification Lens

To install magnification lens, slide the magnification lens from the top of the magnification lens frame and slide it down until it comes in contact with the last set of tabs on the magnification lens frame. Ensure that the lens fits firmly in between the tabs.



3. Magnification Lens installed

Once the lens is installed it should sit firmly in place as shown in the picture on the left.



4. Removing Magnification Lens

To remove the magnification lens slide the magnification lens from the bottom edge in an upwards motion until the magnification lens becomes free from the magnification lens frame.

Magnification lens ordering information (optional):

Description	Part Number
1.50 diopter	454012
2.00 diopter	454010
2.25 diopter	454014
2.50 diopter	454011

SECTION 8: Changing of Front Cover Lens



Do Not Use the Welding Helmet without the Front Cover Lens installed correctly in place.

If the Front Cover Lens is broken, plainly worn, distorted or contaminated it should be replaced immediately with a genuine Cigweld replacement part.



1. Removing the Front Cover Lens.

Remove the Front Cover Lens by pulling up the central part of the lens (as pictured) and sliding one side at a time from under the tabs.



2. Installing the Front Cover Lens.

Align the Front Cover Lens and place under the tabs (as pictured) on one side that secure the Front Cover Lens in place.

Pull up the Front Cover Lens in the centre and repeat for the other side.



Ensure that the Front Cover Lens is securely in place before use.

SECTION 9: WeldSkill Auto-Darkening Filter Lens Controls

9.01 WeldSkill Fixed Shade 11 Auto-Darkening Filter Lens Controls.



For your protection and maximum efficiency of your product, please study this information carefully before use.

For your protection and maximum efficiency of your product, please study this information carefully before use.

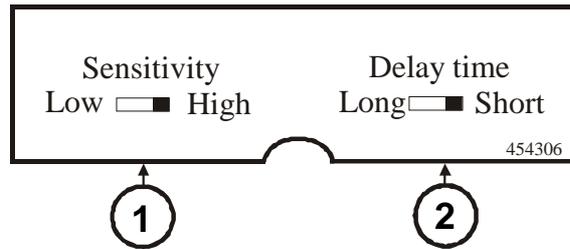


Figure 1 - WeldSkill Fixed Shade 11 Auto-Darkening Filter Lens Controls

1. **Sensitivity Switch:** The Sensitivity Switch is used to make the Filter Lens more responsive to different light levels. Manually adjust the sensitivity level as required for the application.
2. **Delay Switch:** The Delay Switch is used to adjust the hold time of the Filter lens after welding is completed. Manually adjust Delay time to desired level as required for application.

9.02 WeldSkill Variable Shade 9-13 Auto-Darkening Filter Lens Controls.



Ensure that switch is set to welding mode when welding.

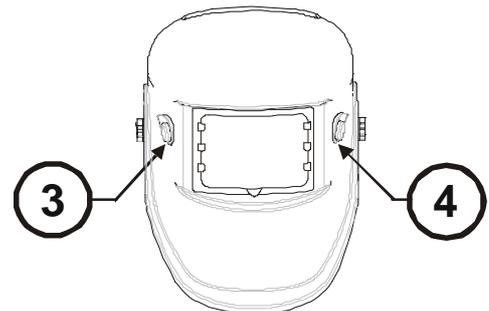
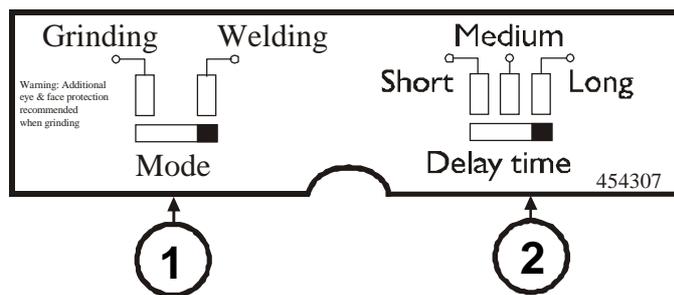


Figure 2 - WeldSkill Variable Shade 9-13 Auto-Darkening Filter Lens Controls

WeldSkill Auto-Darkening Welding Helmets

1. **Mode Switch:** The Mode Switch is used to change the Filter Lens between Welding and Grinding modes. Note that additional eye and face protection is recommended when Grinding.
2. **Delay Switch:** The Delay Switch is used to adjust the hold time of the Filter lens after welding is completed. Manually adjust delay time to desired level as required for application.
3. **Sensitivity Control:** The Sensitivity Control is used to make the Filter Lens more responsive to different light levels. Manually adjust the sensitivity level as required for the application.
4. **Variable Shade Control:** The Variable Shade Control is used to adjust the Shade level between 9-13. Manually adjust shade to desired level as required for the application.

SECTION 10: Routine Maintenance & Inspection

This equipment must be checked periodically. Defective equipment should not be used. Parts that are broken, missing, plainly worn, distorted or contaminated, should be replaced immediately. Should such repairs or replacements become necessary, it is recommended that such repairs be carried out by appropriately qualified persons approved by CIGWELD. Advice in this regard can be obtained by contacting an accredited CIGWELD Distributor.

NOTE

Inspect lenses frequently. Immediately replace any scratched, cracked, or pitted lenses as they may impair visibility and reduce protection.

Inspect Helmet Shell and Harness Assembly frequently. Immediately replace any damaged or worn components.

The Internal Battery is not replaceable. Do not attempt to open the Filter Lens.

10.01 Cleaning the WeldSkill Auto-Darkening Welding Helmet



When cleaning the Welding Helmet or Filter Lens Do Not use solvents or abrasive cleaning agents.

In order to ensure the continued safe and reliable operation of your WeldSkill Auto-Darkening Welding Helmet it should be cleaned with a soft, clean lint-free cloth after use.

NOTE

Keep the Sensors and the Solar Cell clean at all times.

SECTION 11: Spare Parts

Cigweld cannot be held responsible for the continuing performance of this Welding Helmet if non-genuine spare parts are used.

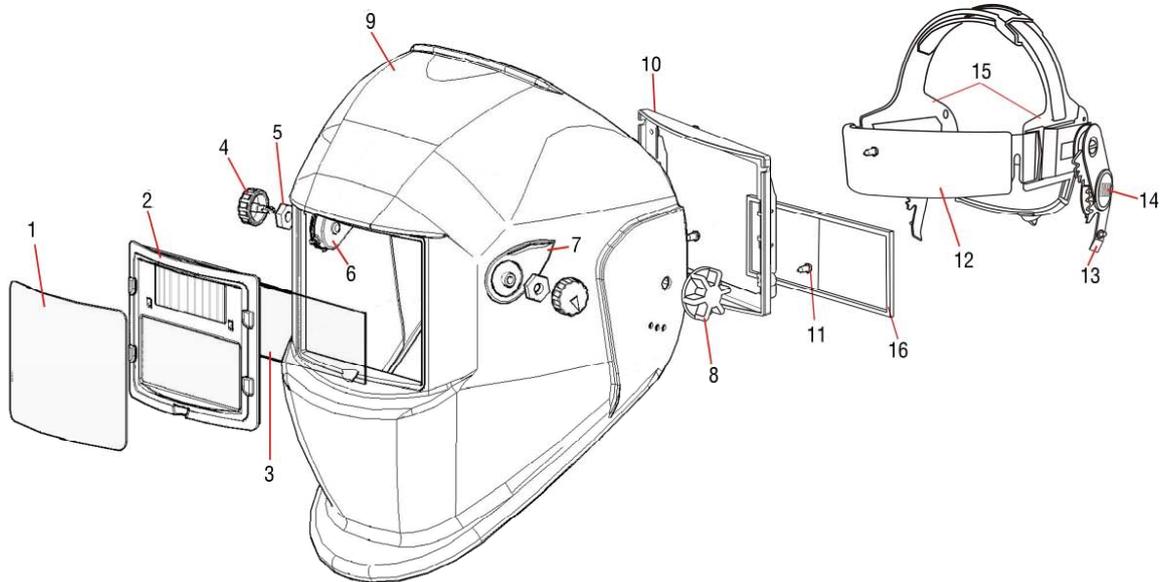


Figure 3 – Exploded View of WeldSkill Auto-Darkening Welding Helmet.

SPARE PARTS – WELDSKILL WELDING HELMET			
Item No	Part Number	Description	Qty
1	454308	Front Cover lens	1
2	454306	Auto-Darkening Filter Lens Fixed Shade 11 (Fitted to 454304)	1
	454307	Auto-Darkening Filter Lens Variable Shade 9-13 (Fitted to 454305, 454314, 454321, 454322, 454323 and 454324)	1
3	454309	Rear Cover Lens	1
4	454315	Control Knob External (Sold as Pkt Quantity of 1)	2
5		Not available as a spare part.	
6		Not available as a separate item. Only supplied with part no 454307.	
7		Not available as a spare part.	
8, 12, 13, 14 & 15	454310	Harness Assembly (available as complete assembly only)	1
9		Not available as a spare part.	
10	454320	Magnification Lens Frame	1
11		Not available as a spare part.	
12	454311	Sweat Band	1
16		Magnification Lens (Optional- refer to page 13 of operating manual)	1

SECTION 12: Basic Troubleshooting

FAULT	CAUSE	REMEDY
1. The Filter Lens does not operate.	A. The Internal Battery is discharged. B. Filter Lens is faulty.	A. The Internal Battery is not replaceable. Do not attempt to open the filter lens. B. Replace the Filter Lens.
2. The Filter Lens flickers or does not darken.	A. Front Cover Lens is dirty or damaged. B. Sensors are obstructed.	A. Clean Cover Lens with a soft cloth. Replace if necessary. B. Clean the Sensors with a soft cloth.
3. Filter Lens stays dark after the weld is extinguished or the Filter Lens is dark when no arc is present.	A. Sensors are obstructed. B. Sensitivity and or Delay Switch not set correctly. C. Ambient light level is too bright.	A. Clean the Sensors with a soft cloth. B. Adjust the Sensitivity and or Delay Switch accordingly. C. Reduce the ambient light level in the area.
4. The centre of the Filter Lens viewing area appears darker than the sides of the Filter Lens viewing area.	A. This is a normal characteristic of the LCD Lens.	A. Keep the viewing angle from the object being welded as close as possible to 90 degrees.



If the above troubleshooting recommendations do not resolve the problem, do not use the Auto-Darkening Welding Helmet. Contact Cigweld for further information.

Asia Pacific Regional Headquarters
71 Gower Street
Preston, Victoria, Australia, 3072
Telephone: +61 3 9474 7400
FAX: +61 3 9474 7391
Email: enquiries@thermadyne.com.au
www.thermadyne.com.au

CIGWELD
By THERMADYNE.