



OWNER'S MANUAL

290463C

2024-04

MobileArc

Augmented Reality Welding System

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Section 1 – Safety Precautions – Read Before Using



Protect yourself and others from injury—read, follow, and save these important safety precautions and operating instructions.

1-1. Symbol Usage



Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

NOTICE – *Indicates statements not related to personal injury.*

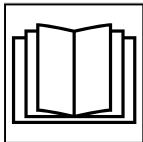


Indicates special instructions.

1-2. Welding Simulator Training System Hazards



The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard.



READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in

each section.

- Use only genuine replacement parts from the manufacturer.
- Perform installation, maintenance, and service according to the Owner's Manuals, industry standards, and national, state, and local codes.
- Do not repair, modify, or disassemble the training system or use with parts or accessories not supplied by the manufacturer. Use only approved components and accessories from the manufacturer.
- Be sure all hardware is properly tightened.
- Do not use the training system until you are sure it is correctly assembled and working properly.

- Before each use, inspect the training system for damage and verify it is secure and installed properly.
- Use the training system only as specified in the manual.



HELMET does not protect user from arc welding hazards.

Do not use helmet for live arc welding. Use helmet only with simulator system.

1-3. California Proposition 65 Warnings



WARNING – Cancer and Reproductive Harm
— www.P65Warnings.ca.gov.

Section 2 – CONSIGNES DE SÉCURITÉ - LIRE AVANT UTILISATION



Pour écarter les risques de blessure pour vous-même et pour autrui — lire, appliquer et ranger en lieu sûr ces consignes relatives aux précautions de sécurité et au mode opératoire.

2-1. Symboles utilisés



Indique une situation dangereuse qui si on l'évite pas peut donner la mort ou des blessures graves. Les dangers possibles sont montrés par les symboles joints ou sont expliqués dans le texte.

AVIS – *Indique des déclarations pas en relation avec des blessures personnelles.*

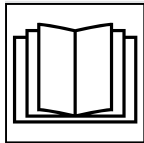


Indique des instructions spécifiques.

2-2. Dangers liés au système de formation en soudure



Les symboles donnés ci-après sont utilisés dans tout le manuel pour attirer l'attention sur les dangers possibles et pour indiquer le type de danger dont il s'agit. Quand on voit le symbole, prendre garde et suivre les directives correspondantes pour éviter le danger.



LIRE LES INSTRUCTIONS.

- Lire et appliquer les instructions sur les étiquettes et le Mode d'emploi avant l'installation, l'utilisation ou l'entretien de l'appareil. Lire les informations de sécurité au début du manuel et dans chaque section.

- N'utiliser que les pièces de rechange recommandées par le constructeur.
- Effectuer l'installation, l'entretien et toute intervention selon les manuels d'utilisateurs, les normes nationales, provinciales et de l'industrie, ainsi que les codes municipaux.
- Ne pas réparer, modifier ou démonter le système de formation, et ne pas l'utiliser avec des pièces ou accessoires non fournis par le fabricant. Utiliser uniquement des composants et accessoires approuvés par le fabricant.
- S'assurer que toute la quincaillerie est bien serrée.

- Ne pas utiliser le système de formation avant d'être certain qu'il est bien monté et qu'il fonctionne correctement.
- Avant chaque utilisation, inspecter le système de formation pour déceler tout signe de dommage et s'assurer qu'il est bien installé et maintenu correctement.
- Utiliser le système de formation seulement conformément au manuel.



Le CASQUE ne protège pas l'utilisateur contre les risques liés au soudage à l'arc.

Ne pas utiliser le casque lors de travaux de soudage à l'arc effectués sous tension. Utiliser un casque uniquement avec un système de simulation.

2-3. Proposition californienne 65 Avertissements



AVERTISSEMENT – Cancer et troubles de la reproduction — www.P65Warnings.ca.gov.

Section 3 – Definitions

3-1. Miscellaneous Symbols And Definitions

	Battery Charge
	Power On/Off

	Bluetooth
	Left Hand
	Right Hand

	Rotate Mobile Device
	Press Tabs To Release

Section 4 – Specifications

4-1. Introduction

The MobileArc offers innovative training that simulates live welding at an affordable price so students of all ages can get a feel for welding, improve their skills, and make informed career decisions.

Designed with ease of use and portability in mind, MobileArc allows students to learn independently, accelerating the overall learning process.

After the MobileArc system is set up, the user turns on the mobile device, selects the desired joint type, and performs the simulated welding activity in either the helmet-mounted or welding gun-mounted configurations. The camera and processor detect the AR markers on the workpiece and welding gun to determine the welding technique parameters (gun angles, gun speed, contact tip to work distance [CTWD], aim), which compares it to the pre-determined target values. The system evaluates the welding technique and scores the student's performance.

The MobileArc instruction is complementary to training with live welding equipment. To complete their welding training, students should also practice their acquired skills by welding under the supervision of qualified persons in a safe welding environment.

NOTICE – Do not install or use the MobileArc in the same area as live welding equipment.

 *Phone images may vary by model year.*

4-2. Serial Number Location

The serial number information for this product is located on the front of the mobile device and on the base of the MIG welding gun.

4-3. Software Licensing Agreement

The End User License Agreement and any third-party notices and terms and conditions pertaining to third-party software can be found at <https://www.millerwelds.com/eula> and are incorporated by reference herein.

4-4. Specifications

A. Input Power And Battery Life

	Input Power	Battery Life
Mobile Device	Internal: 5000mAh Li-Po battery (non-removable) Charger: 120-240V, 50/60Hz, 0.3A	3 hours of continuous simulation (will run indefinitely when powered through USB charging port)
Welding Gun	9V Battery (replaceable)	70 hours of continuous use
		~30 days in sleep mode (will automatically enter sleep mode after three minutes of inactivity)

B. Hardware And Software Specifications

Mobile Device	Motorola G Power
Display Resolution	HD+ 1600x720 20:9
Software Version	Displayed on System Settings Screen. Register for free software upgrades at MillerWelds.com/register .
Operating System	Android
Processor	Qualcomm SD662
Memory	4GB RAM, 64 GB Hard Drive
Mobile Device Ports	USB Type C
Measurements	Standard (Imperial) or Metric
Language	English

C. Dimensions And Weight

Dimensions (LxWxH)	Full package in original box	15.75 x 15.75 x 19.69 in. (400 x 400 x 500 mm)
	System in travel bag	24 x 13 x 13 in. (609 x 330 x 330 mm)
	Mobile device in case	7.8 x 3.75 x 0.6 in. (183 x 95 x 16 mm)
Weight	Full System	6.8 lb (3.1 kg)
	Helmet with mobile device	25 oz (0.7 kg)
	Welding gun	12 oz (340 g)
	Welding gun with mobile device + mobile device mount	28 oz (0.8 kg)
	Mobile Device Only	7.3 oz (206.5 g)

D. Welding Simulation Specifications

Simulation Configurations	Helmet-mount, Gun-mount
Supported Welding Processes	MIG (GMAW)
Parameters Tracked By Camera	Work Angle, Travel Angle, Travel Speed, Contact Tip To Work Distance (CTWD), Aim
Supported Joints	Butt Joint, T-Joint, Lap Joint
Welding Positions	2F, 1G
Workpiece Positions	Horizontal, Flat
Base Material	Carbon Steel
Workpiece Thickness	1/4 in.
Wire/Gas	0.035 in. ER70S-6 Wire and C25 Gas

4-5. Environmental Specifications

A. Temperature Specifications

Operating Temperature Range	Storage/Transportation Temperature Range
41 to 113°F (5 to 45°C)	-4 to 131°F (-20 to 55°C)

4-6. Regulatory

A. United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

B. Canada

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage.
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter [IC: 12246A-BM71S2] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated.

Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio [IC:12246A-BM71S2] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés cidessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

C. Welding Gun Antenna

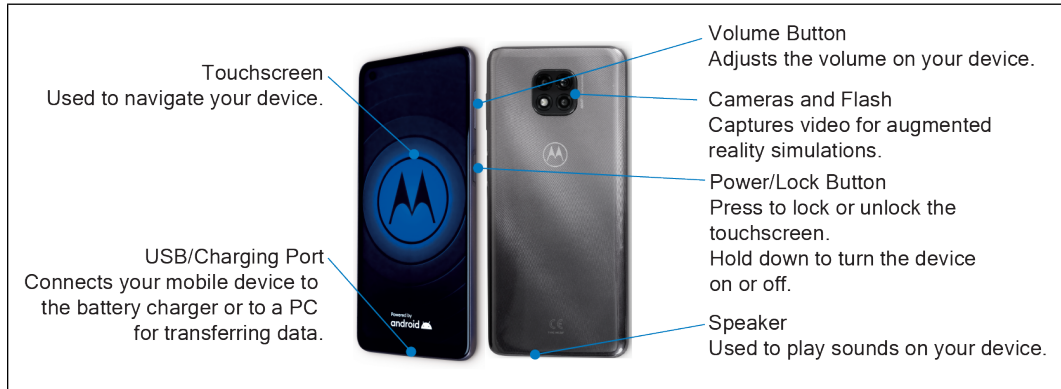
Parameter	Values
Frequency	2442 MHz
Max Gain	0.1 dBi
Efficiency	42.7%

Antenna Description	Manufacturer Part Number	Manufacturer
ANT ANT3216A063R2400A PIFA 2.4GHz L3 2W1.6	ANT3216A063R2400A	Yageo Corporation

4-7. System Components



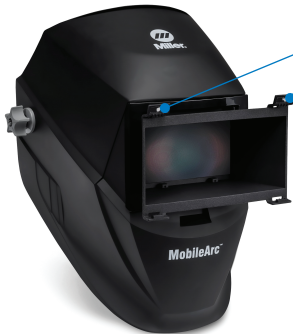
4-8. Mobile Device



4-9. MIG Welding Gun Components



4-10. Helmet Components



Mobile Device Release Tabs
Use thumbs to press tabs to
release mobile device from helmet

Helmet Lens
Allows for viewing display
of mobile device
from inside the helmet

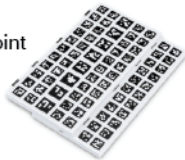


4-11. Workpiece

T-Joint



Lap Joint



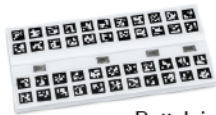
Top Plate



Base Plate



Butt Joint
(Base Plate Only)



Use magnets to
configure joints.

Top plate is rotated 180°



Magnets are mis-aligned.



Magnets should not be visible.
The sides of both coupons should be flush.

Lap Joint

Correct



T-Joint

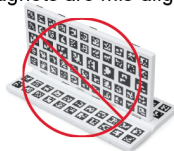
Correct



Entire workpiece backwards.



Magnets are mis-aligned.



Section 5 – Installation

5-1. Selecting A Location



NOTICE – Use training system only indoors and away from sources of high frequency (TIG welders) and other types of electrical interference. It may be necessary to enclose nearby electrical wiring in conduit if unit is affected by interference.

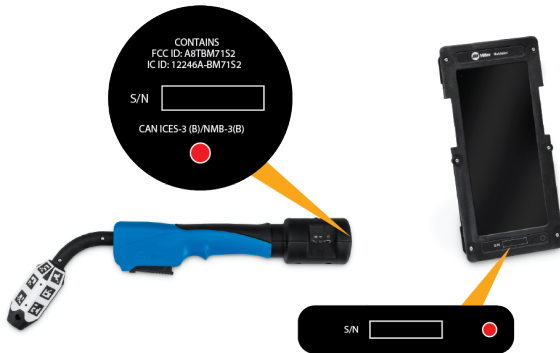
NOTICE – Do not use training system in damp or wet locations. Keep training system components dry.

NOTICE – Do not position training system where the camera is in direct sunlight. High intensity sunlight can interfere with gun tracking.

NOTICE – Do not install or use in the same area as live welding equipment.

The MobileArc can be used wirelessly, or the mobile device may be plugged in for continuous power while in use.

5-2. Labeling Welding Gun and Mobile Device



Apply matching colored stickers to welding gun and mobile device.

In cases where multiple systems are in use, this allows easy identification of paired devices.

5-3. Configuring System for Helmet Mount

Orient mobile device with right hand up for right-handed welding, or with left hand up for left-handed welding.

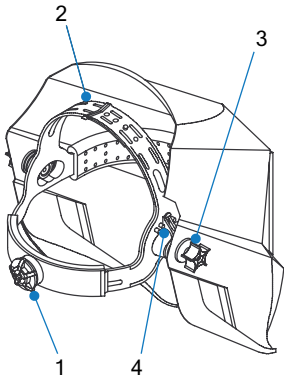


Or



Line up slots on mobile device case with tabs on helmet mount and snap into place.

5-4. Adjusting Headgear



1 Headgear Tightness

Push in the knob and turn to desired tightness.

2 Headgear Top

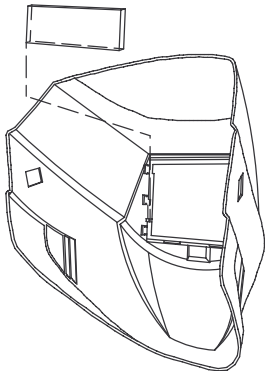
3 Distance Adjustment

Adjusts distance between the face and lens. Loosen both outside tension knobs and press inward to free from adjustment slots. Move forward or back to desired position and tighten. Both sides must be equally positioned.

4 Angle Adjustment

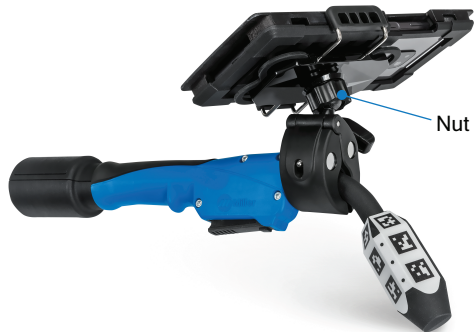
Press tab on the top of pivot point and rotate headgear to the desired peg.

5-5. Installing Optional Magnifying Lens



Starting at the top, slide magnifying lens into the helmet retaining brackets. Position the lens tightly against the bottom holding pins.

5-6. Configuring System for Gun Mount



Install mobile device clamp on neck of welding gun.

Orient mobile device with the right hand facing up for right-handed welding, or the left hand facing up for left-handed welding.

Install mobile device in clamp, taking care not to obstruct the cameras or the screen.

Adjust the angle of the clamp so the camera can view the welding gun nozzle. Tighten nut to secure mount in desired orientation.

Do not place clamp in mobile device case cutouts.

Cameras covered; buttons held down

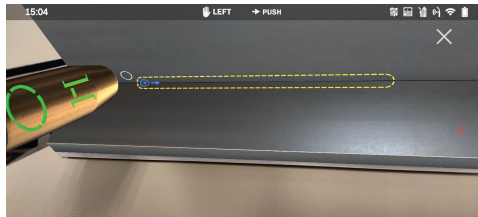


Cameras free; buttons available

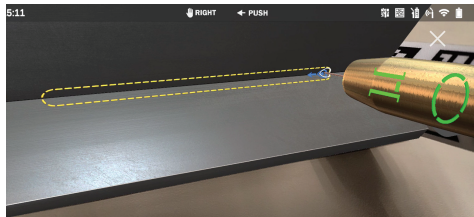


Correct Nozzle Alignment

Left-handed user



Right-handed user



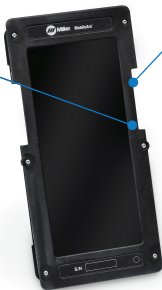
You will be able to see this and adjust the alignment after entering the simulation.

Section 6 – Operation

6-1. Getting Started

Turn on the mobile device by holding the power button for two to three seconds.

Turn on the power switch of the welding gun.



Press the volume button and use touchscreen slider to adjust volume as desired.



Use the touchscreen to launch the MobileArc app from the Android home screen.

6-2. Home Screen Navigation



The MobileArc app can be navigated both with the mobile device touchscreen and by pressing or holding the welding gun trigger.

Some menus and functions on the Home screen are only accessible when using the touchscreen to navigate. These items include accessing the tutorial after startup and the **More** menu, which includes Settings.

 *The touchscreen cannot be used when the mobile device is mounted in the helmet. Remove mobile device from helmet to navigate touchscreen menus.*

6-3. Tutorial



The tutorial automatically launches whenever the MobileArc app starts. It is recommended to remove the mobile device from the helmet to navigate the tutorial with the touch-screen. Tap the welding gun trigger or touch the **Next** button to proceed to the next section of the tutorial, or touch the icon of the navigation header to jump directly to a desired section. For sections with an animation or video, the content will loop continuously until you manually exit. To exit the tutorial, pull and hold the trigger or touch the **Exit** button.

6-4. Selecting Joint Type And Starting Simulation



Start Button

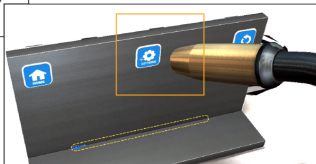
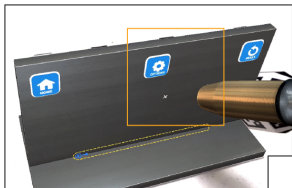
Joint Type
Selection
Buttons

The welding gun must be connected to start the simulation. Ensure the gun is turned on. **The gun will go into sleep mode after 3 minutes of inactivity.** If the gun is turned on and not connected, tap the trigger and wait a few seconds to re-establish connection.

Tap the welding gun trigger until the joint type you wish to simulate is highlighted in orange. Prepare the coupons for that joint as shown in Section 4-11.

When the correct joint type is highlighted and you are ready to start the simulation, pull and hold the welding gun trigger. The **Start Simulation** button will fill with orange.

6-5. Augmented Reality Navigation And Buttons



When in a welding simulation, all navigation is done with the welding gun. The only touchscreen option is to exit the simulation.

AR buttons are embedded in the AR workpiece. Point the welding gun toward the buttons to see the crosshairs. Align the crosshairs with a button and tap the trigger to select the button. Select **Home** to exit to the home screen, select **Reset** to reset the welding simulation progress, or select **Options** to open the Options menu to configure simulation settings.

6-6. Simulation Options Menu



Access the Options menu from the simulation screen to change settings.

Hand: switch between left- and right-handed welding

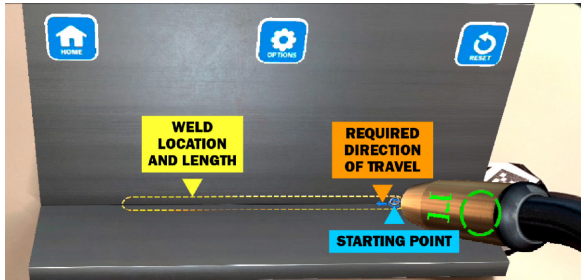
Push/Draw: toggle the travel angle technique of the weld

Weld Guides: turn weld guides on or off. Blue text indicates guide is enabled. Gray text indicates guide is disabled.

Shade: adjust the darkness. Options range from 7 (lightest) to 13 (darkest).

When finished, select Options again to exit the menu and return to the simulation screen.

6-7. Simulation Start Welding Guides

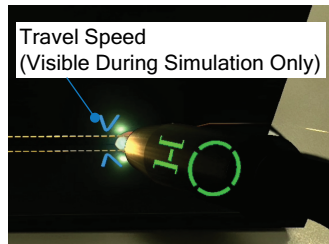
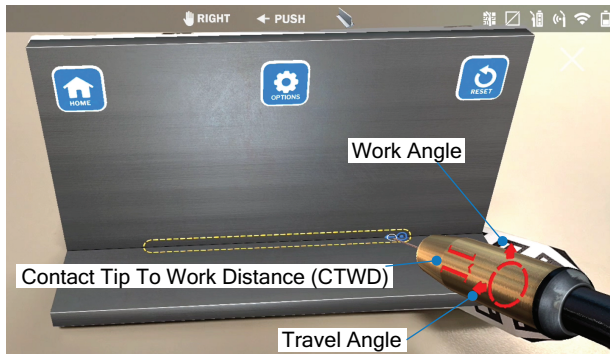


The **starting point** is indicated by a small blue circle. Move the welding gun toward the work-piece and aim the tip at the starting point. The white circle that indicates where the tip is aimed should line up with the starting point. If the weld is interrupted, the starting point guide will reappear where the last weld ended.

The **required direction of travel** (push or drag) is indicated by a blue arrow next to the starting point. Move the gun in this direction when welding.

The **weld location** is outlined in yellow. Use this outline to guide your aim. The entire **length** of the outlined area must be welded before results can be assessed. Guide flashes green and disappears when weld is complete.

6-8. Understanding Welding Technique Guides



Guides are green when the gun is positioned within the preset parameters, and red when it is not.

 *Preset parameters are not adjustable and cannot be changed.*

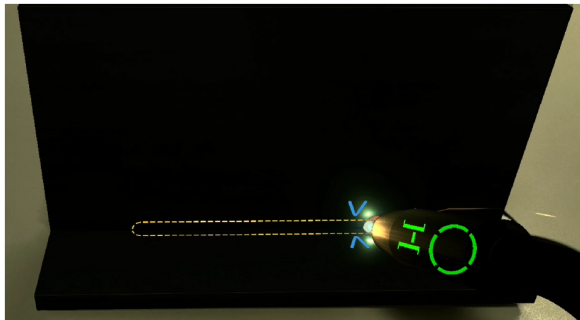
The **Contact Tip to Work Distance (CTWD)** guide provides feedback on how close the contact tip of the gun is to the workpiece. The arrow between the red lines indicates the tip is too far away and should be moved closer for a better weld.

The **Work Angle** guide provides feedback on the angle of the gun relative to the workpiece. The red arrow indicates the gun should be angled upward for a better weld.

The **Travel Angle** guide provides feedback on the angle of the gun relative to the direction of travel. The red arrow indicates the gun should be angled more to the left for a better weld.

The **Travel Speed** guide moves along the weld during the simulation to help you gauge the rate at which to move the gun. It will turn red if the travel speed is too fast or slow. If you fall behind or get too far ahead, the guide will automatically reposition itself.

6-9. Performing The Simulation



With the welding gun aimed at the starting point, pull the trigger to start welding and move slowly along the joint while trying to maintain proper welding technique and keeping pace with the moving travel speed guide. Continue to hold the trigger for the entire duration of welding. If welding is interrupted, realign the gun at the new starting point and continue the welding simulation. Continue until the required weld length is completed. When the trigger is released, the results will automatically load.

6-10. Interpreting Scores

 WORK ANGLE AUG 58°	SCORE 91	TOTAL SCORE 94 TAP TRIGGER TO VIEW GRAPHS
 TRAVEL ANGLE AUG 38°	SCORE 98	
 CTWD AUG 0.85 in.	SCORE 94	
 TRAVEL SPEED AUG 35.16 in/min	SCORE 87	
 AIM AUG 0.00 in.	SCORE 99	

✕
PRESS & HOLD
TRIGGER TO EXIT

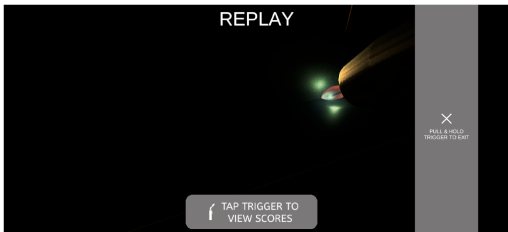
After completing the welding exercise, examine scores to determine areas in need of improvement. Scores of 80 or above are shown in blue. Scores below 80 are shown in red. Scoring is based on the pre-set technique and tolerance settings. These settings are fixed and not adjustable. Use touchscreen or press gun trigger to view graph.

Use touchscreen or press and hold gun trigger to exit.



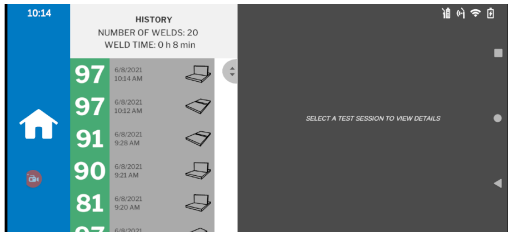
Review graphs for detailed technique performance throughout the length of the weld. The overall technique status bar below the graphs shows green where all technique parameters are within the appropriate range and red where at least one technique parameter is out of range.

Use touchscreen or press and hold gun trigger to advance to replay.



Use touchscreen or press and hold gun trigger to exit.
Replay will automatically loop until you exit.

6-11. Simulation History



On the Home screen, use the touchscreen to open the **More** menu. Select **History**.

Scores for 20 most recent weld simulations are displayed. Select any score for more details about that simulation.

See Section 9-5 to reset history.

10:35



HISTORY

NUMBER OF WELDS: 20
WELD TIME: 0 h 8 min

97	6/8/2021 10:14 AM	
97	6/8/2021 10:12 AM	
91	6/8/2021 9:28 AM	
90	6/8/2021 9:21 AM	
81	6/8/2021 9:20 AM	
87	6/8/2021	



WORK ANGLE	97
TRAVEL ANGLE	96
CTWD	97
TRAVEL SPEED	97
AIM	98

Detailed scores for the highlighted exercise are shown.

Select a history test item to view the detailed technique scores.

6-12. Exiting App And Turning Off System



It may be necessary to exit the MobileArc app to access the mobile device Settings or Google Home apps.

Slide your finger up slightly from the bottom of the screen to show the navigation icons.

Touch the home button to exit the MobileArc app.



Power Button

Power Off



Press and hold the power button for a few seconds until the power menu appears.

Select **Power off**.

Move the switch on the welding gun to the Off position.

6-13. Status Bar Icons

	Mobile Device Battery Level
	Mobile Device Battery Charging
	Mobile Device Battery Ex- tremely Low
	Gun Marker Detected
	Gun Marker Not Detected

	Gun Disconnected
	Gun Connected
	Gun Battery Level
	Workpiece Marker Full Detection
	Gun Battery Level Extremely Low

	Gun Battery Unknown
	WiFi Disconnected
	WiFi Connected
	Workpiece Marker Partial Detection
	Workpiece Marker No Detection

6-14. Welding Gun LED Logic

Power Switch	Bluetooth Power Status	Bluetooth Connection	Battery Level	Trigger	Red LED	Blue LED
On	Sleep	No	Low	Released	1 blink/20 sec*	1 blink/20 sec*
			Normal	Released	Off	1 blink/20 sec
	Awake	No	Low	Pressed	On (solid)	1 blink/1 sec
				Released	1 blink/1 sec*	1 blink/1 sec*
			Normal	Pressed	On (solid)	1 blink/1 sec
				Released	Off	1 blink/1 sec
		Yes	Low	Pressed	On (solid)	On (solid)
				Released	1 blink/1 sec	On (solid)
			Normal	Pressed	On (solid)	On (solid)
				Released	Off	On (solid)
Off	x	x	x	x	Off	Off

*Red and blue flashes are in sync.

Section 7 – Administrator Operation

7-1. System Activation And Setup



Confirm that all other MobileArc welding guns within 100 meters are turned off.

Turn on the welding gun that is to be configured.

Charge the mobile device. Turn on the mobile device by holding the power button for two to three seconds. Launch the MobileArc app by touching the icon.

Select language

English

Spanish

French

Select unit and standards

Imperial

Metric

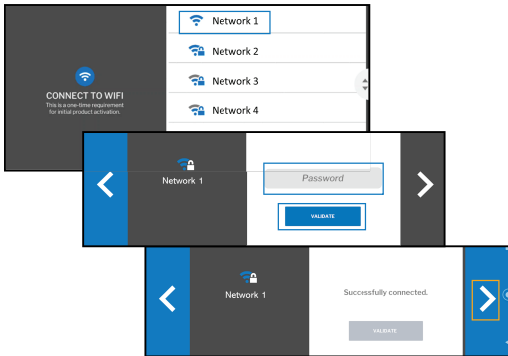
Currently only English is available



When prompted, select language and measurement system (imperial or metric).



Currently only English is available.



Review and accept the end user license agreement.

Select a WiFi network to connect to. The device must be connected to the Internet for initial activation.

Enter network password, and select **Validate**. When the device is successfully connected, touch the arrow on the right of the screen to proceed.

If the WiFi network you want to connect to requires two-factor authentication, you will be redirected. See Section 7-2.

EMAIL SENT TO:
E*****@ergmillerwelds.com

CHECK YOUR EMAIL AND ENTER
PROVIDED PIN CODE HERE

1 1 4 3

RESEND CODE

BACK

VALIDATE

When prompted, enter an administrator email address.

 *The serial number field should be automatically filled in with the system serial number.*

An email containing a PIN will be sent to the administrator email address. When prompted, enter the 4-digit PIN on the mobile device. Select **Validate**.

 *All devices activated with the same email address will use the same PIN. The PIN is tied to the email address and cannot be manually changed.*



CONNECT TO BLUETOOTH

Place the power switch of the welding gun in the ON position



SUCCESS!

WELDING GUN

The Bluetooth welding gun has been successfully paired to this device.



ACCEPT

If prompted, turn on the welding gun by moving the power switch to the On position. When the mobile device detects that the gun is active, select **Accept** to proceed to the tutorial. Use the touchscreen or the gun trigger to advance through the tutorial.

When ready, exit the tutorial to advance to the Home screen.

7-2. Two Factor Authentication



Network 1

Select this button to open the network login page.



After connecting via the network login page, select **VALIDATE** to test Internet connectivity.

VALIDATE



Login

Username

Password

Login

Some networks require two-factor authentication. If prompted, select the button to open the network login page. Enter your credentials on the network login page. When the login is successful, exit the login page and return to the MobileArc app.



Network 1

Select this button to open the network login page.



After connecting via the network login page, select **VALIDATE** to test Internet connectivity.

VALIDATE



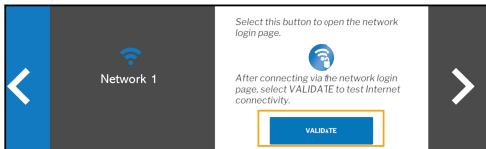
Login

Username

Password

Login

Some networks require two-factor authentication. If prompted, select the button to open the network login page. Enter your credentials on the network login page. When the login is successful, exit the login page and return to the MobileArc app.



Select **Validate**. When the device is successfully connected, touch the arrow on the right of the screen to proceed.

7-3. Accessing Settings Menu



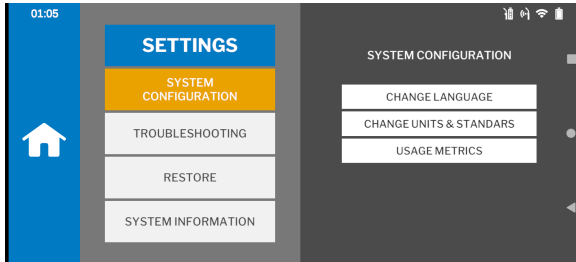
On the MobileArc Home screen, use the touchscreen to open the **More** menu.

Select **Settings**.

Enter PIN number (see Section 7-1).

If you lose or forget the PIN, select **Resend Code**. The code will be emailed to the administrator email address. If you lose the PIN and do not have access to the administrator email, contact Miller technical support.

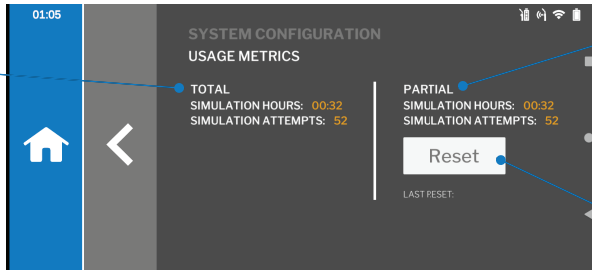
7-4. System Configuration Menu



Use the System Configuration menu to change language and units and to view device usage data.

7-5. Usage Metrics

View total simulation hours and attempts for the mobile device.



View simulation hours and attempts for the mobile device since the last reset.

Tap to reset partial usage metrics.

Section 8 – Screen Casting

8-1. Preparing Devices For Screen Casting

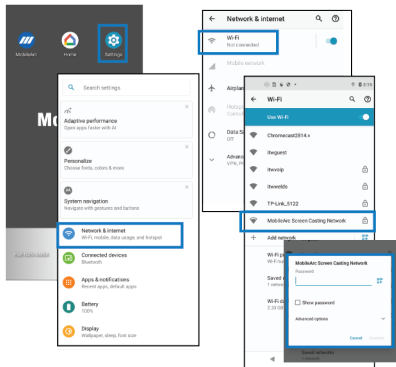


To use the screen casting feature, you must use a Google Chromecast and router (not available through Miller).

Plug in the designated router and turn it on. Connect an Ethernet cable to the Internet port on the back of the router. The Chromecast and router require Internet for the initial activation.

Connect one end of the provided USB power cable to the Chromecast, and the other to a USB power supply such as a laptop or charging block. Connect the Chromecast to the HDMI port of the display device that will be used to display the screen casting. Set up the display device for the appropriate HDMI input.

8-2. Connecting To Screen Casting Network



Turn on the mobile device that will be used to cast the MobileArc app.

 *Press and hold the power button for two to three seconds to turn the device on.*

Select **Settings** on the mobile device.

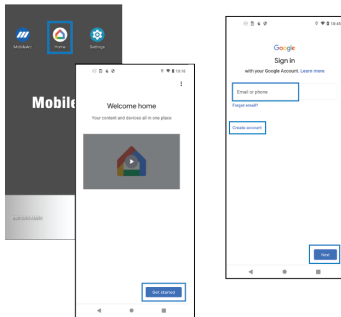
Select **Network & internet**.

Select **WiFi**.

Select the WiFi network broadcast by your router. Enter the WiFi password if necessary.

Exit Settings.

8-3. Signing In To Google



Select the Google Home App from the home screen of the mobile device.

Select **Get Started**.

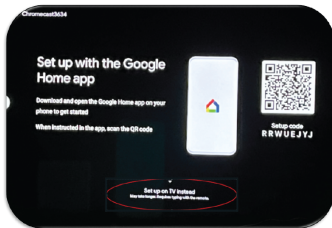
Sign in to your Google account. If you do not have a Google account, you will have to create one.

Read and accept the Google Terms of Service.

Select OK to proceed with your Google account.

If you are using Chromecast TV, proceed to Section 8-4. Otherwise, go to Section 8-5.

8-4. Setting Up Chromecast TV



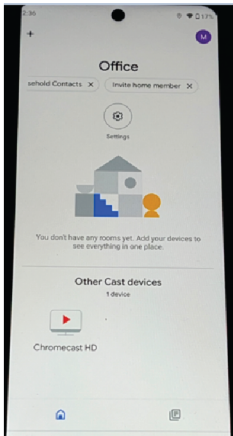
Follow the steps shown on the display device. Stop when you reach the screen shown at left.

Use the navigation circle on the remote and select **Set up on TV Instead** at the bottom of the screen.

Follow the on-screen steps to completion.



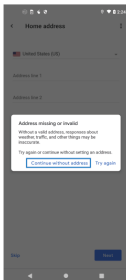
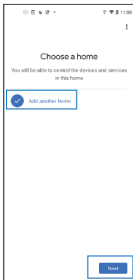
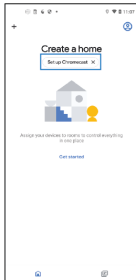
Use the same Google account that was used on the MobileArc device.



After you have completed the Chromecast TV setup, return to the MobileArc device. The Chromecast icon should be displayed within your Google account screen.

Proceed to the second page of Section 8-7 to begin casting.

8-5. Connecting Chromecast To WiFi



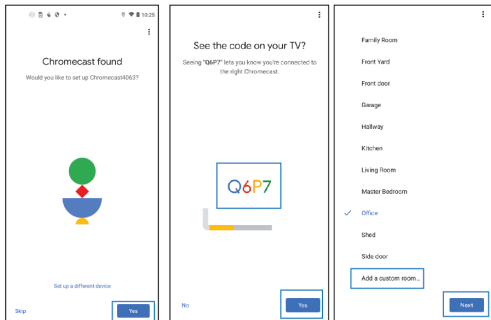
Select **Set up Chromecast**.

Select **Add another home**, then press **Next**.

Name your home, then press **Next**.

It is not required to enter an address. Select **Skip**, then **Continue without address**.

The mobile device will begin looking for a Chromecast.

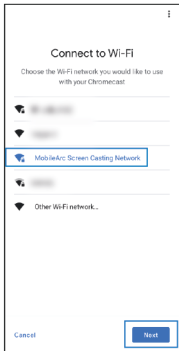


When the device finds a Chromecast, it will display a Chromecast with an ID number (such as Chromecast4063). If the number matches the number being displayed on the casting device, select **Yes**.

A second, four-digit code will be displayed on both the mobile device and on the display screen. If the code matches, select **Yes**.

Read and accept the additional legal terms from Google. Select whether or not to help improve Chromecast (optional).

Select the location of the Chromecast. Add a custom room if desired. Select **Next**.



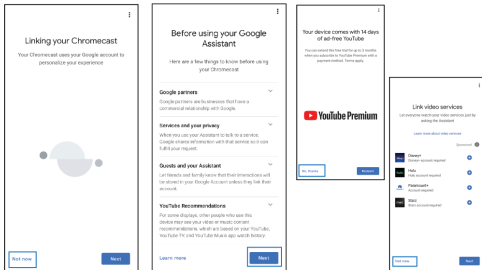
To connect to WiFi, select the same network that the mobile device is already connected to. Select **Next**.

You may be prompted to use the saved WiFi password, or you can choose to enter the password manually.

Chromecast will connect to WiFi.

Select **OK**.

8-6. Chromecast Options

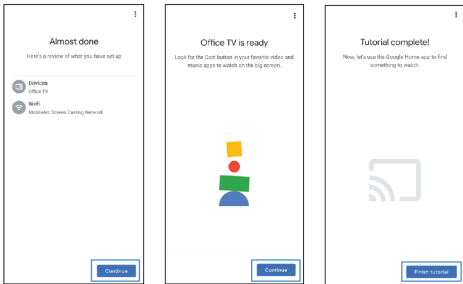


A series of options pages will be displayed.

When asked to link Chromecast to your Google account, it is recommended to select **Not now**.

Google Assistant, Youtube, Radio Services, Video Services, and Live TV options may be displayed. It is recommended to select **Not Now**.

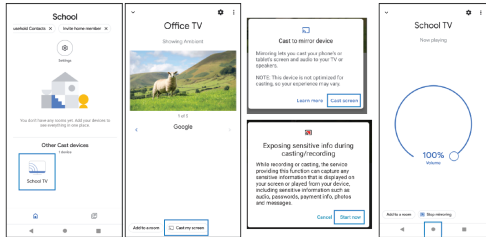
8-7. Casting Screen



Review the devices you have set up and select **Continue**.

The device is ready to cast. Select **Continue**.

A tutorial will be displayed. Select **Skip tutorial**, then **Finish tutorial**.



Select Cast device (i.e. School TV).

Select **Cast my screen**, then **Cast Screen**.

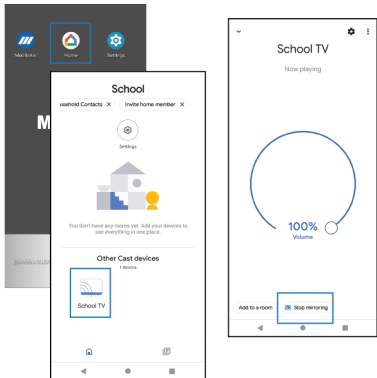
A message will appear reminding you that sensitive information may be displayed while casting. Read the message, then select **Start now**.

Adjust volume as necessary.

Tap the mobile device Home button to exit the Google Home app.

Open the MobileArc app and proceed with simulation.

8-8. Stop Casting Screen



To stop screen casting, exit the MobileArc app.

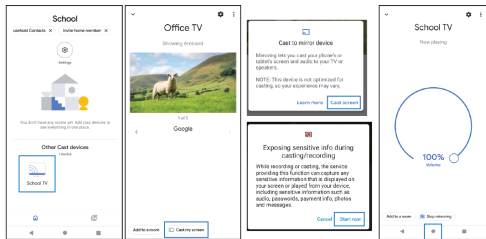
Select the Google Home app.

Select the cast device.

Select **Stop Mirroring**.

Exit the Google Home app.

8-9. Reconnecting To Chromecast



To connect to a Chromecast that has already been set up, follow instructions in Sections 8-1 and 8-2.

From the Android home screen, open the Google Home app. Select Cast device. Select **Cast my screen**, then **Cast screen**.

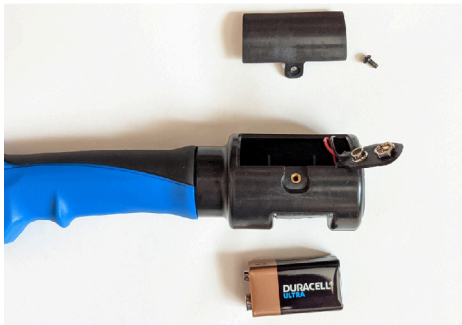
A message will appear reminding you that sensitive information may be displayed while casting. Read the message, then select **Start now**.

Adjust volume as necessary. Tap the mobile device Home button to exit the Google Home app. Open the MobileArc app and proceed with simulation.

To stop casting your screen, see Section 8-8.

Section 9 – Maintenance And Troubleshooting

9-1. Replacing The Welding Gun Battery



Turn off welding gun.

Remove screw holding battery compartment closed.

Remove battery from the compartment and disconnect from connector.

Install new battery in connector and place inside compartment.

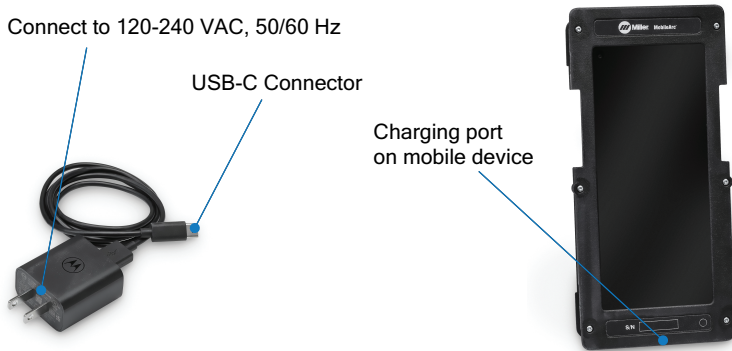
Replace cover and screw.

9-2. Charging The Mobile Device

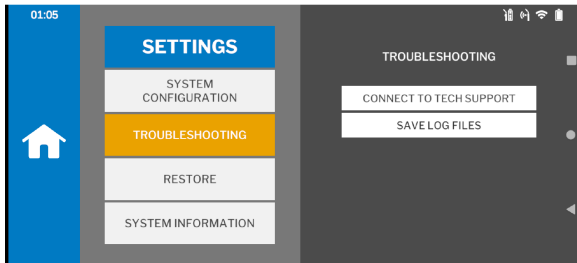
Connect to 120-240 VAC, 50/60 Hz

USB-C Connector

Charging port
on mobile device



9-3. Troubleshooting Menu



On the Home screen, use the touchscreen to select **More**, then **Settings**, then **Troubleshooting**.

Select **Connect to Tech Support** to view contact information for Miller technical support as well as your device software version and serial number.

Select **Save Log Files** to email the log files to the administrator email address. The log files can then be forwarded to technical support if required. You must be connected to the Internet to save log files.

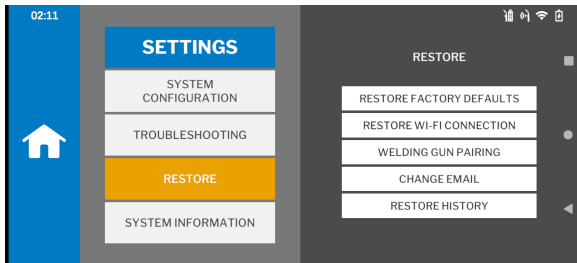
9-4. Troubleshooting



It may be necessary to stop the MobileArc app if there are technical difficulties and it needs to be restarted. Swipe up slightly from the bottom of the screen to show the navigation icons. Touch the square button and then swipe up on the MobileArc window. On the home screen, select the MobileArc app icon to restart it.

If the home screen turns blue and the app icons unavailable, it is usually a temporary glitch, and the normal home screen will return after 10 to 20 seconds. If the issue persists longer than this, reboot the device.

9-5. Restore Menu



On the Home screen, use the touchscreen to select **More**, then **Settings**, then **Restore**.

Select **Restore Factory Defaults** to restore the app to factory defaults.

Select **Restore Wi-Fi Connection** to disconnect from or reconnect to a network.

Select **Welding Gun Pairing** to unpair or repair the mobile device with the welding gun.

Select **Change Email** to change the email address of the administrator.

Select **Restore History** to delete all data regarding previous welding simulations and scores.

Section 10 – Parts List



Item No.	Part No.	Description	Quantity
1		Helmet Assembly (Includes)	1
	231415	—Helmet Shell	1
	286430	—Helmet Mount, Mobile Device	1
	770246	—Headgear	1
	770249	— —Fabric Headband	1
	216336	—Comfort Cushion	1
2	286445	Mobile Device Assembly	1
3	286590	MIG Welding Gun	1
4	288774	Workpiece	1

Item No.	Part No.	Description	Quantity
5	212238	1.50 Magnifying Lens	1
6	212240	2.00 Magnifying Lens	1
7	290462	Mobile Device Gun Mount	1
8	228028	Travel Bag	1

Section 11 – Limited Warranty

LIMITED WARRANTY— Subject to the terms and conditions below. Miller Electric Mfg. LLC, Appleton, Wisconsin, warrants to its original retail purchaser that the new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

This Miller training system is warranted for 1 year from the date of purchase. *Proof of purchase is required for warranty transactions so it is imperative that a copy of the original invoice or sales receipt be retained.*

This warranty provides specific legal rights, and other rights may be available depending on your state or province.

For warranty transactions, contact your Miller Distributor.

Effective January 1, 2024