INSTRUCTION MANUAL



Manufacturer:

Greenlee®

Product Name:

Greenlee® Battery-Powered Micro Ferrule Crimper Tool Kit with 13.8 mm Jaw - 110V

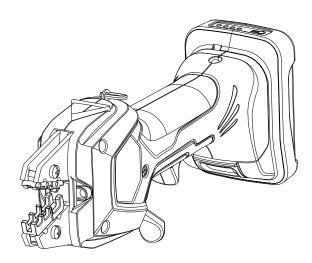
Manufacturer Part Number:

EK50ML13811

▶ Click here for more details on the Greenlee® Battery-Powered Micro Ferrule Crimper Tool Kit with 13.8 mm Jaw - 110V



Serial Number



EK50ML Battery-powered Crimping Tool



Read and **understand** all of the instructions and safety information in this manual before operating or servicing this tool.

Register this product at www.greenlee.com

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Description

The EK50ML Battery-powered Crimping Tool is a hand-held, self-contained crimping tool intended to crimp cable using Greenlee's Kwik Cycle® 9 and CrimpALL® die sets as well as some competitors' die sets.

U.S. patent pending.

Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Purpose of this Manual

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following Greenlee tool:

EK50ML Battery-powered Crimping Tool Keep this manual available to all personnel.

All specifications are nominal and may change as design improvements occur. Greenlee Tools, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. CrimpALL and Kwik Cycle are registered trademarks of Greenlee Tools, Inc.

Teflon is a registered trademark of Dupont.

KEEP THIS MANUAL

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IMPORTANT SAFETY INFORMATION



SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

ADANGER

Immediate hazards which, if not avoided, WILL result in severe injury or death.

AWARNING

Hazards which, if not avoided, COULD result in severe injury or death.

ACAUTION

Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.

▲WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.



AWARNING

Do not use solvents or flammable liquids to clean the tool body. Solvents or flammable liquids could ignite and cause serious injury or property damage.

AWARNING

An incomplete crimp can cause a fire.

Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.

Failure to observe this warning could result in severe injury or death.



AWARNING

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning could result in severe injury or death.



AWARNING

Pinch points:

- Remove battery before changing dies, adapters, or jaws.
- Keep hands away from the crimping tool head when crimping.

Failure to observe these warnings could result in severe injury or death.





This tool is not insulated. When

Electric shock hazard:

using this unit on or near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning could result in severe injury or death.

WARNING

Do not dispose of batteries in a fire. They will vent fumes and may explode.

Failure to observe this warning could result in severe injury from harmful fumes or burns from flying debris.

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IMPORTANT SAFETY INFORMATION

AWARNING

Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.

Failure to observe this warning could result in severe injury or death.

ACAUTION

- Allow approximately 3 to 5 minutes of time to cool down as tool automatically switches off when it gets too hot.
- Do not secure this tool in a vise. This tool is designed for hand-held operation.
- This tool may be used in damp or wet environments; however, air-drying is recommended before use if the tool becomes soaked. Damage may result when the tool is operated prior to thorough drying when electrical components are soaked.
- Use this tool for the manufacturer's intended purpose only.

Failure to observe these precautions may result in injury or property damage.

ACAUTION

Do not allow anything to contact the battery terminals

- Do not immerse the batteries in liquid. Liquid may create a short circuit and damage the battery.
 If batteries are immersed, contact your service center for proper handling.
- Do not place the battery into a pocket, tool pouch, or tool box with conductive objects. Conductive objects may create a short circuit and damage the battery.
- Do not place a battery on moist ground or grass.
 Moisture may create a short circuit and damage the battery.

Failure to observe these precautions may result in injury or property damage.

ACAUTION

- Do not store the battery at more than 122 °F (50 °C) or less than -4 °F (-20 °C). Damage to the battery can result.
- Do not use another manufacturer's charger. Other manufacturers' chargers may overcharge and damage the battery.
- Do not attempt to open the battery. It contains no user-serviceable parts.

Failure to observe these precautions may result in injury or property damage.

ACAUTION

Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe this precaution may result in injury and property damage.



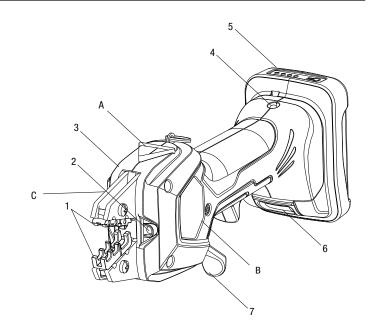


Identification

- 1. Crimping Dies
- 2. LED Work Light (white)
- 3. Crimping Head
- 4. LED Indicator (red)
- 5. Battery Cartridge
- 6. Battery Lock
- 7. Trigger

Decals

- A. Manual Jaw Release
- B. Identification
- C. Warning









Note: Keep all decals clean and legible, and replace when necessary.

Specifications

Crimping Tool	
Length (with battery)	9.93" (252.22 mm)
Width	2.5" (63.5 mm)
Depth	3.6" (91.44 mm)
Weight	2.18 lb (0.98 kg)
Crimping Force	1.53 tons (15 kN)
Recommended Operating Temperature Range	14 °F to 104 °F (–10 °C to 40 °C)
Battery	
Charging Time	40 min

52068605 Battery, 10.8V 1.5 Ah li-ion (16.2 Wh) 52068603 Charger, 10.8V li-ion batteries, 110V 52068604 Charger, 10.8V li-ion batteries, 230V

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Battery and Charger

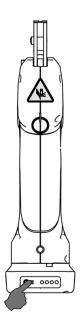
ACAUTION

Remove battery only after unplugging charger from socket.

Failure to observe this precaution may result in injury and property damage.



- 1. Charger is plugged into socket.
- 2. Battery is charging.
- 3. Battery is fully charged.
- 4. Battery is defective.
- 5. Battery is too hot or too cold.
- 6. Charger is defective.



% Charge Remaining







Operation

AWARNING

Inspect tool and dies before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.

Failure to observe this warning could result in severe injury or death.

AWARNING



Electric shock hazard:

This tool is not insulated. When using this unit on or near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning could result in severe injury or death.

AWARNING



Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

AWARNING



Pinch points:

- Remove battery before changing dies, adapters, or jaws.
- Keep hands away from the crimping tool head when crimping.

Failure to observe these warnings could result in severe injury or death.

AWARNING

An incomplete crimp can cause a fire.

Use proper die, connector, and cable combinations. Improper combinations can result in an incomplete crimp.

Failure to observe these warnings could result in severe injury or death.

ACAUTION

- Allow approximately 3 to 5 minutes of time to cool down as tool automatically switches off when it gets too hot.
- Do not secure this tool in a vise. This tool is designed for hand-held operation.
- Use this tool for the manufacturer's intended purpose only.

Failure to observe these precautions may result in injury or property damage.

Charging the Battery

Read the instructions supplied with the battery charger.

LED Work Light (white)

This LED automatically turns on when the trigger is pulled. It remains on for 10 seconds after the trigger is released.

LED Indicator (red)

This tool is equipped with a special circuit board incorporating several important features to inform the user about the current status of the unit. The LED signals in the following cases:

		When	What it means
		After inserting the battery	Battery is inserted in tool
	20 sec 20 sec/2 Hz		Low battery
			Contact Greenlee service
-∳=∮=∮=∮=∮=∳- 20 sec/5 Hz	20 sec/5 Hz	cycle	Tool has become too hot
1 x	1 x	After interruption	Error – manual interruption of crimp cycle prior to completion
3 x	3 x	After working cycle	Error – automatic opening of tool due to exceeding crimp force

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Operation (cont'd)

Installing Dies

- 1. Select the proper dies for the intended crimp.
- Slide the die into the crimping head and secure with screw.
- 3. Properly position the second die. Repeat Step 2.

Preparing Cable

Follow the lug manufacturer's instructions for appropriate cable strip length.

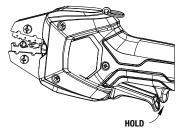
Crimping Cable

 Insert the connector into the appropriate slot of the crimping die.





Pull the trigger midway such that the jaws grab and hold the connector in place.

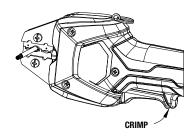


3. Insert the stripped wire into the connector.

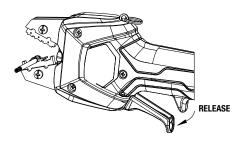




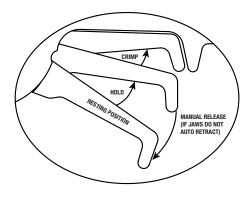
4. Pull trigger all the way down to complete the crimp.



 The crimp cycle will automatically stop when complete. Release the trigger upon crimp completion and the jaws will automatically retract.



Note: The jaws may be manually released by pushing the trigger outward. This may be necessary if, for example, an incorrectly-sized connector has been inserted into the die opening.







Maintenance



▲WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

AWARNING

Do not use solvents or flammable liquids to clean the tool body. Solvents or flammable liquids could ignite and cause serious injury or property damage.

AWARNING



Pinch points:

- Remove battery before changing dies, adapters, or jaws.
- · Keep hands away from the crimping tool head when crimping.

Failure to observe these warnings could result in severe injury or death.

Daily

Before use:

- 1. Inspect the tool for wear or damage, such as cracks, gouges, or chips.
- 2. Inspect the tool for damage.

After use:

- 1. Use a damp cloth and mild detergent to clean the housing. Allow the housing to dry.
- 2. Place the tool in the carrying case and store in a cool, dry place.
- 3. If necessary, recharge the batteries. Refer to the instructions supplied with the battery charger.

Monthly

Thoroughly clean all surfaces.

Annually or After 35,000 Crimps

Send the tool to a Greenlee Authorized Service Center for inspection.

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Troubleshooting

Before You Begin

- Make sure that the battery is charged. Recheck the battery after several minutes to make sure the battery is holding its charge.
- Use a nonflammable contact cleaner or pencil eraser to clean the electrical contacts on the battery and tool.
- 3. Reinstall the battery and check the tool again.

Problem	Possible Cause	Probable Remedy
Tool is inoperative.	Continuous use causes tool to become too hot and automatically switch off.	Allow approximately 3 to 5 minutes of time to cool down.
Dirt, contaminants, etc., in jaw area of tool.		Clean tool.
	Tool components worn or damaged.	Return tool to a Greenlee Authorized Service Center.
	The crimp did not complete	Engage manual release and check if the connector is correct. Cut off old connector and perform a new crimp with the correct connector.
Motor is inoperative.	Low or uncharged battery.	Try known charged battery. Inoperative battery may be discharged or may have reached life expectancy.
	Broken switch components.	Return tool to a Greenlee Authorized Service Center.
LED glows for 20 seconds.	Battery charge low.	Charge or replace battery.

Note: For Warranty Service or Repair, contact Greenlee customer service at 800-435-0786.

Service

Do not attempt to open tool, it contains no user serviceable parts. `

Disposal

Do not throw away in trash. Parts of these tools contain valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations.

Contact your local waste management authority for more information.



Do not discard this product or throw away!





Die Holders

For EK50ML120GL



For Panduit and T&B die sets



For Greenlee CrimpALL® and Kwik Cycle® dies; some competitor dies (Ideal)

CrimpALL® Interchangeable Die Sets

For Coaxial Connectors

	DESCRIPTION		DIE	REMARKS	
CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	neiwanko	
O RG58, RG59, RG62AU	BNC/TNC and 3 Piece	0.256" (6.5 mm, 0.213" (5.4 mm), 0.068" (1.7 mm) HEX	PA2034	Common 2-piece and 3-piece BNC/TNC	
O RG174, RG59/62, mini-coaxial 75 Ω	HDTV SMA, True 75 Ω BNC/TNC, Mini-UHF	0.255" (6.5 mm), 0.197" (5.0 mm), 0.178" (4.5 mm), 0.068" (1.7 mm) HEX & 0.042" (1.0 mm) SQ	PA2648	Common 2-piece and 3-piece BNC/TNC (Kings, ADC, Amphenol, etc.)	
RG59, RG6, Belden 8281, Belden 1694A	HDTV BNC/TNC/CATV "F" True 75 Ω	0.324" (8.2 mm), 0.255" (6.5 mm), 0.068" (1.7 mm) HEX & 0.052" (1.3 mm), 0.042" (1.0 mm) SQ	PA2649	Common 2-piece and 3-piece BNC/TNC (Kings, ADC, Amphenol, etc.)	
RG6, Belden 1694, Belden 1694A	HDTV BNC/TNC True 75 Ω	0.278" (7.0 mm), 0.275" (6.9 mm), 0.068" (1.7 mm) HEX & 0.042" (1.0 mm) SQ	PA2657	Common 3-piece BNC/TNC (Kings & ADC HDTV)	
RG58, Mini-59, RG-174, small coaxial	SMA, SMB, Mini-59 BNC/TNC, Mini-UHF	0.128" (3.2 mm), 0.213" (5.4 mm), 0.197" (5.0 mm), 0.178" (4.5 mm), 0.068" (1.7 mm) HEX & 0.042" (1.0 mm) SQ	PA2653	Common 2-piece and 3-piece SMA/SMB/ BNC/TNC & Mini-UHF	
O RG58, RG174, AT&T 735, 50 and 75 Ω	Thinnet, BNC/TNC, Mini-UHF	0.213" (5.4 mm), 0.178" (4.5 mm) 0.068" (1.7 mm) HEX & 0.042" (1.0 mm) SQ	PA2046	50/75 ohm small 2-piece & 3-piece BNC/TNC (Kings, ADC, etc.)	
O RG59, RG62, Belden 8281, 50 and 75 Ω	BNC/TNC and Mini-UHF	0.315" (8.0 mm), 0.252" (6.4 mm), 0.068" (1.7 mm), HEX 0.042" (1.0 mm) SQ	PA2047	75 ohm 2-piece & 3-piece BNC/TNC (Kings, ADC, Amphenol, etc.)	
O RG174, RG179 and Small Cable Connection	BNC/TNC	0.178" (4.5 mm), 0.128" (3.2 mm), 0.068" (1.7 mm) HEX	PA2051	Common 2-piece and 3-piece BNC/TNC/SMA/SMB	
RG6 and RG6 Quad, Belden 1694A	BNC and CATV "F" Type & HDTV	0.360" (9.1 mm), 0.324" (8.2 mm), 0.068" (1.7 mm) HEX	PA2045	Common 2-piece and 3-piece BNC/TNC and CATV "F" 2-piece	
RG59, RG6 Video Cable	CATV "F" Type	0.346" (8.8 mm), 0.319" (8.2 mm), 0.256" (6.5 mm) HEX	PA2042	Crimps Ferrules or Sleeves Only	
RG8, RG11, RG213	N-Type	0.429" (10.9 mm), 0.100" (2.54 mm), 0.080" (2.03 mm) HEX	PA2656	Common 2-piece and 3-piece "N"-Type (Kings, ADC, Amphenol, etc.)	
RG8, RG11, RG213, RG216	N-Type, MS39012 Type	0.415" (10.5 mm), 0.095" (2.4 mm) HEX	PA2039	Crimps Pins and Ferrules	
© Belden 1855A, 1865A, 1505A, 1505F, 1694A, 1694F, 179DT	HDYV BNC/TNC True 75 Ω	0.178" (4.5 mm), 0.255" (6.5 mm), 0.278" (7.0 mm), 0.068" (1.7 mm), 0.041" (1.0) HEX	PA2699	Kings, ADC, B&L, Trompeter, Amphenol, Switchcraft	

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CrimpALL® Interchangeable Die Sets (cont'd)

For Modular Plugs

DESCRIPTION					REMARKS
	CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	HEMAINO
2001 O J SAC W055 2001 O 2001	RJ45 - 8P8C (8 Pin)	Flat/Round, Solid/ Stranded	RJ45 Unkeyed WE and SS	PA2061	Western Electric (WE)/Stewart Connector (SS)
2002 O	RJ11 & RJ12 - 6P6C, 6P4C, 6P2C	Flat/Round, Solid/ Stranded	RJ11 & RJ12 Unkeyed WE and SS	PA2062	Western Electric (WE)/Stewart Connector (SS)
0 2083 8322 HANDOST 2083 0	RJ22 Handset - 4P4C (4 Pin)	Flat/Round, Solid/ Stranded	4 Pin Handset WE and SS	PA2063	Western Electric (WE)/Stewart Connector (SS)
2004 O 1	RJ45 - 8P8C (8 Pin)	Flat/Round, Solid/ Stranded	RJ45 Unkeyed AMP	PA2064	AMP (Tyco) Inc. Connectors Only
Top O	RJ50 - 10P10C (10 Pin)	Flat/Round, Solid/ Stranded	RJ50 Unkeyed WE and SS	PA2068	Virginia Plastics (VP)
O 2000	British Telecom 6 Pole Plug	Flat/Round, Solid/ Stranded	BT 6 Pole	PA2032	British Telecom Plugs Only
	RJ45, Molex Connectors for 5.0 dia. Cable	5.0mm Dia. Round, Shielded (STP)	RJ45 STP Molex Connectors, 5.0 mm dia. cable	PA2673	Molex
	RJ45, AMP/Molex Connectors for dia. Cable	6.0mm Dia. Round, Shielded (STP)	RJ45 STP AMP & Molex, 6.0 mm dia. cable	PA2674	AMP (Tyco) Inc. & Molex

For Specialty Crimpers

DESCRIPTION					REMARKS
	CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	nemano.
	RJ45 WE/SS & RG6/RG6 Quad CATV "F"	UTP 4-Pair & RG6/ RG6 Quad	RJ45 WE/SS 8-pin & 0.360" (9.1mm) HEX/ 0.324" (8.2 mm) HEX	PA2687	For standard RJ45 WE/SS Modular Plugs & 1-piece RG6/RG6 Quad CATV "F" conns.
000	HDMI Equivalent	HDMI	24 AWG connector components, 24 AWG HDMI cable	PA4003	Precision cast 4140 steel for durability High Tensile steel cutting blades for long life Error-proof design avoids misalignment





CrimpALL® Interchangeable Die Sets (cont'd)

For Insulated Terminal Crimpers

	DESCRIPTION				DIE	REMARKS
		CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	TIEMATIO
	0 	Insulated Terminals and Lugs	Solid or Stranded Wire, 22-10 AWG (0.34-6 mm²)	12-10 (Yellow), 16-14 (Blue), 22-18 (Red), (6-4 / 2.5-1.5 / 0.34-0.75 mm ²)	PA2035	For Large Professional Terminals (Panduit, T & B, etc.)
	3345 O	Insulated Terminals and Lugs	Solid or Stranded Wire, 22-12 AWG (0.34-4 mm ²)	12-10 (Yellow), 16-14 (Blue), 22-18 (Red), (4/1.5-2.5 / 0.34-0.75 mm ²)	PA2040	For Standard Commercial Terminals (Hardware Store Brands)
1111	0 0 0 0 0	Insulated Terminals and Lugs	Solid or Stranded Wire, 26-14 AWG (0.10-2.5 mm ²)	16-14 (Blue), 22-18 (Red), 22-26 (Yellow), (1.5-2.5 / 0.34-0.75 / 0.34-0.10 mm ²)	PA2029	For Smaller Wire Barrel Terminals

For Non-Insulated Terminal Crimpers

 DESCRIPTION			DIE	REMARKS
CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	
Non-Insulated Terminals and Lugs	Solid or Stranded Wire, 22-8 AWG (0.34-0.10 mm ²)	10-8 / 14-12 / 18-16 / 22-20 (6-10 / 2.5-4 / 0.75-1.5 / 0.34-0.50 mm ²)	PA2031	For Standard Commercial Terminals

For Open Barrel, Box and Terminal Systems

	DESCRIPTION				DIE	REMARKS
		CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.	
		Open Barrel Non- Insulated Terminals, Narrow Lugs and Power Contacts	Solid or Stranded Wire, 22-10 AWG (0.34-6 mm²), F Type*	22-18 / 16-14 / 12-10 (0.34-0.75 / 1.5-2.5 / 4-6 mm ²)	PA2033	For Standard Commercial Terminals
 		Open Barrel Non- Insulated Terminals, Wide Lugs and Power Contacts	Solid or Stranded Wire, 22-14 AWG (0.34-2.5 mm ²), F Type*	16-14 / 22-18 (1.5-2.5 / 0.34-0.75 mm²)	PA2096	For Standard Commercial Terminals
	O 3337 A_A_A_ O	Open Barrel D-Sub Contact Pins RS-232	Solid or Stranded Wire, 28-20 AWG (0.08-0.50 mm²), F Type*	28-24 / 22-20 (0.08-0.2 / 0.34-0.5 mm²)	PA2097	For Standard D-sub Pins Only; not for HD D-subs

For Wire Ferrules

DESCRIPTION					REMARKS	
	CABLE TYPE	CONNECTION	CRIMP SIZES	CAT. NO.		
233 O MAAAAA O D 2333 O D 2333	Insulated & Non- Insulated Wire Ferruls	Solid or Stranded Wire, 22-10 AWG (0.34-6 mm ²)	22-20 / 18-16 / 14-12 / 10 (0.34-0.55 / 0.75-1.5 / 2.5-4 / 6 mm²)	PA2095	For DIN or US Type Wire Ferrules	

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