



User Manual V6

For Website

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Introduction

Thank you for purchasing the Ukey System, the #1 trusted brand in construction equipment security. We want this installation to be as safe and easy as possible for you, our customer. It is important that you read this manual and thoroughly understand it prior to the installation. If you don't fully understand this manual or need any support or have questions regarding the Ukey installation, please contact us at 281-252-5438 or email us at support@ukeyless.com.

Safety

There are certain precautions you must take before installing the Ukey System; please read through and fully understand this manual before attempting to install the Ukey System in your equipment. Failure to do so can cause property/equipment damage, or personal injury. Practice safe workplace habits while the installation is being performed including wearing PPE and proper housekeeping. We are assuming the the Ukey System will be installed by one of our authorized dealers or a technician with basic mechanical knowledge, tools, and a working knowledge of DC electric devices. Disconnect machine battery before installation to prevent accidental shorts. We want you to be happy lifetime customers with Ukey.

Package Contents

- Ukey main unit with attached beeper alarm
- Keypad connector cable
- Ukey keypad (white for starter applications or black for boom and scissor lifts)
- Wire connectors
- Instructions
- Small decal for control panel

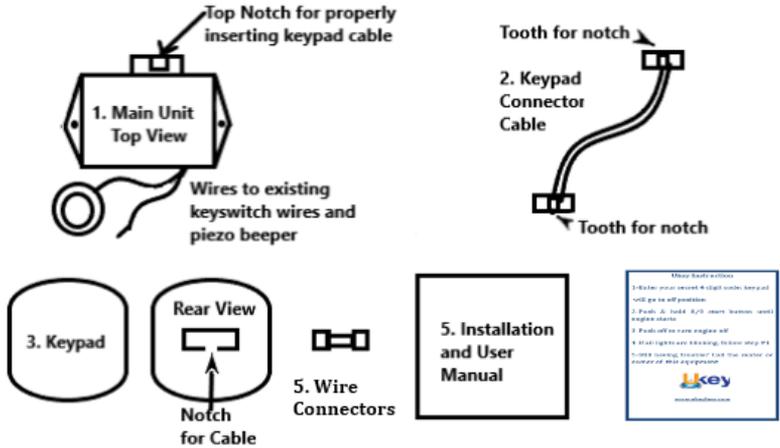


Figure #1 Components

Necessary Tools

- File or cutter for making rectangle hole for keypad installation.
- 1 inch drill bit (or unibit) for drilling hole for piezo beeper
- Wire crimper pliers
- Test light or voltmeter
- Safety glasses, gloves or PPE as required by your workplace.
- Knowledge of DC voltage and testing

Installation Guide

Overview

We have two different machine configurations; the black keypad is for boom lifts with ground **OFF** platform position and white keypad is for all other machines, forklifts, telehandlers, backhoes, and any other equipment that has a 12/24-volt system. These have **OFF**, **ON**, and **START** positions on the original key switch. Please note that the keypad is smart, so you can use the same main unit for both starter and boom lifts and scissor lifts. You just need to change the keypad out. Extra keypads are available for replacement or different machines. Make sure you have the proper keypad for your machine before proceeding. Contact Ukey to order extra keypads.

Installation

1. Prior to installing the Ukey system in your machine, test the existing key switch, assuring that the engine starts, and all functions work properly and that full ground and platform function tests upper and lower are performed on all MEWPs machines per the factory instructions.
2. Disconnect battery from machine.

3. Remove dash or instrument panel where the existing key switch is located
4. Remove key switch from panel
5. Locate the keypad in the panel facing the operator, since the operator needs to see the numbers to enter their code. Cut, grind, or file a rectangular hole, 1 inch across and 1/3 inch high to accommodate keypad bump out on back, and cable connector within the distance of keypad cable to main unit. We can supply longer keypad cables for special applications. Grind or file the edges smooth and clean face of panel where keypad will be installed, remove paper from rear of keypad to expose adhesive. Stick keypad onto dash panel holding it level. If dash panel is too rough or keypad is not sticking thoroughly, use a clear silicone adhesive. It is normal for keypad connector and main unit connector to have grease on them. This is nonconductive grease that helps to prevent moisture on connector pins.
6. Find a suitable location for the piezo on the panel, within wire distance of main unit, making sure you can close the dash panel without contacting anything. Drill hole for piezo 1 inch in diameter using a cone shaped unibit (step drill bit). Make sure it is located within the distance of the main unit and red/black wires. Sometimes you can use the existing key switch hole for locating the piezo beeper. Place piezo into hole and install and tighten plastic retainer nut.
7. Install keypad cable into main unit and rear of keypad making sure you line the notch up in the connector as shown in figure #1. Forcing the connector backwards will cause malfunction and damage the unit. Attach the main unit inside of dash or panel on a clean smooth surface by removing the paper from the adhesive tape located on the bottom of the unit. Try to stick the main unit with no keypad or wires coming out of the top of the unit, preferably on the side. Use 2 screws in mounting tabs if necessary.

If you have a white start keypad, use the instructions in Section 2.

If you have a black GP (ground platform) keypad, skip to the instruction in section 3.

Section 2 – white keypad system

1. Ground Black wire from main unit to machine frame (important to clean all paint and attach tightly). Do this before connecting to any other wires! Failure to do so will cause intermittent operation and damage to the starter and will void the warranty. Please note that the ROPS (Roll-over Protective Structure) on many backhoes and skid steer machines are rubber mounted and do not serve as a solid ground connection and newer machines have many plastic panels and dashes, so you may need to run the black wire directly to the battery minus terminal.

Warning! Before performing the following steps, make sure that it is ok to turn on the ignition and start machine momentarily and the engine is clear of personnel etc., and make sure the key switch does not short to ground anywhere.

2. Connect the battery back to the machine.

Figure 2 Start Wiring Matrix

4. Connect all the key switch wires to the Ukey unit according to the wiring matrix, making sure that wires are arranged and fastened properly to prevent accidental shorts.
5. Reinstall dash panel to machine.
6. Fasten small Ukey instruction decal near keypad for reference.

Quick Start for White keypad System

1. The Ukey keypad consists of 5 buttons. Each button represents two numbers. You do not need to push a button twice to get the other number for example:

The Ukey 4-digit code that ships with your unit is ****. Each of the 5 buttons on the keypad represents 2 numbers.

Note: Enter only 4 digits for login.

To enter your 4-digit code you would push each corresponding button (0/1, 2/3, 4/5, 6/7, 8/9) once, this will log you in. You should have a green LED and the **OFF**-position **blue** LED on. Then you can push **ON** (6/7) then **START** (8/9) or **START** button (8/9) directly to start your machine. Make sure to push and hold the start button unit engine starts, or you need to log off then back on to restart start time (output works first time only for anti-restart and times out after 20 seconds for starter protection). To turn your machine off, push the **OFF** (4/5) button once. This also logs you off.

Section 3 – Black keypad GP System

1. If you are installing the Ukey system in a Genie boom lift, please refer to the Genie boom kit part# TSDIH. It contains the proper harness and wiring diagram to easily install Ukey in Genie boom lifts. Please refer to the Genie boom lift application kit instructions included with the kit.
2. Grounding - attach black ground wire from main unit to machine frame (important to clean all paint and attached tightly); do this before connecting any other wires! ***If you have an electric machine, it may have an isolated negative called B-. Connect the black wire to B- to ensure proper operation. B- is usually located on the motor controller. Examples are Genie GS scissor lifts, JLG ES scissor lifts, electric drive boom lifts etc. This is important to the***

proper operation of the Ukey processor and if not connected before any other wires, can cause unintentional output on ground and platform outputs.

3. Connect the battery back to the machine.
4. Connect all the key switch wires to the Ukey unit according to the wiring diagram, making sure that wires are arranged and fastened properly to prevent accidental shorts.
6. Reinstall dash panel to machine.
7. Fasten small Ukey instruction decal near keypad for reference.

Quick Start for GP keypad system

1. The Ukey keypad consists of 5 buttons. Each button represents two (2) numbers. You do not need to push a button twice to get the other number. For example: To enter your 4-digit code you would push each button once. This will log you in. You should have a green **LED** and the **OFF**-position **LED** on.
2. Push GRD (Ground Control) 6/7 button. Function test all ground controls per daily inspection in your machine operator's manual.
3. Push PLAT (platform controls) 2/3 button. Function test all platform controls per daily inspection of your machine. Turn off the emergency stop and turn back on, making sure the machine restarts and the functions work correctly.
4. Return to the ground station and log off by pushing 4/5 OFF button once.

Most machines do not require an application wiring diagram, however, there are some applications that are special, requiring additional diodes, relays etc. If you are in doubt, please contact us for application diagrams or assistance. We have many years of experience in special applications. Please have the make, model, and serial number, if available, for our reference.

This concludes your successful installation of the Ukey system in your equipment. Contact us if you need additional support regarding the Ukey system.

Ukey Programming Instructions

The Ukey Keyless System is fully programmable. It features the following coding structure to give you the ability to customize your security.

6-digit Company code: Capacity 1, must contact Ukey for changing or discovery authorization.

5-digit Foreman code: Capacity 10. One is included with your purchase
Capability: can add, delete, or read last ten 4-digit user codes that have logged in. This code cannot operate the machine, but it can be used to add a 4-digit user code to operate machine.

4-digit User Code: Capacity 124. One is included with your purchase.

We recommend changing the default code to a custom 4 digit code or codes.

3-digit Emergency code: Capacity 1, none are included with your purchase (you add it). Capability: Can operate your machine with warning beeper and keypad flash for a limited, 1 time use. Expires upon logging out (pushing off)

User programming instructions

To enter the User programming mode, enter your 5-digit Foreman code. You will then see the green PGM LED lit in the center of the keypad. Ukey will log you out after 2 minutes of no button presses for security reasons. You can then perform any of the following:

1. **Add new 4-digit code** – press the 5-digit code, followed by your new 4-digit code, followed by 1-1-1. Make sure the orange **AUX** LED flashes 3 times; you can add the next code using the same sequence (up to 124 max). You can add a new 3-digit emergency code followed by 1-1-1 (one only). If too much time elapses between keystrokes, then the Ukey will reset itself and not save the coding; you will have to repeat the process.
2. **Remove an existing 4-digit code**: press the 5-digit code, followed by the 4-digit code you want to remove, then followed by 9-9-9. Make sure the blue 8/9 LED flashes 3 times, this indicates successful removal. You can then remove another 4-digit code using the same sequence.
3. **To read existing users**: Enter 5-digit code and then press the 2/3 button 9 times and wait, you will see all codes displayed by LED flashes with a pause between codes. Let the Ukey finish the sequence without interruption.
4. **To remove all existing users**: If you are selling your machine or just want to start over, enter the 5-digit code, and press the 8/9 button 9 times, then 8/9 blue then while LED flashes rapidly, press 8/9 button once immediately. This removes all 4-digit user codes from your system. You must enter a new user code to use your machine. See step #1 – (Add new 4-digit code)
5. **See last 10 users**: To see the last ten users that logged into your Ukey System, enter the 5-digit code, press 0/1 button 9 times, wait and Ukey will flash the 10th user, followed by the 9th user and so on. Allow Ukey to finish its blinking sequence without interruption.
6. **To log out**: of user programming mode, press **OFF** once.

To enter the foreman programming mode, enter your 6-digit company code. You will then see the green PGM LED lit solid in the center. Ukey will log you out after 2 minutes of no button presses for security reasons. You can then perform the following:

After entering your 6-digit company code, green PGM led will light solid, then you enter a new 5-digit code followed by 1-1-1. Then make sure the orange AUX blinks 3 times. You can then add the next code using the same sequence (up to 10 foreman codes). To exit push off button once.

To enter a new company code, please contact Ukey for instructions.

Troubleshooting

If you are having trouble using your Ukey in your machine, follow the steps below:

1. **No LEDs on keypad:** Check 30-amp fuse and red wire voltage source; also test black wire to battery negative. Red LED should blink once per second after powering up.
2. **LEDs rapidly blink counterclockwise:** The wrong code was entered more than 6 times indicating tamper mode. The only way to clear this is to enter a successful code. Often you will see this on Monday morning after someone tried too many times to log in and use your machine. If a button is damaged on your keypad, it may not register a successful code. Test the buttons by pressing each button one at a time and make sure piezo beeps once. If any buttons are damaged, you may have to replace the keypad only.
3. **Piezo alarm continually sounds:** In rare situations, there can be positive feedback from the machine. Disconnect yellow, brown, and blue wires separately until the piezo stops sounding. Install a 6-amp diode in series with the stripe facing your machine to block any positive feedback from the machine. This is the hotwire detection alarm sounding.
4. **Piezo alarm will not sound:** Check the back of the piezo for proper wire connections making sure red is on (+) positive and black is on (-) negative. **If Piezo still will not sound, replace it.** Replacement parts are available from Ukey.
5. **LEDs blink all at once rapidly:** Hotwire detection alarm was off, enter correct code to clear.
6. **If your machine will not start after logging in:** Refer to figure 4 and test for voltage at the proper output wire.

Figure 4 Ukey Voltage Test White Start System

7. **If your boom or scissor lift will not function after logging in:** test for voltage at the proper keypad output wire. If you continue to have any issues with the installation of the Ukey System on your machine, contact us immediately.

Thank You so much for being a Ukey customer!

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