Basic Falcon System Setup

Quick Installation Instructions

PTI Integrated Systems

THE NEXT LEVEL OF SECURITY SYSTEMS
AND MANAGEMENT SOFTWARE:
INTEGRATION.

EASY TO IMPLEMENT. SIMPLE TO USE.

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I. Introduction.

This is a Quick Installation Instruction Document for use in setting up a basic Falcon System with two standard keypads. You will need to reference the Falcon Installation Manual for Falcon programming instructions or for more complicated system setups. Please read this entire document before proceeding. Please follow all steps in order. If you need assistance or have questions about this installation, please contact our technical support department by telephone at (480) 941-1513 or by email at support@ptiaccess.com.

II. Disclaimers and Warnings

We strongly recommend that installation and setup of any PTI equipment be done by a certified, licensed, qualified, and competent person. PTI Integrated Systems can recommend local dealers and installers, but it is up to the customer to verify their qualifications and negotiate any pricing or contracts unless PTI has been specifically contracted in writing to do so for the customer. These guidelines are subject to change without notice. With any setup or configuration, some troubleshooting and adjustment of the configuration may be required. This will differ with every installation depending on many outside and site-specific variables. This troubleshooting and configuration may include purchasing additional equipment. In no circumstances will PTI Integrated Systems be responsible for any damages either incidental or consequential based on these recommendations. All installation of electronics and electrical systems must be in compliance with local, municipal, state, and National Electrical Code.

Warning – Incorrect installation of electrical components can result in damage to electronics as well as personal injury.

Warning – Cross-wiring the AC power with DC power will damage the electronics.

Warning – Cross-wiring the Power wires with the Data wires will damage the electronics.

Warning – Cross-wiring the positive and negative on the DC part of the system will damage the electronics.

Warning – Do not run low voltage system wires in the same conduit as high voltage wiring.

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III. Installation Instructions

1. Pull system wires in electrical conduit from the office, where the Falcon Base Unit will be (generally on the desk near the computer), to the location of the keypad located inside the protected area (usually the Exit keypad). Be sure to leave a few extra feet of wire at each end to allow room for adjustment.   Run system wire from the keypad inside the protected area to the keypad location outside the protected area (usually the Entrance keypad). Be sure to use PTI recommended wire (18 awg, 4 conductor shielded). Run an additional wire from the keypad inside the protected area to the gate operator or door strike to be triggered by the keypads. Surge protection (Opto-Isolator or Ditek) is recommended to be put on the system wires for additional protection but is not required for operation. Contact PTI Technical Support for more information on surge protection or to purchase surge protection for your site.

2. Mount the keypads on goosenecks or on walls that are accessible for clients to enter their code to enter the gate or door. It is a good idea to seal the back of the keypad and the base of the gooseneck with silicone. Pull the wire through the hole in the back of the keypad base. Trim back the wire leaving ½" of bare wire on each. Connect the bare wire ends to the terminal blocks as shown in the diagram, seating the wire firmly and tightening down the terminal block screws. Plug the terminal blocks onto the keypad circuit board. Using a small screwdriver, turn the small dial in the center of the keypad circuit board to # 1 on the exterior keypad and # 2 on the interior keypad. Connect the relay wires from the keypad to the door strike or gate operator per the instructions that came with that item. Close the Keypad case.

3. Mount the PTI Power Supply in the office near the Falcon Base Unit (generally on the wall under the desk or in an adjacent closet). Connect the power supply per the instructions that came with it. Be sure to connect the Power Supply + & - wires to the system wire + & - using wire nuts or crimp connectors.

4. Connect the system wire data lines to the RS485 cable using the large terminal block at the end of the RS485 cable. Then connect the cable to the RS485 connector on the back of the Falcon Base Unit, tightening it down with the attached screws.

5. Connect the Falcon Desktop Power Supply to the back of the Falcon using the small screw-in connector. Plug the power cable into the desktop power supply and then into the 120V outlet (230V in Europe or Australia). PTI strongly recommends that the Falcon Base Unit and any other office electronics be plugged into a UPS (Uninterruptible Power Supply) or other surge protection/battery backup device. Turn the Falcon Base Unit on using the switch on the back.

6. If using a Dot Matrix Printer for Access Control reporting, connect the cable that came with the printer from the back of the Falcon Base Unit to the printer. Tighten down the screws on each connector. Plug the printer in and turn it on.

7. If using Falcon 2000 for Access Control reporting or if interfacing to an Accounting Software, connect the RS232 cable that came with the Falcon system to back of falcon. Plug the other end into the RS232 port on the back of the computer. Tighten down the screws on each connector. You must use the PTI provided RS232 cable; others will not work. Do not cut or splice the RS232 cable. If you need a longer cable, contact PTI to purchase one.

8. Set date and time on Falcon Base Unit using Function 1. For details on how to do this, refer to the Falcon Installation Manual. After 1 – 2 minutes, check the keypads to make sure that the correct date and time was transmitted to them. If not, verify that all connections have been made correctly.

9. Program time zones and units in Falcon (Functions 2 & 5), Falcon 2000, or download from interfaced accounting program. Refer to the Falcon Installation Manual or your accounting software manual for instructions on doing this.

10. Try an access code at one of the keypads for to verify that it triggers the relay, opening the gate or door strike. If this does not work, double-check each step. Then if you need assistance, contact PTI Technical Support.
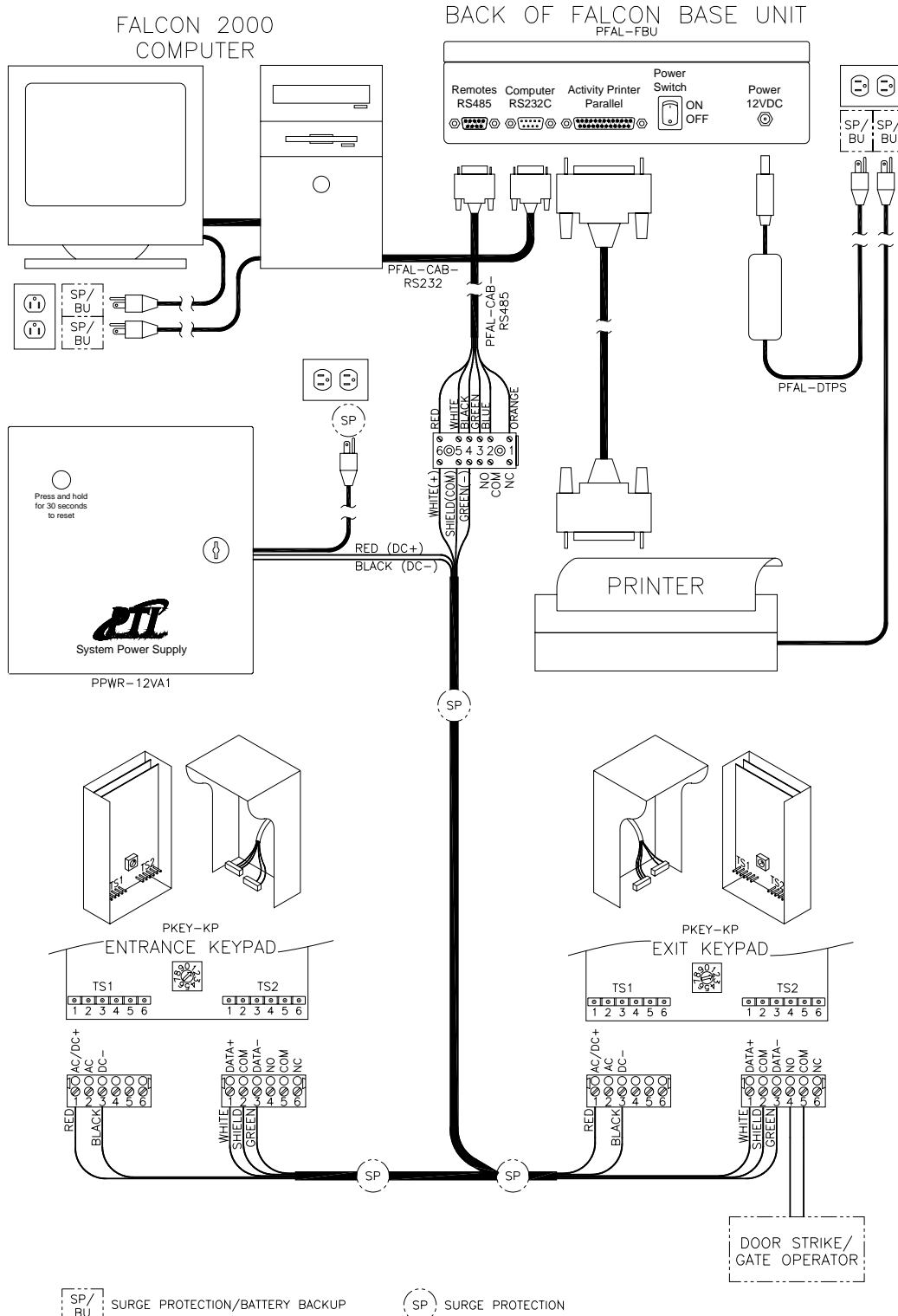
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IV. Installation Diagram

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V. Part Identification List

Falcon Base Unit (PFAL-FBUNV): This is the unit that controls the Falcon Access Control System. This should be mounted in the office, generally on a desk near the computer or printer.

Standard Keypad (PKEY-KP): This is the remote unit that customers use for access into and out of a secured area. These should be generally be mounted in near the door or gate in an accessible location (either on a gooseneck stand or on a wall). For other keypad types, refer to the Falcon Installation Manual.

PTI Remote Power Supply (PPWR-12V1A): This is the unit that supplies power to the Standard Keypads. Generally, it should be mounted inside the office near the Falcon Base Unit in an accessible location. Do NOT power door strikes, sirens, cameras or other non-PTI equipment from the same power supply that is used for the Standard Keypads.

Desktop Power Supply (PFAL-DTPS): This is the unit that supplies power to the Falcon Base Unit. This is plugged into the back of the Falcon Base Unit and then into a 120V outlet (230V in Europe or Australia). PTI recommends that the Falcon be plugged into a UPS or other power surge/battery backup system.

Power Cable (PFAL-CAB-PWR): This is the cable that connects the desktop power supply to the 120V outlet*. It is plugged into the back of the Falcon Base Unit and the system wires are connected to the terminal block on the other end. PTI recommends that the Falcon be plugged into a UPS or other power surge/battery backup system.

RS485 Cable (PFAL-CAB-RS485): This is the cable that connects the Falcon Base Unit to the Standard Keypad wires. It is plugged into the back of the Falcon Base Unit and the system wires are connected to the terminal block on the other end.

RS232 Cable (PFAL-CAB-RS232): This is the cable that connects the Falcon Base Unit to a computer using Falcon 2000 and/or an Accounting Software. One end is plugged into the back of the Falcon Base Unit and the other end is plugged into the RS232 port on the back of the computer. Do not use other similar RS232 cables that come with the computer, are bought from a store, or that you make yourself. The PTI RS232 cable is made differently than others, so you must use ours. Do not splice or cut the RS232 cable as this will interfere with operation. If you need a longer cable, contact PTI to purchase one.