

HandPunch

Overview

This section describes the HandPunch series of biometric scanners from RSI (Recognition Systems).

These instructions apply to all the different HandPunch models, from the 1000 to the 4000.

Biometric Recognition

The HandPunch does biometric **verification** (as opposed to biometric **identification**). The employee identifies himself by entering a badge number, then the HandPunch verifies that he is who he claims to be by checking that his hand matches a stored profile.

The HandPunch does not store fingerprints, palm prints, or anything else from the front of the hand. The HandPunch looks down at the back of the hand and records the outline of the hand, as well as looking sideways at the thickness of the hand. These measurements are stored as a numeric value, and subsequent scans are compared to the value. The “score” that is shown when an employee scans indicates how closely the new scan matches the stored value.

Is it safe?

The HandPunch uses an infrared digital camera along with an infrared light. This is the same harmless light as your TV remote control uses.

The HandPunch poses no more health risk for employees than shaking hands, handling money, or touching the same doorknob as everybody else uses.

Installation

There are a number of installation and setup steps for the HandPunch.

Physical Installation

Physical installation is fully described on the documentation CD that comes with the HandPunch. The recommended height for the HandPunch platen is 40 inches (102 cm) from the finished floor. The HandPunch should be out of the path of pedestrian and vehicular traffic. Avoid placing the HandPunch where users must cross the swing path of a door. The HandPunch should be in an area where it is not exposed to excessive airborne dust, direct sunlight, water, or chemicals.

Electrical Power

The HandPunch is like any computerized device; it needs clean electrical power to operate properly. If the electric power supplied to the HandPunch is subject to brownouts, fluctuations, or interruptions, you may want to consider connecting it to a UPS (uninterruptible power supply).

When the HandPunch is turned off or loses power, it retains the employee profiles and scans in its memory until power returns. The real time clock will keep running while the power is off.

Data Communication

Datacomm installation depends on the communication option purchased. The two HandPunch connection options are serial, in which the device connects directly to a serial port on your computer, and Ethernet, in which the device connects to your network using either built-in Ethernet or an external Lantronix UDS-10 adapter.

Serial

The RS232 serial connection is achieved using the RS232 wire supplied with the HandPunch. It consists of 50 feet of serial cable, with a DB9 plug at one end, and a three-pin connector at the other end. The DB9 plugs into a serial port on your computer, and the three-pin connector connects to the HandPunch.

If you will be passing the cable through a wall or a conduit, you may need to remove the connector to ease the passage of the cable through tight spaces. Take note of the wire colours before removing the connector, so you can put it back correctly.

Ethernet

If your HandPunch has a built-in Ethernet port then you simply plug it into your 10BaseT network using the usual network cable and RJ45 plug. You assign it an IP address via the front-panel Set Serial command (using supervisor password 2).

If you are using the external Lantronix UDS-10 serial-to-Ethernet adapter, connect the RS232 wire supplied with the HandPunch to the Lantronix UDS-10 using the supplied DB9-to-DB25 adapter. The Lantronix connects to your 10BaseT network using the same type of Ethernet wiring and RJ45 connectors as you would use for a computer.

Before you permanently attach the Lantronix to a wall or other surface, take note of the MAC address on the label. It will be in the form 00-20-4A-xx-xx-xx. You will need this information when setting up and configuring the Lantronix. See the separate instruction sheet included with the Lantronix unit to assign it an IP address.

Retrieval Setup

See the ATG section of this manual for the configuration of the ATG retrieval program, which collects the scans from the HandPunch and posts them to the time & attendance system.

Employee Code vs. Badge Number

The time & attendance system knows employees by two IDs. The employee code is the alphanumeric value that links the employee to the payroll system. The badge number is the numeric value that the employee enters on the HandPunch. Often the two values are the same, but they do not have to be. For example, if your employee codes in the payroll system are not completely numeric or if they have a leading zero, you will need to assign a numeric badge number for employees to use with the HandPunch. You can enter only numeric IDs into the HandPunch.

The HandPunch discards or ignores any leading zeros in the badge number. Therefore you must ensure that you do not enter leading zeros in the badge numbers in the time & attendance system.

When registering employees in the HandPunch, enter their badge number, not the employee ID.

Registering Employee Hand Profiles

You use the front panel of the HandPunch to register employees in the clock. You must be registered in the HandPunch as a “supervisor” to be able to register other users.

Sign on as a supervisor

Press [Clear] and [Enter] together. Enter your supervisor ID and press [Enter]. Scan your hand. When prompted for PASSWORD, enter 4 and press [Enter].

(When the HandPunch is new and no employees or supervisors have been registered yet, pressing [Clear] and [Enter] together will prompt for password right away. Once there are users registered, you must enter a supervisor ID to get to the PASSWORD prompt.)

Adding an employee to the clock

To add an employee, press [Yes] at the ADD EMPLOYEE prompt. Enter the employee’s badge number and press [Enter]. Then have the employee scan his hand three times when prompted.

Adding a supervisor to the clock

To add a supervisor (a user who can register other users), press [Yes] at the ADD SUPERVISOR prompt, and follow the same instructions as for a regular employee. Enter the supervisor’s badge number and press [Enter]. Then have the supervisor scan her hand three times when prompted.

It is possible that your supervisors do not have badge numbers because they are not in the time & attendance system. Maybe they are on salary and therefore do not have

to use the HandPunch to scan their times. In that case, you will need to make up some fake badge numbers for the supervisors to use when registering employees in the clock. You do not have to add these supervisors to the time & attendance system. Only the HandPunch will know about these supervisor badge numbers.

Removing an employee from the clock

To delete an employee or supervisor, press [Yes] at the REMOVE USER prompt. Enter the ID and press [Enter].

When you remove an employee from the HandPunch, you may also want to delete him from the Employee Management database in ATG, as well as change his status to Terminated in the time & attendance system.

Exit from supervisor mode

Press [Clear] a few times to exit from supervisor mode.

Having trouble registering some hands?

Some employees may have disabilities such as missing fingers that prevent them from using the HandPunch successfully. The HandPunch is oriented for right-handed use, but an employee who has difficulty registering his right hand may be able to register his left hand successfully, by scanning his left hand with the palm up.

In extreme cases where neither hand can be registered, there is a Special Enrollment option that allows selected employees to not have to register their hand. See the RSI documentation CD for details.

Multiple HandPunch Units

If you have more than one HandPunch, and want your employees to be able to scan in and out using any HandPunch interchangeably, you have two options.

You can register the employee's hand profile into each HandPunch unit independently.

You can register the employee at only one HandPunch, and use the Employee Management function of the ATG program to synchronize the hand profiles among the clocks. See the ATG section of the manual for details.

Scanning In and Out

Employees scan at the clock by entering their badge number, pressing [Enter], and scanning their hand to prove that they are who they claim they are.

When the HandPunch recognizes the employee it shows a SCORE. The score identifies how closely the employee's hand scan matches the registered template. Lower numbers are better. The HandPunch is programmed to reject scores higher than a given number. This rejection threshold is settable in ATG.

If the employee enters the wrong ID, he simply presses the [Clear] button and starts over.

HandPunch User Capacity

The HandPunch stores employee templates as well as employee time scans in its non-volatile memory. Each HandPunch comes with a certain amount of configured employee memory. You can see how many employee profile locations remain by using supervisor function 3.

Press [Clear] and [Enter] together. Enter your supervisor badge number and press [Enter]. Scan your hand. When prompted for PASSWORD, enter 3 and press [Enter].

Press [Yes] at the LIST USERS prompt. The HandPunch will display the number of empty employee 'slots'. That is how many more employees you can register in the clock. If you need to add more employees than there are slots available, you can delete terminated employees from the clock to free from space. Alternatively you may be able to purchase a memory upgrade for the HandPunch. Contact Advanced Tracker for details.

Press [Clear] a few times to exit from supervisor mode.

What Time is It?

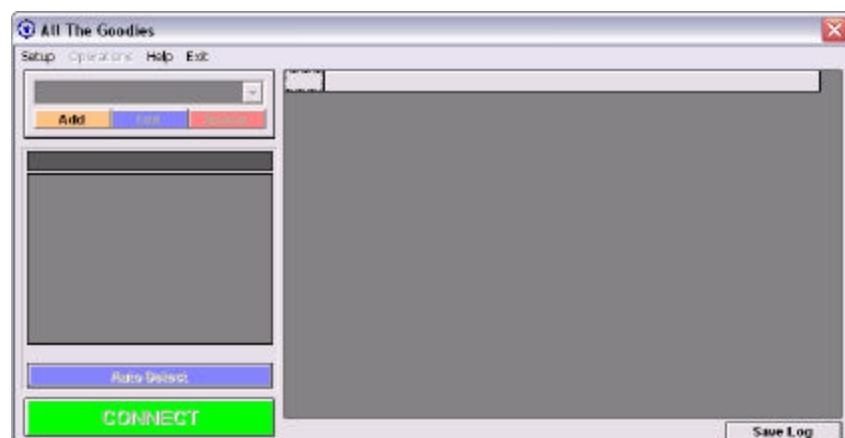
The HandPunch keeps time by itself.

When an employee scans in our out, the HandPunch will record the time that was displayed on its front panel at the time of the scan.

If the time needs to be adjusted, e.g. because of Daylight Saving Time, see the TimeSync section of this manual.

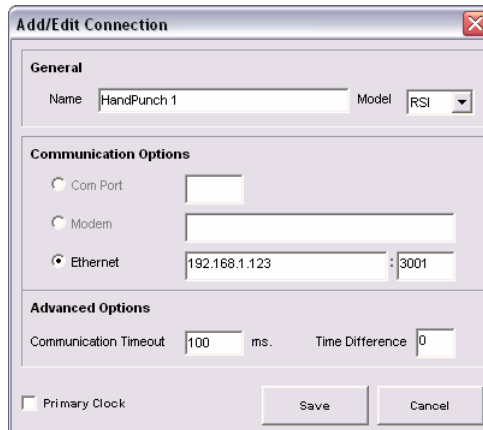
Setup ATG

You need to configure your HandPunch in ATG. Run ATG in Setup mode. You can get into Setup mode by pressing the S key while the program is starting, or you can create a shortcut that runs ATG with the setup command.



Add a connection

Add a new connection by pressing the Add button:



Give the connection a name, and set the Model to RSI. If the HandPunch connects to a serial port on your PC, select Com Port and enter the port number (usually 1). If the HandPunch connects via Ethernet, select Ethernet, enter the IP address, and enter 3001.

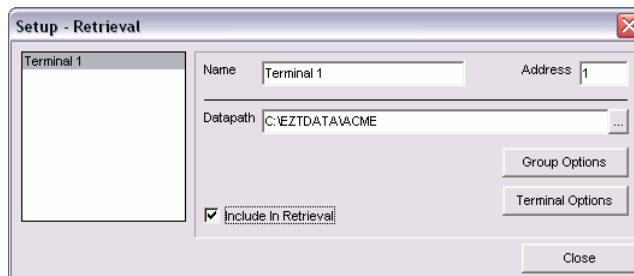
Press the Save button.

Connect

With the connection you just created showing in the list of connections (just above the Add button), press the green Connect button. If ATG can connect to the device successfully, it will auto-detect the HandPunch. If ATG cannot connect, verify the com port or IP address you entered for the connection.

Setup Retrieval

While connected to the HandPunch, select the Setup > Retrieval menu option. This will show you the Setup Retrieval window for the connection:

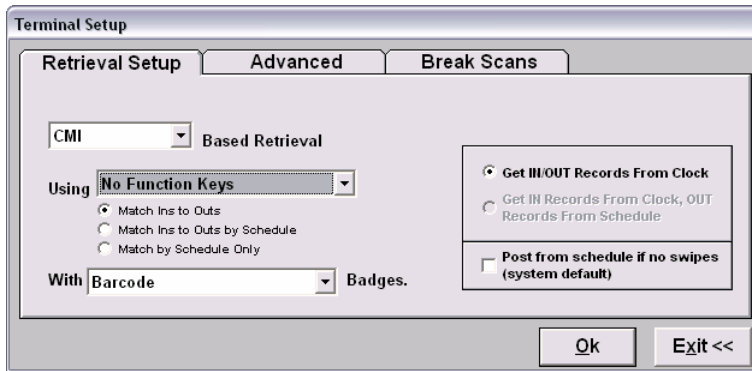


Set the Datapath to the path of your time and attendance databases (i.e., whatever is set in the File > Company menu of the time and attendance system).

Check the Include In Retrieval option.

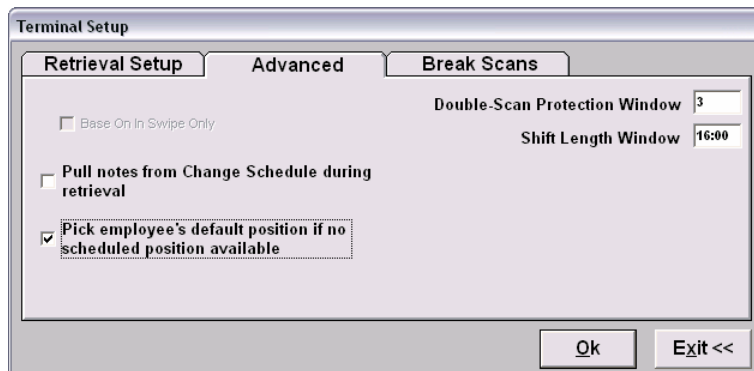
Press the Terminal Options button, to get to the Terminal Setup window.

In the Retrieval Setup tab:



- Set the Using option to “No Function Keys”.
- Select “Get IN/OUT records From Clock”.

In the Advanced tab:



- Set the Double-Scan Protection Window to 3. This configures ATG to ignore multiple scans from the same employee within a three-minute window.
- Set the Shift Length Window to the longest amount of time you normally expect an employee to work (e.g., 14:00). ATG will not attempt to match In and Out scans that are farther apart than the Shift Length Window.
- Check the “Pick employee’s default position” option.

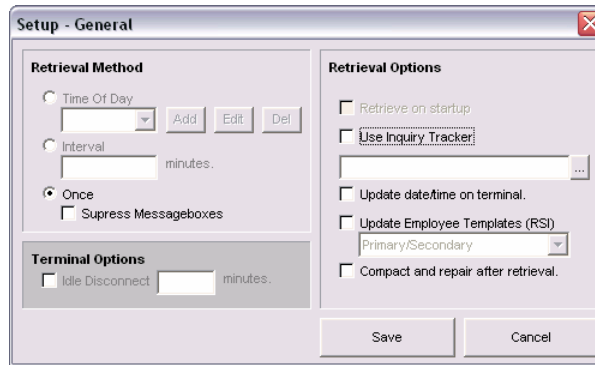
In the Break Scans tab, make sure the option is not checked.

Press OK to save your changes.

Close the Setup Retrieval window.

ATG Retrieval Scheduling

Use the Setup > General menu to configure how ATG Retrieval will operate.



When you start ATG Retrieval, it may retrieve once and then stop running (the Once option), or it may retrieve at specific times of day (the Time Of Day option), or at specified intervals (the Interval option).

If you use the Time Of Day or Interval options, you can specify whether it should retrieve immediately on startup, or wait until the specified time of day or interval before doing the first retrieval.

Check the “Update date/time” option if you want ATG to reset the HandPunch’s clock with every retrieval. Use this option only if the clock on your PC is always accurate.

Do not use the “Update Employee Templates” or “Compact and repair” options.

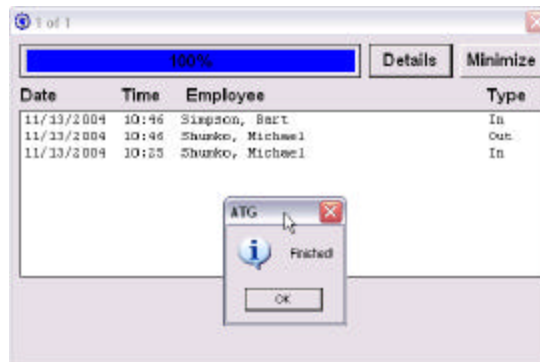
Close the Setup General window.

Exit from ATG Setup.

Retrieve Scans from the HandPunch

The ATG Retrieval needs to be run occasionally to retrieve the scans that are stored in the HandPunch and post them to the Time And Attendance Transactions database.

The ATG Retrieval shows you all the scans that it processes.



Note that when ATG processes an Out scan, it may show you the matching In scan, even if that In scan was already displayed in a prior ATG Retrieval run.

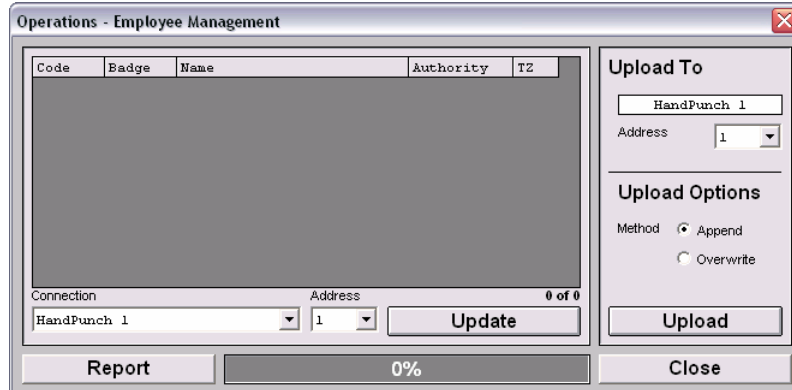
Don’t worry if the display does not seem to be interpreting the scans as In or Out correctly. This is because of the functionless scanning (the employee does not press a button to indicate whether the scan is an In or an Out). Once all the scans are in for a given employee, the scans will be categorized correctly in the Time and Attendance Transactions.

Save the Employee Profiles

To protect yourself from having to re-register all your employees' hand profiles if the HandPunch unit ever needs to be replaced, you can backup the profile data in the ATG database. Then when you get a new HandPunch you can restore the profiles to the new clock.

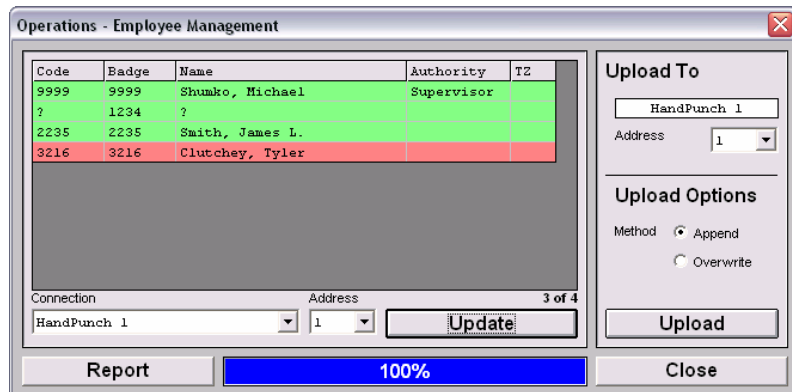
Remember to do this after you have registered new hand profiles in the HandPunch. Start ATG in Setup mode, and Connect to the HandPunch.

Bring up the Operations > Employee Management menu:



Backup the profiles

To backup the profiles, use the Update button. This will update the ATG profile database with the latest profiles from the HandPunch.



The window shows the badge numbers that are recorded in the HandPunch, and displays the corresponding Employee Code and Name from the time and attendance database.

If a line shows question marks (?) for Code and Name, it means that there is a badge number registered in the HandPunch that is not known to the time and attendance system.

If a line shows in red, it means that a previously stored profile is no longer present in the HandPunch. You can restore the profile to the HandPunch (see "Restore the profiles" on page 10), or you can delete the profile from the ATG database by right-clicking on the name and choosing Remove Employee.

Restore the profiles

To copy the stored profiles back to the HandPunch, press the Upload button on the right. After the upload is complete, the program will automatically do an Update to show you the status of the HandPunch.

Synchronize multiple HandPunches

If you have multiple HandPunch units, you can copy hand templates from one HandPunch to another. For example, you may always register employees at a certain HandPunch, therefore you need to copy the profiles from that HandPunch to all the other units that the employees might use.

- Connect to the “source” HandPunch and do an Update.
- Then connect to the “destination” HandPunch, select the “source” HandPunch in the bottom-left box, and press the Upload button. Repeat for any other HandPunch units that need to receive the new templates.