# Teller Cash Dispensers (TCDs) Installation and Troubleshooting

Configuration and Troubleshooting Guide for Legacy or Lutzwolf Middleware Integration

## INTRODUCTION

This document covers the installation process and the primary responsibilities of the Systems Team technician for troubleshooting TCD's utilizing either the legacy or Lutzwolf middleware approaches.

## CONTENTS

# WHAT DOES THIS GUIDE COVER?

This guide primarily covers the installation and troubleshooting guidelines for teller cash dispensers that utilize the new Lutzwolf middleware to interface with CU*BASE.  It also covers the basics of configuring and troubleshooting a TCD using the legacy interface.

This guide attempts to give the hardware settings for both the TCD and the workstation it's connected to, but these settings may vary depending on the model of the dispenser.  Please use this guide a reference, but always verify with your vendor that these settings are correct.

> *Most vendors have a "cheat sheet" that covers the installation requirements for use with the Lutzwolf software.  Unfortunately, this cheat sheet does not exist for the legacy interface.*

## SUPPORTED TCD'S

A variety of TCDs are supported by CU*BASE.  Refer to this web page for a the most current list:
http://cuanswers.com/client_pm_bp_network.php#tcd

# TCD CONFIGURATION

## GENERAL NOTES

Every dispenser model may have different settings that need to be set in order for the dispenser to work.  Please work with your vendor to very these settings.  This guide is not definitive and is meant to give a general outline of the most commonly used settings.

## TALARIS TCD SETTINGS

Talaris has a spec sheet for CU*Answers and the technician should be familiar with the settings that need to be set.  Here are the known settings that need to be enabled on the dispenser to enable communication with the middleware.  These settings apply to both the legacy and new middleware.

- 1200 baud, 7 data bits, 2 stop bits, Even parity.
- Handshaking enabled.
- IP connectivity available via an IP to serial converter.
- Serial cable P/N: 6684562.
- Single User Mode (a.k.a, Single Port Mode).

## TALARIS COIN SETTINGS

Coin support with Talaris dispensers is limited to the Instachange or 559 coin dispensers.  As with the TCD, Talaris should have a spec sheet already available for the technician.  Both coin dispensers to be connected to the workstation, not to the cash dispenser.

> **Important:** *These settings only apply to the new Lutzwolf middlware.  If the legacy middleware is in use, the coin dispenser should be connected to the cash dispenser itself and configured using the vendor's defaults.  The coin format must be set to US Standard.*

### Instachange

- 9600 baud, 8 data bits, 1 stop bit, Even parity.
- No handshaking.
- International coin format.
- IP connectivity available via an IP to serial converter.
- Serial cable P/N: 0022178.
- Instachange units are capable of supporting a USB connection, and this requires additional software and a reconfiguration of the coin dispenser.  USB cable P/N: 0050161.

### 559

- 1200 baud, 8 data bits, 1 stop bit, Even parity.
- No handshaking.
- International coin format.
- IP connectivity available via an IP to serial converter.
- USB support is not available for the 559 coin dispenser.

## GLORY PD61 AND PD600

Both the Glory PD61 and the PD600 are configured in almost the same way, even though the PD600's default configuration is much different. Only the Glory PD61 is supported on the legacy interface, and no coin is supported with the legacy interface.

### PD61

- 2400 baud.
- Two serial cables must be connected to the workstation.
- Serial to USB adapters may be used. It is recommended to use the Manhattan PL-2303 adapter.
- Can be used with the Telequip coin dispenser. The coin dispenser must be connected to the workstation, not to the cash dispenser.

### PD600

- 2400 baud.
- Two serial cables must be connected to the workstation.
- Serial to USB adapters may be used. It is recommended to use the Manhattan PL-2303 adapter.
- IP is natively supported on the TCD using TCP port 50000.
- Cassettes must be configured as if they were a PD61 (switch 1 for $1's, switch 2 for $5's, etc.).
- Can be used with the Telequip coin dispenser. The coin dispenser must be connected to the workstation, not to the cash dispenser.

## DIEBOLD 1053 EXP AND 220 ECD

The Diebold 1053 EXP and 220 ECD units are fully supported on the new middleware. They share the same basic configurations. Only the 1053EXP is supported on the legacy interface, and no coin is supported on the legacy interface.

- 9600 baud, 7 data bits, 1 stop bit, Even parity.
- No handshaking.
- IP is natively supported on the TCD.
- Set to "Single User Mode" (or "Single Port Mode").
- Can be used with the Telequip coin dispenser. The coin dispenser must be connected to the workstation, not to the cash dispenser.

## TELEQUIP COIN DISPENSER

Support for coin dispensers for non-Talaris cash dispenser is limited to the Telequip coin dispensers. These coin dispensers must be plugged into the workstation rather than the cash dispenser. On the legacy interface, the coin dispenser must be hooked directly to the cash dispenser and set for the US Standard coin format.

- 9600 baud, 7 data bits, 1 stop bit, Even parity.
- No handshaking.
- Baud of 2400 is also possible.
- IP connectivity available via an IP to serial converter.

# WORKSTATION SETTINGS

This section will outline the basic settings for the workstation that will control the cash or coin dispenser.

## HARDWARE REQUIREMENTS

- The workstation must meet the minimum CU*BASE workstation requirements. Please refer to the specifications at this site: http://cuanswers.com/client_pm_bp_network.php
- Enough USB and/or serial ports to accommodate the required connections from the cash and coin dispensers.
- The workstations COM port settings (baud rate, parity, stop bits, etc.) must match the settings provided by vendor for that particular dispenser.
- The workstation must have a static, routable IP address on the local network. This IP address must be configured in the CU*Answers router to facilitate communication to and from the host.

## SOFTWARE REQUIREMENTS

- The workstation must meet the minimum CU*BASE workstation requirements. Please refer to the specifications at this site: http://cuanswers.com/client_pm_bp_network.php
- Java version 6 must be installed. It is recommended to have the latest Update installed.
- Any and all existing TCD software must be uninstalled or permanently disabled. After disabling the software, a reboot is highly recommended.
- If using the new middleware, TCP port 1111 must be allowed on any local security software (such as the Windows Firewall). If using the legacy middleware, TCP port 22222 must be allowed.
- The middleware must be installed and configured.

**IMPORTANT NOTE:** The Lutzwolf software runs as a Windows service. In order to utilize the dispenser(s), the workstation must remain on. Windows does not need to be logged in, nor does GOLD, but the PC must be powered on and on the network. If the workstation goes to sleep at any point, communication with the dispenser(s) will be disrupted.

However, legacy middleware runs as an application, not as a service. This means that if the workstation with the driver installed is powered off or not logged into Windows, the driver will not be running. If the middleware isn't running, GOLD will not be able to dispense. Please make sure that the PC running the driver remains logged in and powered on throughout the day. If you need assistance configuring these settings, please contact your IT provider.

# GOLD SETTINGS (INTEGRATED)

All GOLD settings for a cash dispenser are set under **Tool #158**
**ATM/Supplemental Vault Location Config.**

**ATM/Supplemental Vault Location Config.** **(Tool #158) >"TCD" (C) Selected**



Provided below is a summary of the necessary configuration options for connectivity and communication:

| Field Name | Description |
|---|---|
| Network Terminal ID | This is the hostname (computer name) of the workstation with the Lutzwolf software installed. This must be in ALL CAPS. Underscores ("_") are not permitted. If using the legacy middleware, this can be set to the workstation's GOLD ID. |
| Machine Model # | This is the name entered in the Configurator for the particular device you are configuring. By default, this is the model of the device. This setting must match the case within the Configurator. If using the legacy middleware, this can be set to the model of the dispenser. **Important:** Both workstations can have a unique model associated with them. This is only needed when working with Glory dispensers that utilize serial connections. If you have a non-Glory device, the models will be identical for both the Left and Right stations. If you are unsure, please contact CU*Answers Network Services. |
| Middleware | This should be set to "LUTZWOLF" if using the new Lutzwolf middleware. If using the legacy middleware, leave this line blank. |

| Field Name | Description |
| --- | --- |
| Public Address | This is an IP address that is addressable by your host system. Please contact CU*Answers Network Services for this information. |
| Private Address | This is the static LAN IP address of the workstation with the middleware installed. |
| Left Station | This is the GOLD terminal ID of the station on the left side of the TCD (usually the workstation with the middleware installed). |
| Coin | Check this box if the Left Station is using a coin dispenser. |
| Coin ID | Similar to the Machine Model #, this is the name of the coin dispenser the Left Station will be dispensing from as set in the Configurator. The case must match the Configurator. If using the legacy middleware, leave this field blank. |
| Right Station | This is the GOLD terminal ID of the station on the right side of the TCD. |
| Coin | Check this box if the Right Station is using a coin dispenser. |
| Coin ID | Similar to the Machine Model #, this is the name of the coin dispenser the Right Station will be dispensing from as set in the Configurator. The case must match the Configurator. If using the legacy middleware, leave this field blank. |
| Bundle Size | Depends on the model of the TCD. "75" is the recommended setting for most models, but please check with your vendor. |

# LICENSING AND INSTALLATION

Licensing is needed for certain models and must be purchased before the software can be installed.  Please contact CU*Answers Network Services to receive a quote.

For installation assistance, please contact a member of the CU*Answers Network Services. You can reach CU*Answers Network Services at 800-327-3478, option #3, or via email at helpdesk@cuanswers.com.

# TROUBLESHOOTING

Due to the two standard interfaces that CU*BASE utilizes troubleshooting steps are identical for all makes and models. These steps provide a generic overview of what should be done. Specific instructions for your particular device should be requested from your vendor.

## COMMUNICATION PROBLEMS

Dispensers are extremely picky about the order of operations, especially when handshaking is involved. The first steps that should always be taken are as follows, and they must be performed in this exact order:

1. Power off the dispenser.
2. Power off the workstation.
3. Power on the dispenser.
4. Wait until the dispenser has finished cycling.
5. Power on the workstation.
6. Ensure the middleware is running without error.
7. In GOLD, perform a CLOSE.
8. In GOLD, verify the cassettes are NORMAL.
9. In GOLD, perform an OPEN/RESET.

If these steps do not resolve the issue, it is a communication issue. The issue could exist between the CU*BASE iSeries server and the workstation, or between the workstation and the dispenser. It may also indicate a hardware failure that is preventing the dispenser from communicating.

Verify the network settings and that TCP port 1111 (for the new middleware) or 22222 (for the legacy middleware) is not being blocked. Also ensure that the workstation is listening on TCP port 1111 or 22222 by running "netstat –an" from a command prompt. If you are using the legacy middleware, make sure the TcdIp.exe application is running in the System Tray. If you are using the new middleware, make sure that the three Lutzwolf services are started.

After verifying the software and network settings, and the dispenser still errors out, verify that the COM port settings are correct in Device Manager, then follow steps 1-9 again.

If the errors continue, please contact CU*Answers Network Services for further support.

## GOLD ERRORS

Most problems with dispensers involve communication. The generic GOLD error message "TCD ERROR" indicates communication issues exist. Please follow the steps in the previous section to diagnose and troubleshooting communication errors.

There are several known conditions that could cause issues within GOLD. These are listed here, with their resolutions. These do not indicate the exact error code you may receive, that that varies by manufacturer. The text may also be slightly different.

- "Low Notes In Cassette." This is typically a warning message. The dispenser determines where the low note thresholds are. GOLD will continue to dispense cash until the dispenser is empty. When these warnings begin appearing, it is strongly recommended you refill the cassettes.
- "Please Verify Amount Dispensed." This typically occurs when the command was sent to the dispenser but no response was received. Please follow the communication troubleshooting steps to reset communication with the dispenser.
- "Notes Cassettes May Have Been Changed." This error indicates that the lifts are not in the up position. To correct this error, please CLOSE the dispenser, make sure the cassettes are at a NORMAL status, then OPEN/RESET.
- "Reject Bin Is Full." This indicates that the reject bin counter on the dispenser is too high. To clear this, you will need to CLOSE the dispenser in GOLD before you open it. If you need assistance clearing the reject bin, you will need to contact your dispenser technician. After the counter has been cleared, perform an OPEN/RESET in GOLD.

There are times that GOLD doesn't respond after a critical error is encountered on the dispenser. You may be able to perform an OPEN/RESET on the unit, but you will not be able to dispense. To correct this, you will need to restart both workstations and re-establish communication with the dispenser. For assistance with communication problems, please refer to the previous section.