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# Using Teller Cash Recyclers (TCRs) with CU\*BASE

## Configuration and User Guide for Legacy or Lutzwolf Middleware Integration

### INTRODUCTION

This booklet covers the integrated approach where TCR uses the integrated model utilizing legacy or Lutzwolf middleware is used. With this approach, all transactions, transfers, balancing, and reporting are handled using CU\*BASE. Additionally, the adding of bills and the denominations are set using CU\*BASE.

For information on the TCR integration without middleware, refer to the “Using Teller Cash Recyclers (TCRs) with CU\*BASE – Integrated Approach without Middleware” booklet.

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For an updated copy of this booklet, check out the Reference Materials page of our website:  
<http://www.cuanswers.com/resources/doc/cubase-reference/>  
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# TCR AND WORKSTATION REQUIREMENTS

The following is a list of the TCR and workstation requirements.

## SUPPORTED TCR'S

A variety of TCRs are supported by CU\*BASE. Refer to this web page for the most current list: [http://cuanswers.com/client\\_pm\\_bp\\_network.php#tcd](http://cuanswers.com/client_pm_bp_network.php#tcd)

## TCR REQUIREMENTS

- USB connections are not supported. TCR must be connected via TCP or serial port. If a serial port is used, it is highly recommended that the TCR be on COM1.
- The TCR unit itself must be configured properly following the TCR specifications. This configuration must be performed by manufacturer's guidelines.
- InstaChange coin dispensers are supported for use with Talaris TwinSafe and Vertera TCRs

## WORKSTATION REQUIREMENTS

- Java version 6 or higher installed.
- TCP port 1111 must be allowed in any security software installed on the workstation (for instance, Windows Firewall, Symantec, Trend Micro, etc.)
- Any existing software for the TCR must be uninstalled or disabled.
- Existing software will conflict the new software and cause communication issues.

# OVERVIEW AND TERMINOLOGY

The following terms are used in this booklet (listed alphabetically):

<i>Term</i>	<i>Description</i>
Audit	<p>This feature allows you to empty the physical bills from the TCR modules so that you can manually count each bill and ensure the inventory is correct. This counting is typically followed by refilling the TCR modules with bills.</p> <p>This procedure is usually done on a routine basis (daily, weekly) as the credit union sees the need. See page 20.</p>
Auto Mix	<p>This term refers to the default combination of bills that will be used for each dispense. This is configured for each individual TCR and can be set up according to the credit union's cash purchasing procedures and member preferences. See Page 12 for more information.</p>
Driver PC	<p>This PC is physically connected as the Left Station of the TCR. On this PC is loaded the TCR IP Server software that must be launched and running before any communications with the TCR can be initiated. See Page 9 for more details.</p>
Note (Bill, Paper)	<p>These terms are used interchangeably to represent the actual paper money that is dispensed from or deposited to the TCR.</p>
Power Timer	<p>This is a device which can be programmed to automatically turn the power to the machine on and off using a daily schedule. This prevents funds from being dispensed from the machine after normal business hours. (See also "Secure" below and Troubleshooting Hints on Page 46.)</p>
Reset Command	<p>This is a command that is issued from CU*BASE to reset the TCR. The machine will make sure that there are no bills stuck in the feed path, and the TCR will be prepared for use. Be sure to remove any visible bills left in the TCR prior to pressing Enter to reset the machine.</p> <p>Some errors require a reset before ANY additional activity can be made by machine.</p> <p style="padding-left: 20px;">A reset command can be issued at any time during the day to "reset" the machine. See Troubleshooting Hints on Page 45 for more information.</p>
Rolled Storage Module (RSM)	<p>These terms are all used interchangeably to refer to the individual containers in which bills are placed for use by the TCR. They are organized by denomination. The denomination that each module will hold is set by the TCR Service technician when the TCR is installed. A Service Technician will need to be called if a change in the module setup is needed.</p>
Safekeeping Areas	<p>Physical cash in a credit union is transferred from one safekeeping area to another.</p> <p>During an Audit, when the money is physically removed from the TCR, CU*BASE records that the funds have been transferred from the Supplemental vault (the TCR) to the Branch Vault; when the money is returned to the TCR,</p>

<i>Term</i>	<i>Description</i>
	<p>CU*BASE records that the money is returned from the Branch Vault to the Supplemental Vault (the TCR).</p> <p>There are currently four types of safekeeping areas that can be tracked in CU*BASE:</p> <ul style="list-style-type: none"> <li>• Branch Vaults - These are the traditional vaults linked by the system to the Change Fund G/L (739.00). Branch vaults were an integral part of the original CU*BASE teller platform. From a credit union's perspective, this is the primary vault for a branch location. Branch vaults have their own tracking and monitoring system (Vault Control).</li> <li>• Teller Drawers - This is the physical cash in a teller drawer used to exchange funds with members. The teller drawer has its own tracking and monitoring system (Teller Control). Teller drawers are considered part of the branch vault and therefore use the same Change Fund G/L.</li> <li>• Supplemental Vaults - These are physical devices or storage locations for cash that are a subset or ancillary service to the branch vault. A recent addition to the original CU*BASE teller platform, they are configured by the CU and can each use a separate G/L account. They include (so far): ATMs, Kiosk cash machines, Teller Cash Dispensers (TCDs), and Teller Cash Recycler (TCRs).</li> <li>• Bank - Physical cash that is stored outside the credit union in third-party financial institutions or the Federal Reserve. Represented by a unique G/L account. Transfers between banks and branch vaults create a history record for that day but do not have monitoring systems or day-to-day balancing features. CU*BASE also uses bank designations for credit union checks and other credit union banking activities. CU*BASE offers many options when using G/L accounts to represent banks (may be different physical companies, different accounts within same company, etc.).</li> </ul>
Secure (Day-Secure, Chest)	<p>These terms refer to the setup of the machine from a security standpoint. A Secure TCR is one that is surrounded by a UL-listed safe (also called the "chest"), similar to the safe which surrounds an ATM. The chest includes a combination lock and other security features, including an automatic power timer which is used to cut power to the TCR on a daily schedule (see "Power Timer" above). A day-secure TCR is a standard machine that is not in a chest. Funds should never be left overnight in a day-secure machine.</p>
Special Mix	<p>This term refers to a deviation from the default "auto mix" combination of bills. For example, if a member requests a certain combination of bills that is not the standard mix dispensed by the machine, the teller can set up a special mix of bills just for that dispense.</p>
Supplemental Vault	<p>See "Safekeeping Areas."</p>
TCP/IP	<p>The communications protocol by which a PC in the credit union can communicate with the CU*Answers iSeries.</p>
Teller Cash Recycler (TCR)	<p>A TCR is a physical device located on the credit union's teller line (usually between two tellers: a "left" and a "right" station) and used to receive and dispense cash. Not to be confused with a TCD (Teller Cash Dispenser) which simply</p>

<i>Term</i>	<i>Description</i>
	dispenses cash or lobby cash dispensing machines attached to a self-service kiosk, a TCR is used only by tellers when performing cash transactions for members or replenishing drawer funds.
Throat Bundle Size	The <i>throat</i> refers to the point on the machine through which bills are pushed during a dispense. The capacity of this throat, meaning the number of bills that can be pushed through at the same time, is referred to as the <i>bundle size</i> . The bundle size will vary depending on the TCR model, but is generally either 75 or 100 bills maximum depending on the quality of the bills.

## TIPS FOR PURCHASING YOUR TCR

- Choosing your TCR vendor is critical if you wish to have an online interface to CU\*BASE. The current interface is designed for “tightly coupled” interface between the TCR vendor and CU\*Answers. At the current time, CU\*Answers has certified Talaris. Always confirm that the vendor you are considering has been certified by CU\*Answers before committing to a purchase.
- The CU\*BASE interface uses **single port connectivity**, meaning that only one PC is connected to TCR, even though two teller workstations can use the TCR for member transactions. The PC must be attached to the LEFT workstation connection and must be running the appropriate TCR IP Server software.
- Keep in mind that the TCR is connected to the PC via a serial port. If the teller station also needs to be hooked to a thermal printer using a serial port, the PC will need to be equipped with dual serial ports (either one can be used). Additionally, a DBR to USB converter can be used with the receipt printer. You cannot use this type of converter with the TCR, however.
- The CU\*BASE interface uses TCP/IP communications protocol and requires a static IP address for the PC which drives the TCR (cannot be a “virtual” device name).
- Some TCR models have modules where inventory is retained by Serial Number. At the current time the CU\*BASE interface will not support this option.
- CU\*BASE currently supports InstaChange coin dispenser for use with Talaris Twinsafe Teller Cash Recyclers (TCRs).
- If communication between your credit union and the CU\*Answers iSeries is interrupted, CU\*Answers recommends simply using funds from the teller drawer until communications are restored. It is not necessary to purchase and maintain a separate PC that runs the TCR in a standalone mode.

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# CONFIGURING A TCR DEVICE

## INSTALLING THE TCR SOFTWARE AND CONFIGURING GOLD

A CU\*Answers Technical Representative will need to install the TCR software and configure your GOLD settings to accommodate the use of a TCR at your credit union.

If your branch has a GUAPPLE unit, the Lutzwolf software will be made available on the GUAPPLE prior to the setup date. If your branch does not have a GUAPPLE, you will need to download the TCR software. Please note: Downloading the software uses the same connection as GOLD. It is recommended to perform the download after-hours.

Once the software is downloaded, it needs to be extracted, installed and configured. Then the supplemental vault in GOLD is configured for use with a TCR.

Following is a quick summary of the configuration options for connectivity and communication:

<i>Field Name</i>	<i>Description</i>
Network Terminal ID	This is the computer name (host name) of the workstation with the Lutzwolf software package installed.
Machine Model #	This should always be "TS2"
Public Address	This is an IP address that is addressable by your host system. Please contact WESCO Net for this information.
Private Address	This is the static LAN IP address of the workstation with the Lutzwolf software package installed.
Left Station	This is the GOLD terminal ID of the station on the left side of the TCR (usually the workstation with the Lutzwolf software package installed).
Right Station	This is the GOLD terminal ID of the station on the right side of the TCR.
Bundle Size	Depends on the model of the TCR. "75" is the recommended setting for most models.

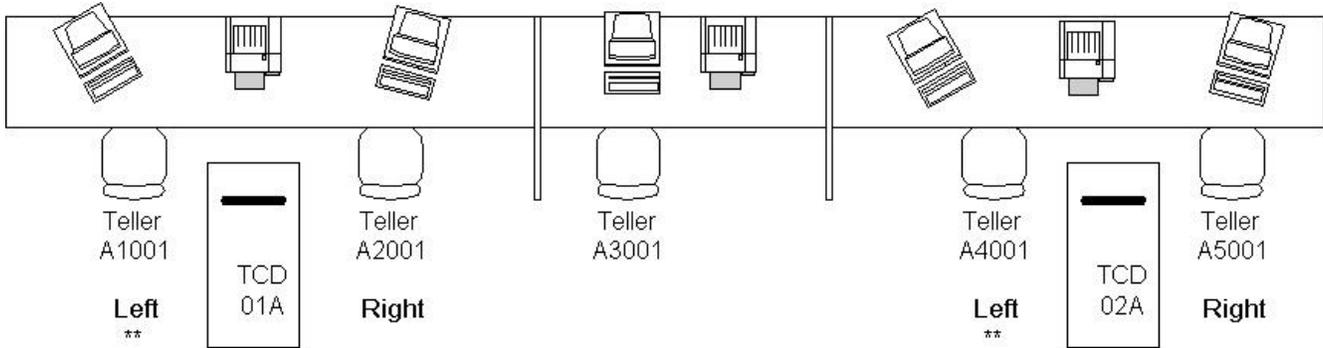
After your TCR has been delivered and installed by a service technician, there are several tasks remaining for setting up the TCR so that CU\*BASE can communicate with it for teller transactions and bulk cash transfers.

## SETTING UP THE TCR AT THE TELLER STATION

For a TCR, a single PC must be physically attached to the LEFT workstation connection on the TCR device, which must have a static IP address on the credit union's network. This PC will be one of the workstations that will function as a teller station and receive funds from that unit. A special **TCR IP Server** communications software is loaded onto this PC and is launched

to “drive” the TCR. This program must be running in order for commands from CU\*BASE to be communicated to the TCR. CU\*BASE must know the TCP/IP address of the “driver” PC where this communications program is running (recorded in Supplemental Vault Device Configuration - see Page 9), as well as both the computer (or host) name of the left workstation, and the GOLD terminal ID of both the left and right workstations. The GOLD ID’s are available in GOLD. The host name is available by right-clicking My Computer > Properties > Computer Name tab; it is the “Full Computer Name” up to the first period.

**Example of a CU Teller Line (the PCs marked with \*\* drive the nearby TCR):**



It is not the location of the PC relative to the TCR (i.e., physically on the right or left side of the unit), but rather the connection to the TCR that determines whether the station is a “left” or “right” station; therefore the “left” position is the port opposite that one.

Keep in mind that other tellers can purchase cash from a TCR to replenish their teller drawers, even if their workstations are not configured to receive member dispenses from that TCR. With the sample setup above, Teller A3001 could buy bulk cash for his/her teller drawer from either TCR 01A or TCR 02A, as needed.

# CONFIGURING THE TCR SUPPLEMENTAL VAULT IN CU\*BASE

## “ATM/Supp Vault Location Config.” on the General Configuration 1 (MNCNFC) menu

Session 0 CU\*BASE GOLD Edition - Supplemental Vault Device Configuration - Update

Vault type  ATM  TCD  TCR Update

Vault number

Number	Type	Description	Number	Type	Description
010	A	MEIJER RECYCLER	749	A	IN-STORE
011	A	MEIJER RECYCLE	750	A	MEIJER
059	A	BRANCH ATM	751	A	MEIJER GAS
088	A		752	A	BRUN GAS ATM
203	A	PARK	759	A	TV STORE
360	A	ENCE VILLAGE	774	A	LE DENNY'S
540	A	I C U	800	A	RUN CUPLUS
572	A	AIN	801	A	IGTON CUPLUS
730	A		802	A	CUPLUS COBRANDED
737	A	INN REST-CASTLE	803	A	AM ONE MOBILE ATM
739	A	I RUN OFFICE	804	A	NE SHARED ATM
740	A	NGTON OFFICE	01A	C	THRU TCD - MAIN
742	A	NE GROCERY-OLD	01B	C	LE CASH DISPENSER
748	A	UN FULL ATM	01C	C	DRIVE THRU TCD

■ Select ■ Select

No Fee Devices

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This is the first of two screens used to set up supplemental vaults. Start by choosing a vault type (TCR), and then enter a 3-character (numbers or letters) vault ID. Use Enter to proceed to the second screen.

*NOTE: The ID field is alphanumeric, so it is recommended that all three positions be used to avoid confusion. One good method is to use a combination of the branch number and a letter or number to designate the TCR itself within that branch (e.g., 01A, 01B, 01C for three TCRs at branch 01).*

**CU\*TIP:** Because of the critical nature of the information in this configuration file (inventory, auto mix settings, TCP/IP addresses, etc.), it is highly recommended that only a select few employees be granted access to the update command on the MNCNFC menu. An inquiry-only version of this system is also available via **“TCD/TCR Inquiry and Control”** on the Vault Control (MNHTEL) menu, for use in daily balancing.

## Screen 2

Session 0 CU\*BASE GOLD Edition - ABC CREDIT UNION  
File Edit Tools Help

### Supplemental Vault Device Configuration Update

Vault type/# **R M03**

Machine location **MAIN OFFICE MIDDLE LANE** Contact name **ANY EMPLOYEE**  
 Address line 1 **123 MAIN ST** Phone # **555 5555555**  
 Address line 2  GL account **739.87**  
 City **ANYCITY** State **MI** Corp ID **01**  
 Zip code **49000** Branch/location # **01**

Network terminal ID

Public address **010**  
 Private address **010**

Left station **A5112** Machine model # **TS2**  Coin Coin ID   
 Right station **A6112** Machine model # **TS2**  Coin Coin ID   
 Bundle size **50**

Allow bulk cash transfers to tellers

Suspend  
 Inventory  
 Auto Mix  
 Delete

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The fields on the second screen will vary slightly depending on the type of supplemental vault being configured. Complete each field as described below and use Enter to save and return to the first screen.

### Field Descriptions

Field Name	Description
Machine location	Enter a description for this supplemental vault (e.g., physical location or other identifying phrase). This description will appear on various inquiry and update screens where this vault is used.
Address, City, State, Zip	Use these optional fields to record information about the location of this physical device.
Contact name Phone #	These fields can be used to record either a contact name and phone number for the service representative to be called if the machine requires service, or the credit union employee responsible for the upkeep of that device.
G/L account	Enter the G/L account number that represents the cash in this physical vault.  <b>To make balancing easier, it is highly recommended that a separate G/L account be used for each individual TCR device.</b>
Corp ID	Enter the Corp. ID to be used with the G/L account when posting activity for this vault.
Branch/location #	Enter the branch/location number to be used with the G/L account when posting activity for this vault.  For example: If your credit union deposits \$100,000 into an ATM machine, a debit will be posted to the G/L account for this vault using the corporation and

<i>Field Name</i>	<i>Description</i>
	branch number configured here.
Network Terminal ID	Use this field to enter the computer or host name of the left workstation.
Machine model #	This is the name given to the TCR machine during the configuration of the TCR, generally TS2.
Public address	The public address is a dedicated public IP address provided by and configured by WESCO Net.
Private address	Enter the IP address for the PC that drives that TCR.  IMPORTANT: Because of way the CU*BASE iSeries communicates with this PC to perform TCR activity, this PC MUST use a static TCP/IP address, not a “virtual” addressing system
Left station	Enter the CU*BASE iSeries device name (5 characters <u>only</u> ) for the workstation attached to the “Left Terminal” connection of the TCR. (This is also the “driver” PC.)
Right station	Enter the CU*BASE iSeries device name (5 characters <u>only</u> ) for the right-hand workstation that will dispense from the TCR for member transactions. (Remember that this PC is not physically connected to the TCR, but will use it to dispense funds for member transactions.)
Bundle size	Enter the maximum bundle size for this TCR. This is <u>specified by the manufacturer</u> as the maximum number of notes that can fit through the throat of the machine at one time (usually 75 to 100 notes).
Coin Coin ID	Check this checkbox if a coin dispenser will be used (check either one or both sides (left or right)). Then enter the device ID of the coin dispenser in the Coin ID field.
Allow bulk cash transfers to tellers	Place a checkmark here if you wish to allow tellers to purchase cash from this TCR to replenish their drawers.  Remove this checkmark if this TCR should be used exclusively for dispensing funds for member transactions. No tellers would be allowed to transfer funds from this TCR. This might be appropriate for extremely busy TCRs, or units that are too small to hold adequate notes to cover bulk transfers of cash.

### **Buttons**

<i>Buttons</i>	<i>Description</i>
<i>Suspend</i> (F4)	Use this to suspend the TCR device so that it cannot be attached to teller workstations or used for bulk cash transfers or cash disbursements in member transactions. Return to this screen again and use Enter to reactivate the device.  Remember that you can also disable the TCR temporarily for the teller workstations that are attached to it, without having to disable the TCR device itself. See Page 16 for more information.
<i>Inventory</i> (F5)	Use this to view or update the Cash Inventory record for this TCR. The screen shown on Page 12 will appear.  NOTE: This represents what the TCR has recorded as the amount of cash stored in the device since the

Buttons	Description
	TCR, not CU*BASE, keeps track of the inventory.
Auto Mix (F6)	Use this to adjust the Auto Mix settings for this TCR, which control the default bills that are dispensed with each member transaction. The screen shown on Page 12 will appear.
Delete (F16)	Use this to delete the entire TCR record. There will be one confirmation message.  BE CAREFUL: This should generally be used only if a TCR record was added by mistake, or you are removing the physical device. Use F4-Suspend instead to temporarily disable this TCR from all activity. Remember that you can also disable the TCR temporarily for the teller workstations that are attached to it, without having to disable the TCR device itself. See Page 41 for more information.

## SETTING DENOMINATIONS AND VIEWING TCR INVENTORY

This screen appears when you use **Inventory** (F5) on the main Supplemental Vault Device Configuration screen (see Page 9). Remember that this is also available via **TCR Audit and Inquiry/Control** on the Vault Control (MNHTEL) menu.

Note: You cannot adjust the inventory. This setup is done one time by the TCR Service Representative when the TCR is set up.

Module	Denomination	# of Bills	Machine Inventory	Status
1	1.00	0	.00	Normal
2	1.00	0	.00	Normal
3	5.00	0	.00	Normal
4	10.00	0	.00	Normal
5	20.00	0	.00	Normal
6	20.00	0	.00	Normal
7	50.00	0	.00	Normal
8	100.00	0	.00	Normal
Coins			50.25	
Total			50.25	

This screen is used to view the denominations that are stored in each module in the TCR. This screen also shows the module inventory for this TCR.

Remember that more than one module can contain the same denomination. When any denomination begins to get low, a warning message will appear on *every* dispense, even if that denomination is not needed for that specific transaction. Replenish the machine as soon as possible.

**To replenish the TCR, or sell funds from the TCR back to the branch vault, use the Cash Transfers system (see Pages 37 and 39).**

## SETTING THE “AUTO MIX”

This screen appears when you use **Auto Mix** (F6) on the main Supplemental Vault Device Configuration screen (see Page 9).

Denomination	Auto Mix	Machine Inventory	# of Bills
Ones \$1	0.00	4.00	4
Fives \$5	5.00	10.00	2
Tens \$10	10.00	40.00	4
Twenties \$20	100.00	340.00	17
Fifties \$50	200.00	2,400.00	48
Hundreds \$100	200.00	3,200.00	32
Coins		0.00	
<b>Totals</b>		<b>5,994.00</b>	

The Auto Mix is the minimum preferred count of each denomination of bills to be dispensed every time a cash dispense is performed for a member transaction. (Enter the total amount of money for each denomination, not the number of bills.) Auto Mix can be set for bills only, not coins.

*For example, does your credit union always like to give out at least a couple of fives for every withdrawal? Do you prefer to give twenties and tens rather than use fifties? This will depend on your credit union’s cash purchasing procedures as well as the preferences of your membership.*

When a value is set here, this number of bills will always be dispensed (assuming it does not exceed the disbursement amount, and there are actually enough of those bills in the machine). If set to zero, the denomination is not *required* to be dispensed, although it may be used if necessary to give the proper amount. (Remember that the teller can always override these settings and use a “special mix” on a case-by-case basis as necessary.)

The minimum dispense is always computed in ascending denomination order (1s, 5s, 10s, 20s, 50s, then 100s). Once that is satisfied, any remaining funds are pulled using the fewest possible number of bills (starting at the highest denomination and working back down).

**Example 1:** Assume the auto mix shown in the sample above. If a member needs \$120, the bills to be dispensed are calculated in two passes: the first pass determines the bills required from the auto mix settings, and the second pass gathers any remaining bills needed to complete the request.

In the first pass, the calculation determines that one \$5, one \$10, and 5 \$20 bills are needed, for a total of \$115. On the second pass, the remaining amount is fulfilled using the smallest number of bills, in this case one \$5. See the diagram below:

Denomination	Auto Mix	Requested Dispense Amount: \$120.00	
		First Pass	Second Pass
\$1	.00		
\$5	5.00	5.00	5.00
\$10	10.00	10.00	
\$20	180.00	100.00	
\$50	200.00		
\$100	200.00		
		\$115.00	\$5.00
		= <b>\$120.00</b>	

**Example 2:** Assume the same auto mix, but this time the member needs \$341.00.

Denomination	Auto Mix	Requested Dispense Amount: \$341.00	
		First Pass	Second Pass
\$1	.00		1.00
\$5	5.00	5.00	5.00
\$10	10.00	10.00	
\$20	180.00	180.00	40.00
\$50	200.00	100.00	
\$100	200.00		
		\$295.00	\$46.00
		= <b>\$341.00</b>	

### Hints for Choosing an Appropriate Auto Mix

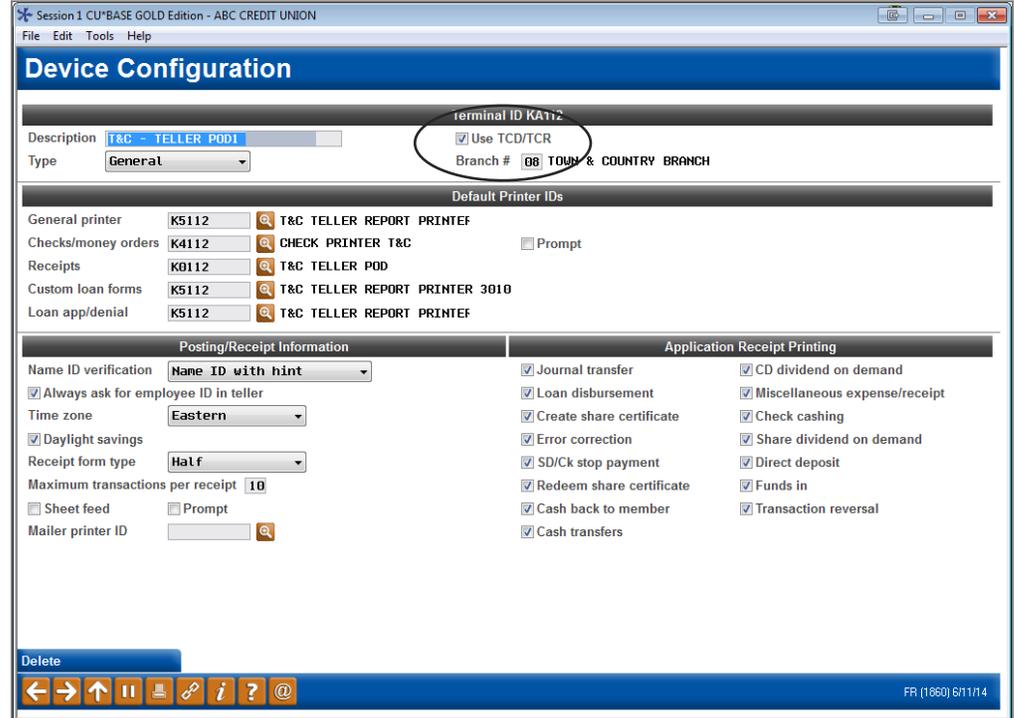
- Consider the point at which you want to begin giving large bills on a dispense. Imagine a typical dispense amount and calculate which bills will be used. The auto mix should be set up so that the system is not forced to use large bills unless the requested amount is higher than that point.
- To help your tellers get used to this default mix and avoid confusion, it is recommended that all TCR devices within a branch (or the entire credit union) use the same auto mix settings.

# CONFIGURING THE TELLER WORKSTATION FOR A TCR

## From CU Hardware Configuration . . .

After the supplemental vault has been configured, it is also necessary to modify the device configuration for the individual teller workstations that will use the TCR for member transactions.

### “CU Hardware Configuration” on the General Configuration 1 (MNCNFC) menu



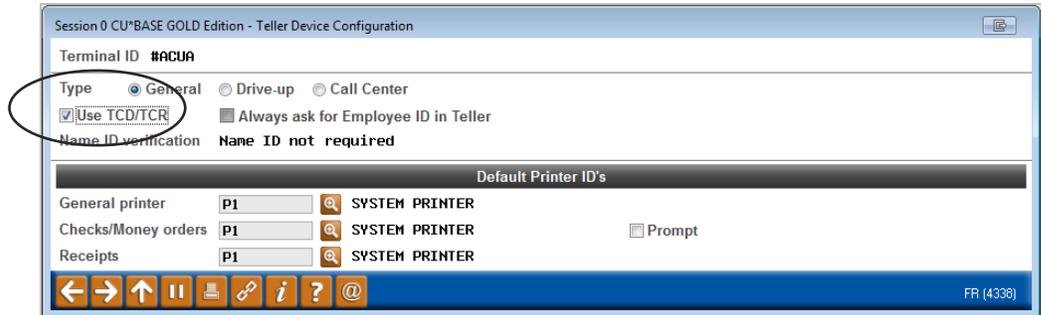
If this workstation should use a TCR for member transactions, place a check in the *Use TCD/TCR* box.

**NOTE:** This setting controls whether the workstation should use a TCR for member transactions only; it does not affect bulk cash transfers from the TCR (see Page 34).

## From Teller Control . . .

When working in Teller Control, a teller can easily activate or deactivate the TCR without having to use the CU Hardware Configuration feature.

### "Device Config" (F13) from the Teller Control screen



With this handy pop-up window, a teller can disable the TCR temporarily so that all transactions go thru the teller drawer, and later reactivate the TCR for normal operations. This can be helpful if the TCR needs to be taken off line temporarily for service or to be replenished, without interrupting member service.

*BE CAREFUL: This window controls the workstation that is currently being used, NOT the Teller ID selected.*

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# RESPONDING TO ERRORS

It is VERY IMPORTANT to pay close attention to your CU\*BASE screen to ensure that when an error message is received that the action items are followed through on to ensure that the machine balances.

Following are some guidelines on handling Level 2 and Level 3 error messages. (In these cases, a pop-up window is received).

- **Special Note: If you receive an error message during a transaction, DO NOT close your session until the error has been addressed.** Never close a CU\*BASE Session without properly logging off of CU\*BASE.

## STEP 1: BALANCE YOUR TCR

Refer to the next section: **Daily TCR Control Activities** for best practices and CU\*BASE screens you can use to balance and audit your TCR.

Any time a Level 2 or Level 3 message is received in CU\*BASE a full audit and count of the physical cash is necessary where the INVENTORY BALANCE = G/L BALANCE = PHYSICAL CASH is required. Otherwise, you may be out of balance.

If an out of balance situation occurs, contact CU\*Answers to retrieve logs and information about the error message.

## STEP 2: IF NEEDED PERFORM OPEN/RESET

If a Level 2 or Level 3 error is encountered which indicates a failure of the machine, the next step is to perform an Open/Reset. If the error message indicates a jam, the machine should be physically opened and all paths checked for torn, misplaced, stuck, or otherwise jammed notes. After the notes are cleared, an Open/Reset should be performed.

If the Open/Reset returns a communications failure, the following steps should be taken:

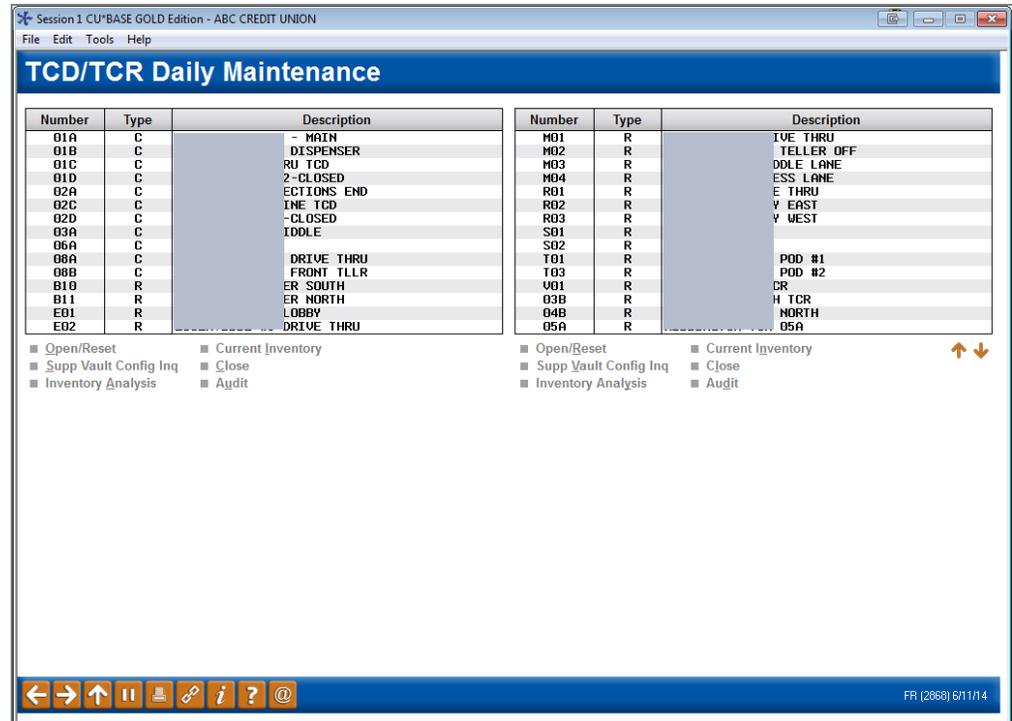
1. Power off the TCR.
2. Power off the workstation that controls the TCR.
3. Turn on the TCR.
4. Let the TCR fully complete its start-up cycle.
5. Turn on the workstation.
6. Perform an Open/Reset.

If errors continue after fully rebooting the equipment in order, then a service call should be placed to the TCR vendor to service the machine.

# DAILY TCR CONTROL ACTIVITIES

## “TCD/TCR Inquiry and Control or “TCR Audit and Inquiry/Control” on the Vault Control (MNHTEL) menu

(The second option includes the *Audit* feature.)



This screen is “command central” when it comes to opening, resetting, monitoring and balancing your TCRs. From here you can choose any of your credit union’s TCRs and select the following options:

Option	Description
<i>Open/Reset</i>	<p>For TCRs, only the Reset option is available.</p> <p>This issues a “reset” command to the TCR which resets the machine, checks the feed modules, raises the lifts, and essentially prepares the TCR for activity.</p> <p>This command can be run at any time to reset the machine during the day.</p> <p>For example, if one of the error messages described in the Appendix (see Page 45 ) occurs, try this command to reset the TCR.</p>
<i>Current Inventory</i>	Use this to see an inquiry-only version of the denomination and inventory screen shown on Page 12. This is helpful when balancing the machine.
<i>Supp Vault Config Inquiry</i>	Use this to see an inquiry-only version of the supplemental vault configuration screens shown starting on Page 9, to look up contact information, confirm the auto mix settings, etc.
<i>Close</i>	This is not used with a TCR.

<i>Option</i>	<i>Description</i>
<i>Inventory Analysis</i>	This will display a historical record of beginning-of-day and end-of-day inventory totals for the TCR. This screen is used when balancing the TCR.
<i>Audit</i>	<p>Use this to physically remove the cash from the modules. You would then count the cash and use the fill option to reload the TCR.</p> <ul style="list-style-type: none"> <li>When money is removed from the modules a G/L transfer is made from the TCR to the Branch Vault. When the cash is reloaded, a transfer is made from the Branch vault to the TCR</li> </ul> <p>This is only available through <b>TCR Audit and Inquiry/Control</b>, so only selected people should have access to this option.</p>

## PERFORM DAILY BALANCING

Be sure to confirm, on a **DAILY** basis, that the Inventory Balance from the previous day matches to the BOD G/L Balance and the BOD Inventory Balance. Use the TCD/R Inventory Analysis and /or the TCD/R Daily Activity Summary report (Page 41) to verify that the TCR inventory amount matches the amount shown in the G/L account configured for that TCR.

If discrepancies are found, an audit of the TCR should be performed to confirm the balance of the TCR. This imbalance may be due to the fact that an error occurred during a TCR transaction on the TCR during the day. Additionally, consult with the accounting staff to ensure the recorded Beginning G/L Balance reflect the actual G/L balance.

## BALANCING YOUR PHYSICAL CASH

It is also imperative that you frequently balance your TCR and reconcile the physical cash in the TCR with the balances of the associated machine. Consider your TCR to need balancing, similar to the way you balance and branch vault.

Remember that there are three control totals for each TCR machine and they all must match in order for the TCR to be in balance:

**Inventory Balance = G/L Balance = Physical Cash in the TCR**

During this balancing, you should physically count the cash in the machine to ensure the INVENTORY BALANCE is matched to the G/L BALANCE and is then matched to PHYSICAL CASH (all three figures should MATCH).

**A full balance of this manner should be performed:**

- **Weekly**
- **Every time a new cassette is loaded**
- **Any time you receive a Level 2 or Level 3 error message**
  - **Refer to previous section: Responding to Errors.**

After balancing the physical cash to the CU\*BASE figures, if an out of balance situation occurs, please contact CU\*Answers to retrieve logs and information about the error message.

- NOTE: Documentation of what is recorded in the SVJRLN that records transactions made by a TCR, as well as how these changes are recorded in CUFMNT are listed on starting on Page 47. (Refer to Appendix C and D.)

## **AUDITING THE TCR MODULES**

Use the Audit option on this screen to physically empty the notes from the TCR and count them. Then use the Fill option to refill the modules.

A credit union will typically audit a TCR on a regular basis (daily, weekly), at the end of the day if there was a discrepancy during the day, or if a serious error occurs.

### **Important Notes on Using the Audit Feature**

- Empty one module at a time.
- It is preferable to empty all of the modules of a TCR before refilling it.
  - If you are emptying only one denomination and have two modules of the same denomination, empty both modules, count the notes from both modules and then refill the TCR with the notes from both modules. The TCR will know how to distribute the notes between the two modules.
- When the modules are emptied, CU\*BASE processes a G/L transfer from the TCR to the Branch Vault. When the TCR is refilled CU\*BASE processes a G/L transfer from the Branch Vault to the TCR.
- This is the only place to empty a coin canister. When you audit the canister, be sure that it is attached so that communication can flow between the TCR and CU\*BASE
- The maximum amount that you can load in a coin canister is \$99.99.

First, select the TCR and select the Audit option (see previous screen).

Session 0 CU\*BASE GOLD Edition - BEDROCK COMMUNITY CREDIT UNION

File Edit Tools Help

### Supplemental Vault Inventory Audit

Vault type R  
Vault # 001 TCR (TWINSAFE)

Empty	Module	Denomn	Beginning Inventory		# of Notes		
			# of Notes	Amount	Emptied	Reloaded	Machine Inventory
	1	1	2	2.00	0	0	2
	2	5	22	110.00	0	0	22
	3	10	22	220.00	0	0	22
	4	20	22	440.00	0	0	22
	5	20	22	440.00	0	0	22
	6	50	40	2,000.00	0	0	40
	7	50	44	2,200.00	0	0	44
	8	100	50	5,000.00	0	0	50
Total				10,412.00	0.00	0.00	10,412.00

Fill  
Show Amount/# of Notes

Navigation icons: back, forward, up, down, print, refresh, help, search, @

TR (3524) 5/28/14

To empty the module click on the to the left of the module number. The bills will be physically emptied from the module. In the example below, the ones were emptied. Notice how the is gone and the “# of Notes” section has recorded the change.

Session 0 CU\*BASE GOLD Edition - BEDROCK COMMUNITY CREDIT UNION

File Edit Tools Help

### Supplemental Vault Inventory Audit

Vault type R  
Vault # 001 TCR (TWINSAFE)

Empty	Module	Denomn	Beginning Inventory		# of Notes		
			# of Notes	Amount	Emptied	Reloaded	Machine Inventory
	1	1	2	2.00	2	0	0
	2	5	22	110.00	0	0	22
	3	10	22	220.00	0	0	22
	4	20	22	440.00	0	0	22
	5	20	22	440.00	0	0	22
	6	50	40	2,000.00	0	0	40
	7	50	44	2,200.00	0	0	44
	8	100	50	5,000.00	0	0	50
Total				10,412.00	0.00	0.00	10,412.00

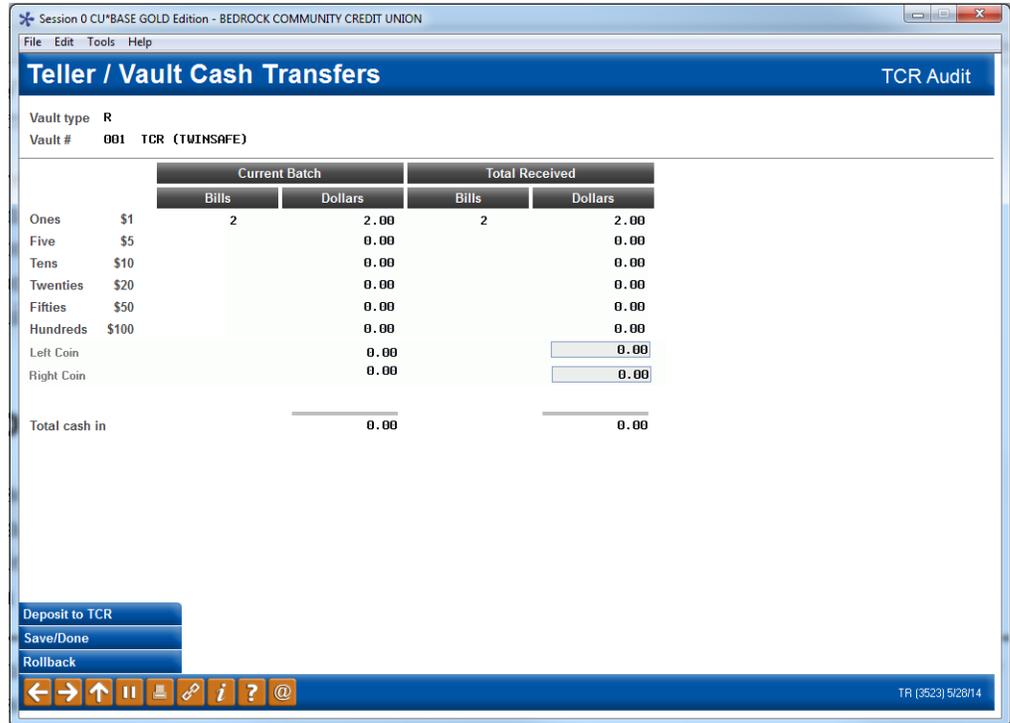
Fill  
Show Amount/# of Notes

Navigation icons: back, forward, up, down, print, refresh, help, search, @

TR (3524) 5/28/14

Continue to empty all of the modules in this manner. It is recommended that you empty the entire TCR before refilling it. At a minimum empty all modules of the same denomination before refilling that denomination. After

you have counted the bills, place them back in the throat and use *Fill* (F6) to reload the bills.



Press *Deposit to TCR* (F6) to complete the reloading of the bills.

Once you have confirmed that all of the bills have been counted, use

*Save/Done* (F10) to complete the process. The  will continue to be missing, to indicate that this module has been emptied. If you exit the Audit

feature and return, the  will be present again, and you will be able to re-empty the module.

- *Show Amount of Notes* (F11), shows the dollar amount of emptied, reloaded and machine inventory.

## RECONCILING THE TCR INVENTORY AND THE G/L BALANCE

Since the TCR maintains its own inventory, it is recommended that you compare this information with the recorded G/L balance at the end of the day to ensure these numbers balance. This is accomplished by comparing two screens you can access from the Maintenance screen (shown on page 18). Access the balance of the TCR (recorded by the TCR itself) by using the Current Inventory option. Access the current G/L balance (recorded in CU\*BASE) by using *Inventory Analysis*.

### “Inventory Analysis” - Screen 1

Date	Beginning GL Balance	Net Changes	Calculated GL Balance
May 23, 2014	0.00	0.00	0.00
Feb 21, 2014	39,896.00	0.00	39,896.00
Feb 20, 2014	49,773.00	9,877.00-	39,896.00
Feb 19, 2014	57,176.00	7,405.00-	49,773.00
Feb 18, 2014	20,674.00	36,504.00	57,176.00
Feb 17, 2014	20,674.00	0.00	20,674.00
Feb 16, 2014	20,674.00	0.00	20,674.00
Feb 15, 2014	20,752.00	78.00-	20,674.00
Feb 14, 2014	30,408.00	9,656.00-	20,752.00
Feb 13, 2014	47,425.00	17,017.00-	30,408.00
Feb 12, 2014	62,745.00	15,320.00-	47,425.00
Feb 11, 2014	69,979.00	7,234.00-	62,745.00
Feb 10, 2014	19,861.00	50,118.00	69,979.00
Feb 09, 2014	19,861.00	0.00	19,861.00
Feb 08, 2014	27,916.00	8,055.00-	19,861.00

This is the first of two screens showing a historical record of TCR activity, one day at a time based on G/L activity. The *Beginning G/L Balance* column is a snapshot of the G/L balance at the time End-of-Day was run. The *Net Changes* column records the transactions made during the day. The *Calculated G/L Balance* column is the calculated change in the G/L based on these two figures.

A detailed view of a day’s activity can be viewed by selecting a date and then using *Select*.

## Screen 2

Session 1 CU\*BASE GOLD Edition - ABC CREDIT UNION  
File Edit Tools Help

### Daily TCD/TCR Inventory Analysis

Vault type R  
Vault # 001 MAIN OFFICE DRIVE THRU  
G/L account 01-01-739.89 Date Feb 10, 2014

Inventory Analysis	
BOD G/L balance	19,861.00
Net to/from tellers	183.00
Net to/from branch vaults	54,060.00
Net to/from supp vaults	0.00
Net to/from bank	0.00
Net to/from members	4,125.00-
Net change	50,118.00
Calculated EOD G/L balance (BOD G/L balance + net change)	69,979.00

FR (455) 6/11/14

Above is a detail of the selected day's activity.

### “Current Inventory”

Session 0 CU\*BASE GOLD Edition - Supplemental Vault Inventory - Inquiry

Vault type R Vault # 01R Time 13:50:37

Module	Denomination	# of Bills	Machine Inventory	Status
1	1.00	0	0.00	Normal
2	5.00	30	150.00	Normal
3	10.00	21	210.00	Normal
4	20.00	31	620.00	Normal
5	20.00	26	520.00	Normal
6	50.00	64	3,200.00	Normal
7	50.00	66	3,300.00	Normal
8	100.00	70	7,000.00	Normal
Coins			0.00	
Total			15,000.00	

Clear Status

**i** Do not change the inventory figures shown here. No G/L entries will be generated if changes are made here. Use the Cash Transfer system to move money in and out of this TCD inventory.

GD (2861)

The screen shown above shows the inventory of the TCR itself as of this moment in time. These figures are recorded by the TCR machine itself. (No information on previous day's inventory is stored.)

The last step in teller balancing should be to compare these two screens to ensure that the Calculated G/L balance matches the actual inventory total. This is a balancing control where you make sure that the calculated G/L inventory matches the real time TCR inventory.

If discrepancies are found, an audit of the TCR should be performed to confirm the balance of the TCR. This imbalance may be due to the fact that an error occurred during a TCR transaction on the TCR during the day.

Additionally, consult with the accounting staff to ensure the recorded Beginning G/L Balance reflects the actual G/L balance.

- **TIP:** If discrepancies occur, take a screen print of the Current Inventory for your records. Once a TCR processes additional transactions, you will not be able to access this information.

# USING A TCR FOR TELLER TRANSACTIONS

When performing a member transaction in the Teller Processing system, if a TCR device has been configured for the teller's workstation, *Deposit to TCR* (F6) will appear for transaction processing. (It appears after entering the member's account on the Account Selection screen and pressing Enter to move past the Verify Member screen.)

## Main Teller Posting Screen

Session 0 CU\*BASE GOLD Edition -

File Edit Tools Help

**Individual Account** Comments on File

Cash  Name **MARY MEMBER**  
 Outside checks  Account #   
 Inhouse checks   
 Total funds in  Outside checks  Hold days  Type

I'm a BRONZE member! (click for more info)

Loan Payoff or Current Balance	Loan Payment or Net Available	Description	Acct Type	Deposit Amount	IRA HSA	Withdrawal Amount	IRA HSA	Proc Code	JO
2,135.07	2,130.07	SHARE SAVINGS	000	0.00		0.00			
1,160.79	1,160.79	CHECKING	010	0.00		0.00			
21,600.00	21,100.00	PREFERRED MONEY	021	0.00		0.00			
0.00	20.00	CHECK PROTECTIO	800	0.00		0.00			

Suppress receipt  Suppress balances

Verify Member	Bal Forward/New Mbr	Phone Operator	Total funds in	0.00	<input type="button" value="Post"/> <input type="button" value="Refresh Cash Back"/> <input type="button" value="Deposit Calculator"/>
Trans Override	Bal Forward/This Mbr	Show Nicknames	Check cash fee	0.00	
Post	Sales Tools	Show Card #	Transaction net total	0.00	
TCR Deposit	In-House Checks	Procedures	Cash back	0.00	

Misc Receipts  Outside Checks

GD (3104) 8/17/14

## TRANSACTION WITH NO CASH IN TO THE TCR

If you are processing a transaction with no cash in (or you are depositing the cash in your drawer (and not the TCR), use the screen (above) as you normally would. Enter in items such as withdrawals and checks in, for example, and press *Post* (F5) to post the transaction. If the member is withdrawing money, CU\*BASE will move you to the Dispense screen indicating which bills the member will receive (based on your auto mix). Press *Post* (F5) to complete the transaction.

See page 31 for a picture and more discussion on the Dispense screen.

## TRANSACTION WITH CASH IN TO THE TCR

If however, the member is depositing cash, which you want to deposit into the TCR, your process will include an additional step. In this step you will deposit the cash into the TCR.

If the transaction includes deposits to the TCR, do not enter the cash in on this screen. You will enter the amount in the next screen.

Session 0 CU\*BASE GOLD Edition -

File Edit Tools Help

### Individual Account

Comments on File

Cash  Name **MARY MEMBER**

Outside checks  Account #

In-house checks  Outside checks  Hold days  Type

Total funds in

**I'm a BRONZE member!**  
(click for more info)

Loan Payoff or Current Balance	Loan Payment or Net Available	Description	Acct Type	Deposit Amount	IRA HSA	Withdrawal Amount	IRA HSA	Proc Code	JO
2,135.07	2,130.07	SHARE SAVINGS	000	0.00		0.00			
1,160.79	1,160.79	CHECKING	010	0.00		0.00			
21,600.00	21,100.00	PREFERRED MONEY	021	0.00		0.00			
0.00	20.00	CHECK PROTECTIO	800	0.00		0.00			

Suppress receipt  Suppress balances

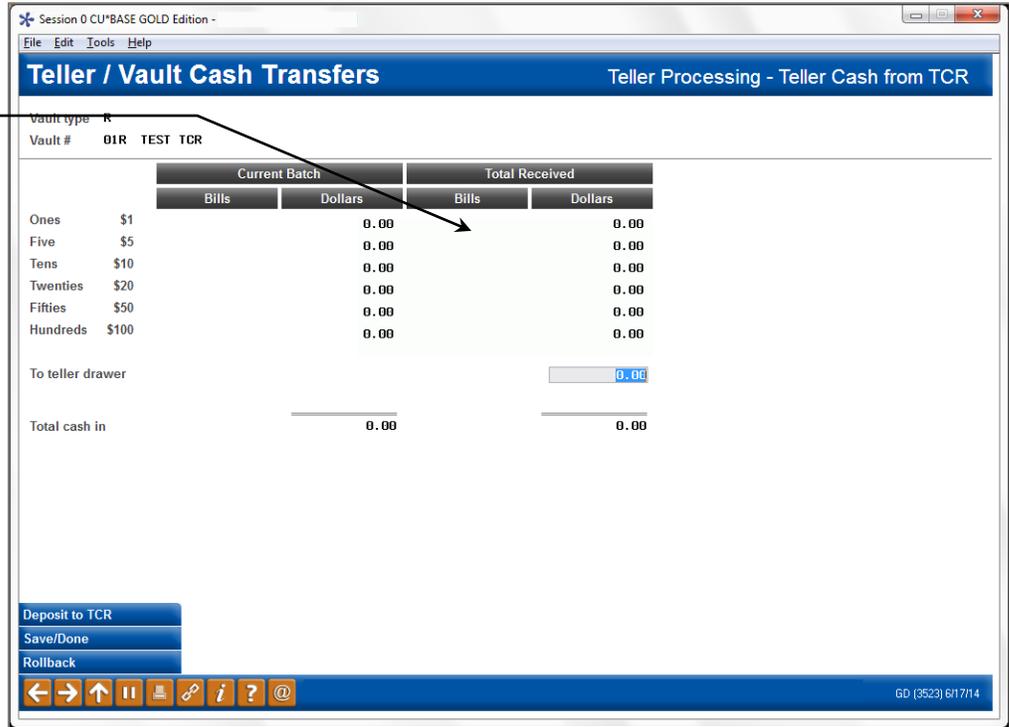
Verify Member	! Bal Forward/New Mbr	Phone Operator	Total funds in	0.00	Post
Trans Override	Bal Forward/This Mbr	Show Nicknames	Check cash fee	0.00	Refresh Cash Back
Post	Sales Tools	Show Card #	Transaction net total	0.00	Deposit Calculator
TCR Deposit	In-House Checks	Procedures	Cash back	0.00	
Misc Receipts	Outside Checks				

GD (3104) 8/17/14

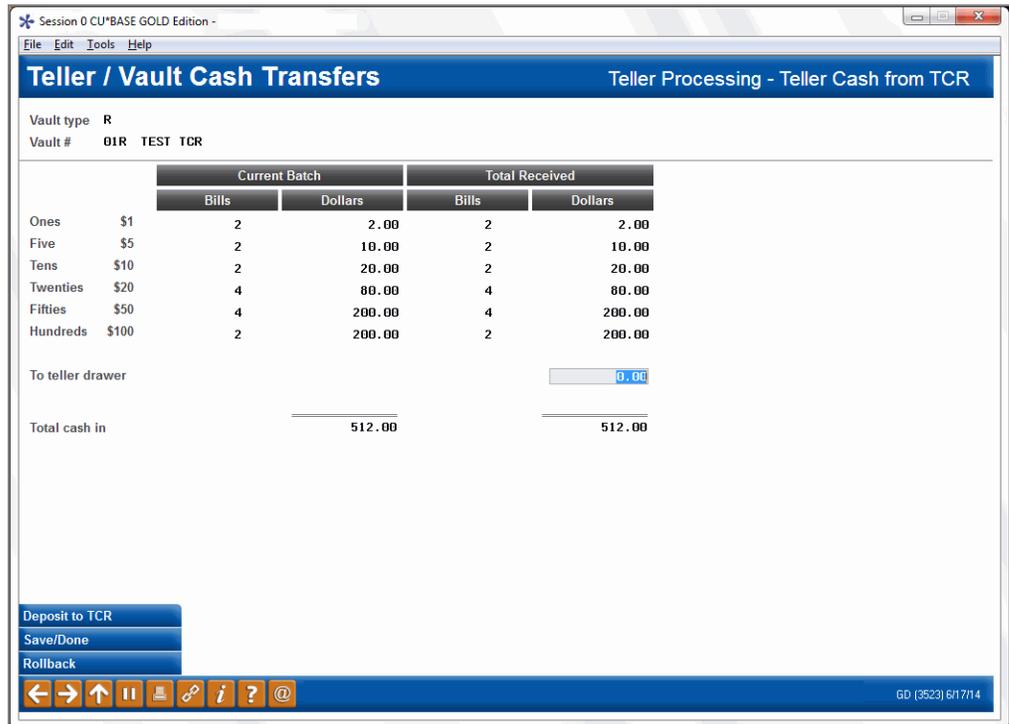
The Main Teller Posting screen is shown above. If your transaction includes deposits to the TCR, **before entering anything on this screen** your first step is to make the deposit. To move to the screen where you will make these deposits, press *TCR Deposit* (F6).

- If an amount is entered in the Cash field on the Main Teller Posting screen when you click *TCR Deposit* (F6), you will receive an edit message. Remove the amount before continuing.
- For COOP National Shared Branch transactions (CUSC and FSCC previously), you may not take a direct cash in transaction to your TCR (neither dollars nor coin). Instead post a regular cash in transaction to your teller drawer, and then sell the cash from your teller drawer to your TCR supplemental vault.

This image shows the screen as it would look when you first enter it. It contains all zeros because no funds have been deposited into the TCR yet.



At this point you would lay the bills in the cradle to prepare them to be deposited. Once they are in place, press *Deposit to TCR* (F6). The TCR will take the bills into the device.



In the example above, the member deposited \$512 cash. The left side of the screen (Current Batch) indicates the funds deposited in the last TCR bundle. The right side of the screen (Total Received) shows the total amount of the total deposit. The screen indicates the breakdown of that amount, for example four \$50 bills were included in this amount. You can continue

depositing additional bills by placing them in the cradle and using F6-Deposit to TCR a second time. At this point the Current Batch column would indicate the amount deposited in the second deposit (the most recent one) and the Total Received column would indicate all the funds deposited into the TCR (both the first and second deposit in this example). Continue depositing the bills in the TCR until all are deposited

- If you are depositing bills into the TCR, you must deposit ALL OF the bills through this screen. Once you make a final deposit into the TCR from this screen and move forward to the Main Teller Posting screen by using *Save/Done* (F10), the Cash field on the Main Teller Posting screen will be greyed out and will not allow additional deposits. (This field will not be greyed out if you use *Rollback* (F16).

Sometimes bills will not be accepted by the TCR. The TCR will remain locked until the bills are removed. In this case, smooth the bills and replace them in the cradle. Press *Deposit to TCR* (F6) again to attempt to deposit these bills another time. If the TCR fails to accept the bills, enter the amount of this cash in the **To Teller Drawer** field on this screen. When you post the transaction, place the bills in your drawer.

- If the deposit includes coins, enter the coin amount in the To Teller Drawer as well.

Once you have deposited all of the bills in the TCR (and have entered any additional bills or coins in the To Teller Drawer field), use *Save/Done* (F10) to complete the deposit and return to the Main Teller Posting screen (see page 26 or page 27). Then complete the withdrawals/deposits needed by the member. Then use *Post* (F5) to complete the transaction. If the transaction includes a withdrawal, you will move to the Dispense screen where you withdraw bills from the TCR. See page 31 for more information about the Dispense screen.

## The Rollback Feature

If you need the TCR to return the cash from your complete deposit (the Total Cash received) you have the option of using *Rollback* (F16) (see page 29). Use this option, for example, if the amount the TCR registers as having received does not match what you expected. **You must use this function key prior to leaving the TCR deposit screen.** This option will return all of the money received during the entire deposit (the Total Received column). Once you have clicked this option, the Current Batch column will indicate the total cash the TCR has returned to you in red. (Your bills will also be returned to you if you use the back arrow on this screen prior to using F10-Save and Done.)

*NOTE: It is important to verify the total amount of the funds in with the member prior to taking "Save/Done" (F10). The rollback option is available only prior to this dispense and is available for use to dispense the same bills if the member disputes the amount.*

These red numbers indicate that the money from this deposit has been returned (dispensed) to the teller by the TCR.

Session 0 CU\*BASE GOLD Edition -

Teller / Vault Cash Transfers Teller Processing - Teller Cash from TCR

Vault type R  
Vault # 01R TEST TCR

		Current Batch		Total Received	
		Bills	Dollars	Bills	Dollars
Ones	\$1	4	4.00	2	2.00
Five	\$5	4	20.00	2	10.00
Tens	\$10	4	40.00	2	20.00
Twenties	\$20	8	160.00	4	80.00
Fifties	\$50	8	400.00	4	200.00
Hundreds	\$100	4	400.00	2	200.00

To teller drawer

Total cash in Total cash back 1,024.00

Deposit to TCR  
Save/Done  
Rollback

0008 - Rollback complete. GD (3523) 6/17/14

## DISPENSING MONEY FROM THE TCR DURING A MEMBER TRANSACTION

If the transaction includes a withdrawal of funds, you will move to the Dispense screen.

Session 0 CU\*BASE GOLD Edition -  
File Edit Tools Help

### Teller Processing - Member Dispense

Vault type R  
Vault # 01R TEST TCR

		Override		Summary	
		Auto Mix	Dollars		
Ones	\$1	0.00	0.00	Total cash back	50.00
Five	\$5	0.00	0.00	Override amount	50.00
Tens	\$10	0.00	0.00	Net	0.00
Twenties	\$20	0.00	0.00		
Fifties	\$50	50.00	50.00		
Hundreds	\$100	0.00	0.00		
Coins		0.00	0.00		
From drawer		50.00	50.00		
Totals		50.00	50.00		

Post  
All From Drawer

GD (1581) 8/17/14

This screen is used to confirm the denominations that will be dispensed from the TCR to the member.

*NOTE: The system always displays this screen as the last screen in the posting process. If there are check cashing fees or other screens needed to perform the transaction, they will appear first before the final TCR denomination screen appears.*

Using the settings in the Auto Mix configuration (see Page 12) the system will automatically calculate the exact bills that will be dispensed. If these bills are acceptable to the member, simply use *Post* (F5) again to complete the transaction and dispense the funds from the TCR.

*If you wish to draw all of the funds from the drawer, use "All from Drawer" (F10). This will clear out the Auto Mix and move all of the funds to the "From drawer" field so that the teller can take all the funds from the drawer. This also allows the tellers to enter the mix of bills themselves.*

The **Coins** amount can be entered in the From Drawer field if the teller wishes to take the coins from the drawer. If a coin canister is attached to the TCR, a coin amount can be entered in the Coins field.

*No more than 99 cents can be dispensed at one time from the coin dispenser.*

If the member has requested a certain set of bills, use the fields in the **Override** column to override the Auto Mix and specify a “special mix” for this dispense. You can enter either the number of bills or the requested amount. Use Enter to recalculate and make sure that the total amount matches the cash back amount at the top of the screen.

When ready, use *Post* (F5) to continue. The TCR will dispense the cash as shown on the screen; simply pull any remaining funds. The coin will also be dispensed from the TCR or will need to be pulled from the drawer.

## **Important Tips**

- **If you receive an error message during a transaction, DO NOT close your session until the error has been addressed.** Never close a CU\*BASE Session without properly logging off of CU\*BASE.
- It is important to reimburse the coin canister when it is low on coin. Be sure to listen for beeping noises from the coin canister and watch for a red light if you have one attached to your TCR. These indicate that the canister is low on coins. (The light should be green.) Failure to respond to this beeping sound can result in problems when dispensing coin.
- A maximum of 99 cents can be dispensed from a coin canister on a dispense.
- Once you enter the TCR deposit screen, you must deposit your bills in the TCR. Additional bills that the TCR does not accept can go in the *To teller drawer* field.
- If a commercial account, for example, deposits a large number of bills, deposit them in separate bundles since the TCR throat is only so wide and cannot accept too many bills at one time.
- Once a teller enters the TCR deposit screen, he or she has control of the TCR. The other teller using the TCR will receive a message alerting the teller that this is the case. The second teller should simply try again once the first teller has completed the first transaction.
- Before issuing a final deposit to the TCR, “shake hands” and ensure that what the screen says will be deposited is in fact what you expect. Be sure to reconcile this amount with the amount the TCR indicates has been accepted. If this amount is not what you expect, use the Rollback feature to remove the bills from the TCR.
- If you have returned to the Main Teller Funds screen and realize that the amount deposited is not what you expect, you cannot perform a rollback or cancel the transaction. In this case post the transaction. (Note the bills recorded may not be the same ones that the TCR would have dispensed.)
- If notes remain in the tray due to the fact that the TCR does not accept them, the bills must be removed before further action can be taken.

- If you receive a Level 1 or Level 2 error message follow the messages on the screen. A Level 3 error may messages require additional action, such as auditing the TCR.

(See the Appendix for troubleshooting common error messages.)

- **If you want to pull all funds from your teller drawer** (such as if you know the TCR is low on the specific bills you want or is malfunctioning), simply use *All from Drawer* (F10). Then use *Post* (F5) and manually take the appropriate bills from your teller drawer.
- If you request more notes than can actually fit through the throat of the machine, remove the first bundle and the next will be dispensed immediately after it.
- Regardless of where the cash came from, transaction reversals are always posted through the teller drawer, not back to the TCR.



Session 0 CU\*BASE GOLD Edition - Teller Control

**Teller Control** Vault 01

Employee ID **CU\*ANSWERS PROGRAMMING SUPPORT**

Beginning cash	0.00	Cash in drawer	250.00-
Vaults to teller +	0.00	Checks in drawer	0.00
Teller to vaults -	0.00	Inhouse drafts	0.00
TCD/TCR +/- members +	0.00	Total drawer balance	250.00-
Cash +/- member +	0.00		
Wdr/dlsb from accounts -	250.00	Cash in drawer	250.00-
Cash in drawer	250.00-	Cash over (+)	0.00
		Cash short (-)	0.00
		Adj closing cash	250.00-

Cash inventory as of **Jun 17, 2014** [MMDDYY] Enter Amounts

Coins	Rolled	Loose	Bills	Total
Pennies	0.00	0.00	Ones 0.00	Subtotal 0.00
Nickels	0.00	0.00	Fives 0.00	Misc 1 0.00
Dimes	0.00	0.00	Tens 0.00	Misc 2 0.00
Quarters	0.00	0.00	Twenties 0.00	Misc 3 0.00
Half dir	0.00	0.00	Fifties 0.00	Misc 4 0.00
Dollars	0.00	0.00	Hundreds 0.00	Total cash 0.00
Subtotal	0.00	0.00	Subtotal 0.00	Net (Adj cash - inv) 250.00

GD (2639) 6/17/14

The teller should select *Buy from TCD/TCR* (F14) to buy cash to the teller drawer from the TCR.

## Screen 2

Session 0 CU\*BASE GOLD Edition -

**Teller / Vault Cash Transfers** Teller to Supplemental Vault

From To

Teller ID **92** Vault type  ATM  ICD  TCR

Vault ID  Vault #

Transfer amount

**i** Leave amount zero when transferring to TCR.

GD (2926) 6/17/14

The screen will default with the TCR selected. Enter the teller drawer ID and the amount of the transfer, then use Enter to refresh the screen. The screen

will show how this transfer will affect the General Ledger. When ready, use **Post** (F5) to continue to the final screen.

Use the final screen to define the denominations to be dispensed to the TCR. Enter the total amount or number of bills to be dispensed for each bill desired. Use Enter as often as needed to recalculate and make sure the dispense amount matches the requested transfer amount at the top of the screen.

When ready, use *Post* (F5) again to complete the transaction and dispense the bills. When done, a cash transfer receipt will be printed on your configured receipt printer:

BANK/VAULT/TELLER CASH TRANSFER RECEIPT						
Date	Time	From	To	Amount		
3/20/02	11:13	01 MAIN OFFICE	001 345 CU*BASE	5000.00		
Coins	\$	_____	Twenties	\$	_____	
Ones	\$	_____	Fifties	\$	_____	
Fives	\$	_____	Hundreds	\$	_____	
Tens	\$	_____	Other	\$	_____	
Initialed: FROM _____ TO _____			TOTAL CASH	\$	_____	

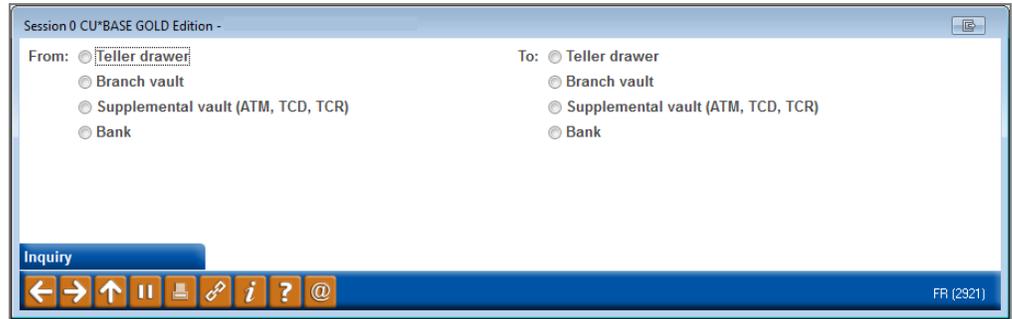
Use the lines provided to jot down the amount of each bill type being transferred. (The system will not complete these; they are used for manual confirmation of the cash that was transferred.)

*NOTE: If you do not wish to receive receipts for bulk cash transfers, uncheck the “Cash Transfers” box in the device configuration for the workstation (**Work Hardware Configuration** on the General Configuration 1 (MNCNFC) menu).*

# TRANSFERRING FUNDS TO THE TCR

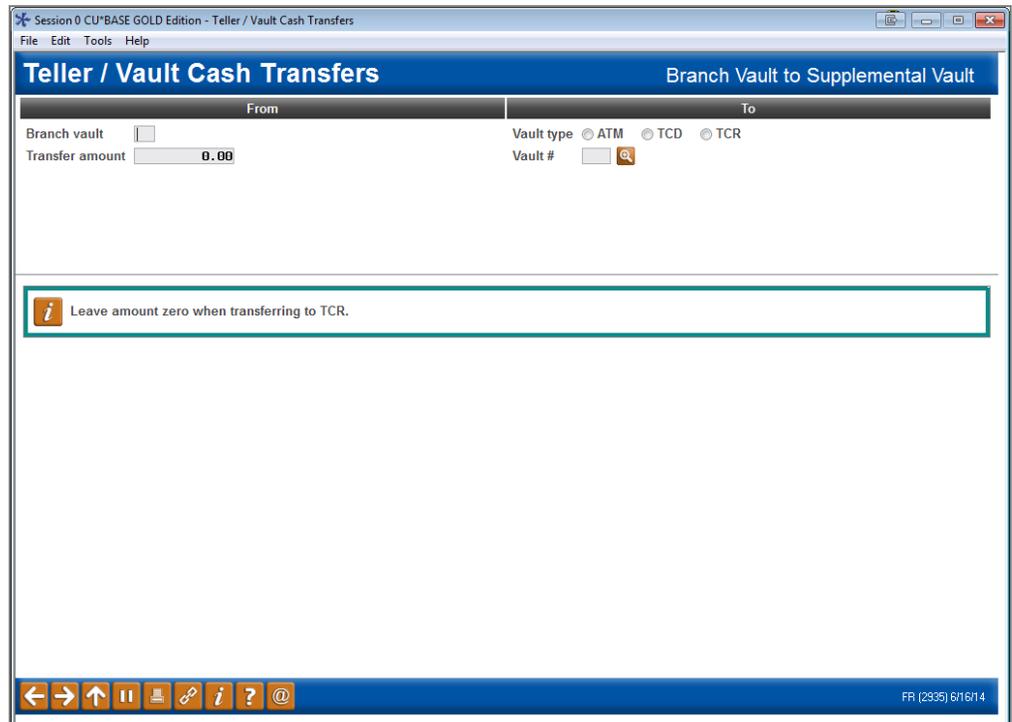
The following instructions pertain to using the cash transfer system to record the restocking of a TCR. You can also use this method to replenish a teller drawer from a TCR, simply by selecting the correct options to transfer from (TCR) and to (Teller Drawer).

## “Teller/Vault Cash Transfers/Inq.” on the Vault Control (MNHTEL) menu - Screen 1



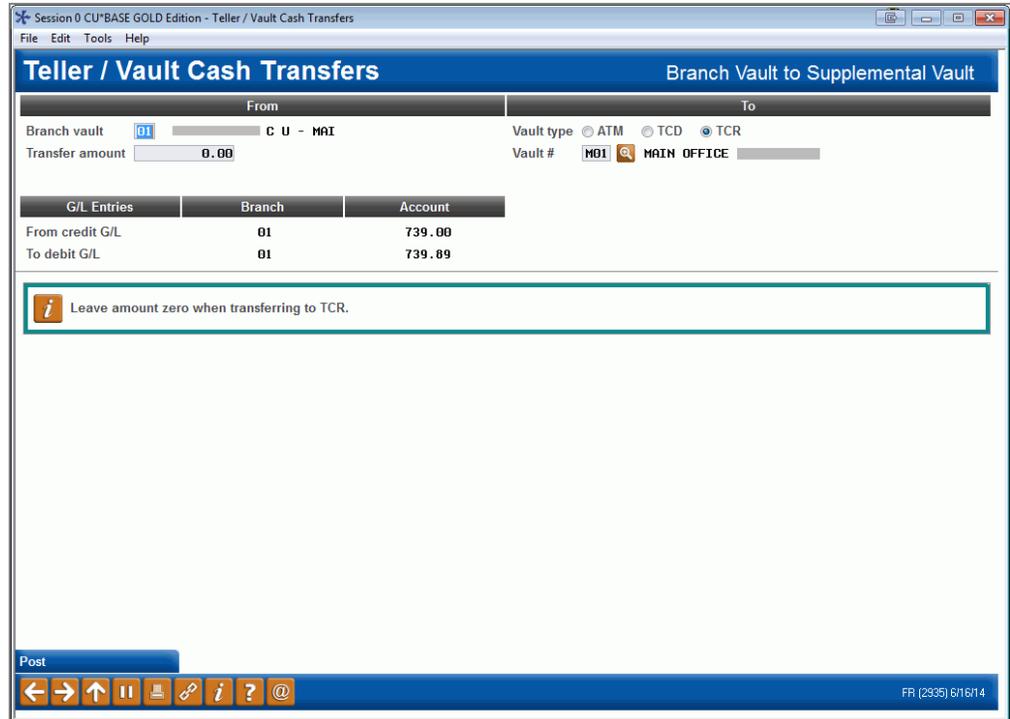
To replenish a TCR, choose **Branch Vault** on the “From” side and **Supplemental Vault** on the “To” side, then use Enter to proceed to the second screen.

## Screen 2



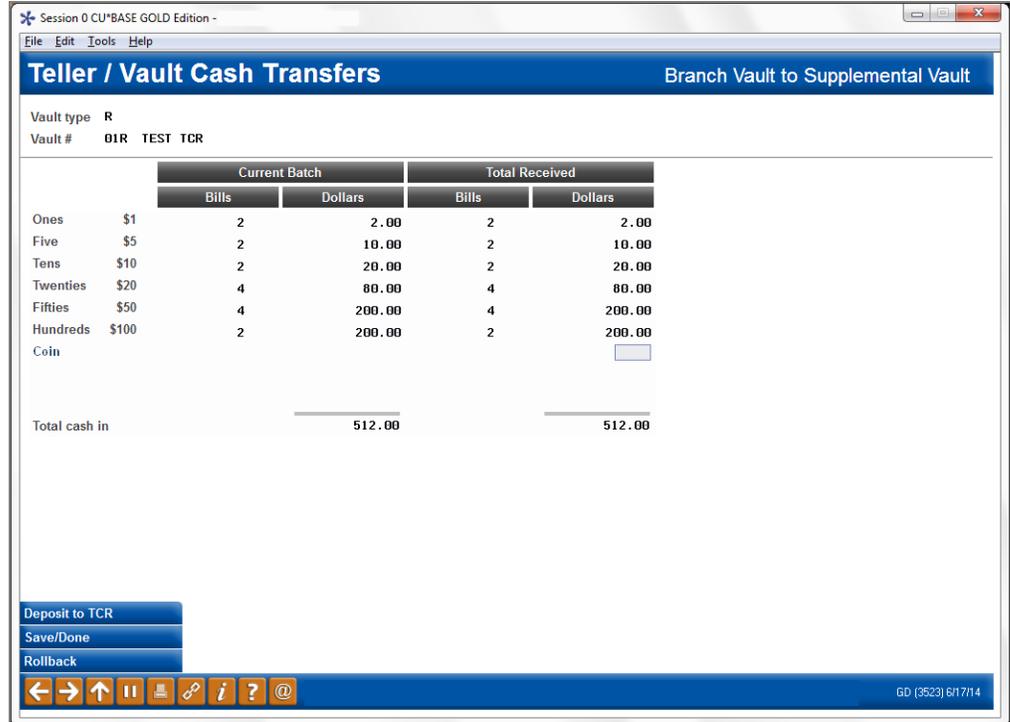
On the left, enter the branch vault from which the cash will be taken. On the right, choose TCR (R) and enter the TCR vault ID. **Leave the transfer amount field blank since the amount will be calculated by the TCR.** Use

Enter to refresh the screen. The screen will show the accounts that will be affected in the General Ledger.



When ready, use **Post** (F5) to continue to the final screen.

### Screen 3



The final screen is used to define the denominations that were restocked in the TCR. (If coin is added to the coin canister, it must be manually loaded. Enter the change transferred on this screen.) Then use **Deposit to TCR** (F6).

---

# SELLING FUNDS FROM THE TCR BACK TO THE VAULT

If it becomes necessary to remove bulk quantities of cash from the TCR (such as if the machine needs repair, is being replaced, or if a cartridge denomination is changing), the Cash Transfers system can be used to sell the money from the TCR back to the branch vault.

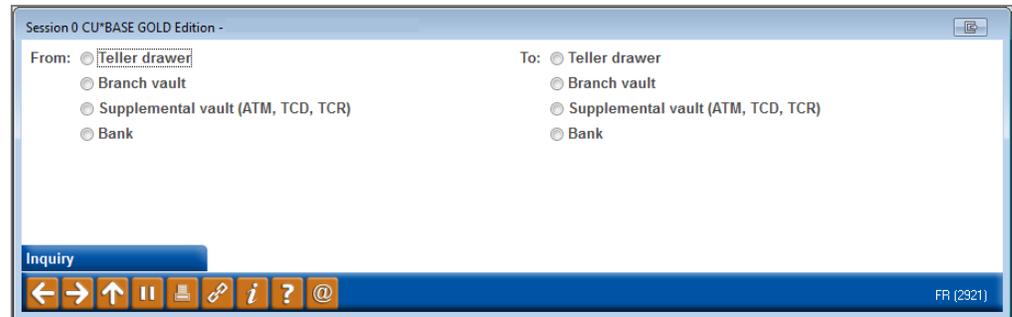
1. First make sure that all teller drawers are in balance and that the TCR is also in balance (use the Inventory Analysis shown on page 12).

*HINT: If a teller drawer is out of balance, determine if it relates to TCR activity or not before proceeding with the physical count. Remember teller “over” and “short” amounts when analyzing these situations. Corrections will depend on the reason for the out-of-balance condition. Contact a CU\*BASE Client Service Representative for assistance.*

2. Deactivate both teller stations from the TCR.

## RECORDING THE CASH TRANSFER

### “Teller/Vault Cash Transfers/Inq.” on the Vault Control (MNHTEL) menu - Screen 1



To sell bulk cash from a TCR, choose **Supplemental Vault** on the “from” side and **Branch Vault** on the “To” side, then use Enter to proceed to the second screen.

## Screen 2

Session 1 CU\*BASE GOLD Edition - Teller / Vault Cash Transfers

File Edit Tools Help

### Teller / Vault Cash Transfers

Supplemental Vault to Branch Vault

From To

Vault type  ATM  ICD  TCR Branch vault 01 C U - MAI

Vault # M01 MAIN OFFICE

Transfer amount 50,000.00

G/L Entries	Branch	Account
From credit G/L	01	739.89
To debit G/L	01	739.00

Post

FR (2344) 6/16/14

On the left, choose TCR (R) and enter the TCR vault ID (click the help button  to see a list of your credit union's configured codes) and the transfer amount. On the right, enter the Branch Vault number that will receive the funds. Use Enter to refresh the screen. Then use **Post** (F5) to post the transfer.

# TCR DAILY ACTIVITY REPORTS

## “TCD/TCR Daily Activity Reports” on the Vault Control (MNHTEL) menu

This screen is used to print three different reports showing daily TCR activity. These reports, two of which are produced automatically during end-of-day teller processing, are helpful for balancing a TCR and researching balancing issues.

Complete all settings as desired and use Enter to print the report(s) selected. See the following pages for report samples.

### Field Descriptions

<i>Field Name</i>	<i>Description</i>
Activity for date	Enter a date for which activity should be shown (mmddy).
TCD/TCR type	Select TCR (R).
TCD/TCR code	If you wish to see detail for only a single TCR, enter the code here. Leave the field blank to include all TCRs on the report (similar to the default daily reports).
Print summary	Check this box to print a report showing a summary of daily activity, using the same format as the Inventory Analysis screen shown on Page 12. Each TCR will be listed separately.  This report is produced automatically during end-of-day teller processing.

Print detail by teller	
(Teller ID)	Leave this field blank to view activity by all Teller IDs or enter a specific Teller ID to view only activity by that teller.
Bulk cash transfers	Check this box to print a report showing each individual bulk transfer performed using the Cash Transfers system.
Member dispenses/ deposits	Check this box to show a summarized total of cash dispenses and deposits by teller. (Remember that this only shows the total amount dispensed/deposited to members for each teller; use the Print complete member dispense report to see individual transaction amounts dispensed/deposited for each member.)
Print complete member dispense detail	Check this box to print a report showing every individual transaction performed on behalf of a member, grouped by teller ID.

### Summary Report - LSVACT

```

3/06/09  43:33  CREDIT UNION  LSVACT  PAGE 1
RUN ON  3/07/09  TELLER CASH DISPENSER/RECYCLER DAILY ACTIVITY REPORT  USER
SUMMARY - 3/06/2009
*****
TCD 08D  US-23 POD #3  G/L 01-08-739.06
*****
Previous Day EOD Inventory Balance          71,778.53
Beginning of Day G/L Balance                71,778.53
Beginning of Day Inventory Balance          71,778.53
Net Bulk transfers to/from Teller           .00
Net Bulk transfers to/from Branch Vault     .00
Net Bulk transfers to/from Supp Vaults     .00
Net Bulk transfers to/from Bank            .00
Net +/- Members                            14,892.57-
-----
NET CHANGE                                  14,892.57-
-----
Calculated EOD Balance (EOD Inventory + Net Change)  56,885.96
EOD Inventory Balance                          56,885.96
*****
TCR 08E  DRIVE-THRU NORTH OFFICE  G/L 01-08-739.08
*****
Beginning of Day G/L Balance                42,525.00
Net Bulk transfers to/from Teller           .00
Net Bulk transfers to/from Branch Vault    20,000.00
Net Bulk transfers to/from Supp Vaults     .00
Net Bulk transfers to/from Bank            .00
Net +/- Members                            23,240.00-
-----
NET CHANGE                                  3,240.00-
-----
** END OF REPORT **

```

### Detail Report - LSVACT2

```

3/06/09  43:33  CREDIT UNION  LSVACT2  PAGE 1
RUN ON  3/07/09  TELLER CASH DISPENSER/RECYCLER DAILY ACTIVITY REPORT  USER
TCR/TCR Detail - 3/06/2009
*****
TCD 08D  US-23 POD #3  (Continued)
*****
+/- TO MEMBERS
Tlr      AMOUNT
N2      6,375.48-
N5      8,517.09-
-----
14,892.57- *
*****
TCR 08E  DRIVE-THRU NORTH OFFICE
*****
BRANCH VAULT BULK TRANSFERS
Vlt      TIME      AMOUNT
08      11:52:17    10,000.00
08      11:58:46    10,000.00
-----
20,000.00 *
*****
+/- TO MEMBERS
Tlr      AMOUNT
N7      7,165.00-
N9      16,075.00-
-----
23,240.00- *
-----
** END OF REPORT **

```

### Member Dispense Detail Report - LSVACT3

NOTE: This report can be printed only via the menu command; it is not produced during daily processing. Because it can be a fairly lengthy report, it is generally used only when researching balancing problems that have been traced to member dispenses.

TLR	TIME	AMOUNT	MBR ACCT	NAME
08	8:30:04	77.01	2222222	MEMBER
08	8:41:00	1,097.84	2222223	MEMBER
08	8:42:38	50.00	2222224	SMITH
08	9:13:33	357.40	3333333	JONES
08	9:16:40	75.00	5555555	TESTPERSON
08	9:23:49	242.50	6666666	JOHNSONTEST
08	9:25:28	60.00	7777777	JAMESTEST
08	9:27:23	33.42	8888888	TESTTEST
08	9:43:25	41.00	7876789	ANOTHERTEST
08	9:45:15	373.02	8888777	MEMBERTEST
08	9:49:38	100.00	5555556	SMITHTEST
08	9:58:26	288.70	4444444	SMITHSONTEST

---

## APPENDICES

- Appendix A: Troubleshooting Hints
- Appendix B: Status and Error Messages
- Appendix C: Documentation of the SVJRNL file that records transaction data made by a TCR
- Appendix D: Documentation of the changes to the SVJRNL file as recorded in the CUFMNT file.

## APPENDIX A: TROUBLESHOOTING HINTS

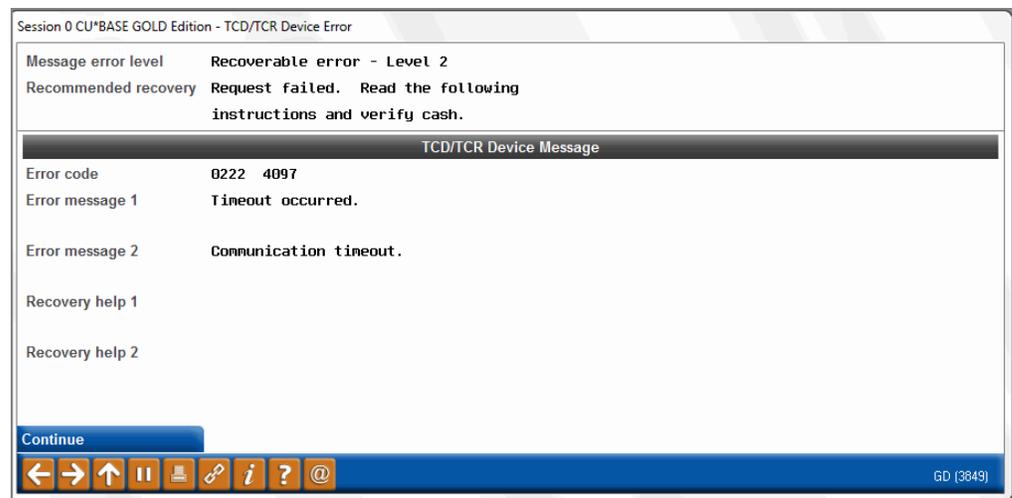
If you are having trouble with the TCR, try these simple tricks first. Also refer to Appendix B (Page 46) for a list of error messages you may see with a TCR.

- Is the power on? Look for the bright green light inside the machine (near the reject bin). If not, try pressing the Override button (OVR) on the power timer unit. If a change in Daylight Saving Time has caused the power timer to be off, follow the instructions provided to reset the timer to the new schedule.
- Try running a “Reset” to reset the machine.
- Is the cable between the driver PC and the TCR connected? To the “Left Terminal” connection on the PC?
- DO NOT change the position of the “OP-LOAD” button inside the machine. This should always be in the “OP” position or you will get unpredictable results from the machine.
- If the cartridges cannot be removed, run the “close” command to lower the lifts.
- Check the device configuration for the TCR to verify the workstation ID set up as the “Left” or “Right” workstation. Check the Public address and verify that all other settings are correct. See Page 9 for details.
- Check the device configuration for the workstation to make sure the “Use Teller Cash Disp Machine” flag has been turned on (for the left or right teller workstation only; this flag should not be checked for workstations that simply purchase bulk cash from the TCR). See Page 15 for details.
- Experience has shown that the TCR will run much more smoothly and experience far fewer problems and down-time if the modules are stocked with plenty of bills and are never allowed to run completely out. Establishing a regular schedule of restocking the TCR before bills are low should help you avoid unnecessary trouble.

## APPENDIX B: TCR STATUS AND ERROR MESSAGES

Following are error messages that may appear when dispensing funds from a TCR. Notice the numeric codes in front of each message; these codes will be important if a technician is required to service the machine. The first digit represents the error level (see below), which is followed by a space, then the error number, followed by error text. The error messages come directly from the machine and will be unique for individual machine models. When warning messages appear, the TCR will still function, but the error should be addressed as soon as possible. An error message must be addressed before the TCR will function again. In most cases, the first step is to issue a reset command to reset the machine. If the error cannot be immediately corrected, deactivate both workstations from the TCR so that they can continue working from the teller drawer.

When a device error occurs, a window will pop-up listing the details of the error, as with the example below:



<i>Error Condition</i>	<i>Remarks</i>
Cassette is almost empty or almost full	This is a typical example of an error with a level one (1) warning. The teller has to empty or fill the cassettes in question in the near future.
Notes are located in an area of the device they don't belong.	This is an example of a level two (2) warning. Typically notes are still in the output slot from the last transaction. The teller has to remove the notes before the transaction can be tried again.
Hardware errors	These are typically errors with a level three (3)—fatal. The teller can try to reinitialize the machine, but if this does not help, then the teller should call a service technician.
Not identified/counterfeit notes during a deposit	Typically this is just a warning. It is not really an error and can happen any time during a deposit. Again a teller has to act on the warning and either try to redeposit the bills or remove them from the TCR.

## Common Talarus Status and Error Messages

<i>Code</i>	<i>Description</i>
114	Not assignable banknote(s) rejected
119	Rejected banknotes contain notes with authentication features out of tolerance
120	Rejected notes
142	Input cassette is empty
145	Output cassette is not empty
152	The RSM is almost full
170-192	Various bank note jams
291	The NHM cover has been opened
635	RSM is empty
662	Banknote(s) not assignable
664	Warning: Possible accounting error!
665	Problems on transport path

## APPENDIX C: DOCUMENTATION OF THE SVJRNL FILE THAT RECORDS TRANSACTION DATA MADE BY A TCR

Following is a table listing the fields, field descriptions, length, decimal places and type used to record TCD transactions.

- NOTE: "Type" refers to whether the field is an alpha-numeric character (letters - A) or a signed numeric character (numbers - S).

<b>FIELD</b>	<b>DESCRIPTION</b>	<b>LENGTH</b>	<b>DECIMAL PLACES</b>	<b>TYPE</b>
SJDATE	DATE	8	0	S
SJTIME	TIME	6	0	S
SJTELL	Teller Number	2		A
SJSIDE	Side	1		A
SJTERM	Terminal ID	10		A
SJTYPE	Supp Vault Type	1		A
SJCODE	Supp Vlt Code	3		A
SJTYP	Transaction Type	1		A
SJFRTO	Transfer From/To	4		A
SJTARQ	Total Requested	13	2	S
SJTADS	Total Dispensed	13	2	S
SJACCT	Account Base	9	0	S
SJGSTS	General Status Cassette 1	4		A
SJC1DNM	Denomination	5	2	S
SJC1ARQ	Cassette 1 Requested	13	2	S

SJC1ADS	Cassette 1 Dispensed	13	2	S
SJC1STS	Cassette 1 Status	1		A
	Cassette 2			
SJC2DNM	Denomination	5	2	S
SJC2ARQ	Cassette 2 Requested	13	2	S
SJC2ADS	Cassette 2 Dispensed	13	2	S
SJC2STS	Cassette 2 Status	1		A
	Cassette 3			
SJC3DNM	Denomination	5	2	S
SJC3ARQ	Cassette 3 Requested	13	2	S
SJC3ADS	Cassette 3 Dispensed	13	2	S
SJC3STS	Cassette 3 Status	1		A
	Cassette 4			
SJC4DNM	Denomination	5	2	S
SJC4ARQ	Cassette 4 Requested	13	2	S
SJC4ADS	Cassette 4 Dispensed	13	2	S
SJC4STS	Cassette 4 Status	1		A
	Cassette 5			
SJC5DNM	Denomination	5	2	S
SJC5ARQ	Cassette 5 Requested	13	2	S
SJC5ADS	Cassette 5 Dispensed	13	2	S
SJC5STS	Cassette 5 Status	1		A
	Cassette 6			
SJC6DNM	Denomination	5	2	S
SJC6ARQ	Cassette 6 Requested	13	2	S
SJC6ADS	Cassette 6 Dispensed	13	2	S
SJC6STS	Cassette 6 Status	1		A
	Cassette 7			
SJC7DNM	Denomination	5	2	S
SJC7ARQ	Cassette 7 Requested	13	2	S
SJC7ADS	Cassette 7 Dispensed	13	2	S
SJC7STS	Cassette 7 Status	1		A
	Cassette 8			
SJC8DNM	Denomination	5	2	S
SJC8ARQ	Cassette 8 Requested	13	2	S
SJC8ADS	Cassette 8 Dispensed	13	2	S
SJC8STS	Cassette 8 Status	1		A

**APPENDIX D: DOCUMENTATION OF THE CHANGES TO THE SVJRNL FILE  
AS RECORDED IN THE CUFMNT FILE.**

Following are what is recorded in CUFMNT when a field in the SVJRNL file is changed.

<b>FIELD</b>	<b>DESCRIPTION</b>	<b>LENGTH</b>	<b>DECIMAL</b>	<b>RESULTING VALUE</b>
MNTDAT	Maintenance Date	6	0	System Date
MNTTIM	Maintenance Time	6	0	System Time
MNTUSR	Maintenance User	8		Employee User ID
MNTEID	Maintenance Employee ID	2		Employee ID
MNTPGM	Maintenance Program	6		"USVINV"
MNTFLD	Maintenance Field	6		"SVCSCCT(1-8)" for cash, "SVCOIN" for coin
MNTWS	Maintenance Work Station ID	2		Employee Workstation ID
MNTOLD	Maintenance Old Data	30		Previous amount in the cassette of coin before change
MNTNEW	Maintenance New Data	30		Resulting amount in the cassette or coin after the change
MNTFIL	Maintenance File	8		"SVINV"