

PERCEPTION[®]

Accounting Interface Setup

A Training Tutorial

This training tutorial outlines the basic features for interfacing the *PERCEPTION* system with financial and accounting systems.

It is a supplement to the user manual entitled “*PERCEPTION Accounting Functions & Interface Manual*,” which provides more details for the user.

Before using this tutorial, the user should first view the preliminary training tutorial, “Getting Started With *PERCEPTION*.”

Other related training tutorials for accounting functions are the following:

- 1. *PERCEPTION* Accounting –Managing Customer Billings**
- 2. *PERCEPTION* Accounting – Managing Time Charges**
- 3. *PERCEPTION* Accounting – Managing Vendor Invoices**
- 4. *PERCEPTION* Accounting Project Interface Setup**

Training Directory



Continue



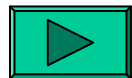
**Synchronizing
Accounting Information**



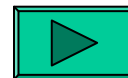
**Initial Accounting
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**Defining General Ledger
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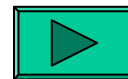
**Defining Project List of
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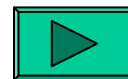
**Selecting Accounting
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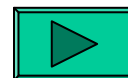
G/L Account Transactions



Time Charge Transactions




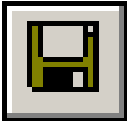
**Un-Posting Accounting
System Transactions**




**Exporting Transactions To
Accounting Systems**

Special Note:

To add new records in any worksheet, click on the *Add* button  on the toolbar or the down-arrow on your keyboard.

To save data entered into any worksheet, click on the *Save* button  on the toolbar.

To delete records from any worksheet, highlight those records (rows) to be deleted, then click on the *Delete* button  on the toolbar.

There are a limited number of steps to undertake to setup the appropriate interface between *PERCEPTION* and an accounting system.

For an accounting system interface to work, the accounting system's general ledger (G/L) accounts need to be defined on the *PERCEPTION* database.

This allows *PERCEPTION* to export its transactions using the same G/L accounts as are in the accounting system's general ledger.

Only those accounts that are needed for labor and material cost management transactions are required for *PERCEPTION*.

Synchronizing Accounting Information

For the interface communications to be successful, certain information between *PERCEPTION* and the accounting system must be compatible and kept so. At a minimum, the following data must be synchronized:

1. G/L Account Numbers
2. Vendor ID
3. Customer ID
4. Invoice Terms
5. Employee ID (Clock Number)

***PERCEPTION* generates various labor and material cost transactions that can be exported directly to accounting systems:**

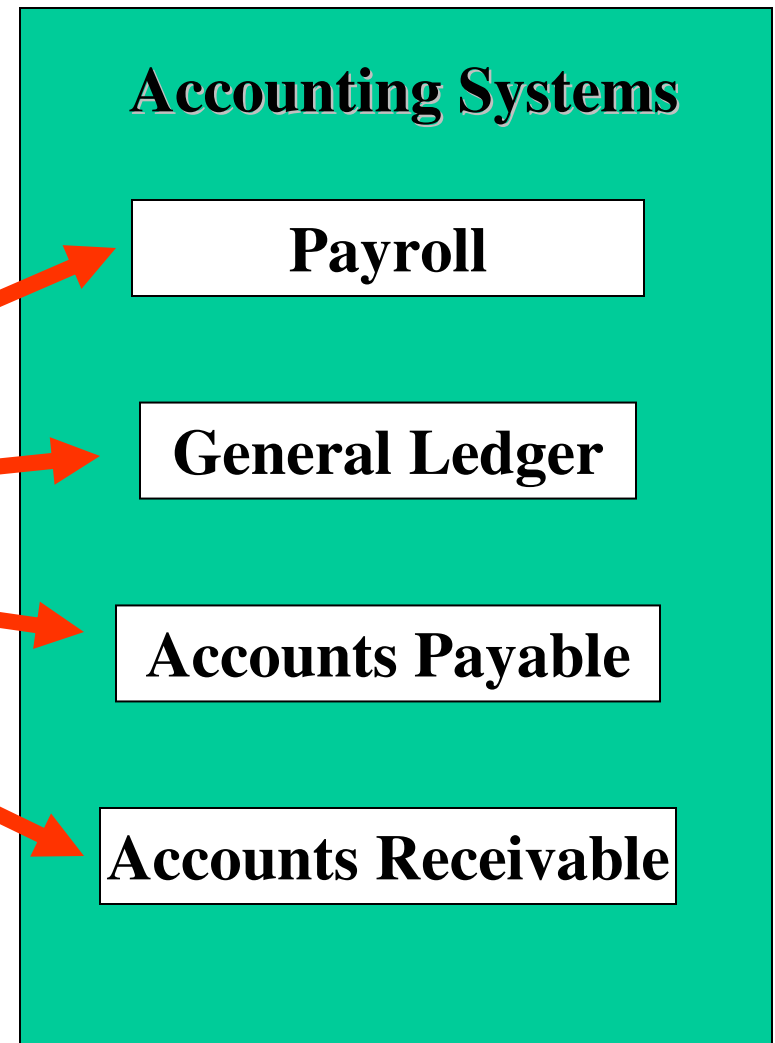
- 1. Time charges**
- 2. Project PO and amendment values to G/L & Accounts Payable (A/P)**
- 3. Stock replenishment PO and amendment values to G/L & A/P**
- 4. Stock issues to G/L (Assets & Project Expenses)**
- 5. Stock inventory adjustments to G/L (net change in asset cost due to changes in quantity and/or unit cost)**
- 6. Vendor invoices to A/P**
- 7. Customer invoice billings to Accounts Receivable (A/R)**

Interfaces With Accounting Systems

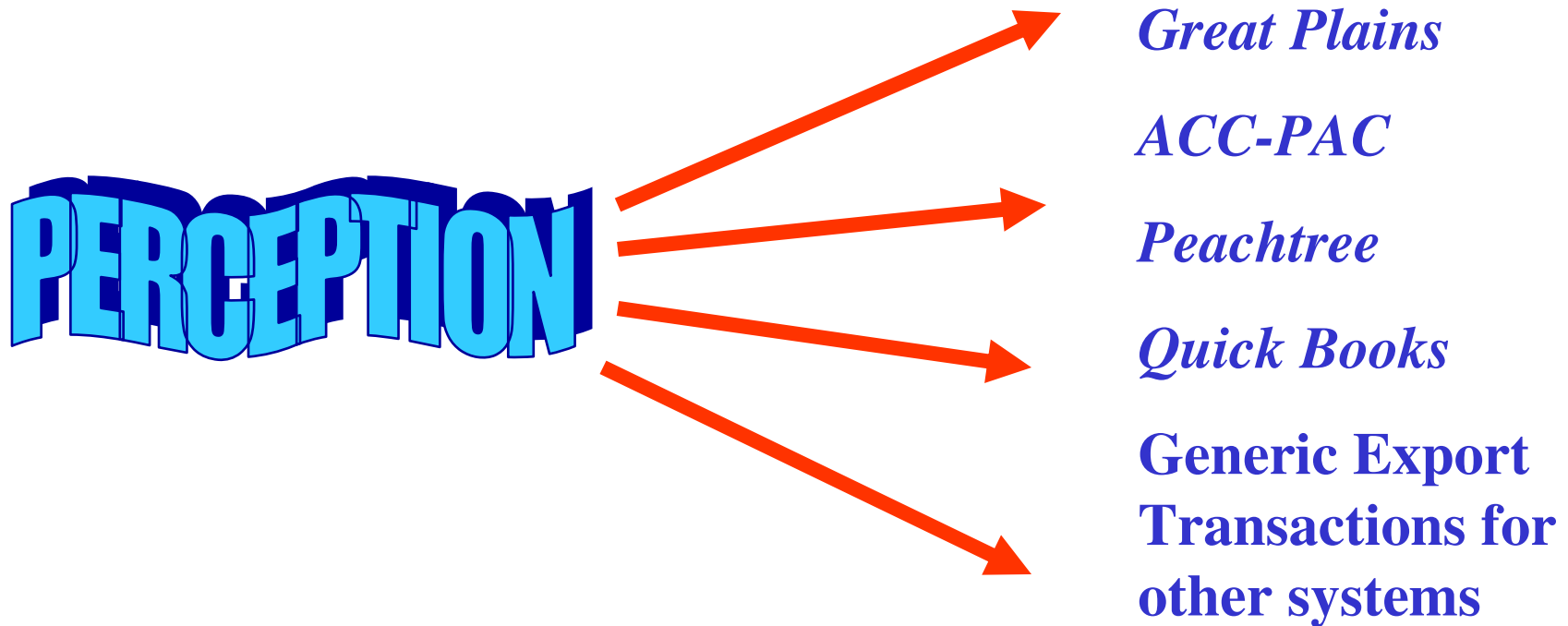
PERCEPTION

System Transactions

- Time Charges
- Purchases
- Stock Usage & Adjustments
- Customer Invoices
- Vendor Invoices



Established Interfaces With Popular Accounting Systems



Initial Accounting System Interface Set-Up

Interfaces with accounting systems can be set up in a variety of ways. Information from *PERCEPTION* can be transferred to accounting software using different methods including the following:

1. Text files
2. Spreadsheet files
3. Database files (Access, dBase, ODBC)
4. Software COM objects embedded in the software to directly access another system's database

PERCEPTION can be set up to support the transfer of its transactions using any of the above methods.

However, each accounting software system typically employs only one of these methods.

PERCEPTION offers a selection of standard accounting interfaces, depending on the software being linked.

Other accounting systems may also be linked if they will support ***PERCEPTION***'s standard Generic Interface formats and will map these files to the accounting system's transaction input requirements.

Company-Wide General Ledger Accounts

PERCEPTION defines the following G/L accounts as company-wide since they apply to all projects, including maintenance and overhead operations:

G/L Asset Accounts:

1. **Stock Assets (one or more)**
2. **A/R Asset Clearing Account**
3. **Material Asset Clearing Account**

G/L Liability Accounts:

1. **A/P Liability Clearing Account**
2. **Payroll Liability Account**
3. **Canadian Government Sales Tax (GST) Clearing Account (optional)**
4. **Local Sales Tax Liability Account***
5. **State/Provincial Sales Tax Liability Account**
6. **Federal Sales Tax Liability Account***

G/L Expense Account:

1. **Stock Adjustment Expense Account**

*** NOTE:** These are not currently used by *PERCEPTION*

Project-Specific General Ledger Accounts

PERCEPTION defines the following G/L accounts as project-specific since they may be different for various projects, including maintenance and overhead operations.

G/L Project Income Accounts:

1. Project Income Account (one or more)

G/L Project Expense Accounts:

1. Project Labor Expense (one or more)
2. Project Material Expense (one or more)
3. Project Stock Expense (one or more)*
4. Freight Expense (one or more)*
5. Local Sales Tax Expense (one or more)*
6. State/Provincial Sales Tax Expense (one or more)*
7. Federal Sales Tax Expense (one or more)*

*** NOTE:** These expense accounts also may be set to be the same as Project Material Expense Account. Tax accounts may be lumped together.

Different G/L accounts may be set up for the different types of projects:

- 1. New construction**
- 2. Ship repair**
- 3. Industrial**
- 4. Overhead and for**
- 5. Stock replenishment “projects”**

For the simplest business accounting (cash-basis accounting), labor costs (time charges) and material costs (vendor payments) can be applied directly to the G/L project expense accounts and, simultaneously, costs of these expenses are deducted from the cash asset account of the balance sheet.

However, for accrual-basis accounting, the process becomes more complex as assets and liabilities will need to be recognized before actual monies are exchanged between parties.

The user may develop G/L accounts in whatever way best suits an individual business requirement.

Defining General Ledger Accounts Master List

PERCEPTION uses general ledger accounts for its various Accounting Interface transactions.

For this interface to operate successfully, the user must define these accounts in the proper places for time charges, vendor invoices, stock purchases & issues to production, and for customer billings.

PERCEPTION uses the master table of general ledger accounts to validate all general ledger accounts that are ultimately assigned to projects.

Click on *Environment/Accounting/General Ledger Accounts* to open the General Ledger Accounts worksheet:

General Ledger Accounts			
GL Acct	Description	Category	
11500	Accounts Receivable Assets	BL-DB	
21601	Stock Inventory - Steel	BL-DB	
31602	Stock Inventory - Aluminum	BL-DB	
41603	Stock Inventory - Outfit	BL-DB	
51700	Material Asset Clearing	BL-DB	
62500	Accounts Payable Liability	BL-CR	
72600	Payroll Liability	BL-CR	
82701	Local Sales Tax Liability	BL-CR	
92702	State Sales Tax Liability	BL-CR	
102703	Federal Sales Tax Liability	BL-CR	
112750	Canadian Government Sales Tax Clearing	BL-CR	
123001	Income - New Construction	OS-CR	
133002	Income - Ship Repair	OS-CR	
143003	Income - Industrial Work	OS-CR	
153004	Income - Other	OS-CR	
164001	Direct Labor Expense - New Construction	OS-DB	
174002	Direct Labor Expense - Ship Repair	OS-DB	
184003	Direct Labor Expense - Industrial Work	OS-DB	
194004	Direct Labor Expense - Other	OS-DB	
204101	Direct Material Expense - New Construction	OS-DB	
214102	Direct Material Expense - Ship Repair	OS-DB	
224103	Direct Material Expense - Industrial Work	OS-DB	
234104	Direct Material Expense - Other	OS-DB	
244111	Stock Material Expense - New Construction	OS-DB	
254112	Stock Material Expense - Ship Repair	OS-DB	
264113	Stock Material Expense - Industrial Work	OS-DB	
274114	Stock Material Expense - Other	OS-DB	
284200	Freight Expense	OS-DB	
294310	Overhead Labor Expense	OS-DB	
304320	Overhead Material Expense	OS-DB	
314410	Plant Maintenance Labor Expense	OS-DB	
324420	Plant Maintenance Material Expense	OS-DB	
339000	Purchase Order Non-Posting Account	NON-POST	

Columns to fill in for each G/L Account are the following:

1. **GL-Acct**: The General Ledger Account Number that will be used in the accounting system (maximum of 255-characters)
2. **G/L Account Description**
3. **Category** - Designations for the type of G/L Account (informational only):
 - BL-DB (A Balance Sheet Asset Account)
 - BL-CR (A Balance Sheet Liability Account)
 - OS-CR (An Operating Sheet Revenue Account)
 - OS-DB (An Operating Sheet Expense Account)
 - NON-POST (A special G/L Account accommodated by some accounting systems that has no direct link to the General Ledger, but transactions will be processed later by the accounting system.)

Defining Project List of General Ledger Accounts

Once the master list of G/L accounts have been defined, each working project defined on the database must be assigned to a selection of G/L accounts from this master list.

If a project refers to an account that is not found on this table, the system will not permit the user to save that project's list of general ledger accounts.

For detailed instructions for defining G/L accounts to projects, please refer to the following tutorial:

Project Accounting Interface Setup

Selecting an Accounting System For *PERCEPTION* Interface

Since different accounting systems have different formats for importing transactions, the user must specify what accounting system is being used.

Interfaces with accounting systems can be set up in a variety of ways.

Information from *PERCEPTION* can be transferred to accounting software using different methods including the following:

- 1. Text files**
- 2. Spreadsheet files**
- 3. Database files (Access, dBase, ODBC)**
- 4. Software COM objects embedded in the software to directly access another system's database**

***PERCEPTION* offers a selection of standard accounting interfaces, depending on the software being linked.**

Other accounting systems may also be linked if they will support *PERCEPTION*'s standard generic interface formats and will map these files to the accounting system's transaction input requirements.

Click on *Library/Company Parameters* and then open the tab window entitled *Accounting*:

The screenshot shows the 'System Parameters and Company Defaults' dialog box with the 'Accounting' tab selected. The 'Company Default GL Accounts' section contains three dropdown menus. The first two are for 'Material Cost' and 'Payroll', both set to 'Great Plains Dynamics'. The third is for 'GST', which is open, showing a list of accounting systems: None, ACCPAC, Peachtree Accounting, Great Plains Dynamics (highlighted), Quick Books Pro, and Generic. To the right, there is a 'Select GL Account Source' section with a 'Get Account from SWBS' dropdown set to 'No'. At the bottom right, there are 'Save', 'Close', and 'Help' buttons.

Once the accounting system has been selected, Save the selection to the database.

Generic Accounting Interface Transactions

For accounting systems that are not one of those directly supported by *PERCEPTION*, the system provides a series of transactions for a Generic interface.

The transaction files generated by *PERCEPTION* will need to be mapped to suit the specific import requirements of the accounting system.

The *Company Default G/L Accounts* section on the *Accounting* tab window contains 3 G/L accounts that are not related in any way to a project.

- 1. The Stock Adjustments Account is used by the Stock Adjustment export.**
- 2. The GST account is a customized data field used by the Voucher export for a Canadian shipyard.**
- 3. The Meal Money Account is a customized data field used by the Payroll export for a Canadian shipyard. Meal Money is paid by union rules to those people who work overtime.**

The default value for *Select G/L Account Source* is *Get Account from SWBS*.

Every time a project is created it will initialize the project options to this default, unless the project was copied from an existing project.

Once the accounting system and various other options have been selected, *Save* the selection to the database

G/L Account Transactions

PERCEPTION generates a variety of transactions that can be exported to an accounting system's general ledger.

These transactions apply to both sides of the general ledger:

- Assets & Liabilities (Balance Sheet)
- Income & Expenses (Operating Statement)

The following outlines these transactions and the *PERCEPTION* functions that generate them.

<i>Limited Accrual Basis Accounting</i>	Balance Sheet		Operating Statement	
	Asset	Liability	Income	Expense
PERCEPTION Transactions	Debit	Credit	Credit	Debits
Posted Vendor Invoices - Non-Stock	-	A/P Liability Clearing		Project Material Expense
Returned Material - Non-Stock	-	A/P Liability Clearing Debit		Project Material Expense Credit
Posted Vendor Invoices - Stock	Stock Asset	A/P Liability Clearing		
Returned Material (after invoice)- Stock	Stock Asset Credit	A/P Liability Clearing Debit		
Posted Stock Issues	Stock Asset Credit			Project Stock Expense
Stock Adjustments (Qty & Cost)	Stock Asset Credit (value loss)			Stock Adjustment Expense Credit
Posted Vendor Invoice Freight Expense		A/P Liability Clearing		Freight Expense
Posted Vendor Invoice Local Sales Tax		A/P Liability Clearing		Local Sales Tax Expense
Posted Vendor Invoice State/Provincial Sales Tax		A/P Liability Clearing		State/Provincial Sales Tax Exp.
Posted Vendor Invoice Federal Sales Tax		A/P Liability Clearing		Federal Sales Tax Expense
Posted Vendor Invoice Canadian GST		A/P Liability Clearing GST Clearing Debit		
Posted Time Charges For G/L		Payroll Liability Clearing		Project Labor Expense
Posted Time Charges Not For G/L (optional)	Employee Time Charges Transactions			
Posted Customer Invoices	A/R Clearing Account		Project Income Account	
Posted Customer Invoice Local Sales Tax	A/R Clearing Account	Local Sales Tax Liability		
Posted Customer Invoice State/Provincial Sales Tax	A/R Clearing Account	State/Provincial Sales Tax Liability		
Posted Customer Invoice Federal Sales Tax	A/R Clearing Account	Federal Sales Tax Liability		
Purchase Orders (Optional)	Non-Posted Purchase Order Account			
Note 1: Projects include both billable, maintenance & overhead				
Note 2: Overhead expenses are typically broken down by accounts				
Note 3: Project Income Account may be an Income Deposit Account. This allows the income to be allocated to the project on some formula basis of project progress.				

Details of interfaces and operating procedures for specific accounting systems are described in “*PERCEPTION Accounting Functions & Interface Manual.*”

Time Charge Transactions For Payroll

PERCEPTION provides data entry windows for entering time charges.

Automated data collection methods such as bar coding, also may be used.

Sample set of time charge transactions that can be either exported to a payroll system, or to an out-sourced payroll service:

DATE	WO	Employee Name	Center	EmpID	Hours	Project	Memo	Hourly(1)/Salary(2)
02/05/2001	11-115	Barry,Tom	FAB	34	9:00	2	Transfer Of Time Card 1	1
02/05/2001	11-115	Jones,Francis	FAB	26	8:30	2	Transfer Of Time Card 2	1
02/05/2001	11-115	Bolt,John	FAB	854	4:15	2	Transfer Of Time Card 3	1
02/05/2001	11-115	Sparks,Bill	FAB	32	8:00	2	Transfer Of Time Card 4	1
02/05/2001	11-115	Thomas,John	FAB	527	4:00	2	Transfer Of Time Card 5	1
02/05/2001	11-115	Alexander,William	FAB	907	7:30	2	Transfer Of Time Card 6	1
02/05/2001	11-115	Mischeif,Barney	FAB	456	5:00	2	Transfer Of Time Card 7	1
02/05/2001	11-115	Belneck,Larry	FAB	714	0:15	2	Transfer Of Time Card 8	1
02/05/2001	11-115	Miles,Dave	FAB	12	8:00	2	Transfer Of Time Card 9	1
02/05/2001	11-115	Smith,John	FAB	8	1:00	2	Transfer Of Time Card 10	1
02/05/2001	11-115	White,Steve	FAB	393	8:00	2	Transfer Of Time Card 11	1
02/05/2001	11-115	Bond,James	FAB	7	2:30	2	Transfer Of Time Card 12	1
02/05/2001	5-100	Barry,Tom	FAB	34	1:00	2	Transfer Of Time Card 13	1
02/05/2001	5-100	Jones,Francis	FAB	26	1:00	2	Transfer Of Time Card 14	1
02/05/2001	5-118	Bolt,John	FAB	854	0:30	2	Transfer Of Time Card 15	1
02/05/2001	5-118	Sparks,Bill	FAB	32	8:00	2	Transfer Of Time Card 16	1
02/05/2001	5-119	Smith,John	FAB	8	3:00	2	Transfer Of Time Card 22	1
02/05/2001	5-119	White,Steve	FAB	393	6:00	2	Transfer Of Time Card 23	1

Note: Only time charge transactions that the user flags as “Approved” will be exported.

Un-Posting Accounting System Transactions

If for some reason, transactions from *PERCEPTION* need to be re-exported, the user may do so by clicking on *Environment/Accounting/Unpost Accounting Transfers*.

Select the type and date of transactions to un-post and click on the *Unpost* button.

Export Accounting Data

Select Information To Unpost

- Vendor Invoices
- Stock Material Withdraw Transactions
- Purchase Orders
- Stock Adjustments
- Customer Invoices
- Time Cards

Date Data was Posted

00/00/0000 To 00/00/0000

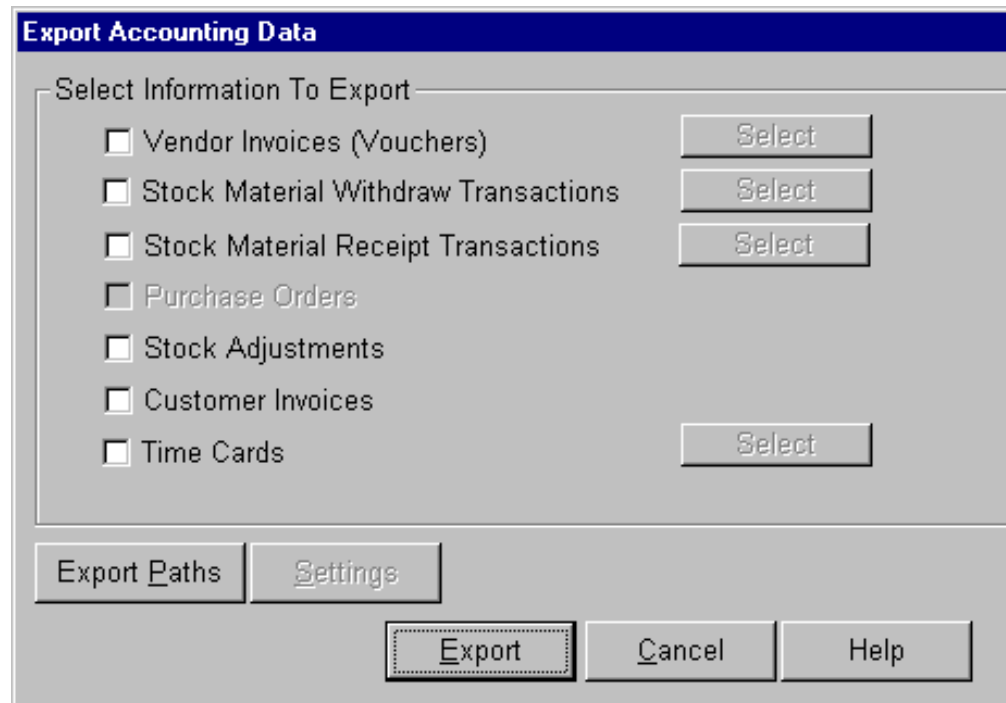
Unpost Cancel Help

After the desired transactions have un-posted, and corrected if necessary, follow the procedures for exporting them to the accounting system again.

Exporting *PERCEPTION* Transactions To The Accounting System

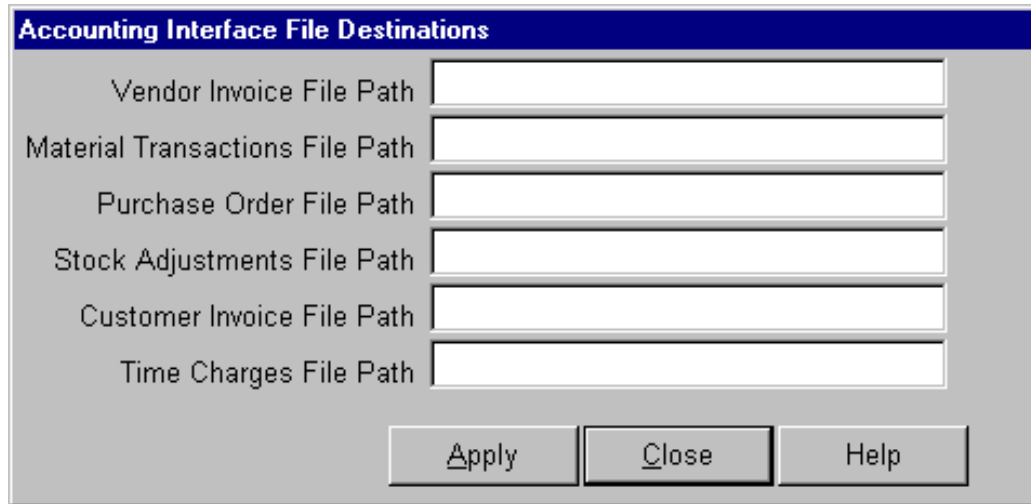
To create transactions for the accounting system,
click on *Environment/Accounting/Transfer to
Accounting System*.

This will display the transaction selections that are
available from *PERCEPTION*:



Selecting PERCEPTION Transactions For The Accounting System

After making the selection(s) for the export to the accounting system, click on the *Export Paths* button to identify the various transaction file directory locations.



The image shows a dialog box titled "Accounting Interface File Destinations". It contains six text input fields, each with a label to its left: "Vendor Invoice File Path", "Material Transactions File Path", "Purchase Order File Path", "Stock Adjustments File Path", "Customer Invoice File Path", and "Time Charges File Path". At the bottom of the dialog box, there are three buttons: "Apply", "Close", and "Help".

Designating Export File Directory Paths

When the file directory paths have all been identified, click on the *Apply* button. This will cause the system to save these paths in the registry on the user's PC.

Once they have been saved, these paths do not need to be redefined unless they need to be changed.

Then click on the *Close* button

When the transaction selections have been made, click on the *Export* button.

The system will generate a different file of transactions for each of the transaction types that the user has selected.

The file names for these transactions are developed as follows:

transactiontypeyyyymmdd.xxx

Where “transactiontype” is the name of the transaction (for example, “voucher,” etc.) and “yyyymmdd” is the date that the file is generated by the system.

For example, voucher transactions generated on September 13, 2001 will be stored in the file named

voucher20010913.xxx.

The file extension, “xxx,” will depend upon what type of transaction file can be imported into the given accounting system. For example, if the accounting system can import comma-delimited files, the extension will be “CSV.”

The user then must execute the accounting system software and import these transaction files according to the procedures required by the accounting system.

Special Note: Once transactions are exported to the transaction file, they are all flagged by the system as being “posted.” Only un-posted transactions will be exported to the transaction files. This helps ensure that transaction files do not include any duplicate transactions from earlier transaction files.