

PERCEPTION[®] WORK-PAC

Starting From Scratch

Work Order Planning

A Training Tutorial

This training guide outlines the basic features of the *PERCEPTION* system for developing and managing shipyard work orders.

It is a supplement to the user manual entitled “*PERCEPTION Labor/Manpower Planning & Cost/Schedule Management*,” which provides more details for the user.

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

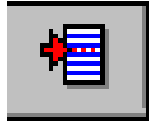
Other related training tutorials are the following:

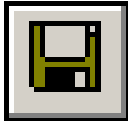
1. *PERCEPTION* Starting A New Project
2. *PERCEPTION WORK-PAC* Manpower Planning & Forecasting
3. *PERCEPTION WORK-PAC* Modeling Shipyard Manpower
4. *PERCEPTION WORK-PAC* Work Orders


Before the planning and managing of work orders can begin, there are a number of files and tables that first need to be developed on the *PERCEPTION* database:

- 1. Shipyard Work Centers**
- 2. Shipyard Trades**
- 3. Shipyard Employees**
- 4. Types of Labor Charges**
- 5. Standard Work Order Clauses (Optional)**

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.

Defining Work Centers

A work center is a shipyard department or stage of construction that is assigned specific responsibility and resources needed to perform work.

Work center also may be assigned to subcontractors.

Select *Library/Work Centers* from the main menu to open the Work Center worksheet:

\$ Work Center Information for the Estimating Environment				
Center	Description	Manager	Location	Productivity Factor
10	Spar Center			1.0000
201	Hull Planking Shop			1.0000
302	Mast & Rigging Shop			1.0000
403	Sail Loft			1.0000
504	Steel Weldout			1.0000
605	Mould Loft			1.0000
706	Material Control			1.0000
807	Planning & Control			1.0000
909	Drawing Office			1.0000
1010	Production Services			1.0000
1111	Carpenter s Shop			1.0000
1215	Miscellaneous			1.0000
1321	Joiner Shop			1.0000
1422	Rigging Shop			1.0000
1523	Outfit Shop			1.0000
1624	Pipe Shop			1.0000
1725	Machine Shop			1.0000
1826	Electrical Shop			1.0000
1927	Sheet Metal Shop			1.0000
2028	Paint Shop			1.0000
2136	Maintenance			1.0000

Add work centers as needed with the following information:

- 1. The work center number:
alphanumeric (maximum of 8 characters)**
- 2. The work center description**
- 3. Manager (optional)**
- 4. Location (optional)**
- 5. Productivity Factor (used only for cost estimating)**

Defining Shipyard Trades

The shipyard trades table is required for the labor time charging process.

Each time charge must be identified with one of the trades defined on this table, for all time charges are summarized for each work order by trade.

Work order budgeted labor hours also may be broken down by trade, at least by major trade.

This allows the system manpower analysis to produce manpower requirements by trade.

Select *Library/Trades* from the main menu to open the Trades worksheet:

Trade Information for the Estimating Environment					
	Trade ID	Type	Description	Charge Hand Rate	Base Rate
	11	H	Carpenter Class I	0.00	0.00
	22	H	Carpenter Class II	0.00	0.00
	33	H	Carpenter Apprentice	0.00	0.00
	44	H	Concrete Worker	0.00	0.00
	55	H	Electrician	0.00	0.00
	66	H	Electrician Apprentice	0.00	0.00
	77	H	Plumber Class I	0.00	0.00
	88	H	Plumber Class II	0.00	0.00
	99	H	Painter	0.00	0.00
	1010	H	Painter Apprentice	0.00	0.00
	1111	H	Excavator	0.00	0.00
	1212	H	Carpet Layer	0.00	0.00
	1313	H	Iron Worker	0.00	0.00
	1414	H	Tile Setter	0.00	0.00
	1515	H	Heating/AC Worker	0.00	0.00

Add trades as needed with the following information:

- 1. The Trade ID: alphanumeric (maximum of 8 characters)**
- 2. The Trade Description (maximum of 40 characters)**
- 3. Trade Type – “H” stands for hourly type of resource (optional)**
- 4. Charge Hand Rate (optional)**
- 5. Base Rate (optional)**

Defining Shipyard Employees

All employees charging time to work orders must be defined on the *PERCEPTION* database.

Refer to the “*PERCEPTION* Accounting Functions - Time Charges” tutorial for details.

Defining Standard Work Order Clauses

The user can develop a library of work order clauses to help standardize work instructions on work orders.

Once these standard clauses have been copied to the work order description, the user may modify and fill in blanks as necessary.

The work order description (work instructions) is printed on the work order ticket.

Select *Environment/Production Engineering/Work Order Clauses* from the main menu to open the **Work Order Clauses worksheet**:

Clauses			
	Clause ID	Clause	Clause Flag
1	Rem Pipe	Remove all pipe	Labor
2	Fab Pipe	Fabricate pipe spools	Labor
3	Fit Pipe	Fit pipe & fittings	Labor

The Clause ID is limited to 8-characters.

The clause may be of an unlimited length of characters.

The Clause Flag of “Labor” identifies the clause as pertaining to a work order description. The other option for this flag is “Material” which is used for purchase order Header or Footer descriptions.

Defining Shipyard Calendar

Calendars provide the information to plan and schedule around non-working days. This includes weekends and holidays.

Click on *Library/Calendar* to open the calendar worksheet:

Calendar Settings for the Estimating Environment											
Calendar	Calendar Name	Hours Day	Days Week	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	
10	Standard Calendar	8	5	No	Yes	Yes	Yes	Yes	Yes	No	
21	Standard Overtime Calendar	8	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

For each day of the week, select whether it is a working day (“Yes”).

Also, define the normal working hours per day (per employee) and the total of workdays per normal workweek.

This information is needed for the system to determine how to compute manpower requirements.

Double click on a selected calendar or right click to open to pop up menu for Drill Down to open the Holiday List Worksheet:

\$ Company Holidays		
	Holiday	Description
1	01/07/2001	Martin Luther King Day
2	02/12/2001	Lincoln's Birthday
3	02/22/2001	Washington's Birthday
4	03/21/2001	Sock Burning Day
5	04/16/2001	Easter Monday
6	05/28/2001	Memorial Day
7	07/04/2001	Independence Day
8	09/03/2001	Labor Day
9	10/08/2001	Columbus Day
10	11/22/2001	Thanksgiving Day
11	12/25/2001	Christmas Day
12	01/01/2002	New Year's Day