EuroJOC - User's Manual

Version 2K6

Software for Construction Estimating & Job Order Contracting

CorVetsys.com

Our Specialty … IT Solutions for Construction

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Table of Contents

Introduction 1
What is EuroJOC? 1
Typefaces and Conventions Used in this Manual 2
Source of UPB Data 3
New Features 3
EuroJOC 2006 Partial Feature List 4
Chapter 1 - EuroJOC Program Setup 5
Hardware/Software Requirements 5
Software Installation Procedure 5
License and Registration 7
Enter Registration Code 8
User Identification and Passwords 8
Setting EuroJOC file locations 8
LAN Installation 9
Setting-Up Foreign Language Keyboards 9
Using Multiple Language Keyboards 9
Other Methods of Entering Characters 10
Creating Desktop Shortcuts 10
Removing EuroJOC Software 10
Using Program Control Features 11
Using the Menu System with a Keyboard 16
File Selection Dialog Form 16
Chapter 2 - EuroJOC Main Form 19
EuroJOC Program Log-In. 19
EuroJOC Main Form 19
Creating Contract files 20
EuroJOC Contract File Structure 21
Contract File Requirement 21
Project Select Tab 22
General Information Tab 22
Project Status Tab 23
Request for Proposal Tab 23
Joint Scope Meeting Tab 24
Cost Tab 24
Negotiation Meeting Tab 25
Pictures Tab 25
Statement of Work & Funding Tab 26
Rich Text Edit Boxes 26
Importing Projects 26
Printing Project Information 27
Utilities - Compact Database 27
Utilities – Delete Database 27
Utilities – Conversion Factors 28
Utilities – Abbreviations 28
Sharing Contract Files 29
Simple Contracting Process 30
Chapter 3 - Unit Price Book 31
Cost Codes or Positions 31
Three UPB components 32
Contractual Data 32
Using the Title-Tree Control 33
Modifier / Surcharge Items 33
Adding Summary Items to Estimate 34

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Adding Items to Estimate 34
Three Click Selection 34
Group Items (Scroll the UPB) 34
Help Menu 34
Video Help 35
About EuroJOC 35
Searching UPB Cost Items by Using Key Words. 36
Title Search Results 37
Item Search Results 38
Printing UPB Data 39
Chapter 4 - Estimate Form 41
Opening an Estimate 41
Different UPB Selected 42
Using the Estimate form 42
Adding Items to the Estimate 43
Component Cost 43
Demolition Cost 44
Group Items - Continuous UPB List Option 44
Editing Items within the Estimate 44
Deleting Items from an Estimate 44
Non Pre-priced Items 45
Second Estimate 45
Sorting the Estimate 46
Percentage Modifier / Surcharge Items 46
Estimate Toolbar 47
Calculating the Estimate 47
Export to Excel® Spreadsheet 47
Estimate Details 48
Calculation Errors 48
Selecting Estimate Window View 48
Single Estimate Record View 49
Moving Grid Columns 49
Grid Row Height and Column Width 49
Splitting Grids 49
Saving Window Settings 50
Creating Remarks 50
Estimate Statistics/Graphics 51
Printing Estimates / Proposals 51
Pictures 52
Backing Up and Restoring Data Bases 52
Chapter 5 - Printing Reports 53
Reports Print Preview 53
Estimate / Proposal Report 54
Estimate Detail Cos 54
Estimate Detail Cost Report 55
Estimate Statistics Report 55
Non Pre-priced Item Report 56
Negotiation Meeting Report 56
Project Joint Scope Meeting Report 57
Project Pictures Report 57
Project Status Report – Part I 58
Project Status Report – Part II 58
Request for Proposal 59
Printing the Unit Price Book 59
Project Status Date Report 60

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Estimate Comparison Report 61
Report Modifications 61
Exporting Reports to a Word Processor 62
Chapter 6 – Preference, Specification & Language Forms 63
Font & Options Tab 63
System Setup Tab 64
Currency Tab 64
Coefficients Tab 65
Cost Formulas 66
Contractors Tab 66
Users & Passwords 67
Default Values Tab 68
Facility Information 68
Save Form Settings 69
City Cost Indexes 69
Specifications Form 70
Language Form 72
Languages Form Tabs 72
Programmer Access 73
Chapter 7 - UPB & Administrative Functions 75
Editing the Unit Price Book 75
Titles & Cost Records 75
Select Records (Advanced Search) Tab 76
Advanced Search Capability 77
UPB Details 80
Data Checking 80
Translations 81
Re-price UPB Tab 81
Printing & Exporting 82
Pictures 82
Editing/Creating Surcharge Data Items: 83
Summary Cost Items 83
Crew and Equipment Hourly Cost 83
Productivity Editing 83
Preliminary Remarks 84
Group Icons Types 84
Compare Unit Price Books 84
Distributing UPBs to Users 84
Chapter 8 – Contractor's Proposals & Comparison 85
Password Control 85
Contractor Version Differences 86
Contractor User Name Active 86
Government/Owner User Name Active 86
Government Users of Proposals 87
E-Mailing Proposals 87
Importing Proposals into the Owner' Contract File 87
Comparing Estimates & Proposals 88
Selecting Estimates to Compare 88
Compare Results 89
Comparison Details 91
Comparison Sorting 91
Comparison Report 91
Example Compare Reports 92
Other Uses of Comparison 93
Chapter 9 – Using Assemblies & Assembly Builder 95

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Using Assemblies 95
Creating Assemblies 96
Input Variables 97
Option Buttons 97
Formulas 98
Test Assembly 99
Assembly Pictures 100
Printed Assembly Listing 102
Appendix A - Technical Notes & Data Base Details 103
Technical Notes 103
Database Details: 103
Index 107

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Introduction

EuroJOC has evolved into a great modern estimating program with an excellent look and feel. The program is intuitive and easy to learn. You don't need to use EuroJOC everyday to remain effective in creating cost estimates. EuroJOC handles any estimating task.

What is EuroJOC?

EuroJOC is an estimating tool used to calculate the cost of construction projects. Job Order Contract (JOC) includes other acronyms such as Task Order Contracts (TOC), Indefinite Delivery/ Indefinite Quantity (ID/IQ), and Simplified Acquisition of Base Engineering Requirements (SABER). EuroJOC can work with almost any source of unit price data and has multiple pricing mechanisms. EuroJOC was originally designed to operate in Germany and Europe. EuroJOC has been enhanced to include capabilities needed for use in the United States and Italy. Settings within each contract file change the appearance of EuroJOC to meet the needs of the country, installation and contracts. When opening any countries contract file, EuroJOC will morph to display the appropriate settings and controls for that country. Thus, it is possible for multiple countries and contracts to exist on the same estimator's computer. The Unit Price Book (UPB) cost data provided with EuroJOC is appropriate for the installation. The default feature settings are customized for each purchasing installation.

This User's Manual is intended for estimating personnel and administrators using EuroJOC. As a minimum, it is recommended that that users read chapters two through five in their entirety. This manual is not intended to teach the subjects of cost estimating or contracting concepts. The reader is expected to have an independent knowledge of those subjects. By necessity, some of the principles and concepts of contracting and estimating are discussed in this manual. ***The reader should not assume anything in this manual affects policy or applies to a particular contracting situation.***

A major problem with using estimating cost data is finding the cost items to use and assuring ones-self that they are the most appropriate and correct. EuroJOC has included excellent search capabilities. In addition to word searching, it is possible with little more than three mouse clicks to access many of the approximately 30 to 100 thousand unit price items using a graphical title-tree selection interface. The Item titles are grouped into a hierarchy title system specific to the UPB employed. The number of items existing within the UPB varies depending on the location and data source used.

After cost items are located, they are quickly incorporated into the construction estimate using any one of three methods: double clicking, dragging the item into the estimate or by typing the cost code. Cost items found in previous estimates can be easily imported. The program's display grids can be sorted into ascending or descending order by clicking on the column's title. The user can customize the program to suit individual taste. Many form settings are automatically stored as the program is used.

EuroJOC includes all the tools necessary to create, modify and print unit price data. Administrative functions related to editing and updating

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the Unit Price data are controlled by password. Cost items and titles can be described in two languages. EuroJOC provides all the functions necessary to export item descriptions. The exported information can then be translated with translation software, manually reviewed and re-imported into EuroJOC.

The software controls can quickly transform into English, German, French, Spanish, Italian or Portuguese. The program allows for a seventh user defined language to be created. EuroJOC has language export and import features that can be used with commercial translation software or even web based translators such as www.altavista.com. The software's menus, buttons, tabs, and grid heading controls all change based on the language selected. EuroJOC allows the program's control language to be changed instantly. EuroJOC's foreign language features can be turned off when necessary and only English will be displayed.

Typefaces and Conventions Used in this Manual

Words in this manual surrounded by apostrophes (example; 'Main Menu') indicate the exact wording of the text shown on a form, menu item, or control button. You will be able to find this text on the screen.

Bold and *Italic* fonts are used in this manual for special emphasis of items important or critical to the operation of the software.

Gray vs. Black - A standard Windows convention is that when controls or menu items are shown in light gray instead of black, it means that the menu item is not available for use or disabled. The software program controls when menu items or program features are turned off. The figures in the manual may not always match what is seen on the screen due to features being turned on and off. Program features may also be hidden when inappropriate to the current situation.

Screen Captures:
As Windows® is an ever evolving operating system, we attempt to use the most modern version within our user's manual. The forms that you see on your system will be similar, but may not be exactly the same. All the same program functionality exists no matter the operating system used.

About the program:
The program was written for the Microsoft® Windows® Operating System and will operate in the following versions; Win-98, Win-ME, Win-NT, Win 2000, WinXP, and WinXP Pro. The software was created using Microsoft Visual Basic®, Microsoft Access® Xp, Crystal Reports®, and ComponentOne True Grids®. These development tools are all recognized industry standards and allow for rapid change to meet user needs.

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Training Manual:
A separate training manual exists for EuroJOC. The manual is provided when training services are purchased. The manual has several small construction projects designed to allow students to learn the operation of the software. Contact CorVet Systems for further information and availability of the software training. A small group classroom setting with a computer for each student and a projection display system is recommended for training purposes.

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Usage:
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Source of UPB Data

The EuroJOC user should be aware that CorVet Systems is not the supplier or developer of the unit price cost data used within EuroJOC. In Germany, the data is known as Schedule of Rates and Services (SSR) and updated by various states within the Germany government. The UPB data was provided by the USACOE. The data was imported and reformatted for use within EuroJOC by CorVet Systems. The surcharge item links were developed by CVS.

Within the United States unit price data is typically supplied by RS Means™ Inc. or using a database purchased by the Tri-Services. The data may be a variant of the commercial unit price book CUPB as adapted for JOC by the Army JOC steering committee. If you have problems with the original data values, please contact the data supplier directly. CorVet Systems has imported the data into a format compatible with EuroJOC. Extensive review has verified that the conversion occurred correctly. If you should notice a problem with the conversion, you are requested to immediately notify CorVet Systems, Inc.

CorVet Systems has the technical expertise to develop and provide unit price cost data for construction and maintenance tasks. If you have a need for unusual items, we can develop the cost of furnishing and installing those items. The data can then be added to your UPB data. Additional items generally will require a contract modification with your JOC contractor.

New Features

New features found in EuroJOC 2006 that were not previously part of the software are indicated with the ‘new’ icon shown above. Many of the new features in this version were added to make EuroJOC compatible with the United States and Italian methods of creating estimates. With the addition of new features, we have tried to make the software easy to use and provide the capability necessary to complete your work. Please visit the www.corvetsys.com website for descriptions of the latest additions***. Your suggestions are always welcome and many are incorporated into subsequent software versions. Without you - the user - there is no reason to produce EuroJOC.***

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EuroJOC 2006 Partial Feature List

- EuroJOC morphs to meet local site conditions and user needs
- CONUS and OCONUS operation
- EuroJOC retains user settings and preferences, saving time
- Excellent Cost Item and Title Complex Search Capability
- Access to Multiple Unit Price Books; Germany, US, Italian, Kuwait/UAE
- Very Flexible UPB Data Structure including Pictures
- Flexible Project Storage
- Unlimited Estimate / Proposal Size
- User Name and Password program protection.
- Title Tree Browser – Graphic View of UPB structure
- UPB Management with Advanced Toolset, Including Printing
- Labor, Material, Equipment, Demo Component Cost Capability
- Seven User Languages; English, German, French, Italian, Spanish, Portuguese & 1 User
- Cross Referenced Specifications
- Simple Grid Editing
- Estimate vs. Estimate or Proposal Advanced Comparison
- View and Import Two Estimates on the Estimate Building Screen
- Simple Program Installation and Removal
- Capability to Export Reports to Word Processor
- Adobe Acrobat User Manual on Disk
- User Controlled Font Sizes
- Win98, Win2000, WinNT, WinMe, WinXp and LAN operation
- Government and Contractor Versions
- Column Sorting by Clicking Column Heading.
- Unit of Measure Converter with user editing capability
- Abbreviations Listing with user editing capability
- Immediate Estimate Calculation
- Calculation Error Messages are available until corrected.
- Calculation Errors do not stop the calculation process.
- All printed results can be displayed on screen prior to printing
- User Input is tagged and documented by User Name.
- Estimate results can be presented in any user established currency
- Unit Conversion & Abbreviation Lookup Capability
- Single and Multiple record views of estimate.
- Stores Project Meetings, RFP and Status Dates, and Progress Pictures.
- Date Calculator, Days Between, Final Date given start and number of days.
- Many reports are available. reports can be custom modified.
- Video Help Files
- Modifiers / Surcharge Items Displayed with Associated Items
- Advanced UPB Editing & local area factoring capability
- Grids Allow Splitting, Moving Columns, resizing – settings stored
- Simple Data Transfer using; Drag and Drop and Double Click methods.

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Chapter 1 - EuroJOC Program Setup

The EuroJOC software program is provided on a single CDROM. EuroJOC requires approximately 30-60 megabytes of disk space depending on the unit price book used. Depending on the installation license purchased, EuroJOC may be available for download from the internet. With T1 or Cable modem access the download takes 15 to 20 minutes. If you have slower access, you should order the CDROM version as it could take several hours to download using 56K dial-up modem access. All versions of EuroJOC are protected from unauthorized installation by the use of passwords.

EuroJOC access is controlled by the use of User Names and logon passwords. Within EuroJOC administrator functions are protected by passwords. The unit price book (UPB) or Schedule of Service Rates (SSR) data cannot be changed by the typical user. This is necessary to insure project contractual unit prices are protected. The password will be provided to users on an as needed basis. Contact your installation's JOC support person or CorVet Systems for the high level passwords needed to modify UPB unit price data.

The software installation program will automatically install itself into the "*C:\Program Files\EuroJOC-2k6*" subdirectory unless the user specifies another directory.

Hardware/Software Requirements.

EuroJOC has the following hardware and software requirements in order to function:

- Personal Computer using the Intel processor. A Pentium 400 or better micro-processor is required. 128MB of Random Access Memory (RAM) minimum. 256MB or more is recommended. EuroJOC will not run on an Apple computer running Apple OS.
- Screen Resolution of 800x600. 1024x768 resolution or higher is recommended.
- 80 MB of available hard disk space.
- Mouse, trackball or another pointing device.
- CD-ROM Disk Drive for installation.
- Method of making estimate backups.
- Printer installed to work with the Microsoft Windows environment.
- One of the following Microsoft-Windows operating systems: Windows-98, Windows NT, Windows 2000, Windows Me or Windows Xp, or Windows Xp Pro.

Software Installation Procedure

The EuroJOC program is supplied on a Single CDROM or as an internet download.

- When installing any software you should close all currently running programs. The task bar indicates most of the programs running in memory.

- Insert EuroJOC CDROM disk in the drive. The auto run feature will begin the installation and display the first installation screen as shown in the figure.

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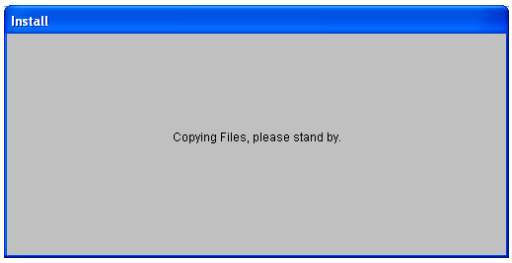
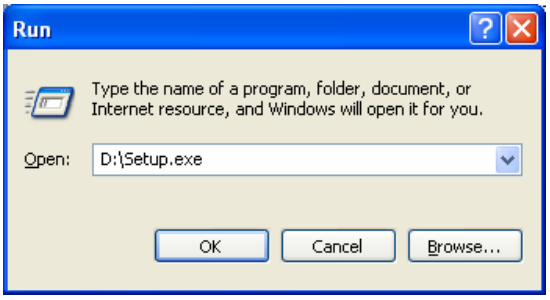
- Clicking the Install 'EuroJOC' selection will begin the software installation process and start copying files from the CDROM.



- If the Auto Run feature of Windows is not enabled on your system, click the Start button and choose the Run command. In the Run dialog box, type "D:\SETUP.EXE. D represents the drive letter of the CDROM drive and may be different on your machine. After entering the information, click the OK button. If you're not sure which drive letter your computer's CDROM uses, click the 'Browse' button on the run form and look for the CDROM icon and then the setup file.

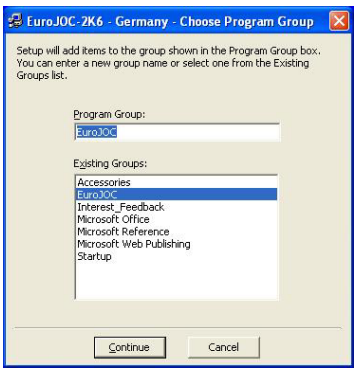


- The 'EuroJOC Setup' welcome Screen will appear with two command button options; 'OK' and 'Exit Setup'. If there is any other software currently running on your computer, you should close the other software, then return to the EuroJOC setup program. If you are ready to begin the EuroJOC program setup, click the 'OK' command button.

- The default drive and directory destination for the EuroJOC program is; "C:\Program Files\ EuroJOC-2k6", as shown in the Figure. To change the installation directory, click on the 'Change Directory' command button and enter the alternate destination.

- When the installation destination is acceptable click on the computer graphical icon button, as shown in the red ring of the figure on the right.

- You can now accept or change the program group used in the start button menu system. It is recommended that you use the default value and simply click on the 'Continue' command button.



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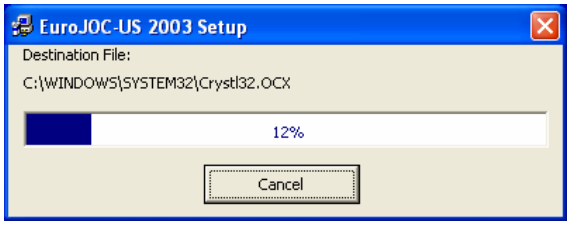
- The installation program will install all of the files in the selected location and add the EuroJOC program to the Start menu system. File transfer progress will be shown as in the next figure. ***During the copying process, you may be informed that the software is trying to copy an older version of a file onto your system. You should always keep the newer files.*** The form, as shown in the figure below and right will be displayed after successful program setup.

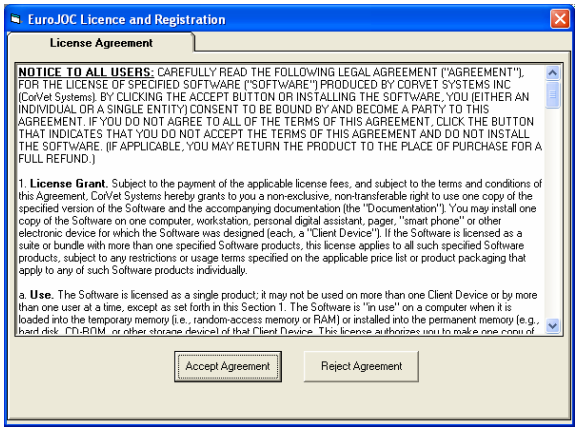
- If you would like to create a program shortcut icon on your desktop, see the paragraph later in this chapter for instructions.

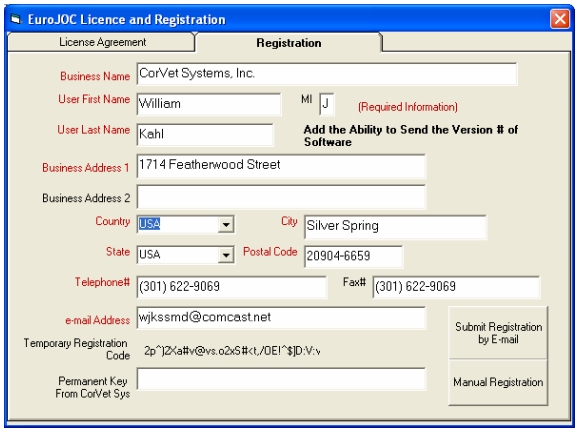


Please Note that removing and reinstalling EuroJOC will not erase any existing estimates located on the hard drive. The Example Contract file is replaced when ever EuroJOC is installed. ***If Microsoft's Access® software is installed on your computer and it has never been used, you may have to open Access and finish that program's setup/installation process. This is a Microsoft requirement.*** *EuroJOC does not require Access to operate.*

License and Registration

After completing the installation procedure it is necessary to register the software with CorVet Systems. You will be asked to enter identification information and e-mail the information to the company. This information will not be shared or provided to any one outside of CorVet Systems. The registration insures that EuroJOC is installed and used on the appropriate number of systems as purchased. Whenever possible, you will be allowed to operate the software for a short period without a permanent registration code.





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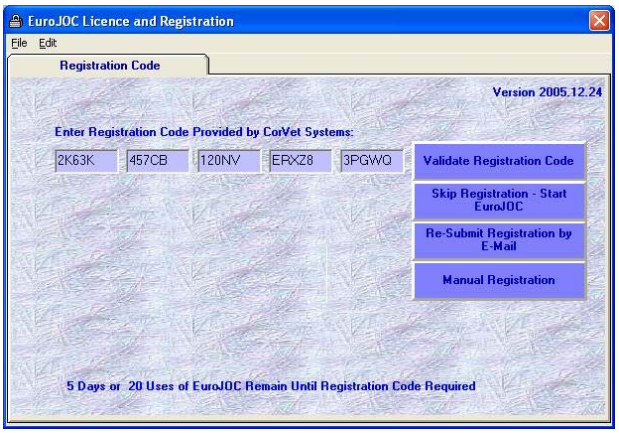
Enter Registration Code



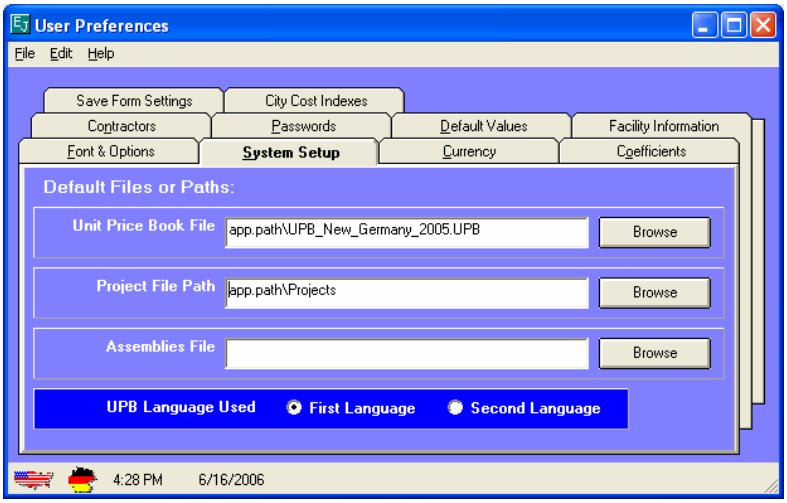
With this form it is possible to e-mail the registration information to CorVet. An automatic and manual method is available.

A unique registration code will be returned via e-mail to the registering party. The code will be 25 digits long. This code will only work for this computer and this software installation. Should you need to reinstall, a new code will be issued.

User Identification and Passwords

For security purposes access to the EuroJOC program is protected by the use of a 'User Name' and 'Password'. It is recommended that the program's administrator create new user names and passwords and delete the default settings after the EuroJOC software is installed. Chapter's two and eight provide the default User ID's and passwords. Refer to chapter six for information on setting up passwords and user IDs. EuroJOC annotates each estimate row with the user name used during the estimate creation process. This capability allows estimates to be merged and later separated, if necessary, based on the user name.

Setting EuroJOC file locations



After the EuroJOC program has been installed, it is complete and ready to use. The 'System Setup' tab of the preferences form allows the user to specify where the estimates and the Unit Price Book data files are located. The preferences form is available on the main and estimate form menus. Multiple language features shown on this example form are only displayed when a dual language UPB is selected as a source for the contract file.

The 'System Setup' function allows the user to group similar files types. The file paths can be input directly into the path text boxes, or the 'Browse' function can locate the files for you and set the paths. By default, all estimates created are grouped in the projects subdirectory (ie. C:\Program Files\EuroJOC-2k6\Projects). It is not necessary to share the Unit Price Book on a network drive. The cost of computer hard drives has dropped to such an extent that we recommend installing all files on the local hard drive for reasons of access speed. The UPB occupies about 15 megabytes of space. The only reason we anticipate using a network drive for

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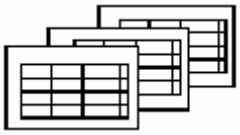
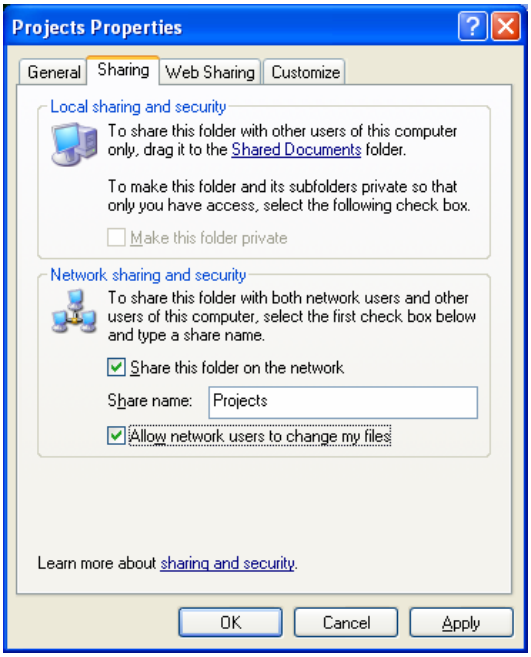
estimate storage is when several estimators are working on the same estimate or the network administrator is tasked with making scheduled backups. Of course, we consider it very important for you to back up your estimates frequently.



The Unit price book file used by a contract file must be set and may not remain blank. The project path may remain blank. If the project path is blank the projects will be located in the following subdirectory: ***C:\Program Files\EuroJOC-2k6\Projects***

LAN Installation

EuroJOC must be installed and registered on each user's computer. EuroJOC contract files can be located on a local area network and can be shared among many users. The 'System Setup' tab of the preferences form is used to specify location of contract and UPB files. The folder used to contain projects or unit price books should be shared and network users should have the ability to change the contract files.



The unit price book file specified on the preferences form can be a shared network file and the project path can be a path to a shared network directory. For improved performance, we recommend that the UPB file remain on each user's machine.

When installed on a LAN each user should be assigned a user name and password on their local machine.

A default password can be generated for each user of the system. Each user can then alter their password as necessary. As estimates and proposals are created each cost row will be tagged with the user name of the person creating it.

EuroJOC incorporates a simple security system. Contract CON / MDB files are not encrypted nor password protected. The administrator should also edit the Project_Template.CON file located in the System_Files subdirectory and insert the Preference form standard settings and coefficients. The template file is used each time a new contract file is created. The Project_Template file should then be distributed to each user.

Setting-Up Foreign Language Keyboards

Within the Microsoft Windows operating system, several foreign language keyboards can exist concurrently. The steps vary from one version of windows to another. We suggest searching your help system for "add other languages", or "regional settings" for instruction on setting up alternate keyboards. Generally these settings are available from within the control panel.

Using Multiple Language Keyboards

To switch from English to an alternate language, hold down the left alt key and press the shift key (or alternately, depending on your selection, the control and shift keys). When the Windows task bar is displayed, the language will toggle from one language to another. Clicking on the task bar language indicator will display the languages available and allow language selection.

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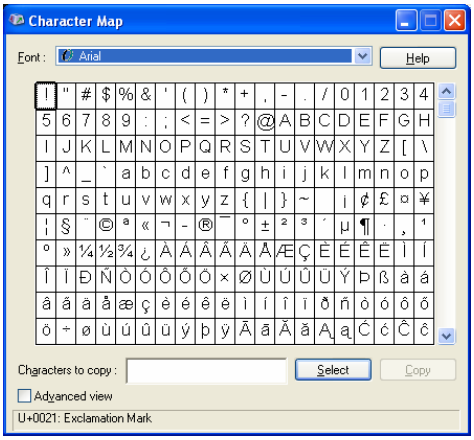
Other Methods of Entering Characters

Also provided with the windows operating system is the Character Map ('Start', 'All Programs', 'Accessories', 'System Tools' 'Character Map'). Character Map is accessible from within EuroJOC on the languages form. The character map is also provided on several toolbars when a Multilanguage version of EuroJOC is being used.

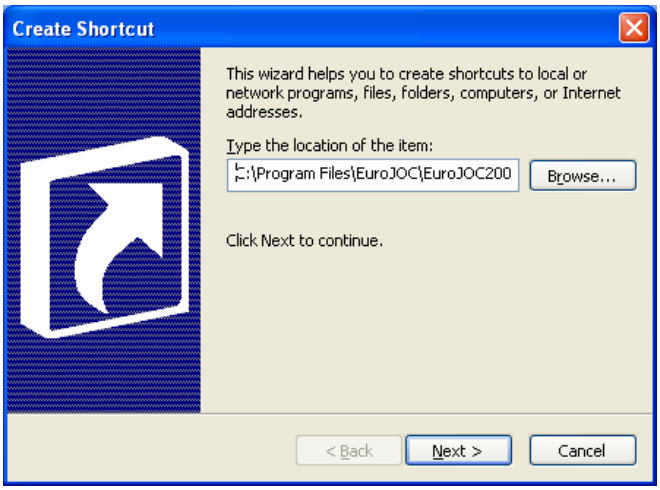


Use the Language dropdown menu or the toolbar icon located on several other forms to display the character map. The character map form also provides keystroke sequences for all the characters at the bottom of the form. Using the character map form it is possible to enter symbols available in many different fonts.

Creating Desktop Shortcuts

The EuroJOC installation program creates the menu items within the 'Start' button system. Many users do not like the desktop filled with shortcuts, so we leave it for you to decide. Here are the steps for creating the icons on your desktop. It is recommended that you create shortcuts for easy use of the program.

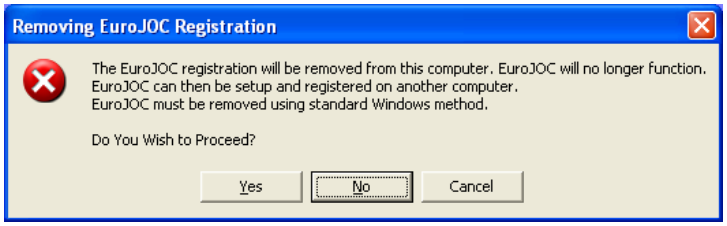
- First close or minimize any running programs so that the desktop is visible.
- In an area not filled with program icons, right click. Select option 'New' and then 'Shortcut'
- The form above will appear (Win Xp version shown). Click on the 'Browse' button.
- Using the file dialog form, Find the drive and directory where EuroJOC-2k6.EXE were installed. The default location is C:\Program Files\EuroJOC. Select the exe file and click the 'Open' button. The 'Next' button on the 'Create Shortcut' form will now be active. Click on 'Next'.
- Type the Icon Name you wish to display on your desktop. We suggest EuroJOC 2k6.
- Click the 'Finish' Button and the icon will be created.



To delete an existing icon, right click on the icon and select delete. Respond 'Yes' to the confirmation message.

Removing EuroJOC Software

Removing the EuroJOC program is a two step process. Each copy of EuroJOC is registered with Corvet Systems, removing the registration notifies the company that the software registration is available for installation on another computer. This feature is located on the utilities menu of the main form as 'Remove EuroJOC Program". The function will send an e-mail as notification of the removal.



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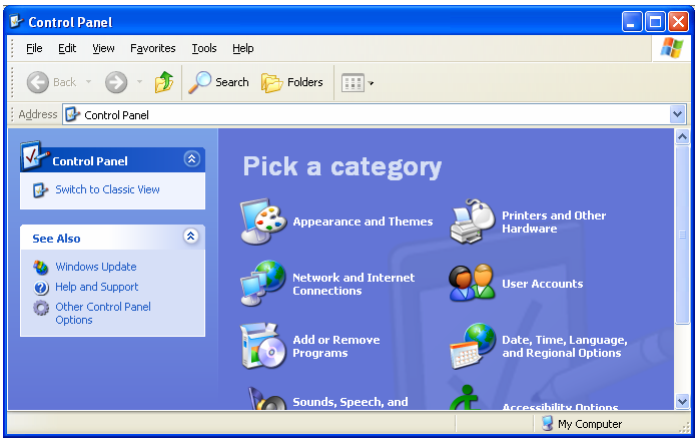
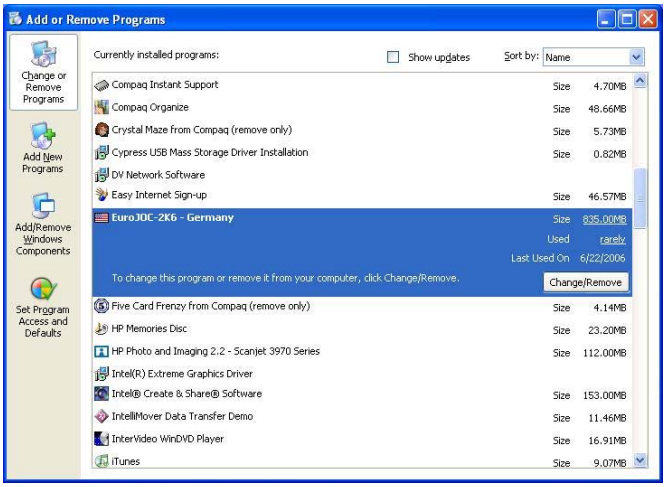
Following this step, the Microsoft Windows® operating system provides a standard method of removing software on the 'Control Panel'. You should always use the 'Add or Remove Programs' method for managing your software. Deleting software directories manually can cause windows failures. These steps can vary depending on the version of the operating system.



- Click on the task bar 'Start' button, Select 'Control Panel'.
- From within the control panel form click on the 'Add/Remove Programs' Icon.
- Find the 'EuroJOC' in the 'Currently installed programs' list box. (may be slightly different name)
- Click on the 'EuroJOC' entry in the list box to highlight it. Click on the 'Change/Remove' Command button.
- Follow through the uninstall procedure. When warning messages appear about keeping shared files, we recommend leaving these files on the system.

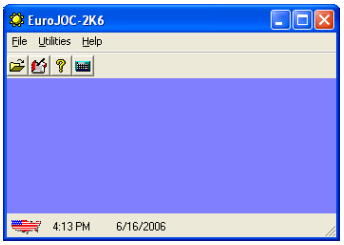


The removal procedure will not remove any estimates that you have created using EuroJOC. The EuroJOC uninstall procedure will remove the EuroJOC program and the start menu program references. You can now delete any desktop shortcuts you have created by right clicking on the shortcut icon and selecting 'delete'.

Using Program Control Features

Following is a listing of program controls used within EuroJOC. The Windows standard names are presented here, but many controls have other common names. A control is used together with the mouse or the keyboard to initiate a program feature or select options. You should become familiar with how to use the grids in EuroJOC they are slightly different than spreadsheets.

Form



An example of a window's form is shown. A form or window is a term used to describe a screen display. A form normally has a specific purpose within a program. A form usually has a title bar with the program or form name. The X command button in the top right corner closes the form. Some forms have the following features; A minimize command button at the top right corner consisting of a small horizontal bar at the bottom of the icon button. When the minimize button is clicked the form will disappear and be shown on the task bar. To restore a minimized window, click on the icon in the task bar. The maximize button, shown as a small form with

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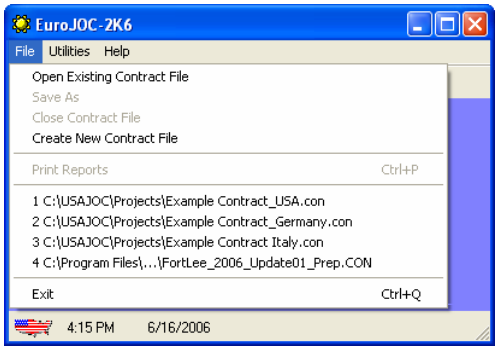
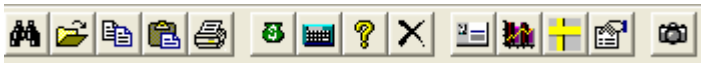
a bar at the top, will expand the form to fill the entire screen. When a form is maximized, the maximize button is replaced with a button containing two small boxes or forms (not shown) will restore the form to a window state. Many but not all forms are re-sizeable by clicking and dragging an exterior edge or corner. The entire form can be relocated by clicking and dragging the title bar to the new location.

Menu System



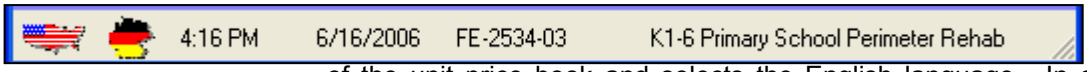
The form's menu is located as the second line down from the top of a form. The main menu usually has several elements from left to right and varies from window to window. A form does not always have a menu system. Pointing at a menu item and clicking the left mouse button will start a program function or display a drop down menu (as illustrated in the example). Items displayed in black are available to the user. Items displayed in grey are not available and considered disabled. Items can also be hidden by the programmer when they are not needed. The menu is usually accessed with the mouse but can also be used with the keyboard. Press and release the Alt key (some programs require you to press and hold the alt key). Then press the underlined letter (Alt+U for this example) to display the 'Utilities' drop down menu. In Windows® Xp the letters are not underlined until the Alt key is pressed. When the drop-down menus are displayed, press any underlined key to start the function. Alternately, when drop down menus are displayed, the up and down arrow keys will highlight menu items, and the enter key can be pressed to select the highlighted item. The menu system can also have keyboard shortcuts. When available they are listed next to drop down menu items. The keyboard can be faster than using the mouse to navigate the program's menus.

Toolbar



The toolbar is a collection of useful and often used routines that the user can simply click with the mouse to use. When available, the tool bar is located below the menu at the top of the form. By placing the mouse curser over a toolbar item and waiting, the tool tip text will popup displaying a box describing the feature.

Taskbar



The taskbar consists of panels at the bottom of a form. A panel can contain icons or text information. Clicking on an individual panel icon may serve a functional purpose. The American icon in this example on the estimate form closes the opened sections of the unit price book and selects the English language. In a dual language version the second language is selected by an icon representing that country. Error and informational messages are often displayed in the taskbar.

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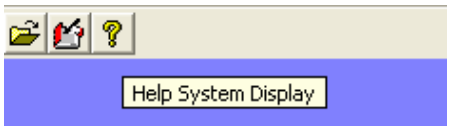
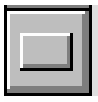
Tool tips



Most controls have an associated tool tip. When the mouse hovers over the control, after a second or two of delay, the tool tip text message will be displayed. In this way, the window form remains clutter free and the controls can be properly labeled. When multiple languages are available, the tool tip is displayed in the active language.

Command Button



The command button control carries out a command or action when a user chooses it by pointing at it with the mouse and clicking the left mouse button. A command button may contain text or a graphical icon to indicate feature or function.

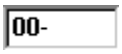
Check Box

The check box control displays a True/False or Yes/No option. You can choose to check or leave blank any number of the check boxes on a form. The checkbox is set by clicking the left mouse button.

Option Button

The option button control, is part of an option group. Together with other option buttons they display a single choice from multiple options. A user can choose only one option. One option is required. The option button is also known as a "Radio Button".

Text Box



The text box control allows the user to enter text by typing with the keyboard. The text box control can be variable in length and may have multiple lines and a vertical scroll bar. Some text boxes allow pasting rich text with font and color information.

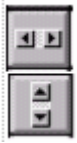
List Box

The list box control displays a list of predetermined items that a user can choose from. The user is prevented from typing information into a list box.

Combo Box

The combo box control combines a text box with a list box. The program may allow the user to type in a selection or select an item from a predetermined drop-down list.

H&V Scroll Bar



The horizontal and vertical scroll bars allow a user to select a value within a range of values or scroll the screen to view more of a form. Forms, Grids, Text, List and Combo boxes can all have scroll controls.

Tab

The tab control as used in Euro JOC affects the current view of the form displayed. Like a divider page in a three-ring binder, the tabs separate obvious sections of the form or program and group similar information. The green and red icon squares are used to indicate frequently used important tabs.

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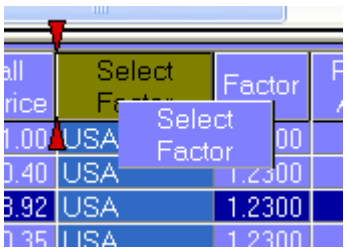
Grids

The grid control is graphically similar to a **spreadsheet.** A grid can display an almost unlimited amount of information because each row is linked to the database directly on the hard disk and

	UPB NPP	Division - Section	Group - Item	UM	Install Quantity	Install Unit Price	Select Factor	Factor	Row Total Amount $	Acc ount	Remarks	S	Group De
	U	01418	4400	EA	2.00	61.00	USA	1.2300	150.06	K			Soil Testing
	U	09200	1001	LF	3100	1.12	USA	1.2300	413.28	K			Crack Repai
	U	03217	0320	TON	2.00	1,268.92	USA	1.2300	3,121.54	K			Spirals, hot r
	U	08369	4040	SF	200.00	30.35	USA	1.2300	7,466.10	K			Bi-part, anch
	U	02049	1000	SF	300.00	0.40	USA	1.2300	149.37	K		*	Modifier - Fo

not is relying on the computers limited random access memory (RAM). The information is recorded or saved to the disk drive each time a different row is selected. A **row** or **record** is a single horizontal line of related information within the grid. A black right triangle in the grid's leftmost column indicates the active row. Some grids also have the active row highlighted. This is more of a selection convenience than function. A **column** is a vertical stack of similar data cells. A column is also referred to as a record **field**. The darker **column color** indicates that the column's cells are locked and data cannot be changed. A grid **cell** is a single field located on a single row. Graphically a cell is represented as a box. The **active cell** is selected by clicking within a cell's perimeter or using the keyboard arrows. To **edit the active cell** click a second time within the same cell or press the F2 key. Within EuroJOC, the active cell's text is displayed in blue and the active cell has a blinking vertical bar type cursor. To **add a new row** of data, move to the last row of the grid by using the vertical scroll bar or the down arrow. An asterisk will be shown in the leftmost column if the grid allows the user to create new rows. Begin entering the new information on the asterisk row and a row will be created. To **enter information** into a cell, move the cursor to the cell you want to hold the information by clicking with the mouse cursor in the cell or by using the arrow keys to move to the cell. Simply begin typing the information into the cell. **Pencil Mode** - while entering or editing a cell of data a pencil icon appears in the leftmost column of the grid. The pencil icon indicates the row of data is being modified and has not been saved to the disk. Move to another row to save the row's changes to the disk. To **delete a row** from the grid, click in the leftmost column of the grid, the row to be deleted will be highlighted, press the delete key on the keyboard. Some **Column Widths** are set by the software and some cannot be changed. Move the mouse to the line separating column headings. If the mouse cursor changes to a double headed arrow the column's width can be modified. The vertical line can be clicked and dragged to the right or left making the column wider or narrower. **Column Order** - Some grids allow the user to move columns within the grid. To **move a column** click on the column heading, click and drag down and then right or left to drag the column to the new position. The red arrows show the position of the column when the mouse button is released. Many grids sort the grid's information when the column heading is clicked. The user can **change the row height** by clicking and dragging the rows horizontal line in the leftmost column up or down. Most of the grid's physical settings are saved and



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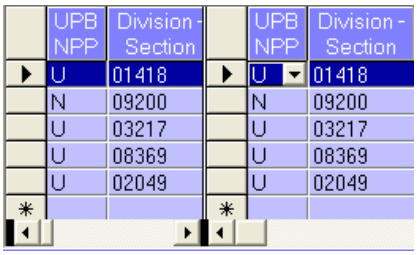
restored each time the grid is displayed. The preferences form controls when grid settings are stored. **Sorting** - The data within most grids can be sorted by clicking on the column title. To sort a column in descending order click with the column's data and then click a second time on the column title

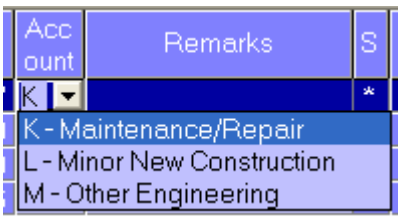
Grid Splits

A grid Split allows the user to split the screen into multiple linked grids. A black square in the lower left corner of a grid's horizontal scroll bar indicates the grid splitting feature is available. When a cell is edited in one spit, the information is updated in all splits. Changing rows within one grid split will move correspondingly in the other. To **create a split**, click on and drag the black square to the right to the size required. Multiple splits can be created using the same method. To **close a split**, click and drag the black square all the way to the left of the grid and drop. When multiple splits are showing, the split will be closed when one black split square is dragged and dropped on another. The grid split information is saved and restored when the form's preference save setting is enabled. When the grid's horizontal scroll bar is not displayed, enlarge a column until the bar is displayed and then splits feature will become available.



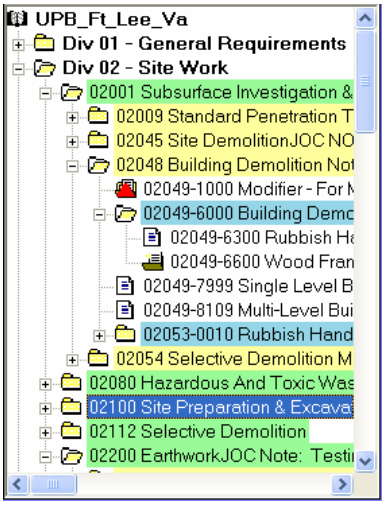
Grid Fly-outs

A grid fly-out is similar to having a drop down or combo list box contained within a grid cell. Several columns in EuroJOC's estimate grid have small dropdown buttons with a black down arrow triangle indicating the existence of a fly-out. By clicking on the drop down button, the user can select from the options available in the fly-out. It is possible to enter text not found in the drop-down choices into many of the fly-outs, while others will generate an error message if one of the predetermined choices is not selected.



Title-Tree Control

The title-tree control is a compact representation of the unit price book title and item structure. The icons displayed within the title tree indicate many things. A closed file with a plus sign to the left indicates that more titles or items exist underneath the title. An open file indicates the title structure is displayed. The user can click on the plus sign or double click on the icon or description to expand the title level. As the title opens, it will reveal either additional title levels or leafs. A leaf simply means the title structure has ended and items are displayed in the grids when a leaf is selected. Depending on the type of leaf selected determines which grids are displayed.



In EuroJOC there are three types of leafs. From left to right in the illustration Leafs without related items, leafs with related items and the related modifier / surcharge item leaf. The icon of a small open file wrapped around a page indicates a group with related items. The small white page with text indicates a group leaf without related items. The icon with a red triangle represents a group of modifier/surcharge items. Whenever the user clicks on a title item (parent) the green and orange grids are empty, and when a leaf node is selected the cost items are displayed in the green item grid and the related surcharge items are displayed in the orange item grid.

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Bars

Thin button bars separate the tree-view controls and the grid controls. By clicking and dragging these bars the user can resize individual grids or “window panes” within the form. The position of the bars is automatically stored, for many of the forms, when the form is closed. This allows the user to adjust the form to suit personal preferences.

Using the Menu System with a Keyboard

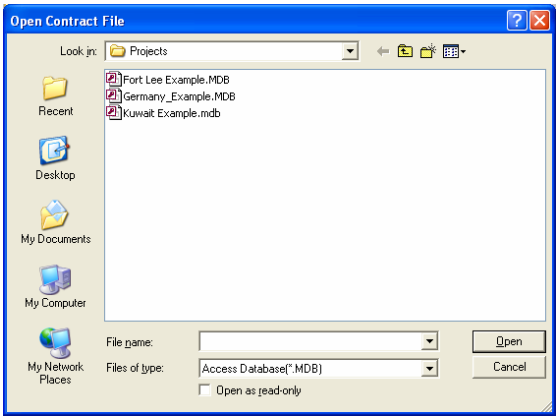
The underlined characters within a form's menu indicate the keystrokes that can be used instead of using the mouse. In Windows Xp the underlined characters do not appear until after the ‘Alt’ key is pressed. To access a menu item hold down the ‘Alt’ key and press the underlined character of the menu item desired. After the drop-down menus are displayed, you can release the ‘Alt’ key. Press the one of the underlined characters in the drop-down menu, or use the up and down arrow keys followed by pressing the ‘Enter’ key. Several menus also have hot keys as indicated to the right of the menu item. To use these hot key functions press the key combination shown. Many hot-key functions are windows standards, such as pressing Control + P for printing.

File Selection Dialog Form

The file dialog form is used for file selection tasks within the Euro JOC program and other Windows programs. The form shown is a standard from Windows®-Xp, your file dialog form may be slightly different. The dialog form has the ability to select individual files on your PC. There is not a rigid sequence that you need to follow when using this dialog form. Generally, you need to select a directory and then a file within the directory and then click the ‘Open’ button. Using this form it is possible to select files located on shared network drives.

Setting Drive & Directory - Generally, you should start by verifying the disk drive and directory. Use the drop down button within the 'Look in' list box to display all the drives and directories available, including network drives.

By selecting a drive rather than a directory (file icon) all the directories available on the drive will be displayed in the list area. Choose a directory by double clicking on the directory file icon you want to use. If any files pass the 'Files of type:' drop down list filter control they will be shown in the list area with horizontal and vertical scroll bar as needed. Subdirectories may also be shown in the list area.



Selecting a File - The 'Files of type' drop-down list box filters what files types are displayed in the file list area. EuroJOC allows for the display of Microsoft Access files (MDB or CON). A file can be selected by;

- double clicking on the file name
- Single clicking on the file name in the list area and then clicking on the 'Open' command button
- Typing the file name into the 'File name' text box and clicking the 'Open' command button. Note that the complete path needs to be input if it is different then the one currently shown.

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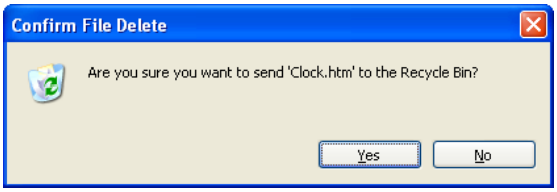
Using any of these methods, the file will be selected and the file selection dialog box will be removed from the screen and the program will proceed with the next step.

The 'Open as read-only' check box on the file selection form can be selected to allow data to be read-only and no changes will be made to the file. You should ignore this check box as you will need to have write privileges available for EuroJOC to function correctly. The 'up one level' (tool tip text) icon command button located to the right of the 'Look in:' list box displays the files, directories, drives or network computers one hierarchy level higher in the local computers available disk file structure.

The 'Create New Folder' (tool tip text) icon command button creates a new subdirectory at the current drive, directory, or sub-directory level shown in the file list area.

The ‘View Menu’ icon changes the display method used in the file list area. It controls whether the icons or file details are displayed. Each user has usually has personal preferences how they like the file list displayed.

Time Saving Windows Tips: It is ***possible to delete a file, rename a file*** or even ***move a file*** while any file dialog form is open.



Select the file by clicking on it to select, once highlighted, press the keyboard ‘Del’ (delete) key. The ‘Confirm File Delete’ message box will be displayed. Selecting ‘Yes’ will complete the file deletion.

To rename a file, select the file, press the ‘F2’ key and use your left and right arrow keys to move within the filename.

To move a file you can select the file. Then using the ‘Control+X’ cut command, move to the new subdirectory and use the ‘Control+V’ paste command.

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Chapter 2 - EuroJOC Main Form

EuroJOC Program Log-In.

When EuroJOC is started, the log-in form will be displayed. EuroJOC is protected by the use of a 'User Name' and a 'Password'. Program functions can be controlled depending on the user name settings. It is expected that an administrator will create new passwords and delete the default passwords after the EuroJOC software is installed. Refer to chapter five for information on setting up passwords and user names. Each estimate or proposal item created is associated with a user name assuring accountability. Estimates can also be combined and separated based on the user name. This will help in multiple estimator environments.

After you start the EuroJOC program by double clicking on a shortcut icon in MS Windows, or using the start menu system, the above log-in screen will appear.

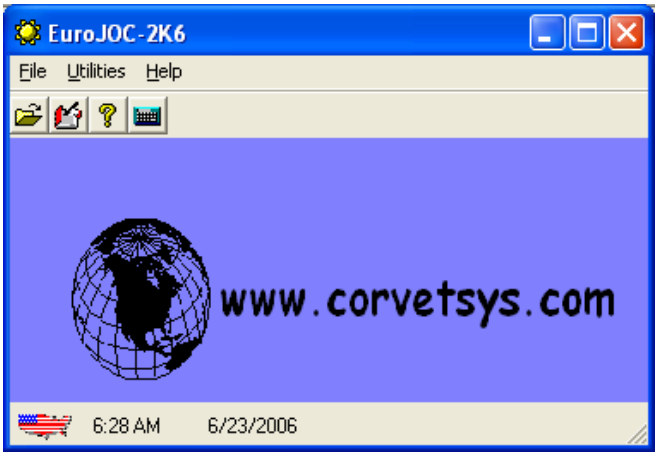
The program's default owner User names and passwords are as shown:

	User Type	Default User Name	Default Password
a.	Owner	Owner1	admin
b.	Owner	OwnerGroup	admin
c.	Owner	IDAdminO	

Type the 'User Name' or select it from the drop down list, then type the 'Password', followed by clicking the 'OK' button. Administrator should e-mail CorVet for default ID creation password.

EuroJOC Main Form

The EuroJOC Main form is the form used to create and edit contract project data including the owner's 'Estimate' and the contractor's 'Proposal'. The main form example shown on the right does not have a contract file open. Many functions are disabled and tool bar icons hidden until a contract file is opened.



The main form has functions for editing the project's general information, dates, funding, coefficient factors, contractors, currency, joint scope meetings, attendance, drawings, schedule, progress photos, and review meetings. Many menu items and toolbar icons are not displayed until a contract file is opened. The main form has features to;

- Create and rename contract files.
- Compare estimates and proposals.
- Edit the Unit Price Book
- Compact databases.
- Edit program preferences
- Edit the Program's Foreign Language Database
- Open the Internet Browser and display the CorVet website.

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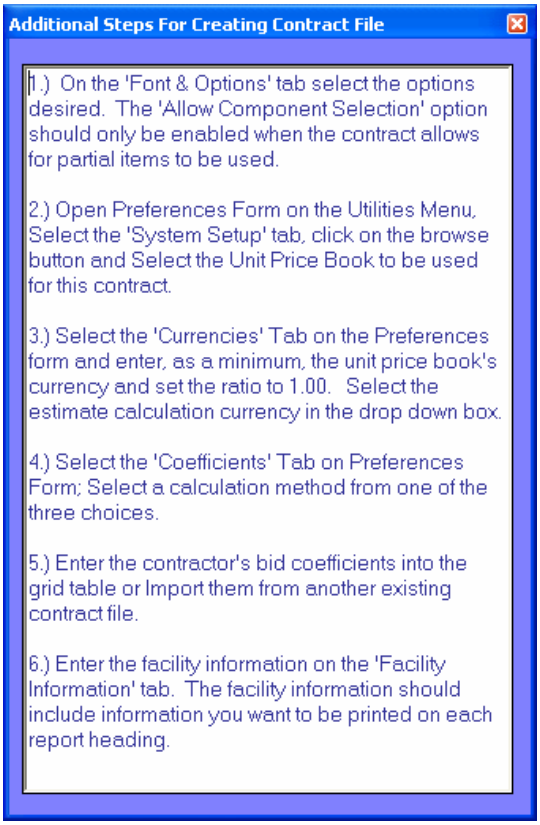
Creating Contract files

The function to create a new contract file is found on the 'File' menu of EuroJOC's main form. Each time a new contract file is created a list of recommended steps is displayed for the user to follow. The steps involve the preferences form and selecting the unit price book used, establishing contractor coefficients and currency values.

It is also possible for the user to edit the standard contract template file (contract_file_template.con) found in EuroJOC's 'System Files' subdirectory to eliminate these steps. Changes made to the project template file will be included each time that a new project file is created.

Editing of the contract template could be used when the user is creating many similar individual contract files. Another good reason to edit the contract template is to insert the current year's contractor factors.



Single vs. Multiple Contract Files

EuroJOC's data storage system is intended to be flexible. An individual project can be created in a separate contract file or a single contract file could be used for each fiscal year. Each installation or user must decide how to best store their contract and project information. It is possible to move projects from file to file so that the user can change strategy at any point in time. Some reasons for and against using a single or multiple project files is included below;

Reasons to Store All Projects in One Contract File	Reasons to Store Projects in Separate Contract Files
Software can Print summary report of all projects stored in the file. These reports are of significant management value.	Different contracts have different contractors, contractor coefficients or fiscal years. ***These variables require using separate files.***
Networking, Backing up, and Restoring is simplified with a minimum number of contract/project files.	User preference. User does not feel comfortable with everything in one place. This concern is lessened with frequent backups.
Multiple files can cause problems with version control and lost files. A single file is more likely to be of higher value and cared for in a better manner.	Security – The projects may have security needs not best handled by one file. Rather than one public accessible file, multiple files in secure subdirectories can be created.
	Projects can be moved from file to file as necessary. The file can be moved to the new fiscal year without modifying the current fiscal year's file.

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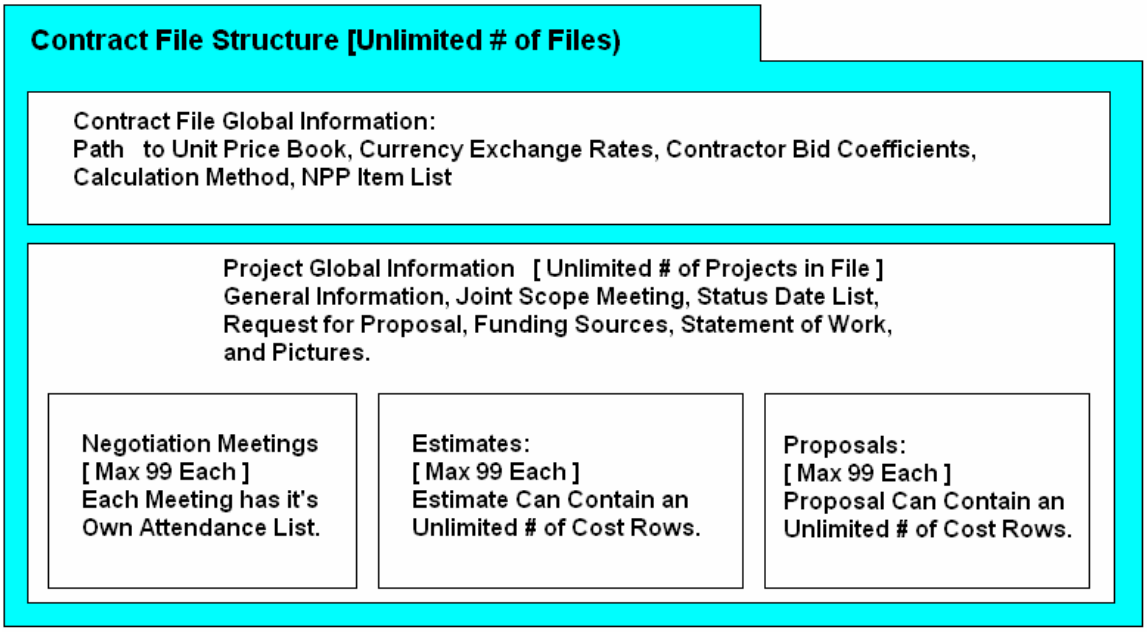
EuroJOC Contract File Structure

The EuroJOC contract file structure allows all project and associated information to be contained within a single file. With this arrangement, it is possible to have multiple contracts files and multiple unit price books on a single computer. A contract file can have multiple projects. Each project can have multiple estimates and/or proposals. ***If you save or backup the contract files and unit price books, you will have captured everything needed.*** Contract files can be shared or e-mailed to another EuroJOC user if both users have the same UPB file.



A EuroJOC contract file can contain an unlimited number of projects. Each project can contain 99 estimates and 99 proposals. The physical size of the computers hard disk is the only limit of how large the contract file may grow.

Creating a new contract file is necessary when the UPB, Coefficients, or currency rates change. When the fiscal year changes, it may be necessary to create a new contract file. When using the US calculation method, adding coefficient items may avoid the need to create a new contract file.

EuroJOC's file structure is very flexible. The user can decide where projects, estimates and proposal should be stored. It is possible to compare estimates and proposals from within any two contract files. Copying projects from contract file to contract files is discussed later in this chapter. By storing many projects in a single contract file project there are project summary reports that can be printed. EuroJOC's hierarchy is simple yet powerful and flexible, you make the decisions where and how your information is stored.

Contract File Requirement

A new contract file must be created each time; 1) the unit price book used changes, 2) the currency conversion ratio changes, 3) the contractor coefficients change or 4) the calculation method changes. When using the German calculation method, this means that a new file is created for each option year of the contract. When using the American calculation method it is possible to add coefficient types (AA2004, AA2005, AA2006) to keep all the project information in a single contract file.

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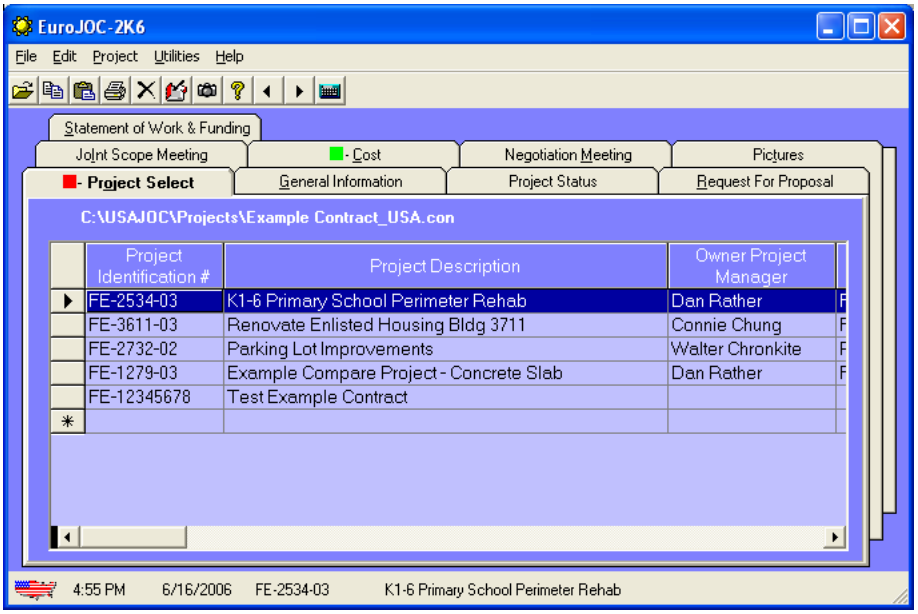
Project Select Tab

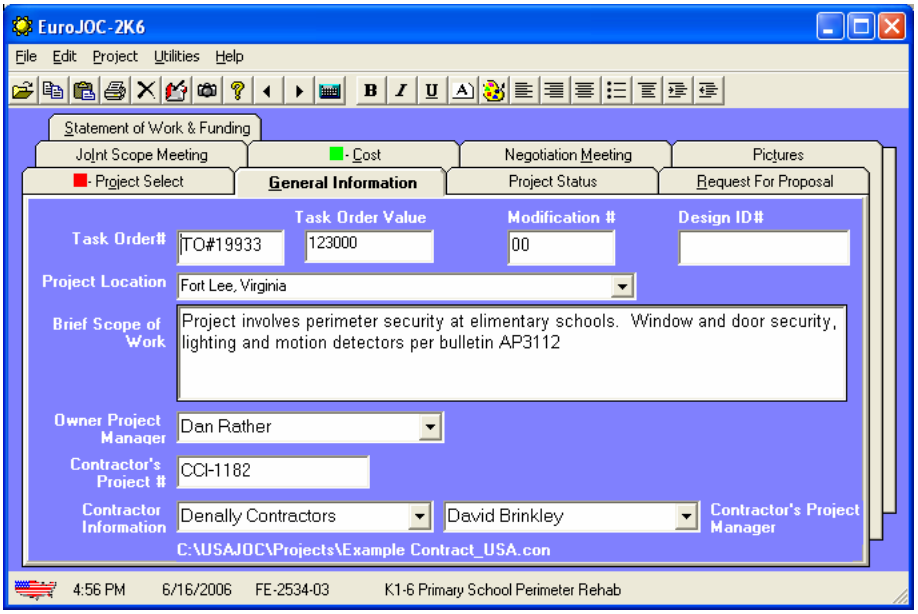
The project select tab displays all the projects within the open contract file. The project selected on this tab determines the information displayed on all the other tabs. To create a new project use either; the project drop down menu, or move to the last line in the grid and enter the new project ID# and project Description. The project ID number can be changed as necessary. Some fields displayed in this grid are also shown on the 'General Information' tab. You can begin entering project information that you wish on either tab. The project grid can be sorted by clicking on any one of the column headings. A second click in the heading will reverse the sort order. The red icon on the 'Project Select' tab indicates an important tab. The project must always be selected before the estimates or proposals appear. The grid is locked and a lock graphic is displayed while the estimate form is open.



General Information Tab

The general information tab contains several pieces of descriptive information about the project. The information can be typed directly into the text boxes. The information is saved to the database whenever another tab is selected or the form is closed. As multiple projects are entered, unique values for items such as the location appear in the drop down selection box to be reused. Many of these values are used over through out the life of the contract.

The space for the brief scope of work is a rich text box is capable of receiving font and color text from a word processor. The text can be entered into the MS WordPad text editor (Icon on toolbar) and then copied and pasted into the 'Brief Scope of Work' space. The user does not need to worry about filling in all the information spaces. They can come back to this tab later when the information is available.



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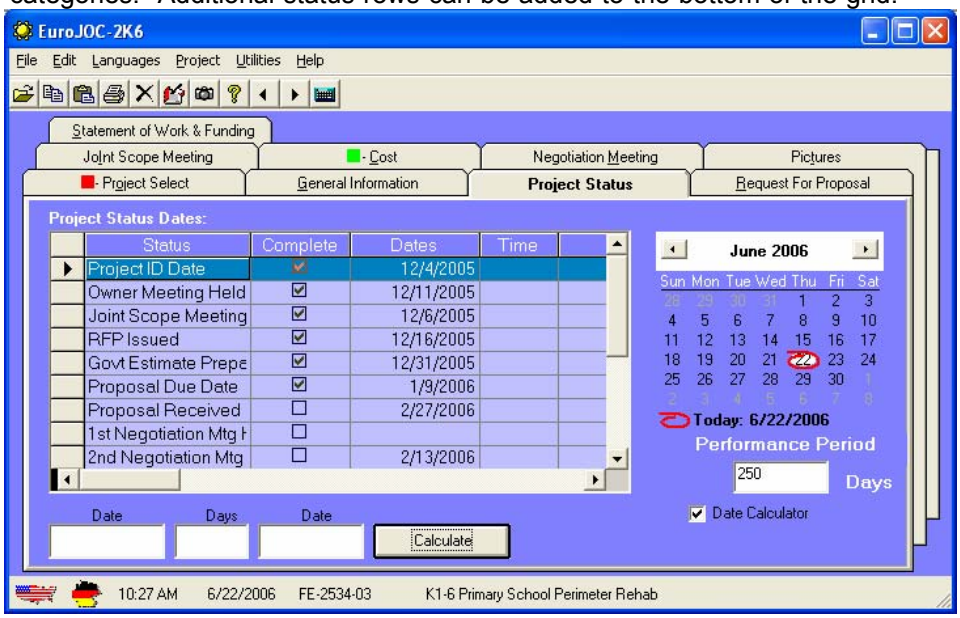
Project Status Tab

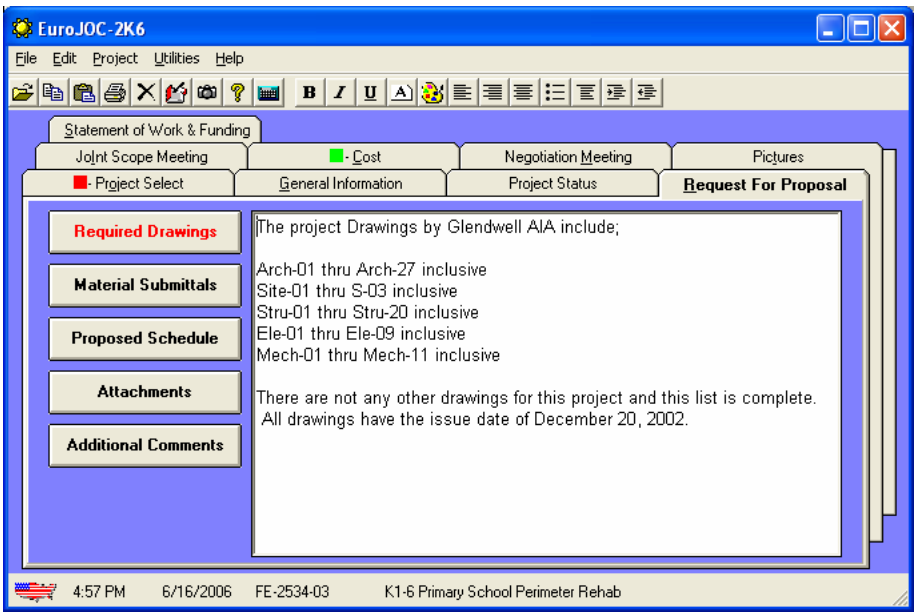
The 'Project Status' tab tracks important project dates in the grid. The sixteen original status dates appear in the project summary status reports. The user should not delete any of the original project status categories. Additional status rows can be added to the bottom of the grid. The added rows appear in the status report for this project. The grid also has additional columns for time and notes associated with each row. The perpetual calendar is used with both the grid and the date calculator. When the date calculator is turned off, double clicking a date transfers the date to the date cell on the active row.



When the date calculator is active, double clicking a date will transfer the date to an open date cell in the calculator. The date calculator is designed to take any two information fields and calculate the blank field. The performance period is a static field. The grid's date information is saved when the row changes or the main tab selected changes.

Request for Proposal Tab

The request for proposal tab has five buttons on the left side of the form. The current button selected is displayed in red and the associated information is displayed in the rich text box . Each button is associated with space in the database space to store approximately ten pages of information (32,000 chrs.) Bold button text indicates the existence of associated information.



The information may be typed directly into the rich text box. Using another editor such as Wordpad, the information can be copied and pasted into the rich text box. Changing to another tab or selecting another button will save the information entered.

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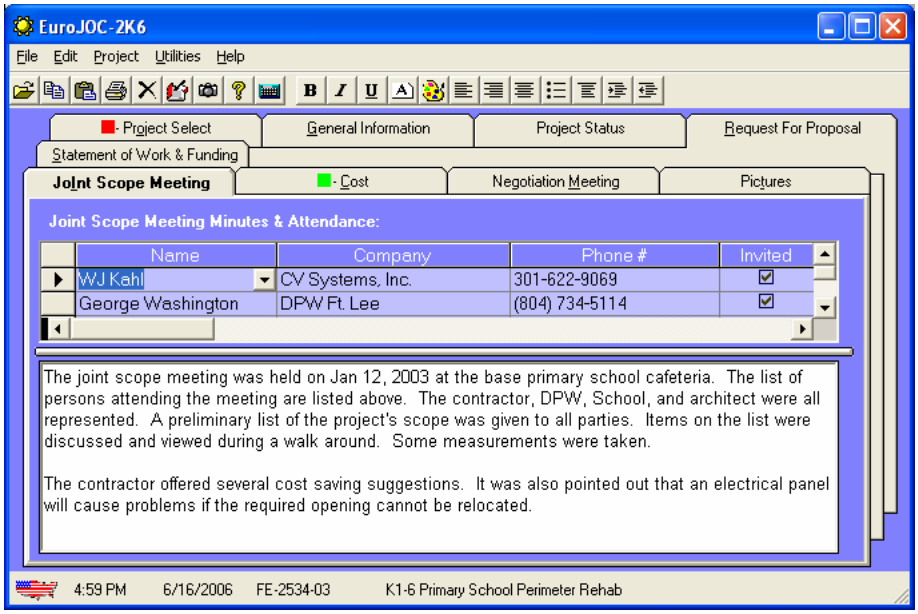
Joint Scope Meeting Tab

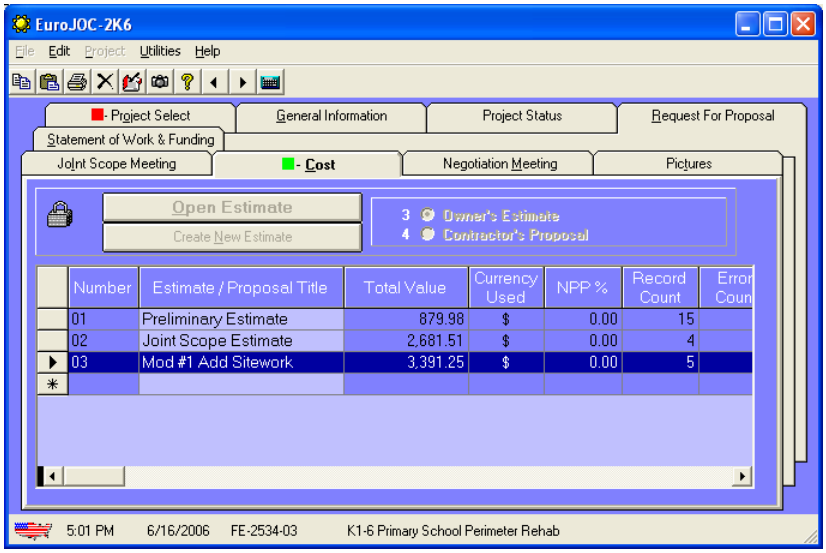
The Joint Scope tab contains the meeting's minutes and the names of people attending the meeting. The drop-down grid boxes contain the unique values of previously entered names and company information. The horizontal bar can be positioned to show either more of the grid or more of the text box.



Information can be copied from a word processing program into the rich text box representing the meeting minutes or the text can be typed directly into the box. The names and addresses are saved each time the row changes. The minutes are saved when another tab is selected or the form is closed.

Cost Tab

Each project can have up to 99 associated estimates and/or proposals. For example, there may be several versions of the estimate as the scope of work is modified to fit within the budget. Modifications during construction may require additional estimates for modifications. The two radio buttons on the form determine whether an estimate or proposal is opened. When a contractor' user name and password are used only the proposal radio button is displayed. The desired estimate / proposal should be selected in the grid and the 'Open …' button clicked. When an owner's user ID name is used a contractor's proposal can be viewed but changes cannot be made.



To create a new estimate or proposal click on the 'Create New…' button and a blank row will be added to the bottom of the grid. Chapter four covers more about this tab and the estimate form.

The lock symbol is displayed on this tab and the 'Project Select' tab whenever the estimate form is displayed. The user cannot change the project or the estimate / proposal selected while the estimate form is open. Several new columns have been added to track error counts, the last UPB used, and the City Cost Index.

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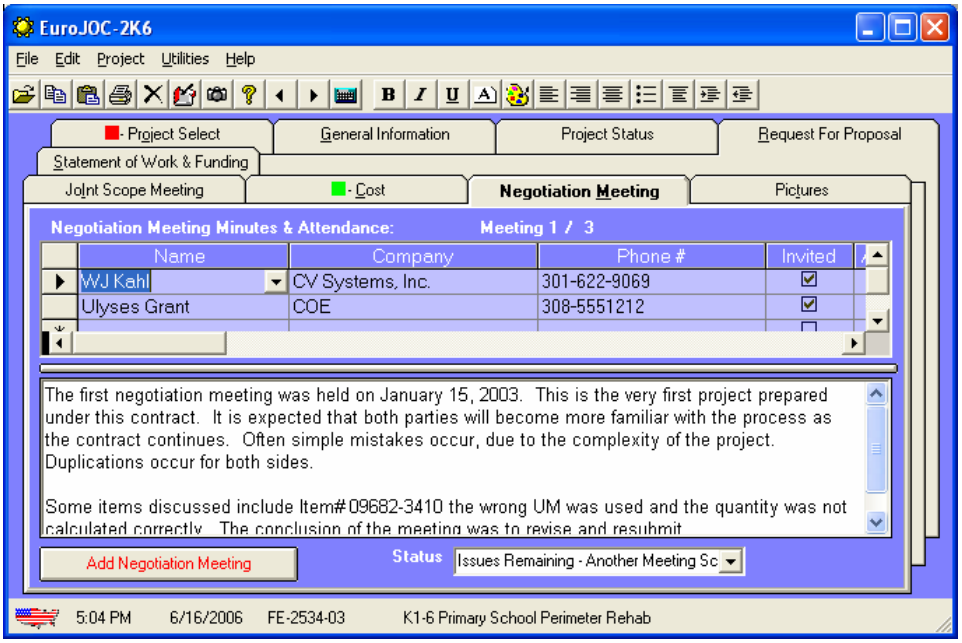
Negotiation Meeting Tab

The negotiation tab is similar to the joint scope meeting tab. The 'Negotiation Meeting' tab can record an unlimited number of negotiation sessions. The project's negotiation may require several meetings over several days to resolve the differences and each meeting can be recorded separately.

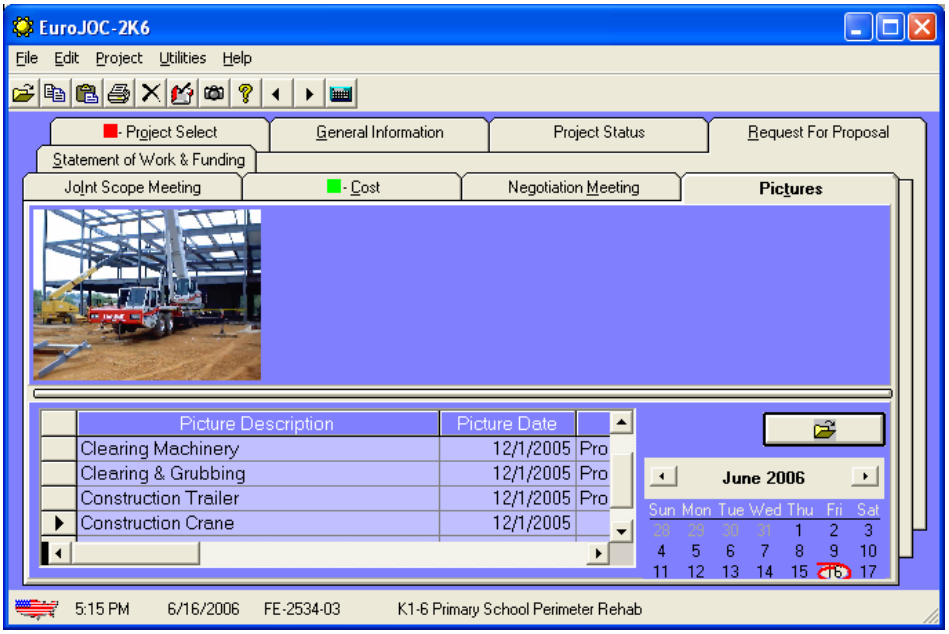


The left and right arrow buttons on the tool bar control which meeting is displayed. The horizontal bar can be moved to change the size of the grid relative to the meeting minutes.

The meeting minutes text box can contain rich text pasted from a word processor or typed directly into the text box. Different fonts and colors can appear in the text box. A link to the windows word pad editor is provided on the toolbar.

Pictures Tab

Project progress photos can be stored in the database by creating a new row at the bottom of the picture grid and then clicking on the yellow file icon button and selecting the graphic file in the file open dialog form.



Each row of the grid represents a different picture. The user can use the right and left buttons on the tool bar to move between pictures. When the printer icon is selected while the picture tab is selected a report containing all of this projects pictures will be printed. The horizontal bar can be moved to change the size of the picture and grid. The largest picture given the space available will be shown. Picture dates and status of the project can be associated with each picture. A calendar tied to the grid has been added to help with entering the picture dates.

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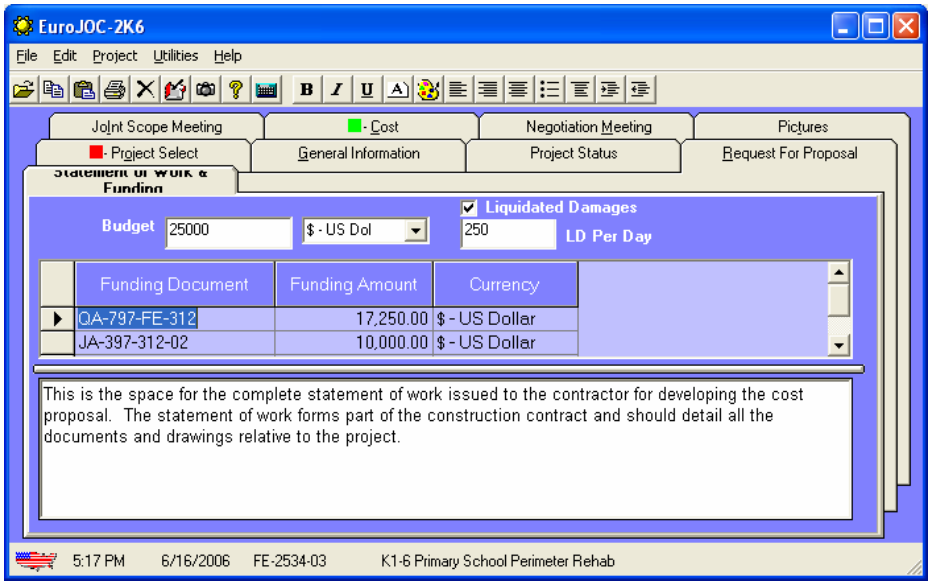
Statement of Work & Funding Tab

This tab is similar to the Joint Scope and Review meeting tabs described before. The grid in this instance contains the funding document related to this project. The text box is capable of receiving rich text from other applications.

The long statement of work (SOW) is recorded here and represents the contractual document given to the contractor.
The user can also record the liquidated damages daily rate and the projects total budget on this form. The SOW text box can store approximately 32,000 characters of information or about ten pages of typed text.

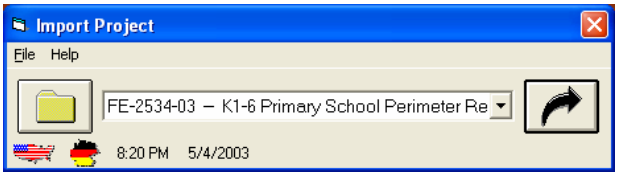


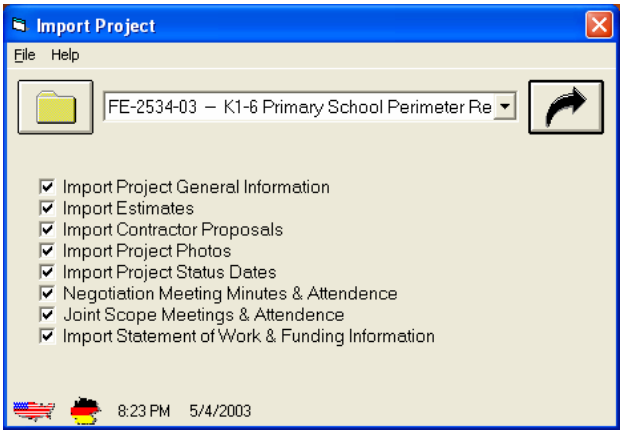
Rich Text Edit Boxes

Most of the large text input boxes within EuroJOC can accept rich text. Toolbar icons are provided to allow the user to format their text like other word processing programs. Toolbar icons are provided for changing fonts, colors, justification and indenting. The tool bar icons will appear whenever the form's components have need for these tools. Place your mouse over an icon and wait for the tool-tip to appear and explain the function of the icon.

Importing Projects

Projects can be moved from one contract file to another using the '*Import Project from Another File*' function on the main form's '*Projects*' menu. When using this feature, first open the contract file to receive the imported project data, when the Import Project form is displayed select the contract file to be imported from using the file button or the menu system. The combo box will contain a list of all the file's projects. A project is chosen in the drop down combo selection box. The Start button is clicked and the import process proceeds. Before clicking the start button, it is possible to exclude parts of the project's information from being imported by selecting the 'Display Import Detail' option on the form's file menu. The form expands as shown below. Removing a





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checkmark will exclude the data from the import process. By default all project information is imported except the contractor coefficients, UPB used, and calculation method. NPP items when not found in the open contract file are imported.

The user is cautioned, when adding projects from contract files using different unit price books, NPP pricing, contractor coefficients or calculation methods that re-pricing an estimate will use the settings of the receiving file. Re-calculating the imported estimates will use the settings of the contract file that the project was imported into and pricing may be different.

A contract file can access only one UPB and use only one calculation method. The Estimate form also has importing capabilities using a second estimate as described in chapter four.

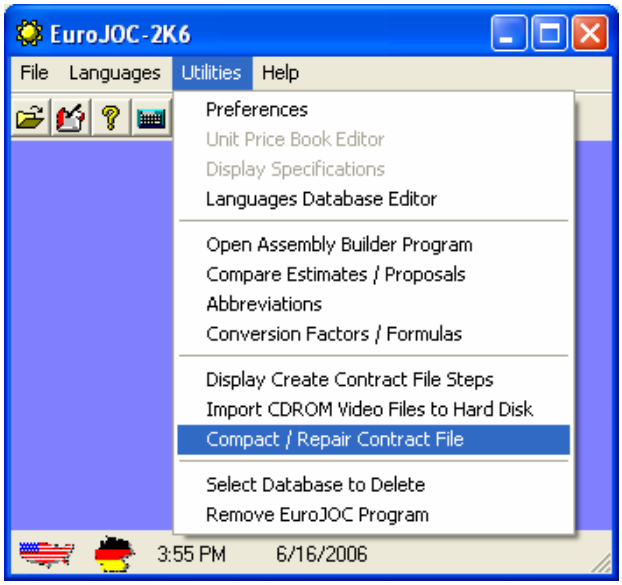
Printing Project Information

The print icon located within the tool bar, prints the project reports. The report printed depends on what main form tab is selected. Select the tab of the report you wish to print and click on the printer icon. A print preview screen will display the report before committing the data to paper. See chapter five of this manual for further information on printing and the reports available.

Utilities - Compact Database

The utilities menu of EuroJOC's main form includes a function for compacting the contract database files. EuroJOC marks records when they are deleted. The disk space is not immediately reclaimed and files remain the same size until compacted.

Compacting (AKA as packing) the database file rewrites the entire database file removing all records marked for deletion. It is recommended that you run this function periodically to remove deleted items. This helps to keep the size of the contract database files compact. This will also slightly improve the file access speed.



Selecting the 'Compact Database' option from the 'Utilities' menu will show the 'Select Database to Compact' form on the screen. The 'Select Database to Compact' form is the standard file selection dialog box form as described in chapter two of this manual. Select the database to be compacted, and click the 'OK' button. A backup of the database file is created and the user has an opportunity to retain the backup.

Please note that the compaction function will not work if the database is being shared by other programs or users. If this sharing error occurs, have other users exit the program before you retry. Once a MS Access data record is deleted it cannot be recovered. Corrupted Access databases vary rarely occur. Often corrupted files may be fixed using MS Access Xp.

Utilities – Delete Database

Selecting the 'Select Database to Delete' option from the 'Utility' menu shown in the figure above will display the 'Select Database to Delete' file dialog form. The ‘Delete Database’ function

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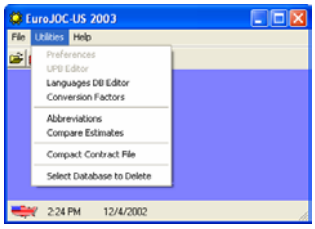
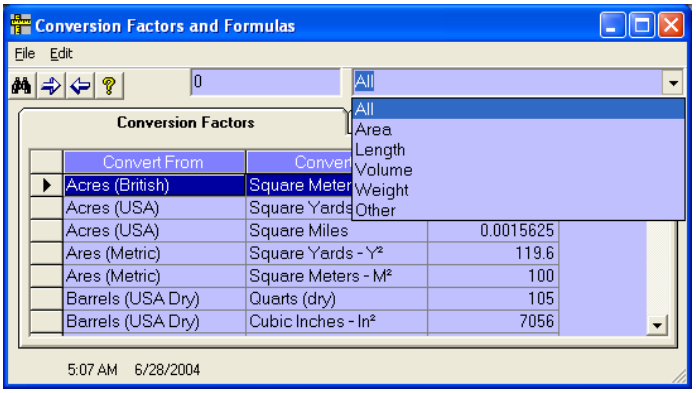
should be used to remove contract files you have created and no longer need. Deleting any other system files can prevent EuroJOC from operating properly.



To delete a database, select the database from the file dialog form, and click the 'OK' button. All files deleted in this manner will appear in the recycle bin and can be restored if needed. However, once the recycle bin is emptied, files cannot be recovered. You should also be aware that when space on the hard drive is needed, files in the recycle bin can be over written. If you need to restore a file, do it as soon as possible for the best results.

Utilities – Conversion Factors

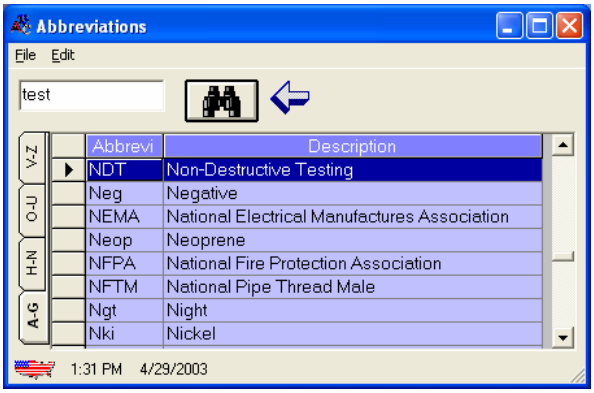
The conversion factor function is available on both the main and estimate form menus. The conversion factors form allows the user to easily convert from one unit of measure to another. The conversion factors have been classified so that if 'Area' is selected in the drop-down box the factors related to area measurements are presented.



To convert a value, enter the value in the top center text box. Next select the conversion factor row in the grid. Finally click on the right arrow to convert from the Unit of Measure (UM) in the left column to the UM in the right column. Click on the left arrow to convert from the right column UM to the left column's UM. The grid can be sorted by clicking on a column title. The number of decimal digits displayed is the same as the conversion factor being used. The conversion result is formatted using current windows regional numerical settings. The text box can also be used together with the search toolbar button to search for factors containing those text strings in either column.

The user can add and edit the conversion factors using the 'Allow Editing' function within the 'Edit' menu. The edit menu's paste function becomes available when editing is enabled. The copy function copies the contents of a cell to the Window's clip board. The text can then be pasted into another Windows program.

Feet-Inches - Within the grid is a special conversion row that allows the user to convert from: feet'-inches"-and fractions of an inch (ex: 3' 4 ½") to the decimal foot equivalent. Look for this feature alphabetically under 'feet….'



Utilities – Abbreviations

The abbreviations function is available on both the main and estimate form menus. The US UPB data was originally abbreviated to save expensive disk space. The abbreviations database contains approximately 1,400 common engineering abbreviations that may be used in the unit price database. The abbreviations are displayed alphabetically within the grid.

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The user can search through the grid or use the tab indexes located to the left of the grid. The abbreviation or a description word can be entered into the text box above the grid. Pressing the 'Enter', 'Tab' key or clicking the binocular icon search button will display the first match. Multiple search button clicks will continue the searching in a downward direction. The left arrow button reverses the search direction from the current position upward. If the search string is found, it will be displayed in the highlighted row usually at the top of the grid.

The user can edit and add new abbreviations by selecting the 'Allow Editing' feature on the 'Edit' drop down menu. When editing is enabled, the paste function is also enabled on the edit menu. The copy function copies a cell's contents into window's clipboard. The abbreviations grid can be sorted by clicking on a column title heading.

Sharing Contract Files

It is possible to share EuroJOC contract files between estimators using local area networks (LANs), e-mails, a USB port based memory stick, or any other method of physically transferring the file. The only requirement is that each machine have the UPB file referenced on the preferences form. *Floppy disks are not large enough to handle the storage requirements of estimate or proposal files.*

The EuroJOC contract file is designed to contain all the information necessary to work on another computer with the important exception of the unit price book. The unit price book is rather large (approx. 10-30 megabytes) so it cannot be sent via e-mail. It can be shared by burning the file on to a CDROM or posting on a web site. Please see chapter eight for more information on e-mailing proposals and estimates.

By using a shared network directory, it is possible for several estimators to be adding estimate rows simultaneously. Users should be logged in with different user names as each row created is tagged with their user name. It is also possible to prepare different estimates and combine them. For example: Est01 = Combined, Est02= Civil Work, Est03=Mechanical, Est04=Electrical. All of these estimates could be located in the same contract file as part of the same project while they are being built.

The contractor can deliver his proposals and the government estimator can import the information into the contract file or use the file directly. Chapter eight provides additional information on the topic of comparing estimates and proposals. It is also possible to compare two estimates or two contractor proposals for version differences.

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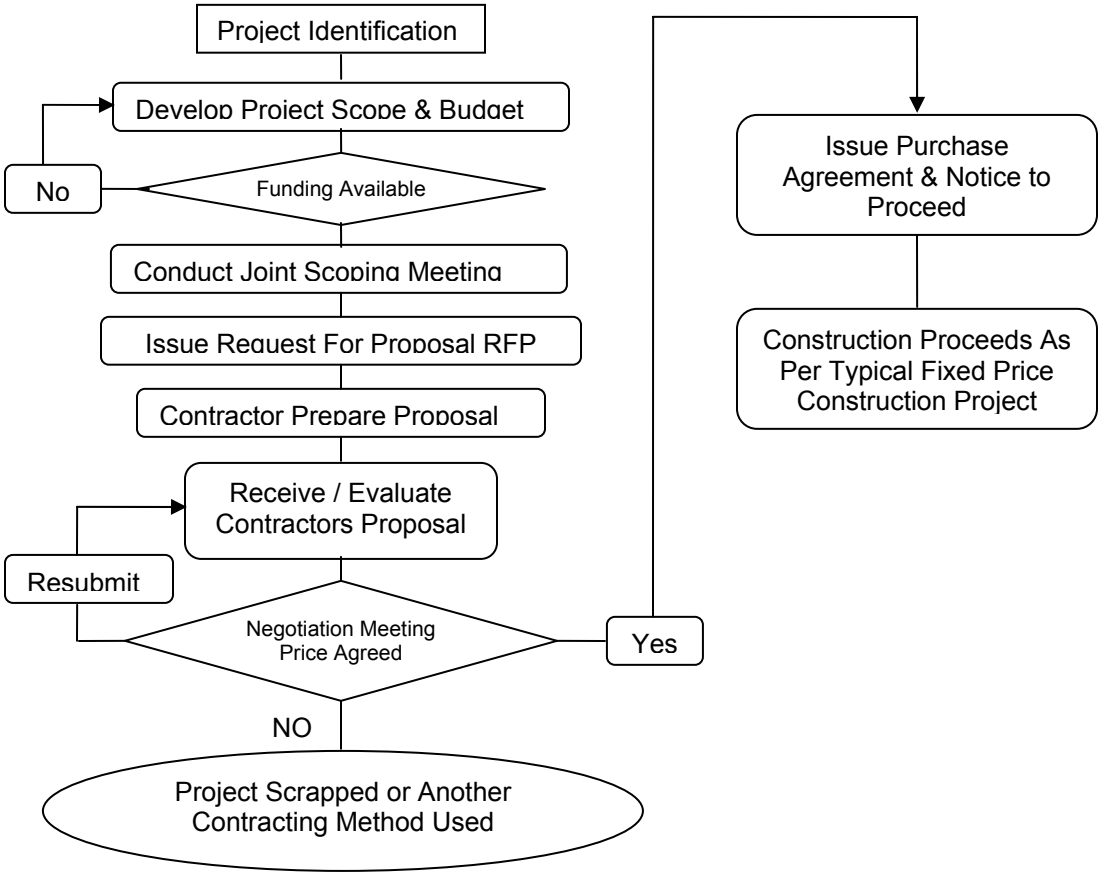
Simple Contracting Process



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Chapter 3 - Unit Price Book

Within EuroJOC, the UPB is a major component of the estimate form, but it also has it's own separate form for making changes. In this chapter we will discuss the UPB as a part of the estimate form. The Unit Price Book (UPB) is also known as the Schedule of Services and Rates (SSR) in Germany. Within the confines of a unit price contract (JOC, TOC, SABER, ID/IQ) the unit price data forms the basis of the contract and is not normally modified by the estimator.

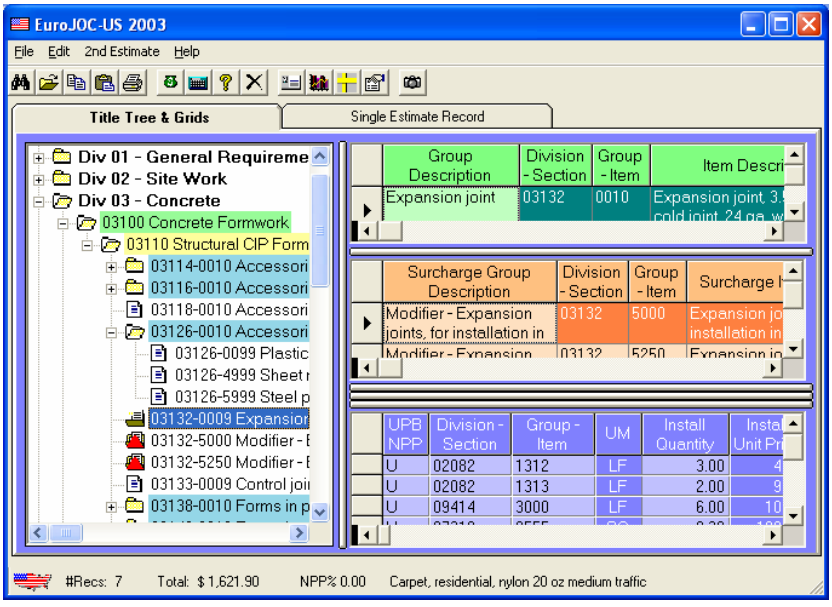
Group Description	Division - Section	Group - Item	Item Description	UM	Install Unit Price $	Demolition Unit Price $	Labor Unit Price $	Material Unit Price $	Equipment Unit Price $	Subcontr t Unit Pri
Expansion joint	03132	0010	Expansion joint, 3.5" H, keyed cold joint, 24 ga, w/stakes	LF	1.51	0.00	0.60	0.91	0.00	0
	03132	0050	Expansion joint, 4.5" H, keyed cold joint, 24 ga, w/stakes	LF	1.57	0.00	0.60	0.97	0.00	0
	03132	0100	Expansion joint, 5.5" H, keyed	LF	1.85	0.00	0.61	1.24	0.00	0

The UPB/SSR is integrated into the estimate form to provide ease of moving cost items from the UPB into the construction estimate. EuroJOC is designed to use a UPB based in any currency and several levels of complexity. The unit price can be a single unit price or can subdivided into the components of; labor, material, equipment and subcontractor costs. A cost item can have a demolition unit price, a unit weight, a unit volume, a crew, two productivity rates and a picture. Most unit price date sources do not have all of this information so your actual data will vary by what is available. EuroJOC allows for simple database usage by turning off the display of unused data columns.

Cost Codes or Positions

The cost data is organized with a hierarchical numbering system of cost codes known in Germany as the "positions". In a more general sense these numbers are cost codes. The coding system varies a great deal between various unit price books. EuroJOC has two columns to contain cost codes. In Germany the first two digits of the left column are the division. The section code can be either two or three digits. The first two digits of the second column represent the group and the last two are the item code.

In the United States, unit price books are not as rigidly structured and the first column is known as the section and the second column is known as the item code. The maximum characters the section and items fields may contain is fifteen. Usually far fewer characters are used. The cost code fields can be a combination of alpha and numeric characters.



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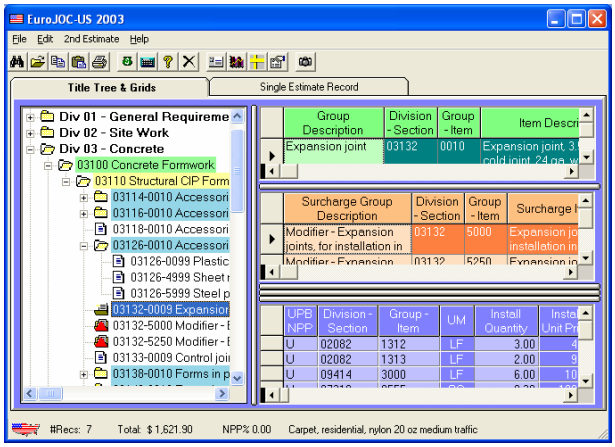
Three UPB components

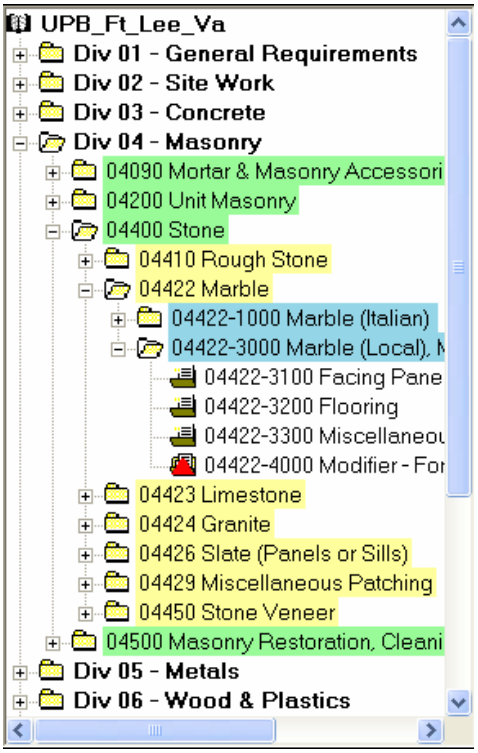
The green item grid, the orange modifier/surcharge grid and the-title tree are the three components comprising the unit price book on the estimate form. These components are inter-related. The title selected in the title tree determines what data is shown in the item and modifier / surcharge grids. The title-tree allows for quickly moving through the UPB and displaying a selection of titles from which to select items. The surcharge grid represents related items such as options or accessories the buyer may be interested in purchasing. When modifier / surcharge items are not available the orange grid is automatically closed to allow more space to display cost items in the green grid. The icons in the title tree serve as a visual clue of the type of information available.



Contractual Data

When multiplied by the contractor's coefficient factor, the UPB represents the contractually agreed price for which the contractor will provide construction services. UPB price modifications require a formal contract modification. When an item is not found within the UPB yet is required to complete a project, a non pre-priced (red grid not shown) item is created and the unit cost is negotiated. Non pre-priced items are stored separately from unit price book items. Depending on local rules NPP items are required to be re-negotiated for each project. Some installations modify their contract yearly to add the NPP items to the UPB.

Within EuroJOC the Unit Price book is accessed using several methods. A cost item's code can be typed directly into the estimate grid. Cost items can be located using the title tree shown on the right. Once the item is found the item can be dragged or double clicked into the cost estimate. The UPB can be searched using up to three words. The last method is used by the administrator to modify the UPB database. Administration of UPB data is discussed in chapter eight. The rest of the methods will be discussed in this chapter.



Some estimators prefer to build the estimate on paper using a paper copy of the UPB. The item codes and quantities are recorded on paper and later keypunched. Typing the codes directly into the estimate grid is the best method for this type of person. The title tree method of selecting items presents 'choices' and the user steps through title levels picking the most appropriate 'choice'. Within a short time of using EuroJOC, the user should be able to navigate the UPB using the title tree.

Using the UPB search tool can quickly display items and is a lot faster and more accurate than searching by hand. The down side of this method is that items are abbreviated and several different words may describe the needed item. This can be resolved by entering search criteria in several ways.

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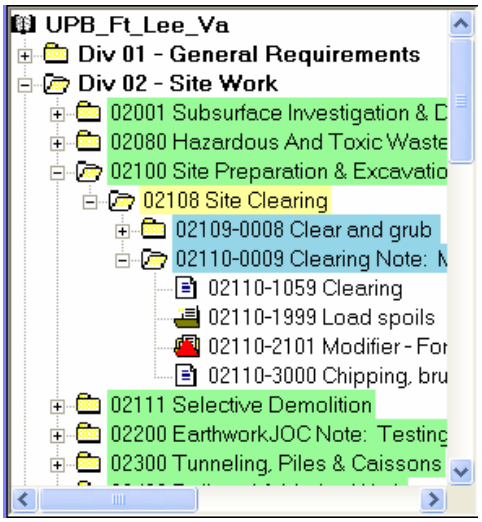
Often the item has been used in a previous estimate. With EuroJOC, it is possible to open an old estimate and copy a record or groups of records into the estimate. It is also possible to create estimate 'baskets' consisting of often used items. A combination of all these methods should be used in creating cost estimates and proposals.

Using the Title-Tree Control

The title-tree (AKA tree-view) UPB browser is very much like the Windows Explorer program that is used to locate files on your computer's hard disk drive. The yellow closed and open file icons represent title levels within the UPB structure. Titles may be linked to other subordinate titles or cost items.

These three icons represent leaf nodes. Leaf nodes are the lowest level of titles and are associated with one or more cost items. To open a title, click on the small plus sign located to the left of the yellow closed file icon or double click on the icon or title description. The title will open and all of the subordinate title branches or leafs related to the opened title will be displayed. The title background colors represent titles of the same structural level.



Continue by clicking to open title structures until the desired items are found. The title structure can be closed by clicking on the minus sign next to the open file icon.

Modifier / Surcharge Items

When a white page leaf icon is clicked, the related UPB items will be displayed in the green grid and there are no related modifier / surcharge items so the orange grid will be closed. The open file icon with a white page is used to indicate that the item group has related modifiers / surcharge items that will be displayed in the orange grid. Both the green and orange grids will be displayed when this leaf node is selected. The icon with a red triangle indicates that this is a modifier / surcharge item leaf node. All related items that use this modifier / surcharge item will be displayed in the green grid and the modifier / surcharge group will be displayed in the orange grid. The red icon functions as a reverse lookup, listing all items that use the modifier / surcharge items in the green grid.

The space available for the green and orange grids is shared. When a group without any relationships is opened, the orange grid will close and the green grid will occupy all the space. When a relationship exists, the space will be split equally between the green and orange grids. The program opens and closes the grids to allow the user to see as many items as possible.

Two types of modifier or surcharge items exist. 1.) The first type is percentage based and has % as the UM value. The unit cost values in these items represent percentages (for example 20%, 50%, 100%, 200%). These items are joined to a related parent item (the currently selected green grid item) and the percentage is multiplied by the parent's unit cost value to determine the modifier or surcharge unit cost. 2.) The second modifier / surcharge type is an item with a standard UM such as SF, CY, M2, or M3. These items do not require a related parent and can be used like any green grid item.

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Though unusual, it is possible for a group of items to be shown as modifiers yet exist as primary items. To accomplish this relationship, leave the 'Is Surcharge' checkbox blank and add the group to the 'Surcharge list' cell of the primary related group.

Adding Summary Items to Estimate

Summary items (such as sales tax) are added to the estimate in the normal manner and the percentage to be used is inserted as the quantity. Summary items calculate column totals and apply markup percentages.

Adding Items to Estimate

Once the items are displayed in the green or orange grids, an item can be selected by clicking on a row within the appropriate grid. Clicking on a row will highlight the item in a darker color of green or orange. Cost items or surcharge items can then be added to the blue estimate grid by several methods;

- Drag & Drop: by dragging the item out of the item grid and dropping it into the blue estimate grid. The item will appear on the bottom row of the grid.
- Double Clicking: by double clicking on the selected item.
- Keyboard: by pressing control+G to add a green grid item, control+O to add an orange grid item, control+R to add a red grid item, and control+Y to add a yellow grid item.
- Menu System: by clicking 'File', 'Import to Blue Grid' and then selecting one of the 4 choices.

Three Click Selection

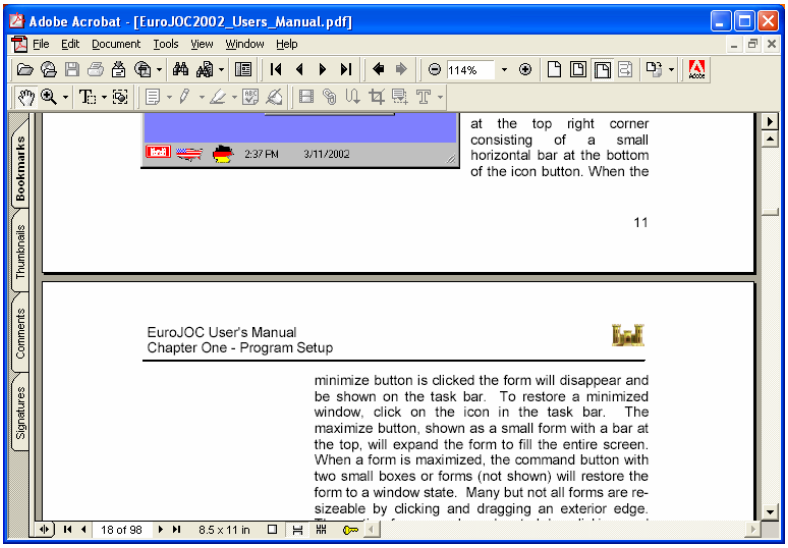
With as few as three title clicks many items among the thirty to fifty thousand cost items can be located. Depending of the title structure an item can be nine title levels or clicks deep. This flexibility allows EuroJOC to use almost any source of cost data. The horizontal and vertical scroll bars can be used to move within the tree-view display and find items outside of the window. By hovering over a title, the title will be displayed in a tool tip text box. The title click selection system reduces the navigation time and simplifies the process of finding cost items.

Group Items (Scroll the UPB)

As title leaf nodes are clicked the cost items associated with the leaf are presented in the green grid. The grouping feature can be turned of and a ***continuous list of cost items*** is shown in the green grid. Turning off grouping helps when the user wants to use the titles to get close and then manually browse for the needed cost item. This feature is located on the 'File' drop-down menu on the Estimate form.

Help Menu

The UPB help menu has an online PDF (Adobe® Portable Document Format) view of this user's manual. Pressing the F1 key from anywhere in the program will display the user manual. An example of the help system screen is shown in the figure on the right.



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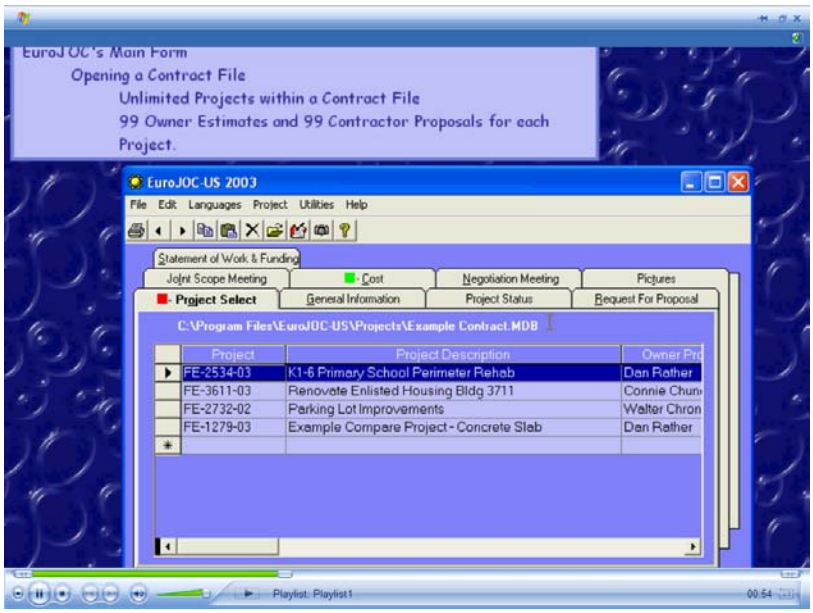
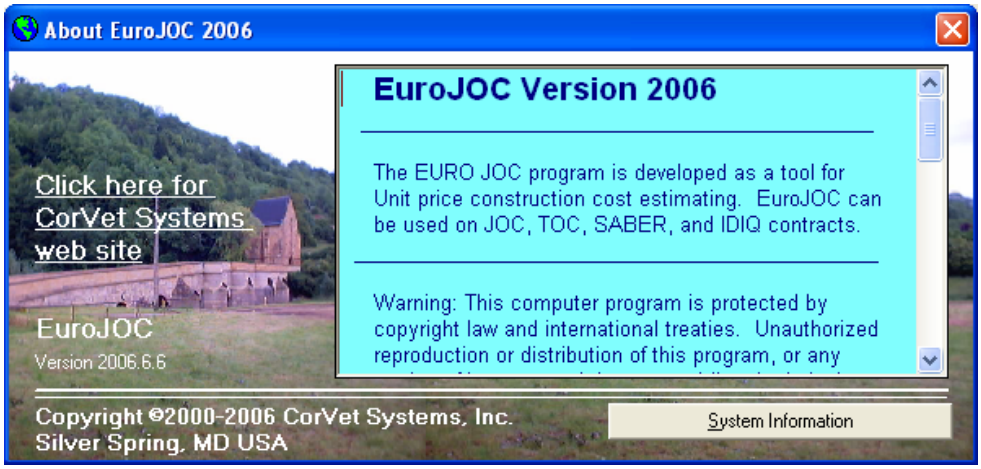
Video Help

EuroJOC has many video help files designed to explain the use of program features. The video files are stored on the CDROM disk. The video topics can be accessed from the help menu on the main form. Video help files can also be imported to the hard drive if you choose to.



About EuroJOC

The Help system's 'About' form has information about the EuroJOC computer program. Contact information is given in the scrollable text box. The CorVet Systems website can be accessed by clicking on the link within the picture. The EuroJOC program user's manual (this document) is also available on the CDROM and can be viewed and searched with the Adobe Acrobat reader software.



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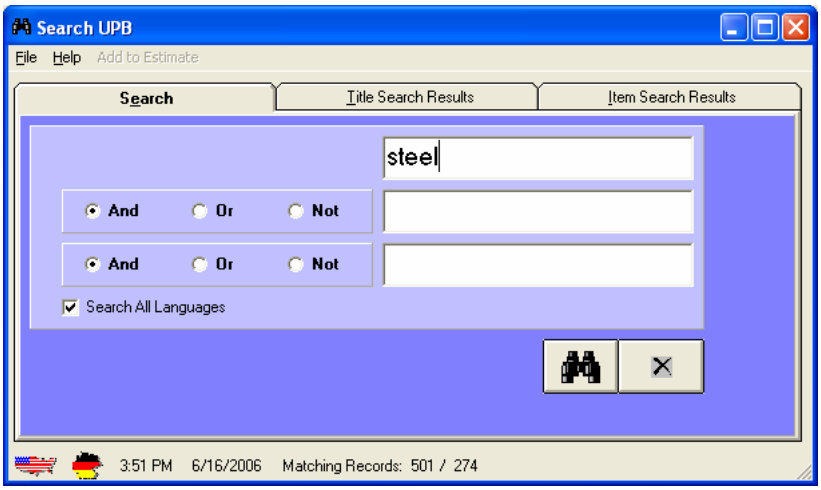
Searching UPB Cost Items by Using Key Words.

EuroJOC has an excellent word search capability. The search can find the search text within the titles or item descriptions. When multiple language databases are available, searching can be accomplished in either language by selecting the appropriate radio button. An advanced search engine is also available when using the UPB editor form.

The simple looking search form creates complex searches using user selected word relationships and wild card characters. The search form is available when either the estimate or the unit price book editor forms are displayed.

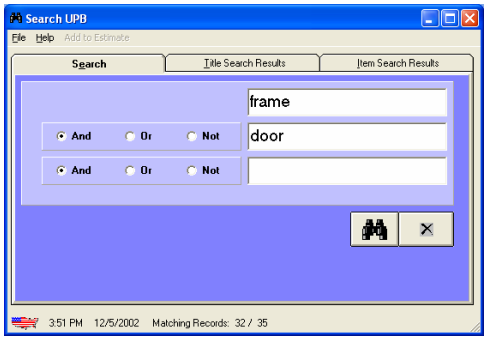


The first tab on the form allows the user to enter search criteria. The UPB data contains item description information at the title and the cost item level. Two different views are required to present the results of a search. The second and third tabs appear after a successful search is completed and presents both the title and item search results.

The search form's status bar, located at the bottom edge, indicates the number of titles and items found containing the search phrase. A maximum of five-hundred title results and all items containing the search phrase are presented on the two results tabs. When a large quantity of search matches are found, the user is encouraged to add words to the search criteria and further limit the search before viewing the results.

When multiple UPB languages are available radio buttons are displayed on the search tab. The user can search for items in either language by selecting the appropriate radio button on the search tab.

The search form's first tab is where the user enters the search words and selects the joining words. The search words can contain the wild card characters; "?" and "*". The "?" character indicates a single wild character before or after the search word. The "*" character indicates multiple characters. The search engine has flexibility with the use of the 'And', 'Or' and 'Not' conjunctive words. In the example, the search is conducted for any title or item descriptions that contain the character strings: '*frame*' and '*door*'. Only title or cost item descriptions that contain both words will be displayed. The words do not have to be together. If the text '*door frame*' is entered in a single text box, only matches containing the exact phrase will be displayed. If '*door*', '*frame*' and '*or*' are selected, matches containing either word will be displayed. The number of matches should be higher. The 'Not' radio button is used to exclude a



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word or phrase from the results. 'Door', 'Not', and 'Frame' will find titles & items with 'door' and exclude 'frame'.

Clicking the command button with the binocular symbol activates the search engine. The search is almost instantaneous for simple searches, but can take a minute or so for complex searches using the 'or' and 'not' conjunctive words. It takes a short time to build the tree-view results. Upon completion of a successful search, the 'Title Search Results' tab of the search form will be displayed.

The search form's keywords are stored so that you may return and reuse the same search criteria later. The search keywords are cleared when the clear button with the X symbol on the 'Search' tab is selected or when EuroJOC ends.

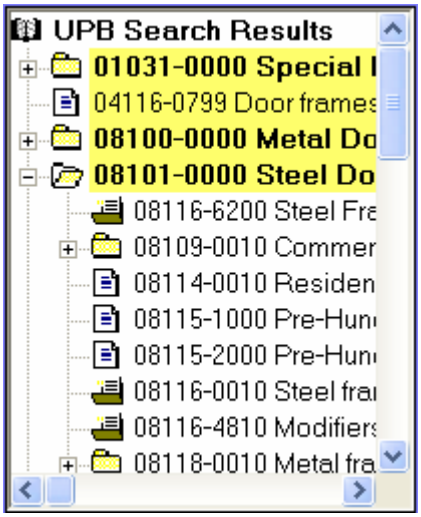
Computer searching technique is part; experience, experimentation, practice and luck. A few hints for better searching are provided in the next table. These hints apply to most search engines.

Tips For Better Searching:

- The search routine is usually not case sensitive.
- Use short words. 'conc' will find the word Concrete. 'Concrete' will not find any occurrences of 'conc'. Short and simple is often better. You can add characters to your search words if too many matching records are found.
- Use the singular, not the plural form of the word. – 'fixtures' will not find 'fixture'
- Use the wild card characters; "?" and "*".
- Remove word suffixes such as; ING, MENT
- Keep the search as simple as possible. Start simple and add criteria as necessary. Use of the 'or', 'and' and 'not' conjunctive word radio buttons requires practice.
- The user should be aware that many words in the database have been abbreviated and should make use of the abbreviated form of the word.
- Use of word phrases -Two or more words can be inserted in a single textbox. The search results will only contain items with the phrase in the exact order entered. Generally, it is better to enter keywords into separate text boxes.
- Many German UPB Items have a single dash "-"as the description. This indicates the items group description applies to this item.
- Check the abbreviation listing and search for the abbreviated form of words. See Chapter two for help using the abbreviation utility.
- Use the cost code to move quickly to the section of the UPB you expect the item to be found. If you are expecting electrical items, you can quickly ignore earthwork divisions.
- Try searching both languages. Sometimes the descriptions are mixed up and turn out to be in the wrong language field.

Title Search Results

The tab containing the title search results consists of a title-tree, the grid of items related to the title, and a movable vertical bar. Titles matching the search criteria are shown highlighted in yellow within the title tree. A title at any structural level can contain the search phrase. Cost items related to the title or the subordinate titles need to be shown. Even though the subordinate title does not match the search, the titles need to be presented in order to reach the cost items. It is possible for two parts of the same title structure to match the search phrase. When this happens the same title can appear in the title-tree several times.



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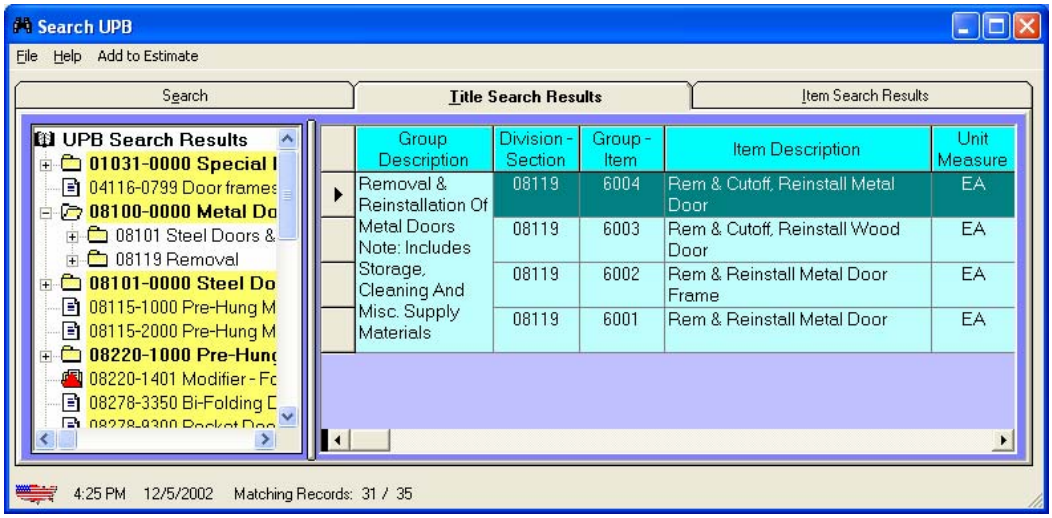
The cost items related to the title are displayed in the grid on the right side of the form when a leaf node in the title tree is selected. Once a desired item is selected in the green grid, it can be transferred to the blue estimate grid by double clicking or using the 'Add to Estimate' menu item.

On the 'Title Search Results' tab the tree-view is used in a manner similar manner as on the estimate form. The user needs to click on a title or leaf node within the tree-view and the associated cost items will be displayed within the grid on the right side of the form. The search form can be resized by dragging the form's edges or corners. The vertical bar can be moved from left to right as necessary to display the results.



After selecting an item from within either the title or item search result grids you have two options to transfer items to the estimate/proposal:

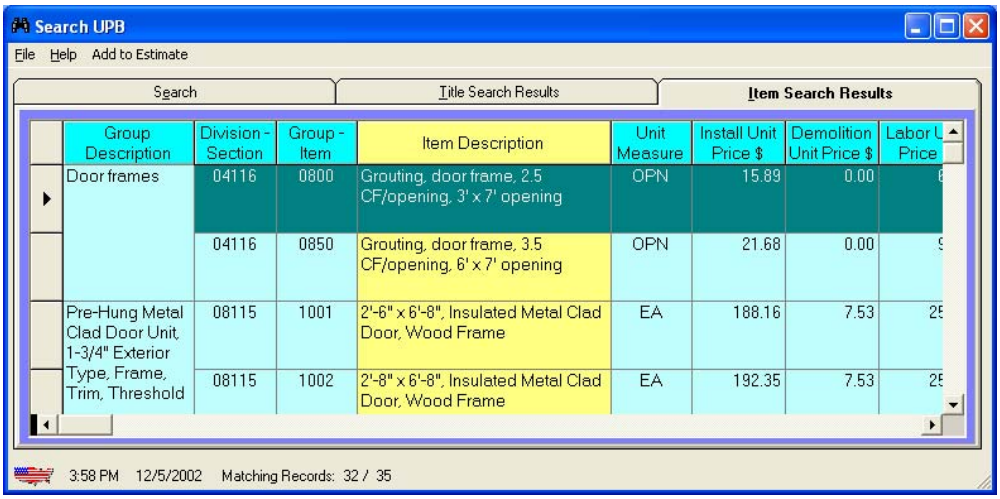
- click on the 'Add To Estimate' Icon in the form's menu, or
- double click on the item within the grid.

The user should be aware of the data structure. Group descriptions or item descriptions can contain the search phrase, but only cost items are added to the estimate.

Item Search Results

The yellow column in the grid indicates where the cost item search match text was found. The grid items can be viewed by moving up and down within the grid. Once an item is found it can be transferred to the blue estimate grid by double clicking or using the 'Add to Estimate' menu item.

Use of the cost code columns allows the user to quickly exclude sections of the UPB that the item is not expected to be located. Items can appear on both the title and item result tabs.



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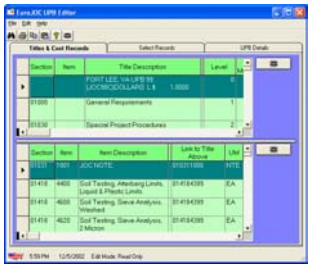
Printing UPB Data

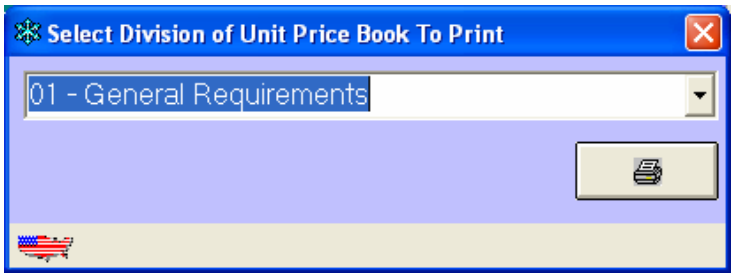


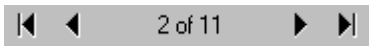
Printing is accomplished using the UPB editor form. The UPB publisher may not allow the UPB to be printed. In this case the printing function will be disabled. Normally the UPB editor is used by the data administrator. Access to the UPB may be restricted for some user names. If this is the case contact your administrator for assistance. Access to the UPB editor form is available on both the main and estimate forms. The UPB grids are always read-only unless a special password is entered for editing privileges.

With the UPB editor displayed, printing is accomplished by clicking the printer icon in the tool bar or by using the print item on the 'File' menu. The UPB is a large document and it is unlikely that you will ever print the entire book at one time. With the 'Select Division of Unit Price Book to Print' form (shown below) the user can select a single division of the UPB to be printed.

When multiple languages are available radio buttons appear on the division select form and one or both of the language(s) appear in the drop down.

Once the division is selected, click on the printer button and the output will be generated.

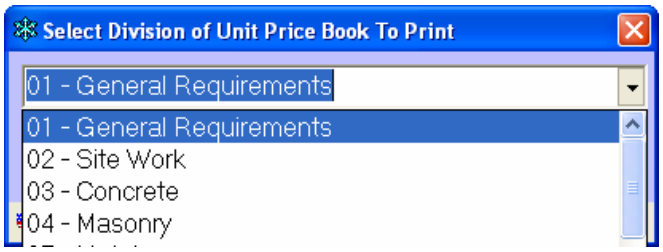




The printed output is first displayed in a preview window as shown on the next page. With the preview, the user is able to jump within the document and view item groups using the group tree located in the left panel. There is a single word search engine in the tool bar. To use the search feature, click in the white box and enter the search word. It is possible to export the data using the envelope icon. The VCR (video cassette recorder) style buttons from left to right are; 1.) move to beginning of report, 2.) previous page, 3.) next page, and 4.) move to end of report.

The printer setup can be changed by clicking on the printer icon with the yellow key. To start actual printing of the document, click on the printer icon at the top of the preview window.

Divisions, sections, and groups are all separated by horizontal lines in the report. Cost items for each group are located under the group description.



Some German UPB/SSR items have a single dash for an item description. This means that the group description is the item's description. The version shown has both languages displayed but single language versions are available by selecting the 'English' or 'German' radio buttons on the division print selector form. The UPB report has been designed to consume less paper and increase readability.

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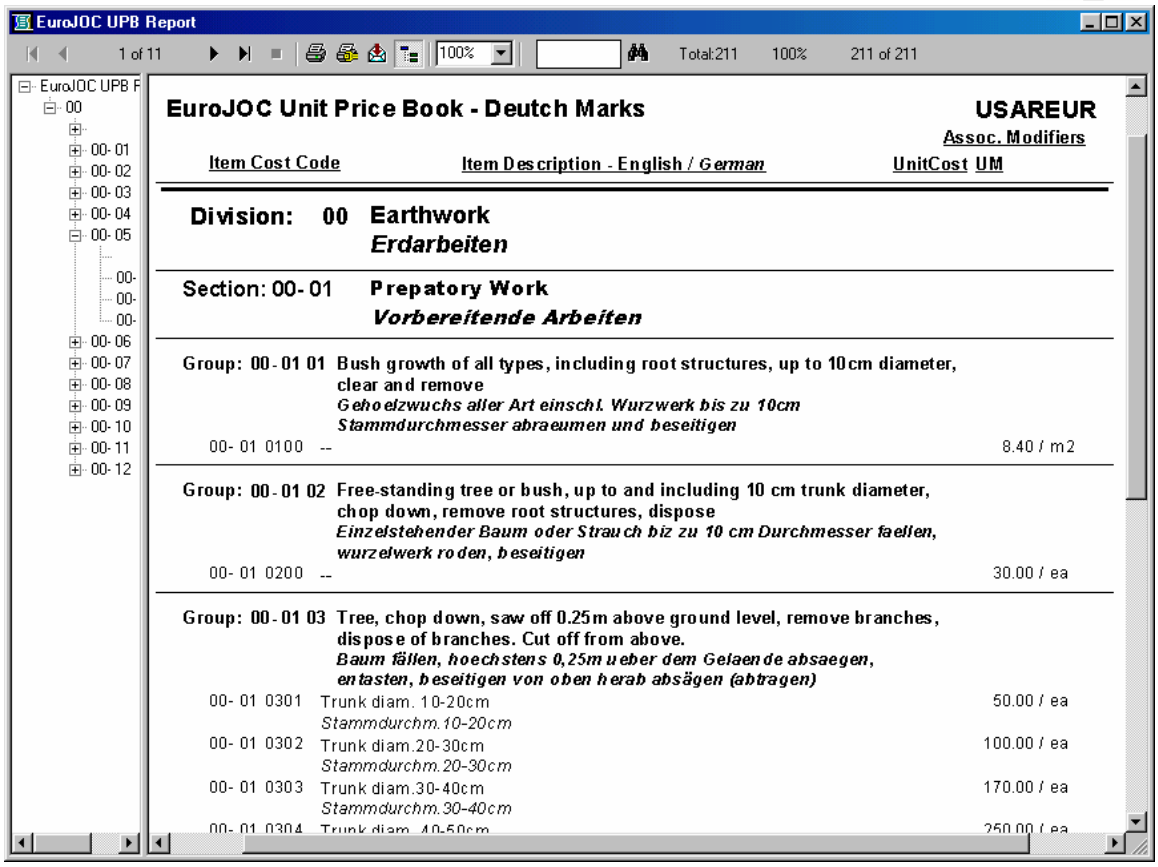

Example of the unit price book printout. Ownership of the UPB data determines whether or not the UPB can be printed. In cases where the data cannot be printed, PDF (Adobe Portable Document Format) files are available.

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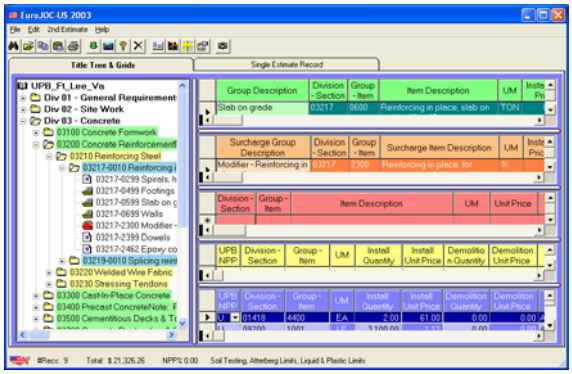
Chapter 4 - Estimate Form

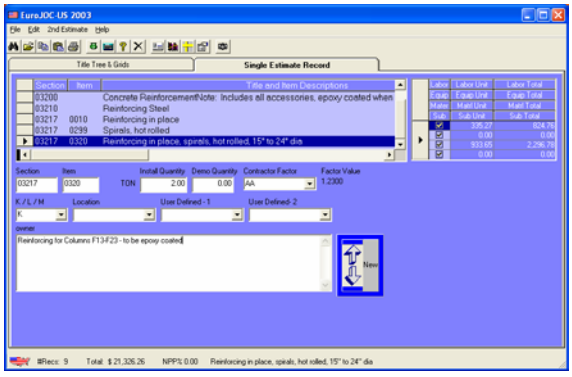


The estimate form is used by owner and contractor estimators to prepare cost estimates and proposals for construction projects. Items are selected in the unit price book and moved into the blue cost estimate grid. Once in the grid, quantities are entered and a contractor factor is selected.

EuroJOC is restricted from combining an owner's estimate with a contractor's proposal (see: second estimate section). The user name selected on the password screen determines whether a proposal or an estimate is generated. *A blue estimate background indicates that an estimate is opened, while green indicates a proposal.* When using an owner user name the contractor's proposal can be viewed without allowing changes. By using a contractor user name, the contractor can not create owner estimates. These security features protect both parties. Most of this chapter applies equally to both owner and contractor cost estimate creation. Remaining contractor version differences are discussed in chapter eight of this manual.

When EuroJOC was modified to allow use in the United States additional cost columns were needed to display the component costs of each item. The United States construction cost databases include component costs for Labor, Material, Equipment and subcontractor unit costs. The US data can also have a separate demolition quantity and unit cost.

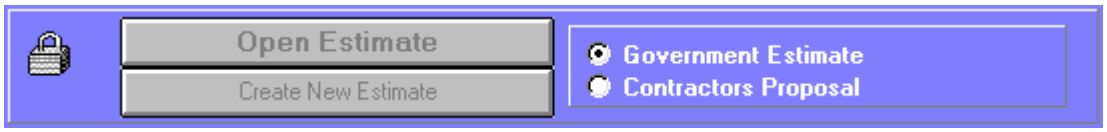
Features needed for use in the United States are controlled by checkboxes on the 'Preferences' form. When ever these capabilities are not needed such as in Germany and Italy, they can be hidden. The features can exist without complicating the software for many users.



EuroJOC has the capability of viewing a single estimate row on one screen. This capability became more important as component cost columns were added to the estimate grid. Scrolling left to right within the estimate grid can take time. By adding the new tab, it is easy to see a single estimate row's contents on one screen.

Opening an Estimate

A contract has to be opened, project selected and the cost tab selected on the main form. With the cost tab displayed select one of the estimates available in the grid and click on the 'Open Estimate' command button. To open a contractor's proposal, click on the 'Contractors Proposal' radio button. The buttons will change to reflect opening a proposal. When using a government



user name, the proposal will be opened in read-only mode to protect the contractor's information.

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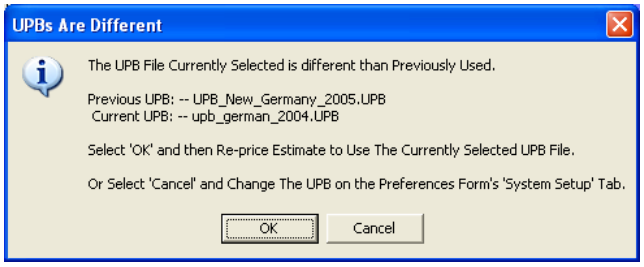
The government estimator cannot change a contractor's proposal. The 'Government Estimate' radio button is hidden when a contractor user name is used during the log on process.

After clicking on the 'Open Estimate' button, locks will appear on the main form's 'Project Select' and 'Cost' tabs and the estimate/proposal form will be displayed. The lock on these two tabs prevents the user from changing the project or estimate selections while the estimate form is displayed. EuroJOC estimates are contained in Access® databases and are not encrypted.

On the estimate form, the title-tree, green item grid and orange modifier / surcharge grid represent the unit price book as explained the previous chapter. The red grid contains the project's non pre-priced items. The yellow grid contains a second estimate or a basket as selected by the user. The blue grid contains the estimate being created or modified. The bars may need to be moved to see some grids. All items flow from the tree and grids to the blue estimate grid.

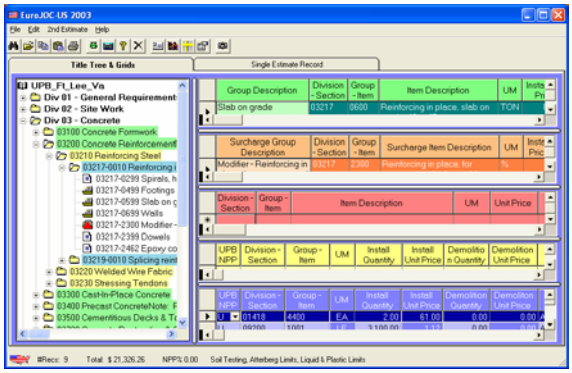
Different UPB Selected

The UPB used to calculate an estimate is stored as part of each estimate's details. When the UPB selected on the preferences form is different a warning message is displayed each time the estimate is opened. This feature is especially useful when the UPB is updated quarterly to reflect market conditions.

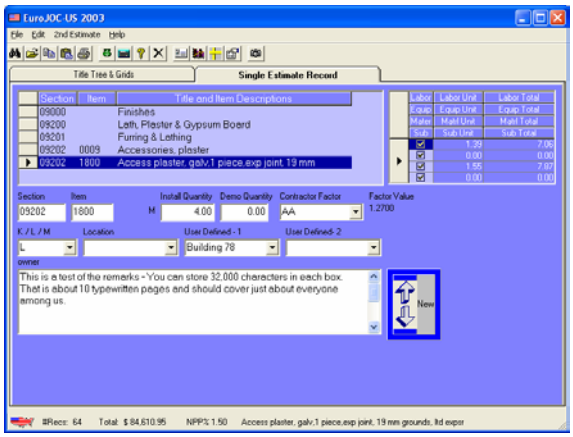


Using the Estimate form

The estimate form's presentation view can be controlled in several ways. The entire form is re-sizeable using the edges and corners of the form and the Minimize or Maximize form buttons in the top right corner. Another method of changing the view is by use of the **'Change Window State (Alt+V)'** button in the toolbar below the form's menu. The first state has the title-tree the full height of the form. The second state has the estimate grid running the full width. The third state has the estimate occupying the entire form.



Another method of changing the view is by using the **separator bars** located between the grids and title-tree controls. The user can click and drag the bars either in a horizontal or vertical direction to open or close various pieces of the window. Some of the bars automatically move by program control depending on the data requested in the title-tree.



The grids can be individually customized by changing column width, column order, and adding splits. Changing the grids is discussed in chapter one. Using all of these techniques

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the user can set up the estimate form in a manner they are comfortable. The settings are saved and restored between uses, thus reducing setup time. The default form settings can be restored by turning off the 'save form settings' feature for the estimate on the preferences form.

The blue estimate grid can be used to enter or edit all of the estimate information. User entered data can result in errors. Most errors are caught during data entry, and others are caught during the re-pricing procedure. Rows containing errors are excluded from the total cost of the estimate. When an error exists, the error replaces the description in the task bar at the bottom of the form. An error column exists at the far right of the estimate grid.

Adding Items to the Estimate

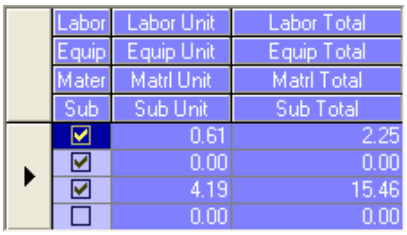
There are a total of nine methods for adding items to the main estimate

- Directly **entering** the item cost codes into the main estimate grid.
- Using the Unit Price Book title-tree and **dragging** cost items from the green grid into the blue grid, or **double clicking** on the cost item.
- Using the Unit Price Book title-tree and dragging surcharge items from the orange grid into the blue grid, or double clicking on the surcharge cost item.
- Entering Item, quantity and other information on the second tab 'Single Estimate Record'.
- Using the **Search** form and double clicking or clicking on the menu selection to transfer the cost item.
- Creating **Non Pre-priced** Items (red grid) and dragging or double clicking to transfer the item into the main estimate.
- Entering information on the 'Single Estimate Record' tab.
- Opening a **second estimate** and importing one or more items.
- Using the Assemblies tab to run an existing assembly.

The first five methods all require the user to enter the quantity as a minimum. The last method transfers a complete row (assuming the original row was complete) of data from the second estimate that is ready-to-use. When any of the transfer methods complete, the cursor is set to the quantity column in the blue estimate grid ready for a quantity to be entered.

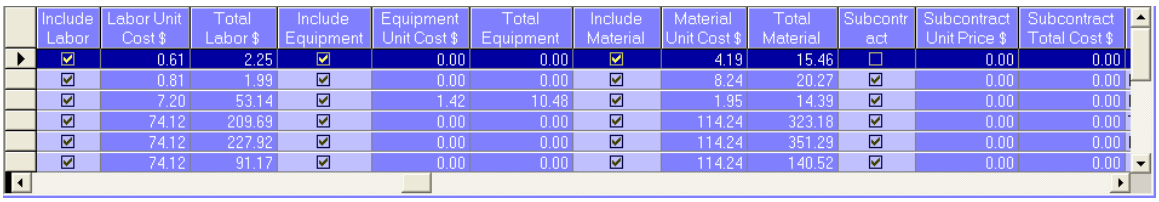
Component Cost

A UPB cost item can be broken into the components of; Labor, Material, Equipment, and Subcontractor cost. The Install Unit Price is the sum of the components excluding demolition. The component cost breakdown is often helpful in making pricing decisions. For example; is a large crane included in the equipment cost? The labor cost is further detailed by knowing the makeup of the crew, productivity and the labor rates for labor categories.



	Labor	Labor Unit	Labor Total
	Equip	Equip Unit	Equip Total
	Mater	Matrl Unit	Matrl Total
	Sub	Sub Unit	Sub Total
	☑	0.61	2.25
▶	☑	0.00	0.00
	☑	4.19	15.46
	☐	0.00	0.00

As the individual labor rates change it would then be possible to recalculate the labor component as labor rates change. This pricing mechanism is not included in EuroJOC. In the case of government furnished items, it is helpful to know the material cost of a similar item. An NPP item could be created that excludes the material cost.



	Include Labor	Labor Unit Cost $	Total Labor $	Include Equipment	Equipment Unit Cost $	Total Equipment	Include Material	Material Unit Cost $	Total Material	Subcontract	Subcontract Unit Price $	Subcontract Total Cost $
▶	☑	0.61	2.25	☑	0.00	0.00	☑	4.19	15.46	☐	0.00	0.00
	☑	0.81	1.99	☑	0.00	0.00	☑	8.24	20.27	☑	0.00	0.00
	☑	7.20	53.14	☑	1.42	10.48	☑	1.95	14.39	☑	0.00	0.00
	☑	74.12	209.69	☑	0.00	0.00	☑	114.24	323.18	☑	0.00	0.00
	☑	74.12	227.92	☑	0.00	0.00	☑	114.24	351.29	☑	0.00	0.00
	☑	74.12	91.17	☑	0.00	0.00	☑	114.24	140.52	☑	0.00	0.00

EuroJOC has two preference option settings that control display of component cost and usage. 'Display Component Cost' shows the component cost breakdown on both tabs of the estimate form. 'Allow Component Selection' will enable the user to select checkboxes removing components from the row's cost calculation. Please note that use of the 'Allow Component

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Selection' option may not be allowed by the JOC contract. You are encouraged to confirm usage before employing this feature. Many UPB databases provide a single install unit cost and do not include component cost information.

Demolition Cost

Demolition cost is a separate calculation within the row's total cost. Individual item demolition cost items are to be used selectively. When an entire area is demolished the bulk demolition items (USA -Div 2) are to be used. When a very small area directly related to the installed item is demolished, using the individual demo unit price is appropriate. A separate demolition quantity is multiplied by the demo unit price and added to the rows' total install cost to form the 'Row Total Amount'. The demo unit price is not available for every item and many UPBs including Germany and Italy do not have this information. An option checkbox on the preferences form controls the display of this feature.

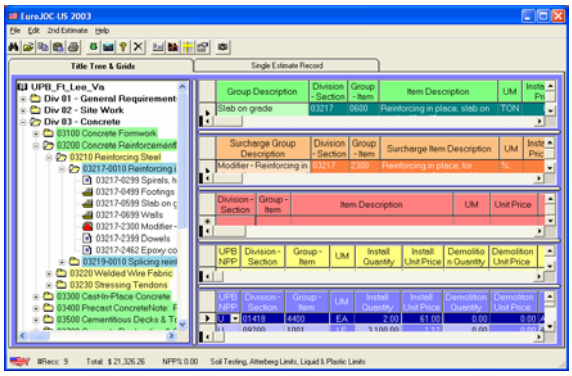
Demolition Quantity	Demoliton Unit Price $
48.00	0.38
12.00	0.42
	0.00
0.00	0.00
2.00	30.00
0.00	0.00

Group Items - Continuous UPB List Option

Each time a leaf node is clicked in the title-tree a small group of related items is displayed. It is possible to disable the item grouping on the 'File' menu. By disabling the grouping, the user will be presented a continuous list of cost items within the green item grid. This feature is useful when the estimator wants to use the title tree to get "close" and then visually scan to select the appropriate item. The surcharge/modifier item display is disabled when this option is enabled.

Editing Items within the Estimate

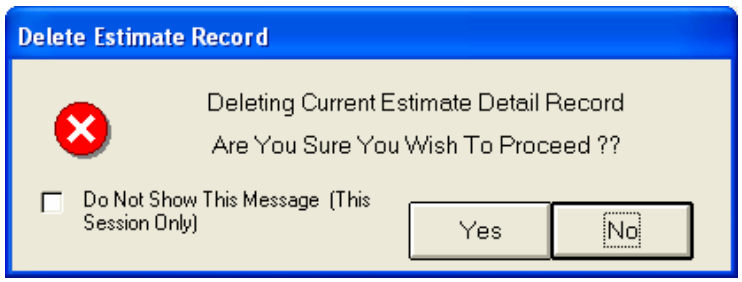
The user can enter or change information within the estimate grid. The user cannot modify the darker blue colored columns. The darker colored columns contain calculated results or information from the unit price book related to the cost code.



To edit existing data within the grid double-click inside a cell, or single click to select the cell and then press the F2 edit key. Keyboard users can move around the grid with the tab key or the arrow keys. Modifier / surcharge items that are percentage (%) based items (as indicated by a star in the 'Surcharge' Column) cannot have the parent item selection changed. If the parent item relationship needs to be changed, the item has be deleted and re-entered.

Deleting Items from an Estimate

An estimate row can be deleted from the estimate / proposal by either of two methods; 1.) by selecting a cell within the row to be deleted and then click on the delete icon in the toolbar, 2.) by clicking in the leftmost column of the grid on the selected row, the row will become highlighted, and pressing the



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keyboard's 'Del' (Delete) key. In either case, the delete confirmation message will be shown and the deletion will proceed unless canceled.

The user can turn off the confirmation message by checking the 'Do Not Show This Message' checkbox. Each time the estimate form is displayed the delete confirmation action is reset so that the confirmation message is displayed.

Non Pre-priced Items

A Non Pre-priced (NPP) item is defined as an item that does not exist within the UPB/SSR contractual unit price cost data. By contractual agreement, an NPP item is created and pricing is negotiated for any items required that are not included in the UPB. The NPP grid is often hidden because it is not used extensively during estimate generation. Move the horizontal bar, located below the surcharge (orange) grid, up or down to display the NPP grid.

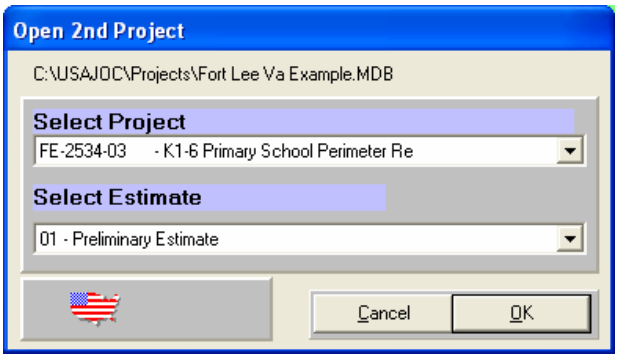
	Division - Section	Group - Item	Item Description	UM	Unit Cost - (DM)
▶	99-01	0001	Press-on Elec Terminal	ea	45.55
	99-02	1000	Spray-on Curing	M2	.01
	99-61	1000	Glazing Artistic	M2	250.00
*					

NPP items must use a '99xxx' or '9-99xxx' division code. The other item or position code numbers (99-xx xxxx or 9-99xxx xxx-xxxx) can be suit individual needs. A new NPP item is created by moving to the last row of the red grid and entering the information. When component cost is enabled, the 'Install Unit Price' column is locked and the cost must be entered as one or more of the components. A separate column is available for the second language description and is accessed by clicking the second language icon in the task bar. The NPP item can be inserted into the estimate by double clicking on the desired item or by dragging the item into the estimate.

Assignment of NPP item numbers should be coordinated within the local JOC office. Rules on reusing NPP items vary from location to location. Some locations allow the NPP items to be reused and other locations require the NPP item to be negotiated each time they are used. If reused, It is important to allow for escalation of NPP item cost as option years change. Some US installations have a contractually based coefficient assigned to NPP items.

Second Estimate

A second estimate can be opened for reference or as a source of line items. Opening the second estimate is a three step process. First the project file is selected from a file dialog form, second the project is selected from the drop down box, and finally the estimate is selected from the lower drop down box. When a second estimate is opened, the yellow grid will automatically open.



	UPB NPP	Division - Section	Group - Item	UM	Install Quantity	Install Unit Price	Select Factor	Factor	Row Total Amount $	Acc ount	Remarks	S	Gr
	U	02082	1312	LF	3.00	4.80	AA	1.23	17.71	L			Active an
	U	02082	1313	LF	2.00	9.05	AA	1.23	22.26	K			Active an
▶	U	09414	3000	LF	6.00	10.57	AA	1.23	89.29	K			Stairs, ca
	U	07318	0555	SQ	2.30	188.36	AA	1.23	532.87	K			Wood
	U	07318	0555	SQ	2.50	188.36	AA	1.23	579.21	L	Remarks can be entered here or		Wood
	U	07318	0555	SQ	1.00	188.36	AB	1.25	235.45	K			Wood
	U	09682	3410	SY	28.00	11.05	AA	1.23	380.56	K			Resident

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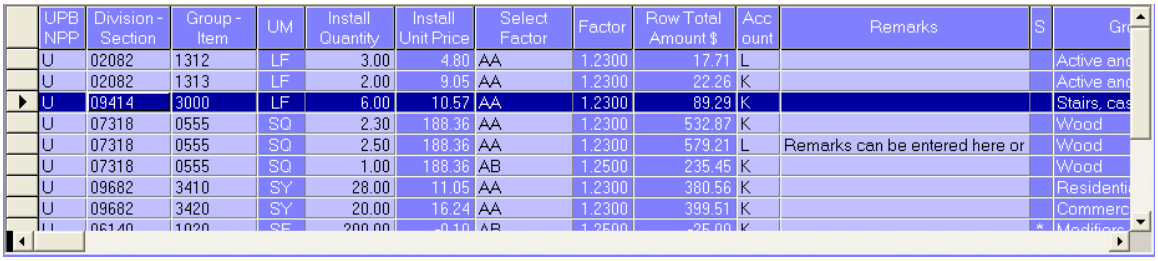
Items can be individually copied into the blue estimate by dragging and dropping, double clicking, or pressing control + y. All the items can be copied at once using the 'Add All Items' function in the menu system.

The second estimate can also contain baskets of commonly used items. Baskets are defined as estimates without quantities. By using baskets, the user is forced to insert the quantities or errors will result. *Due to numerous requests; a hidden feature (activated by simultaneously pressing the Control+Shift+Alt and the Plus Keys) allows the user to open either estimates or proposals in the yellow grid and move the items to the blue estimate grid. Both the 'Second Estimate' and 'Second Proposal' items will appear in the menu system of the estimate form. Use with Caution.*

Sorting the Estimate

When an estimate or proposal opened, the cost items are sorted in the same order as when the user last closed the estimate. The user can click on a grid heading description and the estimate



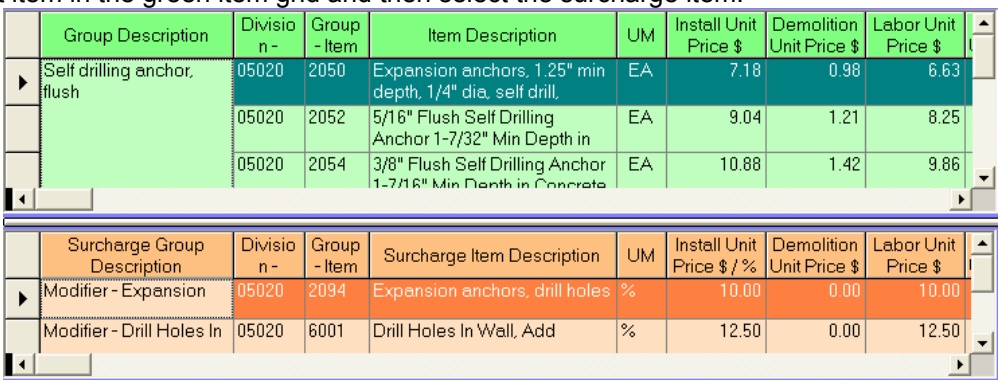
	UPB NPP	Division - Section	Group - Item	UM	Install Quantity	Install Unit Price	Select Factor	Factor	Row Total Amount $	Account	Remarks	S	Gr
	U	02082	1312	LF	3.00	4.80	AA	1.2300	17.71	L			Active and
	U	02082	1313	LF	2.00	9.05	AA	1.2300	22.26	K			Active and
▶	U	09414	3000	LF	6.00	10.57	AA	1.2300	89.29	K			Stairs, cas
	U	07318	0555	SQ	2.30	188.36	AA	1.2300	532.87	K			Wood
	U	07318	0555	SQ	2.50	188.36	AA	1.2300	579.21	L	Remarks can be entered here or		Wood
	U	07318	0555	SQ	1.00	188.36	AB	1.2500	235.45	K			Wood
	U	09682	3410	SY	28.00	11.05	AA	1.2300	380.56	K			Residenti
	U	09682	3420	SY	20.00	16.24	AA	1.2300	399.51	K			Commerc
	U	06140	1020	SF	200.00	-0.10	AB	1.2500	-25.00	K		*	Modifiers

grid will be sorted using that column as the primary sort key. The estimate grid allows the columns to be rearranged, so in order to sort in descending order click in the data area of the same column and then click the column heading a second time. The menu system and a right-click menu contain a selection to return the estimate to the order originally entered. Of course, sorting does not affect a project's cost. Sorting the 'Errors Messages' column will bubble all items with errors to the top of the main estimate grid. Most grids within EuroJOC are designed to sort and function in this manner.

Percentage Modifier / Surcharge Items

Modifier / surcharge items either have a physical unit of measure (UM) like SF(M2), or a percentage (%) UM. Modifier / Surcharge items with physical units of measure are indistinguishable from other green grid items and may be used as such.

When the UM of a surcharge item is percentage, the unit price values represent percentages instead of monetary values. The percentage based modifier / surcharge item is linked to a parent item's cost by the percentage given in the modifier / surcharge item. First select the proper parent item in the green item grid and then select the surcharge item.



	Group Description	Division -	Group - Item	Item Description	UM	Install Unit Price $	Demolition Unit Price $	Labor Unit Price $
▶	Self drilling anchor, flush	05020	2050	Expansion anchors, 1.25" min depth, 1/4" dia, self drill,	EA	7.18	0.98	6.63
		05020	2052	5/16" Flush Self Drilling Anchor 1-7/32" Min Depth in	EA	9.04	1.21	8.25
		05020	2054	3/8" Flush Self Drilling Anchor 1-7/16" Min Depth in Concrete	EA	10.88	1.42	9.86

	Surcharge Group Description	Division -	Group - Item	Surcharge Item Description	UM	Install Unit Price $ / %	Demolition Unit Price $	Labor Unit Price $
▶	Modifier - Expansion	05020	2094	Expansion anchors, drill holes	%	10.00	0.00	10.00
	Modifier - Drill Holes In	05020	6001	Drill Holes In Wall, Add	%	12.50	0.00	12.50

The example figure shows a 10% surcharge of the 05020-2050 item of $7.18/ea. The item highlighted in the green grid is the parent item being used for the cost calculation. The

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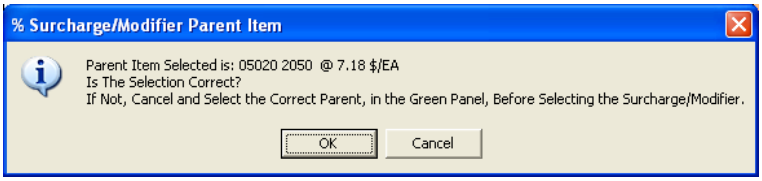
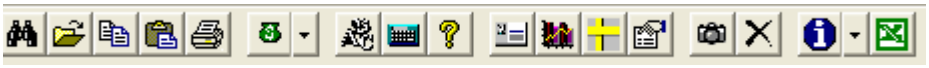
percentage shown as the install Unit Price $/% is an average component percentage. The actual pricing calculation is based on the individual component percentages.

When using a percentage base modifier / surcharge item, the user will be asked to confirm the choice of a parent item selection before the item is added to the estimate. The item currently selected in the green item grid serves as the parent of the surcharge item. The unit of measure shown in the estimate for the surcharge item is the same as the parent.



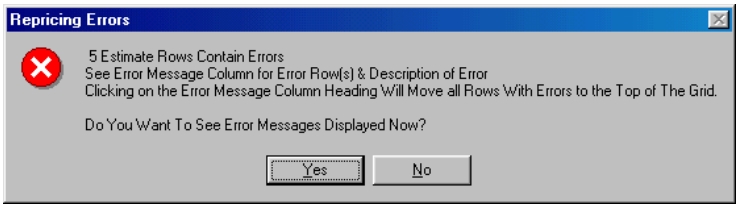
Estimate Toolbar



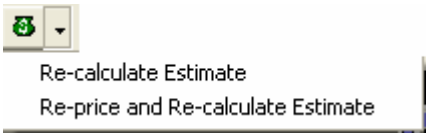
The estimate tool bar contains an assortment of tools for quick access to the programs features. From left to right, the icons allow the user to: a.) display the UPB search form, b.) open the second estimate, c.) copy and d.) paste information, e.) print reports , e.) calculate or re-price the cost of the estimate, f.) display the Windows Character map., g.) display Windows calculator, h.) display the help system, i.) change the view of information displayed, j.) display graphical information, k.) display the conversion factors, l.) display the preferences form, and m.) display item pictures, n.) delete row of estimate, o.) display estimate titles, p.) export to Excel®. Toolbar functions are discussed throughout this chapter. The user can hover the mouse over one of the toolbar icons and a tool tip will appear to explain function.

Calculating the Estimate

The cost estimate is automatically recalculated each time the user makes a change in the grid. The estimate's total price value can be calculated by; 1.) clicking on the money bag icon button located in the toolbar located below the estimate form's menu, 2.) using the 'File', 'Calculate and Re-Price Selection', 'Calculate Price' menu options within the menu system, or 3.) pressing the control +T key combination.



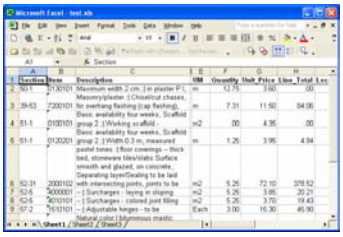
The 'File' menu system and the money bag's toolbar drop down menu now include the ability to re-price the estimate items. When ever the unit price book used changes, estimates must be re-priced so they reflect the current UPB pricing. This feature is useful when changing from one year's version of a unit price book to another. When ever summary items (ex. Sales tax) are in use, the estimate will recalculate on exit automatically.



Export to Excel® Spreadsheet

This toolbar feature will only work if the user has an installed copy of Microsoft's Excel® spreadsheet software.

Sheet one of the exported spreadsheet contains each row of the estimate. Sheet two contains the estimate summary statistics. The columns exported are the same as those displayed in the estimate grid and controlled by the preferences form.



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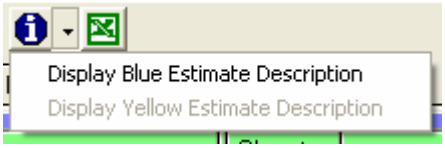
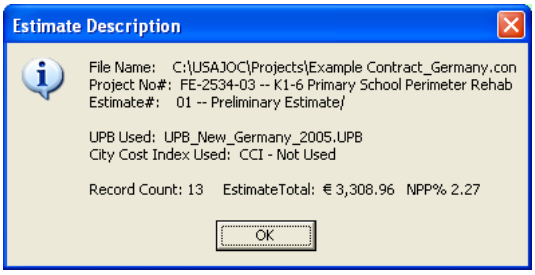
Estimate Details

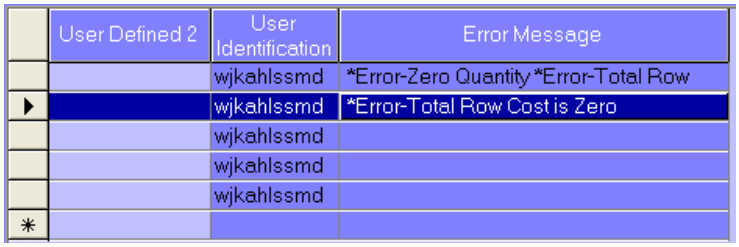


The estimate / proposal description message boxes are displayed by selecting the icon in the toolbar. The user can see the file name, project name, and estimate selected. The same information is available for the yellow grid when a second estimate / proposal is open.



The information is a collection of the selections made as the estimate was opened.

Calculation Errors

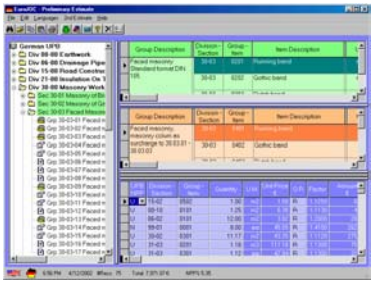


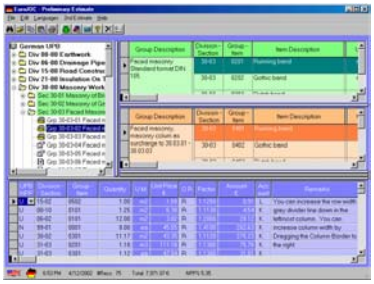
	User Defined 2	User Identification	Error Message
		wjkahlssmd	*Error-Zero Quantity *Error-Total Row
▶		wjkahlssmd	*Error-Total Row Cost is Zero
		wjkahlssmd	
		wjkahlssmd	
		wjkahlssmd	
*			

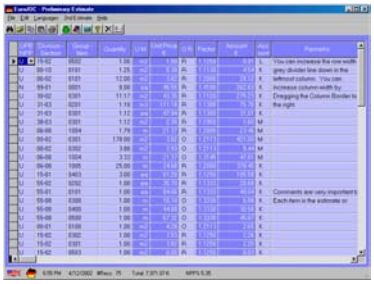
As the price calculation proceeds, a progress bar will be displayed in the status bar at the bottom of the form. When errors occur during the calculation, an error message will be placed in error message field for that row. To see all errors grouped together, move to the far right of the estimate grid and click on the 'Error Message' title heading. The estimate will be sorted and the error message(s) will be displayed in the 'Error Message' column in the right-most column of the estimate grid. When a calculation error occurs, the involved row of data will be ignored in the total estimate cost and the remainder of the cost estimate will be calculated properly.

When a row contains an error message, the message is also displayed in the task bar at the bottom edge of the estimate form. The number of errors encountered is displayed on the Main Form's Cost tab.

Selecting Estimate Window View







Four views of the estimate form are available. The views can be changed by clicking on the window state icon, as shown to the left, located in the toolbar. In view number one, the tree-view panel is full height. In view number two, the estimate grid is full width. In view number three the estimate grid occupies the entire area of the form. The fourth view is available by selecting the second tab. In addition to changing the view, the horizontal and vertical window pane bars can be moved as needed. The estimate form's window view and bar positions are saved each time the estimate form is closed. The settings are restored when the estimate form opens unless the form's preferences settings are turned off.

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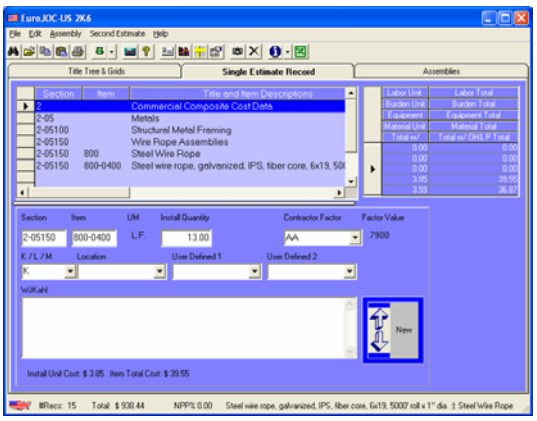
Single Estimate Record View

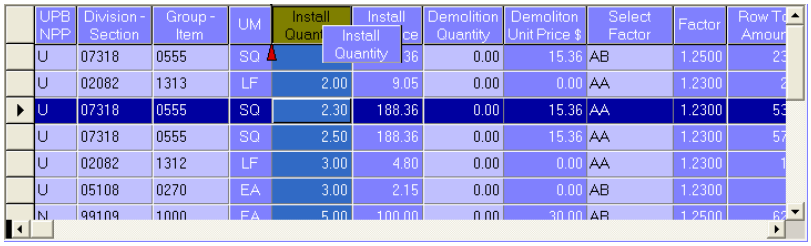
The single estimate record tab of the estimate form allow the user to see the values for an entire row without scrolling side to side. Component costs are shown in the small grid. Each level of related titles is displayed in the large grid. Items in the box at the bottom can be edited.



Navigate from row to row using the up and down arrow buttons.

Moving Grid Columns

The column order of most grids can be set by the user. To change the column order, using the mouse, click and drag the column heading down and to the right or left. Drag the column heading right or left to the new column position as indicated by the red arrows and release the mouse button.



	UPB NPP	Division - Section	Group - Item	UM	Install Quantity	Install ce	Demolition Quantity	Demoliton Unit Price $	Select Factor	Factor	Row Te Amoun
	U	07318	0555	SQ		36	0.00	15.36	AB	1.2500	23
	U	02082	1313	LF	2.00	9.05	0.00	0.00	AA	1.2300	2
▶	U	07318	0555	SQ	2.30	188.36	0.00	15.36	AA	1.2300	53
	U	07318	0555	SQ	2.50	188.36	0.00	15.36	AA	1.2300	57
	U	02082	1312	LF	3.00	4.80	0.00	0.00	AA	1.2300	1
	U	05108	0270	EA	3.00	2.15	0.00	0.00	AB	1.2300	
	N	99109	1000	EA	5.00	100.00	0.00	30.00	AB	1.2500	62

The user can select more than one column to move by clicking and moving the mouse horizontally to highlight the desired columns and then moving the mouse down off of the column heading row. The sort order of the grid may be affected by this change and can be reset later by clicking a column heading.

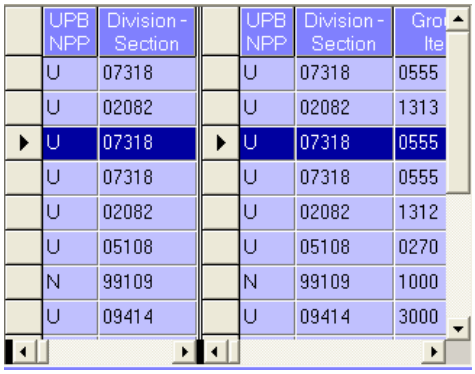
Grid Row Height and Column Width

The user has control over most grid row heights and column widths. Some column widths are fixed and cannot be changed. The row height and column width settings are stored between uses for the forms shown on the preferences form.

The row height can be changed by moving the cursor over the left-most grid column's horizontal line, the mouse cursor will change to an icon consisting of a horizontal line with up and down arrows. Click and drag the row line up or down to change the row height. The column width is changed by locating the mouse pointer on a vertical line between column headings. When the column width can be changed the cursor will change to a vertical bar with left and right arrows. Drag the vertical line right or left.

Splitting Grids

Splitting the grids is one method of locking columns from movement when horizontally scrolling. Splitting a grid creates one or more copies of the same grid. To split a grid the user can click the black square located to the left of the horizontal scroll bar's left button and drag the split open or closed. All grid splits and cells are fully functional for editing or adding data.



	UPB NPP	Division - Section		UPB NPP	Division - Section	Gro Ite
	U	07318		U	07318	0555
	U	02082		U	02082	1313
▶	U	07318	▶	U	07318	0555
	U	07318		U	07318	0555
	U	02082		U	02082	1312
	U	05108		U	05108	0270
	N	99109		N	99109	1000
	U	09414		U	09414	3000

By moving columns and splitting the grid, the user can see the columns in any manner needed.

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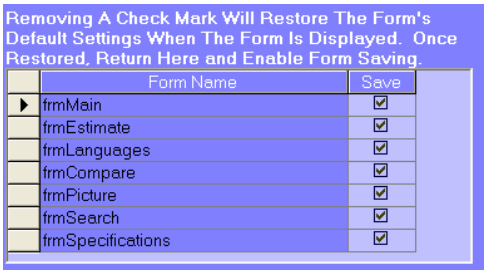
Saving Window Settings

The estimate form settings such as window state, bar arrangement, grid row height, grid column width, column locations, and splits are automatically saved each time the estimate is closed.

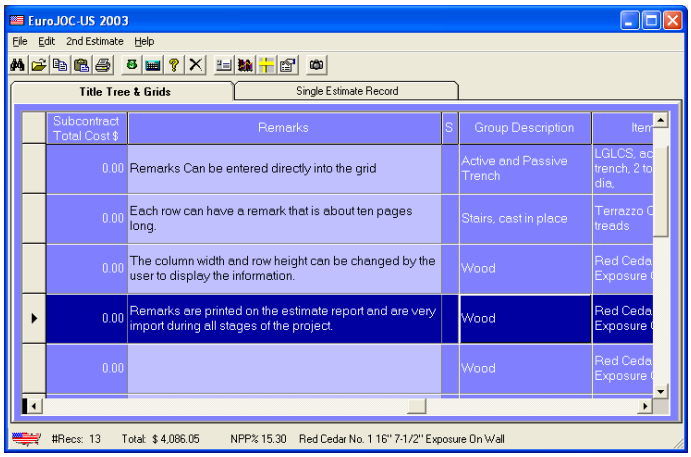
To restore the estimate form's default settings, close the estimate, open the preference form and select the preferences form's 'Save Form Settings'. Remove the estimate form's check mark within the grid and then reopen the estimate.

Return to the preference form and turn on the saving features after the default settings are restored.



Creating Remarks

The user can add estimate / proposal remarks for each cost item by entering the text into the 'Remarks' cell of the estimate or proposal grid. The remark cell's size can be increased by dragging the row's horizontal division line down (within the left-most column) or dragging the column's division line to the right (within the grid's heading). A remark can contain approximately 32,000 characters.



Estimators should be encouraged to heavily document their estimate takeoff rows with remarks or comments. During the negotiation the notes can explain where the quantities were derived. It is also possible to use the location, user1, and user2 fields to document takeoff. During the construction and inspection phases the notes can explain the assumptions made and agreements made prior to starting the project. ***The remarks have value to all concerned parties and are as important as the quantity and cost item numbers.***

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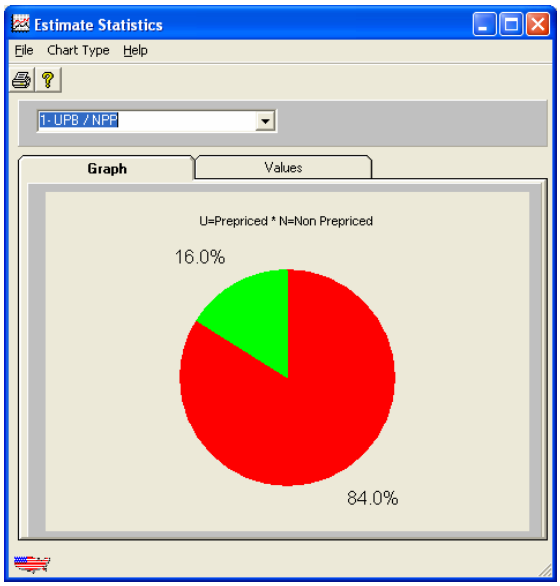
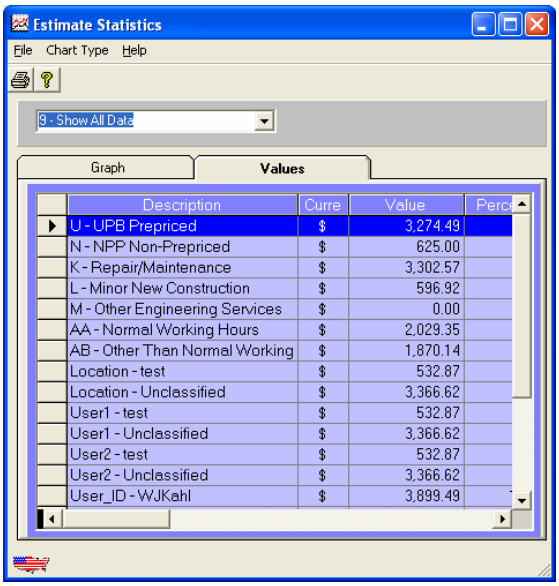
Estimate Statistics/Graphics

The statistics form allows the user to quickly view the estimates ratios in eight manners. 1.) Pre-priced vs. Non Pre-priced, 2.) K, L, M breakdown, 3.) Calculation Method, 4.) Location, 5.) User1

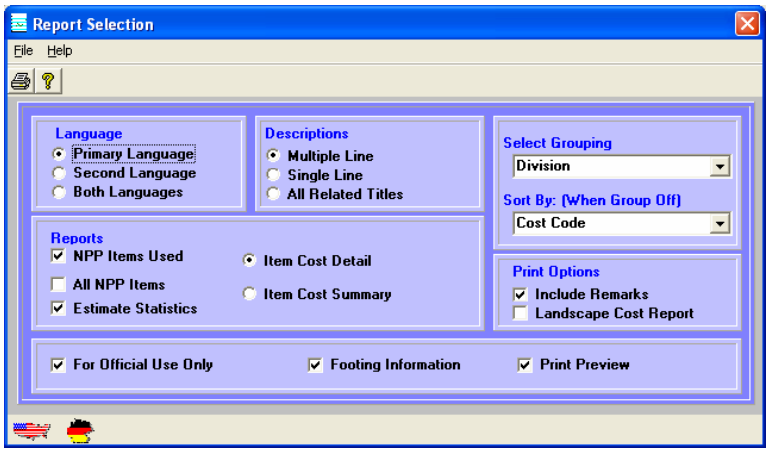




Coding, 6.) User2 Coding, 7) User Name, and 8.) Cost by Division. To change the ratio shown, select the desired ratio in the drop down box. The actual cost values used in preparing the graphic are displayed on the values tab of the form. One use of this form is to get the current division totals without printing the estimate summary report. The form can also be used to check the data input for the wrong values. The typical estimate will use a single K/L/M, Coefficient(US) or O/R(Germany) value. Additional chart types are available within the menu system.

Printing Estimates / Proposals

To print reports, click on the printer icon located in the toolbar of the estimate form or use the menu system. The program will display the form shown below. The user can select the printing of three different reports; NPP Items, Estimate Statistics, and the format of the Estimate.



The user can select what languages are printed, short or long title descriptions. Cost item grouping has been added and the sort order function has been changed for this version of EuroJOC. Selecting the 'All Related Titles' will print each level of related item titles.

The user can also choose whether or not to print the remarks for each item. By clicking on the printer icon in the tool bar, the reports are displayed on screen for a preview. The report can then be printed on paper by clicking the printer icon located at the top of the preview windows.

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The data can also be exported to a disk file in many data formats using the envelope icon at the top of the report viewing window. The topic of printing and using the report preview window will be discussed further in chapter five.

Pictures

The estimate form's picture button will display pictures related to the UPB items. Whenever an item has a picture it will be displayed in the picture form. There are not currently many pictures in the database. The number of pictures will increase with time. The picture form is re-sizeable by dragging edges or corners.

Backing Up and Restoring Data Bases

Losing data is not a matter of "if", but "when". Part of running a professional information technology (IT) operation is planning for data disaster. The most common cause of data loss is user error or equipment failure. The Windows operating system includes backup and restore routines. Data backups are very important to the successful use of any program. The Windows routines include compression capability to shrink the backup's file size. Use the Windows help system to get more information about installing and then using backup and restore.

We suggest using a backup system consisting of a CDROM burning device. At 50 cents (US) per disk, the media is inexpensive and the process of burning 640 megabytes of information takes fifteen minutes or less. Take responsibility for protecting your data. You will never regret having a recent backup when disaster strikes.

You should make a backup schedule up and remain committed to this process.
The backups should be stored offsite so that fire or other local events make both the system and backups unusable. The offsite storage should also be convenient for retrieval. Our practice is to make backups every Friday afternoon on CDROM. Fireproof safes are not a good place to store plastic CDROMs. Backup CDROMs should be stored offsite in multiple locations.

Recent articles have discussed the limited life expectancy of CDROM media. CDROMs were once thought to be a very stable storage media. It has been determined recently that delamination of the silver foil from the plastic allows air and water to pit the metal surface. The delaminating is thought to be caused by large temperature swings.

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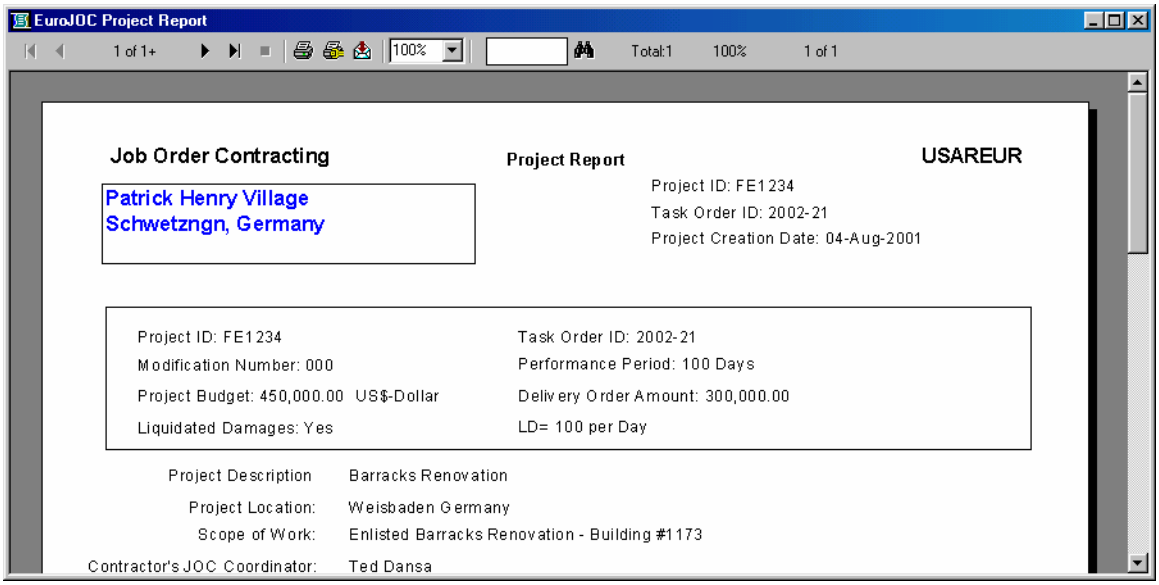
Chapter 5 - Printing Reports

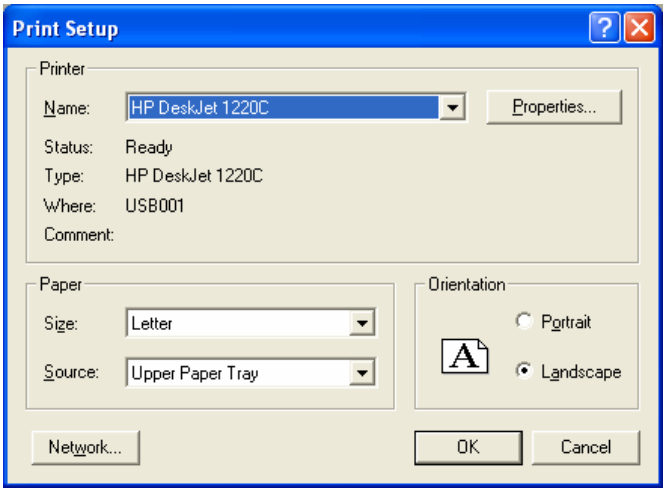
Reports Print Preview

Within EuroJOC, different reports are printed depending on the form displayed and tab selected. The project report, shown below, is created by clicking on the print icon when the 'General Information' or 'SOW & Funding tabs are selected on the main form. All of the EuroJOC reports are displayed in a print preview window before printing occurs. The top of the print preview form has several control buttons that mimic video tape recorder (VCR) controls for moving from page to page within multiple page reports. There are also icons for selecting the printer, starting the printer and exporting the results to a file.



The drop-down list box control changes the preview magnification. The white text box works together with the search icon (binoculars) to search the document for a word or phrase. The X control button in the top right corner will close the preview window without printing anything. The other control buttons maximize and minimize the view within the users display. The horizontal and vertical scroll bars located at the right and bottom edges of the form allow viewing when the magnification is set larger than the screens width.

Clicking on the printer setup icon (printer with a small yellow wrench) will display the printer setup form and allow the user to select the printer to be used and the properties of the printer. The 'Print Setup' form changes in each windows version and printer used. Changing the print orientation within the 'Print Setup' dialog will not change EuroJOC printed report as the orientation is pre-set by the report designer.



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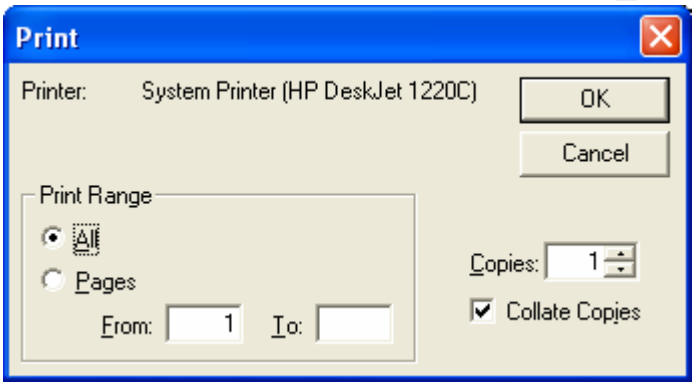
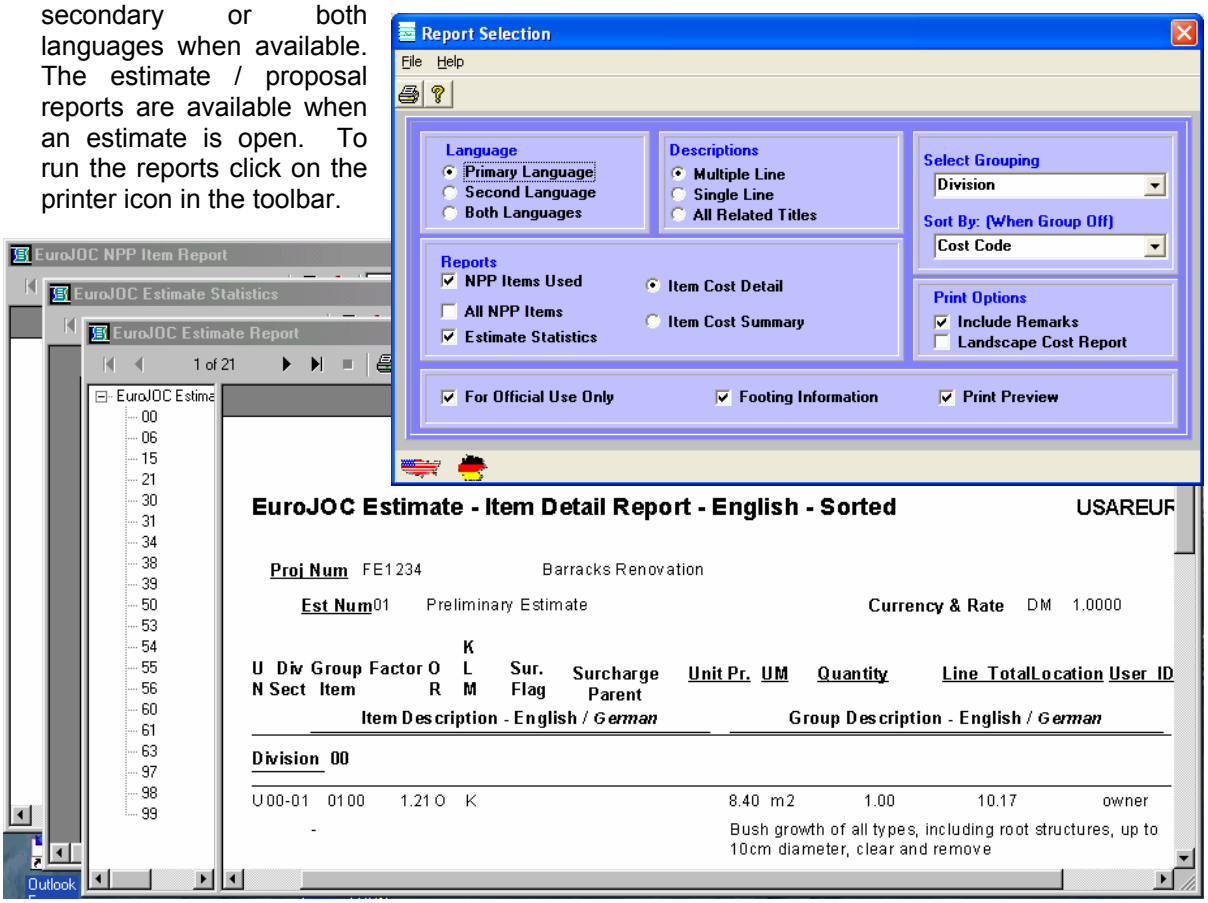


Clicking the printer icon button at the top of the preview form closes the preview form and starts the printing process. The 'Print' form is shown allowing page selection. Using this form, the entire report or individual pages can be printed. Multiple copies and collated copies can be selected. This print form varies with each printer and features allowed by the printer.

Some EuroJOC reports are designed for the owner's in-house use and contain the "For Official Use Only" phrase. When confidential budget or funding information appears in the report the phrase appears. Reports that can be given to the contractor do not contain this phrase. For example; the request for proposal is normally a report given to the contractor.

Estimate / Proposal Report

There are several versions of the estimate / proposal cost report based on the settings of the 'Report Selection' form. Three different sections of the report are displayed in separate preview windows. The NPP report is only displayed when non pre-priced items exist within the project. The report can be printed grouped in several manners or sorted by several choices by using the drop down selection boxes available on the form. The reports can be printed in primary, secondary or both languages when available. The estimate / proposal reports are available when an estimate is open. To run the reports click on the printer icon in the toolbar.



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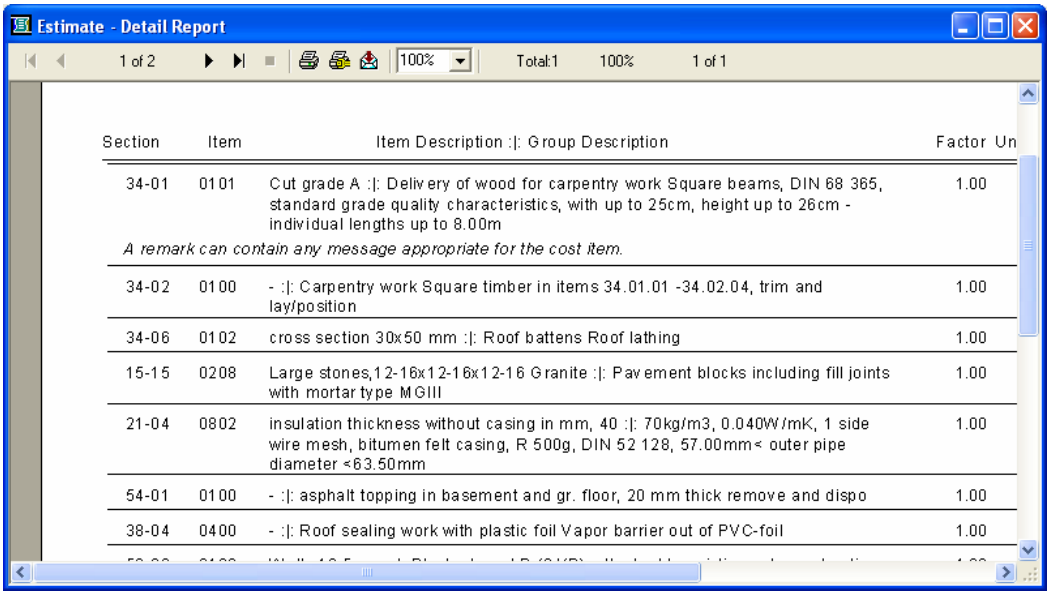
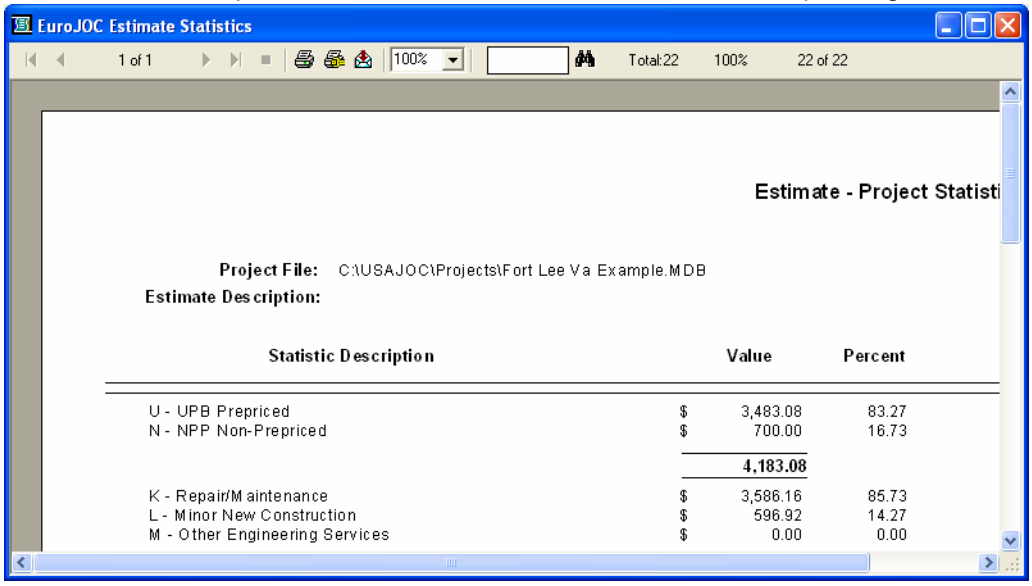
Estimate Detail Cost Report

Four versions of the Item Detail Report are available depending on the grouping selected. The report can be grouped in by several selections. Group subtotals are included at the end of each grouping. By turning grouping off, the estimate detail report can be sorted by; 1.) Section/Item Code, 2.) Location column, 3.) User1 column, and 4.) User2 column. 5.) Entry Order. The last selection allows the user to print the report in the same order the data was entered. It is useful when double checking to make sure all the data has been keypunched.



Estimate Statistics Report

The next figure represents the estimate statistics report. The report contains the same data provided in the graphical representations available on-screen. The report contains a listing of sub totals by division. This report can be skipped by removing the check in the 'Estimate Stats' checkbox on the 'Report Selection' form. You can also use Excel Export to get this information.



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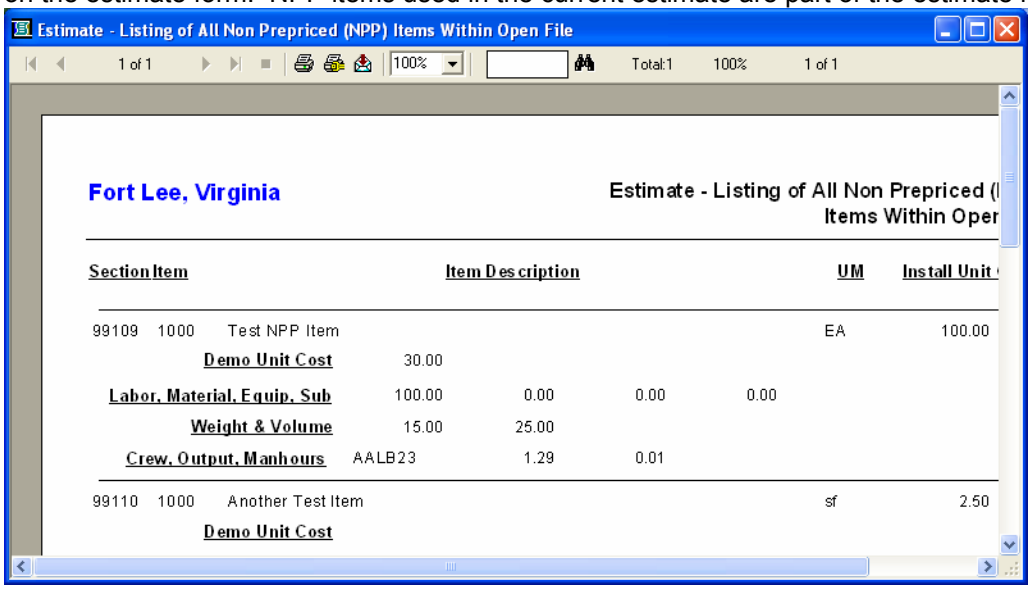
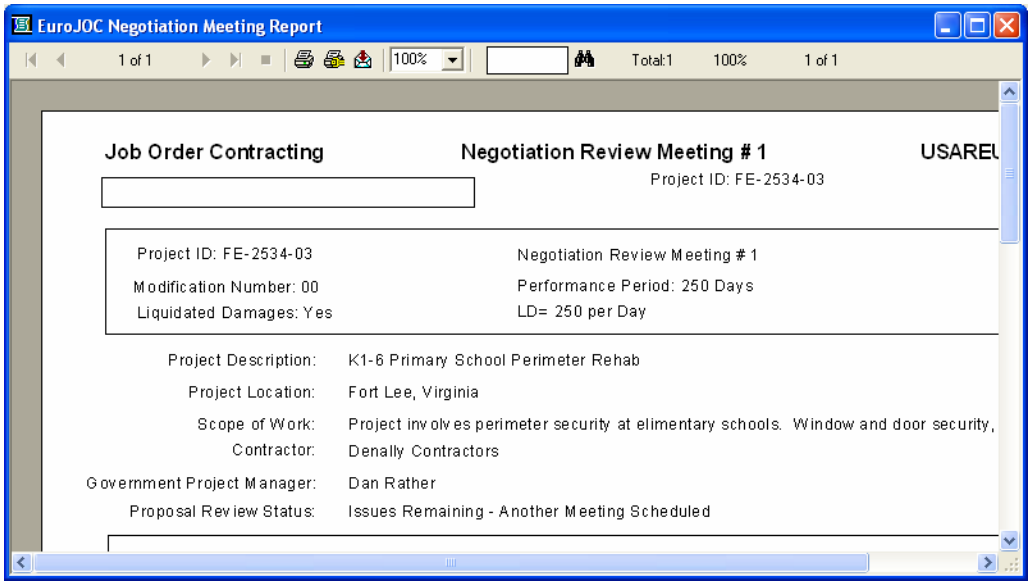
Non Pre-priced Item Report

The NPP report is displayed whenever non pre-priced items are used within the estimate or proposal being printed. The NPP item report displays the entire list of NPP items that are available within the current project file. NPP items are created and used from the red NPP grid on the estimate form. NPP items used in the current estimate are part of the estimate report.



Negotiation Meeting Report

The negotiation meeting details can be printed by selecting the 'Negotiation Meeting' tab on the main form. Click on the printer icon in the toolbar or use the 'File' menu system. Multiple negotiation meetings can exist for each project. Select the negotiation meeting to be printed using the left and right arrow VCR buttons in the main form's toolbar.



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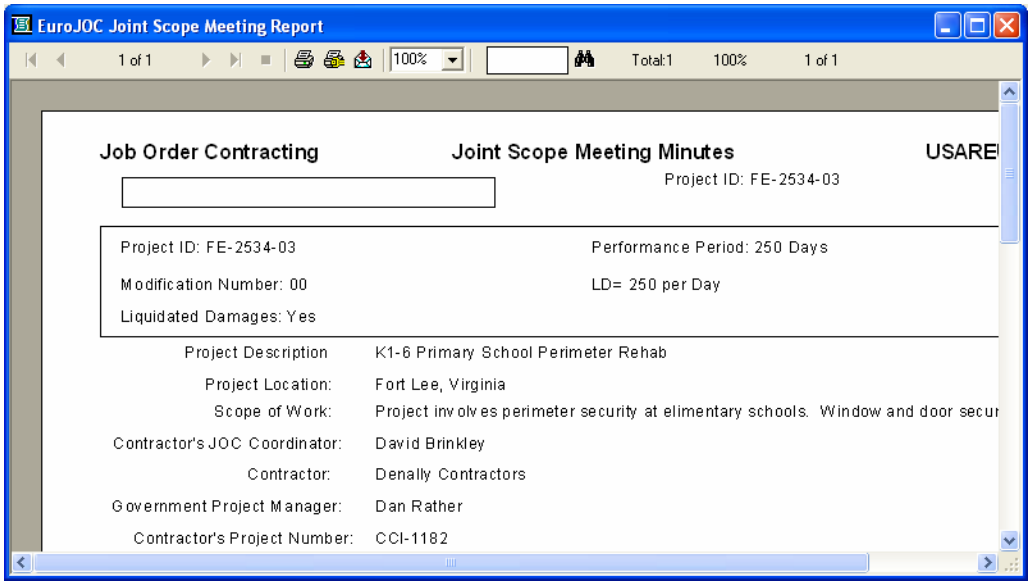
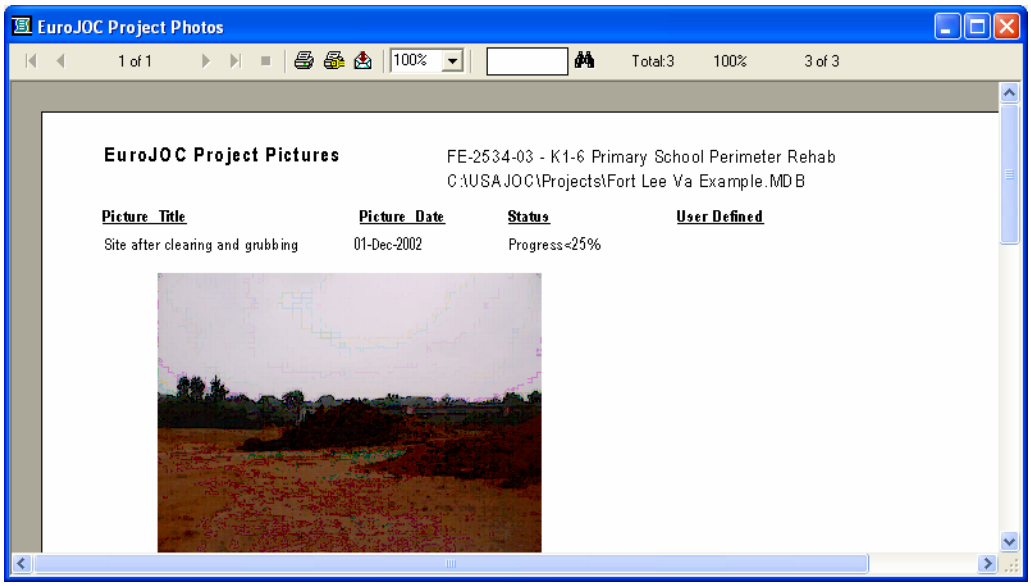
Project Joint Scope Meeting Report

The projects joint scope meeting minutes can be printed by selecting the 'Joint Scope Meeting' tab on the main form.



Project Pictures Report

All of the pictures stored for the project can be printed on a report listing the title, date, status and a user notes field. Select the 'Picture' tab and the printer icon to create the report.



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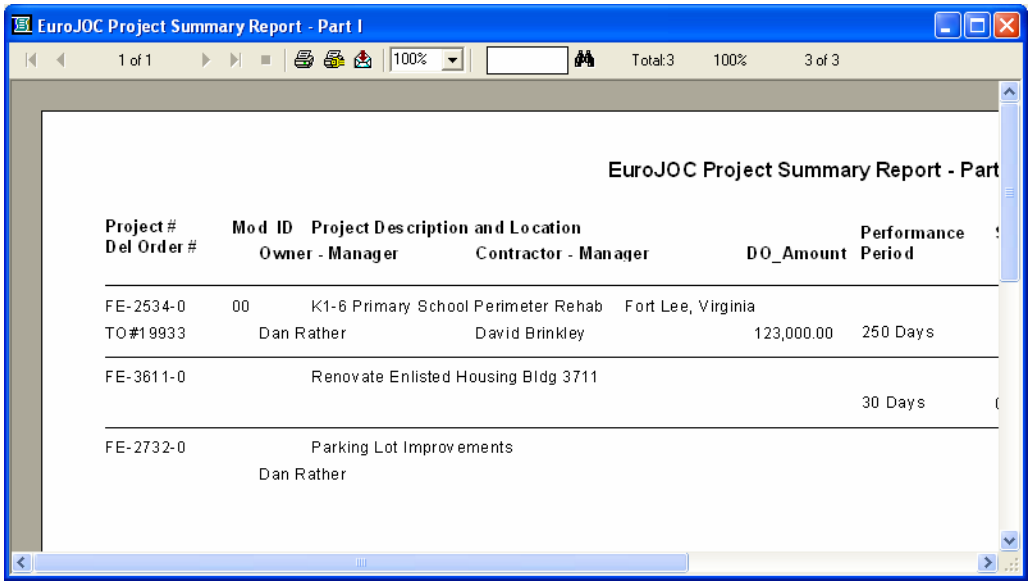
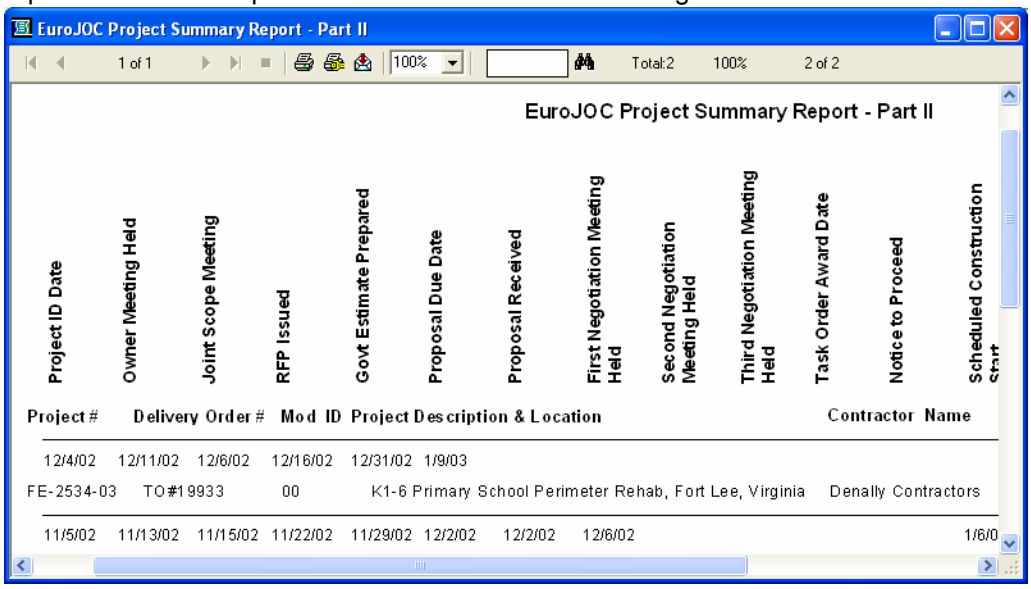
Project Status Report – Part I

A listing of all project contained within the currently opened contract file can be obtained by selecting the 'Project' tab and then the print icon. The first part of the report contains budgetary items and other general management informational items as shown below.



Project Status Report – Part II

The second part of the project status report lists the dates for each project as set on the 'Status' tab of the main form. Only the date categories furnished with the software are shown on this report. The status report includes user created date categories.



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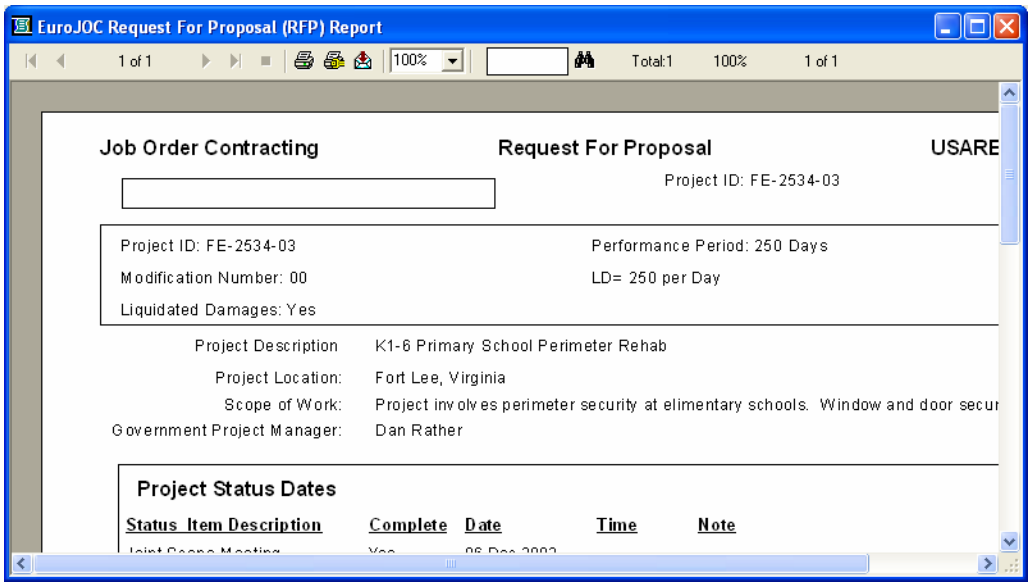
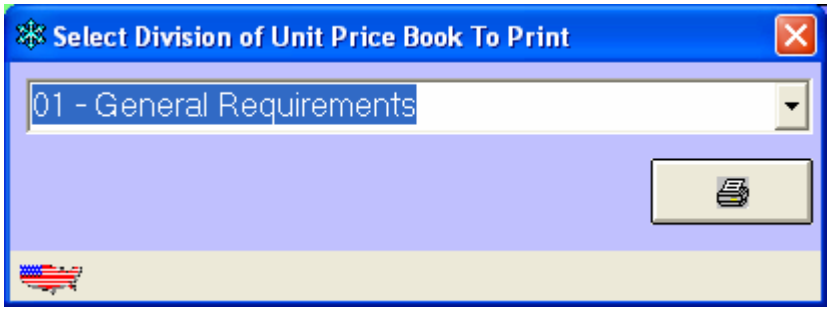
Request for Proposal

Shown below is the contractor request for proposal report. The report is designed to be furnished to the contractor after the joint-scope meeting to enable the contractor to have all the information needed to prepare the proposal for the project. The report does not contain any confidential information. Be sure to include the date that the proposal is due, performance period and liquidated damage rate if any.

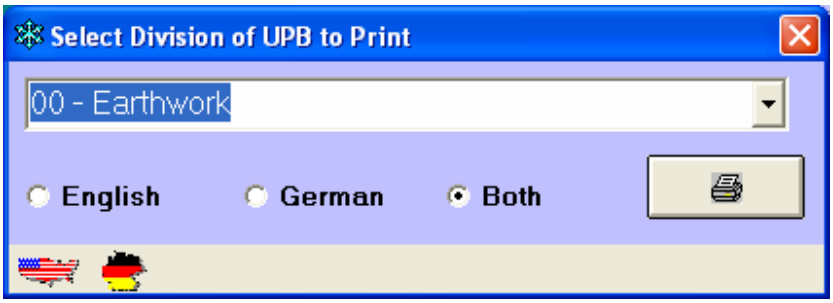


Printing the Unit Price Book

The ability to print of the unit price book may be restricted by the publisher of the UPB data. When available, a single division of the Unit Price Book can be printed with the form shown below. When the dual language checkbox is selected on the UPB details tab of the UPB editor, the second version of the division selection form is displayed. The dual language version of the division selection form allows either language or both to be printed on the report.



To print the UPB/SSR data, open the UPB editor and use the print icon or menu option. See chapters three and seven for further discussion of the UPB editor form. An example of the UPB printout is displayed on the next page.



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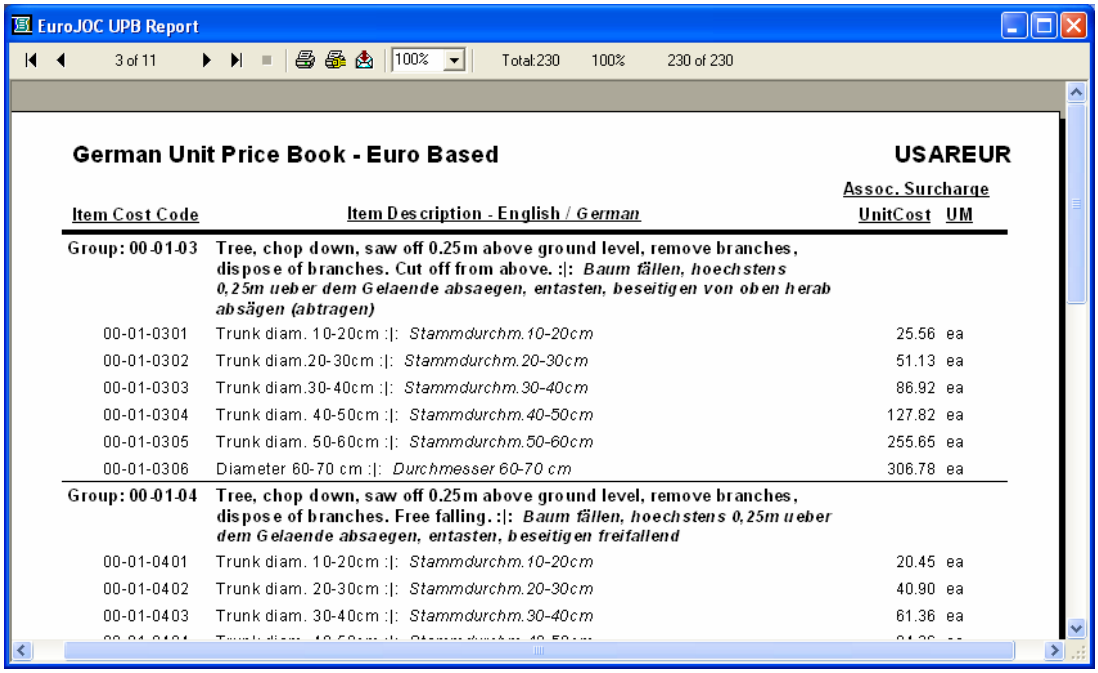
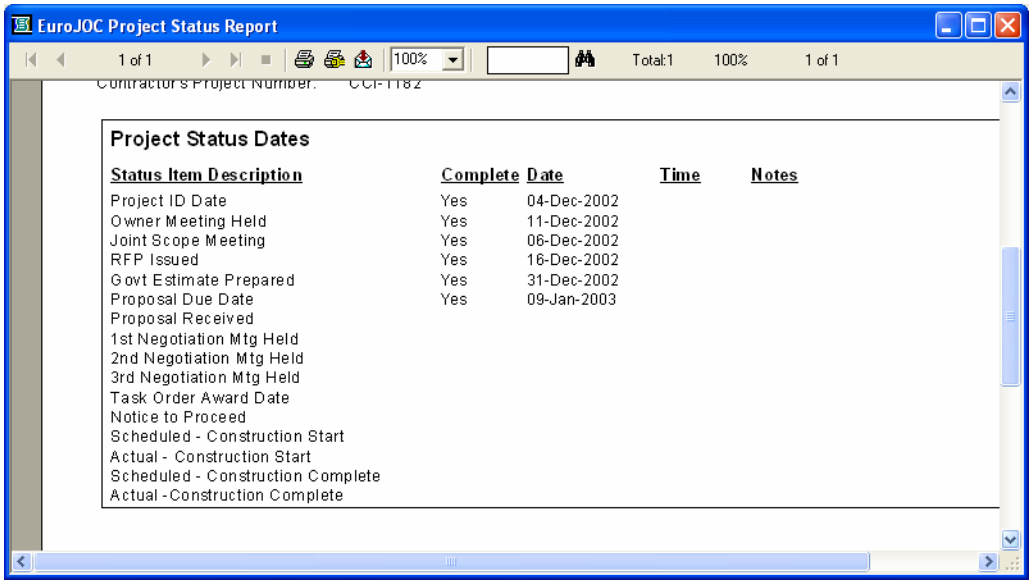
The UPB printed report details each item grouped together with the related titles. There are several versions of this report depending on the country and data available. For instance the component cost and crew data information is not available in Germany. There is also a contractor version of the USA Unit Price Book report.



Project Status Date Report

In addition to the status report that prints all of the projects, there is a report that prints the status dates of the selected project. The report is designed without financial information for general distribution. To print this report, click on the 'Project Status' tab and then click on the printer icon in the tool bar. All user added status items are printed in this report.



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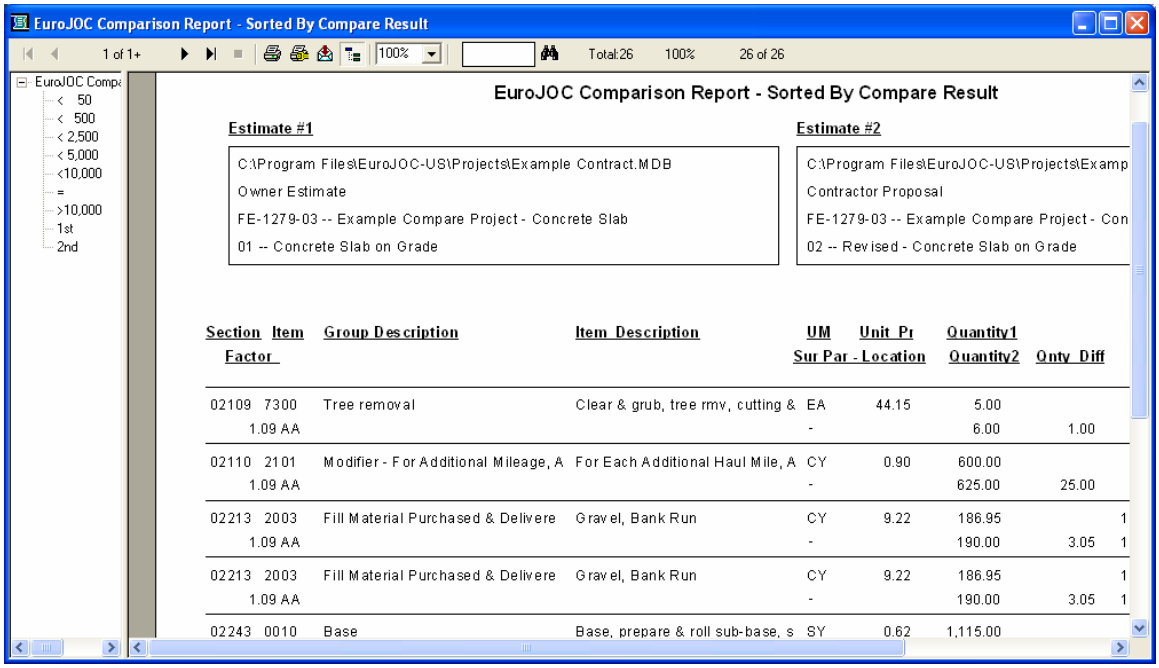
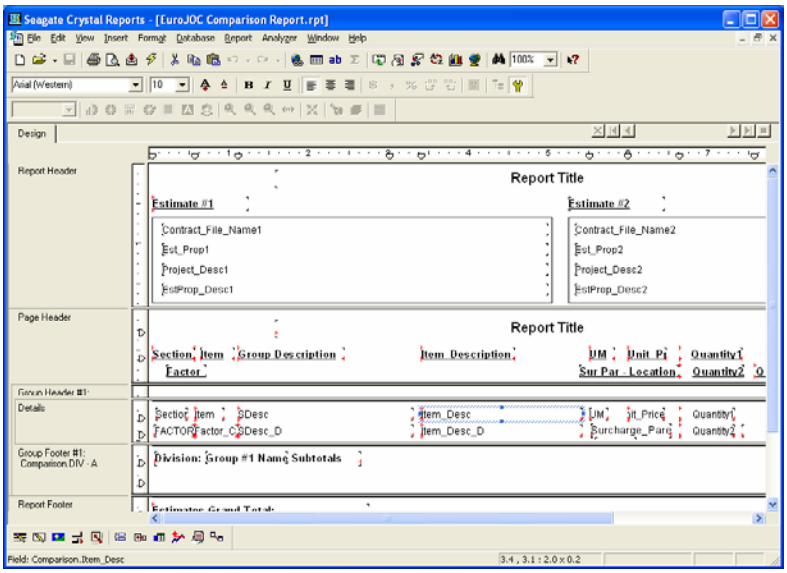
Estimate Comparison Report

The comparison report is available from within the compare form. Two estimates or proposals are selected and the comparison run before the report is available. There are two versions of this report depending on the order selected. See chapter eight for more detailed information about creating and using this report.



Report Modifications

All of the EuroJOC reports are written using Crystal Decision's product; Crystal Reports 8.0. Crystal Reports is one of the best report writers available. Many IT personnel have been trained to use crystal. Using this product it is possible to make minor report modifications as needed. This would include formatting changes and adding graphics to report headings.



EuroJOC was designed to make many reporting capabilities selectable from within the software. We have included a report for almost every need and many of the reports can be changed with program the user settings.

Other reports can be created using Crystal Reports or by contacting CorVet Systems. If you have a need, it is quite possible other installations have similar needs. We will cooperate to make it possible for you to get the results you need. As a

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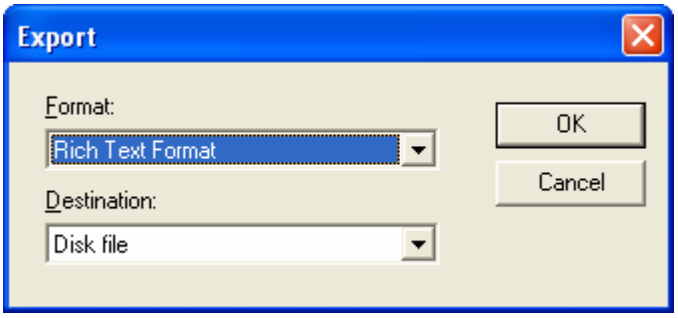
general rule, if we develop a useful report for one installation, it will be included in the next release of the software for everyone. The more complex reports within EuroJOC are created together with programming to develop the necessary data and structure and using crystal to format the results.

Crystal Reports® is not provided with EuroJOC but is available in the commercial market. Additional purchasing contact information is provided in the Appendix.

Exporting Reports to a Word Processor

It is possible using the export button (open envelope icon) located at the top of any print preview screen to export any EuroJOC report data into a word processor for minor corrections or additions. Using the 'Rich Text Format' seems to work better than the 'DOC' format for exporting to Microsoft Word. It is also possible to export the data in text format and spreadsheet formats. EuroJOC data is stored the standard Microsoft Access® database format.



If you need specific data it is possible to import the data directly from the Access® database file. Keep in mind that you can create a blank contract file and import only the project and estimates you are interested in. The newly created Access® file will only contain the information in which you are interested.

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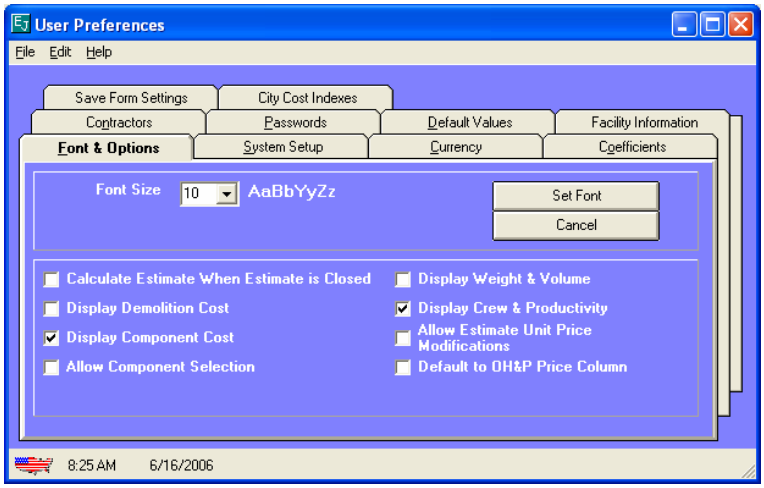
Chapter 6 – Preference, Specification & Language Forms

The preferences form combines most program settings used throughout EuroJOC for the estimates, proposals, and project information. The language form controls the text displayed on the controls throughout EuroJOC as the language selection changes. Access to the preference and language forms is available from the main and estimate forms. Each tab on the preference form will be discussed next.

Font & Options Tab

The 'Font & Options' tab of the Preferences form controls the size of font displayed in the grids and many of EuroJOC's controls. When used together with the standard Windows® display settings the user can change the display to larger, more readable font sizes. To access the Windows® display settings, right click on a blank area of the desktop and select 'Properties' from the menu. The 'appearance' tab has a drop down box where the font size can be specified for all programs.



Most of the preference options affect which columns are displayed on the estimate form. The options can affect how the estimate is calculated. Options are explained individually;

1.) 'Calculate Estimate When Estimate is Closed' – it is no longer necessary to recalculate the estimate before closing due to the new dynamic calculation method. The setting remains for the people who prefer this option.
2.) * 'Display Demolition Cost' – some databases have demolition unit prices, selecting this option displays the unit price and a column for entering the demolition quantity.
3.) * 'Display Component Cost' – Some databases have labor, material, equipment and subcontractor component unit prices available. This option should be enable when the user wants to see this pricing data on the estimate form. Disabling this option does not affect pricing.
4.) 'Allow Component Selection' – This option should only be enabled (checked) when the contract allows for selection of individual unit price components. This option could allow the estimator to exclude the material cost for a government furnished item. When enabled the estimate grid will have a check box column for each component. Generally this option should remain disabled. This option can affect how the estimate is calculated.
5.) 'Display Weight & Volume' – it is possible for the unit price book to contain weight and volume information for cost items. When weight and volume data exists, EuroJOC will calculate weight and volume totals for shipping cost calculations.
6.) * 'Display Crew and Productivity' – When unit price book data includes this information the user can enable this setting and the data will appear in the estimate grid.

* Recommended On Settings for US Usage, All Options Off recommended for German use

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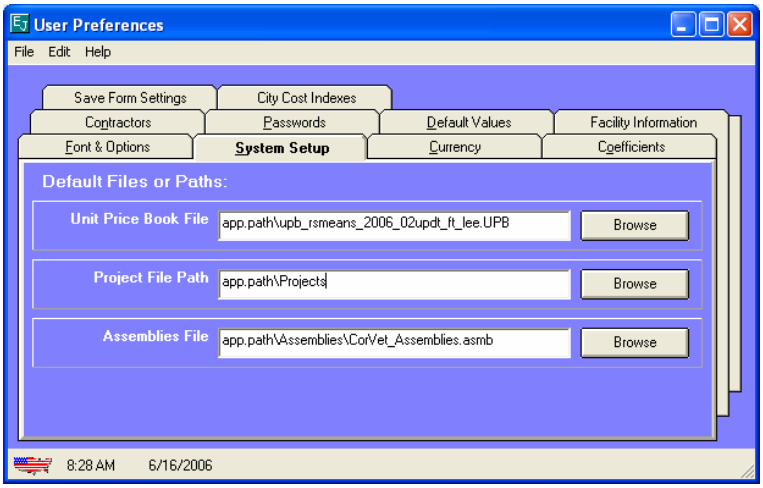
System Setup Tab

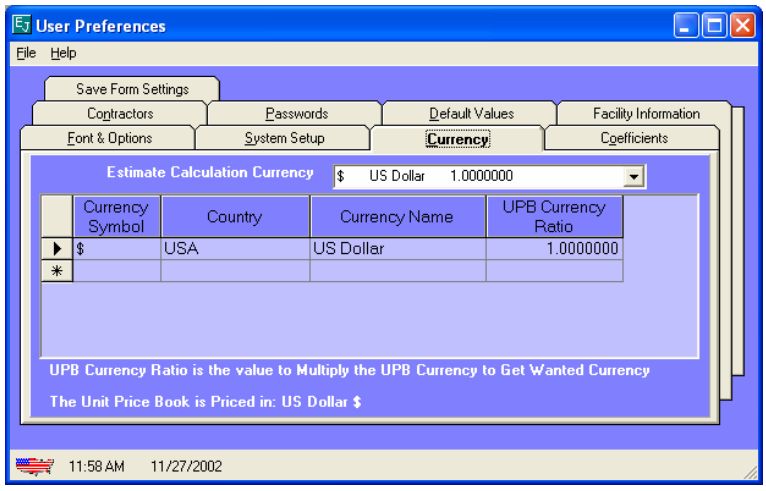


The system setup tab on the preferences form establishes the location the program uses to find projects and the unit price book data files.

The unit price book file must be specified for each contract file. The project path may remain empty and the default path will be used. The project file path is used by the file dialog form as the starting point for the files to be displayed. The default path is App.path\projects which indicates the use of the directory in which the software was installed. It is possible to select a network drive as the path for ***shared projects*** and UPB files. The UPB and project path browse buttons both open a file dialog form for selecting the file or directory. When a unit price book is selected with a different currency base, the currency tab on the preferences form needs to be updated and a message will be displayed. The 'Assemblies File' selection allows the user to switch to different assembly collections used on the estimate form.

Currency Tab

The UPB or SSR data unit price data is priced in a single currency. To allow the user to calculate the estimate totals in other currencies this grid is used. The currency ratio column contains the multiplication value needed to convert the UPB currency to another required currency. ***As a minimum, the currency grid should contain a row for the UPB currency and 1.00 for the currency ratio.*** The calculation currency should then be set to the UPB currency in the drop down selection box located above the currency grid.



Currency exchange rates fluctuate daily on world markets, JOC contract exchange rates and the payment currency are normally specified by contract. If this rate were allowed to fluctuate, the exchange rate would have significant impact on project real cost. The currency exchange rate and the currency that the contractor is to be paid are specified by the contract. Usually a mechanism is used to lock the currency fluctuations by specifying specific currency market and date of value to be used. This mechanism may be adjusted periodically, as specified by contract, to lessen the uncertainty of currency fluctuation. By removing currency uncertainty, lower contractor coefficients are expected at bid. When currency conversion values are added to this grid, they always have to be in relation to the UPB currency. In case an estimator might feel

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more comfortable reviewing cost in a familiar currency. It is possible to add a currency, without affecting the contract, as long as reports are printed and submitted using the required currency.

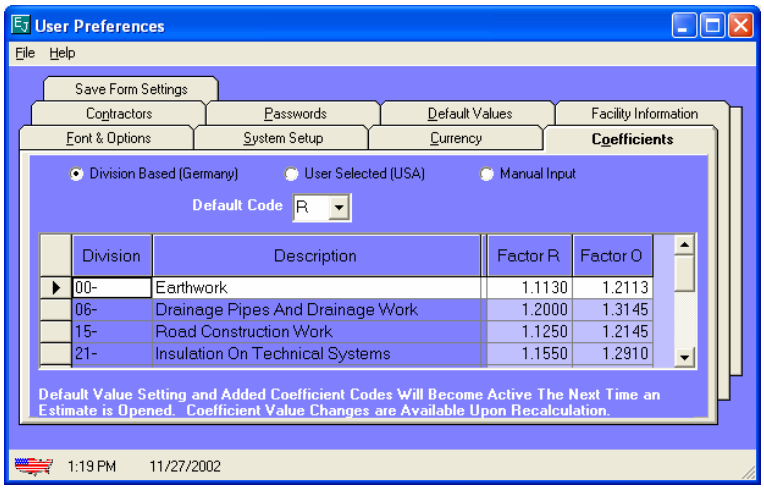
A simplified cost formula example showing the use of this ratio follows:

Quantity x UPB Price x Contractor Coeff x Currency Ratio x City Index = Cost in New Currency.
1000 SF x $1.50/SF x 1.25 Coeff x 0.95 € / $ x 0.8812 = 1,781.25 €

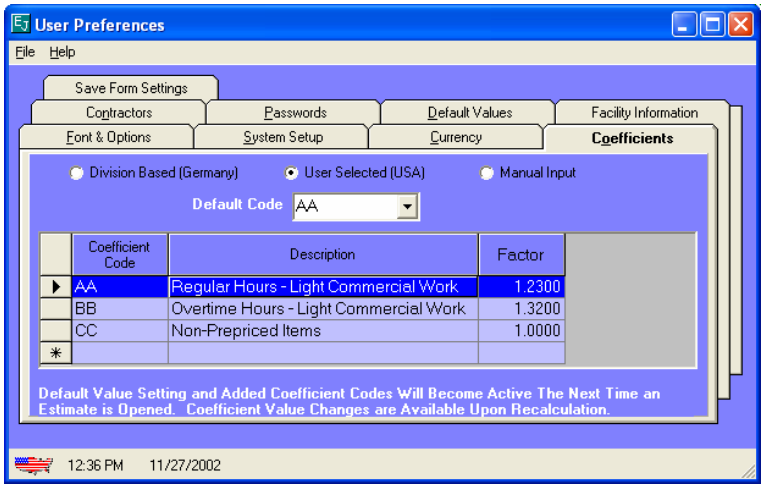
When the UPB file selection changes, the currency table needs to be updated to reflect a change in the UPB's currency. New currencies and ratios are added on the bottom row of the currency grid. The dropdown box above the currency grid selects the currency used during cost calculations.

Coefficients Tab

The Coefficients tab has been substantially enhanced with the addition of two calculation methods. The first new method added is the USA standard and the second is a manual calculation method. In Germany contractors provide two coefficients for each division of the UPB/SSR database. The left coefficient column is for work done during regular work hours and the right column is for work completed in hours other than normal working hours. There are twenty-six divisions in the UPB/SSR for a total of fifty-two coefficients. When a cost item is selected in the estimate, the coefficient is determined based on the items section number and the default O/R code selected. The Germany method's grid does not allow the user to change division numbers or descriptions as the information is derived from the UPB/SSR database. In Germany NPP the item unit cost contain all markups and a coefficient value of 1.00 is used.



In the United States the contractor's coefficient table is not nearly as standardized as Germany. The coefficients are based on the needs of the installation procuring task order services and prior experience. For example, when the contract solicitation covers a wide area such as the state of California, there might be two coefficients for each installation covered by the contract. A contract used on a single large installation might have four or five coefficients.



US coefficient codes can be up to ten characters in length. EuroJOC allows for an unlimited number of coefficient rows. When a new estimate row is created the

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default coefficient code is applied and the user can override the selection as necessary on a row by row basis.

One area of significant concern when using the US calculation method is how Non Pre-priced items are handled. An NPP coefficient could be part of the RFP or the coefficient could be 1.000 and the overhead costs negotiated as part of the unit cost.

The third 'Manual Input' calculation method allows the user to enter any value for each row in the estimate. This method could be used for preparing estimates outside the restrictions of a task order contract.

As a practical matter, the calculation method does not change during the life of a JOC contract. The contractor coefficient values change periodically as allowed by contract. Changing the calculation method does not eliminate the factors used by the last method. The estimate stores all three and displays the proper data based on the calculation method selected. A new contract file should be created anytime the coefficients change. US coefficient factor rows should not be deleted as more than one estimate or proposal may rely on that factor.

The coefficients tab has utilities on the 'File' menu that allow the user to import the coefficient tables from other contract files. This saves time in re-creating this data. The coefficient import operation can be completed at any stage, but the estimates will have to be viewed and recalculated for the new coefficients to be incorporated into the cost.

The German division descriptions can be updated to use the current Unit Price Book by using the update descriptions option on the file menu. This function is enabled when the division based calculation method is active. The Contract_File_Template.MDB file located in the system_files subdirectory can be opened and edited to establish default coefficient tables.

The default coefficient code drop down box displays a list of the US coefficients when the US calculation method is selected. The 'O/R' selection is displayed when the Division Based (German) calculation method is selected. The O/R default value represents Overtime or Regular time. Generally this value should remain as 'R' unless a project requires the use of overtime to complete parts of the project. The default values are used when each estimate record is created.

Cost Formulas

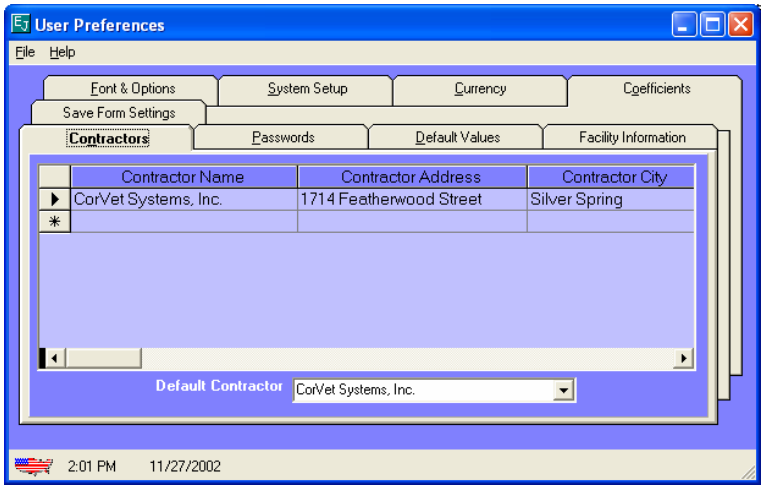
Total Cost of Row = Quantity * Unit Price * Contr. Coefficient * Currency Factor * City Cost Index (CCI)

Total Cost of Modifier / Surcharge % Row = Quantity * Parent Unit Price * Surcharge % * Contr. Coefficient * Currency Factor*CCI (individual component prices are multiplied by individual percentages and summed)

Contractors Tab

The contractors tab allows for the creation and storage of address and contact information for contractors, subcontractors and other personnel involved in the project.

To create a new record, enter the information on the bottom row of the grid. Use the horizontal scroll bar to move right and left within the grid.



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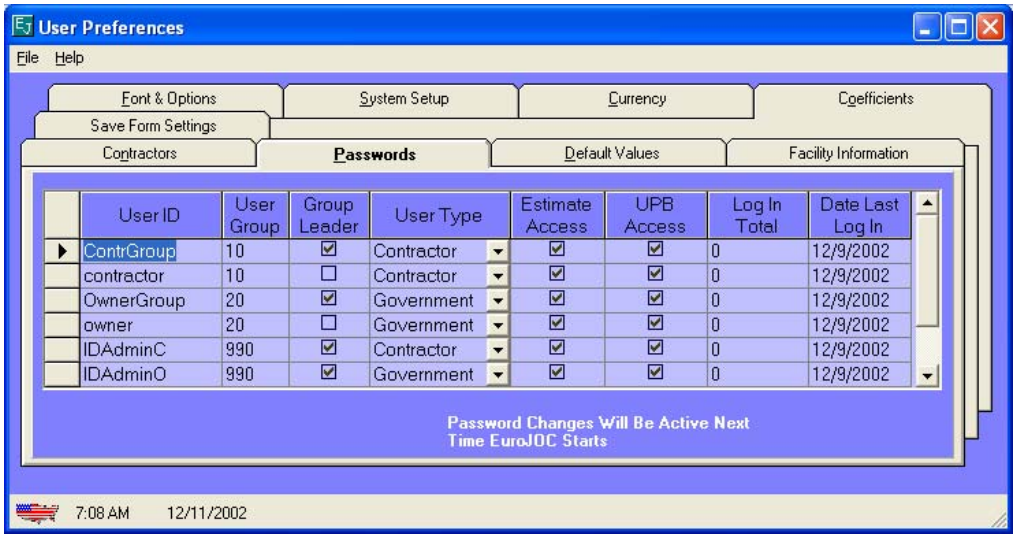
Users & Passwords

The 'Passwords' tab of the preferences form contains encrypted User Name and associated passwords. A user is allowed to change their own user name and password or view their user name settings. All passwords are case sensitive. Group leaders are allowed to create new user Identification names and change settings of users within their groups. The group administrator is able to view individual passwords within their group. ***A user should not use a password that will affect personal security or that of other classified systems.***

User name administrators (group-999) are allowed to create new user groups. User group codes should be values less than 900. When creating a user name, the new user should be placed within the user group desired. The figure below represents a system wide user name



administrator User Name being used to access the system. The passwords were hidden manually. Contractors are prevented from creating owner user names. By default new user names are granted estimate and UPB access. UPB access does not include capability to modify the UPB data. User Group Codes greater than 900 are allowed UPB modification privileges. User name administrators (>900) can see all user name and password entries.

To access the password information, when the password tab is selected, the current user's password must be re-entered. This feature protects the information from someone walking up while you are away from your desk with EuroJOC open.

Default User IDs and passwords are given to get the user started and enough information to create one user group. Other passwords will be supplied on a need to know basis.

	User Type	Default User Name	Default Password
a.	Government	Owner1	admin
b.	Government	OwnerGroup	admin
c.	Contractor	Contractror1	admin
d.	Contractor	ContrGroup	admin

A separate data-base tracks the User ID, login time and total number of program uses by each user ID. It should be noted that government estimates are not encrypted with EuroJOC. A user with a sufficient programming skill can access the estimate information without using the EuroJOC program.

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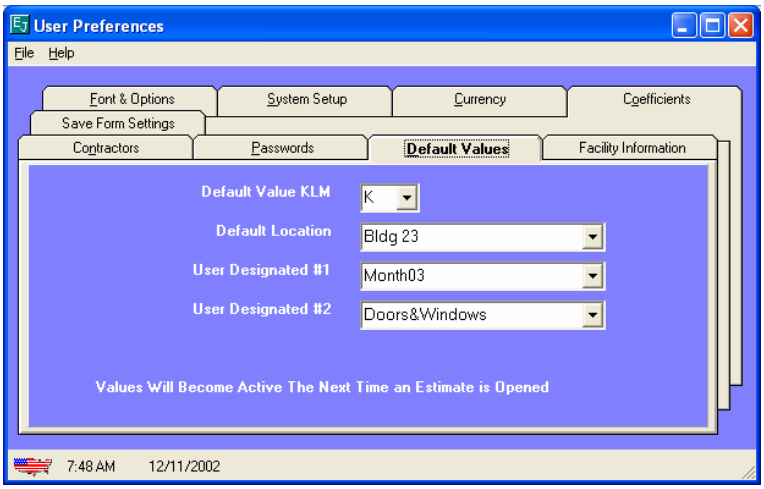
Default Values Tab

The default values tab of the preferences form allows the user to set the default value for the estimate fields used each time the user adds a new estimate or proposal record. Use of these settings help can increase data entry productivity.

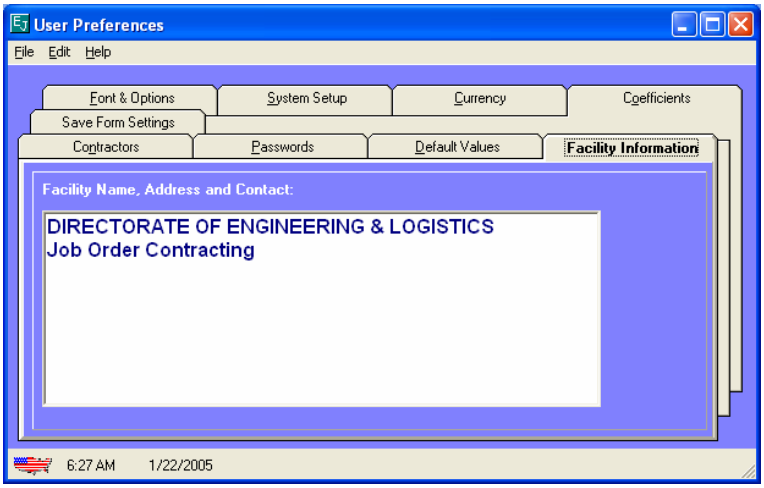


The location field is used to tie estimate records to physical locations. Location codes can be created as necessary by the user by typing new values into the estimate grid. The location field is also used within the comparison form. The default setting establishes a value used when each new estimate record is added. The estimate can be sorted by the location column to allow breaking down the estimate in different ways. The User1 and User2 fields can be used for any purpose and are similar to the location field. They are available to subdivide the estimate in any manner. The values displayed in the three lower drop-down boxes are the unique values mined from all estimates.

The K/L/M default code values represents the following; K = Repair/ Maintenance, L = Minor New Construction, M = Other Engineering Services.

Facility Information

The facility information contained in this text box is printed at the top of most of the reports and might include name and address information for the owner or contractor. The Facility Information text box can contain rich text.



Use a text editor such as the free MS WordPad (included with Windows) to create the rich text and then paste the rich text into the field here. The rich text can contain different colors and fonts.

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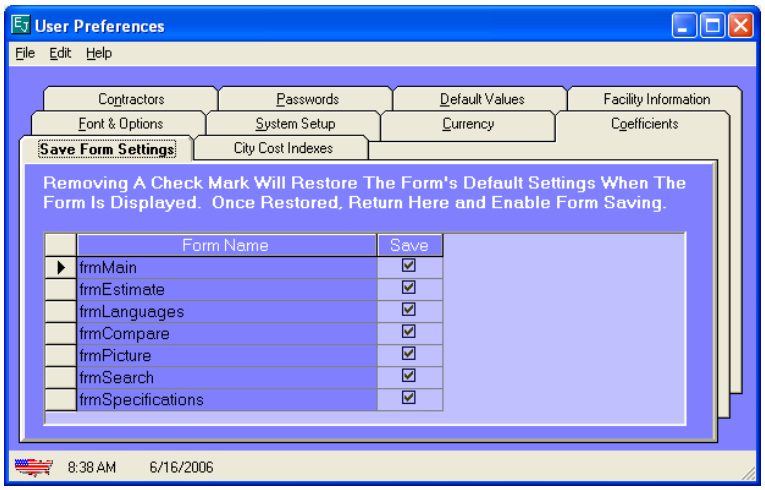
Save Form Settings

Saving the form and grid settings has been simplified in this version of EuroJOC. Now there is a single setting that controls all aspects of saving the user settings for an individual form. When a form's save setting is enabled(checked), the grid information, grid splits, column size, column order, horizontal and vertical bar placements, form location and form size settings are all stored each time the form is used.

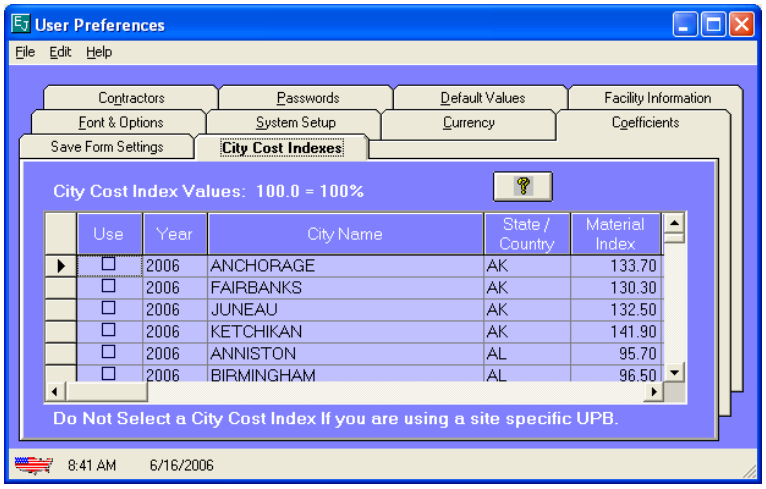


When the form's save setting is disabled (unchecked) the form uses the default settings established by the programmer each time the form is displayed.

If you wish to restore a forms original default settings, clear the check mark associated with the form and reopen the form. Close the form and return here and restore the checkmark. This feature allows the user to set the forms as they like and saves a lot of time

City Cost Indexes

The city cost index tab is designed for use with the RS Means Cost datasets. When using the National database, it is possible to select the city within this table and have the estimate calculations be adjusted to reflect the city cost index values for Material, Labor, Equipment and Average. The table values are published as part of the RSMeans datasets and unit price books. The city values are adjusted quarterly and published on the RSMeans website.



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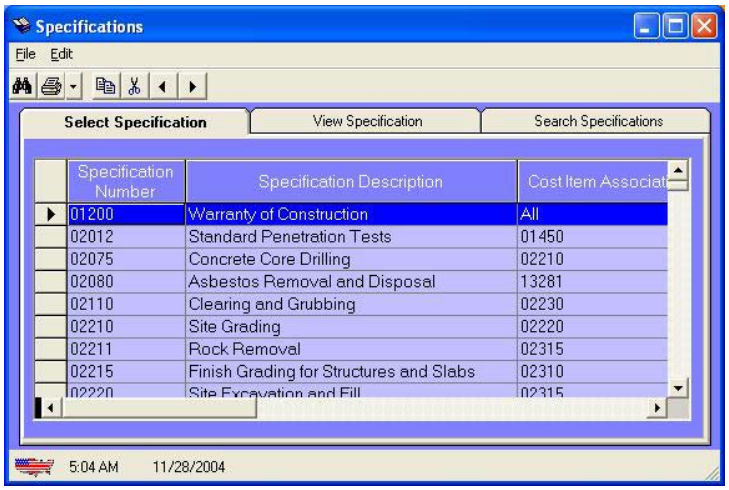
Specifications Form

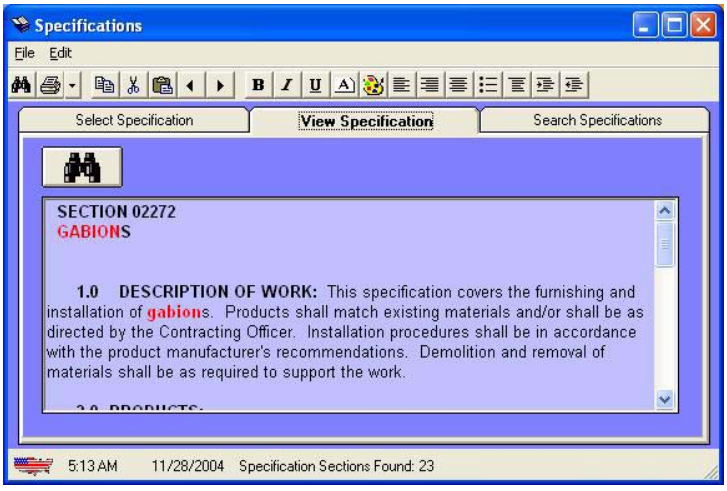


EuroJOC's Specification Form provides access to the contract technical specifications when available. Technical specifications are the details of the construction products to be used and the methods of installation.

The specifications form can be used in several manners.

- The entire specification listing can be displayed and/or sections selected for viewing,
- The specifications applicable to a specific project or estimate can be displayed and printed when ever an estimate or proposal is open.
- The specifications for a specific cost item can be displayed.
- The specifications can be searched for specific words and the results can be displayed and printed.
- A "hot-button" displays the specifications related to a cost item in the estimate grid.

Cost item groups in the unit price book are associated with the appropriate specification using a cross reference column as shown in the image above. These associations are not contractual and the entire specification applies to each project.



The specifications are a contractual document. They cannot be modified and are protected from casual user changes. The unit price book password allows changes whenever necessary. When editing is enabled, the specifications form provides font, color and justification editing features as shown below. Rich text can be pasted into the form from other software programs.

Specification Form Search Capabilities

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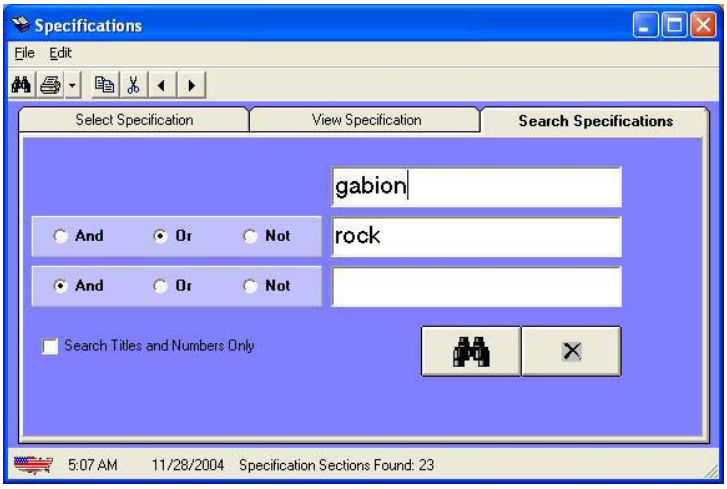
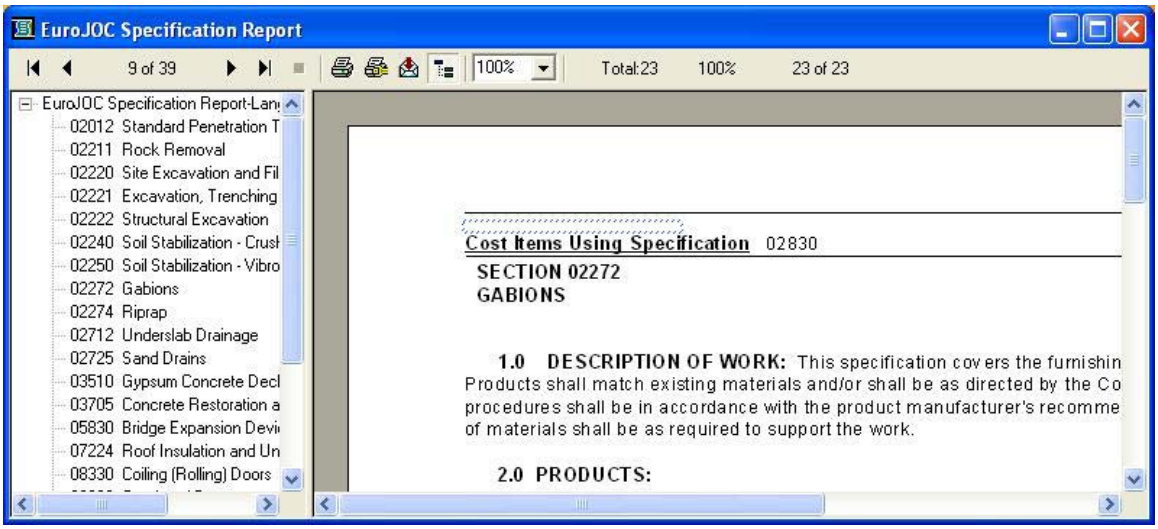
The search tab provides space for three search words. Specification sections containing the search words are displayed in the grid on the first tab. The Second tab (shown above) has a button that will locate the search words within the specification text and display the search words in a bold red font.



Please note: Specifications may not be provided with your version of unit price book. It depends on the location requirements whether it is included or not.

Specification Form Print Preview The print preview form appears giving the user a chance to review the print job before the printer starts. A selection tree appears on the left edge allowing the user to jump between sections.



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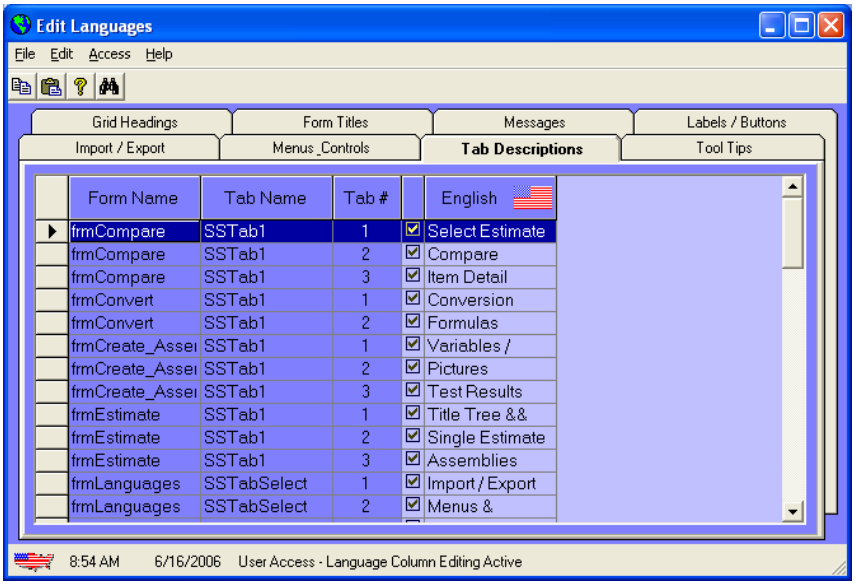
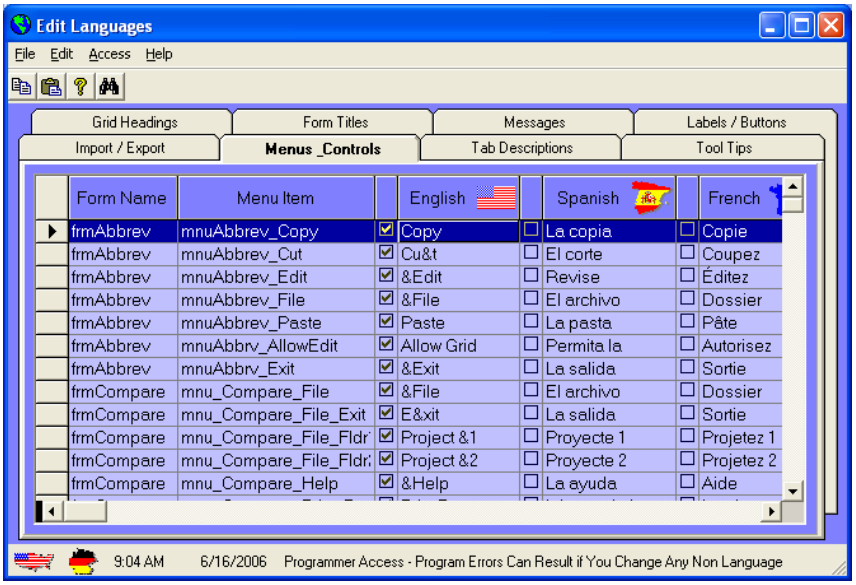
Language Form

The language form is used to edit the text displayed on the forms, menus and controls within the EuroJOC program. EuroJOC is designed to display; English, Spanish, French, German and Italian languages. The multiple language features can be turned off if desired. Language changes within the unit price book are handled on the UPB editor form. Changing the text shown on an individual control is simply a matter of selecting the tab, finding the proper form and then finding the row of the control you wish to change.



We used a translation program to select the words displayed in the program. These translation programs do not always provide the best phrase or word. It is often possible that the phrase or word was too long for the control's available display space.

Generally, the EuroJOC user should have little need to modify the languages unless the translation word used is really bad and disturbs the user. We apologize for inappropriate language translation, and would appreciate notification of any problems you find. The language grids can be sorted by clicking on the column heading. After sorting a column, it may be easier to find the text you are searching for. The checkbox column to the left of each language column locks the cell text from being overwritten by the import language routine.



Languages Form Tabs

Each tab section of the form represents a different type of program control. The '&' symbol used in a language cell is the character used with the Alt key to execute the function.

Import / Export

The Import / Export tab allows the user to translate the program control labeling. This feature is available when programmer access is enabled and described in the next section.

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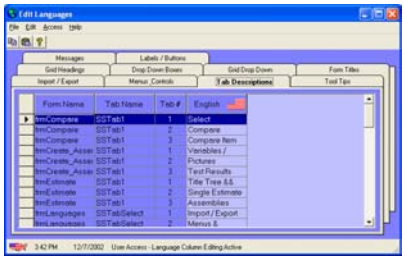
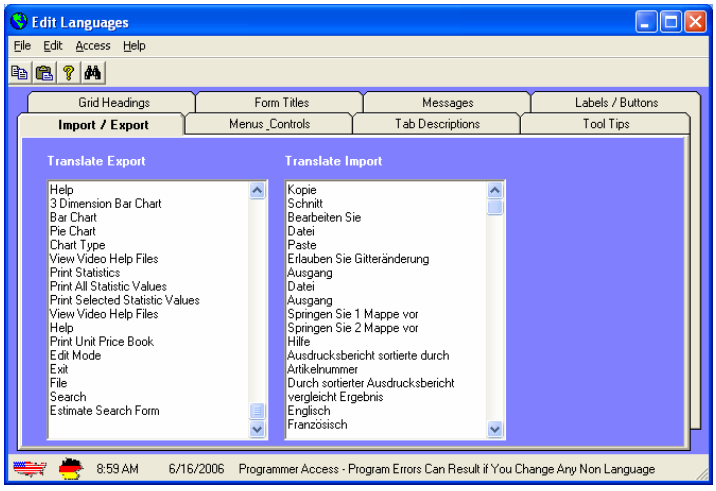
Menus & Controls	Contains the drop down menus for each form and some various controls not otherwise classified.
Tab Descriptions	Contains each tab control. Forms generally only have one tab control.
Tool Tips	Contain the text displayed when the user hovers over a control with the mouse pointer.
Grid Headings	Each Grid in the program is represented and each grid has multiple columns so many rows of data are used. You may notice that some "Unit Price" grid heading data cells contain two $$ symbols. The $$ symbol is replaced by the current UPB currency when the various forms load or change languages. Do not remove the $$ symbols or the replacement will not occur and unit price columns will not be correctly labeled. The $*$ is replaced with the user selected calculation currency symbol.
Labels	Labels are informational messages placed on the form to describe the data.
Drop Down Boxes	Drop down boxes exist both on forms and within the grids.
Form Titles	Form titles are displayed at the very top of most Windows forms.
Error Messages	Some but not all error messages are stored in this data. Error messages with variables are coded directly into the program and are not represented here. Also multi-language phrases needed by the program can be stored here.



It might take a little searching to find the correct tab, the correct control and the correct row of data to modify, but almost all controls within EuroJOC are represented in this database. The languages database is replaced each time EuroJOC is installed. If you make changes to this database you should back up the changes and restore your version after installing EuroJOC.

Programmer Access

Programmer access - available in the 'Access' menu - turns on several of the language form's advanced features. First, all of the language grid columns become available for editing. Second, the translate import and export features are available on the 'Import / Export' tab. It is possible to export a column of data to a commercially available translation program, translate the data, and then import the translation back into an adjacent column used by EuroJOC. Display of the import and export boxes is controlled by the dual language selection of each unit price



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book. When using programmer access, users should avoid editing the control names. They are static within the software and changing them will cause errors.

Steps for using the export-import feature;

- Select programmer access,
- Select tab of data to export, Select the Column of data to export by clicking any row within the column. Do not change sort order during this process by clicking a column heading.
- Select 'File', 'Export Language Column' (or press control+E)
- Use the Copy Icon on the Tool Bar to copy the text to the clipboard.
- Paste the text into the Commercial translation program and translate.
- Copy the translated text into the clipboard (Highlighting and pressing Control+C will copy text in most programs if a copy icon is not available)
- Paste the text into the EuroJOC 'Translate Import' text box.
- Select tab of data to import, Select Column of data to import by clicking any row within the column.
- Select 'File', 'Import Language Column' (or press control+I)

This may seem like a lot of steps, but it follows the logic of export data, copy to the translator, translate, copy from translator, and finally import the data back into EuroJOC. Using this process, it is easy to create additional language selections.

The user needs to be careful and not change the sort order during the process of exporting and importing a grid's set of columns. The export routine exports the column in the current row order, the translate program translates in that same order, and the import should remain in the same order so that rows match up.

The user should use the checkbox feature to the left of each column to protect any cells that are not to be updated. In this manner all cells within a column can be updated automatically and manual translations can be protected.

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Chapter 7 - UPB & Administrative Functions

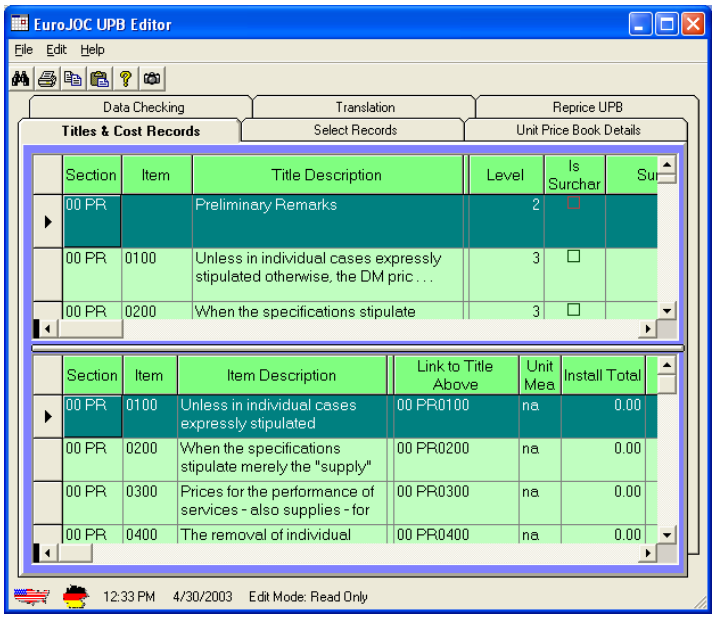
Editing the Unit Price Book

The UPB Editor form provides access to the Unit Price Data for modification, searching and printing. To access a UPB file a contract has to be open and the link set in the preferences form has to point to the UPB file. The UPB editor form has been substantially upgraded to allow using US & Italy data sources. The title information is now contained in a single database table. Combining what formerly existed as two tables allows for a simple and faster search of all title and cost records. Columns for handling component costs have been added. Previously, three title levels existed above the cost items, now eleven variable levels of titles may exist.

Many features are available on the six tabs (five when a single language UPB is used) that allows the UPB data administrator ease in modifying and updating the UPB/SSR data. This form is normally used by data administrators with the exception of UPB printing and advanced searching. Data revision capability is password protected from unauthorized users. ***EuroJOC users should realize that the unit price data is contractual and changing items can negate the ability to easily reach a negotiated settlement with the JOC contractor.*** The contractor has to have confidence in the data used. The UPB editor form is designed to provide all the tools necessary to create and update unit price books and to import and export language translations.

Titles & Cost Records

The first tab of the UPB Editor form displays both of the related UPB/SSR databases, all the available fields, and all of the records. All of the UPB title and cost records are displayed on the 'Titles and Cost Records' tab of the form. Two other tables store search queries and details of the UPB. A total of four tables comprise the UPB file.



The top grid represents the title descriptions (MDesc table) and modifier/surcharge relationships. The bottom grid represents the cost items descriptions (Cost table), unit cost, unit of measure, component cost, demolition cost, productivity and crew information.

Together with the tools available on the 'Select Records' tab, the user can use these grids to locate titles or cost records and edit the contents of the records.

The EuroJOC UPB Editor form has the capability to;

- Control UPB editing access from unauthorized users.
- Print the unit price book.
- Administer the UPB Data and create UPB updates.
- Search for Items using any available field of data. Search and Replace description text.
- Export and Import Language translations (Dual Language UPBs)
- Check the data title structure for completeness.

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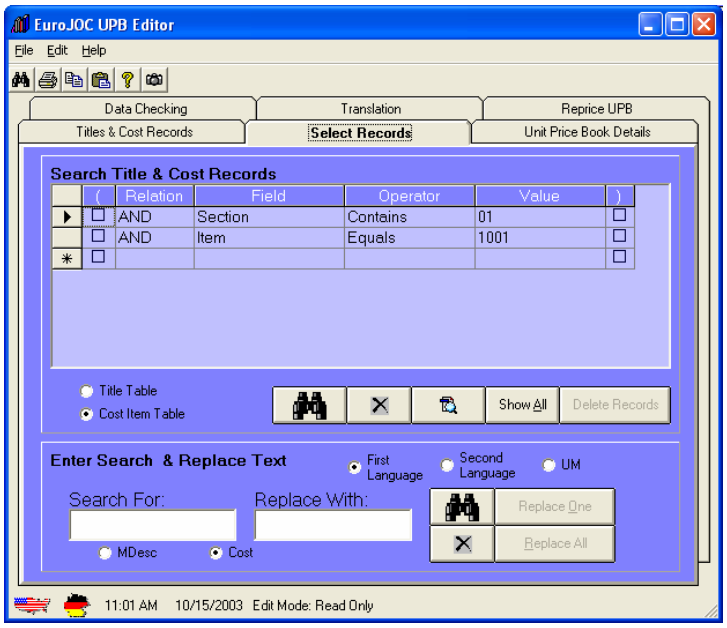
Administrative functions have been included in all versions of the EuroJOC program. Administrator data editing capability requires the use of a high level password. As a guiding principle, the cost data should only be modified when the contract is formally modified. Please do not attempt to modify any unit price data without permission of your contract coordinator / administrator. Generally modifications are bilateral written agreements with the contractor. You should be somewhat familiar with EuroJOC before attempting to edit the UPB data, if not please read this chapter or seek assistance.

The estimate form's NPP capability (red grid) should be used to create items not found in the UPB and needed in the current project estimate. Creating an NPP item may serve the immediate need instead of changing the UPB data.

A horizontal bar separates the title and cost data grids. The bar can be moved vertically to increase the size of the grid the user is working with. Normal sorting abilities exist within both grids by clicking on a column heading. Other grid capabilities are described in the definitions section found in chapter one. The user can copy the contents of one cell to another using the toolbar icons, menu items, or the keyboard keystrokes for copy ('Control +C') and paste ('Control +V').

The user should be very careful when deleting title records as they may affect quite a few items. Cost Items can not be displayed when missing their related titles.

Select Records (Advanced Search) Tab



The 'Select Records' tab of the UPB Editor form, as shown to the right, has two features grouped in separate panels. Both features work with the 'Titles and Cost Records' tab to display user selected records.

The two features are used independently. The binocular buttons located on each panel begins the searching process.

The top search panel contains the newly created advanced search capability. Using this feature, the user can locate cost and title records in any manner conceivable. Use of the feature is discussed in the next section of this manual and a short demonstration is available on-line and on the distribution CDROM. The simple search engine used from within the estimate form is also available to search for cost items.

The bottom search panel allows the user to search for a phrase and replace all occurrences of that phrase with another phrase in one 'Replace All' step or item by item using the 'Replace One' command button. It is possible to watch the replacement process, by switching to the 'Title and Cost Records' tab and using the 'Alt+O' keystrokes to activate the replace process.

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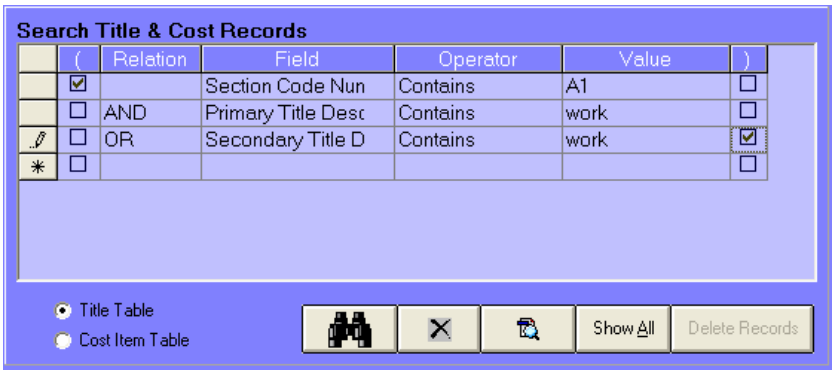
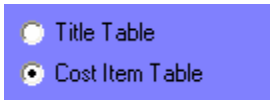
Advanced Search Capability

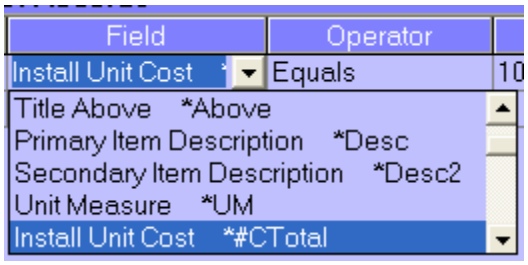


When EuroJOC's simple search engine, located on the estimate form, won't quite meet the needs, the advanced search engine will provide access to all the horsepower of the SQL (pronounced Sea-Quil) database language. The SQL (Structured Query Language) is the coding system programmers use to select and display data stored in databases and is somewhat user readable. The Advanced Search feature builds SQL code in a phrase-by-phrase grid-based manner. Each phrase grid row is then linked to previous rows using the relationship words "and", "or" and not. One level of parentheses allows the user to group multiple search phrases together. The resultant SQL code created by the grid can be viewed and modified by using the code inspector feature. While the code inspector is open the grid information cannot be changed.

Keep in mind that you cannot damage the UPB data by using the search engine. Feel free to experiment and test search ideas. The worst you can do is cause a search error.



Two radio buttons determine whether the title or the cost database table is searched. The fields displayed in the field dropdown box change depending on the database selected. When the code inspector is open the selected table changes in the code. Since many fields do not exist in both tables search criteria rows may become invalid when the radio button changes.



Each line in the grid constructs a phrase within the search criteria. An unlimited number of phrases or rows can be used. The "Relation" column has three grid drop down choices; And, Or and Not. These conjunctive words create the inter-relationship between the grid row phrases. The first conjunctive word on the first row is always ignored. The Field column contains the field description and field name of all of the database fields contained within the table selected by the radio buttons. Fields with the '#' symbol are numeric. Fields with the '!' symbol are Boolean (yes/no). Other fields contain string data, except for the picture field. The symbols help the user choose the proper operator to use with the field.

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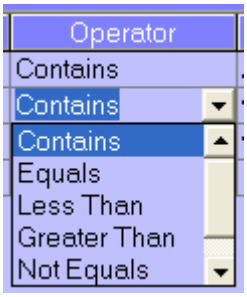
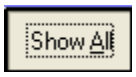
There are nine operator choices; 1) Contains, 2) Equals, 3) Less Than, 4) Less Than or Equal, 5) Greater Than, 6) Greater Than or Equal, 7) Not Equal, 8) Between Val1 and Val2, and 9) IS NULL. Contains is used to find partial string matches and can only be used with string fields. The Equals operator can be used with all field types except picture. The Less Than, Greater Than and Not Equals operators can be used with string and numeric field data types. The IS NULL operator is used to check for null cells. A cell that has never been used is null.



The Between operator allows the user to specify a lower and upper limit in a single row. When using the Between operator, separate the upper and lower values with a dash. The values column contains a user created search value and should correspond with the field type and operator selections. A Values column row can contain the wild card values of "*" and "?". Wild card values should be used together with the equals operator. The parenthesis columns allow the creation of grouping between different rows of search conditions or phrases. For example the parenthesis could be used to create a condition like; WHERE [Item] > '0200' and ([Item] <> '0400' or [Item] <> '0600'). Without the addition of parenthesis, an entirely different result would occur.

The Binocular button executes the search and displays the results on the first tab. The table selected determines the grid modified. The data in the remaining grid remains as before. Because of the advanced nature of this feature, error messages caused by the user created code are not suppressed and may indicate what problem has occurred.

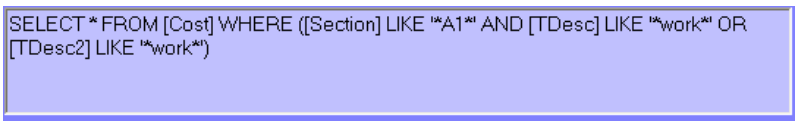
The delete button clears the all of the row/phrases shown in the search grid. Individual rows can be deleted using the standard grid method of clicking in the left-most column on the desired row, and pressing the delete button on the computer's keyboard.



The 'Show All' button removes the search phrases and selects all of the title and cost records shown in both grids on the 'Title & Cost Records' tab.

The delete records button is enabled only when a valid editing password is entered on the 'Unit Price Book Details' tab. The feature can be used to delete multiple rows of title or cost item data. An entire division of the unit price book can be removed in this manner. This button is the only feature within the advanced search function that changes the database and should be used carefully when active. The user must confirm the action prior to deleting records.

The SQL code inspector window is displayed when this button is clicked. The raw SQL code is displayed in a text box. The user can make any necessary changes and then run the code with the binocular button. The grid is disabled while the code window is open. Typically the user would build the SQL code within the grid, inspect or modify the code in this window and then run the code. Using the code inspector, the user has the flexibility to change a phrase using any appropriate SQL text. An example of use might be to add parenthesis beyond what the grid allows. Manually removing the '*' symbol from a like phrase can create starts-with or ends-with conditions.



Advanced Search Examples:
Searching the Cost Table for the English description "heating";

```
SELECT * FROM [Cost] WHERE [Desc] LIKE '*heating*'
```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Searching the Title Table for the English description “heating”;
SELECT * FROM [MDESC] WHERE [TDesc] LIKE '*heating*'

Finding all cost items with unit prices between 12.00 and 13.00;
SELECT * FROM [Cost] WHERE [CTotal] > 11.99 AND [CTotal] < 13.01

Alternative Method Using Between Operator; Find All cost items priced between 3.33 and 4.25;
SELECT * FROM [Cost] WHERE [CTotal] BETWEEN 12.00 AND 13.00

Find section 01 cost items with item code 1001;
SELECT * FROM [Cost] WHERE [Section] LIKE '*01*' AND [Item] = '1001'

Find all cost items containing any wildcard word before the word “dust”
SELECT * FROM [Cost] WHERE [Desc] = '*dust' (hand modified with code inspector)

Find all cost items containing a wildcard letter within the phrase “sh?ub”
SELECT * FROM [Cost] WHERE [Desc] LIKE '*sh?ub*' (notice use of contains/like)

Title Field Descriptions

Section	Division, Chapter, Section Major Code
Item	Title Item Code – May be blank
TDesc	Primary Language Title Description
TDesc2 *	Secondary Language Title Description – German – etc. when available.
#Lvl *	Level of Title – Not used in some UPB’s
Above	Section/Item code of related title above. ? used a separator
!Below	True when Title below exists, false when cost items are next step
!Per_UPB	Not Used
!Print	Not Used
ModGrps	Modifier / Surcharge related groups
!IsMod	Current title record represents modifier / Surcharge item group
Picture *	Picture Data

Cost Item Field Descriptions

Section	Division, Chapter, Section Major Code
Item	Item Code
Above	Section/Item code of related title above. ? used a separator
!Per_UPB	Not Used
Desc	Primary Language Cost Item Description
Desc2 *	Secondary Language Cost Item Description – German – Etc. when available.
UM	Unit of Measure
#CTotal	Install Total Unit Cost
#DTotal *	Demolition Total Unit Cost
#Labor *	Labor Component of Install Unit Cost
#Materl *	Material Component of Install Unit Cost
#Equip *	Equipment Component of Install Cost
#Sub *	Subcontractor Component of Install Unit Cost
#Wt *	Unit Weight
#Vol *	Unit Volume
Crew *	Crew Code
#Output *	Crew Output Per Hour
#Manhrs *	Manhours Per Unit
Picture *	Picture Binary Data
!Print	Not Used
#Bskt	Not Used
#DP *	Demo as Percentage of Install

* depending on the unit price book supplied these data fields may not be populated.
# is a numeric field, ! is a binary (Y/N) field, Other fields are alpha numeric text fields.

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Need More Help With SQL??

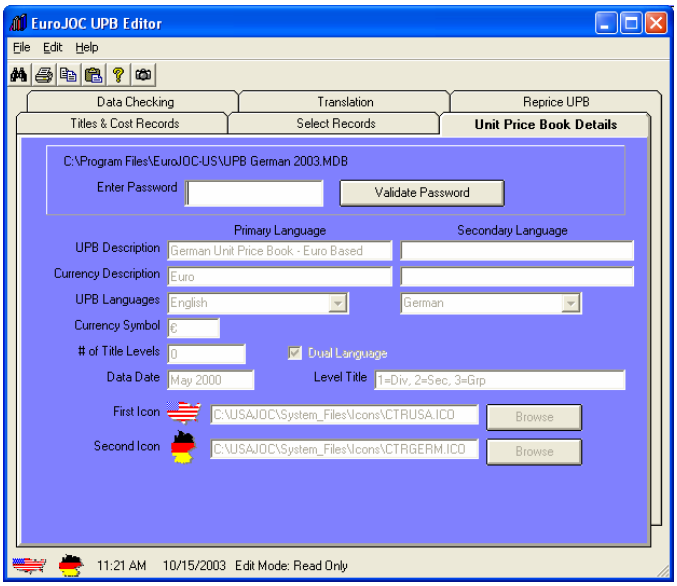
The SQL language is commonly used. Many programmers and database users know how to use SQL. The SQL language is taught in courses provided by Universities, Colleges and Computer Programming Schools. SQL is capable of much more than we have allowed in this query engine. SQL can modify, copy and delete records with a single statement. SQL can accomplish every aspect of administering a database.

There are also many books available on the subject. We suggest the following small paper back book published by Sams; ***"Teach Yourself SQL in 10 minutes – Quick Steps for Fast Results"*** by Ben Forta. ISBN 0-672-31664-1 $12.99 USA. The book is a reference guide filled with SQL examples.

UPB Details

The 'UPB Details' tab contains the password input box, and some UPB description text boxes. The password allows editing access to the UPB/SSR data. The password is the same as the login password for any user group numbered above 900.

The currency symbol field is very important. This symbol or text string is used on reports and within the program to describe the UPB price columns. The icons selected are displayed throughout the program in the status bar. The level title information is used in the title tree-view on the estimate form to indicate title level designation.

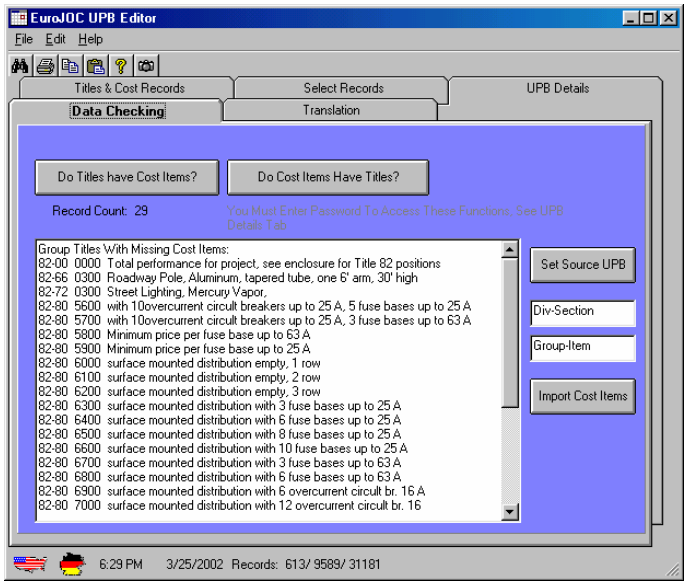


Data Checking

The 'Data Checking' tab allows the data administrator to check the UPB's title structure from titles down to cost items and from cost items up to titles.

This forward and backward checking is important to insure that each cost record can be reached using the titles of the title-tree control on the estimate form and that each title has cost items. Both procedures display the results or any problems encountered in the large text box.

The data checking tab also allows the administrator to import UPB items from other EuroJOC formatted databases.



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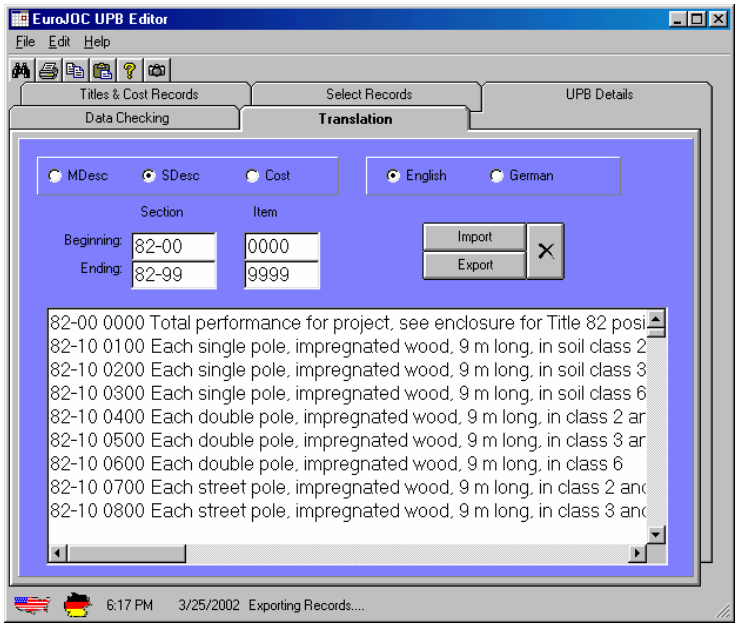
Translations



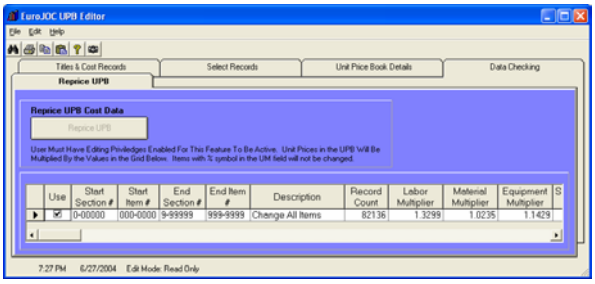
The 'Translations' tab of the UPB Editor form allows the UPB item's description field text to be exported for translation. Translation capability is not included as part of EuroJOC and needs to be acquired separately. Using the UPB translation feature is a three step process.

The user simply enters the beginning and ending item numbers of the titles or cost items to export. The export text for each item includes a cost item number. The translation software will ignore the cost item number and translate the text.

The exported text is then copied from the textbox using the copy icon (or Control +C) and pasted into the translation software. The item's cost number remained embedded during translation and is then used when the translated items are imported back into the UPB database.

The next step is to copy the translated text back into the large text box and select the language setting (English / German) of the text currently in the text box. Finally the import button is clicked. Machine translators are not perfect. You should allow time to review both the original text, translator results and make manual corrections to the text. Abbreviations found in the text to be translated causes problems and should be expanded prior to translation. Using this feature, both the titles and cost item descriptions can be translated.

Re-price UPB Tab



The re-price capability has been recently enhanced to add functionality. The re-pricing tab allows the data administrator to modify all prices by a constant factor.

It is expected that this feature will be useful when;
1.) currency changes are required, or
2.) a specific price escalation factor is to be applied.
3.) the unit price book is localized using market indicator data provided by others.

Each grid row specifies what cost items are to be modified using start and end item code values. The grid row also specifies five multiplier values so that each component unit cost can be individually varied. The use column checkbox allows the user to disable rows not to be used in the re-pricing. The entire grid row is skipped when the check box is empty. A count of the records to be modified is provided no matter the checkbox setting.

The re-pricing feature does not change any percentage based surcharge/modifier items. *An administrative password is required to use the re-price feature.*

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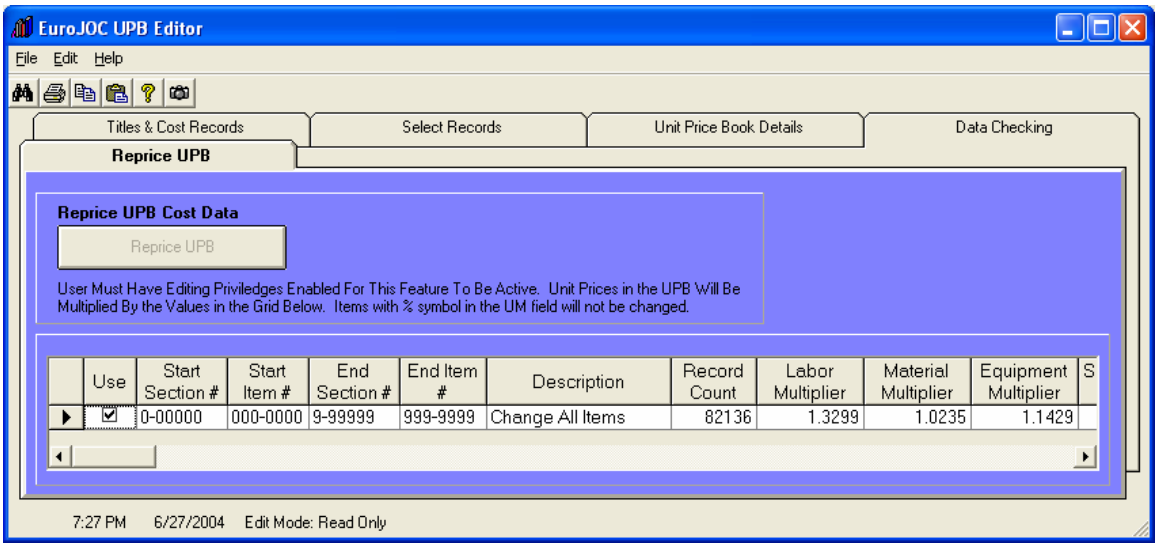
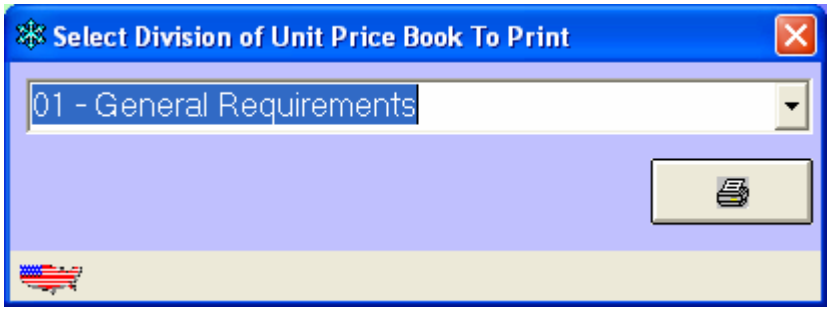


Printing & Exporting



The UPB printing capability may be disabled depending on the ownership rights retained by the database publisher. To print the Unit Price Book, use the menu item for printing or the printer icon located on the toolbar. The form shown on the right will allow the user to select the section of the UPB to be printed. The user can also select whether the output will contain English, German or both languages. Only one section of the UPB is printed each time. Before the printer is started a print preview window will be displayed for the user to see the output prior to using paper and ink. The print preview window also has an export option at top of the form. Click on the white envelope with an arrow icon to use the feature. Many export output formats are available from the print preview window.

Pictures

The unit price book is capable of storing images for each group and cost item. Although the current data does not make extensive use this feature it is anticipated that illustrative pictures of manufacturers products and assemblies can be used to further describe the cost items. You can imagine how helpful it will be when you can see an actual item represented by the cost code. Pictures at the group title level can represent the entire group of cost items. Clicking on the thumbnail picture will open a resizable window showing the same picture. The picture form is updated as the cost item or group title changes. See group 61.06 for some current pictures.

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Editing/Creating Surcharge Data Items:

The figure below shows the MDesc grid (top grid) of the UPB editor form. The surcharge creation is accomplished in two steps. First select the title of a modifier group. Then insert a check mark in the modifier title's 'Is Modifier' field. Add the section and item as one string to the 'Use Modifiers' field for each group to which this modifier applies.

Section	Item	Title Description	Level	Is Modifier	Modifier List	Link to Title Above	Title Below
02053	3079	Machine Loading Truck	6	☐	020533141,020533142, 020533143,020533144,	020532999	☑
02053	3089	Ramp Loading Truck	6	☐	020533141,020533142, 020533143,020533144,	020532999	☑
02053	3141	Modifier - For Each Additional 1 Mile, ADD		☑		020530010	☑

Each group with surcharge / modifier items may have multiple groups. To represent multiple groups, add a comma between each surcharge item number. A maximum of 225 characters is available in the 'Modifiers List' field. It would be an unusual circumstance for both the 'Modifier' and 'Use Modifiers' columns be used at the same time and should be studied. This instance has occurred and is allowed.

Summary Cost Items

Summary cost items calculate a column's total before applying a percentage. The summary specification determines which columns are calculated and cost code start and end points.

Chapter	Item	Item Description	Summary Level	Summary Item Specificatio
NEW!	3020	For New Construction - Min 16%	1	4,9,16,LBMEOD,ALL
1-01107	100-0100	For Alteration work, to $500, fee - Max 50%	1	0,01,50,LBMEOD,ALL
1-01107	100-0150	For Alteration work, Over $5 to fee - Max 25%	1	0,01,25,LBMEOD,ALL

Crew and Equipment Hourly Cost

Using the component cost capability, it is now possible to input hourly labor rates and burden percentages. Bare equipment daily rates form the second raw input. A crew is established consisting of one or more labor trades and equipment. Once the crew daily cost is established it is used with each cost item's productivity rate to calculate a unit cost and man-hours for scheduling purposes. It is now possible to provide site specific pricing and still use commercially available cost data books.

Labor Code	Trade Description
ASBE	Asbestos/Insulation Workers/Pipe
BOIL	Boilermakers
BRHE	Bricklayer Helpers
BRIC	Bricklayers
CAIR	Air Tool Laborers

NEW!

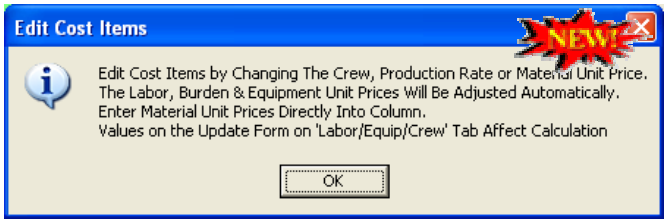
Crew	Quantity	Labor Code / Equip	Descriptio
A1	1	CLAB	Common Building Labo
	1	015901002600	Concrete saw, gas mar

Equip Code	Equipment Description
015900001035	Dumpster, 5 yard container
015900001040	Dumpster, 10 yard containe

Crew	Bare Labor Daily Cost	Burden Percentag	Equipment Daily Cost	Total Man
1 ASBE	312.40	58.1	0.00	
1 BRHE	222.00	52.3	0.00	
1 BRIC	292.40	52.3	0.00	
1 CARP	284.40	55.7	0.00	
1 CEFI	275.20	47.5	0.00	

Productivity Editing

The Enable Productivity Editing selection on the UPB editor's 'Edit' menu allows the user to have the program calculate the labor, burden and equipment component costs. Material unit prices are entered manually.



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Preliminary Remarks

It is possible to insert remarks into the UPB database. Remarks generally are located at the beginning of a division and contain additional information about how items are to be used. Cost Items with a unit of measure (UM) equal to; "na" are considered remarks and cannot be added to an estimate. The remarks capability is generally used to explain how an entire cost division's items are to be used.

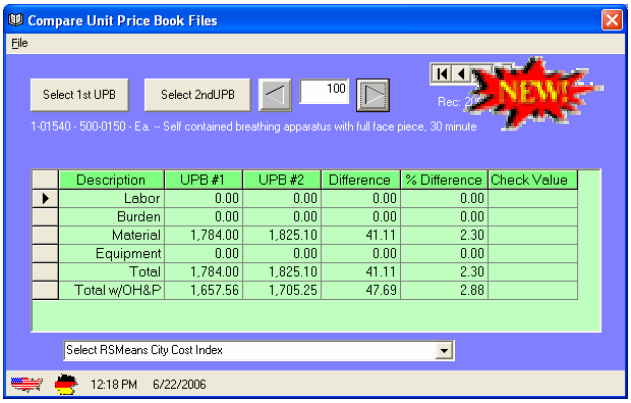
Group Icons Types

Three icon image types are displayed in the tree-view control within the estimate form. The icon displayed depends on the settings within the titles table or upper grid. When the 'Modifier List' ('Surcharge List'-German) field contains data, the second icon will be displayed. When the 'Is Modifier' ('Is Surcharge' – German) field's value is true (checked) the third icon will be displayed. When either of these two icon types is selected the orange and green grids will both be displayed. When both the 'Modifier' and 'Use Modifier' fields are blank, the first icon and only the green item grid will be displayed on the estimate form when the group is selected. The data should not be changed just to change icon displayed. There are other reasons why these fields are set the way that they are. All item modifier/surcharge groups should have the 'Modifier' field checked. All groups that have related surcharge items should have those surcharge groups listed in the 'Use Modifiers' field. Reading the surcharge group's description will explain what groups use the modifier.

Compare Unit Price Books

It is now possible to compare two unit price books together item by item. In this manner, you can see what component pricing differences were made between each UPB. The routine will not work well when the cost codes have changed from one version to the next.

This feature is found on the UPB editor's 'File' menu.



Distributing UPBs to Users

The Unit Price Book is a rather large file, currently about 15-40 megabytes depending on the data supplier. The file containing the UPB data file can be named anything the user decides as appropriate with an extension of UPB. As a standard we suggest that 'UPB' should be part of the title. The UPB remains an Microsoft Access® data formatted file.

This multi-table UPB file contains one table of title descriptions, one table of detail cost line item descriptions, on table that keeps the advanced search phrases, and one table that describes the data details such as currency used. The four related UPB database tables are combined into a single file.

The table names are MDesc, and COST. The MDesc table contains the major division and section titles, the secondary titles and modifier / surcharge titles using up to a 15 digit item coding structure (xxx-xx-xx). The Cost table contains the unit price detail and surcharge / modifier items using up to a 15 digits item code structure (xxx-xx-xxxx).

The UPB file is the only file that needs to be distributed when changes are made to the unit price book. When CorVet distributes a CDROM, we gather all the files needed for an installation together so that one install will set up all of the software and data.

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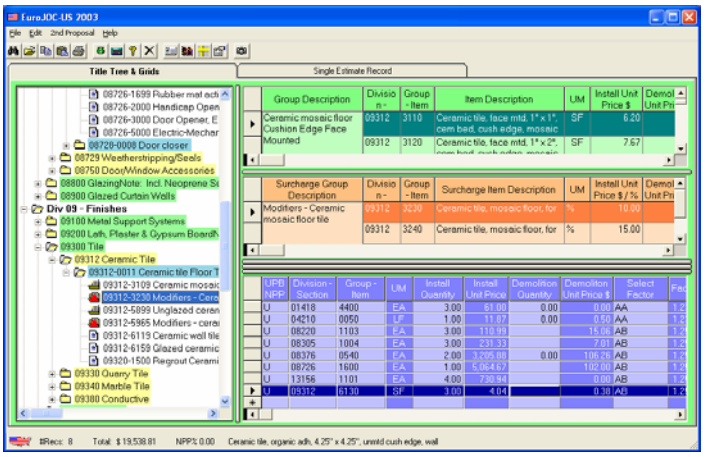
Chapter 8 – Contractor's Proposals & Comparison

Within this chapter, the differences in EuroJOC, as used to prepare a contractors proposal, will be discussed. Use of the comparison feature to analyze the differences between estimates will be discussed. Creating a proposal is essentially the same process as the owner representative uses to create an estimate.



Using EuroJOC allows both parties to the task order contract to use the same software and will speed up the job preparation and negotiation process. The comparison feature will help prepare the owner's representative for the negotiation meeting and point out differences in between the contractor's proposal and the owner's estimate.

Making the prep and comparison process easier and faster increases the ability to contract work and improves owner confidence in the expected result. When an owner estimate is not prepared, the comparison capability allows the owner representative to see that changes requested during negotiation were implemented.

Password Control

When creating proposal cost items, the contractor will use EuroJOC in almost the same manner as the owner's estimator. Most details described in this user's manual apply equally to contractor and owner estimators. The primary difference is that the contractor will use a contractor designated User name and password. Use of a contractor designated name and password will insure that proposals are created and not owner estimates. Proposals are stored in a separate database table from estimates. This is very important to the owner when estimates are provided via electronic exchange.

The contractor's administrator is allowed to create new User Names and should be careful to designate them as a contractor user type. There is no advantage to be gained from doing otherwise. Creating user names is further discussed in chapter seven. The administrator is encouraged to create a user name for each individual because estimate items include the creator of the item and can be used to separate large estimates after being combined, based on the user name.

The program's default contractor User names and passwords are as shown:

	User Type	Default User Name	Default Password
a.	Contractor	contract	Admin
b.	Contractor	ContrGroup	Admin

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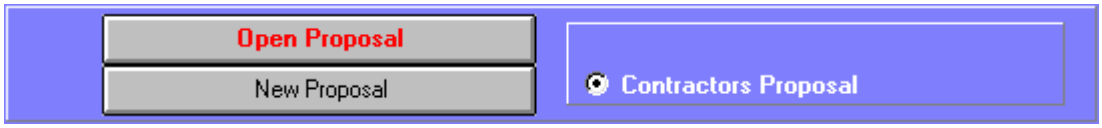
Contractor Version Differences

If you are starting here to learn how to use the software, a better starting place would be chapter two. The features of the software are almost exactly the same. The major thing you need to be aware of is that you log into EuroJOC with a user name that is designated as a contractor.

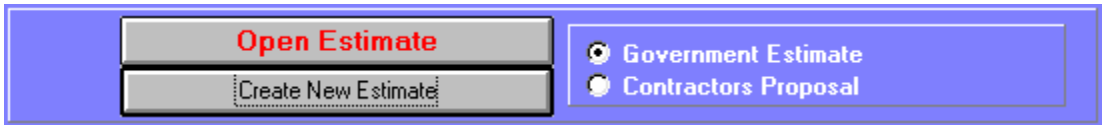
Contractor User Name Active

When using a contractor designated user name, and the 'Cost' tab is selected on the main form, the button selection illustrated below will be displayed. The 'Open Proposal' button will not be displayed until a proposal is created. Use the grid to select the proposal to be opened and then click the 'Open Proposal' button.

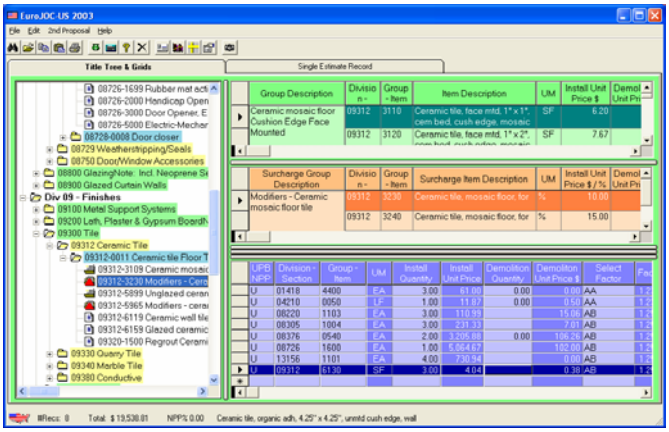


Government/Owner User Name Active

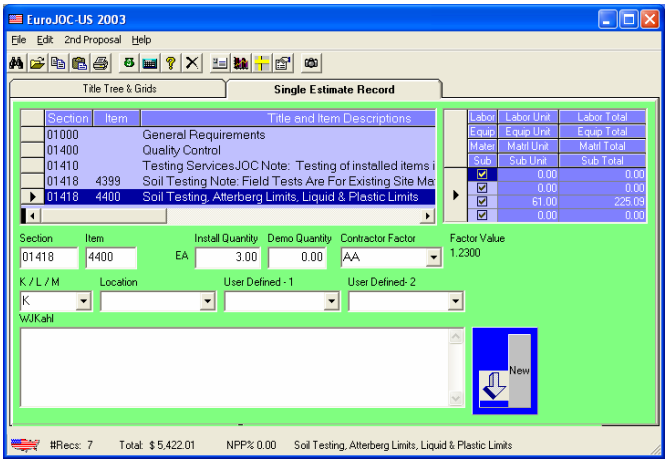
When a Government name is active the 'Cost' tab on the main form will allow the user to select either of two radio buttons determining whether an estimate or proposal is opened. The command button descriptions will change depending on the radio button selected.



The Contractors proposal is different from the government estimate in one subtle way. Proposals are stored in a separate database table within a contract file. Proposals and estimates can **never** be combined. The software excludes the possibility of copying a contractor proposal and using it as the basis for the government estimate. Likewise the government estimate cannot be given to the contractor.



A government designated user cannot modify a contractor's proposal. The government user is can view and print the proposal. As a visual cue, the estimate form's background color changes to green (instead of blue), whenever a contractor's proposal is displayed.



When proposals are to be submitted to the government for comparison, it is suggested that the contractor submit a single proposal per file. Proposals can be copied from one file to another. Long file names should be used to title the file and the file name should contain the project number assigned. This will reduce possible confusion

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when receiving the proposals. A standard system of communication should be established and followed by both parties.

Government Users of Proposals

Government users of proposals include project managers and negotiators. The project's cost proposal is normally delivered to the government several days prior to the negotiation meeting. The information can be handled in two ways. The proposal can be imported into the owner's contract file or the proposal can remain as a separate computer file. Importing the proposal into the contract file helps keep all the project information together and reduces the number of computer files. The user may want to keep copies of originally submitted proposals. Either method will work.

Contractor proposals and owner estimates are never co-mingled. Separate database tables within the contract's Access database file are used to store the records. By design it is impossible to copy cost records across this barrier.

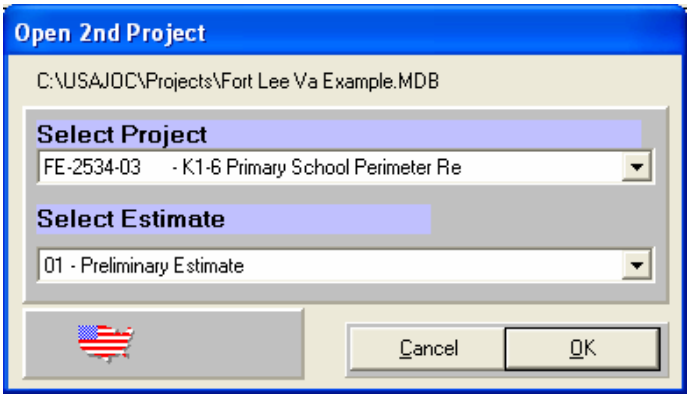
By importing proposals into the contract file, it is possible for the owner representative to store all proposals and estimates in a single computer file. It is possible to quickly see the history of the entire project. If you feel a bit unsure, It is also possible to compare proposals and estimates without importing them into the contract file. This capability insures a higher amount of flexibility and user confidence.

E-Mailing Proposals

EuroJOC's CON proposal files can be e-mailed from the contractor to the owner's representative. We suggest sending a single proposal in the file. Start by creating a new empty contract file and setting the contractor and currency factors. Use the 'Import Project from Another File' feature, discussed in chapter two, for moving the completed proposal into the new empty contract file. If several versions of the proposal exist, you may need to delete one or more proposals from the project. Check the proposal by opening and recalculating. The proposal file is now ready to send***. The user should be aware that some e-mail programs, such as Microsoft Outlook®, restrict receiving certain file types including MDB files.*** MDB type files can potentially contain macro coding when opened and executed using Outlook. EuroJOC's CON files do not contain or use any Outlook macro code. To get around any e-mail restriction, there are two possibilities; 1) Use a program such as WinZip® to compress the file, 2) change the file extension to another file type such as TXT and notify the recipient of this change so they may reverse it when they receive the file. Following the changes, attach the proposal file to an e-mail and send the file as you normally would.

Importing Proposals into the Owner' Contract File

The government user can choose to store all contractor proposals inside the same file as the government estimate. The proposals are securely stored in a separate database table within the contract file and are never commingled. The most important reason for importing the contractor's proposal into the government project file is for organizing the data and keeping everything related to the contract or project together.



Please see the end of chapter two for information about sharing contract files.

Proposals are displayed in read-only

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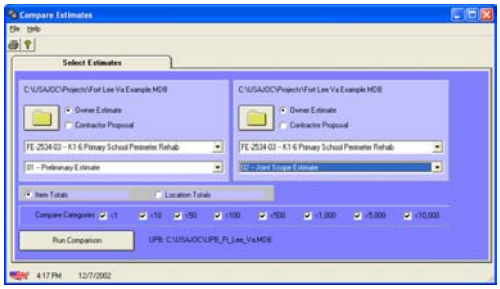
status when a government user name is used. The single function allowed is for the user to create a blank proposal and import all of the Contractor's proposal items from another file into the blank proposal.

From the main form, the steps for importing a proposal from a contractor file are: 1.) Open the contract file that will receive the proposal data, 2.) select 'Contractor Proposal' radio button on the 'Cost Tab', 3.) click the 'New Proposal' button, 4.) Enter a short description for the proposal, 5.) Click the 'Open Proposal' button, 6.) Click '2nd Proposal' in the menu system, 7.) Select the Contractor's proposal file, 8.) Select the Project and Estimate from the drop down boxes on the 'Open 2nd Project' form (shown on previous page) and click the 'OK' button, 9.) The items will be displayed in the yellow second estimate grid, and 10.) From the '2nd Proposal' menu, select the 'Add All Items – Proposal 2 to 1' item. The proposal import process is complete.

The EuroJOC program is designed in such a way that it is impossible to import a proposal into a government estimate unless a hidden feature is used. ***Proposals and estimates are separated.***

Comparing Estimates & Proposals

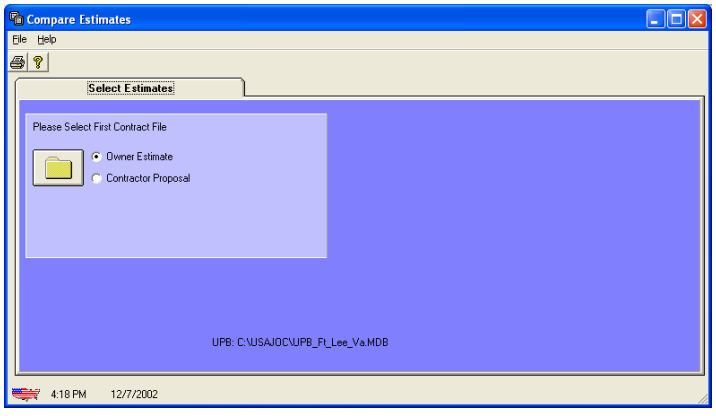


Estimates contain mistakes. There is no perfect estimate, and all parties should agree during the process of estimate comparison and negotiation to the principle of seeking the best possible solution that represents the work involved. Quantities can be duplicated, overstated or understated by simple human error without ill intent. Assuming otherwise can lead to a bad negotiation relationship.

EuroJOC's estimate comparison form allows the user the ability to compare any combination of estimates and proposals. ***Experience has shown using the comparison feature to compare revisions of proposals is an easy method to insure the requested negotiation changes have been incorporated into the new proposal.*** When comparing JOC estimates created by different estimators many differences appear. The estimators may use different cost item (position) numbers to describe the same work. Different quantities are determined for the same cost item or quantities may be combined or entered separately.

The estimators may have items of work that are missed in the other estimate, or the estimate could have overcharges by either estimator. It is nearly impossible to check an estimate row for row because one estimate may use multiple data rows while another only uses a single row. The comparison routine sums the total quantity for each individual cost item and then allows comparison cost item by cost item. The detail supporting each summary item is easily viewed. When both estimators agree to use the same location labels and create the detail necessary, the comparison routine allows an item by item comparison by location.

Selecting Estimates to Compare



Since contract files can contain many projects and each project can have several estimates, there are several steps to selecting the comparison data.

Start by selecting the left yellow file icon and opening a contract file. The left side can be either an

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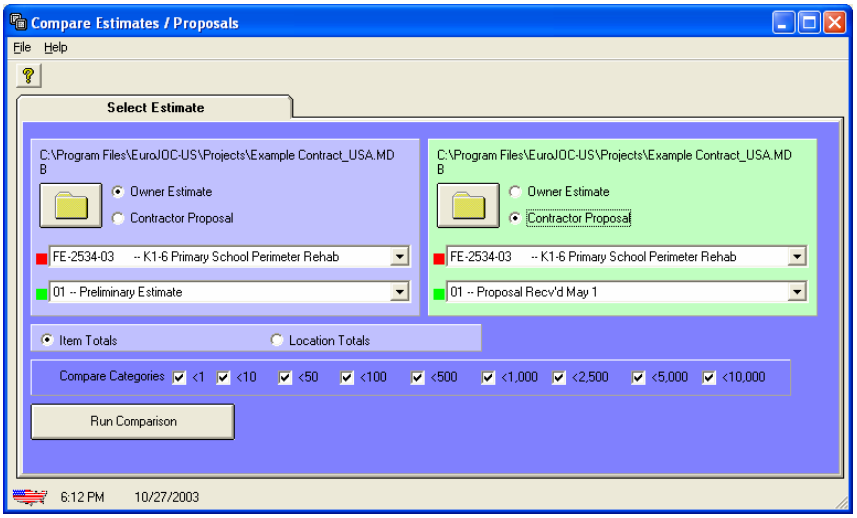
estimate or proposal. The estimates are compared "as-is" without recalculation. You should recalculate the proposal before the comparison if you suspect anything wrong. This step insures that the contractor has not made a mistake entering coefficient or currency values. Once the contract file is selected, the file's projects and estimates will be listed in the drop down boxes within the left panel.

Select the correct radio button before choosing the project and estimate as this will affect whether government estimates or contractor proposals are shown in the lower drop down box. The panel will change to green if the contractor radio button is selected as shown on the next page. After the left project file has been selected, the right project selection panel will be displayed. Repeat the steps to select a file, project and estimate.

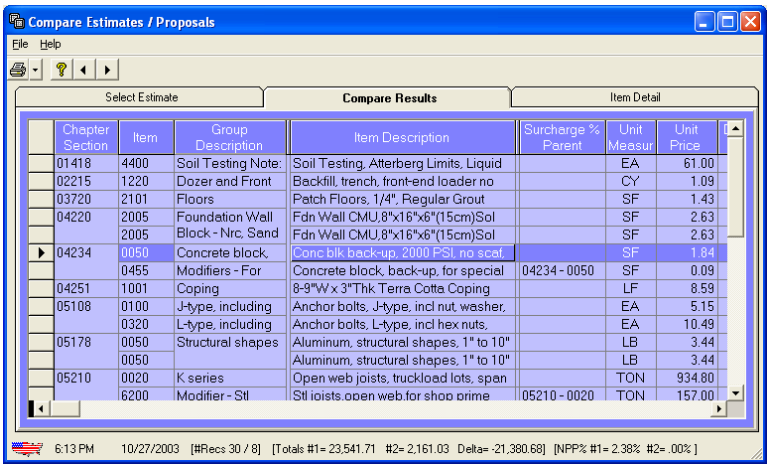


After both selection panels are set, the totals panel and the 'Run Comparison' button are displayed. Left and right files can be selected using the form's menu system. The user can also select the language displayed in the grid by clicking on one of the icons in the status bar. Clicking the 'Run Comparison' button starts the comparison procedure and lists the items sorted by cost code numbers. When the comparison routine finishes the 'Compare Results' tab view will be displayed and the comparison results will be shown in the grid. The totals for each item code number are calculated and displayed in the comparison.

Compare Results

The 'Compare Results' tab is designed to quickly allow the user to see cost item differences. The first estimate's quantities and cost amounts are located next to the second estimate's similar columns. The difference column is located to the right of the quantity & amount column pairs. The far right column indicates a comparison result with symbols used as shown below.

The grid can be sorted by clicking on the heading titles. When sorting using the Div/Sec item code the program will be displayed in an order where the estimator should be able to see alternate item selections such as one estimator is using one particular code and the other estimator using a similar code one or two digits off.



It is difficult, if not impossible, for both estimators to always use the same item selection. In this case, items will have a zero for one or the other quantity columns. This should

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not be considered as an error, it is a point for discussion during negotiations. The discussion should center around which item is more appropriate to be used for the intended purpose

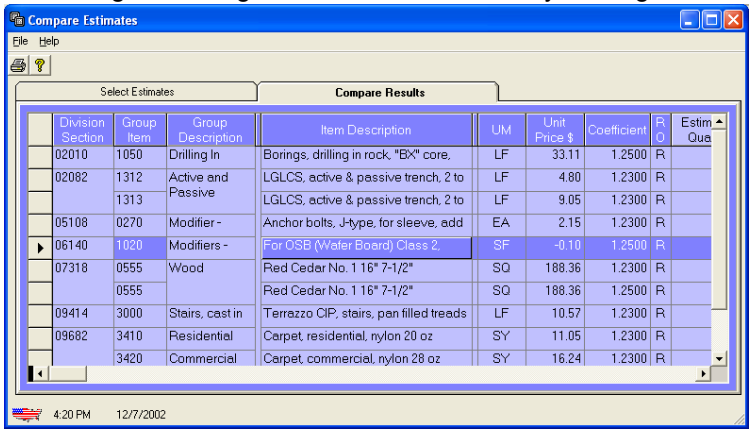
A printed report is also available on the 'File' menu or by clicking on the toolbar icon below the forms menu. The printing features are not available until the comparison has been run.

Compare Result	Description
1st	Cost item found only in first estimate or proposal
2nd	Cost item found only in second estimate or proposal
=	Estimate cost items are exactly equal
<#	The estimate difference is less than a # value of the current currency. These various categories can be turned on and off as needed. When a countries currency unit has a very small value, it is a good idea to turn off the smaller checkbox values.
>#	Estimates value is not equal. The difference is greater than maximum checkbox category value.

Clicking on the 'Compare Order' column heading will sort the results so that distinct compare result sections will be displayed together.

Items found in "1st" and "2nd" results column results from the estimators using different cost items numbers to describe the same work. Resolving these cost code usage differences is a matter for negotiation and agreeing on the item number both parties will used. Typically there are unit price cost differences that are driving the item selected. Items not anticipated or desired by the government estimator typically will appear in the second section. The "1st" and "2nd" sections should be scrutinized carefully during negotiations.

Items in the "=", "<1", and "<10" sections are exactly equal or close to being equal. These sections might not require as much review effort depending on your time requirements and project budget restraints. The reviewer should not automatically allow items when the differences are less than 10 units of currency. As the exchange rate grows larger, $1=600 Korean Won for example, the more you will appreciate being able to ignore small differences by turning off the smaller compare categories.



Inclusion of the "<1" and '<10" categories allows the reviewer to spend the most time on the larger differences. Items in the "> Max Checkbox Value" section generally will require additional inspection time. There may have been a large quantity error or differences in the item codes used. Large differences are significant topics for resolution during the negotiation meeting.

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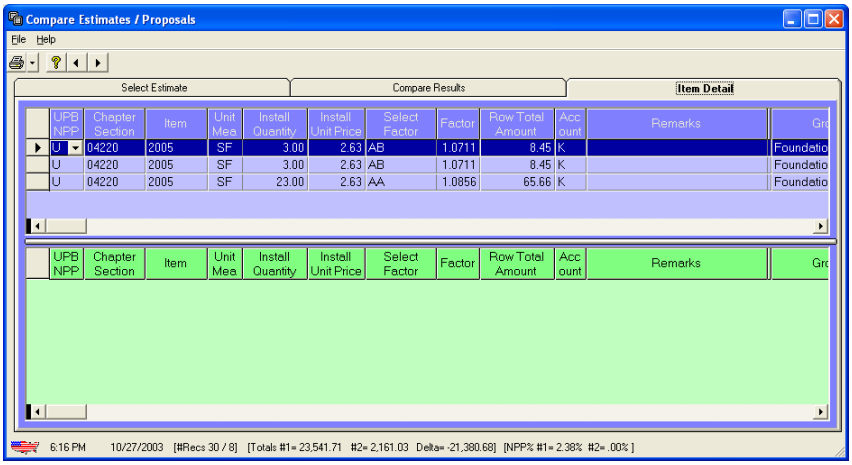
Zero values in the comparison table have been suppressed to allow a clean view. The 'Surcharge % Parent' column is displayed only when surcharge items with percentage relationships exist within either estimate being compared.

Comparison Details

The comparison 'Item Detail' tab displays all the estimate or proposal records associated with a single row of the compare results tab. During negotiations, it is now possible to quickly view all of the detail estimate rows that comprise the summary cost item.

As the user moves row by row through the results on the 'Compare Results' tab, the details that comprise the summary row are displayed on the 'Item Detail' tab.



The top grid represents the first estimate or proposal selected and the bottom grid represents the second estimate or proposal. The color of the grid is blue when an owner's estimate details are displayed and green when a contractor's proposal is displayed.

The left and right arrows on the toolbar allow the user to move from summary row to summary row without changing tabs. Using this feature, the negotiator can quickly see all the backup details for each comparison cost item. Both grids are displayed in read only mode.

Comparison Sorting

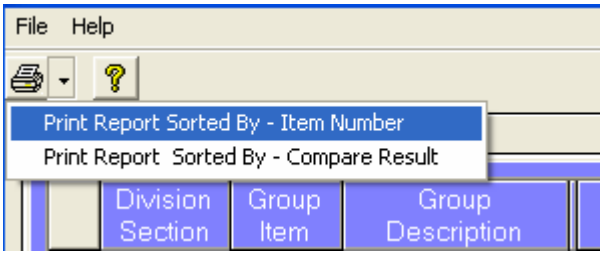
Most grid features are available within the comparison grid including column sorting and column relocation. Clicking on a column heading will sort the compare data by that selection. Clicking within the data of the same column, followed by another column heading click will reverse the sort order. The columns can be moved by clicking the column heading and then dragging the title slightly down and then either right or left as needed.

Clicking on the 'Div / Sec' column heading will allow the user to see the data sorted so that similar items are located together. When estimators use similar, but not exactly the same item number, the items should appear together.

The 'Compare Result' column heading sort should be the other primary sort used to display useful information as described in the previous section. Clicking on the 'Compare Result' grid heading will also print the report sorted and grouped by the symbol within the column. The report sorted in this manner can help establish negotiation priorities.

Comparison Report

The comparison report can be generated by clicking on the printer icon in the form's toolbar or using the menu system. Two different report versions exist. The first report is sorted by cost item number and the second is sorted by the compare result



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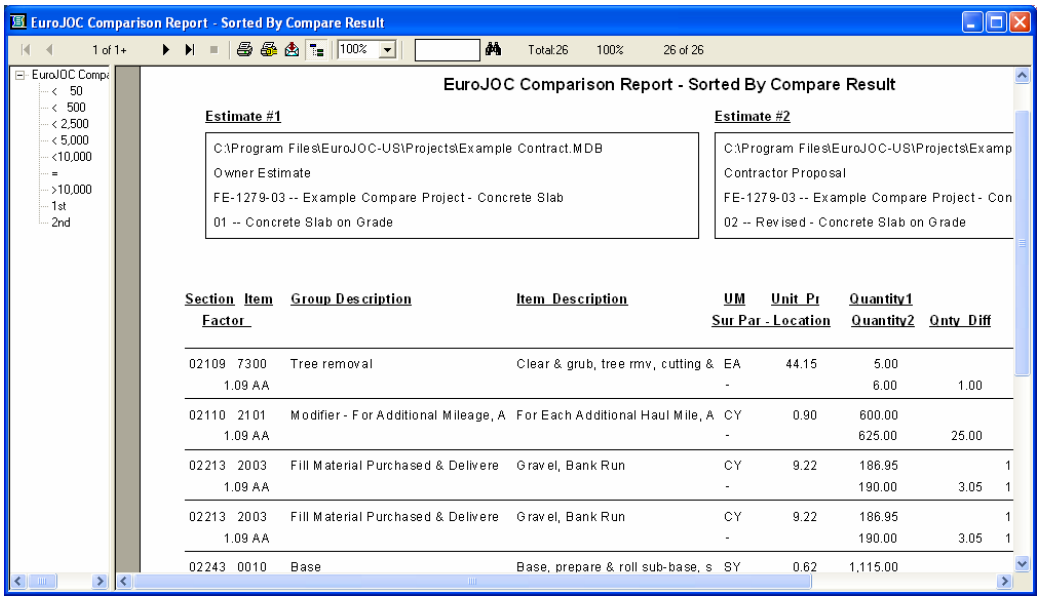
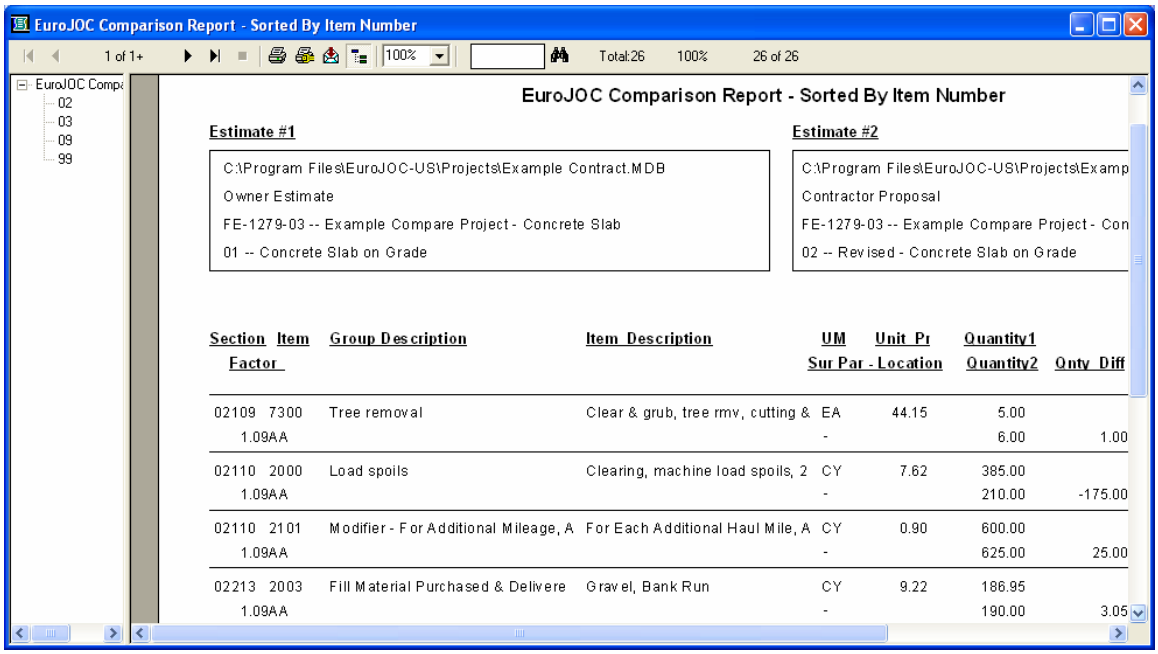
field. Either report can be selected by using the menu system or the tool bar button's drop down arrow located to the right of the printer icon. The menu items and printer button are hidden or disabled until the both estimates or proposals are selected and the comparison is run.

An example of the report is shown below. The group tree, located on the left side of the preview window, enables the user to jump to the top of each section. The group tree can be switched off by clicking on the tree icon in the form's tool bar.

Example Compare Reports





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Other Uses of Comparison

Several versions of a proposal may have been submitted for a project. After every negotiation meeting the contractor could have been required to resubmit their proposal. Upon receipt, the new contractor's proposal can be quickly compared against any other prior proposal. In this manner, you can be assured that the contractor made the requested changes between submissions.

Over time it may be difficult to remember the differences between two versions of an owner's estimate. Many versions may exist due to the number of changes required to arrive at a scope of work within the allowable budget or because of scope changes made between negotiation meetings. The estimate might have been shelved because of fiscal restraints or any other number of reasons. The comparison feature can be used to quickly check one owner's estimate against another owner's estimate.

EuroJOC's comparison feature was designed to be as flexible and friendly as possible. It is possible to compare *any* estimate with *any* other estimate or proposal. By relaxing the comparison rules EuroJOC allows any necessary comparisons can be run. By allowing data from different files to be compared, the user does not have to import and worry about data location. The contractor's proposal can be compared while located on a floppy disk.

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Chapter 9 – Using Assemblies & Assembly Builder

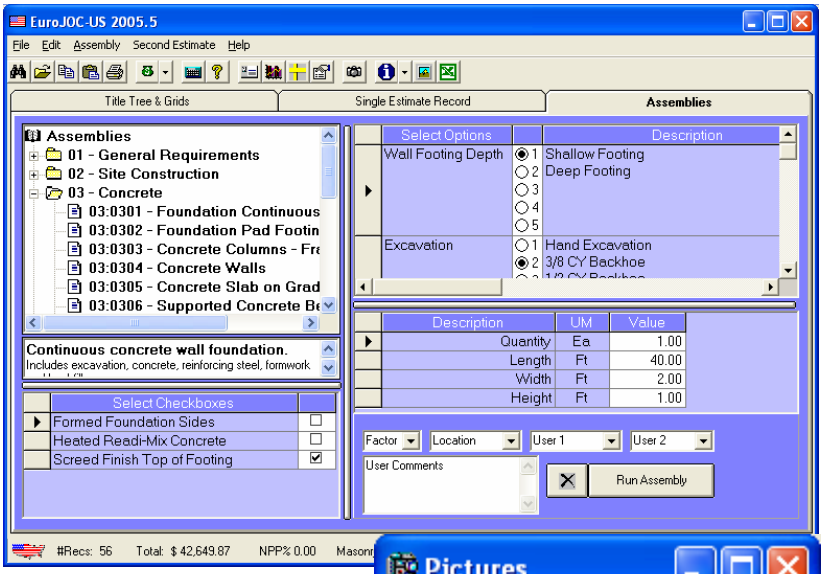
Assemblies were added as a new feature in July of 2005. Using EuroJOC assemblies can greatly increase the speed and reduce the complexity of completing cost estimates. Assemblies give the estimator the ability to create reusable methods of locating price items and calculating construction quantities for standard pieces of construction.

Assemblies are designed to in a general way model expected construction features. Cost items and quantities generated by the assembly are a starting point and can be further modified to meet exact project requirements. Assemblies should be designed to allow the user choices whether to include or exclude certain cost aspects.

The user should realize two processes exist; 1.) using assemblies, 2.) creating assemblies. The user does not have to know anything about creating assemblies in order to use them.

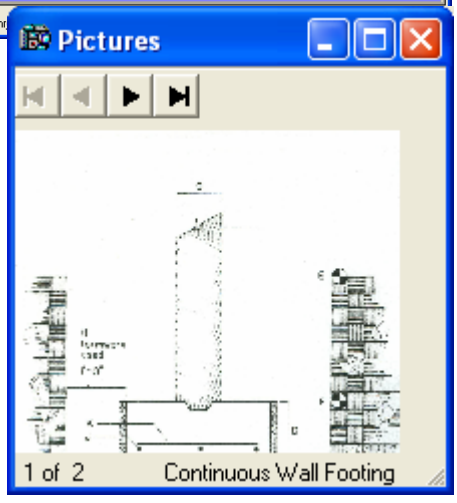
Using Assemblies

Using assemblies consists mostly of reading, selecting from the choices presented to the user and entering dimensions. 'Assemblies' are presented on the third tab of the estimate form. When an assembly file has not been selected on the preferences form, the 'Assemblies' tab on the estimate form is hidden. The 'Assemblies' tab has been designed in a two column format. The user is encouraged to start the process by selecting the assembly in the top left assembly tree and move down to the lower left grid, followed by the top right grid and moving down to enter the dimension variables and row label information.



The assembly designer decided whether the checkbox or option button grid is displayed first.

With dynamic assemblies, the user should be aware that making choices can affect what other choices or variables are displayed. A good example of a dynamic assembly would be; when the user selects a round column, the diameter variable would be displayed instead of length and width variables. The dimensional variables can be entered as feet, inches, and fractions. The value and will be automatically converted to decimal feet. (ex: 4' 5 5/8", or 4 5 5/8, 5', or 4")



Upon finishing the choice selections, entering dimensional variables and filling out the comments and the tagging information, the user clicks the 'Run Assembly' button to convert the information to estimate rows and quantities on the first tab. The user will see screen activity and finally the number of rows added to the estimate as a message in the bottom status bar. Rows added to the estimate are marked with the assembly used,

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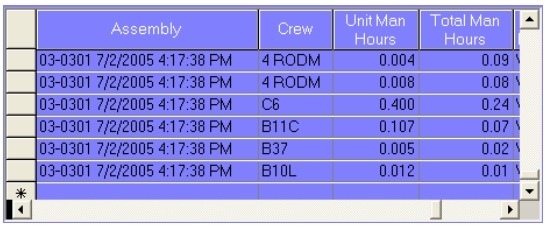
date and time. The user can make changes to the assembly created estimate rows in the typical manner. The user retains full control of the content of the estimate.



Assembly	Crew	Unit Man Hours	Total Man Hours
03-0301 7/2/2005 4:17:38 PM	4 RODM	0.004	0.09
03-0301 7/2/2005 4:17:38 PM	4 RODM	0.008	0.08
03-0301 7/2/2005 4:17:38 PM	C6	0.400	0.24
03-0301 7/2/2005 4:17:38 PM	B11C	0.107	0.07
03-0301 7/2/2005 4:17:38 PM	B37	0.005	0.02
03-0301 7/2/2005 4:17:38 PM	B10L	0.012	0.01

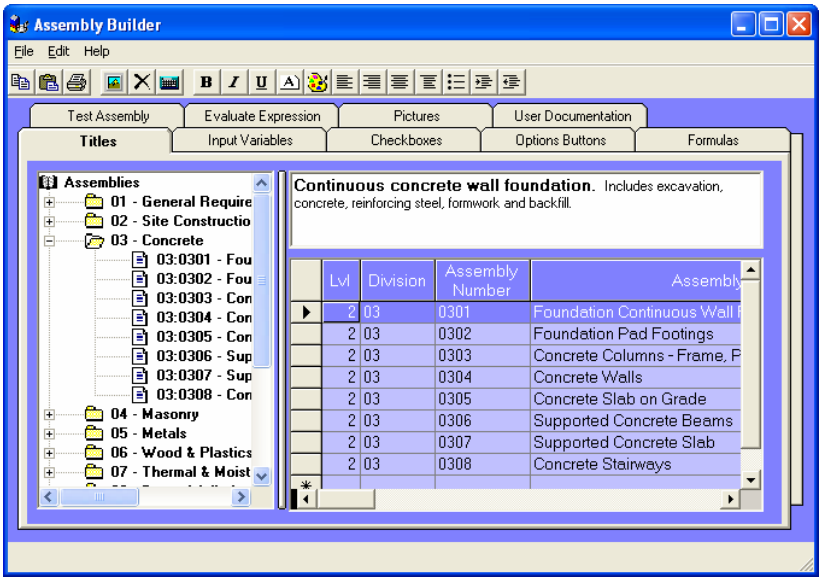
Click on the 'X' button to the left of the 'Run Assembly' button will clear all user selections for a fresh start. Right mouse clicking on an option button row will allow the user to deselect all choices for that grid row.

Displaying the assembly pictures, by clicking on the toolbar button, will let the user see one or more pictures related to using the assembly. The pictures may include a graphical representation of the input variables or show color pictures of equipment choices.

While the user does not need to know how to build assemblies, reading the next sections will give the user an appreciation of what can be accomplished with assemblies. Assembly changes are not difficult to make and can improve your satisfaction with the assembly. If you don't like the particular item selected by the assembly, and it is a permanent type of change, it is easy to change the assembly as discussed in the next section.

Creating Assemblies

The 'Assembly Builder' is where the titles, variables, checkboxes, options, formulas, and pictures are created and stored.



Many assemblies ship with the EuroJOC software. These pre-built assemblies can both be used in estimates and as templates for creating your own assemblies. It is possible to modify or copy the pre-built assemblies and change the item selections or the calculation formula.

By using the existing assemblies you will understand more about what is necessary to build an assembly.

The assemblies tab consists of five areas. In the upper left corner of the form is the assembly selector title tree. The user can select the assembly to be displayed and used.

Changing the assembly selected changes other areas displayed on the form. The assemblies designer can designate which option or checkbox grid is shown first.

The 'Assemblies' form is designed to represent a two column form. First select the assembly then select the checkboxes or options presented below the tree. Followed in the second column by selecting the grid choices presented. Dropping down, the user can then enter the variable values and finally the description information attached to each record created by the assembly. Each checkbox, option button and variable is asking the user a question. An answer or lack of an answer affects the results generated.

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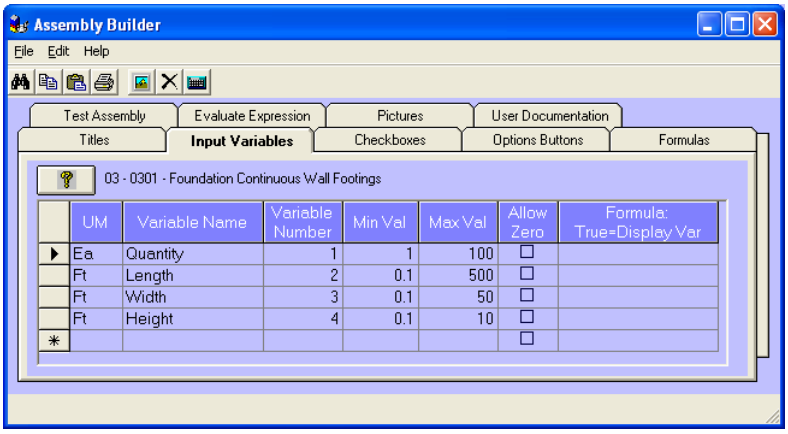
Once the values and setting have been confirmed. Clicking the 'Run Assembly' button will created estimate records on the first tab. The variable values will be checked to make sure they pass the required minimum or maximum value test for a variable.

The 'X' button located next to the 'Run Assembly' button clears all the checkbox, option, and variable values for the user. Between uses the assembly stores the last values used in the assembly.

Input Variables

A variable is created on this tab of the assembly builder. The variable number represents the order the variable is displayed on the user form.



The user entered input values are checked against the Minimum and Maximum values when the 'Run Assembly' button is clicked.

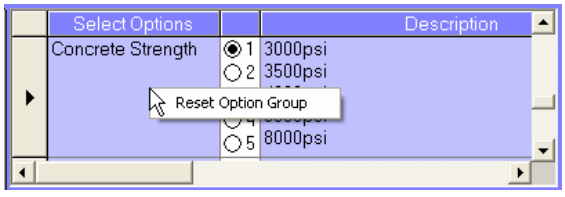
When the 'Allow Zero' column's checkbox is true, a value of zero may be entered by the user. When a zero is to be an acceptable input, the minimum value should be zero and the 'Allow Zero' checkbox should be checked. The minimum and maximum values may be set to negative number values.

Description	UM	Value
Quantity	Ea	1.00
Length	Ft	40.00
Width	Ft	2.00
Height	Ft	1.00

The formula column is used for dynamic variables to determine when the variable is displayed to the user. An example of a dynamic variable formula is: CB1, meaning when checkbox #1 is true or checked the variable will be displayed, otherwise the variable will not be displayed to the user. An example of dynamic variables would be turning on length and width variables for a square column assembly and turning on a diameter variable for a round column assembly. There are also 99 internal variables (xx1 to xx99) described in the formula section of this chapter.

Option Buttons

Option buttons, or radio buttons give the user one choice from a selection of up to five choices. The option group number determines the order in which the options are displayed. On the right is an example of a radio button displayed for the user. Right click an option row to see the 'Reset Option Group' menu selection. 'Reset Option Group' removes the selection made in the currently selected row.



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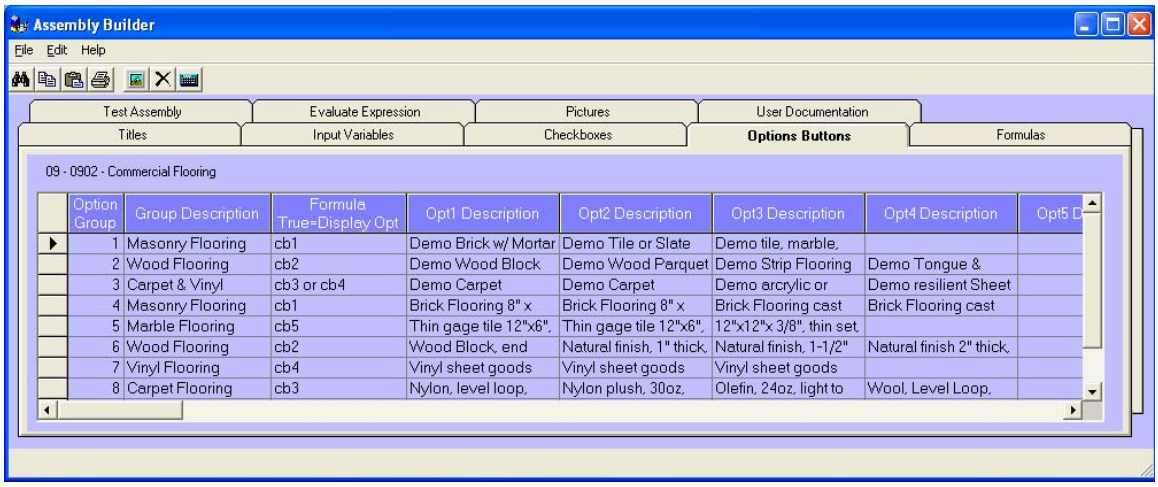


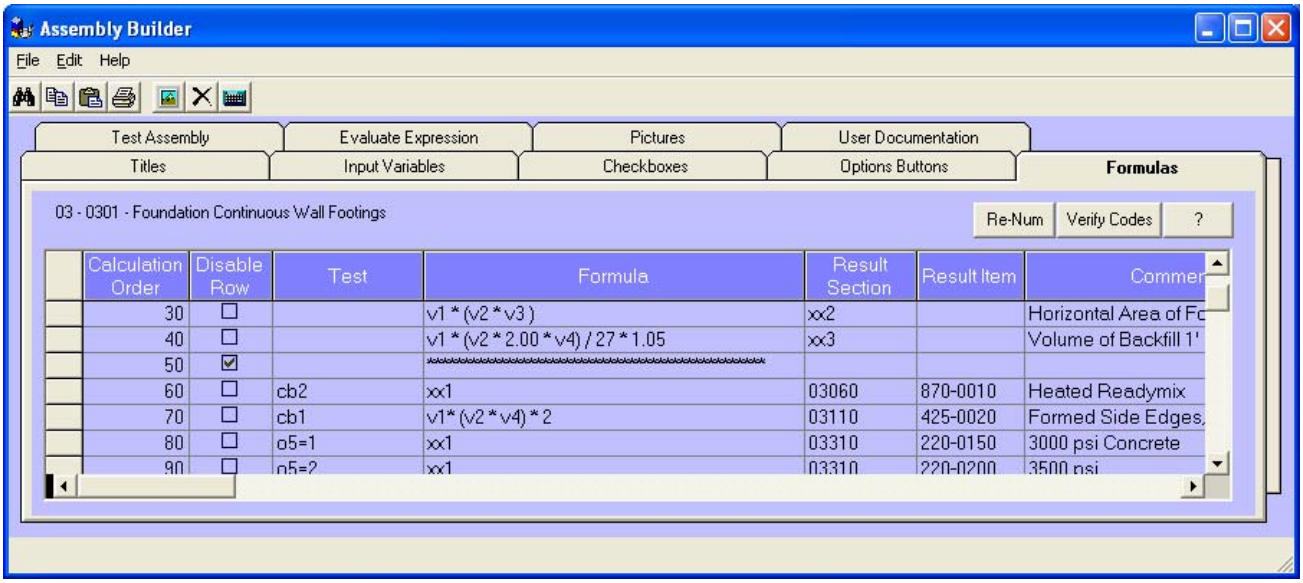
Option Group	Group Description	Formula True=Display Opt	Opt1 Description	Opt2 Description	Opt3 Description	Opt4 Description	Opt5 D
1	Masonry Flooring	cb1	Demo Brick w/ Mortar	Demo Tile or Slate	Demo tile, marble,		
2	Wood Flooring	cb2	Demo Wood Block	Demo Wood Parquet	Demo Strip Flooring	Demo Tongue &	
3	Carpet & Vinyl	cb3 or cb4	Demo Carpet	Demo Carpet	Demo acrylic or	Demo resilient Sheet	
4	Masonry Flooring	cb1	Brick Flooring 8" x	Brick Flooring 8" x	Brick Flooring cast	Brick Flooring cast	
5	Marble Flooring	cb5	Thin gage tile 12"x6",	Thin gage tile 12"x6",	12"x12"x 3/8", thin set,		
6	Wood Flooring	cb2	Wood Block, end	Natural finish, 1" thick,	Natural finish, 1-1/2"	Natural finish 2" thick,	
7	Vinyl Flooring	cb4	Vinyl sheet goods	Vinyl sheet goods	Vinyl sheet goods		
8	Carpet Flooring	cb3	Nylon, level loop,	Nylon plush, 30oz,	Olefin, 24oz, light to	Wool, Level Loop,	

The second graphic is an example of the builder grid where the option was created. Creating an option is accomplished by creating a row in the above grid and adding one or more option descriptions. The formula column is used for dynamic options. For example if the assembly has dynamic enabled, a formula like: CB1 will display the option whenever checkbox one is selected. The balance of the work getting an option established is on the formula tab. The option button formula codes check to see which option value is set and calculates the quantity accordingly.

Formulas

The formula editor brings together all the user input sources, calculates the quantities, calculates the pricing and then writes the results to the proper cost item codes.

The 'Calculation Order' column determines the order of the entire assembly's calculation process. The 'Disable Row' column allows the user to disable a row of the assembly or to create a remark. The 'Test' column contains formulas to determine whether or not the formula is executed based on user inputs. The 'Formula' column contains the formulas used to calculated quantities. The 'Result Section' and 'Result Item' columns contain the cost code to be used after the formula on the same row is used to calculate a quantity. The result column can also contain an intermediate variable such as xx1 through xx99.



Calculation Order	Disable Row	Test	Formula	Result Section	Result Item	Commer
30	☐		v1 * (v2 * v3)	xx2		Horizontal Area of Fc
40	☐		v1 * (v2 * 2.00 * v4) / 27 * 1.05	xx3		Volume of Backfill 1'
50	☑					
60	☐	cb2	xx1	03060	870-0010	Heated Readymix
70	☐	cb1	v1* (v2 * v4) * 2	03110	425-0020	Formed Side Edges,
80	☐	o5=1	xx1	03310	220-0150	3000 psi Concrete
90	☐	o5=2	xx1	03310	220-0200	3500 psi

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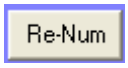
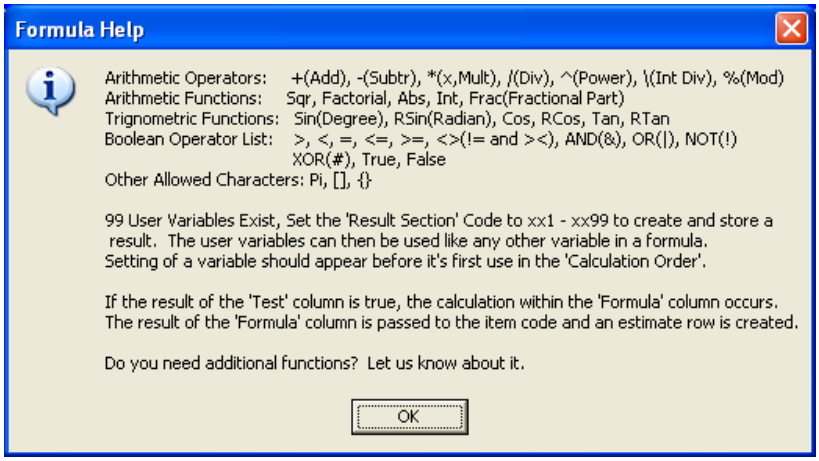


The 'Re-Num' button is used to create increments of ten in the calculation order column. For example, if the user needs to create formulas between rows 50 and 60, a new row at the bottom of the grid is created and given a calculation order number from 51… to 59. Upon finishing the Re-Num button sorts the formulas by the newly created formula numbers. The disable row checkbox column allows the user to temporarily disable a formula row from the calculation process.



The test column determines whether the row is calculated based on the user input variables. For example 01=1 tests to see if the value of option 1 is equal to one. If the value is of the boolean test is true, the formula is run and a result returned to the 'Result Section' and 'Result Item' cost code.

Formulas can consist of the operators presented in the formula help box shown above. Formulas are algebraic representations of the calculation method using operators and variables. Generally variables (v1 to v??) created on the 'Input Variables' tab and intermediate variables xx1 to xx99 are used within the formulas. The user can also input static numbers (ex: v1 * 1.05 * xx3) into the formulas. The formula is calculated in the order of the hierarchy of the operators (^, *, /, +, -) or as specified by parenthesis. Three sets of parenthesis types exist for the user to indicate the required calculation order ([ ],( ), and { }).

The 'Verify Codes' button directs the program to verify that each cost codes exists in the unit price book specified on the preferences form. The feature also stores the cost item descriptions into the formula database. As each formula row is displayed the cost code item's description is displayed in the status bar at the bottom of the form.

Test Assembly

The Assembly Builder has the capability to test an assembly within the builder form. Though slightly different, the user sees the checkboxes, option buttons and variables they would see on the estimate form's 'Assembly Tab'. The assembly being tested is that which is currently selected on the assembly builder's 'Title Tab'. Assembly variables can be entered in the form of feet-inches-fraction and will be converted to decimal equivalents. Horizontal and vertical bars allow the user to resize the grids as necessary to see the input grids.

The 'Run' button starts the assembly calculation process and the 'X' button resets all the user input variables, checkboxes and option buttons. After selecting a radio button, the user should be aware the selection can be deselected from any choice by right clicking on the row and then clicking the 'Reset Option Group' menu item.

The results of the assembly test are displayed in a grid representing the estimate in the lower right corner of the form. Each row that would ultimately be added to the user's estimate is shown in the same format as on the estimate form's 'Title Tree & Grids' tab. The quantities and cost

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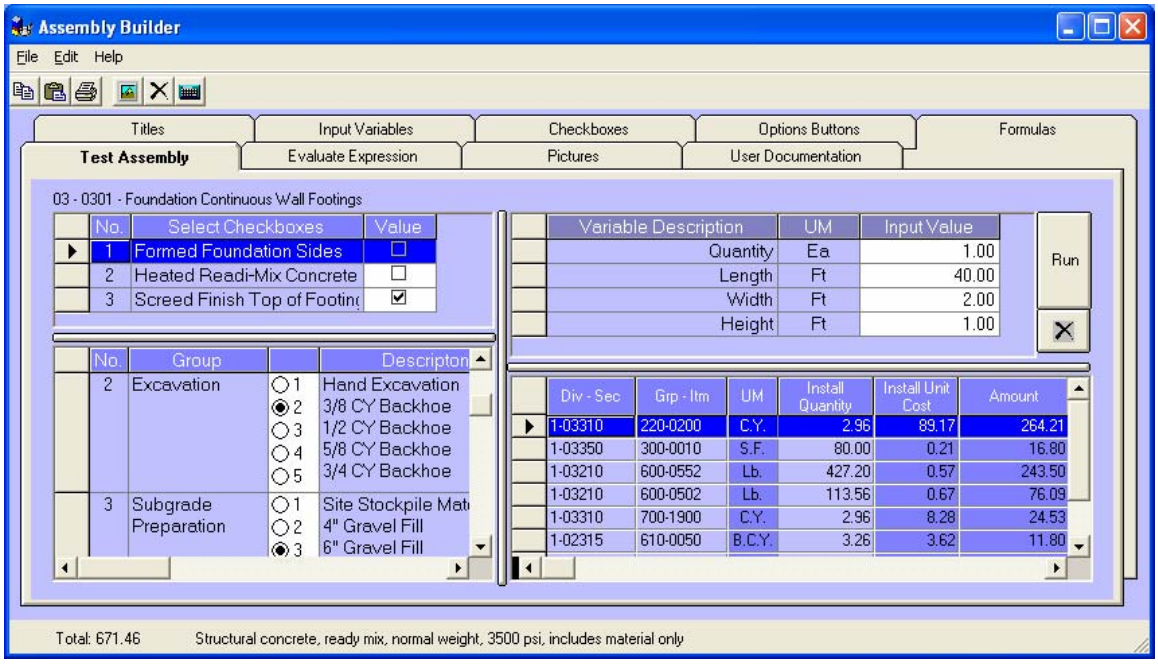
items are created first and then the unit prices and row total cost calculations are completed in a matter of seconds.

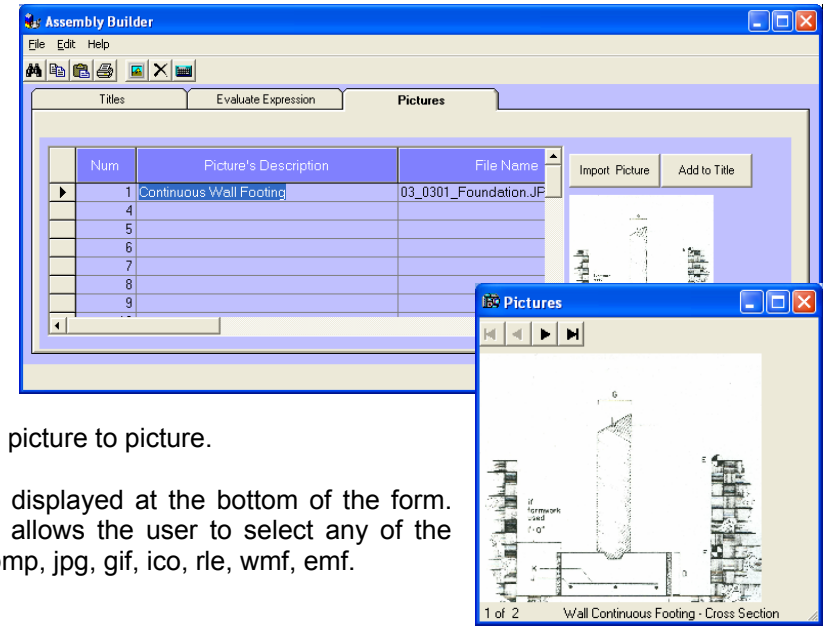
The results generated are used to check the assembly building process. The results can be used to verify the checkbox and option button variables are working as expected. The dynamic aspects of the assembly can also be tested before they are used in an actual estimate.



Assembly Pictures

Pictures can be used to visually explain the variables or give examples of various product samples and choices used within the assembly.

Assembly pictures are stored in such a manner that an individual picture can be shared among many assemblies. Each assembly title can have multiple associated pictures.



When a title has multiple pictures, the picture display form has four buttons displayed that allow the user to move from picture to picture.

The picture's description is displayed at the bottom of the form. The 'Import Picture' button allows the user to select any of the following file format types: bmp, jpg, gif, ico, rle, wmf, emf.

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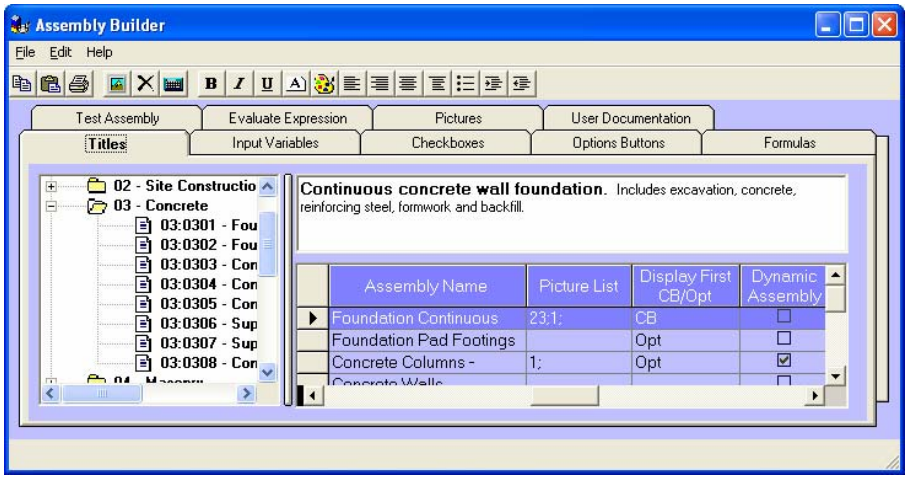
When pictures are added to the current title, they become part of the 'Picture List' column. Each picture is separated by a semi-colon or comma. The user can modify the list to remove or add associated pictures to an assembly or division title.



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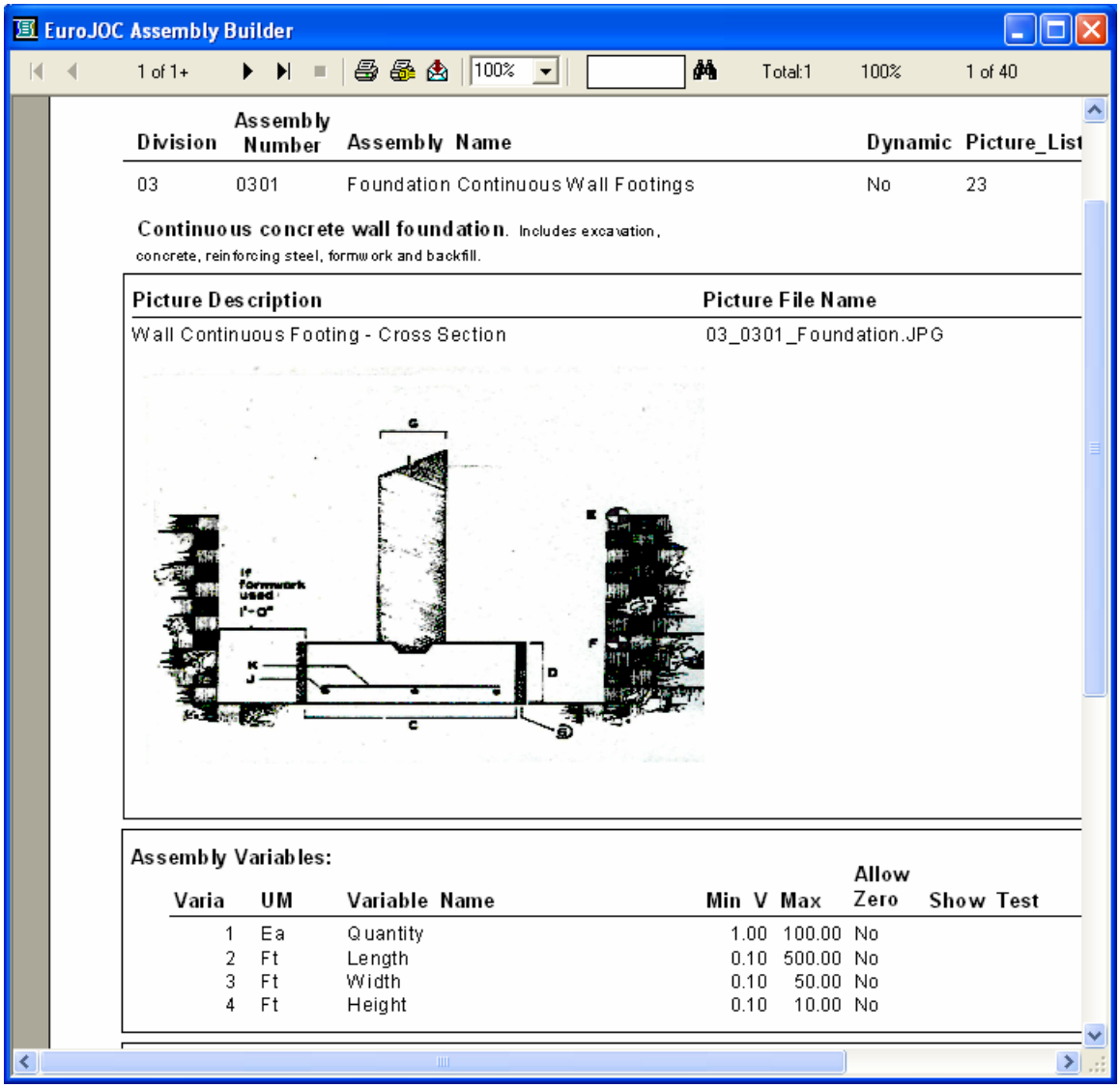
Printed Assembly Listing

A report can be printed for each selected assembly. All the variables, checkboxes, option buttons, formulas and pictures that represent an entire assembly are printed on one report. The report can be used to verify any aspect of variable, formulas and the resultant cost codes.



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Appendix A - Technical Notes & Data Base Details

Technical Notes

This EURO JOC system has been developed in the Windows-Xp Pro environment, using
The following products.

A. Microsoft Visual Basic® version 6.0 Professional Edition- Service Pack 6 was used. This is a MS Window's based compiler.

B. Microsoft Access® Xp (Jet Engine 5): This product has been used to develop the databases for the project.

C. Microsoft Word® Xp - The word processing program was used to create this technical user's manual.

Microsoft Corporation - One Microsoft Way - Redmond, WA 98052-6399
(206) 646-3503

D. True DBGrid Professional for Visual Basic 6.0: This product has been used to provide grid controls for the forms.

ComponentOne LLC, 4516 Henry Street -Suite 500, Pittsburgh, PA 15213 USA
800.858.2739, 412.681.4343, 412.681.4384 (Fax) www.componentone.com

E. Crystal Reports Version 8.0: This product has been used to create the reports and print preview forms throughout the software. This product was formerly published by Seagate software.

Crystal Decisions, Inc., 895 Emerson Street, Palo Alto, CA 94301-2413,
800-877-2340 or 604-681-3435, 1-604-681-2934 (fax), www.crystaldecisions.com

F. WinZip Version 8.0: This product is used to distribute the EuroJOC software on the internet. The entire program is compressed into a single encrypted self installing exe file.
www.pkware.com

Grid Information:

Files with the file type of: GRX contain the True-grid layout information. They can be deleted when needed to restore the programs default grid layout information. The GRX files will be recreated by the EuroJOC software. The EuroJOC program does not save grid information for all of the available grids. Restoring default grid information can also be handled using the preferences form.

Database Details:

Many databases and files are used to support the EURO JOC system. When the program is installed, directories and files are created. The use should specify non standard locations on the 'Preference' form's 'Setup' tab. The following is a brief description of the databases and files. The user should be aware that each database file can contain many tables of data. CorVet Systems will respond to any reasonable request for information about the data structure. We also can create custom additions and reports to meet client needs.

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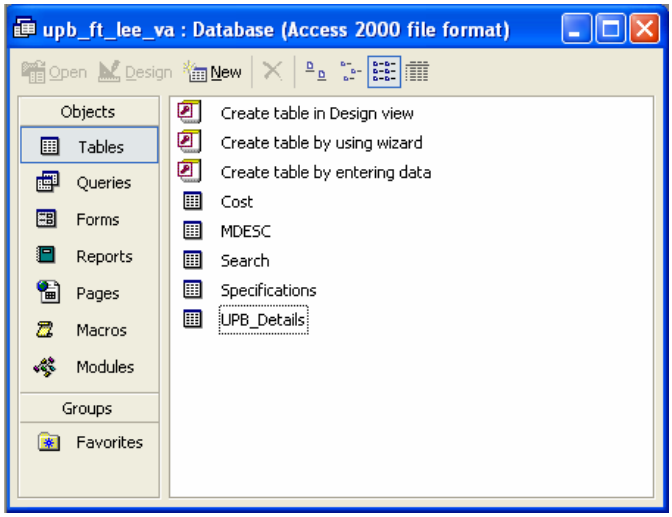
A. APP_TEMP.MDB

This database includes the form position saved data, contractor list, Status Date Template Items, and a system global table of variable.

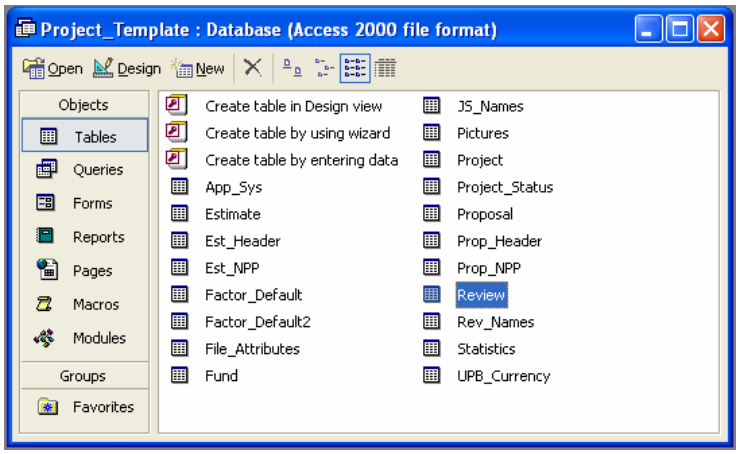
B. UPB_??????.UPB

This is Unit Price Book database and can have various file names. The database has to be specified as the 'Price Book File' on the 'preferences' form ‘Setup’ tab in Utility menu of the main form. A discussion and list of the various fields used in the MDESC and Cost tables is included in chapter seven.



C. contract_file_template.con

Contract_File_Template is a template for creating new contract files. The location of this database is in the system_files subdirectory of the directory the program has been installed. Any user modification of this file will appear in the new contract files created.



D. Comparison_Template

This database stores the template that the program uses for the estimate comparison feature. Estimate and proposal data is copied into this file as needed and the compare table stores the comparison results.

E. Multi_Language.MDB

This file stores the language conversion data for the various program controls. The file is used each time the language

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	selected changes. The file is required even if English is the only language needed.
F. Security.MDB	The Security file is an encrypted file contains the user name and password data.
G. UPB_Out_Template	This file is used for printing the unit price book divisions.
H. xxxx.rpt	There are approximately sixteen Crystal Report files located in the reports folder containing the crystal reports. These files are accessed and fed parameters by the EuroJOC software. If they are improperly changed by the user, they may not continue to function. You should always make a backup of the file before trying to modify it. These files can be opened and modified using Crystal Reports Version 8.0.

Please be assured, as our customer, you will be given any information necessary for the completion of your requirements. Unit price data provided by others may have limitations to protect their data from being copied. If you need to know something, please ask.

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Index

Abbreviations ..... i, 28, 29, 36, 81
About Form 35
Access ... iii, 2, 3, 5, 7, 16, 27, 38, 42, 62, 63, 73, 83, 87, 103
Active Cell 14
Add a New Row 14
Adding Item ..... i, ii, 34, 43
Administrative Functions 1, 76
Administrator 5, 7, 8, 9, 19, 32, 38, 67, 75, 76, 80, 81, 85
Advanced Search ..... iii, 76, 77, 78
Assemblies ..... iii, 95, 96
Assembly Builder ..... iii, 95, 96, 99
Attendance 19
Backing Up ..... ii, 51
Bar ... 5, 9, 10, 11, 12, 13, 14, 15, 16, 19, 24, 25, 26, 27, 35, 37, 38, 42, 45, 47, 48, 49, 50, 60, 66, 69, 76, 80, 89, 92, 95, 99
basket 42
Basket 33, 42, 45
Better Searching 36
Binoculars 53
Browse Button 64
Calculating ..... ii, 47
Calculation Errors ..... ii, 47
Calculation Method 21, 27, 50, 63, 65, 66, 99
Case Sensitive 36, 67
Categories 23, 43, 58, 90
CDROM 5, 6, 29, 35, 51, 76, 84
Change Window 42
Character Map 9, 47
Check Box 13, 34, 44, 55, 59, 81, 90, 95, 96, 97, 98, 99, 100
Child Node 15
Coefficient Factors 19
Coefficients ..... ii, 21, 65
Column Order 14
Column Width ..... ii, 14, 42, 48, 49
Combo Box 13
Command Button 13
Comments 4, 49, 95
Compact Database ..... i, 27
Compact Databases 20
Compare Results ..... iii, 89, 91
Comparison ... ii, iii, 4, 61, 68, 85, 86, 88, 89, 90, 91, 93, 104
Component Cost ..... ii, 41, 43, 45, 60, 63, 75
Contract Files. i, 8, 19, 20, 21, 27, 28, 29, 66, 87, 88, 104
Contracting Process ..... i, 30
Contractor Coefficients 20, 21, 27, 64
Contractor Proposal 29, 86, 87, 88, 89, 93
Contractors Tab ..... iii, 66
Contractual 5, 26, 45, 69, 75
Contractual Data ..... i, 32
Conventions ..... i, 2
Conversion ..... i, 28
Conversion Factors ..... i, 28, 47
Copy 6, 10, 28, 29, 32, 33, 47, 73, 76, 80, 81, 87, 96
Corrupted 27
Cost Estimate 19
Cost Formulas ..... iii, 66
Cost Records ..... iii, 4, 75, 76, 78
Cost Report ..... ii, 55
Cost Tab ..... i, 24, 78, 88
Create New Estimate 24
Creating Remarks ..... ii, 49
Crew Code 79
Crystal Reports 2, 3, 61, 62, 103, 105
Currency Ratio 64
Currency Tab ..... ii, 64
Customize 1
Data Checking ..... iii, 80
Database Details ..... iii, 103
Default Settings 7, 49, 69
Default Values ..... iii, 68
Definitions 11, 76
Delete ... 7, 10, 11, 14, 17, 19, 23, 28, 44, 47, 78, 80, 87
Delete a File 17
Delete Database ..... i, 27
Deleting Rows 14
Demolition Cost ..... ii, 44, 63, 75
Display Grids 1
Distributing ..... iii, 83
Division Print 38, 39
Double Clicking 1, 16, 19, 23, 34, 37, 38, 43, 45
Drag & Drop 34
Dynamic 63, 95, 97, 98, 100
Editing Items ..... ii, 44
E-Mail 7, 10, 19, 21, 29, 87
Encrypted 9, 42, 67, 103, 105
Error Messages 72, 78
Errors 42, 46, 47
Estimate Form .. 8, 12, 22, 24, 28, 31, 32, 37, 38, 41, 42, 43, 44, 47, 48, 49, 50, 51, 56, 63, 76, 77, 80, 83, 86, 95, 99

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Estimate Grid . 15, 32, 34, 37, 38, 41, 42, 43, 44, 46, 48, 63, 68, 69, 88
Estimate Size 4
Estimate Toolbar ..... ii, 47
Export 71, 73, 76
Facility Information ..... iii, 68
File Dialog 10, 16, 17, 25, 27, 28, 45, 64
File Dialog Form .. 10, 16, 17, 25, 27, 28, 45, 64
File Structure ..... i, 21
File Type 87, 103
Financial 60
Fly-out 15
Fonts 2
Foreign Language ..... i, 9, 20
Form Settings ..... iii, 49, 69
Formulas 66, 98
Funding Document 26
General Information Tab ..... i, 22
Government Estimate 42, 87
Green Item Grid 15, 32, 42, 44, 46, 47, 83
Grid ..... ii, 13, 14, 15, 34, 48, 63, 71, 103
Grid Fly-outs 15
Grid Heading 2, 46, 71, 91
Grid Splits 14, 49, 69
Group Description 37
Group Items ..... ii, 34, 44
Group Results 35
Help Menu ..... ii, 34
Help System 9, 34, 47, 51
Horizontal Bar 11, 24, 25, 45, 76
Icon 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 22, 25, 27, 29, 33, 38, 39, 44, 45, 47, 48, 50, 53, 54, 56, 57, 58, 59, 60, 62, 73, 81, 82, 83, 88, 90, 91, 92
Import 26, 34, 71, 73, 76, 87, 100
Import Project 26, 87
Importing Proposals ..... iii, 87
Input Variables ..... iii, 97, 99
Internet 5
Item Description . 2, 4, 35, 36, 37, 39, 81, 83, 99
Item Results 35
JOC Process 30
Joint Scope ..... i, ii, 24, 26, 57
Joint Scope Meeting 19, 25, 57
Key Word ..... ii, 35
Keyboard i, 9, 11, 12, 13, 14, 16, 17, 34, 44, 76, 78
Languages Form ..... iii, 9, 71
Liquidated Damages 26
List Box 13
Lock 22, 24, 42, 64
Look In 16, 17
Magnification 53
Main Form ..... i, 19
MDesc 75, 83, 84
Menu System ..... i, 12, 16, 34
Message Box 17
Modifier .... i, ii, 15, 32, 33, 42, 44, 46, 47, 66, 75, 79, 81, 83, 84
Moving Grid Columns ..... ii, 48
Multi-language 72
Negotiation 25, 49, 56, 85, 87, 88, 90, 91, 93
Negotiation Meeting ... i, ii, 25, 56, 85, 87, 90, 93
Non-Prepriced 32, 42, 45, 56
NPP Report 54, 56
Option Button ..... iii, 13, 97
Options ..... ii, 44, 63
Overtime 50, 66
Packing database 27
Pane 42, 48
Parent 15, 33, 44, 46, 47
Password . 2, 5, 9, 19, 24, 38, 41, 67, 69, 75, 76, 78, 80, 81, 85, 86, 105
Paste 28, 29, 47, 68, 76
Pencil Mode 14
Percentage 33, 44, 46, 47, 81, 91
Perpetual Calendar 23
Pictures ..... i, ii, iii, 4, 25, 51, 57, 82, 100
Pictures Tab ..... i, 25
Positions ..... i, 31
Preferences 8, 14, 15, 17, 20, 41, 42, 44, 47, 48, 49, 63, 64, 67, 68, 75, 95, 99, 103, 104
Preliminary Remarks ..... iii, 83
Preview 4, 27, 38, 39, 50, 53, 54, 62, 70, 82, 92, 103
Primary Sort 46, 91
Print Preview ..... ii, 53, 70
Printer Setup 39, 53
Printing ..... i, ii, iii, 27, 38, 50, 53, 59, 82
Productivity 4, 63
Programmer Access 73
Progress Photos 19, 25
Project Select Tab ..... i, 22
Project Status Report 58
Project Status Tab ..... i, 23
Radio Button .. 24, 35, 36, 38, 39, 41, 77, 86, 88, 89, 97, 99
Read Only 38, 91
Read-Only 17, 38, 42, 87
Recalculate 43, 63, 89
Remarks 49, 50, 83
Re-pricing 27, 42, 47, 81
Request for Proposal ..... i, 23
Request for Proposal Tab 23
Requirements ..... i, 1, 5
Resize 15, 99
Restoring ..... ii, 20, 51, 103
Reverse 4, 22, 33, 87, 91

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Rich Text..... 13, 22, 23, 24, 25, 26, 68
Row Height 14, 48, 49
Schedule of Services and Rates 31
Scroll Bar 13
SDesc 75, 83
Search ii, 1, 4, 28, 32, 35, 36, 37, 38, 43, 47, 53, 70, 75, 76, 77, 78, 83
Second Estimate..... ii, 45
Security..... 7, 8, 9, 20, 41, 67
Select Records ..... iii, 75, 76
Selecting a File 16
Setup ..... i, ii, 5, 6, 8, 53, 64, 103, 104
Sharing Error 27
Shortcuts..... i, 9
Sorting ..... ii, iii, 4, 14, 46, 91
Specification ..... ii, 63, 69, 70
Splitting Grids ..... ii, 49
Spreadsheet 11, 13, 62
SSR ... 3, 5, 8, 31, 39, 45, 59, 64, 65, 75, 80, 84
Statement of Work..... i, 26, 53
Statistics Form 50
Statistics Report..... ii, 55
Status Date ..... ii, 60, 104
Status Report..... ii, 58
Structure 4, 15, 17, 21, 33, 34, 37, 62, 76, 80, 84, 103
Subtotals.....55
Surcharge ..i, ii, iii, 33, 34, 44, 46, 66, 79, 83, 91
Surcharge Grid 32, 42
Surcharge Item i, ii, 3, 15, 32, 33, 34, 43, 44, 46, 47, 81, 83, 84, 91
Tab Control 13, 71
Taskbar 12
Technical Notes ..... iii, 103
Template 9, 20, 104
Test Assembly ..... iii, 99
Text Box..... 13
Three Click.....i, 34
Title-Tree.. i, 1, 15, 32, 33, 37, 42, 43, 44, 80
Tool Tips 12
Toolbar..... 12, 47
Trademarks..... 3
Translations ..... iii, 81
Tree-View.. 15, 33, 34, 36, 37, 42, 48, 80, 83
Typefaces .....i, 2
UM Unit of Measure..... 28, 33, 46, 79, 83
Uninstall 11
Unit Price Book i, ii, iii, 1, 4, 8, 19, 31, 38, 43, 59, 60, 66, 75, 78, 82, 83, 104
UPB Details..... iii, 80
UPB Editor 75, 76, 81
Use Modifier..... 83
User ID..... 4, 5, 7, 19, 67, 85, 86
User Type 19, 67, 85
Using Assemblies ..... iii, 95
VCR 39, 53, 56
Visual Basic 2, 3, 103
Window Settings ..... ii, 49
Window State..... 42, 48
Windows Explorer..... 33
Windows Form..... 11
Word Phrases 36

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