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DRAFT

PROPSPIN III User Manual

UNIDO

Project Profile Screening and Pre-Appraisal Information System

USER MANUAL

(draft)

DRAFT

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Part A : Installation

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DRAFT

PART A   INSTALLATION

1.   Hardware requirements

The programme PROPSPIN III ver.0.f requires:

♦ MS-DOS 3.1 or later version
♦ hard disk free space of at least 1,4 Mbyte
♦ RAM configuration of at least 640 kByte
♦ the presence of a 3.5 diskette driver.

2.   Unpacking

The PROPSPIN III package includes :

♦ n.1 diskette 3.5
♦ n.1 User Manual
♦ n.1 Software License

3.   Installation of PROPSPIN III ver.0.f

The programme is distributed through a 3.5 diskette in a compressed file version. It is therefore required to perform the following list of operations:

- C:\>A: (move DOS prompt to diskette driver)
- A:\>INSTALL   (run the auto-install software)

- A first window will inform the user about the version of the package (Release 0.f). The user can proceed in the installation with ENTER, and abandon with ESC.

- A second window permit the user to edit the name of the directory where to unpack and install the PROPSPIN copy The default directory is C:\PRO3F; the directory will be created if missing.

- A progress indication informs the user about the unpack process from the diskette to the target directory. The current processed files are listed.

- The installation program requires to the user the authorisation to modify the CONFIG.SYS file.
     "Do you wish this program to modify your CONFIG.SYS ? Press Y for Yes, N for Not"

- A final window inform the user about the way to run the program after the installation process:
     "Installation completed. To run PROPSPIN :
     CD -directory name selected> ENTER,
     PRO ENTER"

- A final window requests the user to select if the reboot option should be selected:
     "Do you wish to reboot? Press Y for Yes, N for Not"

4.   Set-up of CONFIG.SYS

Instead of using the set-up facilities of the auto-install package, the user may decide to modify the CONFIG:SYS file by his own. In such a case, the user is requested to open CONFIG.SYS with a proper tool (such as EDIT.EXE included in the DOS directory) and check that the following issues are set up according to the suggested figures:

     FILES=99
     BUFFERS=50

5.   Software License

As soon as the commercial version 1.0 is received, within 5 days from the reception of the package, the user is requested to duly fill in the software license form and send it back to the indicated address. The user shall retain a copy of the licence with the package for any future maintenance and update activity.

PART B : Utilisation

1. INTRODUCTION

1.1 What is PROPSPIN

PROPSPIN stands for Project Profile Screening and Pre-Appraisal Information **System**, and has been developed by UNIDO in order to enable the user to prepare, screen and analyse industrial investment projects.

PROPSPIN can facilitate the activities of:

- formulating industrial investment projects in standard, comprehensive and structured format
- carrying out financial and economic analyses of the envisaged projects
- analysing the business results according to different scenarios developing sensitivity analyses on selected parameters
- preparing complete output reports, including full printout of input tables and calculated results, with a planning horizon of up to 15 years

PROPSPIN has been developed as an easy tool for rapid screening of industrial proposals and for comparing different deployment solutions. It also represents a tool for financial and economic appraisal for those financial institutions (such as private banks, government organisations, international finance agencies) requested to participate in financial matters.

Please note that PROPSPIN , due to its limitations as far as data inputs are concerned, is certainly not fully recommended to deal with complete feasibility studies. The calculated output schedules permit the analysis of the basic financial characteristics of the project. Moreover, initial evaluations of the project's profitability in terms of well known indicators such as IRR, pay -back period break-even point and other ratios are permitted. However, in case of the development of a fully-fledged feasibility study, the use of the UNIDO specialised software package **COMFAR III Expert** is highly recommended. Please apply to the Investment Section Feasibility Branch of UNIDO Headquarters in Vienna (or to the national offices) for any further explanation you may need.

1.2 PROPSPIN III

The **PROPSPIN III** analysis package is a modern and easy tool to evaluate the economic opportunity and the financial structure of a potential industrial investment. It has been developed by the Italian UNIDO office **IPO Milan** to improve the previous version features and to update the MMI (Man-to-Machine Interface). **PROPSPIN III** relies on the standard techniques for industrial investment appraisal and preparation of feasibility studies generally applied by UNIDO. It is mainly focused on the private investor's perspective which implies financial profitability and commercial risk analysis.

The program is based on a compiled version of CLIPPER therefore, it is a stand-alone package given the support of the operative system MS-DOS 3.1 or later versions. A number of different printer set-up are available inside the package.

Most relevant data such as envisaged investment, foreseen costs and sales of products can be easily inserted by utilising self explaining schedules displayed on the screen. The user can so obtain a clear picture of the economic results within the defined planning horizon. An On-line help function is always available in the input sections to guide the user.

PROPSPIN III does not require to fill in all the data input tables; information can be added by the analyst, proceeding from an initial appraisal of the minimum basic data to a more refined analysis along with the natural process of expanding data collection This manual is intended for the use of those that already have a clear understanding of the project appraisal techniques. Besides this manual, for any theoretical and practical approach to the matter, reference may be made to the **UNIDO Manual for the Preparation of Industrial Feasibility Studies**, which represents the common root for both COMFAR III Expert and PROPSPIN III

1.3 General organisation of the program

The program is structured through five basic sections (input, calculations, view, reports, utilities), with several inside levels describing all the required input data or output tables.

Basic investment abd operating data are entered on several database files which are coded and saved automatically by the program. The user is not aware of the multiplicity of the underlying software support. Foreign and local inputs are required by different program sections, according to the following main issues:

- Project identification, planning horizon, accounting currency, income tax, tax holiday, losses carried forward, discount rate

- Investment costs in the planning horizon, and related depreciation rates
- Equity and grant contribution along the years
- Loans and export credits contributions
- Products and related costs, sales along the years
- Utilities costs
- Labour costs
- Other overheads, such as royalties, rents, maintenance, marketing
- Working capital requirements

The output tables consist, besides all the input schedules, of such results as Net Income Statement table, Investment table, Cash Flow for financial planning, Discounted cash flow and IRR for Investment and Equity, and several ratios.

As a general rule, it is possible to return back from any of the levels to the previous one, confirming the input data at the same time, by pressing the ESC button. Whenever required, the user will confirm the data input selected through the proposed options on the window menu.

To quit the program, select the UTILITY section, and then select QUIT.

At any level, the lowest blue coloured row on the screen indicates the reference buttons to move along with the programme. For every schedule, the relative paragraph of the documentation describes extensively the available options proposed.

1.4   Run the program

To run the program (ver 0.f) simply make certain you are in DOS, enter the directory you have defined during the installation, and digit the program runtime code:

      C:\<directory> PRO

2.   SECTIONS

The PROPSPIN III analysis package is composed of five separate sections, which are presented in the Main Menu. The complete analysis is performed following the complete path through the choices listed below presented by the first menu of the programme

The logical sequence requires to pass through all the sections, namely:

    1. INPUT_DATA_ENTRY   create a new project or identify an existing one; insert the relevant data

    2. COMPUTE   calculate all the necessary evaluations

    3. OUTPUT_TABLE select and display the output tables

    4. REPORT   select and print out the output tables

    5. UTILITY   import and export of projects; set up the printer; quit the program

The section labels are displayed on the opening menu (Main Menu) of the programme . They can be selected locating the cursor with the arrows (right and left, circular manner) and pressing ENTER. When the section is selected, a further selection is requested, the user must again locate the cursor with the arrows and press ENTER to choose . By pressing ESC the specific section window disappears and the user can move back to the Main Menu.

TO SELECT A SECTION

locate the cursor in the Main Menu with the arrows, and press ENTER

to select an option in the Section: locate the cursor with the arrows, and press ENTER

to move back to Main Menu : press ESC

2.1   INPUT_DATA_ENTRY SECTION

This section allows the user to input all the parameters needed to describe the envisaged investment.

Project: title and code of the project. date. location. sponsor, base year and planning horizon, local and foreign currencies and their respective exchange rates, income tax rate, tax holiday period. and discount rate.

Investment   yearly foreign and local investments, classified into different types, with related depreciation rates.

Equity and grants: yearly foreign and local equity shares and grants, dividends percentage per year;

Loans and Export Credits: terms and conditions of local and foreign loans (amount, interest rate, duration, grace period. interest during the grace period, disbursement per year);

Products: types of products, sales p ogram per year and related prices. raw materials consumption per year and related costs;

Utilities: yearly consumption and cost of water. electricity, diesel and other utilities; yearly Labour cost and employed quantities of work force, classified as unskilled, skilled, technical. clerical, managerial and expatriate;

Overheads: Taxes and levies. training, factory overheads, marketing overheads, rents, fixed percentage royalties, spare parts. maintenance and other costs, split by year;

Working capital: days of coverage for different items such as cash in hand. account receivable. raw material. products in process. finished products, spare parts, utilities. account payable;

2.2   COMPUTE SECTION

Compute   at the end of the input data phase, the PROPSPIN analysis is carried on, processing the data and calculating the results. The overall elapsed time is displayed.

2.3   OUTPUT_TABLE SECTION

The below-mentioned list of available results can be selected:

Net Income Statement Table:
          report of sales, direct and indirect costs. depreciation, financial costs, tax 's and profit over the planning horizon years

Total Investment Table:
          total fixed assets (according to Data Entry-Investment Section), total working capital (classified according to Data Entry - Working Capital Section), accounting capital, net working capital, increase in working capital, total investment, displayed per planning horizon years

Cash Flow for Financial Planning:
          sources of cash (sales, dividends, variation in accounts payable, equity, loans, export credit overdraft), uses of cash (assets, variation in current assets, operative expenses, debt service. income tax), financial surplus/deficit, cumulative cash inflow. cumulative cash , displayed per planning horizon years

Cash Flow for IRR and NPV for Project:
          cash inflow (sales), cash outflow (assets, increase in working capital, operative expenses, income tax), net cash flow. discounted cash flow, cumulative discounted cash flow displayed according to the planning horizon years, and the total IRR (calculated on the total investment) and NPV (calculated on the discounted cash flow of the table)

Cash Flow for IRR and NPV for Equity:
          cash inflow (sales), cash outflow (assets financed by equity, operative expenses, debt service, income tax), net cash flow. discounted cash flow. cumulative discounted cash flow displayed according to the planning horizon years, and the total IRR (calculated on the total equity) and NPV (calculated on the discounted cash flow of the table)

Indicators :
          Return on investment, Return on equity, Percent of export/sales, cash flow/sales, debt service cover ratio, acid test and current ratio are provided.

2.3 REPORT SECTION

Output Table   List of output tables to be selected for printing:

. Net Income Statement Table
. Total Investment Table
. Cash Flow for Financial Planning
. Cash Flow for IRR and NPV for Project
. Cash Flow for IRR and NPV for Equity
. Indicators
    . Return on investment
    . Return on equity
    . Percent of export/sales
    . cash flow/sales
    . debt service cover ratio
    . acid test
    . current ratio

Input Layouts   List of input data to be selected for printing:

. General Project Data
. Investment Layout (Local)
. Investment Layout (Foreign)
. Investment Layout (Local/Foreign)
. Amortisation rates and Working Capital Requirements
. Equity and Grants
. Loans and Export Credits
. Production programme / Raw materials
. Utilities / Persons engaged
. Distribution of Overheads

3. INPUT_DATA_ENTRY SECTION

3.1 Project

The first input PROPSPIN provides to the user either the selection of the Project from the list of the available projects, or the creation of a new project by filling in an identification schedule. After having identified the project (either selected or created), it is possible to proceed with the other input activities of the program.

3.1.1 Select a Project

The project is identified by the following data in the List of Investment Projects schedule:

PROJECT NUMBER   : reference number of the Project under consideration
TITLE   : reference name of the Project
LOCATION   : place where the Project is located (city, country, others)

The user is requested to select among the following keys (please refer to the lowest display row for screen agenda):

    F1 :   on-line help
    F2 :   to add a project to the list
    F3 :   to delete the project identified
    F4 :   to modify the identification of the project
    F5 :   to find the project by project number and title
    F6 :   to select the project identified
    F9 :   to show the summary table of investments and sources of finance
    ESC :   to confirm and go back to the Main Menu

The programme permits in fact to get an intermediate picture of the balance of investments and sources of finance, showing a summary table of the project by pressing F9. The Balance of Investment and Financial Sources Without Working Capital (it means without the Net Initial Working Capital contribution computed) appears, showing the algebraical difference of the sum of grants, equity and loans less the total investment. Of course, if the difference is positive, the sources of finance exceed the investment

requirements. Again, please consider that the Net Initial Working Capital (NI-WIC) cannot be evaluated 'a priori', and therefore it will be a financial analyst commitment to increase the mentioned difference at least up to the NI-WIC, otherwise a financial unbalance could appear in the first year. The table appears as a small window over the previous list of projects, and can be removed by pressing any button.

HOW TO SELECT A PROJECT

select Project data from the Main Menu
position the cursor on the identification line, and press F6

press ESC to return back to the main Menu

3.1.2 Create a new Project

If the Project under consideration is not already in the list, the user can create a new project from the List of Investment Projects schedule, by pressing F2.

The new Project is identified by the following input data fields, to be duly filled out by the user . The conversion rate (accounting - local currency) is inputted only for further reference, without use in the calculations.

CODE	: Internal code number of the program (not available for user data entry)	2 digits data field
PROJECT Nr.	: Project reference number	15 characters field
TITLE	: Project title	20 char. field
LOCATION	: Place where the Project is located	20 char. field
SPONSOR	: Local sponsor's reference name	20 char. field
DATE	: date of the Project evaluation (computer date is automatically entered, and can be manually revised)	date field
PLACE	: place where the evaluation is performed	20 char field
PREPARED BY	: name of the compiling user	20 char field
RUN NUMBER	: run number of the evaluation	3 digit data field
BASE YEAR	: year of starting up of the activities	4 digits
PLANNING HORIZON	: number of years of activities (years, max #15)	2 digits data field
ACCOUNTING CURRENCY	: abbreviation of the accounting currency	3 char. field
LOCAL CURRENCY	: abbreviation of the local currency	3 char. field
FOREIGN CURRENCY	: abbreviation of the foreign currency	3 char. field
LOCAL TO ACCOUNTING	: local to accounting exchange rate	6 digits data field, one decimal
FOREIGN TO ACCOUNTING	: foreign to accounting exchange rate	6 digits data field, one decimal
SALVAGE VALUE OF INVESTMENT	: percentage of the total nominal capital expenditures considered as residual value at the end of the planning horizon	3 digits data field
INCOME TAX RATE	: local tax rate on profit (percentage)	2 digits data field, no decimal
RATE OF DISCOUNT	: discount rate (percentage)	2 digits field, no decimal
LOSS CARRY FORWARD	: number of years of loss carry forward (years, max #14)	2 digits data field
INCOME TAX DEFERRAL	: number of years of tax holidays (years, max #15)	2 digits data field

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HOW TO CREATE A NEW PROJECT

**Select Project data from the Main Menu
press F2 and fill in all the fields**

confirm and return to the List of Projects by pressing ESC

The discount rate (also known as cut-off rate) is used while computing the Net Present Value of the project. This figure represents the long term cost (or value) of the capital, based on accounting reference estimation. It can also be considered as the lowest interest rate over the planning horizon period the investors may accept to undertake project's activities and risks. Infact, in the case the NPV would result equal to zero, the revenues would equalise the interests income of the invested capital at a positive rate of IRR percentage.

3.1.2   Duplicate an existing Project

In the case the user would like to compare several different versions of the same project, it is possible to duplicate the original one by pressing F9: PROPSPIN presents a duplication of the general project schedule, proposing to the user to edit the Title field, in order to identify the different releases.

HOW TO DUPLICATE AN EXISTING PROJECT

**Select Project from the Main Menu
Select the original project
Press F9
Modify the Project N. and Title fields**

confirm and return to the List of Projects by pressing ESC

3.2   Investment

The second input section of the programme asks the user to define the total investment. When the Investment selection is made on the section window. the Distribution of Investment Expenditures schedule appears on the screen and the user is requested to input all the investment expenditures, divided into local and foreign expenses, classified according to the following list of possible items, and on an yearly basis.

The user is requested to utilise the following list of active keys (please refer to the lowest display row for screen agenda):

F1 :	on-line help
F5 :	next year selection in the planning horizon
F6 :	previous year selection in the planning horizon
F7 :	amortisation rate table selection
F9 :	to show the summary table of investments and sources of finance
ESC :	to confirm and go back to the Main Menu

The first blue row includes the schedule definition (Distribution of Investment Expenditures), the scale factor ('Value/1000') of one thousand accounting units to be considered while filling out the schedule, and the reference Project Number, according to the field Project Code of the previous List of Investment Projects.

The left column, named Investment Expenditures (grey background) lists the possible types of expenditures for reference.

The two central columns, Local and Foreign,(blue background), permit to input both the local and foreign contributions (8 digits data fields), the last row displays the column sum; the user is requested to fill the blue columns for each year of activities,

selecting the years by pressing F5 (Next Year) and F6 (Previous Year). Again, it must be high..ghted that the investment expenditure amounts are requested in thousands of accounting unit, as explicitly mentioned ('Value/1000') in the upper row of the screen schedule. The default value is set to zero.

The fourth column, "Total"), displays the total yearly investment of each listed item over the planning horizon, while the grand total is reported in the last row.

An additional table, on the right of the screen, named Investment, dark grey background, shows the total investment per year. The black blinking field indicates the current year and the related total (local and foreign) investment. All the amounts in Total and Investment columns are indicated in thousands of accounting units.

Every listed investment expenditure can be associated to a depreciation rate. By pressing F7, the schedule Amortisation Rates appears, enabling the user to input the relative amortisation rates, expressed as percentages. In the table default values are inserted, to be modified by the user according to the project's characteristics. Depreciation rates are calculated on a straight-line basis, i.e. the depreciation for a particular assts is charged at a fixed rate over its life (for example, on equipment with a total life of 10 years would bear a 10% depreciation rate). A list of default amortisation percentage is provided, leaving the user the option to modify manually the reference figures. To move back to the Distribution of Investment Expenditures schedule press the ESC button. confirming the input.

After inputting all the required data, according to types and year, and the depreciation rate, the user can revert back to the Main Menu, confirming the input, by pressing the ESC button.

The complete list of Investment Expenditures categories follows:

1. Land   purchase of the land for the JV activities
2. Site Preparation   expenses needed for the site preparation
3. Design and Engineering   related to company's premises and product development
4. Building   company's premises construction
5. Service Facilities   related to service connection or set-up
6. Transport Equipment   equipment for product or internal transportation
7. Plant Mach.& Equipment   manufacturing machines and related equipment
8. Infrastructure   ancillary structural facilities, such as road or telephone networks.
9. Preproduct.Capital Expenditures   to be borne before the starting up of the production can start (such as legal..)
10. Research & Development   product design, technology trials
11. Technology   purchase of technology from outside the company
12. Trademarks   lump sum to be paid to trademark licensee
13. Contingencies   other expenses connected with the starting up of the activities

The programme permits to get an intermediate picture of the balance of investments and sources of finance, showing a summary table of the project by pressing F9. The Balance of Investment and Financial Sources Without Working Capital table appears showing the total investment, Grants, Equity and Loans and the Balance of the first versus the others. The table appears as a small cyan background window over the previous schedule, and can be removed by pressing any key.

TO INSERT THE INVESTMENT EXPENDITURES

select Investment from the Main Menu
input data in every field by using numeric keypads and arrows
repeat for every year scrolling the years by pressing F5 = Next Year and F6 = Previous Year

confirm and return back to the Main Menu by pressing ESC

TO INSERT THE DEPRECIATION RATES

press F7 in the Distribution of Investment Expenditures Schedule
input the % rates

confirm and return back by pressing ESC

3.3 Equity and Grants

The Equity and Grant section permits the user to input information about:

♦ participation of the Project's partners to finance all the listed investment expenditures (see previous section 3.2 Investment) through equity contributions
♦ possible grants contributed to the Project
♦ envisaged percentage of dividend, if any, to be distributed among the partners by the company's administration board.

The contributions are listed according to the partners' list, classified as foreign and local and associated with the year of disbursement. The maximum number of partners contributing to the project is fixed up to six (whatever Local or Foreign). In the same way, the grants are classified as foreign and local, distributed all over the years. The dividends are not attributed to the partners in the output schedules, but simply subtracted from the net profit, if any, on yearly basis, according to the required percentage calculated on the net profit (if any, see Net Income Statement schedule).

The user is requested to utilise the following list of active keys (please refer to the lowest display row for screen agenda):

F1 :	on-line help
F3 :	to delete the partner identification row, select by positioning the cursor on the corresponding name
F5 :	next year selection in the planning horizon
F6 :	previous year selection in the planning horizon
F9 :	to show the summary table of investments and sources of finance
ESC :	to confirm and go back to the Main Menu

The first blue row of the screen includes the schedule definition (Distribution of Equity and Grants), the scale factor ('Value/1000') of one thousand accounting units, to be considered while filling out the schedule, and the reference Project Number, according to the field Project Code of the previous List of Investment Projects.

The Distribution of Equity and Grants Schedule includes the below-mentioned fields to be filled out (as a rule for the schedule. yellow fields correspond to input data while the blue ones display the calculated amounts).

Partner Name	: partners' names , up to 6 partners	20 characters field, 6 rows
L/F	: indication of Local partner (L) or Foreign (F) partner	1 character field, 6 rows
Equity Year x	: each partner's equity c contribution in the year x	8 digit data filed, 6 rows
	(the amount shall be input as thousands of accounting units)	
	(to move to the next/previous year press F5/F6)	
Total	: calculated data, displaying each partner's total equity contribution over the years	
Total Equity	: calculated data fields, displaying :	
	the total equity of the selected year x (column Equity Year x)	
	the total equity over all the years (column Total)	
Local Grants	: local grant contributions, total in the year x	8 digits data field
Foreign Grants	: foreign grant contributions, total in the year x	8 digits data field
Total Equity and Grants :	calculated field, displaying:	
	the total equity and grants of the selected year x (column Equity Year x)	
	the total equity and grants over all the years (column Total)	
% of dividends	: percentage of the profit to be distributed to the partners	2 digits data field

On the black bordered, grey background table, right side of the screen, it is displayed:

Year	: calculated field showing the active year x
Equity	: calculated field displaying the total equity contributed in the year

To insert the input data, use the arrows and the keypad to digit partner names and figures.

As a matter of fact, the programme permits to get an intermediate picture of the balance of investments and sources of finance, showing a summary table of the project by pressing F9. The Balance of Investment and Financial Sources without Working

Capital table appears, showing the total investment, grants, equity and loans and the balance of the investment versus the others. The table appears as a small window over the previous list of projects, and can be removed by pressing any button.

At the end of the data entry, confirm the input and return back to the Main Menu by pressing ESC.

HOW TO INSERT THE EQUITY AND GRANT CONTRIBUTIONS

select Equity and Grants from the Main Menu

locate the cursor in the Partner Name column
insert the partner's name
select the Foreign or Local origin
digit name and amount in thousands accounting units
repeat for all the partners
repeat for all the years using F5 and F6

locate the cursor on Grants (L or F)
digit the amounts in thousands accounting units
repeat for all the years using F5 and F6

confirm and return to Main Menu with ESC

3.4 Loans and Export Credits

Upon selection of this choice in the Main Menu, the program shows the schedule Description of Loans and Export Credits. The schedule shows in the first column the list of Local Loans (max #3) and Foreign Loans (max #3), and an additional Export Credit row, with the associated characteristics for each loan to be input by the user, such as: amount, interest rate, term of the loan expressed in number of years, grace period, the presence or absence of interest to be paid during the grace years, and year of the loan's reception. A row for Total Debt completes the first column.

In the case of any financial unbalance during the horizon period is discovered running the computation, the financial analyst has the chance to add a specific bank overdraft loan to compensate in that (or those) year(s), with the specified debt rate(s), utilising the key listed in the screen agenda.

The first blue row of the screen includes the schedule definition (Description of Loans and Export Credits), the scale factor ('Value/1000') of one thousand accounting units, to be considered while filling out the schedule, and the reference Project Number according to the field Project Code of the previous List of Investment Projects.

The user is requested to utilise the following list of active keys (please refer to the lowest display row for screen agenda):

F1 :	on-line help
F6 :	overdraft input table
F9 :	to show the summary table of investments and sources of finance
ESC :	to confirm the input, and go back to the Main Menu

For each row (i.e. for each available loan) the user is required to insert:

Amount	: loan capital, in thousands accounting units	8 digits data field
Interest Rate	: interest on the loan, (in percentage)	2 digits + 1 decimal data field
Term (Years)	: loan duration, in years (max 15)	2 digits data field
Grace Years	: grace period, in years (max 15)	
Grace Interest?	: if interests on the debt have to be paid during the grace period; default value set to 'Y'	1 digit logical field (Y/N)
Year of Reception	: the year of loan disbursement by the bank	2 digits data field

The programme permits to get an intermediate picture of the balance of investments and sources of finance, showing a summary table of the project, utilising the F9 key. The table appears as a small window over the active schedule, and can be removed by pressing the ESC button.

As a further recommendation to the users, it should be noticed that, under normal circumstances, the overall ratio between debt and equity should not exceed 65:35, as being the maximum level usually allowed by financial institutions.

Selecting the key F6, an overdraft schedule appears as a small window over the active schedule (Bank Overdraft Schedule), listing the selected planning horizon years, and permitting the analyst to input (using normally arrows and keypad) the required bank overdraft contributions, with the associated debt rate, for each year he may select. Such an additional schedule is available to tune the debt position of the company along the planning horizon years. the analyst is requested to leave the schedule blank on the first run, to examine the level of cash flow unbalance (if any), and to correct the input data increasing the equity. the loans or the overdraft according the results. In this connection, it should be pinpointed that the bank overdraft contributions should be considered only for limited (in time and in amount) unbalances, being usually associated (when available) to consistently high debt rates and limited time duration. In the present program such a tool is considered for the fine tuning of company financial forecasts A remarkable recourse to bank overdrafts with respect to equity and loans, especially if associated to reduced rates. would led to bad mistaking of the project financing needs.

At the end of the data entry. return to the Main Menu confirming the input by pressing ESC.

HOW TO INSERT LOANS

Select Loans and Export Credits in the Main Menu
Locate the cursor on the appropriate line
insert the data using arrows and keypad
Check the balance of Investment, Equity and Loans using F9

Return to Main Menu by pressing ESC

HOW TO INSERT BANK OVERDRAFT

check the unbalanced financial year on the output tables
select Loans and Export Credits in the Main Menu
Select F6
locate the cursor on the proper line
insert the data using arrows and keypad

Return back to Main Menu by pressing ESC twice

3.5   Products

3.5.1   Definition of products

The selection of Products from the Main Menu enables the user to input the type and capacity of the different products (the list could be as large as required), the sale program associate with each one (local and foreign sales volumes, domestic and export prices), the raw materials required and the cost of product's unit.

The first schedule of this section is the Description of Products; composed of the two following columns:

Product Name	description of the final product	20 characters field
Unit of Production	unit of the associated product	10 characters field

As displayed in the lower command line, the following functional keys are available to compile the list of products and their associated units:

F1:   on-line help
F2:   to add a new product to the list
F3:   to delete an existing product from the list

F4: to modify an existing product from the list
F5: production program
F6: input materials
ESC: to return back to the Main Menu, confirming the input data

The user is requested to compile the list of products to be manufactured, using F2 to add a new entry to the list, F4 to modify one if required, and F3 to erase it from the schedule. Each product is associated with its specific unit of measure. The related production program for every one can be planned using the key F5, after having placed the cursor on the appropriate line, i.e. after having focused on the relevant item. For the production and sales program, please refer to paragraph §3.5.2. in a closely similar way, the related production costs for every product can be planned selecting the relevant row in the list (i.e the relevant product) and using the F6 key. In this respect, please refer to paragraph §3.5.3.

At the end of the data entry, the user can return back to the Main Menu, confirming the input data, by pressing ESC.

HOW TO DEFINE PRODUCTS

select Products from the main Menu
press F2 to add a new product
edit the field where the cursor blinks
confirm with ENTER or by using the arrows
repeat for all the products

modify locating the cursor on the row and pressing F4
cancel locating the cursor on the row and pressing F3

confirm and return to Main Menu with ESC

3.5.2   The sales programme

After defining the product list, the user is required to specify, for each product, the yearly production programme of the enterprise From the Description of Products schedule, when the cursor is located on a specific line of the list, by pressing F5, the programme moves to the next schedule Production Programme for Product x , where x represents the presently selected product It is therefore possible to insert the Yearly Capacity, the Export Percentage, the Export Price and the Domestic Price for each Year of Production.
The schedule includes the following fields:

Year of Production	: list of years to chose year x	
Yearly Capacity	: production volume, in Units	9 digits+1 decimal data field
Export Percentage	: percentage of exported Units	2 digits data field
Export Unit Price	: price on the foreign market (FOB)	9 digits+2 decimals data field
Domestic Unit Price	: price on the local market (FOB)	9 digits+2 decimals data field

The data entry characteristic of all the fields is the diffusion, i.e. any value input for the selected year x is automatically repeated over all the following years of the defined planning horizon

After inserting the sales programme for the selected product, the same procedure must be repeated for all the others of the list Therefore, the user is required to return back to the previous menu Description of Products by pressing ESC, select another product locating the cursor on the proper row, and press again F5.

From any schedule Production Programme for x , it is possible to move to the corresponding schedule Consumption of Input Materials for x , associated to the same product. In this case the latter schedule will be displayed over the previous.

The program still permits to get an immediate picture of the balance of investments and sources of finance, showing a summary table of the project. The table appears as a small window over the active schedule, and can be removed acting the ESC key.

HOW TO DEFINE THE SALES PROGRAMME FOR A PRODUCT

locate the cursor on the selected product on the Description of Products list
press F5
duly fill the Programme schedule using the arrows and the keypad
confirm and return back to the product list by pressing ESC

repeat for all the products

3.5.3   Production costs

After identifying the different products and their respective sales programme, the user should specify the costs relative to each item. In particular, for each product the user is requested to define the list of the required raw materials, the unit measure, the cost per unit (foreign and local), the consumption for unit of production, and the percentage of import of each raw material.

From the Description of Products schedule, when the cursor is located on a specific product of the list, by pressing F6, the program moves to the next schedule Consumption of Input Material for x , where x represents the product presently selected.

The schedule includes the following fields:

input material	: description of the raw material required	20 characters field
unit	: symbol of the raw material unit	3 characters field
local cost	: local cost for each raw material unit, in accounting unit	6 digits + 2 decimals
foreign cost	: foreign cost for each raw material unit, in accounting unit	6 digits + 2 decimals
consumption per unit	: number of required units of raw material per unit of product	4 digits +1 decimal
import percentage	: percentage of imported raw materials out of their total consumption	3 digits

The number of the matrix rows can be defined by the user, according to the number of raw materials needed for each product's unit.

After inserting the raw materials consumption for the selected product, the same procedure must be repeated for all the others of the list. Therefore, the user is required to return back to the previous menu Description of Products by pressing ESC, select another product locating the cursor on the proper row, and press again F6.

From any Consumption of Input Materials for x schedule, it is possible to move to the corresponding schedule Production Programme for x , associated to the same product, by pressing F5. In that case the latter schedule will be displayed over the previous.

The programme still permits to get an immediate picture of the balance of investments and sources of finance, showing a summary table of the project. The table appears as a small window over the active schedule(s), and can be removed by pressing the ESC key.

HOW TO DEFINE THE RAW MATERIAL COSTS PER PRODUCT

Locate the cursor on the selected product in the Description of Product list
press F6
input the raw materials list and the associated costs and share
confirm and return back to the product list pressing ESC

repeat for all the products

3.6   Utilities

The Utilities selection enables the user to insert the data concerning the total Consumption of Utilities, such as electricity, water, diesel and others, for the whole plant, on an yearly basis. The costs should be input for the overall yearly production, including the consumption of the plant, and are considered as direct costs. Therefore, the utilities are considered as a part of the factory costs.

The schedule Consumption of Utilities presents a matrix where the user can input the data relative to the above mentioned utilities, listed in columns :

	Water	Unit of measure: 1000 litres
	Electricity	Unit of measure: KWh
	Diesel	Unit of measure: litres
Other		no defined unite of measurement

For each column the user shall input the following data:

Price per unit	price of the defined unite measure of the selected utility in accounting unit	4 digits + 2 decimals data field
% Imported	percentage of imported utility out of its total consumption	3 digits data field
Consumption	required utility's quantity (in unit) for the whole production during the selected year x of the planning horizon	7 digits data field

The data entry characteristic of all the fields is the diffusion. i.e. any value input for the selected year x is automatically repeated over all the remaining years of the defined planning horizon

The program still permits to get an immediate picture of the balance of investments and sources of finance, showing a summary table of the project. The table appears as a small window overlapping the active schedule, and can be removed by pressing ESC

HOW TO INSERT UTILITIES COSTS

select Utilities from the Main Menu
input unit cost and total consumption for each utility
repeat for all the years of the planning horizon

confirm and return back to the Main Menu by pressing ESC

3.7   Labour

The Labour selection permits the user to insert the data concerning the total required personnel per year, divided according to employed professional levels such as unskilled, skilled, clerical, managers and expatriate. The employed personnel input has to include the overall yearly personnel, considering indirect and direct related activities. Unskilled and skilled personnel is considered as part of the direct costs, managers and expatriate as indirect costs (and the four categories part of the factory costs); the clerical personnel is attributed to the administrative costs, thus is not included in the factory costs related calculations.

The schedule Number of Persons Engaged permits the of the engaged personnel costs. according to the following categories:

Unskilled	direct personnel, (number of employed persons)
Skilled	direct personnel, (number of employed persons)
Clerical	indirect personnel, (number of employed persons)
Managers	indirect personnel, (number of employed persons)
Expatriate	indirect personnel, (number of employed persons)

For each column the following data are requested:

Annual Cost per Employee	yearly salary, in accounting units	9 digits data field
Persons engaged Year x	number of persons per year x, in unit	9 digits data field

The data entry characteristic of all the fields is the "diffusion", i.e. any value input for the selected year x is automatically repeated over all the following years of the defined planning horizon. Please take care of the "diffusion" while modifying already existing data.

The program still permits to get an immediate picture of the balance of investments and sources of finance. showing a summary table of the project. The table appears as a small window overlapping the active schedule, and can be removed by pressing the ESC button.

.

```
┌─────────────────────────────────────────────────────────┐
│  HOW TO INSERT THE NUMBER OF PERSONS ENGAGED            │
│                                                          │
│        select Labour from the Main Menu                 │
│  input annual cost per employee and the number of persons│
│       engaged for all the years of the planning horizon  │
│                                                          │
│  confirm and return back to the Main Menu by pressing ESC│
└─────────────────────────────────────────────────────────┘
```

3.8   Overheads

The Overheads selection permits the user to insert the data concerning additional costs linked to the production activities considered on yearly basis, such as levies. training. administration and marketing. rents, fixed royalties. royalties as percentage of sales, other costs, maintenance. spare parts and other miscellaneous costs. All the data are related to the overall yearly production.

Again, the available active keys are the following:

        F1:   on-line help
        F7/F6: to move to the next/previous overheads page
        F9:   to show the summary table of investments and sources of finance
        ESC: to return to the main menu. confirming the input data

The Distribution of Overheads schedule permits the data input of selected types of overhead costs. Due to the number of the columns. the schedule is displayed on the screen divided into two adjacent sub-tables. The user can skip from one to the other by using the arrows. select the second half-table from the first with F7, or the first from the second by pressing F6.
The presence of a blue blinking arrow on the right-top corner of the first half-table. and of blue blinking arrow on the top-left corner of the second reminds the user the presence of the second half-table.

The columns of the schedule are presented as follows:

Item	description	Attribution
Taxes and Levies	any fixed tax or levy for one year of production in thousand accounting units, 7 digits data field	Other costs. in Factory costs
Training	a fixed indirect expenses for training for one year of production in thousand accounting units, 7 digits data field	Indirect. out of Factory costs
Administration Overhead	fixed indirect expenses for administration and marketing in thousand accounting units, 7 digit data field	Indirect out of Factory costs
Rents	total yearly fixed rent expenditures in thousand accounting units, 7 digit data field	Direct, in Factory costs
Fixed royalties	fixed yearly lumpsum for royalties in thousand accounting units, 7 digits data field	Indirect, in Factory costs
Royalties as % of sales	percentage of direct royalties on products, calculated on the total sales income 3 digits data field	Direct, in Factory costs
Marketing Overheads	different fixed indirect cost, related to total yearly production. in thousand accounting units, 7 digits data field	Indirect. in factory costs
Spare parts	fixed yearly expenditures for spare parts in thousand accounting units, 7 digits data field	Direct. in Factory costs
Maintenance	fixed yearly maintenance expenditures. in thousand accounting units, 7 digits data field	Direct, in Factory costs

| Factory Overheads | miscellaneous fixed yearly expenditures connected to factory operations, in thousand accounting units, 7 digits data field | Indirect, in Factory costs |

For each column the user shall input the following data:

| % Foreign | percentage of foreign expenditure out of the total amount | 3 digits data field |
| Year x | expenditure amount during the year x of the planning horizon | data field as above described |

The data entry characteristic of all the fields is the diffusion. i.e. any input value is automatically repeated over all the remaining years of the defined planning horizon.

The program still permits to get an immediate picture of the balance of investments and sources of finance, showing a summary table of the project. The table appears as a small window over the active schedule, and can be removed by pressing the ESC button.

HOW TO INSERT OVERHEADS

select Overheads from the Main Menu

input foreign percentage for the selected overhead
input unit expenditure for every year of the planning horizon

repeat for every overhead expenditure type

confirm and return back to the Main Menu pressing ESC

3.9 Working capital

The Working Capital Requirements schedule permits the user to define the project envisaged conditions for: credit from buyers. capital requirements for inventories. in process activities. and payment to suppliers. The user can insert the days of coverage for the different items. such as:

Cash in hand	number of days required to convert the cash in hand
Account receivable	expected period of payment from buyers, (number of days)
Raw Material	expected duration of the raw material in storage. (number of days)
In process	expected duration of the products' processing (number of days)
Finished products	expected duration of the finished products in storage,(number of days)
Spares	expected duration of spare parts in storage . (number of days)
Utilities	expected period for payment of utilities, (number of days)
Account payable	expected terms of payment to suppliers, (number of days)

All the above-mentioned periods have 3 digits input data fields: the items are considered for the whole manufacturing process, and it is not possible to attribute specific values to the different products, or utilities. Therefore, the input values should be average figures calculated for the entire production process The table is provided with default values to be modified by the user according to the characteristics of the project.

The program still permits to get an immediate picture of the balance of investments and sources of finance, showing a summary table of the project. The table appears as a small window over the active schedule, and can be removed by pressing the ESC button.

HOW TO INSERT THE WORKING CAPITAL REQUIREMENTS

select Working capital from the Main Menu

input the relevant days of coverage

confirm and return back to the Main Menu pressing ESC

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4.   COMPUTE

After entering all the data describing the investment under consideration, the package is ready to perform the necessary evaluations.

The user has to locate the cursor on the option Compute in the Main Menu, and confirm the Compute selection by pressing ENTER. The system will automatically carry on the data processing, filling out the output tables. In order to make the user be aware of the present status of the evaluations, the screen displays a red background table reporting the ongoing calculations (Available Memory, Calc. Investment, ...).

If the programme finds out financial unbalances during the investigated years of the planning horizon, the screen displays the message "Warning - Financial Deficit in Year x ", and waits for a manual confirmation (ENTER) to proceed along with the calculations. Therefore the user is informed of the presence of financial difficulties during the year x before the calculation ends.

In the end, the message (End of Calculation) appears on the screen, and the time elapsed in seconds is indicated. The programme stops and waits for a manual confirmation before formatting the output table and going back automatically to the Main Menu. The duration of such process varies according to the complexity of the calculations required, ten seconds being the average time needed.

How to run calculations

**select Compute from the Main Menu
confirm by pressing ENTER
wait for End Of Calculation message
press ENTER to return to the Main Menu**

WARNING
**run a Compute every time the input data have been modified
take note of financial deficit messages (if any)**

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5.   OUTPUT_TABLE

After inputting the project data (see chapter 3 paragraphs 3.1 to 3.9), and calculating the output tables (see chapter 4), the programme is ready to show the evaluation results.

The user has to select View from the Main Menu, and subsequently select the choice among the available following output tables :

    Net Income Statement Table
    Total Investment Table
    Cash Flow for Financial Planning
    Cash Flow for IRR and NPV for Project
    Cash Flow for IRR and NPV for Equity
    Indicators

Each selection displays a complete table, reporting the data over the years of the planning horizon. As the displayed table permits to see only four years results, using the left/right arrows the user is able to scroll the years of the planning horizon. Wherever a little black arrow appears on the right side of a row description, it is possible to open a sub-table by pressing F1. Such subtable will report further details on the selected item over the planning horizon. The sub-table disappears by pressing ESC.

In the following paragraphs, a short description of output tables contents is presented.

```
┌─────────────────────────────────────────────────────────────────┐
│                    HOW TO SHOW  RESULTS                          │
│                                                                  │
│              select VIEW from the Main Menu                      │
│   select the table to be considered locating the cursor and pressing ENTER │
│        move the table over the years with the left/right arrows  │
│        open the subtables locating the cursor and pressing F1    │
│                                                                  │
│              close the subtable by pressing ESC                  │
│               return to VIEW by pressing ESC                     │
│             return to the Main menu by pressing ESC              │
└─────────────────────────────────────────────────────────────────┘
```

5.1   Net Income Statement Table Schedule

Total Sales   from par.3.5.2 Production Programme

Direct Costs   sum of the subtable items
    Raw Material   calculated from 3.5.3 Production Costs
    Direct Labour   calculated from 3.7 Labour
    Utilities   calculated from 3.6 Utilities
    Spare Parts   from 3.8 Overheads, 2nd page
    Maintenance   from 3.8 Overheads, 2nd page
    Royalties as Percentage of Sales   from 3.8 Overheads, 1st page

Gross Margin   Total Sales - Direct Costs

Indirect Costs   sum of the subtable items
    Labour
    (Management and Expatriate)   from 3.7 Labour
    Training   from 3.8 Overheads, 2nd page
    Administration Overheads   from 3.8 Overheads, 1st page
    Rents   from 3.8 Overheads, 2nd page
    Lump Sum Royalties   from 3.8 Overheads, 1st page
    Factory Overheads   from 3.8 Overheads, 2nd page

Operating Costs   Direct Costs + Indirect Costs

Depreciation   according to 3.2 Investment and Depreciation schedule

Operating Profit   Total Sales - Operating Costs - Depreciation

Interest Expenses   calculated from 3.4 Loans and Export Credits
Other Costs   sum of subtable items
    Sales Costs   from 3.8 Overheads
    Indirect Tax and Levies   from 3.8 Overheads

Income (Loss) before Tax   from 3.1 Project
Income Tax   (Sales-Total Production costs-Interests)*Tax Rate
Net Profit   sum of subtable items

Accumulated Fiscal Loss   from 3.1 Project
 Dividends   from 3.3 Equity and Grants
Undistributed profit   from 3.3 Equity and Grants
Accumulated Undistributed Profit   sum of the Undistributed profit over the years

5.2 Total Investment Table Schedule

Total Fixed Investment	sum of subtable items
subtable	according to 3.2 Investment paragraph
Total Working Capital	sum of subtable items
Cash in Hand	from 3.9 Working Capital
Account Receivable	see above
Raw material	see above
Product in Process	see above
Finished Products	see above
Utilities in Stock	see above
Spares in Stock	see above
Account Payable	see above
Net working Capital	Total working Capital - Account Payable
Increase in Working Capital	Difference between present and previous Net Working
Total Investment	Total Fixed ÷ Increase in working Capital

5.3 Cash Flow for Financial Planning Schedule

Sources of Cash	sum of subtable items
Sales	from par.3.5.2 Production Programme
Dividends	from 3.3 Equity and Grants
Variation in accounts payable	from 3.9 Working Capital
Equity	from 3.3 Equity and Grants
Loans	from 3.4 Borrowing
Export Credit	from 3.4 Borrowing
Overdraft	from calculations
Uses of cash	sum of subtable items
Assets	from 3.2 Investment and 3.3 Equity and Grants
Variation in Current Assets	from calculations
Operative Expenses	Direct Costs + Indirect Costs
Debt Service (Capital and Interests)	from 3.4 Borrowing
Income tax	(Sales-Total Costs-depreciation-Interests)*Tax Rate
Financial Surplus/Deficit	Sources of Cash - Uses of Cash
Cumulative Cash Inflow	Sum of cash inflow
Cumulative Cash	sum of cash over the years

5.4 Cash Flow for IRR and NPV for Project Schedule

Cash Inflow (sales)

Cash Outflow
      Assets
      Increase in Working capital
      Operative Expenses
      Income tax

Net cash flow

Discounted cash flow

Cumulative discounted cash flow

Total IRR   calculated on the total investment

NPV   calculated on the above-mentioned discounted cash flow of the table

5.5   Cash Flow for IRR and NPV for Equity Schedule

Cash Inflow (sales)

Cash outflow
        assets financed by equity
        operative expenses
        debt service
        income tax

Net Cash Flow

Discounted cash flow

Cumulative discounted cash flow

Total IRR   calculated on the total equity

NPV   calculated on the discounted cash flow of the table

5.6   Indicators Schedule

Yearly Indicators :
        Return on investment
        Return on equity
        Percent of export/sales
        Cash flow/sales
        Debt service cover ratio
        Acid test
        Current ratio

Summary Indicators:
        NPV Project
        IRR Project
        NPV Equity
        IRR Equity
        Sales / Investment
        Investment / Employees
        Investment Payback (undiscounted)
        Investment Payback (discounted)

6.   REPORT

After selecting the option Report from the Main Menu, the user has to locate the cursor either on Output Table or on Inputs Layout
according to what has to be printed. On either choices, the program provides the user with an additional schedule, namely
OUTPUT TABLES for the first choice and INPUT TABLES for the latter. The user can utilise the shortcut keys to prepare a printing
list among the available listed output/input tables.

        F5   : select all the listed tables for printing
        F7   : search of a defined table
        F10   : confirm the selection
        RETURN   : input the selection of a single item (an arrow appears at the side of the item)
        ESC   : return back to Main Menu (without confirming if F10 has not been selected)

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6.1 Output Table

The Output Data report includes the below listed output tables, to be separately selected locating the cursor and pressing **ENTER:**

- . Net Income Statement Table
- . Total Investment Table
- . Cash Flow for Financial Planning
- . Cash Flow for IRR and NPV for Project
- . Cash Flow for IRR and NPV for Equity
- . Indicators
    - . Return on investment
    - . Return on equity
    - . Percent of export/sales
    - . cash flow/sales
    - . debt service cover ration
    - . acid test
    - . current ratio

6.2 Inputs Layout

The Input Data report includes the below listed input tables, to be separately selected locating the cursor and pressing **ENTER:**

- . Investment Layout (Local)
- . Investment Layout (Foreign)
- . Investment Layout (Local/Foreign)
- . Amortisation rates/ Working Capital Requirements
- . Equity and Grants
- . Utilities / Persons engaged
- . Loans and Export Credit
- . Production programme / Raw materials
- . Distribution of Overheads
- . General Project Data

HOW TO PRINT OUT RESULTS

select Report in the main Menu
select Input or Output list for printing
locate the cursor on the required table and press ENTER

---

7. UTILITY

7.1 Quit

To quit the programme the user has to select Utilities from the main Menu, and QUIT by locating the cursor and pressing ENTER.

HOW TO QUIT THE PROGRAM

select Utility in the Main Menu
select QUIT and confirm pressing ENTER

7.2   Indexing

This file creates the index files related to the database file thus enabling the user to search for any required data by using several key expressions. The user must select this function every time any malfunctioning of the system or any power cut may have corrupted the indexes.

7.3   Printer Set-up

The user is permitted to add to create a list of printer drivers of common use, and to select the driver for the actual use time-by-time. The "Printer Selected" schedule is composed by the following fields:

active   : the printer selected as default one is marked by asterisk
printer name   : short list of drivers under common use
port   : associated output port

In the lowest row the available shortcuts are listed:

F1: Help   on-line help
F2: New   to add a driver to the shortlist
F3: Delete   to delete any of the driver from the short list
F4: Modify   to modify the driver set-up
F6: Default Printer to select the driver under use
F7: Driver   to access the list of available drivers
ESC   to quit the section

The user can add a new printer driver selecting F2, then pressing F1 or ENTER to be helped in getting the required name identifier A small grey box overlaps the screen, presenting a further selection between search through name or through printer reference number. The user can select by placing the cursor on the right choice with the arrows (up and down), and pressing ENTER. A final search box will permit the user to input the required name (even a very partial version composed at least by one initial letter) or the associated number. At both stages, the use of ESC key will interrupt the search. If the required record does exist in the list, the program will return to the Printer Drivers schedule, with the cursor on the required line. Otherwise a warning box "*No record found Please ENTER*" will appear, and the program will revert back to the selection. The selection of the printer driver has to be confirmed with ENTER. The Port field can be filled in with the reference port name (LPT1, LPT2...): the list of allowed ports is available pressing F1. The whole selection (printer driver and port name) can be deleted with F3, or modified with F4.

The F7 selection permits to access the whole list of available drivers, in order to check and modify the associated escape codes This option permits the user to select one of the about 300 printers already loaded as print drivers. The user can also modify some information as: printer name, port or escape codes. He can insert more printer drives looking for the escape code on his own printer manual. In the schedule Printer Drivers, a list of printer names is presented, to be vertically scrolled by using the arrows (up and down).   To each single name a list of feature are associated, first of all the output ports, then the escape codes. all the information are made available for reading by using the horizontal (left and right) arrows. The complete record characterising the single printer driver in its main performance, respectively the ESCAPE ON and the ESCAPE OFF (namely for the features of Initialise, Condensed, Bold, Underline,12 cpi, Italic, Enlarged) is hereinafter listed:

Printer name, Output Port, INIT_PR, EXIT_PR, COND_ON, COND_OFF, BOLD_ON, BOLD_OFF, UNDL_ON, UNDL_OFF USER7_ON, USER7_OFF, ITAL_ON, ITAL_OFF, ENL_ON, ENL_OFF.

7.4   Import project

This function permits the user to load one or more projects created by other PROPSPIN III users onto the user hard disk. After having presented a schedule named Import Projects, the programme asks for the complete path where the project should copied from. External diskette A: or different path C: hard disk are equally accepted. The small box reports the following sentence: "*Drive and path for import* ". As soon as the data are input, confirm with ENTER.

The program will ask the user to confirm the selection first ("*Confirm: Yes/Not ?*"), then will attempt to perform the required import If the unit select is not ready, or no project is listed in the declared path, a warning message will appear ("*The source disk does not contain projects: Retry/Abandon*"), giving the user the final chance to abort the import process or to retry again.
If some projects are available, the program will show the list for the user selection. All the projects loaded will be evident in the Project data list. The program will automatically create the index files for the new projects, relocating them inside its codes.

Please consider that, as the program uses actually a database structure based on CLIPPER/DBIII, it not possible to simply DOS-copy files from one diskette to the hard disk, or viceversa: a vital feature of transcoding would be lost, resulting in impossible operations. and or mismatching/losing of the original data on user memory. If you decide to save your data on hard diskette. please follow the very simply procedure of EXPORT first, and IMPORT when you may decide to load again the data.

7.5 Export project

By selecting this option the user is allowed to export from the user directory one or more projects to other PROPSPIN users' hard diskettes. The programme lists the projects already loaded on the database in a schedule named Project List. The available shortcut keys are the following:

F5 : select all the present projects of the list
F7 : search according to project number or project title
F10 : confirm the selection
ESC : return back to previous menu without actions

The program permits the user to select one or more projects to be exported by locating the cursor on the selected project row. and pressing **ENTER**. After such selection the **F10** key permits to confirm the choice and all the projects selected are actually loaded onto the diskette.

Again, please consider that, as the program uses actually a database structure based on CLIPPER/DBIII, it not possible to simply DOS-copy files from one diskette to the hard disk, or viceversa: a vital feature of transcoding would be lost, resulting in impossible operations, and or mismatching/losing of the original data on user memory. If you decide to save your data on hard diskette please follow the very simply procedure of EXPORT first, and IMPORT when you may decide to load again the data.

Warning: please consider that it is not allowed at all to export a list of projects directly from one PROPSPIN directly to another one containing a second running copy of PROPSPIN. The complete procedure requires an embedded procedure of export and import.

7.6 About

The About selection provides the user with the reference to the version of the package. the date of issue and the developer company.

APPENDIX A : GLOSSARY

ACCOUNTS PAYABLE:
the amount of money owed by a buyer to a seller for goods or services received. The amount depend s on credit terms provided by suppliers. The amount is calculated from the total factory costs

ACCOUNTS RECEIVABLE:
the amount of money owed to a company by a customer; in the case of accounts receivable, the value is calculated from total production costs less interests and depreciation

ACID TEST:
liquidity test, defined as the ratio (total cash in hand + accounts receivable)/(current liabilities) ; it measures the very short-term attitude of the company to face its liabilities by assets which can be turned into cash quickly

BREAKEVEN POINT
percentage of production at which the gross profit is equal to the expenses, thus enabling the economic parity

CASH FLOW :
defined as the difference of cash inflow and cash outflow of a company over the refernce period

CASHFLOW/SALES
yearly parameter calculated as the ratio of net cash flow of the project and total sales

CASH IN HAND:
money held to hand, calculated from the operating costs less raw material costs

CUMULATIVE CASH:
cumulated amount of cash, i.e. algebric sum of present year cashflow and previous year cumulated result

CURRENT ASSETS:
goods owned by the company which are regularly used in the business and regularly replaced, such as raw material, cash in hand, account receivable, products in process, spares in hand

CURRENT RATIO:
is a liquidity measure computed as ratio of current assets and current liabilities, on yearly basis :
he ratio measures the short-term solvency of the company, thus representing an indicator of the company attitude of meeting the current liabilities.

DAYS OF COVERAGE:
average duration in days of a time limited item (asset or liability)

DEBT SERVICE COVER RATIO:
yearly ratio defined as the ratio of Net Cash Flow of the Project and Total Debt

DEPRECIATION :
yearly lowering rate of the value of the fixed assets

DISBURSEMENT YEAR:
reference year of reception of a loan by the borrower

DISCOUNTED CASH FLOW:
yearly cashflow valus discounted according to the rate of discount and to the current year

DISCOUNT RATE:
the discount rate, or cut-off rate, should be equal either to the actual rate of interest on long-term loans in the capital market or to the interest rate (cost of capital) paid by the borrower. The discount rate should basically reflect the opportunity cost of capital: in other words, the discount rate should correspond to the minimum rate of return, below which the investor would consider it does not pay for him to invest.

DIVIDENDS:
the amount of money paid out by a company to its shareholders on yearly basis

DIRECT COSTS:
sum of manufacturing costs of raw materials, direct labour (unskilled and skilled), utilities, spare parts, maintenance, royalties as % of sales

EXPORT CREDIT:
financial source reserved only to the imported capital expenditures of the project

FINANCIAL SURPLUS (DEFICIT):
net difference between inflow and outflow of liquidity of the project

FINISHED PRODUCTS:
amount of processed material stocked in the company warehouse, calculated from the total factory costs

GRACE YEARS:
period of time (usually espressed in years) during which the borrower is requested to pay back only interests tn the disbursed loans to the lender, but not to reimburse any capital amount

GROSS MARGIN:
difference between revenues of sales and direct costs of production

INDIRECT COSTS:
sum of indirect manufacturing costs such as labour (clerical, managers, and expatriate), training, administration and factory overheads, rents and lumpsum royalties

IN PROCESS:
the products still under manufacturing, calculated from the total factory costs

INVESTMENT/EMPLOYEES:
ratio of total cumulated investment, at nominal value, and the increase in working capital over the employees (indirect and direct) calculated at the year of full capacity

INVESTMENT PAYBACK :
first year at which the cumulated net cashflow (undiscounted or discounted) exceeds the zero threshold, thus enabling the overall investment to be repaid. The present indication reports the integer part as the year, and the decimal part as the current month of the year at which the repayment is reached.

IRR:
it is the discount rate at which the present value of the cash inflows is equal to the present value of cash outflows: in other words, it is the discount rate for which the present value of the net receipts from the project is equal to the present value of the investment, and the NPV is equal to zero.

LEVIES:
tax indirect costs, connected to institutional and administration activities

LOSS CARRY FORWARD:
permitted period of carrying forward of fiscal yearly losses

LUMP SUM ROYALTIES:
royalties to be paid independently from the yearly production/sales level to the licensee

NET INCOME STATEMENT:
profit and loss account

NET PROFIT:
difference of total sales less total production costs and taxes

NET WORKING CAPITAL:
difference between current assets and current liabilities (total working capital - account payable)

NPV:
the Net Present Value of the project is defined as the value obtained by discounting at a fixed interest rate and separately for each year, the differences of all annual cash outflows and inflows accruing throughout the planning horizon of the project. The difference is discounted to the point at which the implementation of the project is supposed to start.

OPERATING COSTS:
sum of direct costs and indirect costs

OPERATING PROFIT (LOSS):
difference of total sales less direct costs, indirect costs and depreciation

OVERDRAFT :
a loan facility on a customer's current account at a bank permitting him to overdraw up a certain agreed limit for an agreed period. The program considers a fixed limit of one year, at a fixed borrowing rate. That overdraft rates are usually greater than interest rate for term loans

OVERHEAD COSTS:
list of direct and indirect costs over the manufacturing process

PERCENT OF EXPORT SALES
percentage of export over the total amount of sales

PLANNING HORIZON:
planned time duration of the project

RETURN ON EQUITY
yearly return ratio defined as ratio between Net Profit and Total Equity

RETURN ON INVESTMENT:
yearly ratio defined as the ratio of Operating Profit and Total Invested Capital

ROYALTIES:
percentage of sales to be paid back to the licensee of the products under sales

SALES/INVESTMENT
calculated in the first year of full capacity, being the full capacity year defined as the first year at which the production will not increase in the following year. The investment is considered as cumulated total investment, ref. Total Investment output schedule

SALVAGE VALUE OF THE INVESTMENT
residual value of the whole investment at the end of the planning horizon; the scrap value is considered as a pure percentage of the total mathematical sum of the investments along the periods; the residual value will be attributed to the cash inflow sequences for the calculation of the NPV-IRR for project and for equity. The salvage value will not be added to the cash inflow for financial planning as extraordinary income.

SOURCES OF CASH:
financial sources of cash inflow, namely sales, account payable, equity, term loans, export credit, overdraft

SPARES:
capital immobilised in spare part inventories

TOTAL PRODUCTION COSTS:
sum of operating costs, depreciation, interest expenses and other costs

TOTAL WORKING CAPITAL:
yearly amount of cash, inventories and receivable

USE OF CASH:

financial outflow, namely capital expenditures, variation in current assets, operating expenses, debt service, income tax, dividends

UTILITIES:

manufacturing direct expenses such as water, fuel, electricity, gas, etc.

UTILITIES ON HAND:

related to the inputted utilities except electricity

DRAFT

APPENDIX B: LIST OF SCHEDULES