

draPRO HELP FOR FIRE SERVICES

This help file contains information for each function in draPRO Fire Services 2010.

This product is a “Customised” version of draPRO. draPRO has been specifically designed to suit the client.

All references herein are to the basic draPRO product. Therefore minor discrepancy(s) may be found within the descriptive sector of this help profile. However all principles of the software and its use remain unchanged.

If there are any clarifications required please contact your CAD administrator. If the CAD admin are unsure they will in turn contact the developers.

Features

Utilities

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Sprinkler Heads

Detectors

Miscellaneous Details

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Utilities

Modify Setup

Filter Edit


Line Break

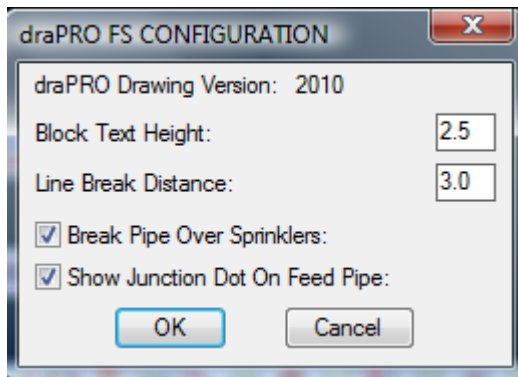
Service Lines

Edit Service Lines

Modify Setup

This dialog box displays the current settings of some variables for draPRO. The values you enter are only valid for the current drawing. If you want any settings to be made permanent set them in the Layer Definition File

From the FS Utilities toolbar, choose 



- draPRO Drawing Version

This is read only and indicates the version of draPRO that the drawing was created with.

- Block Text Height

Text in some blocks are resized using this value. E.g. Supply air and return air arrows.

- Line Break Distance

This is used to specify the distance to break out of the line when using the Line Break function.

- Break Pipe Over Sprinklers

Check this toggle to turn on breaking pipe when it crosses over the top of sprinkler and detector heads.


- Show Junction Dot On Feed Pipe

Check this toggle to show a dot at the start of a feed line to symbolise a connection to a main or branch line.

Filter Edit

Filter list edit enables you to select the type of object you want to edit, then by selecting a window, or crossing window around an area which includes many of the first object selected, a selection set made up of only objects like the first object is made. All other objects in the window will be filtered out.

Move, copy, or erase can then be selected to edit the filtered selection set. If you require the selection set for editing by another command, simply get the selection set and Quit out of the command option. Then when requested for a selection set in the required command type "P" for previous selection set and continue with the command.

From the FS Utilities toolbar, choose 

Format:

Pick object for filter list: pick it

Select objects: select objects by window etc.


Select objects: RETURN when done selecting

Quit/Erase/Copy/Move: type first letter of command to use

Commands continue as per normal AutoCAD commands.

Line Break

This command allows you to cut any number of lines running over a single line.

From the FS Utilities toolbar, choose 

Format:

Pick line to break over: pick line to stay continuous

Pick lines to break:


Select objects: pick them

Select objects: RETURN when done

The break distance is configurable by changing the Line Break Distance value in Modify Setup

Service Lines

Draw a line with text imbedded in it.

From the FS Utilities toolbar, choose 

Format:

From point: pick it

Current settings (plotted sizes)

Segmentlength = 50 Service line text =CW Text Height = 2.5

segmentLength/serviceText/textColour/textStyle/<Endpoint of line>: pick it

segmentLength/serviceText/textColour/textStyle/<Endpoint of line>: RETURN when done

Options:

segmentLength - length of line segment between text. The value entered will be scale by the current scale factor, so the length entered is the actual length you will get when the drawing is plotted.

serviceText - text to go on line. You can have alternating text by entering a comma between the value entered.

E.g. X,HW

This would appear like ----- X ----- HW ----- X ----- HW -----

textColour - text colour (all text line entities are drawn on the current layer)


textStyle - text style name and if zero height text style the text height

Note:

The drawing scale is applied to this function, so all size related properties entered are the as plotted sizes. The text line is not a block and any part may be edited singularly with normal AutoCAD commands, or collectively using the Edit Text Line command.

Edit Service Line

Any one length of a Service Line can be edited as a single entity using the edit service line function. The colour of each piece of text in a single length can also be changed.

From the FS Utilities toolbar, choose 

Format:

textCOLOUR/Copy/Erase/Move/Quit: type option

Select service line to edit: pick any part of service line, line or text.

Options:

textCOLOUR - new colour for each piece of text on selected line. You can edit individual text by using AutoCAD commands. E.g. ddchprop

Copy - as per AutoCAD

Erase - as per AutoCAD

Move - as per AutoCAD

Related information: Text li

Piping (single line)

Mains

From the FS Single Line Piping Toolbar, choose 

Format:

Insertion point: (or R to Reference from):

Specify a point to

To point or R

To point: Specify a point, R, or {RETURN} when done

Branch

From the FS Single Line Piping Toolbar, choose 

Format:



Insertion point: (or R to Reference from):

Specify a point to

To point or R

To point: Specify a point, R, or {RETURN} when done

Pipe Riser/Dropper From Bend

From the FS Single Line Piping Toolbar, choose  , or 

Format:

Specify a point to place riser or dropper

Pipe Riser/Dropper From Tee

From the FS Single Line Piping Toolbar, choose  , or 

Format:

Insertion point: (or R to Reference from):

Specify a point

Rotation angle: Specify an angle

Pipe Break

From the FS Single Line Piping Toolbar, choose ,

Format:

Insertion point: (or R to Reference from):

Specify a point

Rotation angle: Specify an angle

Extent of Contract

From the FS Single Line Piping Toolbar, choose ,

Format:

Insertion point: (or R to Reference from):


Specify a point

Rotation angle: Specify an angle

Sprinkler Heads

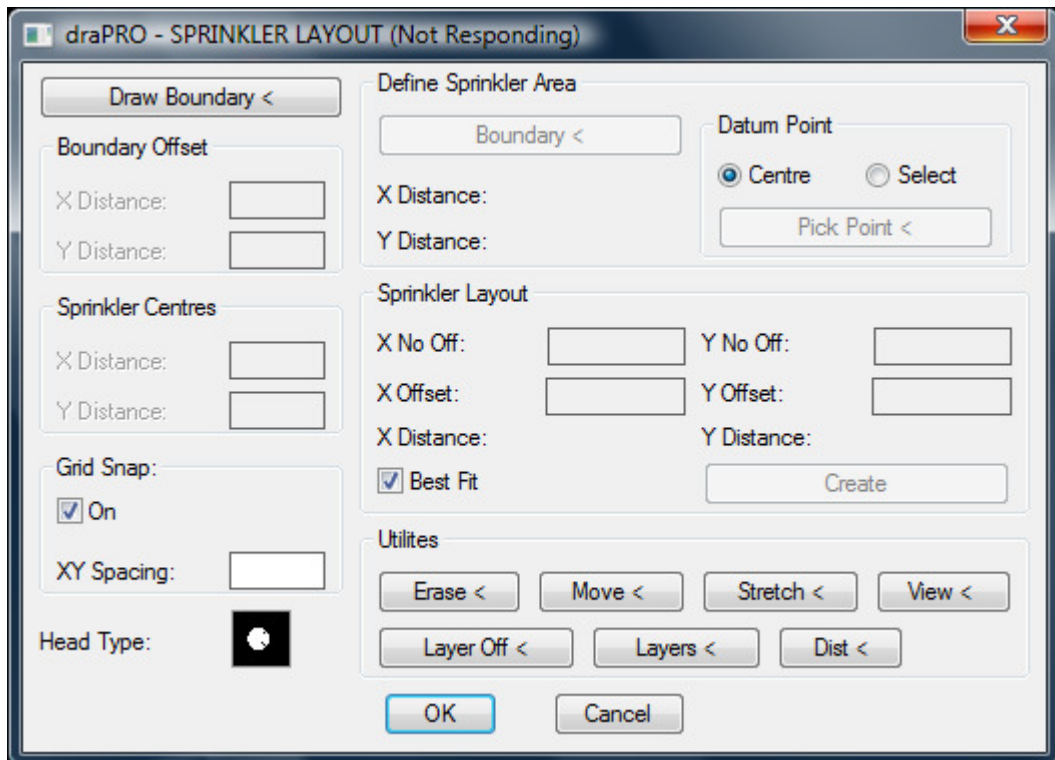
Set Out Sprinkler Heads

Enables you to set out sprinkler heads in a set area, allowing you to design the majority of the head layout with minimal effort.

From the FS Heads toolbar, choose ,

Format: Set Out Sprinkler Heads

Format:
















Method to Layout Sprinkler Heads

1. Specify the overall boundary by choosing the Draw Boundary button.
2. Make any changes to areas of the dialog box you can currently edit, they influence the way the values are calculated in the Sprinkler Layout area. Changes can also be made after specifying the sprinkler area boundary.
3. Set Datum Point
4. Choose the Boundary button in the Define Sprinkler Area.
5. View, change and try different values in the Sprinkler Layout area.
6. Choose the Create button to create the layout grid before specifying the next Boundary to layout.
7. Do steps 4 to 6 again if you have other areas to layout within the overall boundary.
8. Choose OK button. The dialog box is closed, and at every intersection on the layout grid, the head type, specified in the dialog box, will be drawn. The layout grid is also erased.

Sprinkler Heads

Insert sprinkler heads.

From the FS Heads toolbar, choose , or , or , or , or , or , or , or , or , or , or , or , or .

















Format:

Insertion point: (or R to Reference from): Pick it

Insertion point: (or R to Reference from): Pick it, or press Enter when done.

Detectors

Insert fire detectors

From the FS Detectors toolbar, choose , or , or , or , or , or , or , or , or , or , or , or , or , or , or , or .

Format:


Insertion point: (or R to Reference from): Pick it

Insertion point: (or R to Reference from): Pick it, or press Enter when done.

Piping (double line)

Double Line Pipe

Draws double line pipe with optional insulation.

From the MD Double Line Piping toolbar, choose 

Enter pipe diameter <100>: Enter a number

Enter insulation thickness <50>: Enter a number (0 for no insulation)

Draw pipe From point: Specify a point, or R for reference point

- R (reference point option from any "To point")

Reference point: Specify a point to reference from

Enter relative/polar coordinates (with @): Enter relative offset value

To point: Specify a point, or R

To point: Specify a point, R, or {RETURN} when done

Double Line Pipe Bend

Constructs a bend at the juncture of two pipes.

From the MD Double Line Piping toolbar, choose 

Select pipes...

Crossing window - Inside corner: Specify a point on the inside of the two pipes so the crossing window will cross both ends of the pipe.


Pick outside corner: Specify a point on the outside of both pipes.

Pipe diameter: 100 Insulation thickness: 50

Bends will only be drawn when pipes of the same diameter and insulation thickness are selected.

Double Line Pipe Up

Constructs a pipe up bend for a double line pipe

From the MD Double Line Piping toolbar, choose 

Select pipe...

Crossing window: Specify the first point of the crossing window which will enclose the end of the pipe

Other corner: Specify the other point of the crossing window so the end of the pipe is inside the window

Pipe diameter: 100.0 Insulation thickness: 50.0

Double Line Pipe Down

Constructs a pipe down bend for a double line pipe

From the MD Double Line Piping toolbar, choose 

Select pipe...

Crossing window: Specify the first point of the crossing window which will enclose the end of the pipe

Other corner: Specify the other point of the crossing window so the end of the pipe is inside the window

Pipe diameter: 100.0 Insulation thickness: 50.0

Double Line Pipe Break

Breaks double line pipe crossing over the top, or underneath another double line pipe, of any diameter.

From the MD Double Line Piping toolbar, choose 






Select TOP pipe: Use an object selection method to select the centre line of the pipe which will not be broken

Select BOTTOM pipe: Use an object selection method to select the centre line of the pipe which will be broken

Note: When selecting the centre line of the pipe be sure to make your selection on the line, not the gaps.

Pipe Valves (Plan)

Draws a plan view of a valve on double line pipe, breaking the pipe automatically.

From the MD Double Line Piping toolbar, choose , or , or , or , or 

Pick insertion point for valve: (or R to Reference from):

Use an object selection method to select the position on the double line pipe centre line. If the reference from option is used, the resulting relative offset must also be on the pipe centre line.





If a valve for the selected pipe (the diameter is determined from information on the centre line of the pipe) is not found the following message is displayed.

There is no valve available for the pipe diameter selected.

See Customising Pipe Valves on how to add new valve sizes.

Pipe Valves (Elev)

Draws a elevation view of a valve on double line pipe, breaking the pipe automatically.

From the MD Double Line Piping toolbar, choose , or , or , or 

Pick insertion point for valve: (or R to Reference from):

Use an object selection method to select the position on the double line pipe centre line. If the reference from option is used, the resulting relative offset must also be on the pipe centre line.
















Rotation angle: Specify an angle

If a valve for the selected pipe (the diameter is determined from information on the centre line of the pipe) is not found the following message is displayed.

FS Valves

Valves

Draws valve symbols on schematic drawings.

From the FS Valves toolbar, choose , or , or , or , or , or , or , or , or , or , or , or , or , or , or .
















Format:

Insertion point: (or R to Reference from): Pick it

Insertion point: (or R to Reference from): Pick it, or press Enter when done.

Other Symbols

Draws various symbols on schematic drawings.

From the FS Valves toolbar, choose , or , or , or , or , or , or , or , or , or , or , or , or , or , or .

Format:

Insertion point: (or R to Reference from): Pick it


Insertion point: (or R to Reference from): Pick it, or press Enter when done.

Schedule Items

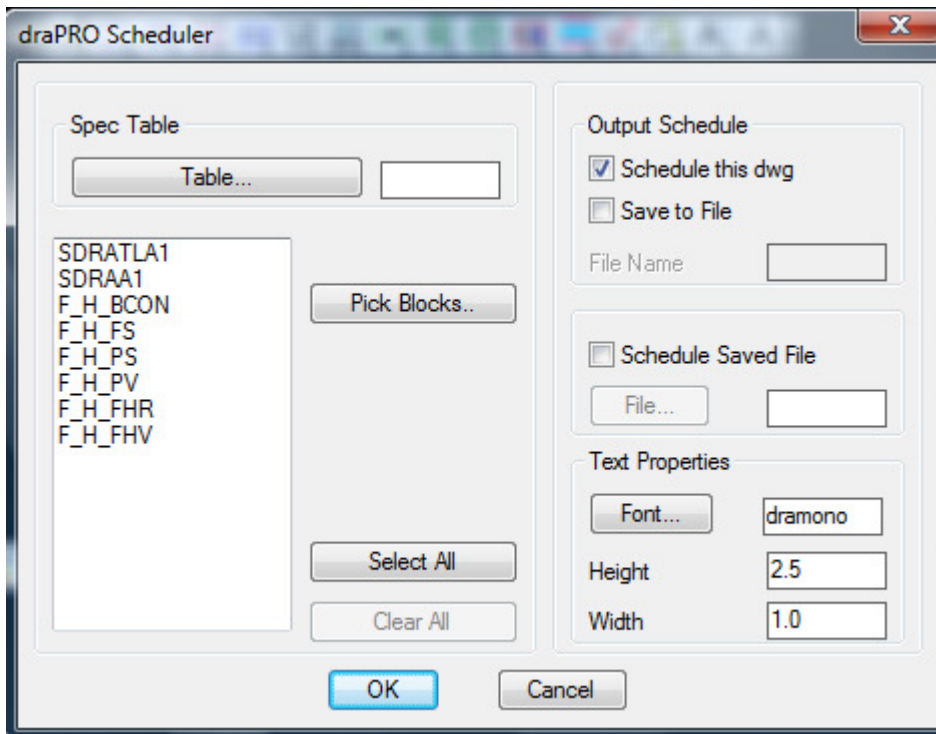
The draPRO schedule program tabulates items referenced in a drawing.

Items are counted and sorted according to the value entered in the item reference as an attribute.

Items will only be scheduled if the database used has an entry which matches the value entered into the item reference.

From the FS Schedule toolbar, choose .

Format:



Dialog Box Description

* Spec Table area

This specifies the database of information on the particular items to be scheduled, as made by the Make Database function, and data entered using the Set Up Database function.

Enter the database name in the text box, or select it by choosing the Table... button.

* Standard References toggle

This specifies that a selection of the item to be scheduled be made from the list box. When off you can select the item (block) to schedule from the drawing using the Pick Reference... button.

* Pick Reference... button

This enables you to select an item reference block from the drawing to schedule. This can either be a standard reference, or a user defined item reference.

* Output Schedule area

- Schedule this dwg toggle

Create the schedule and insert it on the current drawing.

- Save to File toggle

Save the scheduled items to a file, which can be inserted at a later date, to any drawing.

- File Name text box

Enter the name for the file to save the scheduled information to.

* Schedule Saved File toggle

Insert a schedule previously saved.

Enter the file name used to save the schedule, or choose

File... to select the file name.

* Text Properties area

Controls the text properties of the schedule table inserted onto the drawing.

- Font text box

Enter the font to use in the schedule table. If the font specified is not a mono space font the columns of the table will not line up. Choose the Font... button to select the font name.

- Height text box

Enter the text height for the text in the schedule table.

- Width text box

Enter the width factor for the text in the schedule table.

* OK button

Choose OK when you have finished specifying values in the dialog box. You will then be prompted for a point for the placement of the schedule. The point specified is located at the top left hand corner of the schedule table.

TO SCHEDULE A STANDARD ITEM REFERENCE


The following steps are required to create a schedule onto the current drawing.

1. Specify the database table to use in the Spec Table area.
2. Select the item reference to schedule in the Standard References list box.
3. The Schedule this dwg toggle is on.
4. Choose OK.
5. Specify a point for the location of the schedule table.

See also SCHEDULING EQUIPMENT OVERVIEW

Re-Schedule Items

If you have added, or removed any item references you can have draPRO re-count the number of items on the drawing. If the number of items found is different to the number of items scheduled already you can update the schedule table.

From the FS Schedule toolbar, choose 

Format:

draPRO has found a different number of "item ref" references than has been scheduled.

Re-schedule (Yes No)<Yes>: Enter n or press {RETURN}

The schedule table for the item reference will be erased and updated in the same position.

The schedule table can be moved anywhere in the drawing, draPRO will update it in its present position.

See also SCHEDULING EQUIPMENT OVERVIEW IN MD HELP


Make A Database

To use the scheduling commands you must have created a database table, and entered data in the table relevant to the items to be scheduled.

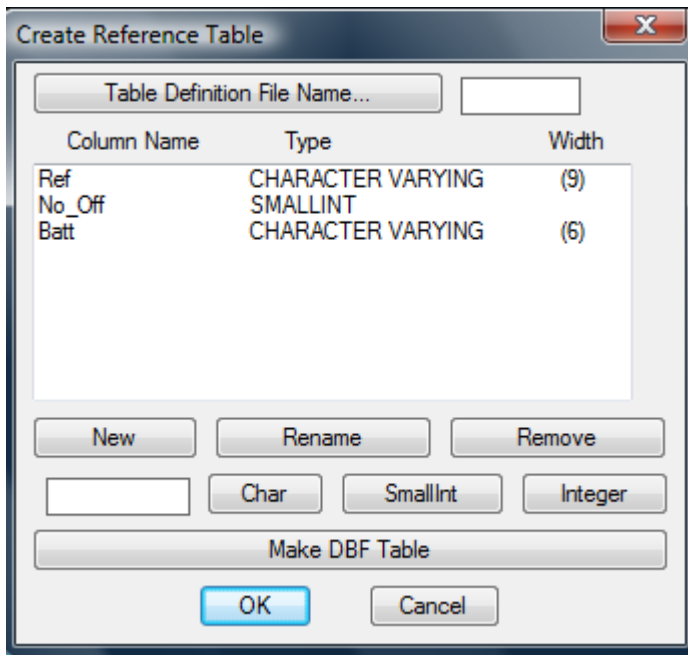
The Create Reference Table dialog box is used to create a file which is used to make the database table. The table definition file specifies the database column names, and the type of data which can be entered in the column.

There are three steps to creating a database table.

1. Define column names, type and width for each row in the database.
2. Specify a name for the database table file.
3. Make the DBF table.

From the FS Schedule toolbar, choose 

Format:



Dialog Box Description

* Table Definition File Name... button

Enter a name in the edit box for the table definition file.

or

Choose this button to select an existing database table to copy the column structure from, using the file selection dialog box.

* List Box

The list box is where the column data for each row of the database table is displayed. The Rename, Remove, Char, SmallInt and Integer buttons are applied to the currently selected row in the list.

List box heading description.

- Column Name: This is a name of a column you wish to have in your schedule.

Restrictions

A schedule will not be created unless you have (as the absolute minimum) the following two columns defined in the table definition file.

REF char (9)

NO_OFF smallint, or integer

You may have as many columns as you wish.

The maximum length for the name is 9 characters. You cannot use the minus sign or spaces as part of the name.

- Type: The data you wish to enter in this column is either an integer, or smallint value, or characters (numbers & letters). The only columns which require the integer or smallint type are NO_OFF, and AIR_QTY, as none of the user defined columns are used to sort the data.

Using char for column data you will need to specify the maximum width for the data field.

- Width: Only the char Type requires a width. The width indicates the maximum length of the data you can enter in this column when you come to entering data in the database.

* Column Name text box (just below the New button)

Enter a new Column Name

* New button

Creates a new Column Name in the List Box, as specified by the name entered in the Column Name text box.

* Char button

Defines the character field length (width) for a selected Column Name.

1. Choose an item from the List Box, it will appear highlighted.
2. Choose the Char button.
3. In the Characters text box of the Character Field Length dialog box, enter the maximum length for the column. Once the database is created this length cannot be changed.
4. Choose OK.

* Integer button

Defines the selected item in the List Box as being an integer.

* SmallInt button

Defines the selected item in the List Box as being a smallint.

* Rename button

Renames the selected item in the List Box to the name specified in the Column Name text box.

* Remove button

Deletes the selected item from the List Box.

* Make DBF Table button

Once the Table Definition File has been saved, choosing this button creates the database table. If draPRO has been successful in creating the .dbf file OK. will be displayed on the command line.

If the database table is not successfully created -

- make sure none of the names in the Column Name field of the List Box exceeds 9 characters in length.

- The Column Name cannot contain a minus sign, or spaces.


See also SCHEDULING EQUIPMENT OVERVIEW IN MD HELP

Set-Up Database

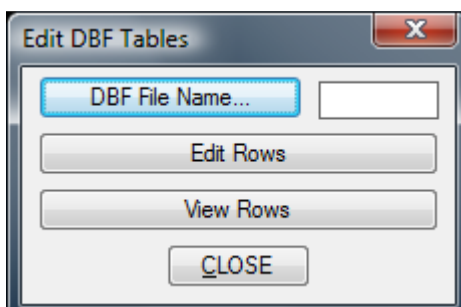
This dialog box enables you to enter and edit data in a database.

To enter data into a database you must have created the database structure, or table using the MAKE A DATABASE function.

The database is a dbase III file.

From the FS Schedule toolbar, choose 

Format:



Dialog Box Description

* DBF File Name text box

Enter the name of the database table to edit. i.e. the dbf file created with the Make a Database function.

or

Choose the DBF File Name... button to select the .dbf file using the file dialog box.

* View Rows Button

Allows you to step forwards and backwards through the database rows. The database is always sorted by the REF column values.

Use the Operations: buttons, Next, Prior, First and Last buttons to view the rows in the database.

* Edit Rows Button

Allows you to add, change, or delete row information in the database.

* Current row area

List box

Shows the contents of the current row in the database. Select a column to edit and the contents of the column will appear in the edit box so it can be changed.

* Change Column Value area

Column Name

When a column is selected in the list box, the column name will be shown as the one being edited.

SET VALUE Button

This button puts the changes made in the edit box back into the column being edited in the List box. You will see an * to the left of the column you changed after choosing this button. This indicates that the column has been marked for updating, and will become permanent when the UPDATE button is selected.

Edit Box

When a column is selected in the list box, the contents of the column will be displayed in this edit box. Edit the entry, and choose the SET VALUE button to change the value in the list box, and mark it for updating.

Operations: area

Next button

Allows you to step forward through the database. The Prior, First, and Last buttons will always be greyed out.

UPDATE Button

This button updates any pending changes made to columns in the row. If you have made changes to the row, update it before going to the next row, or choosing CLOSE, otherwise your changes will not be made permanent to the database.

INSERT Button

This button inserts a copy of the current row into the database, temporarily before the current row. In fact it is actually inserted at the end of the database, and if you don't edit the new row immediately, when you want to edit it later you will find it at the end of the database.

DELETE Button

Deletes the current row in the database.

DIAGN...Button

This button allows you to diagnose problems with incorrect entries in the database.

Data Entry

All the data for one specific reference is entered in a row. This row is made up of the columns you created in the Make a Database function. If this is the first time the table has been edited the database will be empty. In the Current row list box of the dialog box choose a column to edit and enter new values in the edit box in the Change Column Values area.

Special attention should be made to columns specifically used by draPRO. These are -
REF: This field links the item reference to the database, and should be exactly the same as the ref entered when using the Item References function (prefix + number eg. S1).

Note! The case of the ref field must match the case of item you wish to schedule.

NO_OFF: This field should be left blank, as draPRO calculates the number of references in the drawing.

All other user defined columns can have any values, the only restraint is the number of characters specified for the length of column when you made the database table.

To enter data choose the column to edit from the Current row area and enter the required data in the Edit box in the Change Column Values area, press the SET VALUE button to change the column information in the list box. Choose another column and change its value using the same procedure.

When you have finished changing column data, choose the UPDATE button, this makes all your changes permanent to the database To add another row follow the same procedure. The previously entered data will remain as the default for the next row. Be careful not enter two rows with the same ref value.

IMPORTANT NOTE.

When you have created a new database, the first time you edit it, and insert a new row, the columns you created with a field type of characters will have a period in them. It is important that you don't leave any columns with period. Edit them so they have values, or make them blank.

The database can be edited at any time, however if you find a column field is not long enough, or is excessively long the only way to change it is to create a new database, and then enter all the data again. The database files (.dbf extension) can be copied, and edited as a different file name. This may save you time if you need to create a database which is similar to a previously created one.

See also SCHEDULING EQUIPMENT OVERVIEW IN MD HELP