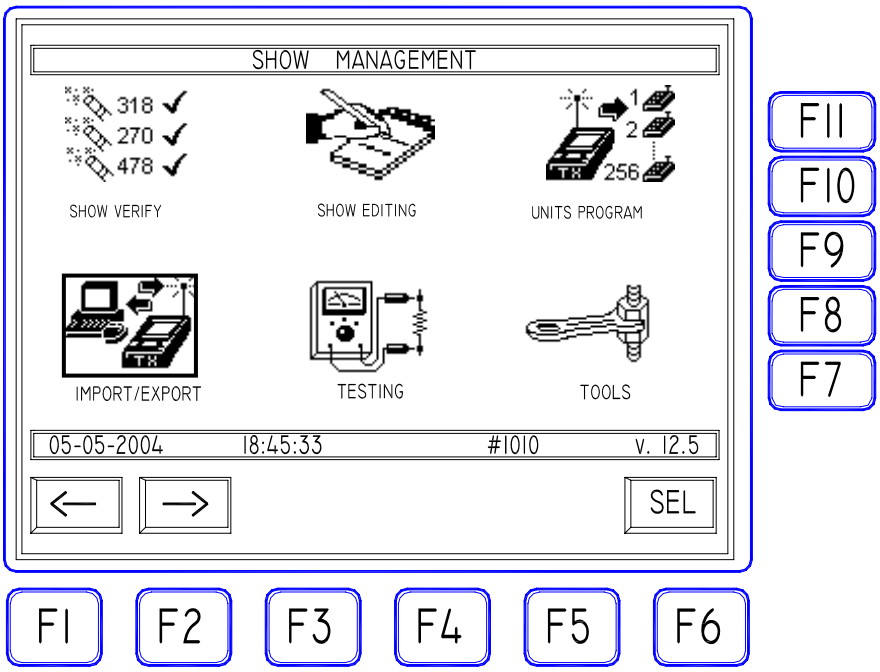
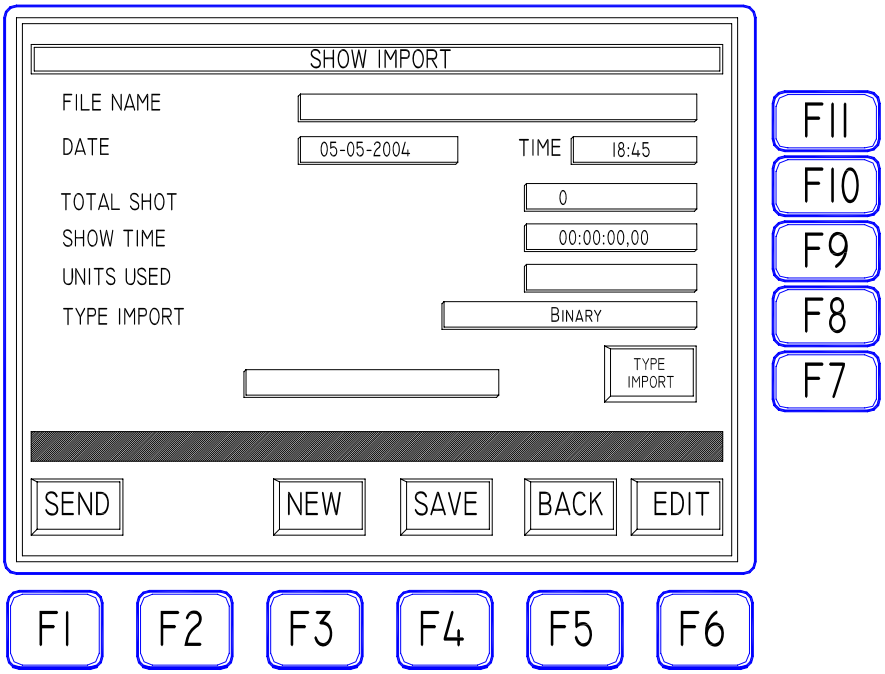
2 . 4 " IMPORT/EXPORT " ICON



This function group allows downloading a whole pyrotechnic show created and edited on a PC directly into the memory of the FIREMASTER III TX2000-A memory.
Use the F6 key "SEL" to select the "IMPORT" mask:



In order to prepare the System to receive a new file from the PC, press key F3 "NEW": all data fields will be cleared.

The data transfer is made via the built-in RS-232 serial interface and the "loader" program SHOWLOADER3® supplied with the FIREMASTER System. The connecting cable between the FIREMASTER IV TX5000 and the PC is a SPECIAL configuration (black cable) supplied with SHOWLOADER3®. It is terminated one end (PC side) with a FEMALE SUB-D 9-pin connector and opposite end with a 7-pole DIN male connector (TX5000 side).

2.4.1 How to compile a pyrotechnic show on a PC

The whole pyrotecnic show can be prepared separately on a common PC using one of the several choices available. The simple and straightforward structure of the firing data allows a direct compatibility with several commercial programs such as FIREONE®, PYROMOTION®, etc. but a valid file can be also created with a simple electronic worksheet such as EXCEL® or even typed-in directly with the NOTEPAD accessory available on any PC.
The resulting file to be downloaded directly to the FIREMASTER IV TX5000 unit must be a TEXT FILE or a .CSV file.
The example below shows how the data must be organized in order to create a valid downloadable file.

```
FIREMASTER 3
NAME  TEST FILE
DATE 28-03-2005
TIME 19:30
CUE;SEQ;DELAY;GROUP;ADDRESS;START;
1;1;0;0;265;00.00.00,00;
1;1;0;0;241;00.00.00,00;
1;1;0;0;1;00.00.00,00;
2;2;0;1;266;00.00.10,00;
2;2;0;1;242;00.00.10,00;
2;2;0;1;2;00.00.10,00;
3;3;0;2;267;00.00.20,00;
3;3;0;2;243;00.00.20,00;
3;3;0;2;3;00.00.20,00;
4;4;0;3;268;00.00.30,00;
4;4;0;3;244;00.00.30,00;
4;4;0;3;4;00.00.30,00;
5;5;0;0;245;00.00.40,00;
5;5;0;0;269;00.00.40,00;
5;5;00.00.00,50;0;246;00.00.40,00;
5;5;00.00.00,50;0;270;00.00.40,00;
5;5;00.00.01,00;0;247;00.00.40,00;
5;5;00.00.01,00;0;271;00.00.40,00;
5;5;00.00.01,50;0;248;00.00.40,00;
5;5;00.00.01,50;0;272;00.00.40,00;
5;5;00.00.02,00;0;249;00.00.40,00;
5;5;00.00.02,00;0;273;00.00.40,00;
5;5;00.00.02,50;0;250;00.00.40,00;
5;5;00.00.02,50;0;274;00.00.40,00;
```

The RED fields are FIXED and mandatory. In particular:
- "Firemaster 3" is a fixed header

- "Name" : the user is allowed to give any name up to 24 characters to identify the show. This field is OPTIONAL and can be left BLANK
- "Date" and "Time" specify the time and date of creation of the show. These fields are also OPTIONAL and can be left BLANK.

The following fields, separated by a SEMICOLON (**;**) are MANDATORY: they must be typed exactly as shown (the first character is a capital). The ORDER of the 6 fields can be different (provided the following data will respect the order).

- "Cue" is a progressive number indicating the sequence of fire inside the show. It will start with "1" and will increase progressively. If two or more lines have the same CUE number, they will be fired AT THE SAME TIME.
- "Seq" normally follows the same sequence of "Cue". It will differ only when a particular line, already fired, must be FIRED again (this happens when the line drives not a squib but an automatic sequencer or similar device).
- "Delay" represent the time spacing between the shots of a RAPID SEQUENCE (less than one second). Data format is: mm.ss,00
- "Group" allows to specify a particular section of the show that can be enabled/disabled during the execution. Up to 9 different groups can be specified, if "0" is specified, then the line cannot be DISABLED during the show execution.
- "Address" represents the number of the physical line addressed. It can range from 1 to 9999
- "Start" specifies the absolute time of firing of that line inside the show. The data format is: hh.mm.ss,00

In the given example the FIRST FIRE command (Cue and Seq 1) will fire three lines (265, 241, 1) at the same time (00.00.00,00). The same is repeated for Cue and Seq 2,3 and 4 with an absolute time of 10, 20 and 30 seconds respectively. Cue and Seq 5 starts a RAPID sequence of 5 shots spaced apart by 00,50 seconds and beginning at the absolute time 40 seconds (note as the "Start" value remains fixed at 40,00 seconds while the "Dealy" increases linearly in steps of 00,50 seconds). Being the "Group" specified as "0" for all Cues, it will be NOT possible to disable any line during the show execution.

No other data is necessary to build a valid file to be downloaded into the memory of the TX5000 unit. Any show can be thus created up to 9999 successive Cues.

2.4.2 How to download the show file to the TX5000 unit

The following steps are required to obtain your show data to be loaded and stored inside the permanent memory of the TX5000 Unit, ready to be executed:

1) Create first a TEXT file containing the show data. The file can be created following the instructions given in the previous chapter. Any method is valid: import the file from a third-party program of show management, create the file with NOTEPAD, EXCEL, WORD or any available TEXT EDITOR program. The file must be always saved as

.TXT or .CSV files: different type of text files (e.g.: .DOC), WILL BE NOT ACCEPTED.

2) Start the SHOWLOADER3 ® program on your PC and follow the indications given in the manual's appendix "A" in order to "import" the text file in the working area of SHOWLOADER3 ®. Once the show data are imported, they could be EDITED and modified directly inside the program using the editing capabilities of SHOWLOADER3 ®. We discourage however this method since it could leave the original file un-modified and thus containing dangerous discrepancies: it is much better to MODIFY ALWAYS THE ORIGINAL TEXT FILE and to import it again in the SHOWLOADER3 ®

3) Connect your PC to the Firemaster TX5000 using the cable supplied for this purpose. A standard SERIAL port (COM*n*) must be used: if not available, an USB port can be used instead along with a RS232-to-USB CONVERTER. Parente Fireworks s.r.l. can supply this type of converter upon specific request. Commercial USBtoRS232 can be also used but we must warn about the possible incompatibility of some models. The COM port used must be the same selected with the COMMUNICATION PARAMETERS menu.

4) Select the "IMPORT/EXPORT" icon on the main menu of the TX5000 (F6 key "SEL"). Clear all existing fields with F3 "NEW". Use F7 to select the SAME TYPE of data transfer (TEXT or BINARY) you selected at point (3).

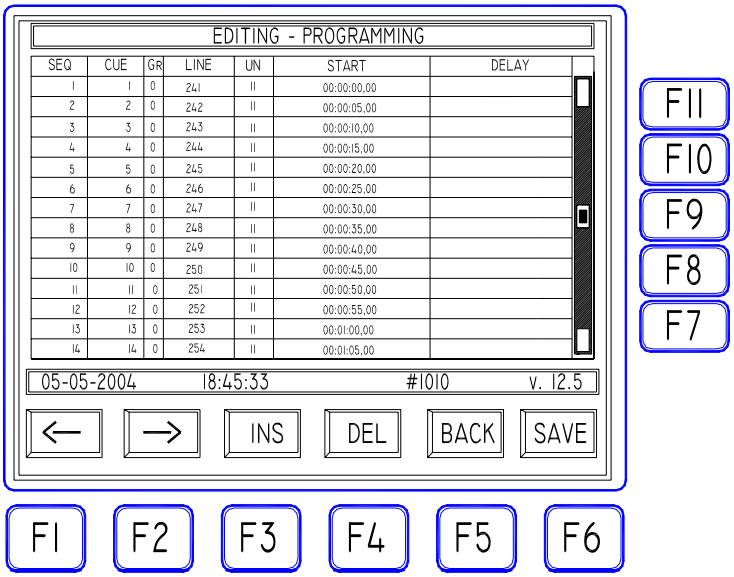
5) Prepare SHOWLOADER3® for the type of data transfer you prefer (TEXT or BINARY). Use the TEXT mode only with a FIREMASTER III TX-2000 with firmware revision 1.6c or earlier ones. Use the BINARY mode in all other cases (FIREMASTER III TX-2000 with firmware revision 1.7 or FIREMASTER IV TX5000 all versions). Click on "ACTION" then click on "Send to Firemaster TEXT" or "Send to Firemaster BINARY" according to your needs: the data transfer will start immediately

In order to prepare the System to receive a new file from the PC, press key F3 "NEW": all data fields will be cleared.

For any other detail about SHOWLOADER3® and data download, please refer to the appendix "A" of the present manual.

2.4.3 EDIT and SAVE the downloaded show data

Click on the EDIT button from inside the "SHOW IMPORT" mask: the EDITING-PROGRAMMING mask will be automatically selected and the show data just dowloaded will be available already formatted as required by the FIREMASTER SYSTEM.



The show data can be edited, modified, deleted or saved as needed. For the editing purposes the following keys and commands are available:

- ← **(F1)** moves the cursor left one column
- → **(F2)** moves the cursor right one column
- **INS (F3)** allows to INSERT a new line
- **DEL (F4)** allows to DELETE one entire line
- **BACK (F5)** steps back to the EDITING menu
- **SAVE (F6)** the displayed data are transferred to the permanent memory and will be stored until a new show will be loaded and saved.
- **F11 (Pg UP)** move the entire data window ONE PAGE UP (14 lines)
- **F10 (Line UP)** moves the data window ONE LINE UP
- **F8 (Line Down)** moves the data window ONE LINE DOWN
- **F7 (Pg Down)** moves the entire data window ONE PAGE DOWN (14 lines)

IMPORTANT NOTICE: even if the EDITING function has enough resources to allow deep changes to your show file and also allows TO WRITE LOCALLY a complete show using the TX5000 resources only, **we warmly suggest** using the EDIT function ONLY TO REVISE AND CHECK THE INTEGRITY OF THE DOWLOADED DATA.
Any change to your show, should be always made directly on the ORIGINAL FILE using the PC editing resources: other than managing the changes with much more ease, your file will be always UP to DATE, while making any modification on the TX5000 only, will produce DIFFERENT VERSIONS of your show.
In order to overcome partially to this problem, the IMPORT/EXPORT mask has a "SEND" key: it can be used to UPLOAD a file modified locally on the

TX5000, BACK to the PC (on the PC a TEXT EDITING or COMMUNICATION program with the FILE CAPTURE option activated, must be operative in order to use this function).

Since the transfer time required to download a file of huge dimensions is VERY SHORT (using the BINARY mode), we again suggest to use always a TEXT EDITOR to modify directly the ORIGINAL FILE on the PC instead of making LOCAL MODIFICATIONS or PATCHES to the file downloaded on the TX5000. This resource should be reserved to small modifications only in EMERGENCY CASES when a PC is not readily available.

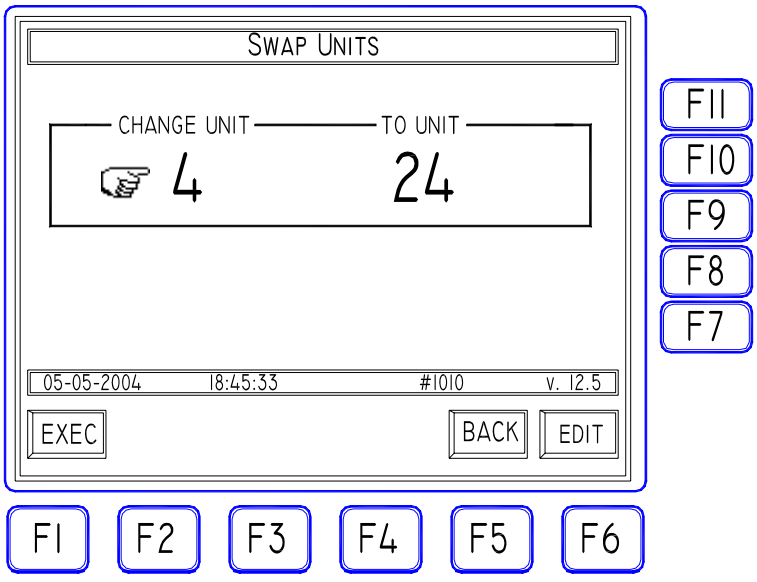
Remember to SAVE the show data when finished with the editing activity, otherwise all changes made to the show will be lost when the TX5000 unit is switched OFF.

2.4.4 THE "EDITING" MENU

The EDITING menu, just described in the previous paragraph, can be also activated from the MAIN MENU selecting the ICON. When the EDITING menu is selected this way, two icons become available:

Selecting this icon, the mask described in the previous paragraph (2.4.3) will be displayed.

Selecting the "SWAP UNITS" icon, will give access to the following mask:



This utility can be very useful if one or more Remote Units RX48 must be substituted on field just before the show. E.g.: let us suppose to already have in memory a complete show using (among many others) the Remote Unit #4. Just before the show the Unit #4 becomes defective and an immediate substitution with Unit #24 is necessary. In this case one will proceed as follows:

- type first the number of the Unit to be changed (4) and press ENTER
- type now the number of the new available Unit (24) and press ENTER
- press EXEC (F1) and the message "DONE" will appear in the window below.

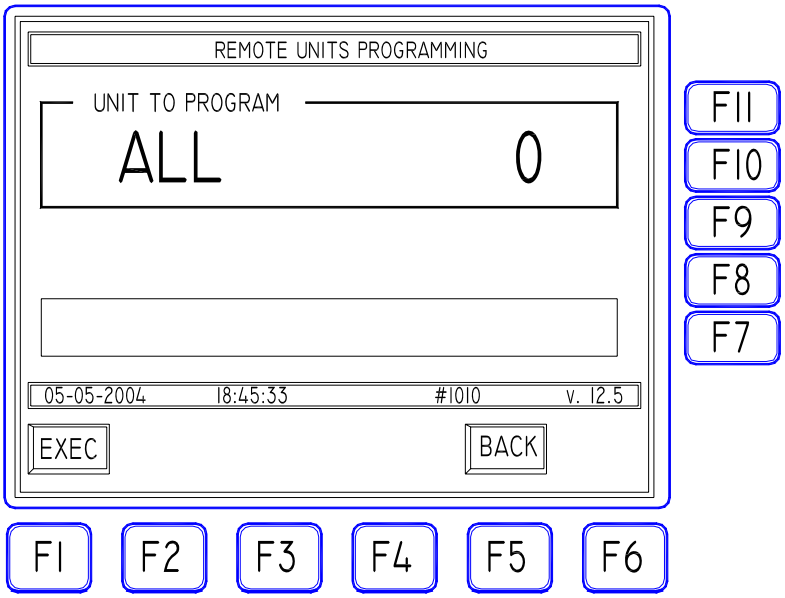
Press now EDIT (F6): the EDITING mask will be presented. All references to the lines of Unit #4 will have changed into the equivalent lines of Unit

#24. All other parameters (Cue, Seq, Start, Delay, Group) will remain UNCHANGED
This process can be repeated for as many Units as it may be necessary.

2.5 THE "UNITS PROGRAM" MENU

Once the show data have been revised, edited and permanently stored in the memory of the TX5000 Base Unit as previously described, it will be necessary to send these data to each Remote Unit RX48.

First of all, switch ON all the RX48 Units (and eventually RX24 and RX24-B is a "mixed" system is used) and wait for the auto-test procedure. After all field Units executed and passed the auto-test, select the "UNITS PROGRAM" icon from the MAIN MENU and get this mask:

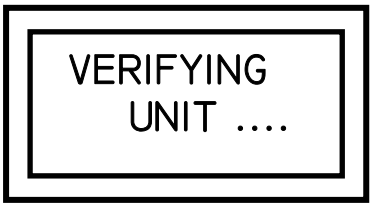


Type "0" to program ALL the RX48 Remote Units, otherwise type-in the number of the Unit you want to program and then confirm with ENTER.
If you are using a "mixed" system comprising FIREMASTER II, FIREMASTER III and FIREMASTER IV Remote Units, remember to select the "OLD UNITS" function in the "TOOLS" mask and to type here the number of all FIREMASTER II Units eventually used: the System will recognize automatically these Units and will change the programming procedure accordingly, thus making fully "transparent" to the operator the programming task.
The programming will start immediately with F1 "EXEC" key: the Unit(s) will be addressed in sequence and the data will be automatically sent to each

Unit. During this process a window will indicate the number of the Unit being programmed at that time.
The whole programming is made using the RADIO LINK and thus all Remote Units must be fully operative from this point of view (antenna correctly installed, good radio signal, etc.).
When the programming is over (this operation could require several minutes if the show does use several Remote Units and even more if one or more FIREMASTER II Units are also present because the previous-generation Units need a programming time 30 times longer than the last-generation ones), the System will display the message "COMMAND EXECUTED!"
Otherwise, if any error occurred during the program dowloading, the System will jump automatically to the "SHOW VERIFY" mask in order to display a complete report of the errors and anomalies.
The TX5000 Base Unit makes 3 attempts when any Remote Unit shouldn't "answer" to the programming, then the next Unit will be addressed and so on for all the Units specified in the show file.

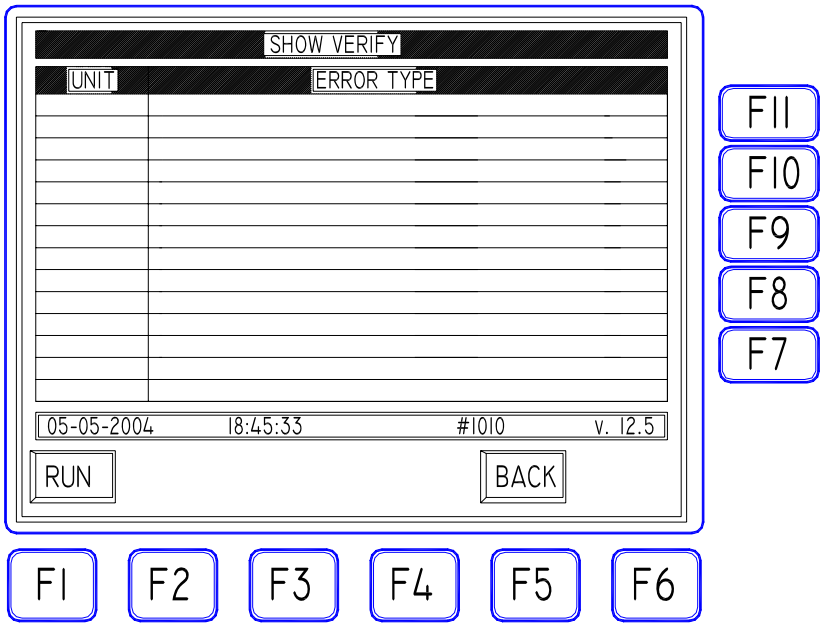
2.5.1 "SHOW VERIFY" MASK

This mask can be selected by the operator at any time from the MAIN MENU in order to verify if the content of the Remote Units RX24 does match exactly the show data stored in memory by the base Unit TX2000. The verify process will take place immediately pressing the F1 "RUN" key.
The following message is displayed during the test of each remote Unit:



If the verifying test gives a positive result (the program stored inside all the Remote Units involved does match the show data hold in memory by the TX5000 base Unit), then the following message will be displayed

If otherwise any error or difference between the data sent back by the Remote Units and the show stored in memory should be encountered, then n error report will be automatically displayed (up to a maximum of 14 lines).



This mask is also AUTOMATICALLY displayed when the TX5000 Base Station has finished with the remote programming and one or more problems have been encountered.

2.5.2 ERROR MESSAGES

The following error messages can be displayed in the SHOW VERIFY mask.
E.g.:

	UNIT	ERROR TYPE
(1)	12	NOT PROGRAMMED
(2)	12	LINE(S) OPEN
(3)	12	NO RESPONSE
(4)	12	PROGRAM ERROR

1) One or more lines of the Remote Unit results NOT PROGRAMMED with consistent data
2) One or more lines, while correctly programmed, result as OPEN CIRCUIT
3) The Remote Unit doesn't respond. The TX5000 base Unit makes two successive attempts.
4) The data sent back by the Remote Unit (relative to one or more lines) doesn't match the show program stored in memory by the base Unit TX5000

Each message type is displayed only once even if more lines have the same error
The error list has a maximum lenght of 14 items.
No specific indication is given about the lines in error: the purpose of this function is just to check if there complete match between the data stored inside the Remote Units and the show data hold in memory by the TX5000 base Unit.

In order to be effective, this function needs always that any parameter modification must be made using the download procedure from the PC show file. I.e: a match error will be always issued if some modifications, additions or deletions are made directly using the LINE TEST or UNIT TEST functions (the data inside the Remote Units have been modified but not so the show data stored in memory by the TX5000).
A programming error will be also issued if a data modification is made with the EDITING function but forgetting to SAVE the modifications with the F6 key.
Of course a programming error will be also issued whenever the data are correctly modified using the EDIT function or downloading the new data from the PC, but the operator forget to SEND THE NEW DATA to the Remote Units using the UNITS PROGRAM function.