

Appendix

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APR Editor

RAD Console

Manufactured by:

Fabricado por:

Fabriqué par:

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REVISION HISTORY

REVISION	DATE	REASON FOR CHANGE
0	MAY 20, 2015	First edition.

This Document is the English original version, edited and supplied by the manufacturer.

The Revision state of this Document is indicated in the code number shown at the bottom of this page.

ADVISORY SYMBOLS

The following advisory symbols will be used throughout this manual. Their application and meaning are described below.



DANGERS ADVISE OF CONDITIONS OR SITUATIONS THAT IF NOT HEDED OR AVOIDED WILL CAUSE SERIOUS PERSONAL INJURY OR DEATH.



ADVISE OF CONDITIONS OR SITUATIONS THAT IF NOT HEDED OR AVOIDED COULD CAUSE SERIOUS PERSONAL INJURY, OR CATASTROPHIC DAMAGE OF EQUIPMENT OR DATA.



Advise of conditions or situations that if not heeded or avoided could cause personal injury or damage to equipment or data.

Note 

Alert readers to pertinent facts and conditions. Notes represent information that is important to know but which do not necessarily relate to possible injury or damage to equipment.

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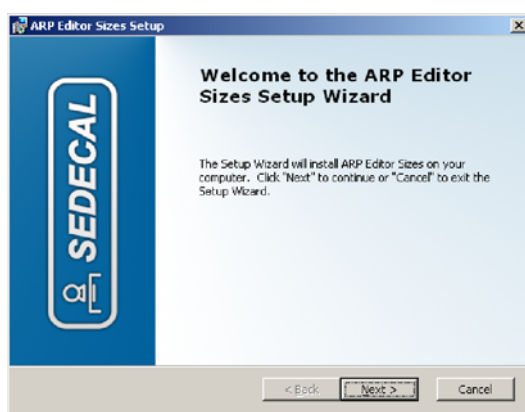
SECTION 1 INTRODUCTION

The Control Console is equipped with a communication port (serial) to allow the connection of an external PC with a female-female D-sub (9 pin) cable. The following actions can be performed with the program “*APR Editor Sizes*” loaded in the external PC:

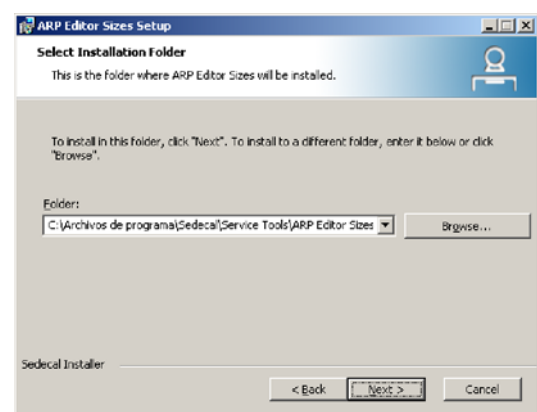
- Receiving the APR file used in the Control Console for Back-up purposes in the PC. (*Refer to Section 2*).
- Receiving the APR file used in the Control Console for editing purposes in the PC with the advantages of a user-friendly interface, and then uploading the edited APR file in the Control Console. (*Refer to Sections 2, 3 and 4*).
- Replacing the APR file in the Control Console by other APR file sent from the PC. (*Refer to Section 4*).

1.1 INSTALLATION OF THE “APR EDITOR SIZES” PROGRAM IN THE PC

1. Plug the USB with the Software Service Tools of the Generator in the PC.
2. Click on the .exe file, *APR Editor Sizes Setup*, to run the installation program, select the installation language and click on “*Accept*”. Then, click on “*Next*”.
3. Install the program in the selected folder by default or click on “*browse*” to select a different folder and click on “*Next*”.

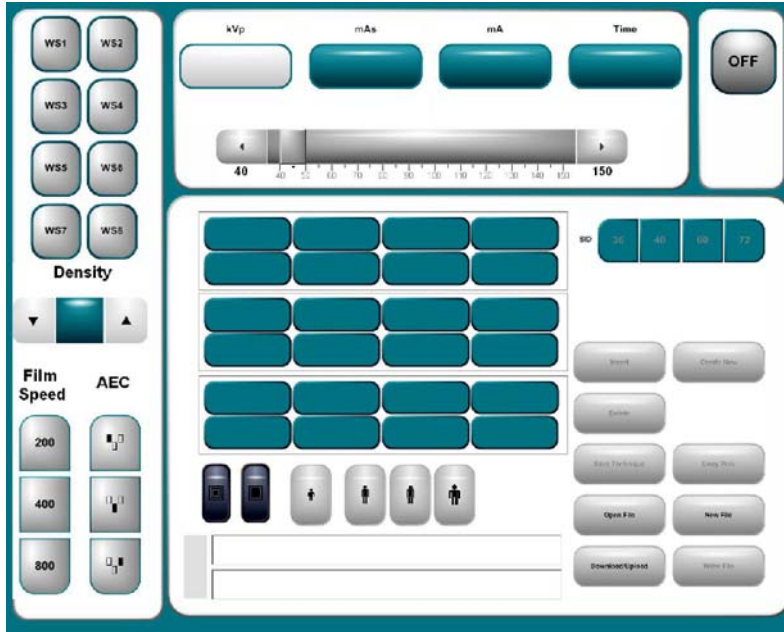


Click on “Next”



4. Click on “*Install*” to start the installation process.

5. Once the installation process has finished, click on “Finish”.
6. To run the program, click on “Start Menu\Programs\Sedeca\Service Tools\APR Editor Sizes” or on the desktop shortcut created during installation.



APR PC SCREEN

SECTION 2

RECEIVING THE APR FILE FROM THE CONTROL CONSOLE

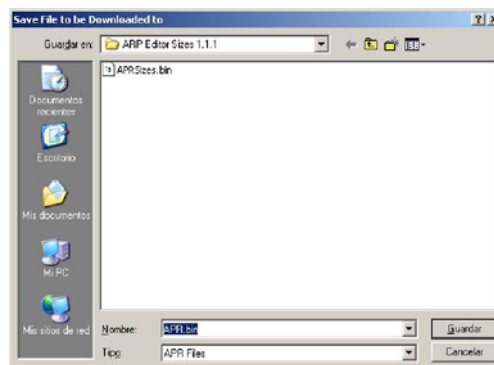
1. Interconnect PC and the Control Console with the female-female D-sub (9 pin) cable (D-sub connector is located at the back of the Console).
2. Run the program "APR Editor Sizes" in the PC, click on "Start Menu\Programs\Sedeca\Service Tools\APR Editor Sizes" or on the desktop shortcut.
3. With the APR inactive, press "AEC Reset" + "Medium patient size" in the Control Console (APR Display shows the message "APR EDITION MODE").



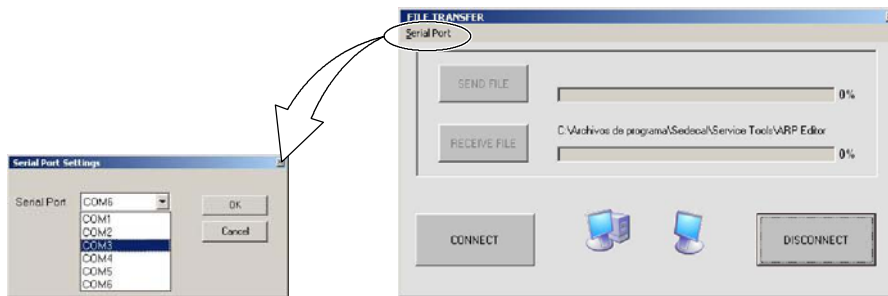
4. Click on "Download/Upload" button on the APR PC Screen.
5. Click on "Download File".



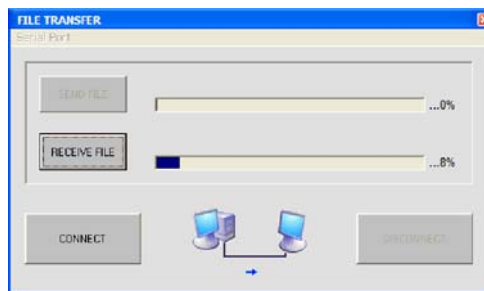
6. Select a folder and a new name (or existing name to be overwritten) for the APR file to be received in the PC and save it.



- 7. Check the communication serial port, by defect "COM1". For that purpose, click on "Serial Port". If the Control Console is not connected to COM1 in the computer, select the corresponding serial port and press "OK".



- 8. Click on "CONNECT" and then click on "RECEIVE FILE" button, now enabled.



The Control Console shows the message "PC CONNECTED" on the APR Display.

Note

If the APR download is canceled by closing the window, the Control Console is locked and shows the message "COMMUNICATION LOST". It is needed to turn it off and on again.

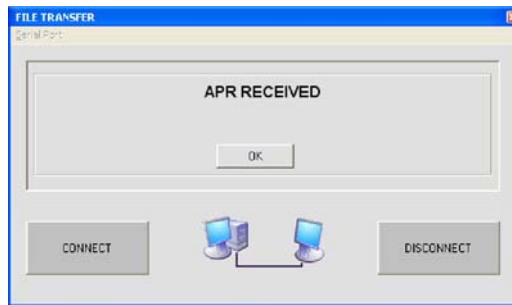
If the Generator is not ON or the Console is not on APR edit mode, the following message appears on the PC Screen.



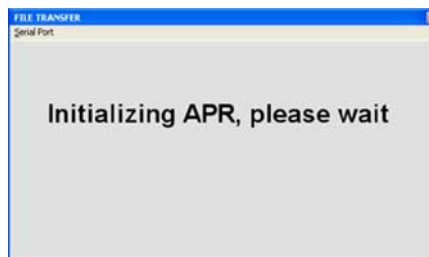
Turn ON the Generator and/or press simultaneously “AEC Reset” + “Medium patient size”.



9. Once the file transfer has finished, the PC screen requests an “OK” confirmation for “APR Received”.



10. Click on “DISCONNECT”. Once the APR file is saved, the APR is automatically initialized on the PC. The Control Console is no longer in APR Edition mode.



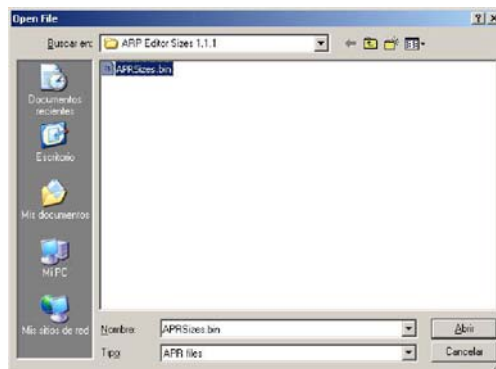
11. Once the initializing process has finished, click on the top right window cross button.
12. The APR is now ready to be checked or edited on the PC screen. (Refer to Section 3).

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SECTION 3 EDITING THE APR IN THE PC APPLICATION

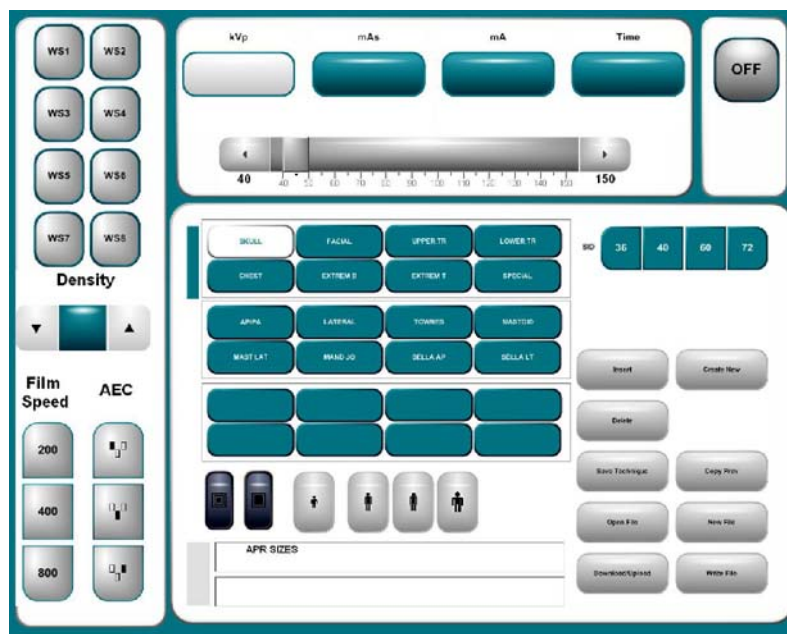
The “APR Editor Sizes” program allows the full edition of the APR techniques in the PC for later loading in a Generator Console.

1. Run the program “APR Editor Sizes” in the PC, click on “Start Menu\ Programs\Sedecal\Service Tools\APR Editor Sizes” or on the desktop shortcut.
2. Click on “Open File” button and double click on the APR file you want to edit.



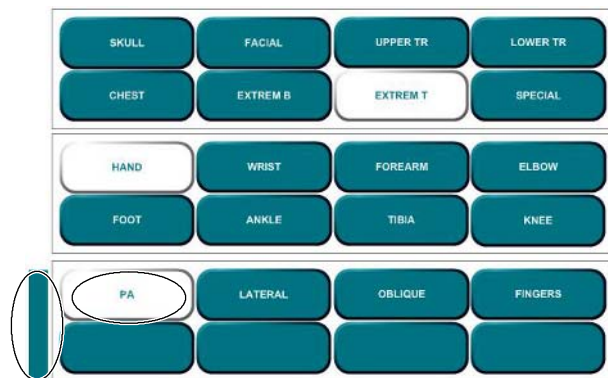
3. The APR PC Screen shows the opened APR.

Illustration 3-1
APR PC SCREEN



3.1 MODIFYING THE NAME OF A REGION - VIEW - PROJECTION

1. The operator may want to rename a Region, View or Projection. For that, select the Region, View or Projection to be renamed (the left Column appears in green and the button of the selected name in white).



2. Double click on it to edit the name. At this moment a virtual keyboard appears on the screen.
3. Write the new name, maximum of 8 characters (use the PC keyboard or click in the corresponding letter). Click on “Enter” when finished.



Note 

If the operator double clicks by mistake on the name of a Region-View-Projection, press “Esc” to exit from the virtual keyboard.

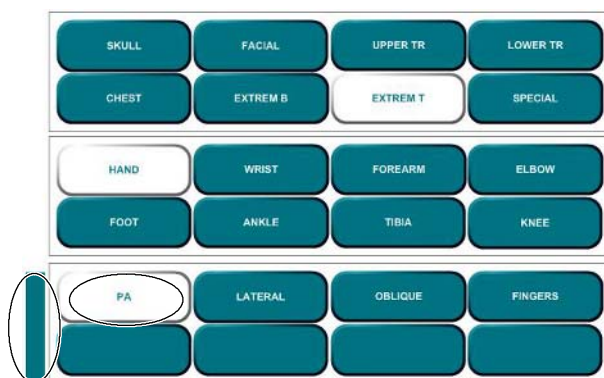
3.2 CREATING A NEW REGION - VIEW - PROJECTION



1. To create a new Region, View or Projection, first click on any Region, View or Projection, (the lateral Column appears in green), then click on “Create New” button.

Note 

Creating a Region, View or Projection will not be allowed in case all the positions are already filled.



2. A small window appears requesting for a confirmation. Click on “Yes”, then a virtual keyboard appears on the screen.



3. Write the name of the new Region, View or Projection and click on “Enter”. The new Region, View or Projection will be located in the last position of the list.



4. Now, if what it was created was a Region, the operator will have to create (assign) Views and Projections for that new Region. For that, the program requires to create at least one View for that Region and after that, create at least one Projection for that View. Follow the above steps 1., 2. and 3. to create and name the new Projection and Views.
5. Then, select the first Projection and a Size in order to assign the Radiographic Parameters (by default 40 kVp, 0.01 mAs, 10 mA, 0.001 seconds), AEC selections and SID to that Projection/Size.

Note 

If an APR technique is to be stored with AEC parameters, a suitable back-up time (and/or mAs) MUST be stored in the program by the operator.

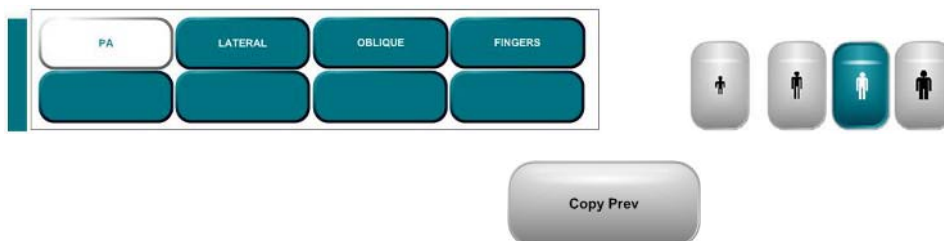
Note 

If the stored values for the APR technique do not match the scales programmed in the Generator, this values will be automatically adjusted by the Generator when the technique is selected in the Control Console.



6. Click on “Save Technique”.
7. Follow the same procedure to store the Radiographic Parameters of the rest of the Sizes of the Projection.
8. Click on the next Projection and then press on “Copy Prev” to copy all the data of the previous Projection to the new selected one (the stored values of the previous Projection will be copied to all the Sizes of the selected Projection). This feature makes easier the filling of all Data as usually it is only necessary a slight modification from one value to the next.

Click on the following Projection and then click on “Copy Prev”





The Copy Prev feature copies all the data of the previous Projection, no matter if the selected one had previously configured values.



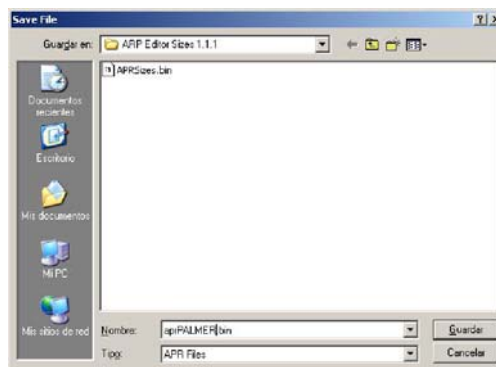
9. Before selecting the next Size or Projection, click on “*Save Technique*” once all the radiographic parameters are set for the present one.
10. The name of the total APR (sets of Regions-Views-Projections) can also be modified in the PC application, this name is also shown on the APR Display of the Generator Control Console. There are 2 editable lines with 40 characters each.



The new name is automatically saved.



11. When finished, click on “*Write File*”. A screen will request a name for the new APR file. Write a name or overwrite an existing one and save it.



12. Click on “*OFF*” button to exit the application. In case any parameter has been modified and the “*OFF*” button is clicked, a pop up screen will request to save the current modifications or discard them.

13. This step is only a quick guide to edit an APR file.

Create a New Region:

- 1.- Click on any Region
- 2.- Click on "Create New", "Are you Sure" -> YES
- 3.- Write the name of the new Region and click on "Enter." (The Region is included in last position).

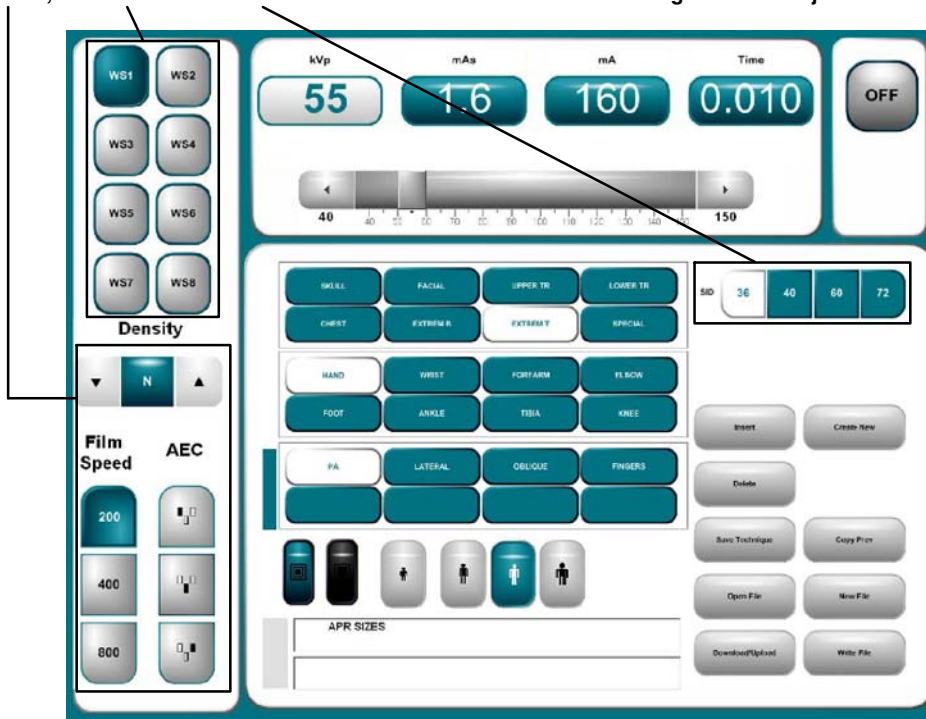
Create a New View or Projection:

- 1.- Click on any View or Projection
- 2.- Click on "Create New", "Are you Sure" -> YES
- 3.- Write the name of the new View and Projection and click on "Enter". (The View/Projection is included in last position).

Assign Parameters to the new Region-View-Projection/Patient Size:

- 1.- When editing the Parameters, first click on the corresponding projection and Size, then,
- 2.- Check and/or modify the Radiographic parameters (kVp, mA, mAs, Time), Workstation, AEC selections and SID indication (36", 40", 60" or 72") related to that Region/View/Projection/Patient Size.
Keep in mind that all Sizes in a Projection will share the same AEC values, Workstations and SID, that means that if one of these selections is modified, it will affect to all sizes for that specific Region-View-Projection.
- 3.- Click on "Save Technique".
- 4.- Follow the previous procedure to store the Radiographic Parameters of the rest of the Sizes of the Projection.
- 5.- Click on the next Projection and then press on "Copy Prev" to copy all the data of the previous Projection to all the Sizes of the new one. Modify the required parameters.
- 6.- Before selecting the next Projection or Size, click on "Save Technique" once all the radiographic parameters are set for the present Projection or Size.
- 7.- When finished, click on "Write file" to overwrite an existing APR file or to create a new APR file.

AEC, Workstations and SID are common values for all Sizes in a Region-View-Projection



3.3 INSERTING A REGION - VIEW - PROJECTION

This option allows the operator to create a new Region, View or Projection in a specific position.



1. To insert a Region, View or Projection, select (click once) the Region, View or Projection located immediately after the position where you want to insert it and click on “Insert” button.

Note 

Inserting a Region, View or Projection will not be allowed in case all the positions are already filled or if they are all empty. In this last case, use the “Create New” option (refer to Section 3.2).

2. A small window appears requesting for a confirmation. Click on “Yes”, then a virtual keyboard appears on the screen.



3. Write the name of the Region, View or Projection and click on “Enter”.



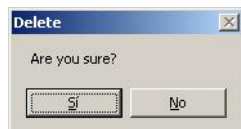
4. Now follow the process described in the previous *Section 3.2 Creating a Region-View-Projection* from step 4.

3.4 DELETING A REGION - VIEW - PROJECTION



To delete a Region, View or Projection, select (click once) the Region, View or Projection to be deleted and click on “Delete” button. All data related to that Region, View or Projection will be deleted.

A small window appears requesting for a confirmation.



3.5 NEW FILE



“New File” button is used to create a new APR file from the beginning without using data from other existing APR.

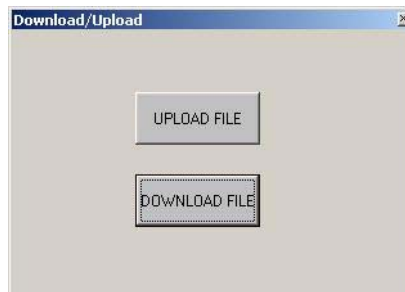
1. Click on “New File” button.
2. The program assigns a default name to the file (*newAPR.bin*), modify it as desired (*e.g. Saint Michael APR*). Write the name of the file and save it.
3. Follow steps in *Section 3.2* in order to create a new Region, View, Projection and Thickness values.

SECTION 4 SENDING AN APR FILE TO THE CONTROL CONSOLE

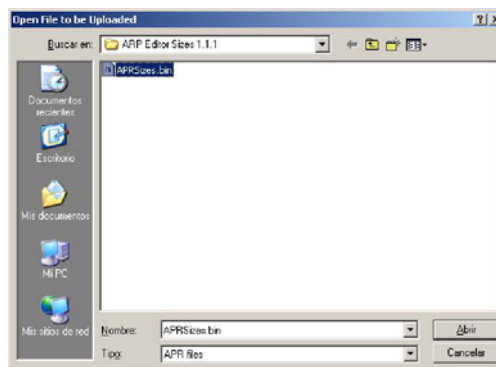
1. Interconnect PC and the Control Console with the female-female D-sub (9 pin) cable (D-sub connector is located at the back of the Console).
2. Run the program "APR Editor Sizes" in the PC, click on "Start Menu\Programs\Sedeca\Service Tools\APR Editor Sizes" or on the desktop shortcut.
3. With the APR inactive, press "AEC Reset" + "Medium patient size" in the Control Console (APR Display shows the message "APR EDITION MODE").



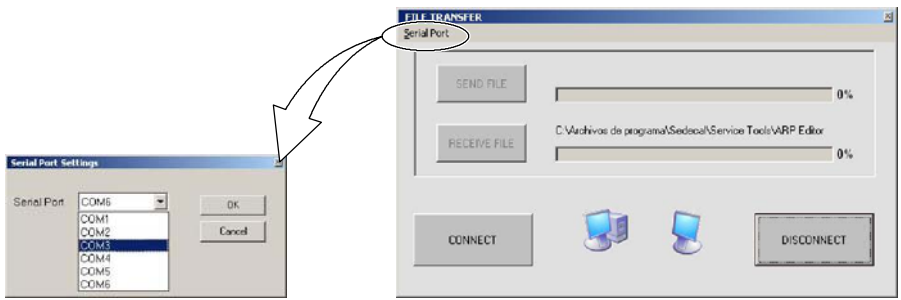
4. Click on "Download/Upload" button on the APR PC Screen.
5. Click on "Upload file".



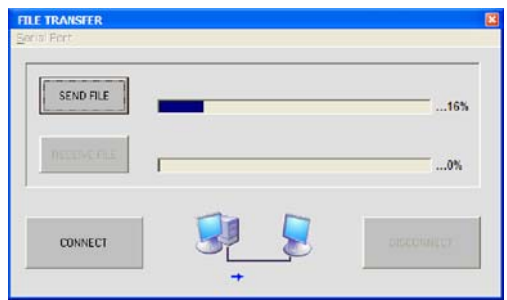
6. Select the APR file to be uploaded in the Control Console.



- 7. Check the communication serial port, by defect "COM1". For that purpose, click on "Serial Port". If the Control Console is not connected to COM1 in the computer, select the corresponding serial port and press "OK".



- 8. Click on "CONNECT" and then click on "SEND FILE" button, now enabled.

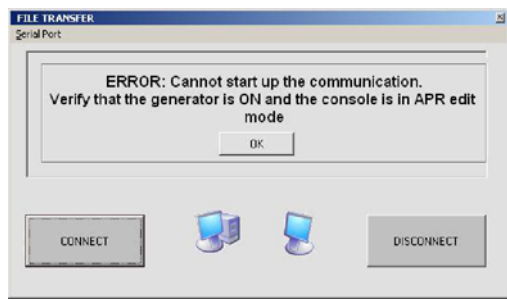


The Control Console shows the message "PC CONNECTED" on the APR Display.

Note

If the APR upload is canceled by closing the window, the Control Console is locked and shows the message "COMMUNICATION LOST". It is needed to turn it off and on again.

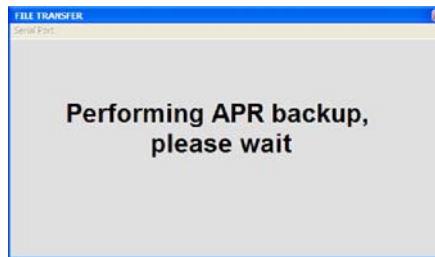
If the Generator is not ON or the Console is not on APR edit mode, the following message appears on the PC Screen.



Turn ON the Generator and/or press simultaneously “AEC Reset” + “Medium patient size” in the Control Console (the message “APR EDITION MODE” will be shown in the APR Display).



9. Once the file transfer has finished, the message “Performing APR backup, please wait” appears on the PC Screen.

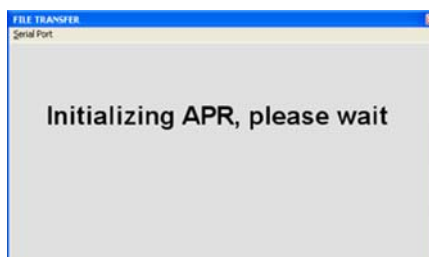


This is a safety feature that performs a Backup copy of the existing APR file in case the communication between the PC and the Console is interrupted during the Upload process.

10. Click on “DISCONNECT”.



11. Once the process is finished, the APR is automatically initialized on the Control Console while the PC shows the message “Initializing APR, please wait”.



12. Once the initializing process has finished, click on the top right window cross button. The Display on the Control Console shows the name of the uploaded APR.

13. Click on “OFF” button to exit the application.



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