FOM® User Manual

Scheduling / Billing / Reporting / Compliance

“Manage Everything Online, Any Where, Any Time.”
# Table of Contents

1. Introduction ............................................................................................................................. 1-1
2. User Roles ................................................................................................................................ 2-2
   2.1 System Administrator ............................................................................................................ 2-2
   2.2 Facility Administrator .......................................................................................................... 2-2
   2.3 Instrument Manager ............................................................................................................. 2-2
   2.4 User ....................................................................................................................................... 2-2
   2.5 Supervisor and Supervisor Assistants .................................................................................. 2-3
   2.6 Business Manager and Auditor ........................................................................................... 2-3
3. Installation and Setup of System Admin ..................................................................................... 3-3
4. User Registration .......................................................................................................................... 4-6
5. Add Financial Account Number .................................................................................................. 5-7
6. System Administrator Tasks ........................................................................................................ 6-7
   6.1 Add new facility and assign facility administrators .............................................................. 6-7
   6.2 System-wide settings ............................................................................................................. 6-8
7. Facility Admin Tasks ..................................................................................................................... 7-9
   7.1 Facility configurations .......................................................................................................... 7-9
   7.2 Add new consumables .......................................................................................................... 7-9
   7.3 Add new Accessories .......................................................................................................... 7-10
   7.4 Add new instrument and assign instrument managers ........................................................ 7-10
   7.5 Configure fee structures ...................................................................................................... 7-11
   7.6 Billing and reporting ............................................................................................................ 7-11
   7.7 Define holidays .................................................................................................................... 7-12
   7.8 Set up user survey ............................................................................................................... 7-12
   7.9 Maintain departments ......................................................................................................... 7-13
   7.10 Maintain supervisors ........................................................................................................... 7-13
8. Instrument Manager Tasks .......................................................................................................... 8-14
   8.1 Configure instrument rules ................................................................................................... 8-14
   8.2 Modify fee structure ............................................................................................................. 8-15
   8.3 Change instrument status .................................................................................................... 8-15
   8.4 Reserve instrument time ...................................................................................................... 8-15
   8.5 User training ...................................................................................................................... 8-16
   8.6 User assistance ................................................................................................................... 8-17
1 Introduction

The Facility Online Manager, FOM®, is a professional and customizable online application that provides a complete solution to shared facility management. It incorporates many features that are not seen in other scheduling systems. These unique features make FOM® a highly secure, versatile, reliable, and easy-to-use system for both the users and the facility administrators. FOM Networks works with every customer institution to customize the system. Common customization projects include institution-wide single sign on, special formatting of billing and reporting, or modification of graphical user interface. Any and all aspects of FOM® are customizable, from the color scheme to integration with any software you are currently using.

FOM® may be used to track the usage and payments per instrument time, per sample, per consumable, or per staff time. FOM® is ideal for:

- Small research groups (no billing involved, share among group members only)
- Core facilities (centralized management)
- Recharge centers (configurable billing and invoicing)
- Research service labs (work order and collaboration tracking)
- Central office for research (unified reports)

If you need more information about the Facility Online Manager system, please contact:

*General questions about FOM® system:*
General FOM Networks, Inc. email
info@fomnetworks.com

*FOM® Technical Issues and System Troubleshooting:*
Shu-You Li, Ph.D.
shuyou@fomnetworks.com
2 User Roles

2.1 System Administrator

System Admin is the highest level administrator in the system. System Admin login is usually
generic and not tied to any personal username or email, so that the System Admin login can be
easily transferred at any time. Usually there is only one System Admin for a FOM license holder.
For Standard and lower license holders System Admin is the same as Facility Admin because
these levels of FOM license allow only one Facility in the system. System Admin’s task include (1)
add new facilities into the system and assign Facility Administrators, and (2) configure system-wide
settings.

2.2 Facility Administrator

Facility Admin is in charge of managing an individual facility. In a FOM system with Enterprise
license, there may be many facilities hosted on one server. A Facility Admin cannot see other
facility’s billing and reporting information. Facility Admin’s tasks include (1) configure facility-wide
settings, (2) add of new instruments and assign Instrument Managers, (3) define fee structures of
an instrument, (4) download billing and reporting files. There are other things that a Facility Admin
can do, such as (5) set up facility holiday schedule, (6) set up user survey, (7) manage the list of
departments, and (8) manage the list of supervisors. One facility may have multiple Facility
Admins.

2.3 Instrument Manager

Instrument Manager is the person who manage instrument use, do service experiments for a
user, perform user training and grant user’s access to the instrument. Instrument Manager’s tasks
include (1) configure instrument access rules, (2) modify instrument fee structure, (3) reserve
instrument for various purposes, (4) perform training for new users, (5) charge training fee or
service/assistance fee, (6) verify user information, (7) grant user’s access to the instrument at
various levels, and (8) collaborate with users and charge service fee. Other things that an
Instrument Manager can do include (9) adjust a user’s usage records, and (10) email various
groups of users using FOM email list. One instrument may have multiple Instrument Managers.

2.4 User

User is the person who may apply and use any of the resources hosted on the FOM system.
After registration in FOM system, User has no access to any resource by default. The User’s
access must be granted by Instrument Manager. User’s tasks in the FOM system include (1)
register username in the system, (2) maintain a list of valid financial account numbers, (3) search
and apply instrument access, (4) attend training and be granted access by Instrument Manager, (5)
reserve instrument ahead of time, (6) logon instrument before usage, (7) logoff instrument after
usage, (8) modify or cancel a reservation, (9) request service and collaboration with Instrument
Manager, and (10) download usage history report.
2.5 Supervisor and Supervisor Assistants

Supervisor Assistant is a great helper in maintaining the group members' information. Any regular user may be assigned as a supervisor assistant to any supervisor in the system. Once granted Supervisor Assistant role, the user will see Supervisor Home page after logging in FOM. Supervisor Assistant’s tasks include (1) maintain user’s financial account numbers, (2) download group member’s usage reports, and (3) report misuse of financial account numbers to Facility Admin or Instrument Manager for corrections.

2.6 Business Manager and Auditor

Business Manager and Auditor can do billing and download facility statistic reports on behalf of Facility Admin without access to other Facility Admin level functions. Facility Admin can define which report the Business Manager can view and download.

3 Installation and Setup of System Admin

FOM Networks staff will help you set up the FOM server. Once the server is up and running, you will be given a URL to access your FOM system. If your FOM system is hosted by FOM Networks, the URL is https://www.insumentschedule.com/. If you have your own server, please write down your FOM URL below before you distribute this manual to your users.

FOM System URL: ____________________________________________

When you first time visit the FOM system, you will be prompted to initialize the installation and set up the System Admin user account.

a) In a web browser, type in FOM system URL. You should see window like the one shown below.

b) Read the End User License Agreement, scroll down, and then fill in the required information. The installation passcode should have been given to you by separate email.
c) You will see the following page. Input at least one department name. You may add more departments later.

![Facility Online Manager - Departments](image)

Go back to Admin Home, you will see the following page. Add at least one Supervisor. You may add more supervisors later.

![Supervisor Information](image)

e) Go back to Admin Home, you will see the following page. Choose Internal User, and then register "SysAdmin" as the first user of the system. This user account will be used as System Administrator. Do NOT mix this one with your personal login. You will set up your personal login later. You may want to use a general email address instead of your personal email address.
f) Submit registration form, you will see this page.

Installation is done!

Now you may send notice to all Facility Managers to register their accounts.

All the equipment managers must register in the system before addition of new instrument and assignment of equipment managers.

Click here to login and add new instruments

huyou.li, NIANCE, NIU

g) STOP HERE! Now it is the time to ask all your facility administrators and equipment managers (including yourself!) to register their own accounts in the system. Before set up new instrument (or for enterprise licensees, new facility), you must have the corresponding instrument manager(s) registered in the database.
4 User Registration

All users, no matter which user role a person holds in the FOM system, needs to register a login username to start. You will be given a URL to access your FOM system. If your FOM system is hosted by FOM Networks, the URL is https://www.instrumentschedule.com/. If you have your own server, please write down your FOM URL below before you distribute this manual to your users.

FOM System URL: ________________________________

a) Visit FOM system welcome page. The login page may look like one of the following two screenshots, depends on whether your institution has configure for single sign-on.

- FOM Welcome page with Single Sign On
- FOM Welcome page without Single Sign On

b) Click "I am a new user", then fill the registration form to register new user name.
5 Add Financial Account Number

a) After registration you will see this warning window. You must add one account number to continue, unless you will become a manager (Facility Admin, Instrument Manager, or Supervisor Assistant).

![Warning Window]

FOVERror: WARNING: You must add a valid financial account number before continuing, unless you are registering as a manager or a supervisor/assistant. Click here to add account number

If you are registering as a manager or supervisor/assistant, please close the window and inform your facility administrator so she can upgrade your user role.

b) This account number is typically your institution’s internal financial account number, and may be validated with the rules set by facility manager. If you have questions regarding this account number, please contact the facility manager.

![Account Number]

6 System Administrator Tasks

6.1 Add new facility and assign facility administrators

Login with System Admin username, click on “Facility Config” link on the left-side navigation menu, and then click on the “Add a new facility” button.

Note 1: Invoice template file is used to generate invoices for external user. The invoice template file usually needs to be customized by FOM Networks, Inc.

Note 2: User verification may be set in number of years. When a user’s access needs to be re-verified, an email is automatically sent the user.

Note 3: Multiple email addresses are allowed, separating with comma, in the FacAdmin Email field to allow multiple Facility Administrators.

Note 4: A facility may be set to be open or private. The resources in a private facility is not visible to FOM users unless they are granted access to the resources.

Note 5: In Business Manager and Auditor’s Access part, you may add one or more person and grant them access to billing and special reports.
6.2 System-wide settings

Login as System Admin, in the same page of Facility Config, scroll to lower part of the screen, you can see the part of System Configuration. This part is not visible to Facility Administrators.
### 7 Facility Admin Tasks

#### 7.1 Facility configurations

Login as Facility Admin, go to Facility Config page. Also see notes in Section 6.1

![Facility Config](image)

#### 7.2 Add new consumables

Login as Facility Admin, go to Resources Admin page. In the drop-down menu, select Consumables of the facility.

![Resources Admin](image)
7.3 Add new Accessories

Login as Facility Admin, go to Resources Admin page. In the drop-down menu, select Consumables of the facility.

7.4 Add new instrument and assign instrument managers

Login as Facility Admin, go to Resources Admin page. Click on “Add New Instrument” button.

Note 1: Most of the parameters can be left as default, unless you need that feature.

Note 2: Multiple Instrument Managers may be added by inputting their registered email addresses, separated with commas.

Note 3: There are also other types of resources such as Group of Tools and Safety Training with no calendar associated with the resource.
7.5 Configure fee structures

After adding new instrument (see section 7.4 Add new instrument), scroll down the lower part of the screen to find the “Default Fee Structure” part of the resource.

Note 1: Internal, External, and Admin_Use are three default fee structures. You may add more discount structures for each individual resource as needed.

Note 2: There are other items you may want to add or change, including Consumables of a resource, Accessories of a resource, Logoff reminders, and Documents.

Note 3: Fee Structure settings may also be updated by Instrument Manager of the resource.

7.6 Billing and reporting

Login as Facility Admin, then click “Billing” link on the left side. Billing is separate for Internal users and External users. Internal users’ billing report is usually an Excel spread sheet listing all usage of the month, which may be customized to meet your institution requirement. External users’ billing is usually an invoice for each individual user of the period of service. External invoice usually needs an invoice template customized by FOM Networks (see section 6.1 and 7.1 for Facility Configurations).
7.7 Define holidays

Login as Facility Admin, then click “Holidays” link of the left side. Holiday settings affect users with daytime only access. Any time users and managers are not limited by holidays. By default FOM does not recognize any holiday. Holidays may be set differently for each individual facility.

7.8 Set up user survey

Login as Facility Admin, then click “User Survey” link on the left side. The survey form is created elsewhere. User survey can be set in FOM to target at specific user groups on the designated instruments, or at facility level.
7.9 Maintain departments

Login as Facility Admin, then click “Departments” link on the left side. The department list may be maintained by either Facility Administrators or Instrument Managers. Normal users cannot modify this information. Each user needs to select from the pre-defined list of departments when the registration form is filled. If a department is not listed at registration, the user can email one of the managers to add the department.

7.10 Maintain supervisors

Login as Facility Admin, then click “Supervisor” link on the left side. The supervisor list may be maintained by either Facility Administrators or Instrument Managers. Normal users cannot modify this information. Each user needs to select from the pre-defined list of supervisors when the registration form is filled. If a supervisor is not listed at registration, the user can email one of the managers to add the supervisor.

One or more Supervisor Assistants may be added to a supervisor (see section 10).
8 Instrument Manager Tasks

8.1 Configure instrument rules

Login as Instrument Manager, click on “Resources Admin” link on the left side, then select the instrument to be configured.

Note 1: Instrument Manager cannot add new instrument. If a new instrument needs to be added, the Facility Administrator login is required.

Note 2: Most of the parameters may be left as default, unless you need that feature.

Note 3: Difference between Auto Logoff and Forget Logoff: The main difference is the calculation of usage fee. Auto Logoff is treated the same as user manually logoff. Forget logoff may have different fee calculation, based on the Forget logoff charge rate listed at the Fee Structure part of the Resources Admin page. Forget logoff fee calculation is the same as auto logoff when the option of “charge full elapsed time” is selected in forget logoff charge. There are minor differences such as email and comments in Usage Records. Forget logoff usually triggers an email to the corresponding user, but auto logoff does not.

Note 4: If a rule is required but not seen in this page, you may contact FOM Networks, Inc. for a customization to add the feature.
8.2 Modify fee structure

In the same page of Resources Admin, scroll down to find the “Default Fee Structure” part.

Note 1: Internal, External, and Admin_Use are three default fee structures. You may add more discount structures for each individual resource as needed.

Note 2: Fee Structure settings may also be updated by Facility Administrator of the facility.

8.3 Change instrument status

Login as Instrument Manager, then instrument status can be modified in Instrument Manager’s Admin Home page. You may also add a quite note that will be shown on the top of the instrument calendar page.

8.4 Reserve instrument time

In Admin Home, User Home, or the drop-down menu on left side. Click on the instrument name to see the calendar of this instrument. Click on an available time slot to reserve the time.

As an Instrument Manager, you may reserve the instrument for different purposes, including for repair, for maintenance, for training (see section 8.4), for paid service research (see section 8.5), for your own research, or reserve for another user.

Note 1: If you reserve for another user, that user must have already granted access to the instrument.

Note 2: Some purpose selections will trigger automatic comment text, so that every user can see the purpose on the calendar.
Note 3: Reservations may be synchronized with personal calendar (such as google calendar or outlook calendar). Such preferences are set in “My Profile” page.

8.5 User training

When logging off a session, select the same “For training” purpose, then a pop-up window shows the trainees list. Usage fees and training fees may be input by the manager.
8.6 User assistance

When reserving a time on instrument, select “For paid service research” as the purpose. When logoff a session, select the same “For paid service research” purpose, then a user can be selected and charged the service fee.

Note: Service fee may also be tracked in the Collaborate & Service module of FOM. The Collaborate & Service module provides more flexible tracking of all collaboration activities including customization of Service Request Form, document sharing, progress reports, and service charges.

8.7 Verify user information

Login as Instrument Manager, click on “Users Admin” link on the left side.
Various filters can be applied to get a list of users, users can also be searched by typing in partial name or email address.

Note: Expiration date is not reinforced in FOM by default. Customization is required to have automatically deactivate a user when expiration date is reached.

8.8 Grant user access

New users who just applied to use an instrument are listed at the top of Admin Home page. Click on the user’s name will lead to Users Admin page (Section 8.7).

Note: The first pair of numbers (6/12 below) shows the date when the user applied to use the instrument. The second pair of numbers (0/1 below) shows the number of trainings done (0) and the total number of trainings required (1) for this instrument.

In Users Admin page, scroll down to see the list of all the instrument that you manage. You may grant multiple instruments with the same fee structure and access level by checking the check boxes on the left side.
8.9 Collaboration and service tracking

In order to use this feature, the system must be customized to present pre-defined Service Request Form. One example of the Service Request Form is shown below.

Once a customized Service Request Form is added into the FOM system, a user may initiate a collaboration request by submitting this form by clicking the “Collaborate & Service” link on the left side of FOM screen. All the ongoing collaboration projects are tracked in the same page.
For each collaboration, collaborators may share information and managers may apply service charges to the service requester. Collaborators can be dynamically added or removed at any time. Rather than charging a service fee on an instrument, staff time may also be included in the service charge. Collaborators may share experimental results and literature papers within this page.
8.10 Adjust usage records

Usage records may be adjusted in the “Usage Records” page after logging in as an Instrument Manager. Usage records may also be imported from other systems in this page.

Select an instrument to see the past or future records of the instrument. Any field in the page may be manually updated.

Tip: You may use the clock icon (🕒) to select time, or use the copy icon (┄) to copy the actual start/end time to the record insertion line on top of the page.

Note: The “Usage” button is used to re-calculate the usage fee based on the revised start/end time. You may also manually type in any charge amount. Once updated, the system won’t retroact usage fees even when the fee structure is updated.
8.11 Email list

Login as Instrument Manager or Facility Admin, click on “Email List” on the left side, and then select the group of users to send email message.

8.12 Add another instrument manager

Instrument Managers may be add in either the “Resources Admin” page or the “Users Admin” page. In Resources Admin page, type the new instrument manager’s email in the “Instrument manager email” field, separated with comma, or in the Users Admin page, grant user access level with Instrument Manager level.
8.13 Modify user’s reservations

As a manager, you can override user’s reservations. Click on normal user’s reserved time slot, you will see a pop-up window to modify or cancel user’s reservation.

9 User Tasks

9.1 Register username

This part is the same as Section 4 in page 4-6.

9.2 Maintain financial account number

This part is the same as Section 5 in page 5-7.

9.3 Apply to use an instrument

a) In user home page, search for the instrument listed on right side to apply for this instrument.
b) Input your preferred time for training in the text box. This message will be sent to instrument managers. You will be contacted shortly regarding the training.

c) After training and your account activated, you will see the instrument name listed on the left side of the user home page.

9.4 Reservation, cancellation, logon and logoff

a) In user home page, click the instrument name that you want to use. You will see the schedule of this instrument, as shown below. Current time is shown in red with bright yellow background. Your own reservation is shown with green background. Others’ reservations are shown in black with yellow background. Available time is shown in black. Past sessions are shown in grey.
b) To reserve a session, click on the time you want to start with. Then you will see the window like the one below. Choose an ending time to make the reservation.

c) To cancel or modify a reserved session, click on your own reserved time. Note: Many facilities configure their resources so that no cancellation can be done within 24 hours of the reserved start time. Some facilities also configure to charge cancellation fee for late cancellation.
d) To logon a reserved session or do an express logon, click on the current time shown in pink with yellow background.

e) When you are using the instrument the your time slot in shown in red with yellow background, and on top of the window the instrument is shown as "Being used".
f) After finishing your experiment, you must log into FOM again to logoff the instrument. Click on the red link showing you are using the instrument.

---

g) Fill in consumables if you have used. Choose "Something wrong" if you want to report problem of the instrument. Fill in comment, select account number to use, then click logoff.
9.5 Forgot logoff sessions

If you forgot logoff your session, you will receive email reminder after the reserved ending time. Also the next immediate user who reserved the instrument can log you off. You will receive email if another user forced you off an instrument.

9.6 Download instrument operation manual

Click on "Documents" link on the left side to download instrument documents.

9.7 Usage report

Click on "Usage Report" link to download report of your usage in the facility with given start time and end time.
9.8 User Preferences and Email opt-outs

Click on "My Profile" link to update your contact information and other user preference items.

9.9 Link FOM reservations with your Outlook or Google Calendar

In “My Profile” page, you can find a URL to “Show FOM reservations in your Outlook or Google calendar”.

In Google Calendar, Click the “Add” link at the lower left corner, then select “Add by URL”.
Paste the URL you have got from Step #1 in the URL field and click “Add Calendar”.

In Outlook, go to Calendar view, click Open Calendar, and then select “From Internet”.

Paste the URL that you have got from Step #1. If your FOM schedule URL starts with http://, change your link to start with webcal://; If your FOM schedule URL starts with https://, change your link to start with webcals://.

9.10 Update account number

Click on "My Accounts" to add your account number(s). For auditing purposes, you cannot modify an account number once it has been validated and added to the system, but you can make it inactive if you don’t use an account number any more.
9.11 Contact managers

Click on "Contact Manager" to write message to instrument manager(s).

9.12 Online community

Click "User Forum" to visit our online discussion board – Science & Instrumentation Wiki (www.siwiki.com), where the FOM® users may share instrument manuals, FAQs, and other thoughts. You may edit any page contents there and share with other FOM users.
10 Supervisor Assistant Tasks

Supervisor Assistant’s access is granted to normal user in the Supervisors page. Any Facility Administrator or Instrument Manager can add or remove Supervisor Assistants from Supervisor’s profile (see section 7.10).

Once a user is granted Supervisor Assistant access, the user can login and go to Supervisor Home page. In the Supervisor Home page, a Supervisor Assistant can edit the Supervisor information and group member information, download group member usage records, billing records, set expense limit, and more.

11 Business Manager and Auditor Tasks

Business Manager and Auditor’s access can be granted by Facility Administrator or System Administrator for each facility (see section 6.1). Once granted Auditor access and given access to specific report types, the auditor may login to Auditor Home page, where the auditor can download various reports.
Be patient! It may take several minutes to create a report !!!

Note: For all the reports, the start date is included, but the end date is not.

<table>
<thead>
<tr>
<th>Report Type</th>
<th>Parameters</th>
<th>Submit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed User report</td>
<td>01/01/2014 - 06/01/2014</td>
<td></td>
</tr>
<tr>
<td>List of active charge rates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submit
Appendix 1. Set up and Connection of FOM Networks Relay Boxes

1. You will need the following to start with:
   a. For each relay box, you need to request a permanent IP address from your IT department. It might be standard internet IP address or local area network with Port Mapping. Your IT department should also give you the Subnet Mask and Default Gateway. In this manual we use the following as an example:
      1. IP Address: 10.1.1.201
         Subnet Mask: 255.255.0.0
         Default Gateway: 10.1.1.1
   b. Also notify your IT department that inbound PORT 80 (HTTP) communication must be allowed from the FOM server to each of the relay boxes. 
      If you are using online FOM server, the IP address of the FOM server is 69.65.29.2 (www.instrumentschedule.com).

Appendix 1-34
2. The default IP address of the box is 192.168.1.100. So you need to first set your computer IP to the same range. For example, you may configure your PC with IP 192.168.1.101, subnet mask 255.255.255.0, Default gateway may be left empty.
3. Connect both your PC and the box to one hub or switch.
4. Open a browser, type in address \texttt{http://192.168.1.100}. You will need username and password to access this website. The default username is admin and password is also admin. You may change the username/password after logging in (recommended).
5. After logging in, you see a window similar to this:

6. Click Network on left side, then change the following items:

- **Obtain IP using DHCP** = No
- **Static IP**: (the static IP you received from IT department)
- **Subnet Mask**: the subnet mask you received from IT department
- **Gateway IP**: the gateway IP you received from your IT department
7. Submit the form. You may see page loading error page, because the IP address of the box has been changed.

8. After IP is configured, you may disconnect the box and connect it to your instrument.

9. Once the hardware is connected, you may now log into FOM, input the IP address and port number in the Resources Admin page:
10. The **Relay Switch IP** address should be the one you have set on the relay box. The **Relay port number** depends on which outlet plug you use for this instrument. For 2-port box, it should be 1 or 2, and for 8-port box, it should be a number between 1 and 8. If multiple instruments are connected to the same box, they can be controlled independently in FOM system. The Relay communication method is usually 1 if your box is purchased after 1/1/2011. You may try 2 or 3 if setting 1 does not work.

11. You may change the relay box username and password using the link on the page if you have changed the username/password in step #4 above.

12. You may now test the relay box on/off function in the Admin Home page of FOM:
Appendix 2. Set up FOM relay box with RS232 cable

1. If you have RS232 cable, it is more straightforward to configure the relay box. It is highly recommended that you get a cable if you have multiple FOM relay boxes to configure. You may need a RS232 to USB converter since most of the modern computers have no RS232 serial port any more.

2. If you use a USB-RS232 converter, you need identify first which COM port is assigned to the USB port. In the screenshot below, COM4 is assigned to the USB converter.

3. You need the program Hyper Terminal. This program is included in Windows XP. If you use Windows 7 or higher OS, you may download the program at
4. Run the exe file, you will see the following window. Input FOM in the Name field and click OK.

5. In next window, select the COM port that you noted in step 2 above, and click OK.
6. Choose Bits per second 9600 and other settings should show as the following screenshot. Click OK.

7. In the blank window, hit Enter key, you should see the regular Telnet prompt.
8. Use command “sysshow” to see the current settings of the box. Note the MAC address should match the label on the box.

```
> sysshow

System Settings:
System Name : NP-02B
IP Static or DHCP : Using Static IP
> Active network info:
IP-Mask-GW : 0.0.0.0-0.0.0.0-0.0.0.0
Static IP/Mask/Gateway : 192.168.1.100-255.255.0.0-192.168.1.1
Ethernet Port is OFF
HTTP/Telnet Port #s: 80/23
MAC Address : 00:90:c2:cd:bd:e0
Outlet Status(1-On, 0-Off, Outlet 1 to 2): 0 0
--- Note: use WEB access for more settings
*** Type "?" for help.
>
```

9. Use command “login” to login. Username=admin, Password=admin
10. Use commands “ip”, “gw”, and “mask” to set the IP address, Gateway, and subnet mask respectively.

11. Continue with Step #8 in Appendix 1 to configure and test the box communication in FOM User Interface.
Appendix 3. Set up and connection of software screen locks

The following steps assume that you already have the FOM standard or enterprise license installed and configured correctly. If not, please contact Dr. Shuyou Li at shuyou@fomnetworks.com.

The computers on which you are to install the soft lock must have static IP address and have .Net framework version 4.0 installed. Please contact your IT support if you are not sure the computer meets the requirements. In the following steps we use IP address 192.168.1.2 as an example. When you follow the procedures, replace 192.168.1.2 with the IP address of the to-be-controlled PC.

1. Login FOM as Facility Admin or Instrument Manager. Go to Resources Admin, and select the instrument where the soft lock will be installed.

2. In the Relay switch IP field, type in the IP address of the to-be-controlled computer. Input 4 in the Relay communication method.

3. Open Schedule page of the instrument to be controlled. In the address bar, you can find the Equipment ID number. Please write it down. We will need this number in next steps.

4. On the to-be-controlled PC, unzip the FOMLock package to an appropriate folder, say C:\FOMLock\.

5. Use Notepad.exe to open the file “fomlock.properties” in FOMLock folder. Update the line with the URL of your FOM home page, eg. http://www.instrumentschedule.com/fom/fomlock?eid=101
And the eid to be the number you have got from step #3 above.

6. On the to-be-controlled PC, configure firewall so that port 2011 is allowed for inbound TCP.
7. You may test the firewall and other settings with the following command in DOS mode:
   Fomlock.exe testmode

8. Run FOMLock.exe, you should see the computer is locked, with only the FOM welcome page shown up on screen. Like the screenshot below.

9. To unlock the screen, you need login FOM, and then logon this instrument as you normally do to start using the instrument. This may be done on the locked PC or another internet connected PC.
10. With successful logon, the FOM screen should be unlocked and you see normal desktop again. The FOM Lock window is now a normal window shown at the top-center of the computer screen, with a timer shown and a logoff button. You may minimize until the end of your session.

11. If you logged in with an instrument manager user name, you will see the following screen that allows you to terminate the FOM Lock program.
12. If Steps #8-10 are successful, you may now configure Windows to auto start FOMLock.exe when Windows reboot.


14. Enter password to the Administrator login of the computer, then click Enable.

15. Click OK.

16. Click Start Menu, and input “Task Scheduler”. Hit enter to run the task scheduler.
17. Click “Create Basic Task…” on the right side of the window.

18. Enter “FOMLock” in the Name field and click Next.
19. Select to start the task “When I log on”, and click Next.

20. Select “Start a program” and click Next.
21. Click Browse.

22. Find FOMLock.exe file, and click Open.
23. In Start in field, type C:\FOM, and click Next.

24. Check the box to “Open the properties dialog for this task when I click Finish”, then Click Finish.
25. In the open up Window of FOMLock Properties, click “Change User or Group”.

26. In the pop-up windows, enter SYSTEM and then click OK.
27. You can see the user account changed to “NT AUTHORITY\SYSTEM”. Click OK.

Now, inform your users with the following instructions on how to use the soft lock of FOM.

1. Reserve instrument on FOM calendar with any internet-connected computer.
2. Before starting experiment on the instrument, you should see the computer screen locked with only the FOM welcome page shown.
3. Login FOM as normal, and the computer screen will be unlocked with a successful logon of this instrument.
4. After experiment, you must click “Logoff” in the FOM Lock window. This will log you off FOM session and lock the computer screen and be ready for the next user.
Appendix 4. Contact information and problem reports

FOM® Technical Issues and System Troubleshooting:
Shuyou Li, Ph.D.
shuyou@fomnetworks.com
Office Phone: (224) 225-9168

or General FOM Networks, Inc. email
info@fomnetworks.com