SILVER MOUNTAIN TARGETS

ADMIN GUIDE

S25 SERVER SYSTEM

TABLE OF CONTENTS

PURPOSE OF THIS MANUAL

The purpose of this manual is to provide the system administrator the tools and training necessary to effectively setup and operate the Silver Mountain S25 Server software. It does not cover hardware features, hardware setup, or installation.

SYSTEM DESCRIPTION

There are 2 types of systems that utilize the S25 Server. The Plug-n-Play system is a permanent or semi-permanent installation utilizing 3-lane boxes to control 3 targets each. The G2 system utilizes a G2 on each target. The S25 server is the same in both systems.

1.1   Targets

In the Plug-n-Play system utilizing the S25 server, the targets are the heart of the bullet sensing functions, utilizing state of the art acoustic sensors to measure shot location, angle, and speed. The targets consist of 4 dual microphone sensors, mounting hardware, and cabling.

Microphone sensors can be mounted on existing target frames, custom made frames that improve sensor geometry, or built into the range design for new ranges. Targets do not require pit raising and lowering mechanisms, so for new ranges they can be permanently mounted behind a low berm wall that protects the lower sensors and Target Controllers

1.2   Target Controllers

The target controllers in the Plug-n-Play system control up to 3 targets each, coordinating all sensor readings, and transmitting those readings to an uplink radio that passes the data along to the server. Each controller contains a computer, radio, and power conditioning hardware.

Target controllers used in the S25 G2 System utilize single controllers on each target. These controllers have their own radio and panel antenna, transmitting data directly to the line server. In addition, the Plug-n-Play 3-Target Controller can be used intermixed in the same system with the G2 single Target Controller

1.3   Server

The S25 server is the brains of the target system. It sits on the firing line, receiving data from all targets via the uplink radio. It consolidates that data and presents it to the shooter or scorekeeper on the firing line.
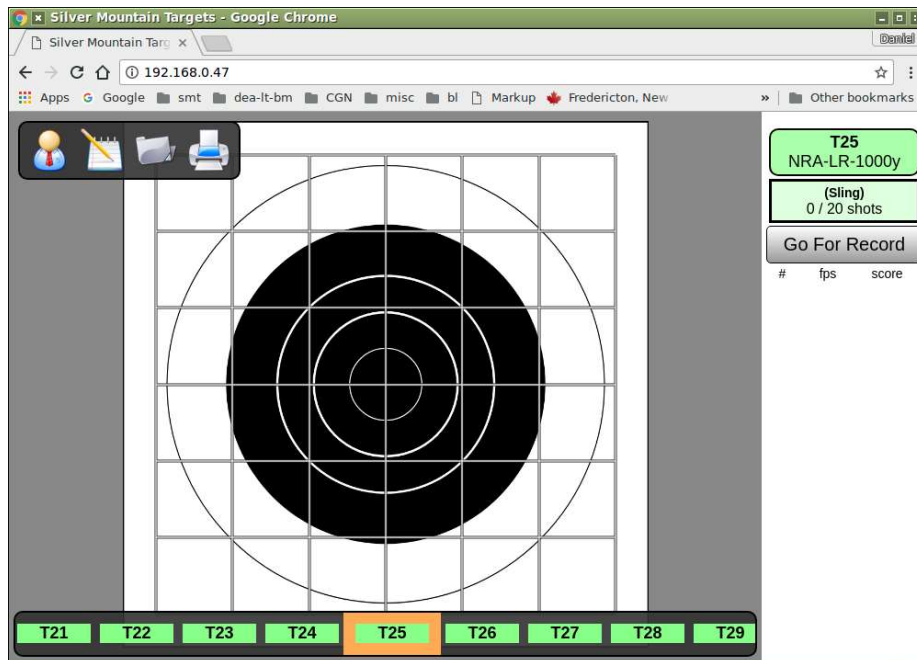
PARTS IDENTIFICATION

2.1   Target

The main components of the target are the dual microphone sensors. These sensors utilize a unique ball-and-socket swivel mount allowing the user to align each microphone to other mics on that target, and to the firing line. Once aligned, tightening the screws on the base will lock the swivel mount in that position. The microphones can also be easily removed if desired, since they incorporate a quick quarter-turn mechanism attaching them to the base. The base stays mounted to the target frame.

2.2   Target Controller

In the system utilizing the Plug-n-Play 3-Target Controller, each Target Control box contains a G3 Controller for each target (typically 3 or 4 per box), which independently communicate to the uplink radio, power conditioning, and its own shade-protected temperature probe. The box is weatherproof, and utilizes water-tight connections, allowing the unit to be left installed year-round.

In the system utilizing the G2 single Target Controller, the controller is mounted on the target frame below the berm, and communicates via its own antenna directly to the line server.

2.3   Server

The line server contains the main system computer, radios to connect to shooter's display devices, rechargeable batteries, and an antenna for communicating to the pit uplink radio. It has power and activity LED's, power switch for safe system shut down, and a power receptacle allowing the unit to be plugged in to recharge the internal batteries after your match.

The new user of the S25 Server System will have to assemble the server like the picture here.

1. The S25 Server and the large panel antenna are typically mounted on a tripod of some kind. The one shown on the right is a speaker stand used by musicians.
2. Mount the S25 Server and panel antenna on a suitable stand or tripod. They should be a couple feet above ground so they maintain clear line of sight to the target antenna/antennas.
3. There are 2 right angle connector antenna cables that get attached to the back of the panel antenna, then connect to the center two connectors on top of the S25 Server box.
4. Attach the two omni-directional whip antennas on the outer two connectors on top of the S25 Server box.
5. There is a 120VAC plug on the bottom of the server to allow for easy connection to mains power to recharge the internal batteries between uses.
6. To power on the S25 Server, press the power button on the bottom of the Server box for 5 seconds and release. You should see the two green lights on the front of the Server box turn on after a few seconds.
7. The S25 Server is like a computer. It needs to be powered down in an orderly fashion. To power down the S25, press the power button on the bottom for 6 seconds and release. The green S25 indicator lights will go off after a few seconds as the System shuts down.
8. Be sure to plug the Server into mains power after shut down so the batteries are fully charged for the next use.

SOFTWARE BASIC OVERVIEW

3.1 Administrator Features and Functions

Administrator functions include all software features surrounding system setup, target frame setup, target selection, user privileges, and other protected features not accessible to the shooter, scorekeeper or range officer.

3.2 Menu Structure

There are only 3 main levels to the menus when logged in as Admin. A shooter or scorekeeper only sees the first level menu.
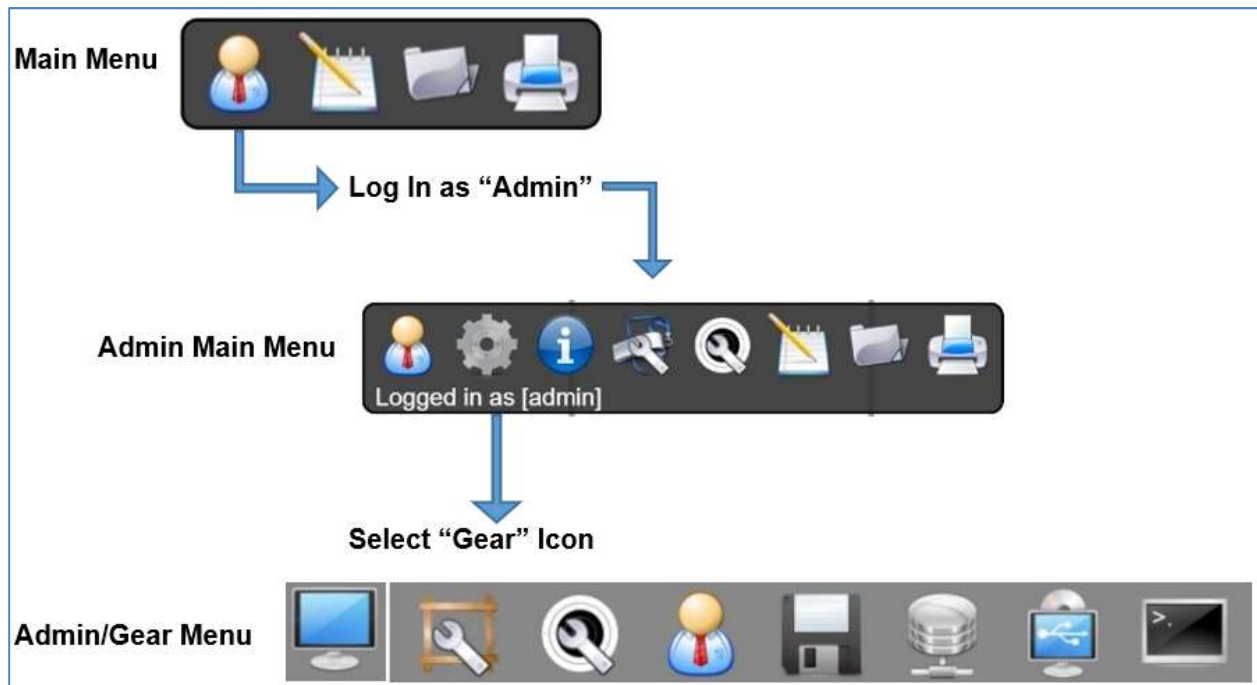
Main Menu

This menu is accessible to all users. This is the main screen for witnessing and recording shots fired on the target

> **Users**
> This icon looks like a man with a tie and is used to log into the system as an advanced user such as Admin, or as a competitor or scorekeeper when individual users are desired.
>
> **Notepad**
> This icon allows the user to enter Plot Mode, displaying horizontal and vertical shot dispersions

Folder

The Folder Icon provides access to saved strings of fire

Printer

Allows printing of displayed targets

Main Menu/Users

When the Users Icon is selected, the user is prompted to enter his/her competitor number or username. If Admin mode is desired, enter "Admin", and the menu expands to the following list.

Logged in as [admin]

Users

Provides access to set passwords, select use of F-class targets, and choice of default bullet diameter. Note that selection of any of these submenus will display a "back" icon allowing the user to return to the previous menu.

Gear

This selection provides access to the main Admin submenu. Submenu functions are listed below. In addition, the Administrator can shut down the server, simulate a shot, do visual calibration, or access additional info. There is also a selection for RSTAT Sync All, allowing all shots to be synchronized to an external stats program called RSTAT

Info

Struck out shots are shots that are removed from a string of fire, typically by a Range Officer. These include crossfires. This menu provides a list to any RO of all struck out shots during the match.

Whistle & Wrench

This menu provides the Administrator with target status and primary match choices. These include sighter variables, shots on score, if individual shooters or scorekeepers are to be assigned, F-class delays, user privileges for managing strings, and scorecard settings

Target & Wrench

This menu allows the Administrator to choose which target is currently displayed, from the choices of allowable targets. It also allows the choice of pair or triple firing on a single target.

Notepad
Plot Mode

Folder
Allows selection of previously saved strings

Printer
Allows printing of targets

Admin/Gear
This is the main Admin sub menu accessible when the user has logged in as Admin, and the Gear menu is selected. Across the top for all submenu selections are icons for safe shutdown of the server, simulate a shot, perform visual calibration, or turn on

Monitor
Allows the Admin to choose display parameters, unit of measure for shot position, velocity unit, target grid unit, and language.

Frame & Wrench
This selection allows the user to define, hide, rename or copy specific frame parameters for individual targets. This is useful when target frames are not all alike, such as varying shot angles at 2 different firing lines

Target & Wrench
This allows the Administrator to choose which loaded target faces are active for this match. It also allows downloading of additional target faces. Specific choice of a target face for an upcoming string of fire is done in the Target & Wrench icon on the previous level.

Users
This menu allows individual users to be defined, and specific roles assigned.

Disk
Allows the Administrator to download log files, manage saved strings and sensor readings, perform a complete backup of all data, or restore all data from a backup.

Network
This selection allows synchronization of all data to the external program RSTAT

System
This icon looks like a monitor with a USB symbol, and is the main diagnostics menu, and many of the choices should only be used with the support and direction of a Silver Mountain representative. There are locations for the

Administrator to enter target frame options for side and plunge angles or non-standard sensor geometry, as well as sensor mapping and frame override.

Command Prompt
This selection allows the Administrator to view the Sensor Triggering Log, which shows which sensors on which targets are firing.

ADMIN USER (USER ICON)

4.1   Logging in as Admin

All sensitive or potentially damaging operations are restricted to the privileged "ADMIN" user. The ADMIN user has full system control. Care must be exercised to avoid accidentally deleting data or changing configurations.

The Admin user has the ability to assign Range Officer roles for those users that need to exercise full operational control over the system (changing target faces, course of fire, etc.) but without the possibility of changing system configuration data.

ADMIN access is only needed for system configuration data, importing, editing, or deleting data (e.g., adding new hardware, calibration, editing configurations, renaming, etc.)

To log in as ADMIN:
- Click the User icon in the top left corner of the main menu
- When prompted with " Enter your competitor number / username:", enter "admin" (all lower case, no quote marks), and click "OK"
- If a password has been set, you will be prompted to enter it, then click "OK"
- Note that additional control icons are now present in the menu
- Note the text "Logged in as [admin]"

To log out:
- click the "user" icon in the top left corner and select "logout"
- Note the menu reverts to a minimal number of icons

A password may be set on the ADMIN account and it is recommended to do so.
- Click the "USER" icon
- Click "Change" and enter desired password
  - Please carefully record the password. If lost or forgotten, Silver Mountain factory assistance will be required for recovery
  - The ADMIN password should be known only by trusted and trained personnel.
  - The ADMIN password does not need to be very long or secure. It is intended to prevent casual or accidental use of the ADMIN account. Choose a password easy to enter in the field on a touchscreen device

TYPICAL ADMIN FUNCTIONS

5.1 Adding a New Target Frame

A software "TargetFrame" corresponds to a physical target frame with attached sensors, and carries the associated data needed for the server to gather shot data on that frame. A "TargetFrame" is created by making a copy of an existing frame.

This is needed on initial system installation, or when adding a new target frame. From the Admin menu, click on the Gear icon, then the Frame & Wrench icon

- Select any existing target frame by clicking on the target across the bottom of the screen
- Select the "Copy" button
    - A TargetFrame named "new" will be created and selected
    - Status = yellow (offline; not connected to a sensing unit)
- Select the "Rename" button to name the new frame such as "T01" etc. TargetFrames are sorted alphabetically
- Choose the applicable wiring harness type (G2-5, G2-8, PnP, etc.), and the correct Mic mapping and Spacing will automatically be set
    - G2-5mic is for a G2 Target Controller with 5 mics
    - G2-8mic is for a G2 Target Controller with 8 mics
    - PnP is for a Plug-n-Play Target Controller with 8 mics
- For example, "PnP" has been selected here, which automatically fills in the parameters needed for a "Plug-n-Play" sensing unit (sensor spacing of 210mm and the sensor mapping "12365487").
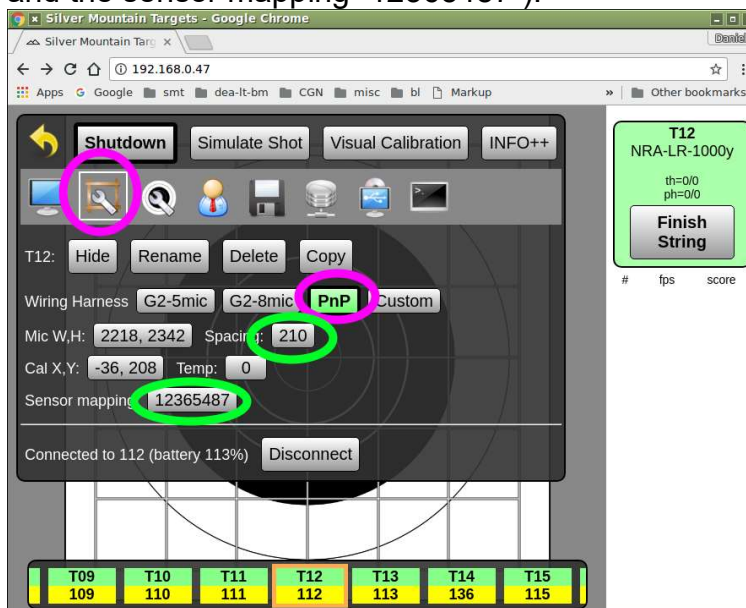
- Enter Microphone Width and Height values. This is the distance measured between the left side of the upper or lower mics, and distance measured between

the tops of the left or right mics. It provides the system with measurements
needed to calculate shot hole coordinates.
  - ○ Measurements need to be entered in mm (25.4 x inches, or 10 x cm)
  - ○ No decimals or commas, and a space between the two numbers, i.e.,
    "1330 1635"
- The "Connect to:" button allows the target selected at the bottom of the screen to
  be connected to a particular G2 or PnP target sensing unit. Enter the IP address
  of the sensing unit
  - ○ Status should change to GREEN
  - ○ "Other G2" may be used if sensing unit is not currently online

5.2   Sensor, Cabling, and Hardware Validation

Use these procedures prior to calibrating a target, or at any point when diagnostics are
needed to confirm that the server:
- Is in communication with sensing unit
- Is able to read each mic individually
- Is able to read correct temperature

To confirm network communication with sensor unit:
- From the Admin menu, click on the Gear icon, then the Frame & Wrench icon
  - ○ Verify that each target across the bottom of the screen is green, and the
    selected target is also green in the upper right side of the ShotsList
   column.
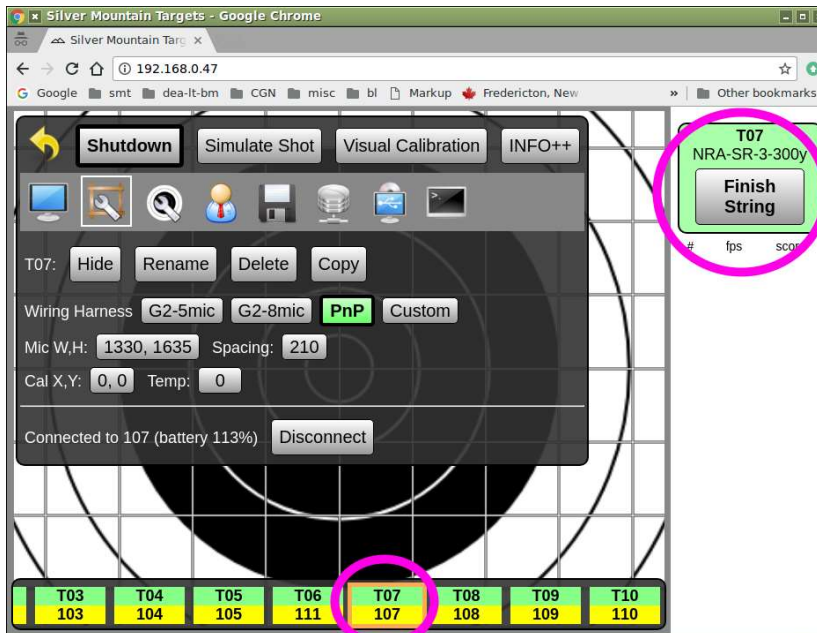
To confirm sensor unit battery level sensing and MCU function:
- From the Admin menu, click on the Gear icon, then the Frame & Wrench icon
  - ○ Observe "Connected to xx (battery YY%)
    - ■ Battery level should be 113% for hardwired units

- Battery level should be 98-105% for fully charged battery-powered devices
- Battery level should never be missing or 0%
- Battery level should always be stable

To confirm sensor unit temperature sensing:
- From the Admin menu, click on the Gear icon, then the Frame & Wrench icon
  - Confirm "Temp" calibration button is set to a single digit value, otherwise set it to zero. DO NOT use this screen to set ambient temperature!
  - Confirm that temperature sensor is correctly installed (in free air, and in a shaded location or with sunshade installed)
  - Tap any microphone
    - Observe appearance of a measurement reading in the ShotsList column. Select topmost reading
    - If red "SENSOR READING" warning button has appeared, the temperature sensor is faulty; replace the wiring harness.
    - Use "+" and "-" buttons to adjust reported temperature in ShotsList column to agree with observed or estimated local air temperature.
    - Confirm that "Temp:" field is a small single-digit value - almost always in the range of 3 to 5. Note that negative values or large values might indicate a faulty sensor, or sunlight hitting sensor
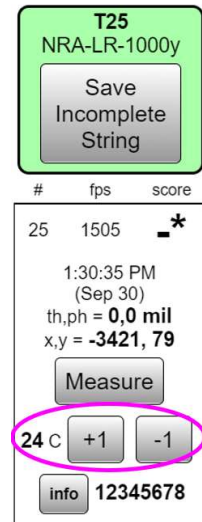
To confirm each mic is working correctly (Tap Test):
- From the Admin menu, click on the Gear icon, then the Frame & Wrench icon
  - With your fingernail, make a light, direct, careful tap on the silver sensor can of mic#1
  - OBSERVE:
    - A large Green "1" shows on the target, and indicates that only mic #1 fired
    - You should only receive ONE reading for one fingernail tap. You should not get multiple readings, and you should not have missing readings.

Repeat this procedure for each other mic in the system. For reference, here is the mic numbering scheme for 5-mic and 8-mic systems.

Sensor Locations 5-Mic System

Sensor Locations 8-Mic System
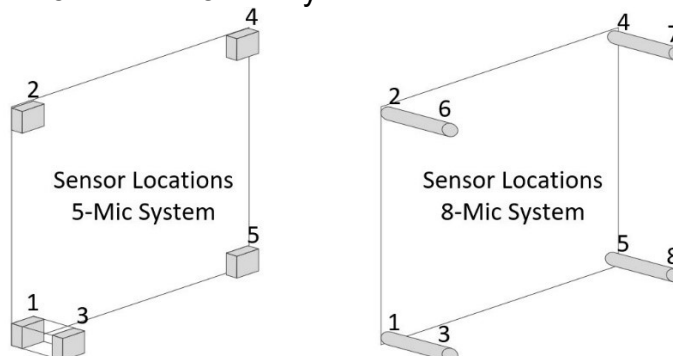
Sensors	Measurement hardware	Mapping string
Standard 5-mic	Gen-1 T-Mark 600X, Gen-2 TM-600G2	12345
Standard 8-mic	Gen-2 TM-600G2	12345678
Standard 8-mic	SMT tri-target PnP	12365487

5.3   Target Calibration

Use these procedures to align the e-target's coordinate system with the physical center of the installed target face. This should only be required on the first installation of sensor mounts, or if physical target center has moved.

- Set up the physical target frame for shooting, using a new target face, or paste all holes
- In your Silver Mountain E-target system, sign in as Admin, select the Wrench & Whistle icon and select the corresponding target face.
- Go to firing line and fire one or more shots, with at least one shot being within 10" of the center. Additional shots may be near the center or any other place on the target face.
- CONFIRM that reported bullet speeds agree with expectations
- Go to the physical target and find bullet holes in paper
- From the Admin menu, select the Gear icon, then select the Frame & Wrench icon
- In the ShotsList Column, select the shot closest to center. This will be the shot used for calibration.
- METHOD 1 – VISUAL CALIBRATION
  - Click "Visual Calibration" button
  - CLICK AND HOLD anywhere on the target face display
  - Observe that a green ring appears around the shot indicator for the selected shot
  - DRAG that shot until it is in correct location as seen on the physical target
    - repeat as needed
    - Zoom may be adjusted
  - CONFIRM that the calibration shot on the target screen is now shown in the correct position as seen on the physical target. Repeat DRAG and DROP as needed.
- METHOD 2 – physical measurement of shot position
  - Measure the location of the bullet hole center, on the physical target. As an option, you may draw vertical and horizontal reference lines to assist in measuring
 - Record the bullet position as two numbers, X and Y coordinates.

- The X coordinate is how many millimeters the bullet is to the RIGHT of the vertical centerline. If the bullet is LEFT of the vertical centerline, your X coordinate will be a negative number
- The Y coordinate is how many millimeters the bullet is ABOVE the horizontal centerline. If the bullet is BELOW the horizontal centerline, your Y will be a negative number
  - Click the "Measure" button in the ShotsList column for the calibration shot. Enter your X and Y values, separated by a space
  - CONFIRM that the calibration shot is now shown in the correct position. If not, cancel the shot from the calibration and repeat the MEASURE button.
- If other shots were fired, CONFIRM they are also in the correct position. The entire group on the paper should match the entire group on the Silver Mountain E-target display
- Note, shot(s) used for a calibration offset calculation are highlighted in yellow, in both the ShotsList and screen display
- The CANCEL button can remove a shot from calibration calculation

5.4   Target Faces

Electronic TargetFaces are software-generated and fully programmable. They are available as text files (with a file extension of ".txt" or ".tgt") and binary archive files (file extension ".tgz").

Installing TargetFaces
- Acquire one or more TargetFace definition files from your dealer, or from the SilverMountainTargets.com website
- In Admin mode, select the Gear icon, then select the Target & Wrench icon
- On this screen you'll see all target files already loaded into the system
- To import a new target file, select "Choose File"
  - Select a ".txt" or ".tgt" or ".tgz" target face definition file located on your device
  - Select "OK"
  - Observe new TargetFace is now listed
  - All newly imported or re-imported TargetFace names will be reset to GRAY (inactive) status
- Click on TargetFace(s) to make GREEN/GRAY as desired:
  - GRAY (inactive) TargetFaces will not be available to RO for shooting
  - GREEN (active) TargetFaces will be available to RO
- "Dual-mode" TargetFaces are identified by having their names **underlined**
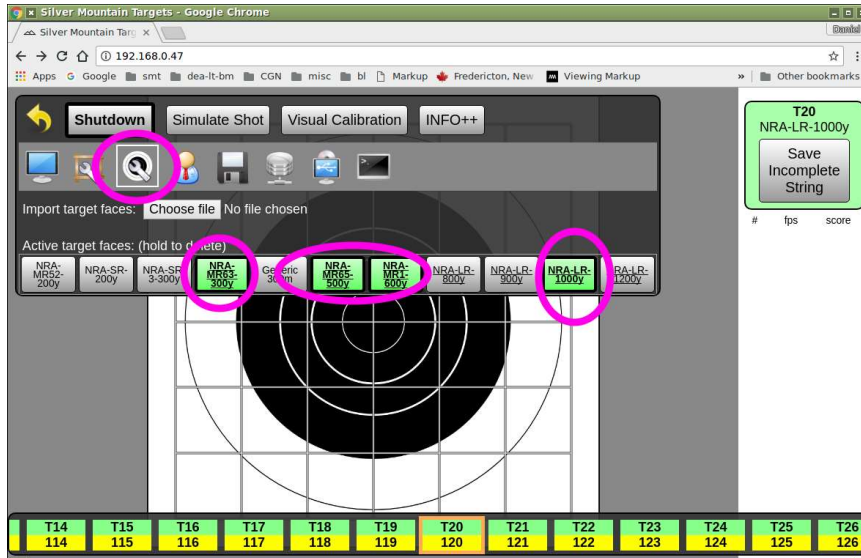
Deleting TargetFaces

- Generally, it is NOT RECOMMENDED to delete TargetFaces
  - If a TargetFace is deleted, ALL SAVED STRINGS fired with that TargetFace will ALSO BE DELETED
- If you wish to delete a TargetFace:
  - In Admin mode, select the Gear icon, then select the Target & Wrench icon
  - CLICK and HOLD on the TargetFace you wish to delete
  - Confirm with "OK"

5.5   Users – Creating and Managing

"Users" may be created, in order to identify shooters and scorekeepers. This allows identifiable users to be assigned to shot strings, allowing for

- Identification of who fired or scored a shot string
- Restriction of shot management functions (converting sighters, striking shots, saving strings, etc.)

A "User" has the following information:
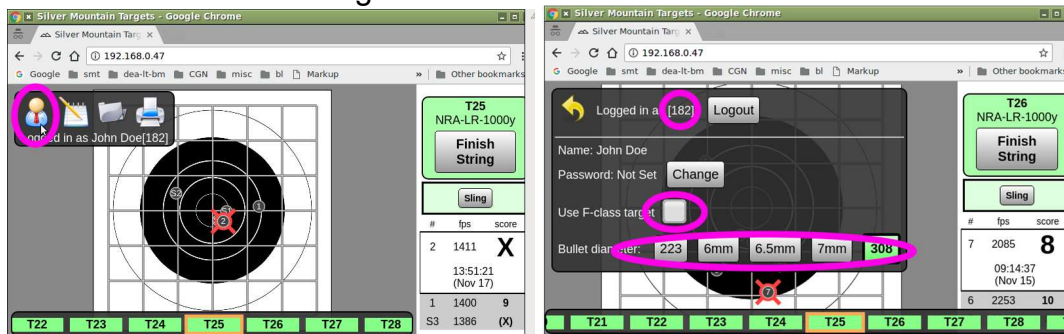
- "userid" (case sensitive; used to log in)
  - Short is best - because each user will have to type this in to identify themselves

- ○ Long national shooter IDs or NRA numbers are not recommended. Userids need to be frequently entered in the field on touchscreens
  - ○ a two or three-digit competitor ID or competitor initials work well
- "Real Name" (optional)
- "Password" (optional)
- "Use F-Class Target" For dual-mode TargetFaces, this is a flag to indicate whether the primary scoring rings (iron sights) or alternate scoring rings (F-Class) are used.
- "Bullet diameter" Used to gauge whether or not the edge of the shot hole touches scoring line.

To view, edit or delete users:
- In Admin mode, select the Gear icon, then select the User icon
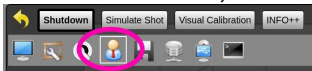
- Choose an existing user, either by selecting from the drop-down menu, or click "Select" and enter the userid
- To edit or delete a user, choose "Delete Profile", "Set Real Name", or "Range officer" as needed.

To create a user:
- In Admin mode, select the Gear icon, then select the User icon
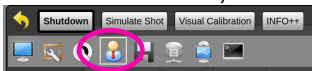
- Click "New User"
- Enter a userid for the new user
- Optionally, "Set real name"
- Optionally, set "Range officer" privilege flag

5.6   Managing Server Data

To download a log of data, or manage stored strings, or to save a backup copy of all data
- In Admin mode, select the Gear icon, then select the Disk icon
- Select the desired duration to download a log
- Select "Delete strings older than…" to manage stored strings
- Select the checkbox to include sensor readings in all saved strings
- Select the "Download" button for a complete backup of all data.
  - ○ Note, this is best done from a laptop with internal storage. If using an iOS operating system device, the saved file may not be able to be retrieved.
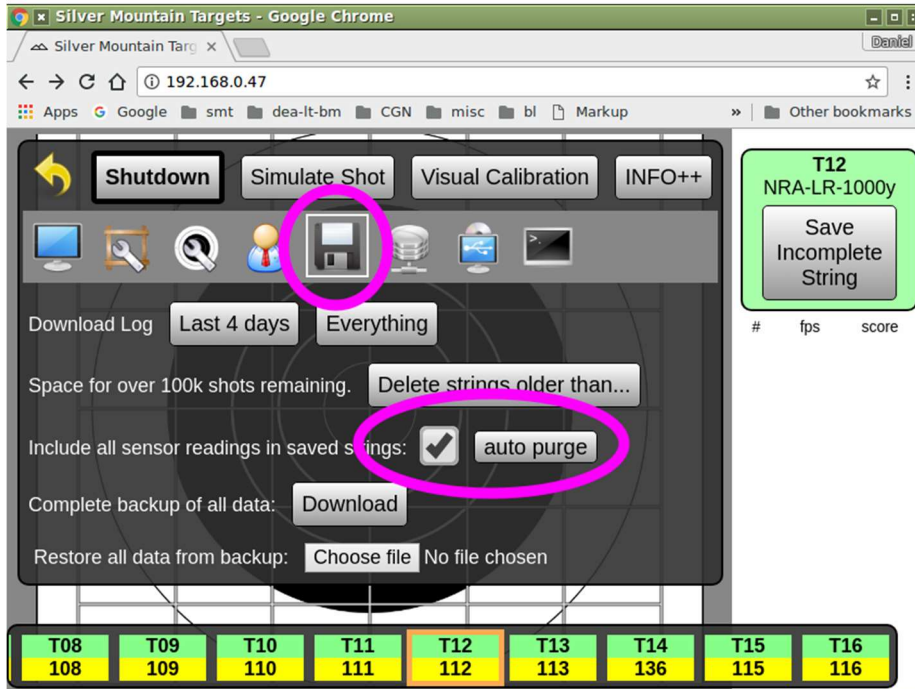
To restore data from a previously saved backup, select the "Choose File" button, select a backup file from your laptop.

5.7 Recommended Default Server Settings

The following settings are recommended, and should not normally be changed. These are advanced features, and should only be changed with advice and support from a Silver Mountain representative.
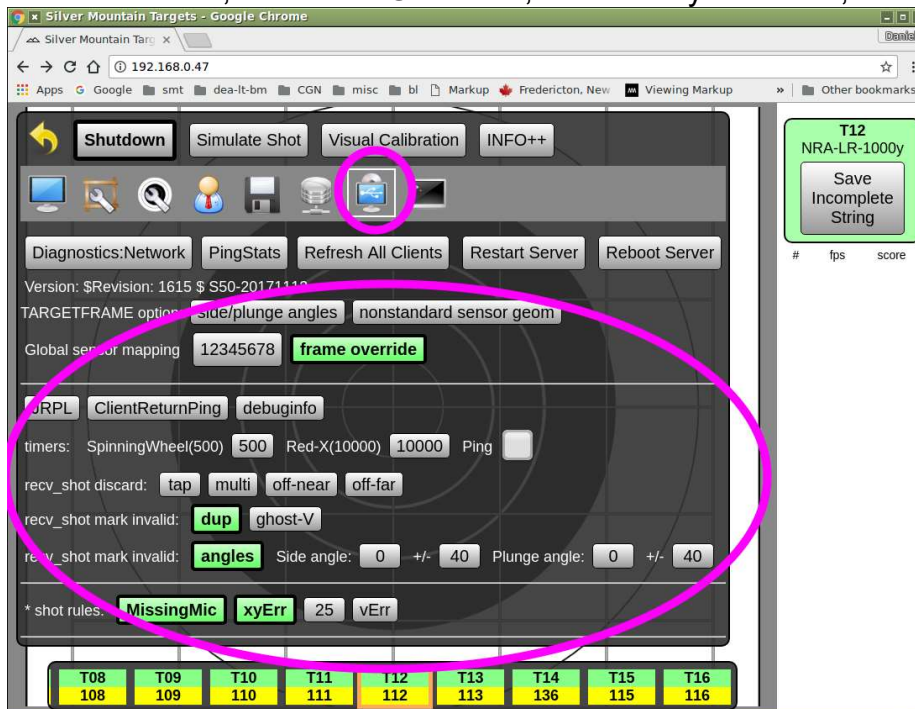
In Admin mode, select the Gear icon, then the Disk icon and configure these fields

In Admin mode, select the Gear icon, then the System icon, and configure these fields

5.8   S25 Server Firmware Update Procedure

Unlike an SMT "G2", a firmware upgrade on an S25 Server will ALWAYS destroy all user data (settings, TargetFaces, TargetFrame configurations, calibrations etc.) Therefore. you should ALWAYS make a complete backup of all the server's data before proceeding. In Admin mode, click on the Gear icon, then the Floppy Disk icon. Then under "Complete backup of all data" choose "Download".
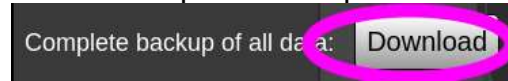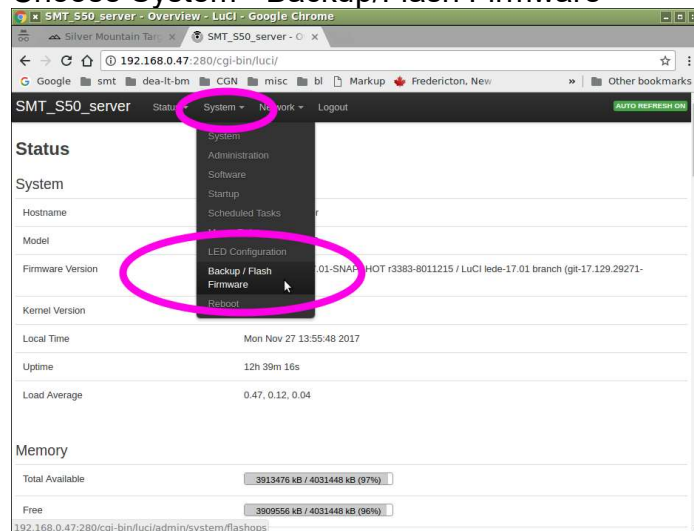

Consult your SMT dealer for advice on when to do a firmware upgrade and which version to use. Obtain a firmware file from the Silver Mountain Targets website.

Select the System icon, select the "Diagnostics:Network" button, and log in with username=root and password=root
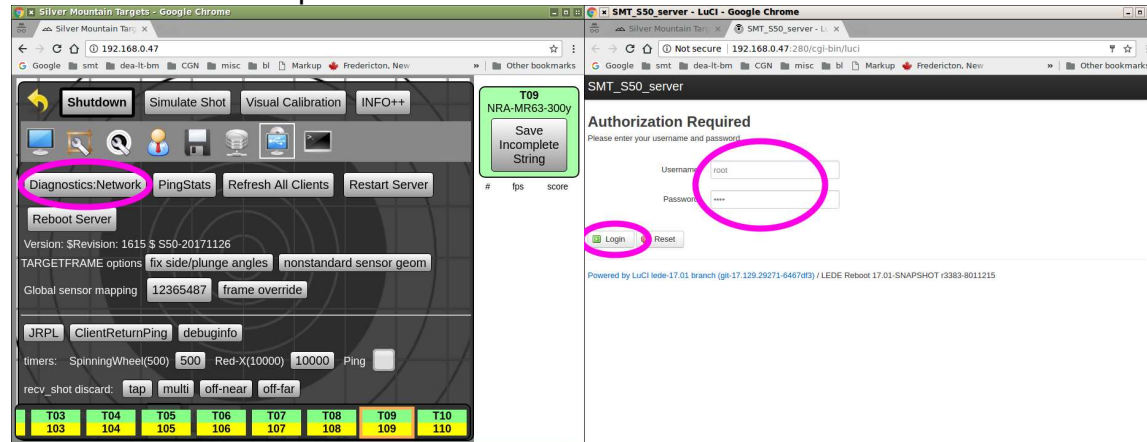
Choose System->Backup/Flash Firmware

Un-tick "keep settings", select the firmware file, and upload it with "Flash image…":
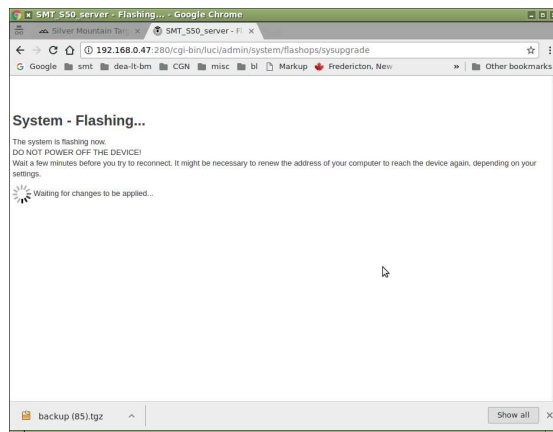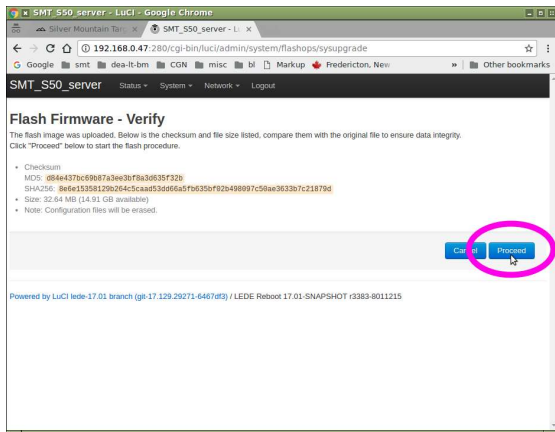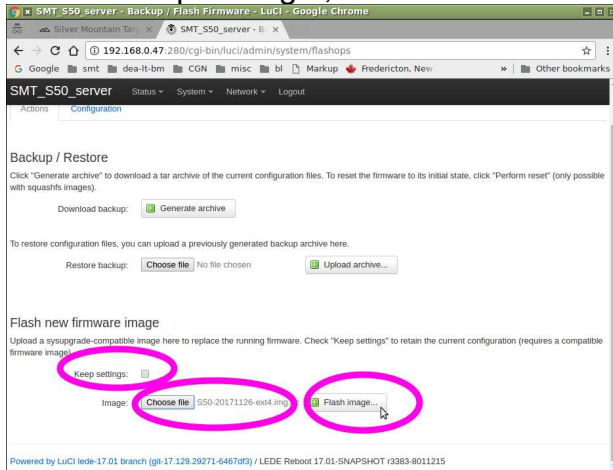
Click "Proceed" and wait several minutes. Note that the "System - Flashing…." screen will never change. It is safe to close this screen at any time.   When the firmware update is completed, you will be able to access the ordinary web page, which will now have the new firmware but with all user data gone. Restore your user data:
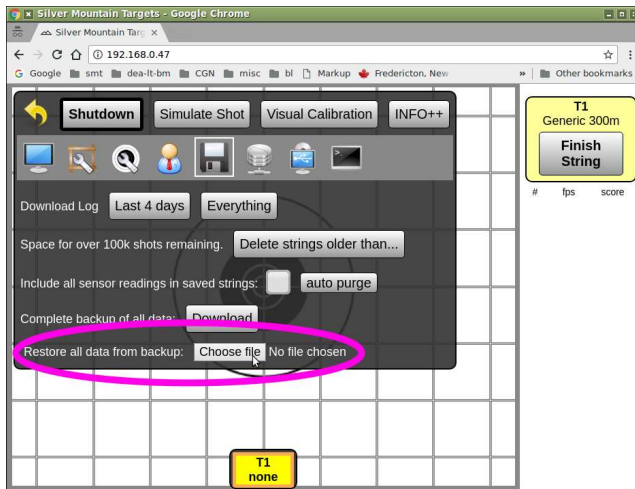
5.9   Installing Target Control Box WIFI Radio Configuration

In a Plug-n-Play system with multiple Target Control Boxes, there will a single box designated as the Pits Master Box. This box receives data from the other boxes and passes it to the uplink radio. In this Pits Master Box there are two Mikrotik radio devices:

- An internally mounted one, designated as the Access Point ("AP") device
    - It generates the SSID **"SilverMountainTargets"**
    - It is connected to two folding omni antennas
    - Other SMT Target Control Boxes in the pits can connect to this AP
- An external one, mounted nearby, designated as the station ("STA") device, containing:
    - One ethernet cable connection to the Master Box for power and data
    - Two RF coax cable connecting to a directional panel antenna
        - Located above-grade
        - Pointed to firing line
    - WIFI connection to S25 Server on firing line
        - Configured as a WIFI station STA
        - SSID is **"SMTserverUplink"**
   - Connects the pits WIFI devices to the S25 Server on firing line

In order to install a radio configuration file, you will need:

- a Windows laptop with both WIFI capability as well as an Ethernet port.
- the latest version of the program "winbox.exe", available from the Mikrotik web site https://mikrotik.com/download
- Configuration files **"config-sta-pnp.rsc"** and **"config-ap-pnp.rsc"** provided by your Silver Mountain dealer.
- A Power Over Ethernet injector, and DC power supply 8-30V with 2.1x5.5mm male barrel jack

To install the radio configuration file on the internal "AP" unit

- At the range, have the Pits Master Box turned on and also the S25 Server
- With your laptop, connect to the SilverMountainTargets Network
- Run the "winbox.exe" program. On the "Neighbors tab", select the pit box internal radio.
    - If IP addresses are shown, it'll be the ".0.13" one
    - the MAC addresses are shown on a label on the exterior of the radios.
    - click on the MAC address
    - then click the **Connect** button
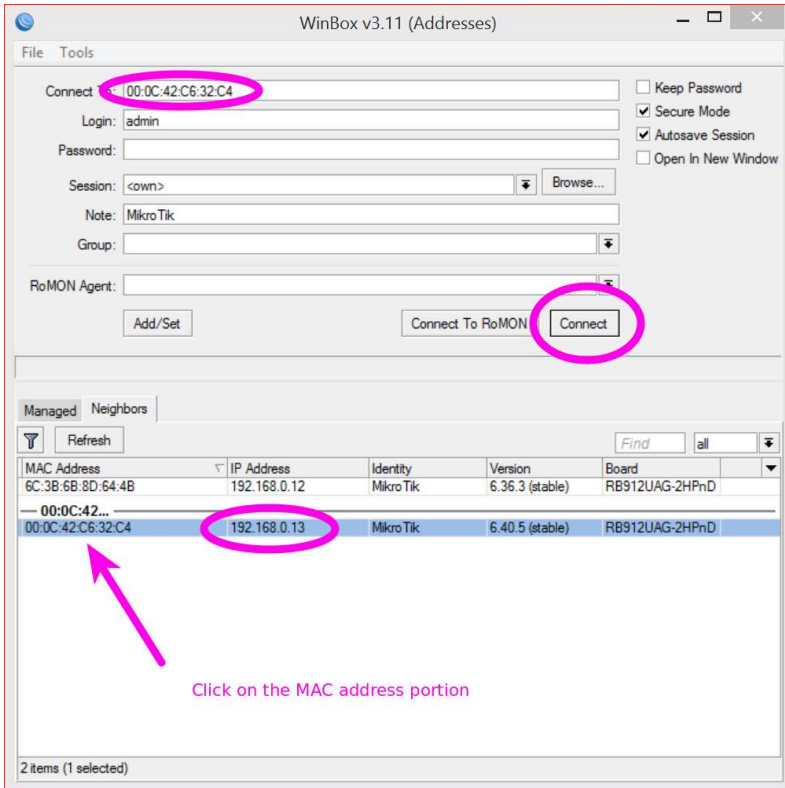
- The Winbox tool window will open. You can then "drag and drop" the file "config-ap-pnp.rsc" into the Winbox tool. After you have done this you should see the file present. Confirm that the file size (for this particular file) is 1482 bytes:
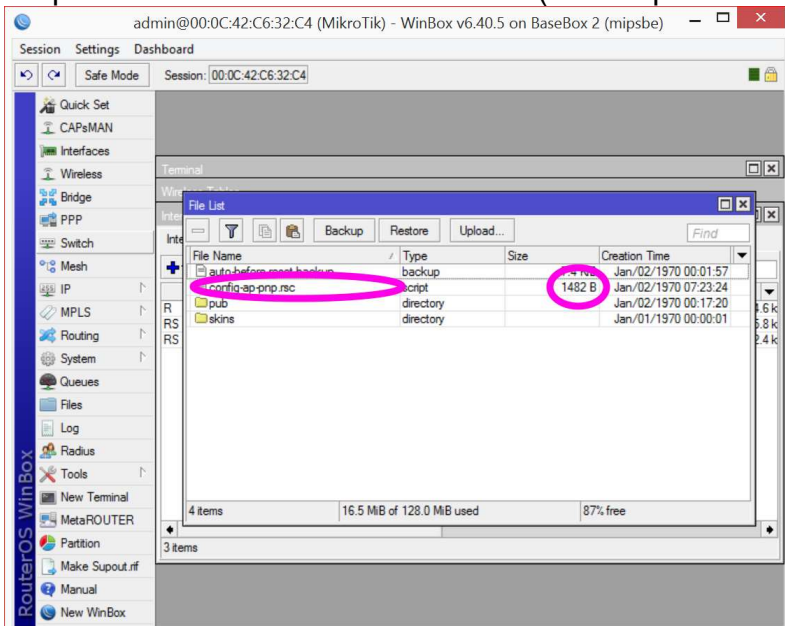
- Next, click "System->" and then "Reset Configuration" and make it read like this:
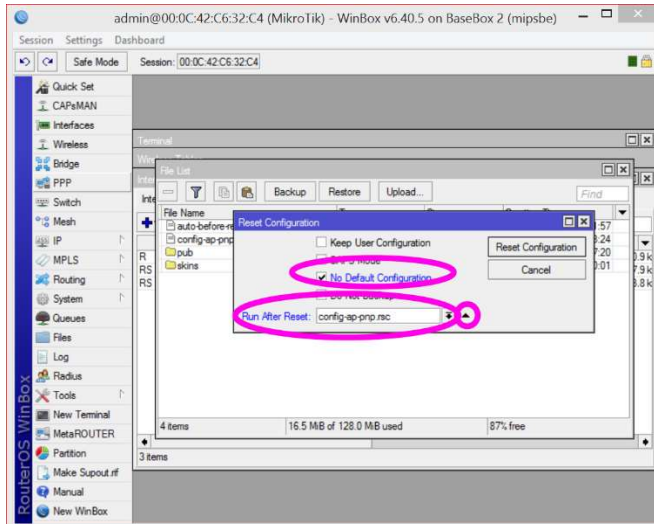
- You can then click "Reset Configuration" and confirm that choice.
- The radio will reset itself and apply the update

To install the radio configuration file on the external "STA" unit
- You must have already successfully programmed the "AP" unit in the Pit Master Box.
- Turn on the Pit Master Box
- Assemble the "STA" radio
  - The two antenna cables MUST be connected to an antenna; if not, there is a risk of burning out the high-power radio module
  - Connect with ethernet cable to pit master box PoE port
  - Make note of the MAC address of the STA radio
- Confirm that there are NO **"SilverMountainTargets"** APs running.
- Power on the pit box.
- Enable WIFI on your laptop
- Connect laptop WIFI to **"SilverMountinTargets"**. You might get a warning about an incomplete connection.
- Run winbox.exe program
- Click on "..." button
  - After a short delay, you should have a list consisting of **TWO** devices
  - DO NOT select the AP radio, which will have IP address 192.168.0.13
  - Click on the MAC address of the STA radio.
    - You will need to expand the column to see all of the MAC address number
  - Click the **Connect** button
- The Winbox tool should open
- "Drag" the file **"config-sta-pnp.rsc"** to Winbox
- Click "**System->Reset Configuration**" and:
  - Tick **No Default Configuration**
  - Under **Run After Reset**, select the file **"config-sta-pnp.rsc"**
 - Then press **Reset Configuration**

5.10 "*" Shots

When the system detects an anomaly in the shot calculations, such as an extreme angle, lack of a reading from one of the sensors, abnormal velocity, etc., it will flag that shot with an asterisk in the ShotsList column. This assists the range officer in addressing a challenge to the shot by highlighting that shot from all others.
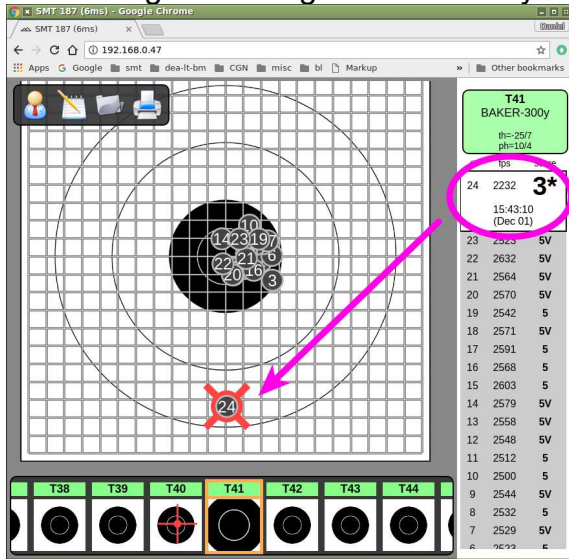
5.11 Dual Mode TargetFaces

Some TargetFace definition files are identified as "DUAL-MODE" on the Silver Mountain Targets web site, and include TWO sets of scoring rings, to support F-Class and iron sight ("sling") shooting.

These permit F-Class or iron sight scoring rings to be manually selected, using the "Sling" or "F-Class" button. This is the same string, scored on the left using the F-Class rings and on the right using the iron sight rings:
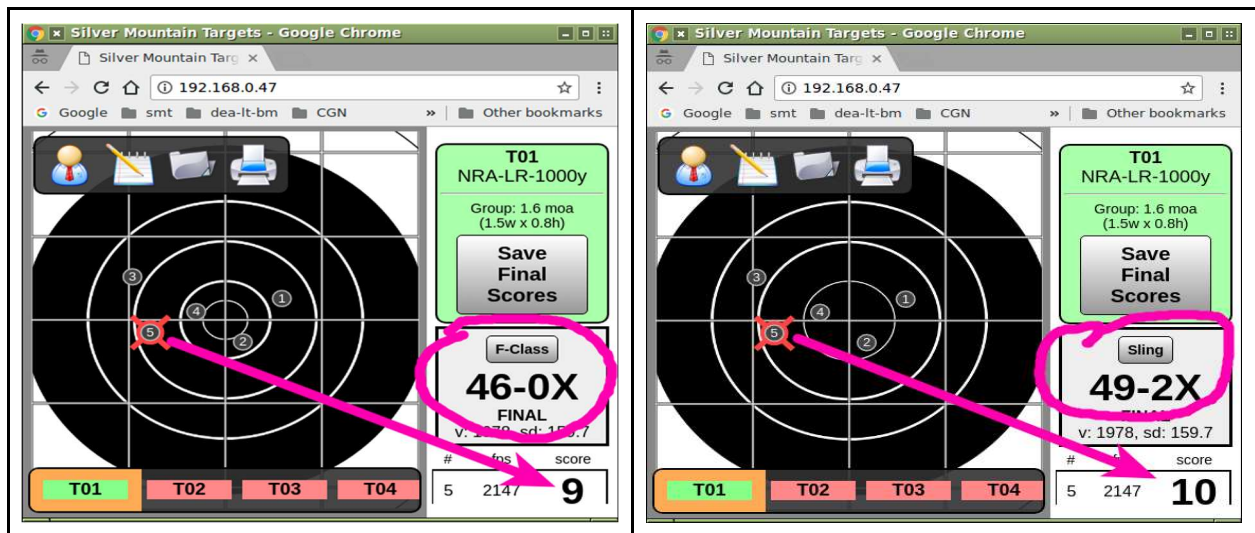
If the "assigned shooter" mode is in use then the correct scoring rings will be automatically selected when a shooter is assigned to a target.
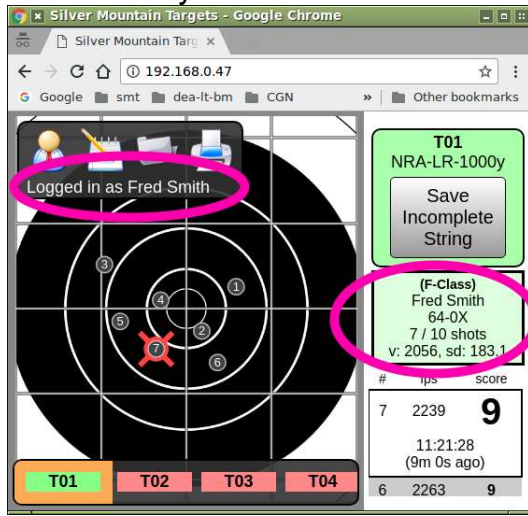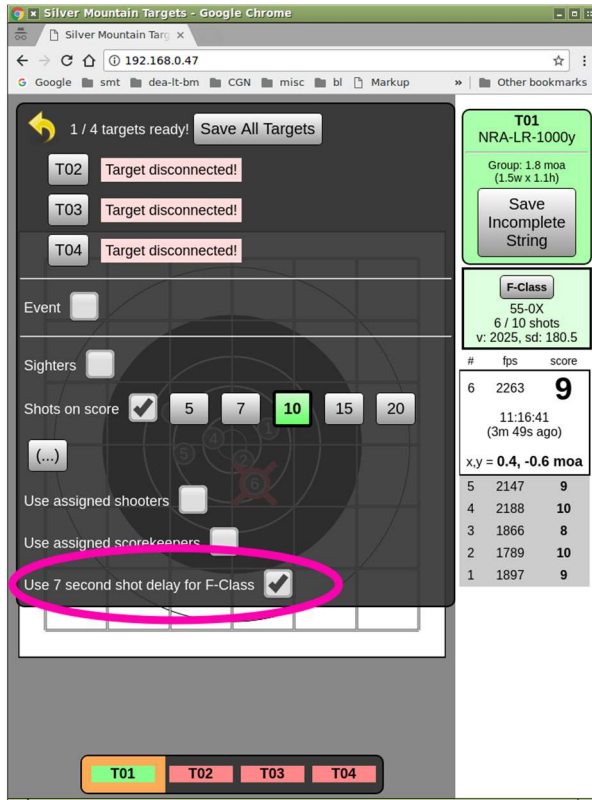

5.12 F-Class 7-Second Delay

An optional 7-second delay is available when DUAL-MODE TargetFaces are in use and the F-Class scoring rings are selected. The shot value and shot position will not be shown until a 7-second delay has elapsed. During this time a countdown timer is shown:
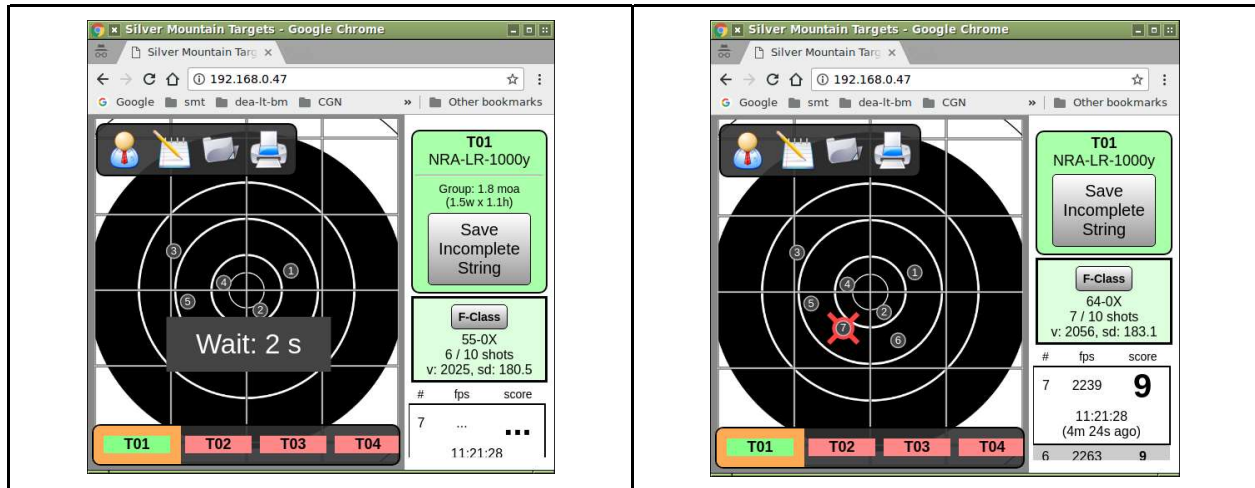
A Range Officer or ADMIN user can control this via the "WRENCH-WHISTLE"
menu.

5.13 Managing Strings of Fire

The "Manage String" privilege is required for the following operations:
- Saving a finished string
- Saving an incomplete string (not enough shots)
- Saving a string with too many shots
- Converting sighters
- Striking out shots

This privilege may be granted to:

Mode	Save/Convert/Strike Available to...
Everyone	Anyone. May be logged in, or may be guests (not logged in).
Assigned	Scorekeepers, shooters. Also RO users and ADMIN users
Scorekeeper	Scorekeeper. Also RO users and ADMIN users
RO Only	Only RO users and ADMIN users
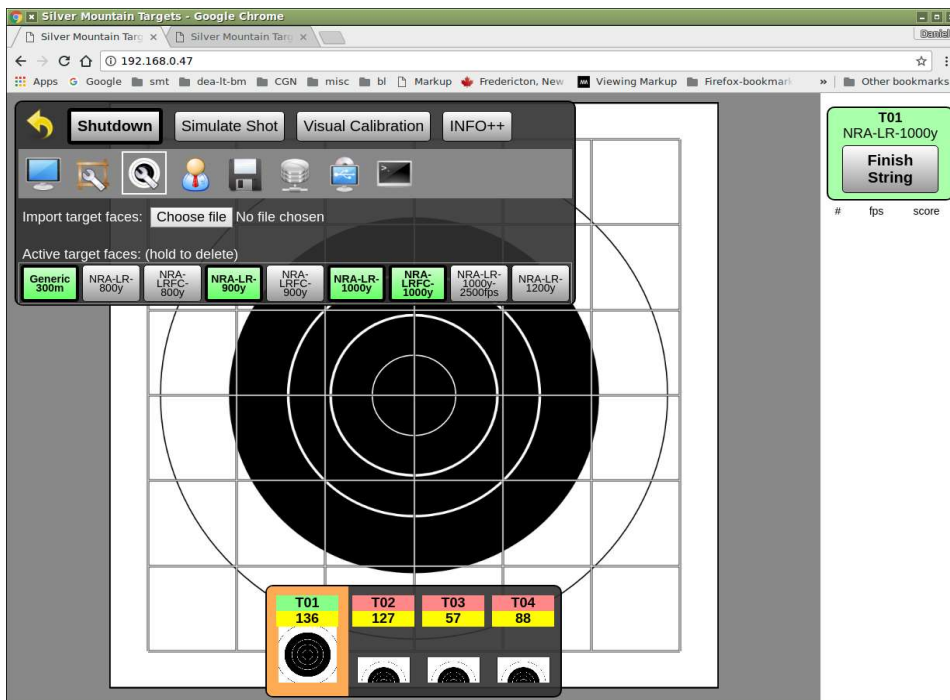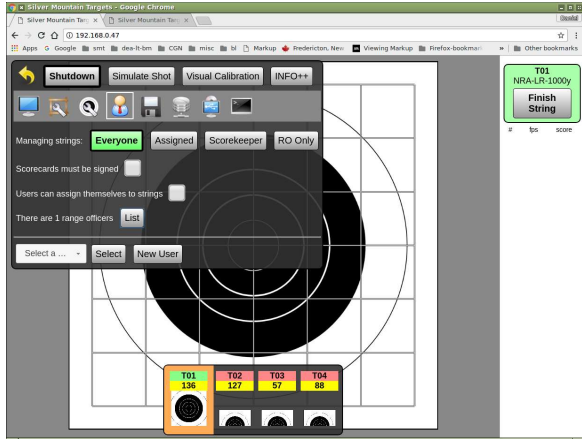
OTHER SPECIFIC ADMIN FUNCTIONS BY MENU

6.1   User Icon

Logout
Allows Admin user to log out, returning to normal, non-admin menus

Change or set Password
Change or set the Admin password

Use F-class target
If selected, this enables a selection box for F-Class or Sling, for any target containing dual scoring rings

Bullet Diameter
Selection of default bullet diameter for scoring of shots close to rings

6.2   Gear Icon

Shutdown
Selecting this will perform a software shutdown of the server

Simulate Shot
Allows a user to tap the screen of his display device and simulate a shot on target

Visual Calibration
Allows a shot displayed on the screen to be dragged and dropped to calibrate a target. More info can be found in section "5.3 Target Calibration"

Info ++
Selecting this will display detailed measurement and calculation information for each shot.

Gear Icon Sub Menus

6.2.1 Monitor Icon

Display Selections
 Stats:
 Circle:
 Mean POI:
 Shot XY:
 XtraStats:
Position Unit Selections
 MOA
 Mil
 Inch
 MM
Velocity Unit Selections

FPS
M/S
Grid/Scope Unit Selections
MOA
Mil
Language Selections
English, French, or German

6.2.2 Frame & Wrench Icon

This submenu contains information on the following fields. More detailed information can be found in section "5.1 Adding a New TargetFrame"

Hide, Rename, Delete, or Copy a TargetFrame.
Wiring Harness selections for standard mic configurations.
Mic W/H & Mic Spacing
Cal X,Y, & Temperature for calibrating a TargetFrame
Disconnect from a TargetFrame

6.2.3 Target & Wrench Icon

This submenu allows import and activation of individual TargetFaces. More detailed information can be found in section "5.4 TargetFaces"

6.2.4 Users Icon

This submenu allows creation and configuration of users. More detailed information can be found in section "5.5 Users – Creating and Managing"

6.2.5 Disk Icon

This submenu contains functions to download logs, manage stored strings, backing up and restoring data. More detailed information can be found in section "5.6 Managing Server Data"

6.2.6 Network Icon

This submenu allows all data to synchronized with the external program "RSTAT"

6.2.7 System Icon

This submenu contains many advanced functions that should not normally be changed. These are advanced features, and should only be changed with advice and support from a Silver Mountain representative. Specific details of recommended settings can be found in section "5.7 Recommended Default Server Settings"

6.2.8 Command Prompt Icon

This submenu displays a Sensor Triggering Log, showing a global view of all sensor triggerings on all targets, useful for diagnostic analysis.

6.3   Wrench & Whistle Icon

6.3.1 Save All Targets

This selection will save all current strings on all targets, clearing screens in preparation for the next string of fire.

6.3.2 Sighters

This section allows the Range Officer or Admin to choose if sighters are part of the upcoming shooting session, and if so, how many there are, and if they are convertible.

6.3.3 Shots on Score

Defines the number of shots expected in a string of fire

6.3.4 Use Assigned shooters

Selecting this checkbox requires that a logged-in user be "assigned" to a target as shooter in order for the string to be considered valid and complete.

6.3.5 Use Assigned Scorekeepers

Selecting this checkbox requires that a logged-in user be "assigned" to a target as scorekeeper in order for the string to be considered valid and complete.

6.3.6 Use 7 second shot delay for F-Class

Turns on a 7 second delay for F-Class. More detailed information can be found in section "5.13 F-Class 7-Second Delay"

6.3.7 Managing Strings

Defines what assigned user roles can manage strings of fire. More detailed information can be found in section "5.13 Managing Strings of Fire"

6.3.8 Scorecards must be signed

Defines that scorecards must be signed when running a match or practice in "Login Mode". This requires that the shooter "sign" his scorecard before it can be saved and submitted as complete by the scorekeeper. Ordinarily ticked "yes".

6.3.9 Users can assign themselves to strings

Allows individual users to assign themselves to strings. This box should normally be checked, as if it is not, then Range Officers must be involved in assigning shooters and scorekeepers to targets.

6.4   Target & Wrench Icon

Detailed information can be found in section "5.4 Target Faces" on importing and activating targets for an upcoming shooting session or match. This menu allows the Admin or Range Officer to select from those activated targets for the current string of

fire. Clicking on a TargetFace once will select that face for the selected target. Clicking on a TargetFace twice will select it for all targets.

The "Number of shooters" selection defines if 1, 2, or 3 shooters will fire on a single target, for pair or triple firing.

6.5   Notepad Icon

Plot mode provides the same functionality as a mechanical plotter with the added convenience of marking each shot for you.
This is a memory aid useful for visualizing your group and recording scope settings for each shot. It will not tell you what to set your scope to, calculate your group center, or predict the wind.
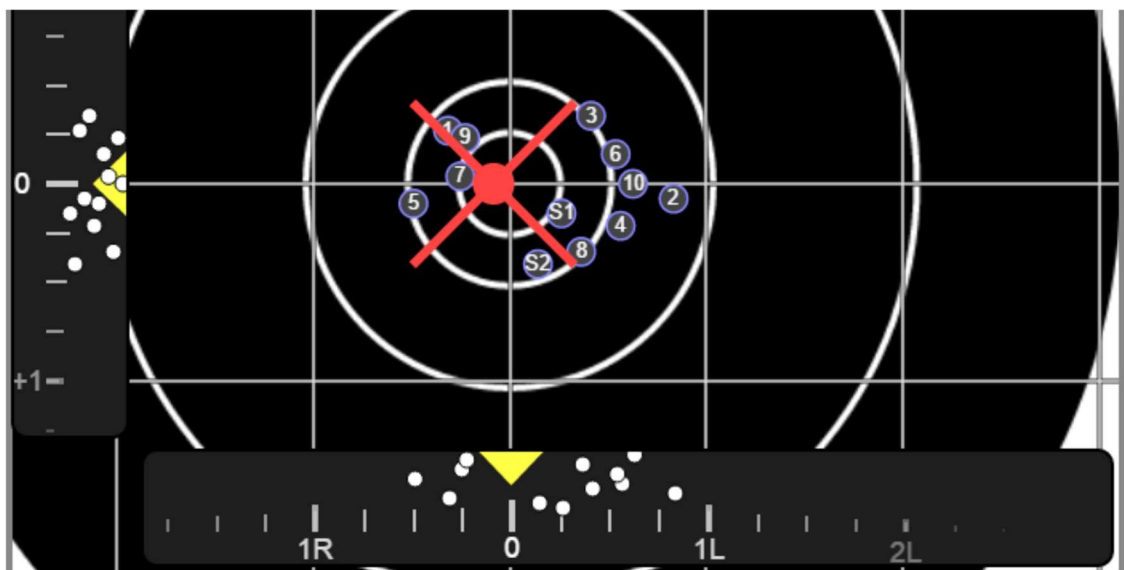
The size of your group is the dispersion of your shots had you not touched your scope settings for the entire string. This is very useful for understanding the precision of your aim, your rifle, and the wind effects.
Moving the sliders will move your group around and show you where your shots would have landed had you fired with this setting for all shots. This may help you visually determine which setting is optimal for the next shot.
The white dots on the sliders mimic the functionality of graphing. Each dot represents where a shot landed relative to your scope setting on the elevation and windage axes separately. Equivalently, this shows you what scope setting would have landed this shot in the center.
To use plot mode:
- Using the sliders, set the scope elevation and windage to match what you have on your scope BEFORE firing each shot.
- As you adjust your scope, adjust the plot immediately to help keep them synchronized.

If you fire a shot with different settings than recorded, select the shot in the list and adjust it with the pop-up.

6.6   Folder Icon

This menu selection will allow the user to select a saved string and recall it onto the TargetFace.

6.7   Printer Icon
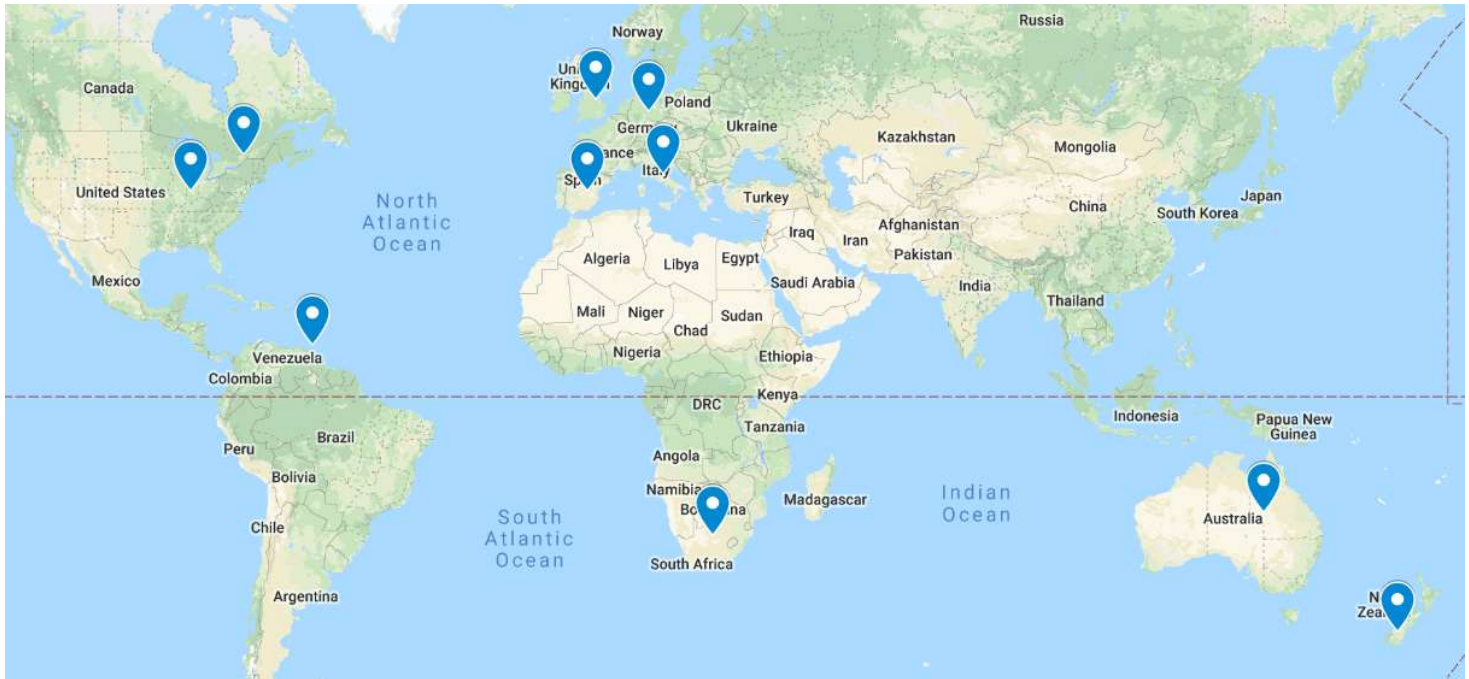
Allows printing of the displayed target

MAINTENANCE

7.1   Routine Maintenance Requirements

Unlike chamber targets that require routine maintenance of backer sheets, the Silver Mountain Target has literally no routine maintenance requirements, other than keeping batteries charged.

SILVER MOUNTAIN TARGETS

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