



DryFire V4

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Safety

Be sure to read the following safety precautions before using DryFire equipment. It is your responsibility to ensure that the equipment is used safely.

Guns can kill.

Never put a cartridge into a shotgun unless you are on the shooting stand outside.

Double check that your shotgun is unloaded before using it with DryFire.

Take extra care with semi-autos where an unnoticed cartridge may be in the breech or in the magazine.

General

- Do not disassemble any part of the equipment, as this may cause damage. Do not store or use the equipment in dusty areas and protect it from high humidity and rain. If the equipment has come into contact with liquids or has sustained any physical damage, do not use it but remove the batteries and disconnect the power lead and computer lead and have it examined by a competent person.
- Protect the equipment from the high temperatures that can occur in direct sunlight and in automobiles.
- Do not allow foreign objects to enter the equipment. Do not allow children to handle the equipment.
- Do not move the equipment suddenly from a cold to a hot place or vice versa as this promotes condensation which can damage the circuitry.
- Store the equipment where temperatures are between 10° and 60° C and the humidity is 10 to 80%.

Batteries for trigger box

- After removing the batteries from the trigger box, put them in a safe place where there is no danger of them getting into the hands of small children and being accidentally swallowed.
- Keep batteries out of the reach of small children. If accidentally swallowed, consult a physician immediately.
- Never charge batteries unless they are marked "Rechargeable". Never try to take batteries apart or allow batteries to become shorted. Batteries may explode and cause serious personal injury if overheated so never expose them to direct heat or dispose of them by incineration.
- Do not allow any metal object to touch the battery terminals as this may cause a fire or battery leakage.
- Misuse of batteries can cause them to leak acid that can cause damage to nearby items and creates the possibility of fire or personal injury.
- If leakage enters the battery compartment, remove the batteries and dispose of them safely (not by incineration), clean the compartment carefully using a damp cloth and allow to dry naturally in a warm room before replacing with fresh batteries. Do not use the unit while there is still any trace of leakage or moisture present.
- Always make sure that a battery's positive (+) and negative (-) sides are facing correctly when you load it into the equipment.

- Remove the batteries if you do not use the equipment for a long time
- Use only the type of batteries specified below:
 - Trigger box: 3 x LR44 button cells. These are not rechargeable.

Lasers



Lasers can cause serious personal injury if used irresponsibly. The simulator contains a low power (<3mw) 650nm visible (red) laser diode. The muzzle insert contains a low power (<3mw) 780nm invisible (infra-red) laser diode.

- A laser is a concentrated beam of light - never look directly into the beam of a laser. There is the possibility of serious personal injury or blindness if you stare directly into the beam of a laser.
- The laser used in the muzzle insert is controlled by the trigger box so that it fires a very short pulse (<30ms) when you press the trigger. To allow for shooting doubles the trigger box permits you to fire two pulses within any 5 second period. After two pulses have been fired the system will “lock out” until at least 5 seconds has elapsed since the first shot.
- You will not see the laser beam or spot produced by the muzzle insert – infra-red light cannot be seen by the human eye but can cause damage to it. The small LED on the trigger box will flash once each time you fire. If it flashes twice when you fire it indicates that the 5 second delay time has not yet elapsed so you should wait before firing again.
- Never point the muzzle insert at another person. Never point your shotgun, with or without the muzzle insert, at another person. There is the possibility of serious personal injury or blindness if the laser in the muzzle insert is repetitively fired into the eyes of another person.
- Always remove the complete gun assembly: trigger switch, trigger box and muzzle insert; before using the shotgun for live shooting. Leaving the muzzle insert in place may result in an exploding barrel and serious personal injury if a real cartridge is fired.
- The simulator contains a time-out of about 12 seconds. If the laser is on, and you do not shoot at it within this time, it will be turned off for safety reasons and to avoid overheating.

Power Supply

The DryFire power supply is approved for use throughout the world and is supplied with a plug head for connecting to the mains supply in your country. It accepts 110-250V 50Hz/60Hz input and produces 5V regulated output to the DryFire simulator with a positive centre terminal.

- Do not handle the AC power supply with wet hands. Do not pull or abrade the AC cord. Keep the adaptor away from sources of heat. Do not drop or damage the power supply. If the unit is dropped and the case is damaged you should dispose of the unit and order a new one.

- Other than the interchangeable plug head, the power supply has no user-serviceable components.
- Never attempt to open the power supply. To do so will expose high voltage levels that can cause serious personal injury or death.

Do not use any other power supply with DryFire products - to do so will invalidate your warranty and may cause a fire or damage to the equipment and danger to those nearby. Contact your supplier, or www.dryfire.com, if you require a replacement power supply.

Your shotgun

You will be using your own shotgun with DryFire and you will be using it indoors.

- Never insert cartridges into any shotgun until you are on the shooting station on an outdoor range.
- Double check that you have no cartridges in your shotgun before using it with DryFire.
- Set your shotgun on safety. This provides resistance when using the DryFire trigger switch and is always a wise safety procedure.
- Ensure that there are no cartridges openly visible or openly accessible in the same room as your DryFire system. You would never forgive yourself if you put your shotgun down and a child found cartridges, put them in the gun and caused damage to himself, others or property.
- Never point a shotgun at anyone.
- There are no such things as “accidents” with shotguns - all “accidents” are the result of the inability to think about what could happen or the result of irresponsible or unsafe behaviour. Remember: “if it can go wrong, it will go wrong” - always think ahead and put safety first.

Introduction

Congratulations, you are now the proud owner of a DryFire clay shooting simulator.

DryFire models the real world to enable you to practise your selected clay pigeon discipline inside throughout the year so that your time on the real range shooting at real clays is more successful and cost effective.

DryFire’s model of the real world takes into account such things as:

- How your gun shoots: The Point Of Impact [POI] and Choke for each barrel as well as the characteristics of your cartridge load.
- How the clays fly; including drag, lift and gravity.
- How much energy is required to break the clay.
- How much energy each pellet in your shot carries at each point along its trajectory.

Take some time to correctly configure DryFire and it can present clay trajectories on your wall as they would appear to you on the range.

DryFire will determine the path your shot will take and whether your shot would hit and break, hit but probably not break or miss the clay.

When you miss DryFire will show how you missed, so you know what to do differently – maybe more or less vertical or horizontal lead. If you are shooting rising clays, such as DTL

or ATA trap, you can experiment with different POI values for your shotgun's barrels in the DryFire simulated world to see how they might help you in the real world.

If DryFire determines you're unlikely to break a clay, even if you're on target, then you can consider whether you can shoot at the clay when it's closer to you or see the effect of using a tighter choke (which will require you to be more accurate) so that more pellets might strike the clay at the greater distance.

Accomplished shooters have also used DryFire to reduce the time to shoot while retaining accuracy using the "slow-motion" function in DryFire. This function shows the clay at slower speeds but requires you to use the normal amount of lead. By repeatedly taking targets while gradually increasing the clay's speed back to normal you can reduce your time to accurately shoot. Taking an away target closer allows you to use a wider choke because at closer distances the pellets hold greater energy and fewer are needed to break the clay.

After repeatedly practising with DryFire, your sub-conscious acquires a sight picture of when you should shoot that you take with you to the real range and break clays more often.

Options

Options available for DryFire include:

Software

[Report Generator module](#)

This optional module allows you to analyse the DryFire shot history.

Have you ever wondered whether you are consistently missing targets for a consistent reason or wanted to know by how much you've improved over time with practise at a specific target? The Report Generator module can help with this.

Report generator shows details of all shots logged for any DryFire shooter, or you can filter the list by any of the following:

- Date range: Compare results for different times – are your percentages getting better?
- Layout: Show results for one specific layout, e.g. DTL, Olympic Skeet, etc.
 - Target: When showing results for a specific layout you can further filter the list to show results for a specific target – compare your hit rate on each DTL/ATA stand to see where you are missing most and need to concentrate your practise.
- Shot: Show results for your first, second or both shots

The statistics are displayed on screen with options to print or save them as a PDF.

If you want to analyse and compare your shot results, but don't want to process the data directly, then this option is one for you.

For more information, see the [Report generator section](#).



Add this option to your simulator by selecting the Help, Registration and Features menu to display the [Add features dialog](#).

[Trap Exercise Module](#)

The Trap Exercises module is specifically designed to support the shooter in practising their particular area/target of weakness using ATA, DTL and ABT layouts. This can be used by the shooter alone or in conjunction with a program set by a coach.

If required, multiple shooters can work concurrently on different or the same training plans using the same layout.

The shooter or coach defines the specific angles or range of angles that clays will be thrown at, meaning that each shooter can concentrate on the type of targets that they wish to improve their scores for.

This module also provides analysis of results which can be printed or saved as a PDF report. The PDF report might then be emailed to a coach.

If you shoot ATA single, DTL or ABT and want to practise either specific angles or clays thrown in an arc of your choosing then this option is one for you.

For more information, see the [Trap exercise section](#).



Add this option to your simulator by selecting the Help, Registration and Features menu to display the [Add features dialog](#).

[Squadding Module](#)

The optional “Squadding” module allows a group of shooters to practise a layout at the same time, as they would if on the range.

Shooters take turns to shoot, either each from a different stand/station (trap) or all from the same stand (skeet or sporting) before moving to the next stand while DryFire maintains separate scores for each shooter.

Remember that, if each shooter is to use their own gun, you’ll need to purchase additional **Gun Assemblies**. Take a look at the **Store** at www.dryfire.com for more details.

If you want to shoot targets in DryFire alongside others as part of a squad as you would on a real range then this option is one for you.

For more information on the squadding module, see the [Squadding section](#).



Add this option to your simulator by selecting the Help, Registration and Features menu to display the [Add features dialog](#).

Training Mode – coming soon

Course Designer – coming soon

Hardware

Foot switch

If you want to practise with DryFire but worry calling “Pull” might upset your family or neighbours, consider the DryFire foot switch. It plugs into the simulator and allows you to release targets simply by pressing the foot switch.

Scenic canvas wall hanging

DryFire doesn’t project the backdrop onto your wall. Some shooters find it useful to show a scenic backdrop on the wall and project the laser target onto it. Take a look at the **Store** at www.dryfire.com for more details.

What’s in the box

You should find the following items in the DryFire box:

- One Simulator, comprising:
 - One Simulator with either one or two heads, depending on what you have purchased.
 - One USB cable, for connecting to your Windows XP/Vista/7 PC.



- One Universal Power Supply Unit [PSU] accepting 110V–240V, 50–60Hz AC and producing 5V regulated power through a positive central terminal connection, for connecting your simulator to AC mains electricity supply.
- One Gun Assembly



Comprising:

- One muzzle insert to place into the end of your shotgun's barrel, with attached cable to connect to the trigger box.
 - One red trigger box, containing three LR44/AG13 batteries and including a magnet to attach to your gun's action.
 - Plastic cable clips.
 - One trigger switch to attach to your shotgun's trigger, with attached cable to connect to the trigger box.
- One CD, containing:
 - DryFire software
 - DryFire guide, this document

Installation

Requirements (System and Environment)

DryFire requires:

1. A Windows PC running Windows XP (SP3), Vista 32/64 bit or Windows 7 32/64 bit which has a spare USB port.
2. A Room:
 - With no direct sun or artificial light onto the projection wall or into the simulator's camera heads.
 - With a projection wall:
 - Wide enough to show as much of the clay's path as you need, a wall about 4m (13 feet), to 5m (16 feet) wide is fine.
If the wall isn't this wide then DryFire will still work, but you will see less of the clay's path and so have less time to acquire and shoot at it.

- That isn't extremely rough or coloured dark green.
The camera in the simulator needs to see the spot of infra-red light fired from your shotgun, rough surfaces such as stone or bare brickwork disperse the lasers. As long as you can see a bright, clear, red laser spot everything should work fine.

- With a high ceiling, if you intend to use DryFire to practise overhead targets.
- Mains Electricity supply for the simulator.
- With a tripod (preferred) or table on which to place the simulator so that it faces the projection wall at a height of between 0.7m (27 inches) and 1m (40 inches) to the spirit level when the simulator is horizontal.

Ideally you should have room to stand directly behind the simulator so that your shotgun is directly above it.

3. A shotgun:

- You will be using your own shotgun to shoot at the laser projected onto the wall using the supplied gun assembly.

Take careful note of the safety notes included above.

The Simulator

The DryFire simulator is available with either one or two heads:



Each head contains a laser (A) and a camera (B):



The laser is carefully focused during production. Under no circumstances should you attempt to adjust the laser using a screwdriver or any other device.

Both types of simulator show singles and on-report doubles in the same way.

Simultaneous doubles are slightly different:

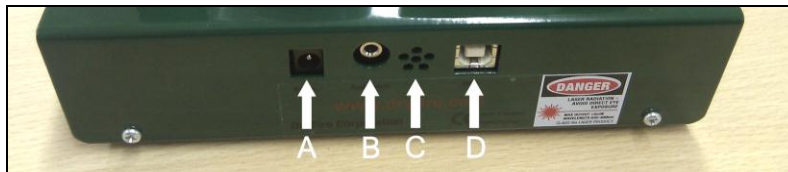
- The double head simulator shows both clays simultaneously from launch.

- The single head simulator shows the first clay's trajectory initially. When you shoot at and break the first clay with your first shot, the simulator switches to show the second clay's trajectory.

If you wish, DryFire can be configured to switch to show the second clay's trajectory after you take your first shot even if that first shot doesn't break the first clay.

Whether you are using a single or double head simulator, DryFire will show the outcome of both your shots on the PC screen.

The back of the simulator has 3 connectors and a microphone as shown below:



A Power socket: Plug the PSU's round connector into this socket.



Use only a power supply with a 5V regulated output through a positive central terminal connection.

B Manual release: Plug the optional foot/hand switch release connector into this socket.



The manual release switch is useful if you don't want to disturb others, perhaps at night. If you don't already have one you can purchase one via www.dryfire.com.

C Microphone: If no foot release switch is connected DryFire uses this microphone to hear when you shout "Pull" to release a clay.

D USB socket: Used to connect the simulator to your Windows PC using the supplied USB cable – **do not** connect the simulator to the PC until instructed to do so.

All DryFire simulators come with a standard photographic tripod bush in their base, so that you can mount it on a tripod. Mounting the simulator on a tripod makes it easier to tilt the simulator to 45°. Tilting the simulator enables DryFire to show overhead clay trajectories more completely for layouts such as skeet.

If you don't have a tripod, just position the simulator on a desk or table and use books under the front of the simulator to tilt it upwards when necessary.

Position the simulator about 1.5m (60 inches) from the wall about midway across its width and at about desk height. Ideally you should have room to stand directly behind the simulator so that your shotgun is directly over it, but if that isn't possible you can stand elsewhere and tell DryFire as we'll explain later.



DryFire will fit as much of the clay's trajectory as possible on to the wall in front of you.

For layouts such as ATA, DTL and Olympic trap the whole trajectory from launch to landing will normally fit on the wall, but this might not be the case for wide layouts. A good example is Skeet stand/station 4. On the normal range the High house will be about 55 degrees to your left and the Low house about 55 degrees to your right. If you want the full trajectory to fit on your wall you will need to stand close enough to the wall so that when you turn left about 55 degrees you are looking to the left end of the wall and when you look right 55 degrees you are looking at the right end of the wall. If you stand too far back the 55 degrees will take you beyond the limits of the wall and DryFire will only show you the central part of the clay's flight path.

If you have to stand closer to the wall then the simulator, being in front of you, will

need to move closer to the wall as well.

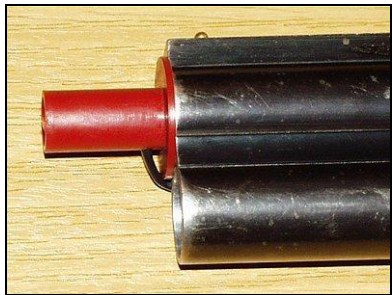
Do **NOT** connect the simulator to your PC yet.

The Gun Assembly

1. Fit the trigger switch round your trigger. The switch should face forward and be easily reachable with your trigger finger.



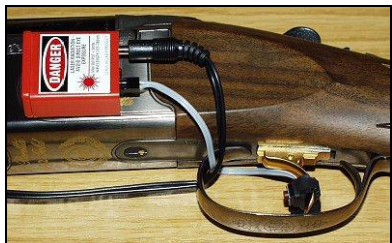
2. Place the muzzle insert into either barrel of your shotgun.



The muzzle insert's laser is carefully focused during production. Under no circumstances should you attempt to adjust the laser using a screwdriver or any other device.



3. Connect the muzzle insert and trigger switch cables to the red trigger box, they will each fit into only one of the sockets and may fit either way around. Then attach the trigger box to your shotgun in front of your trigger guard or on the side-plate using the magnet to hold it in place:



4. Use the supplied clip to hold the cable from the muzzle insert to the gun barrel.

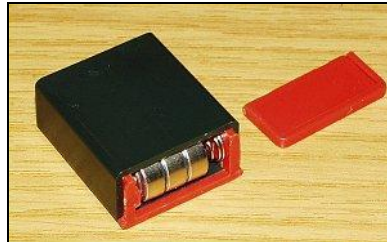


5. Set your gun on "Safe" to give firm trigger resistance and test the trigger switch by pressing it. You should see a flash from the small red LED on the trigger box. If this does not happen, check that the batteries are inserted the correct way round and that you have connected the cables correctly.



The DryFire gun assembly normally fires a shot (and lights the red LED on the trigger box) when you press the trigger switch. To fire on releasing the trigger, reconfigure as described in the [FAQ section of this guide](#).

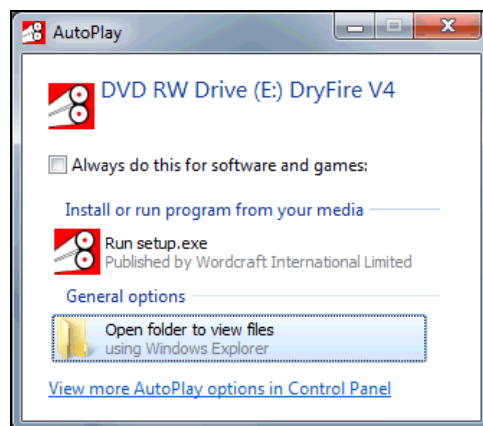
The trigger box uses 3 LR44/AG13 button cell batteries. To replace these batteries, slide off the lid of the trigger box and insert 3 batteries with the flat (positive) side of each battery towards the spring then replace the lid:



Installing Software

1. Insert the DryFire CD-ROM in to the CD-ROM drive.

Depending on the version of Windows you are using you may be asked what you want to do. If you are asked, click **Run setup.exe**.



2. The DryFire Installation Menu (below) should automatically appear. If it does not, click **Start, Run**, type F:\SETUP.EXE (where “F” is your CD-ROM drive) and then click the **OK** button.

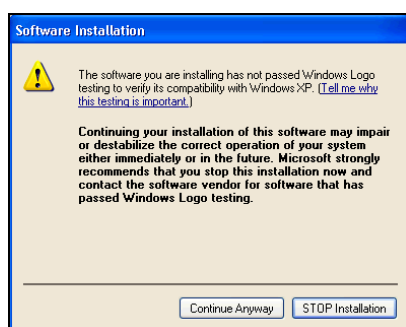


Select the required language from the list shown in the lower right corner of the DryFire Installation Menu.

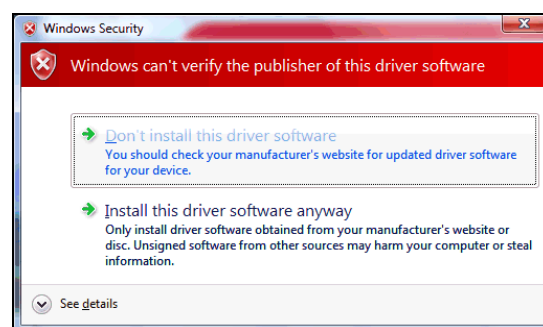
Click **Install DryFire Software**.

3. Drivers for the DryFire simulator are now pre-installed to Windows so that they can be found when a compatible DryFire Simulator is subsequently connected. Depending on how Windows is configured, Windows may warn that the drivers have not passed Windows Logo testing or that it cannot verify the publisher – click **Continue Anyway** or **Install this driver software anyway**.

Windows XP



Windows Vista/7



4. When the following screen appears:



Connect the DryFire Simulator to the main electricity supply using the power supply provided with the simulator. Then connect the simulator to the PC using the supplied USB cable.

If the DryFire simulator is already connected to the PC and power supply, disconnect the simulator from the PC then reconnect it.



The simulator heads will nod up and down when mains power is on and the system is connected (via USB cable) to a PC which is also switched on.

If either of the laser/camera heads shake from side to side it means that the main simulator board cannot communicate with the laser/camera head. This may be because:

- The cable for that head has been disconnected inside the simulator case;
- The camera head has not been programmed.

If either or both head shake from side to side in bursts, it means that the contents of the simulator's memory, where calibration detail are stored, has been lost or corrupted.

Please contact your supplier for advice explaining your symptoms.

If you are installing DryFire before buying it and do not have a DryFire simulator, click the link at the bottom of the page to continue the installation and skip to step 11 below.

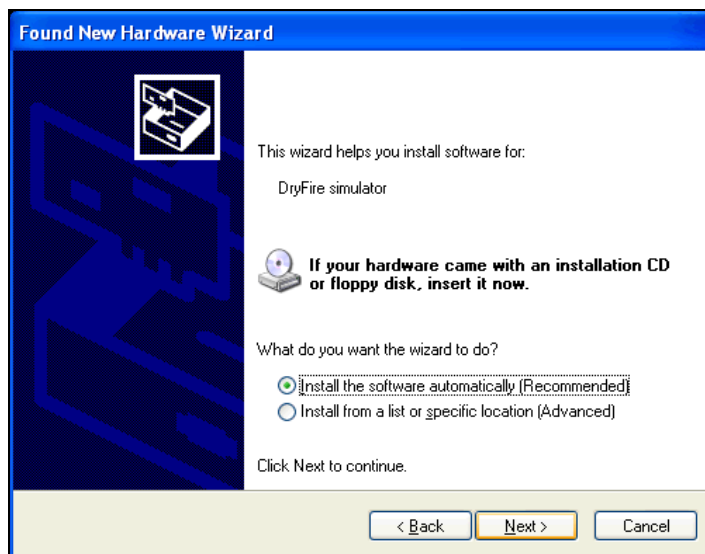
5. Windows should detect the Simulator being connected.

6. If using Windows Vista or Windows 7, skip to step 11.

For other Windows platforms; when asked if Windows should connect to Windows Update select **No, not this time** and then click the **Next** button.



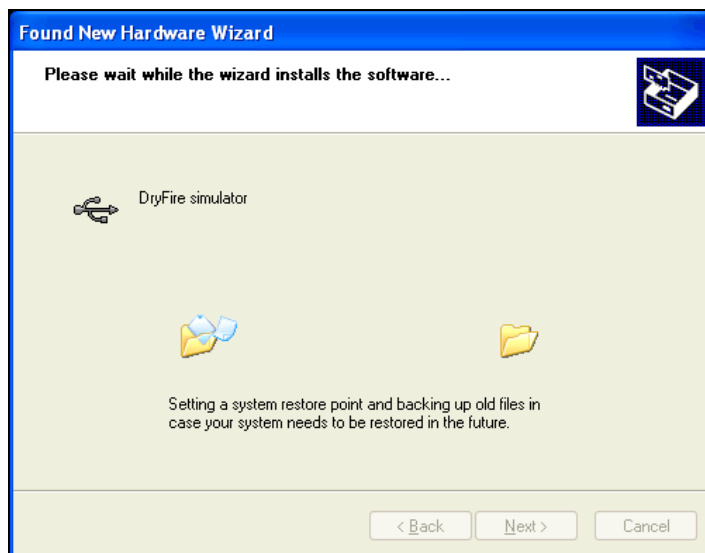
7. Select **Install the software automatically (Recommended)** and click the **Next** button.



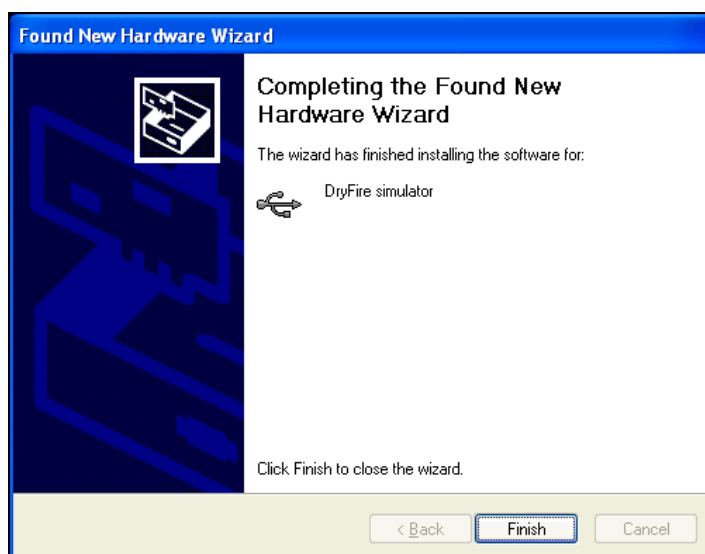
8. Depending on how Windows is configured, Windows may warn that the drivers have not passed Windows Logo testing – click **Continue Anyway**.



9. Please wait while the USB driver files are installed.



10. Click the **Finish** button.



11. The DryFire Installation Menu will notice the DryFire Simulator is connected and continue the DryFire installation process.

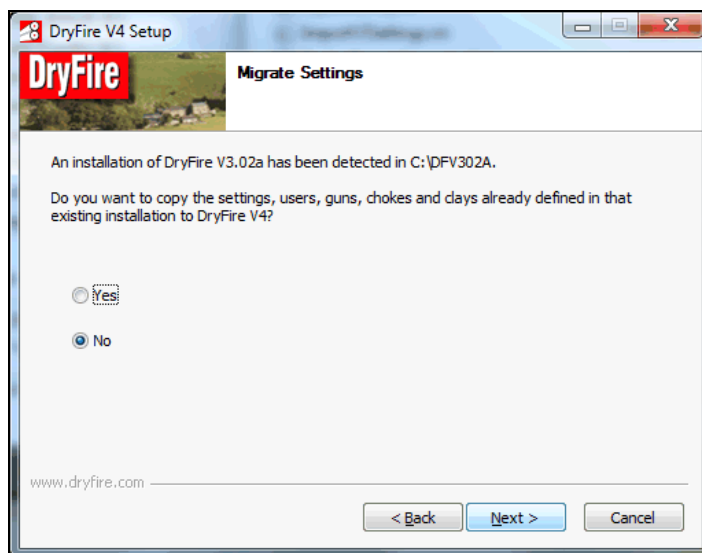


Read the Important Safety Notice, more guidance is [included in this Guide](#).



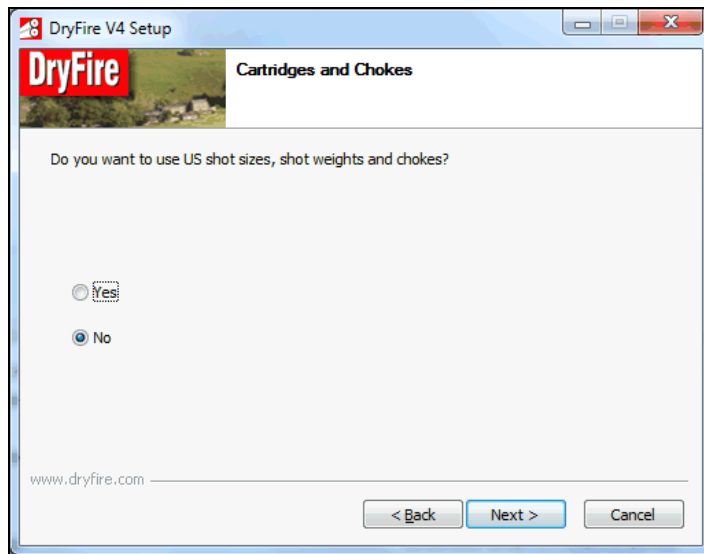
If you understand and accept that it is your responsibility to use and ensure that others use DryFire safely, tick the **I understand** check box and click the **Next** button. If you do not agree, click **Cancel** and the installation will stop.

12. If you already have a copy of DryFire V3 or the DryFire USA-Friendly software installed on this PC and have not previously installed DryFire V4 on this PC you will be asked if you want to copy settings from the earlier installation to DryFire V4.

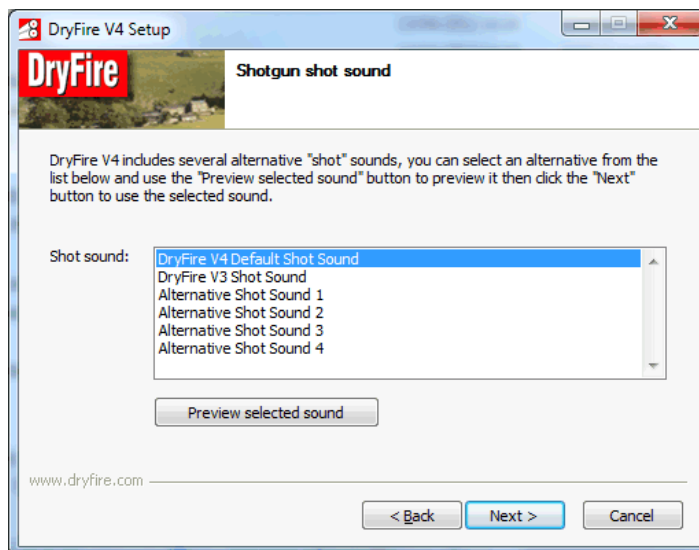


Select "Yes" if you want to do so before clicking the **Next** button.

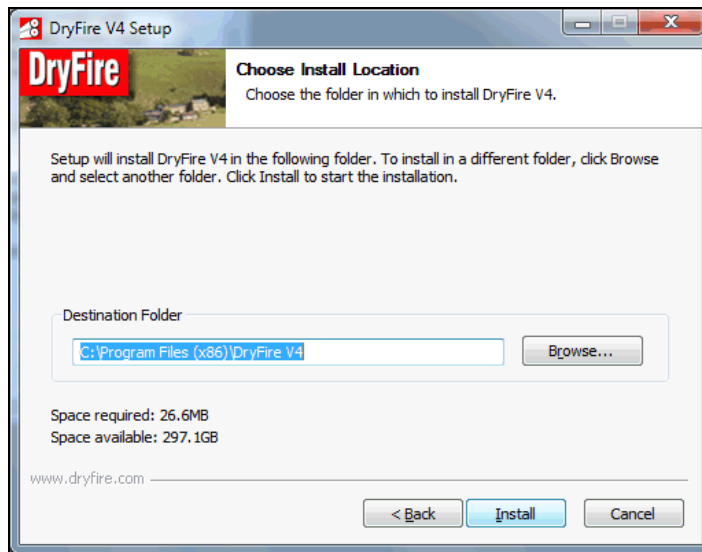
13. US cartridge shot sizes and weights as well as chokes are slightly different. If you want to use the US data select **Yes**, otherwise leave the selection as **No**, then click the **Next** button.



14. Select the sound you DryFire to play when it detects your shots, use the **Preview selected sound** button to listen to the selected sound, and then click the **Next** button.



15. Choose the folder into which the software should be installed, and then click the **Install** button.



If you have already installed DryFire V4 on this PC this page will not be displayed.

16. Please wait while the files are copied from the CD.

17. Click the **Finish** button to complete the installation.



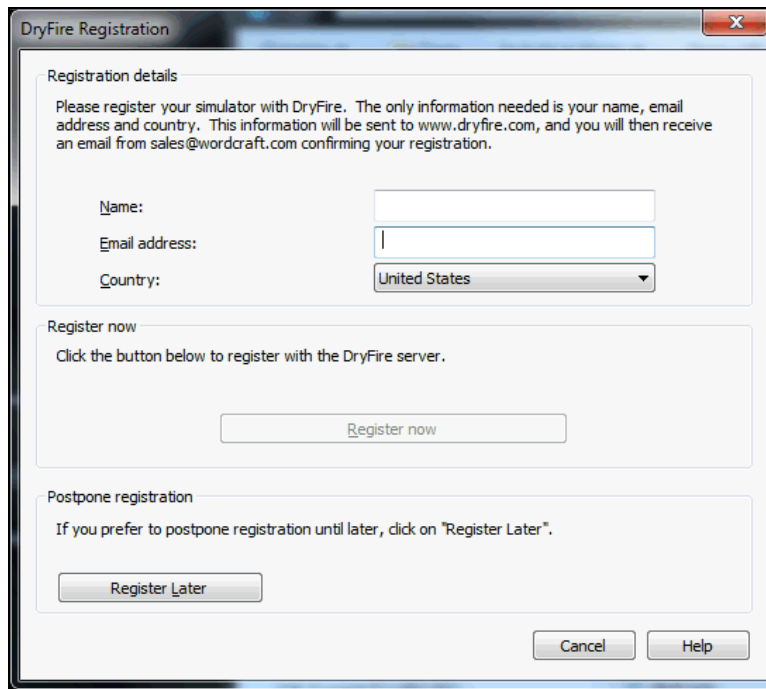
By default DryFire will be started automatically, so the installation process can complete.



If you do not want to start DryFire immediately, clear the **Run DryFire V4** check box before clicking the **Finish** button – the installation process will continue from this point when you next start DryFire manually using the shortcuts created on your Windows desktop and in the Windows **Start, Programs, DryFire** menu.

If the installer detects that it is necessary to restart Windows the above page will indicate this.

18. If your DryFire simulator has not yet been registered the following screen will appear as DryFire starts:



The image shows a 'DryFire Registration' dialog box. It contains a 'Registration details' section with instructions to register the simulator. Below this are input fields for 'Name:', 'Email address:', and a 'Country:' dropdown menu currently set to 'United States'. There are two main action buttons: 'Register now' and 'Register Later'. At the bottom are 'Cancel' and 'Help' buttons.

Click the **Register Later** button to defer registration and start DryFire V4 – you will be prompted next time you start DryFire V4. You cannot defer registration indefinitely.

To register your simulator:

- Enter your name, email address and select your country.
- Click the **Register now** button to quickly register your DryFire simulator.
- DryFire will now attempt to connect to the DryFire.com website to register your simulator.

If this process is successful DryFire will tell you and ask that you check for an email that will contain a licence key for you to enter to confirm the registration.

If DryFire cannot connect to the DryFire.com website it will display the following dialog:



The image shows an error dialog box titled 'DryFire Registration'. It features a red error icon and text stating: 'DryFire could not connect to www.dryfire.com, please check your Internet connection is working and no firewall is blocking the connection.' Below this, it says: 'If this computer has no Internet connection, please click the "Save file" button to save a file then upload the file to www.dryfire.com from a PC connected to the Internet.' At the bottom are 'Help', 'Save file...', and 'Cancel' buttons.

Click the **Cancel** button to either try connecting again or defer the registration until later.

If you do not have an Internet connection from this PC, click the **Save file** button to save a file that you can then transfer to another PC which does have an Internet connection so that you can upload it to www.dryfire.com.

Remember where you save the file and with what name, after you save it DryFire will give you more instructions.



A registration key is sent via email to the address you entered which you then load into DryFire V4 to complete the registration process, so you must enter your real email address.

The email is from sales@wordcraft.com, so please check your spam filter doesn't intercept it.

When you have started the registration the following version of the DryFire Registration dialog will be shown:

DryFire Registration

The registration of your DryFire simulator has not yet been confirmed. You should receive an email including your registration confirmation key from the DryFire server.

Type the confirmation key that appears within the email here:

Confirm registration

Restart registration

If you don't receive the email from the server you can choose to start the registration process again, but this will invalidate the pending registration.

Start new registration

Postpone registration

If you prefer to postpone registration until later, click on "Register Later".

Register Later

Cancel Help

To confirm the registration:

- Type the confirmation key from the registration confirmation email into the box on this dialog then click the **Confirm registration** button.

To defer the completion of the registration process:

- Click the **Register Later** button.

To restart the registration process, and invalidate any in-progress registration and related email, with the option of entering different name/email address/country:

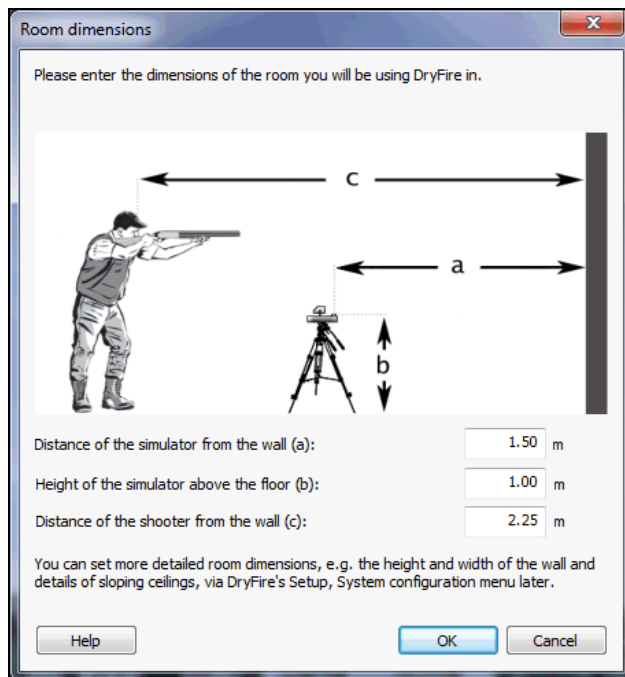
- Click the **Start new registration** button.



To display the above dialogs or, after registration is complete, the **Add Features** dialog; select DryFire's **Help, Registrations and Features** menu.

19. The first time DryFire starts you must enter some details of your room and yourself. It is critical that you enter these details accurately; otherwise DryFire will not be able to produce laser clays that accurately represent real clays.

The following dialog is displayed:



Complete the dialog with settings to reflect where you and the simulator will be positioned.



DryFire presumes you will stand directly behind the simulator.

When you are more familiar with DryFire you should [define additional measurements](#) to further improve the accuracy of the clays DryFire produces.

Using DryFire

This section of the guide will introduce you to the features provided by the DryFire software and explain how they are used. Later you may find [Appendix A](#), which answers some Frequently Asked Questions, or the [Table of Contents](#) good points of reference.

If DryFire is not already started, connect and power on the simulator then select the **Start, Programs, DryFire, DryFire V4** menu or the **DryFire V4** shortcut on your Windows desktop.



When you are using DryFire V4 you can press **F1** to open help or click the **Help** buttons included on many DryFire dialogs for help about that dialog.



On installation DryFire V4 Shooter passwords are disabled. If enabled, the default administrator password is “**dryfire**”. If you are not importing settings from an earlier DryFire V3/USA Friendly installation the default password for **Shooter 1** is “**red**”. For more information on passwords, see the [Passwords section](#).

Muzzle Alignment

Each time you place the DryFire muzzle insert into your shotgun’s barrel it will project the laser in a slightly different direction.



It is *essential* that DryFire knows *exactly* where the laser is projecting, so that it can tell *exactly* where you pointed the shotgun. It is therefore necessary to recalibrate the muzzle alignment each time you start using DryFire, or if you think the muzzle insert may have moved.



If you find that DryFire reports you missed clays when you believe you hit them, recalibrate your muzzle insert in case it has moved. You can recalibrate your muzzle insert without having to finish practising the current target or layout.

When the appropriate shooter and gun are selected on the DryFire toolbar, recalibrate the DryFire muzzle insert's alignment as follows:

1. Either:

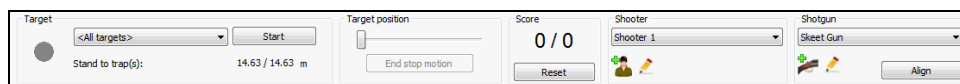
- Select the **Setup, Muzzle Alignment** menu.

Or:

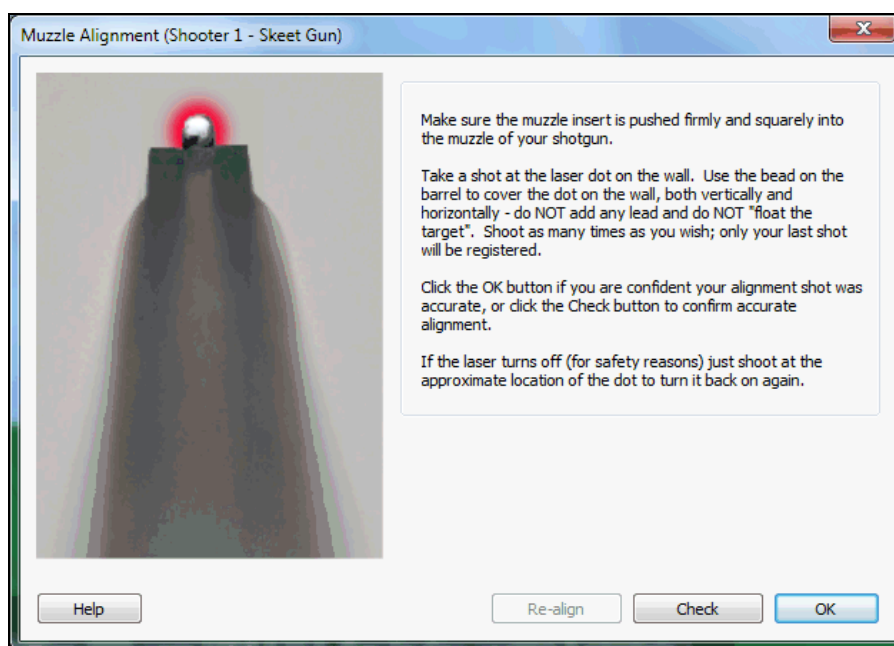
- Press the **F12** key

Or:

- Click the **Align** button to the right of your shooter and gun name on the DryFire toolbar.



2. The following screen will appear, noting the current shooter and gun in the title bar, and DryFire will project a static laser dot on the wall directly in front of your defined shooter location:



3. Take a shot at the laser dot on the wall. Use the bead on the barrel to cover the dot on the wall, both vertically and horizontally - do **NOT** add any lead and do NOT “float the target”. Shoot as many times as you wish; only your last shot will be registered.

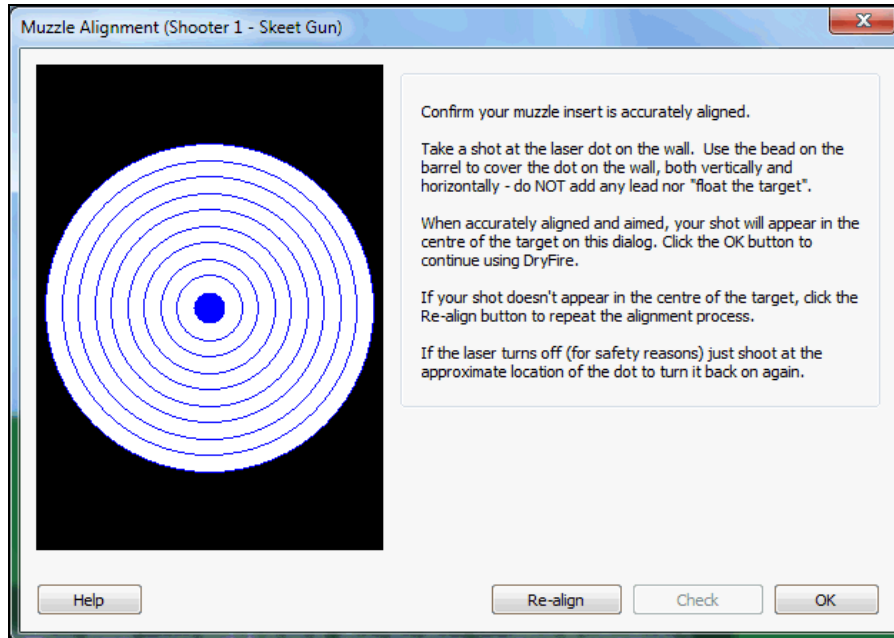
When you shoot the laser will briefly go out to let you know your shot has been seen and, if your PC has sound, you will hear a “bang”.

Click the **OK** button if you are confident your alignment shot was accurate, or click the **Check** button to confirm accurate alignment.



If the laser turns off (for safety reasons) just shoot at the approximate location of the dot to turn it back on again.

4. If checking your alignment, the following screen will appear:



Take a shot at the laser dot on the wall. Use the bead on the barrel to cover the dot on the wall, both vertically and horizontally - do **NOT** add any lead and do NOT “float the target”.

When accurately aligned and aimed, your shot will appear in the centre of the target on this dialog. Click the **OK** button to continue using DryFire.

If your shot doesn't appear in the centre of the target, click the **Re-align** button to repeat the alignment process.



If the laser turns off (for safety reasons) just shoot at the approximate location of the dot to turn it back on again.

Shoot!

You've now installed and configured DryFire, let's try taking some targets and while doing so introduce you to more of the DryFire program. We'll gradually explain things in more detail and show how you configure DryFire to present targets as accurately as possible.

Remember that you start DryFire either by double clicking the **DryFire V4** shortcut on your Windows desktop or by selecting the **Start, Programs, DryFire, DryFire V4** menu and each time you start DryFire (or whenever you insert/move the muzzle insert) you need to repeat the [muzzle alignment process](#).

Now, having started DryFire and completed the muzzle alignment process, let's shoot some targets.



We understand that it may be tempting to skip through these examples, but they do introduce you to the DryFire V4 software gradually and later text assumes you're familiar with preceding text so we'd recommend that you do at least read through the examples in order even if you don't shoot all of them.

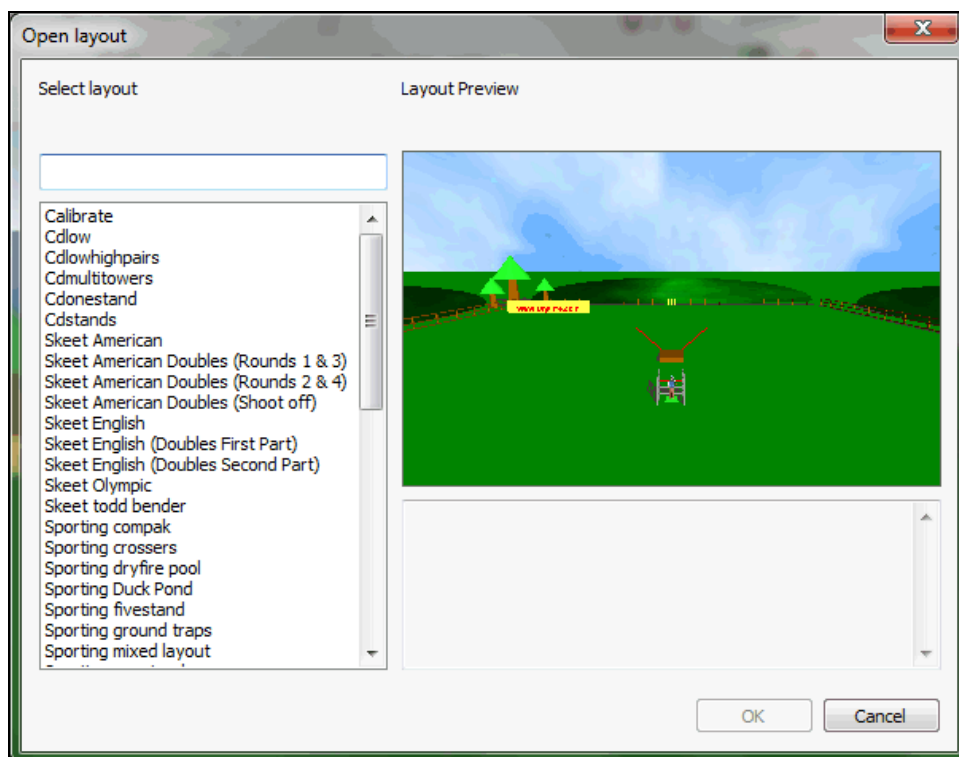
Example 1: The basic start trap layout

DryFire stores target and range details in “layouts”, so what targets it presents depends on which “layout” is open. At its simplest a layout consists of one stand (also known as a station or peg) where the shooter stands and one trap from which clays are released; but often layouts include multiple stands, multiple traps and a combination of other elements such as trees, hills, signs or fences.

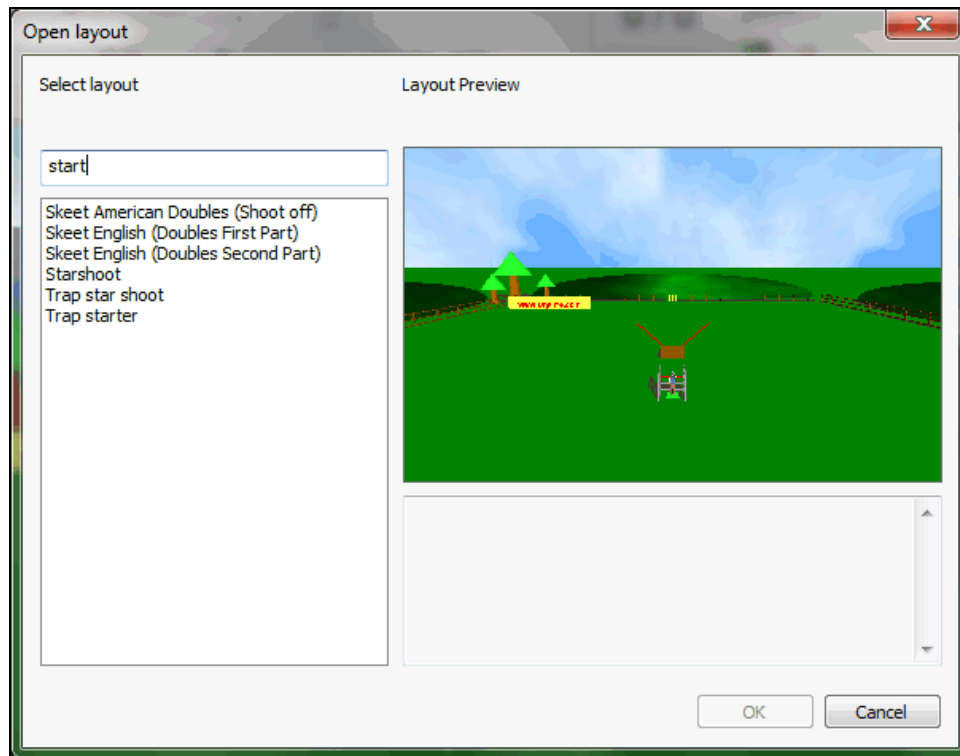
DryFire V4 includes ATA, ABT, DTL and Olympic Trap; English, American and Olympic Skeet; Universal Trench and several Sporting layouts.

To introduce the DryFire software and how you use it, let's start with a simple example layout: **Trap starter**.

First you need to open the appropriate layout file. To do this select the **File, Open layout** file menu, the **Open Layout** dialog is displayed:

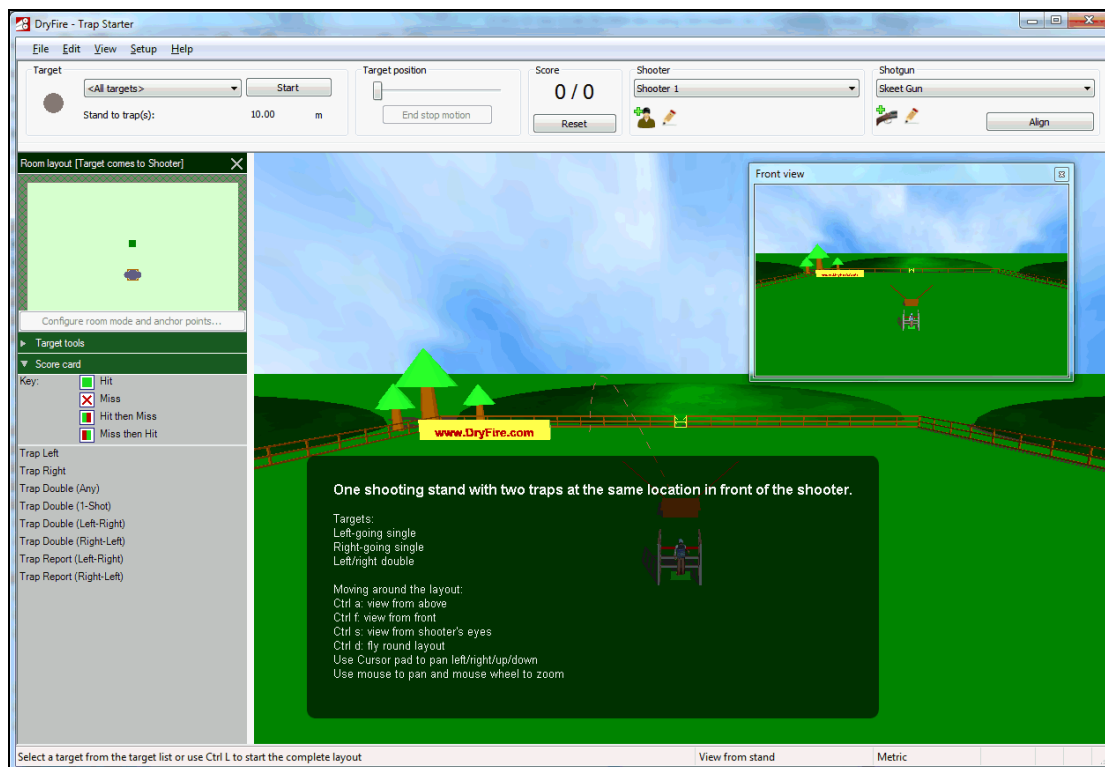


The left column lists available layouts; if you know the name or sort of layout you want you can type part of it in the box above the list to show only layouts with matching names. Type “**start**” into the box on the left, note how the list is then filtered:



Click on the **Trap starter** entry in the left column and DryFire shows you a view of and, if available, information about the selected layout on the right.

Click the **OK** button to open the layout and the **Trap starter** layout then appears in DryFire:

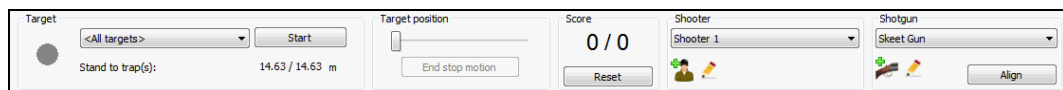


The DryFire display, above, comprises 6 parts:

1. Menu Bar: **File, Edit, View, Setup, Help**

Use the menus to open layouts, reconfigure DryFire, change the view or close DryFire.

2. Toolbar



You select which specific target you want to practise from the **Target** list on the left, DryFire tells you the distance from the stand to the selected trap trap below the target list. The **Start** button is used to start practising the selected target.

The **Target position** slider is used to access the [Stop motion function](#) where you can tell DryFire to show, at a specific time or distance into its flight, the target's position, the lead you should give to hit the target and the perfect aim point.

On the right of the toolbar the **Shooter** and **Shotgun** sections allow you to select who is shooting and with which gun. The **Align** button can be used to quickly recalibrate the muzzle insert for the selected shooter's gun at any time.

When shooting at targets DryFire will show your score on the toolbar, click the **Reset** button to zero it.



For new installations one shooter (**Shooter 1**, default password: **red**) is defined with two guns (**Skeet gun** and **Trap gun**).

We'll cover this in greater detail later, but you can:

- [Create new shooters.](#)
- [Edit the selected shooter's settings](#) and any of their guns either via

the **Edit, Shooters and their Guns** menu or by clicking the **Edit shooter** icon in the **Shooter** section of the toolbar.

- [Edit the currently selected shooter's gun](#) by clicking the **Edit shotgun** icon in the **Shotgun** section of the toolbar.
- [Add a new gun](#) for the currently selected shooter either via the **Edit, Shooters and their Guns** menu or by clicking the **Add shotgun** icon in the **Shotgun** section of the toolbar.

If passwords are active the current shooter's password or the administrator password is required. For more information on passwords, see the [Passwords section](#).

3. Main view

DryFire shows views of the virtual DryFire range and results of your shots here.

On opening a new layout, as you've just done, DryFire shows you an overview of the layout.

When available, DryFire shows some brief information about the layout in the black background text box in the lower right corner of its display. Often this information explains the targets included in the layout, but the **Trap starter** layout also includes some hints as to how you change your view of the DryFire virtual range. Take a few minutes to experiment with the options:

- **Ctrl A** (or the **View, From above** menu) to see the layout from above.
- **Ctrl F** (or the **View, From front of layout** menu) to see the layout from the front – the view shown when you open a layout.
- **Ctrl S** (or the **View, From stand** menu) to see the layout from the currently selected stand.
- **Ctrl C** (or the **View, Clay's eye view** menu) to view an animation showing the view from the clay to the stand through the clay's trajectory.
- Use the mouse wheel to move forward or backward.
- Use the cursor keys or click and drag the view with your mouse to pan. Try holding the SHIFT key down while dragging left/right or up/down with the mouse.
- Use the keyboard's number pad to move around.



Press **F4** to hide or show the layout information box.

4. Preview window

DryFire shows the view of the whole layout from the front of the layout with the shooter standing on the currently selected stand/station in the smaller window. This enables you to always see an overview of the open layout.

When you are practising shots this preview window will show you the view from the stand for the next target to be shot.



You can:

- Drag this window elsewhere on your Windows desktop.
- Hide or show the window by selecting the **View, Preview window** menu (or pressing **F9**).

5. Status Bar

DryFire displays suggestions, details of the current view and whether metric or imperial measurements are in use here.



You can double click on the word **Metric** or **Imperial** in the status bar to switch between the measurement systems.

6. Sidebar

The sidebar can be closed and reopened by pressing **F8** or selecting the **View, Sidebar** menu.

It includes a **Room layout**, showing a plan view of your room noting the active room mode and the location of the simulator, shooter stand(s) and any active anchor points. This is described later, as you work through some examples.

Depending on which heading is clicked, the lower portion of the sidebar shows either:

- **Score card**

DryFire will record the results of your recent shots here for each target practised:



Hit with both shots at a double or one shot at a single.



Shot 1 miss, Shot 2 hit.



Shot 1 hit, Shot 2 miss.

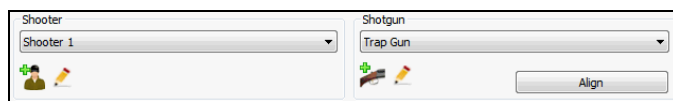


Miss with both or only shot.

- **Target information**

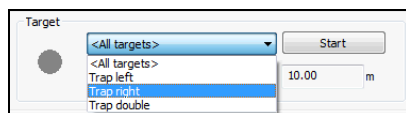
This is used to access the [Stop motion](#) function and to define [Hold points](#).

The **Trap starter** layout has rising targets; a gun that shoots high is often used for this type of target, so that you don't have to cover the clay with the barrel of the gun in order to give the required lead. On the right side of the DryFire toolbar click on the currently selected **Shotgun** to see a list of guns associated with the currently selected Shooter, if you're using a new installation of DryFire V4 you should see **Skeet gun** (which shoots 50:50 or "flat") and **Trap gun** (which shoots 70:30, also known as 0.2m or 7.87inches, high at 32m) – select **Trap gun**:



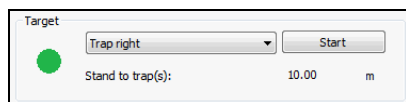
Since this is a new gun, you need to calibrate the muzzle insert for it; click the **Align** button on the toolbar and complete the [Muzzle Alignment](#) process.

For this example we'll use the **Trap Right** target, so click on the currently selected **Target** on the left side of the toolbar and select **Trap Right** from the list.



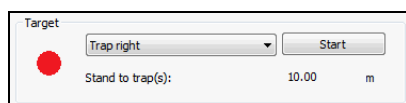
Now we're ready to start showing clays, click the **Start** button to begin practising shots at this target.

The DryFire toolbar changes slightly; the status circle changes to green to indicate that DryFire is ready to release the target and the **Start** button changes to show **Finish** to provide a means to stop practising this target:

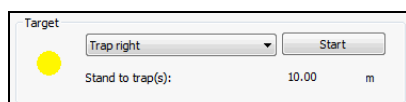


If you have speakers on your PC then DryFire will have also made a “ping” noise – DryFire makes this noise whenever it is ready to release a target, so you don’t necessarily have to look at the screen each time.

Let’s see what happens on the PC when you release a target. When you’re ready, while looking at the PC screen, call “Pull” loudly, press the foot release switch or press the SPACE BAR on the PC running DryFire V4 – the status circle will change to red to indicate DryFire is preparing to release the target:



Shortly thereafter, depending on the active [Minimum and Maximum Target Delays](#), the target will be released. At that time the status circle will change to yellow and the laser dot will appear on the wall.



If you missed anything, wait for the status circle to show green and the “ping” sound then call “Pull” again to repeat the process. Then do it again while looking at the wall so that you can see where the laser appears and how it travels across the wall.



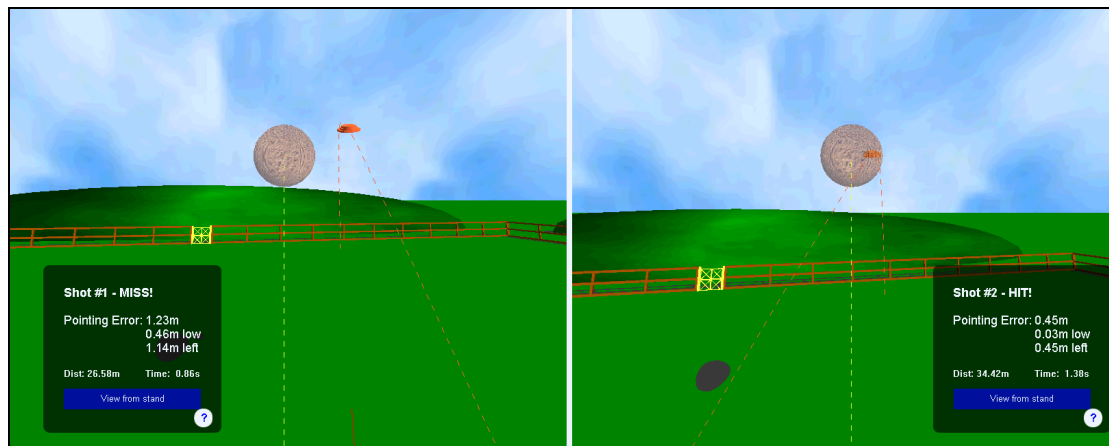
Notice that when DryFire doesn’t detect any shot it considers the target a “no bird”, doesn’t count it towards your score and repeats the target.

OK, now let’s try to hit it!

Pick up your gun and take up your shooting stance behind the simulator, or wherever you have told DryFire you will stand. DryFire isn’t a substitute for an instructor or coach, so stand and prepare for the shot as you’ve been told to do on the real range.

When you’re ready call “Pull” loudly or press the foot release switch. As you see the laser appear, acquire the clay, allow for lead as normal and press the trigger switch to shoot – if you have sound enabled you should hear a bang from the PC. If you hit the clay the laser dot will disappear immediately, if it doesn’t disappear continue to track it and take your second shot.

As DryFire detects your shots it will show the results on the screen – up to two shots, depending on the target:



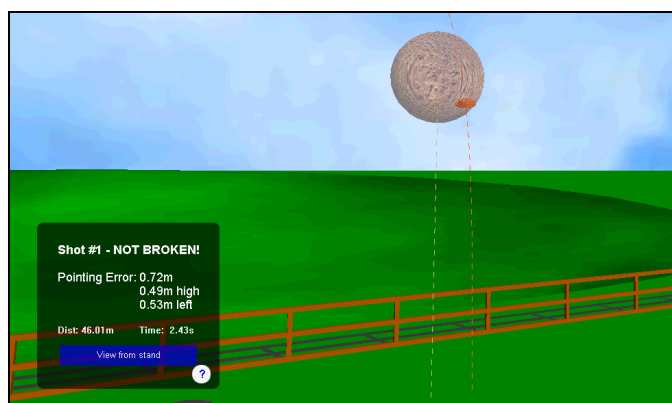
DryFire zooms in to show the shot cloud in close-up, you can click the **View from stand** label to view the shot from the stand and then click **Zoom to clay** to return to this view.

A dashed orange line shows the clay's trajectory, a dashed yellow line shows the shot's path.

This is the genius within DryFire... For each shot, *including misses*, DryFire shows you the position of your shot cloud as a brown circle of pellets in relation to the orange clay at the point they were closest and tells you:

- **Result:**
 - **HIT!**
 - **MISS!**
 - **NOT BROKEN!**

DryFire knows the energy in each pellet along its path to the clay, how the shot cloud spreads and how much energy is required to break the clay. So if you shoot at a clay when it is too far away DryFire will determine that you failed to break the clay even if the clay is within the shot cloud – you need to shoot at the clay when it is closer to you.



You can change the energy required to break clays via the **Energy required flat-on** and **Energy required edge-on** settings on the [Clay details dialog](#). Set them to zero to cause DryFire to ignore distance when deciding if the clay was broken.

- **WRONG CLAY!**

When shooting a double target where the clays should be shot in a specific order DryFire will also tell you if you aimed at the wrong clay.

- **Distance and time**

- **Pointing Error:** The distance from the centre of your shot cloud to the centre of the clay.
- **Above/Below, Ahead/Behind, Left/Right:** An indication of where your shot was in relation to the clay.
- **Distance:** The distance the clay was from you.
- **Time:** The time from when the clay was released.
- **Distance from stake/post:** For Skeet layouts the distance the clay was from the stake/post is also shown.



You can increase or decrease the size of the font used to display result information by pressing **Alt +** and **Alt -** respectively. Press **Alt 0** to reset the size to its default.

Sometimes the clay can be difficult to see on screen in the shot results or stop motion displays, particularly if it is in the distance. By default DryFire will show a translucent sphere around the clay to highlight the clay's location. This can be turned on/off via the [System configuration dialog](#).

This information, together with the representation of the shot cloud and clay, tell you what you did wrong, or right. Perhaps you have given too much or too little lead? Now, rather than guessing, you can see exactly what was wrong and correct it!



When showing the results of a shot DryFire shows the clay larger than its real size, so that it is visible on screen.

Click the **Finish** button on the DryFire toolbar when you want to finish practising this target.

Example 2: ATA Doubles or DTL (Double Rising), whole round

Now let's try practicing a whole doubles trap layout using either the **Trap American Double** or **DTL (Double Rising)** layout, depending on whether you shoot the US discipline or not.



You can shoot doubles using DryFire whether you have a single head or a double head simulator.

When using a single head simulator:

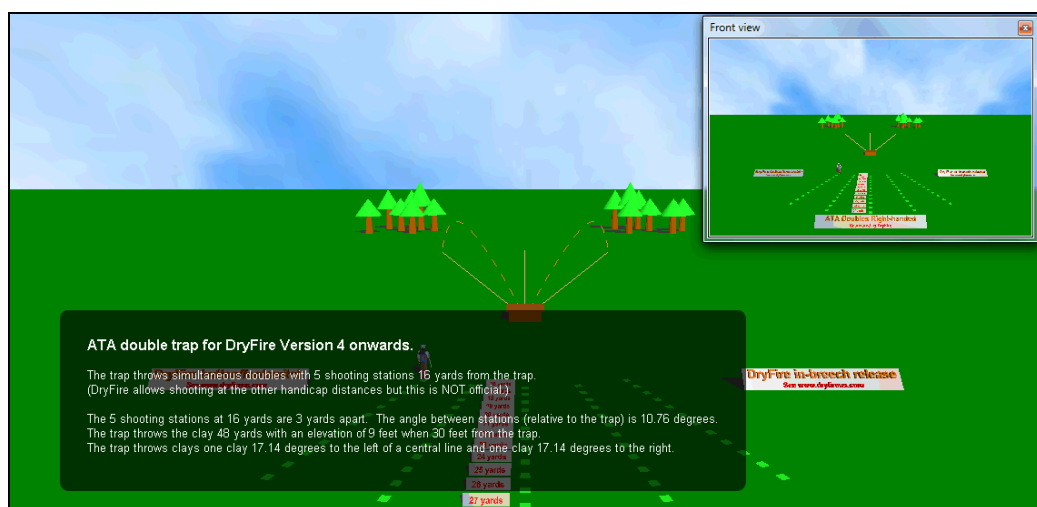
- DryFire can only show one clay at a time.
- By default DryFire will switch to show the second clay, at whatever point it would have reached in its flight, if you hit the first clay with your first shot or you are required to shoot at the second clay with your second shot.

You can [configure DryFire](#) to show the second clay after you shoot at the first clay even if you miss the first, so long as the second shot is permitted to be taken at the second clay.

For these disciplines DryFire will allow only one shot at each clay in any order; if you shoot at the same clay twice and break it with your second shot it will not count.

Select the **File, Open layout file** menu. Look for and double click on either **Trap American Double** or **DTL (Double Rising)** in the left column.

DryFire shows you the view from the initial stand in the main window, the ATA Doubles view is shown below:



In Target comes to shooter mode

With this layout, and most none Sporting layouts, DryFire V4 can operate in either of two **Room modes** offered by DryFire V4:

- **Target comes to shooter**

The way that previous versions of DryFire have worked and is supported by all layouts, including sporting.

All shots are taken from the same physical location at in the room and the clay's trajectory is shown on the wall as it would appear on the range when viewed from the appropriate stand/station.

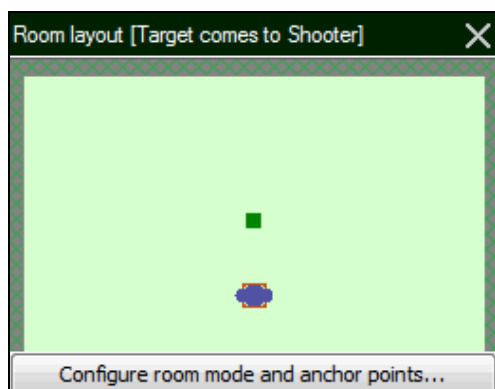
- **Move around the room**

In this mode shooters stand in different physical locations in the room depending on the station/stand that the target being presented relates to and DryFire shows the clay(s) emerging from or passing through fixed points on the wall, known as anchor points.

This mode is useful when you want specific points on the wall to relate to points on the range, such as trap houses or stakes, or are using a scenic wall canvas such as those available via www.dryfire.com or your local DryFire dealer.

We will initially shoot the layout in **Target comes to shooter** mode and then look at how you could shoot it in **Move around the room** mode.

The currently selected **Room mode** is shown in the title of the **Room layout** diagram at the top of the sidebar (press F8 to show the sidebar if it is not already displayed):



It includes several elements:


- The large pale green area represents the room, with the main projection wall represented by the horizontal line at the top.
- The simulator's location is represented by the small dark green square.
- When operating in **Target comes to shooter** mode: The single location that all shooters take it in turns to shoot from is represented by a red checked square.
- The shooter's location is shown by the blue ellipse.

Unless you have previously reconfigured this layout to operate in **Move around the room** mode **Target comes to shooter** mode will be selected.

	<p>When a layout that supports Move around the room mode is open the Configure room mode and anchor points button and the Setup, Room mode and Anchor points menu are active, select either to show the Configure room dialog to switch between modes and move anchor points.</p> <p>For now, leave Target comes to shooter selected.</p>
--	---


These layouts launch rising clays, so a gun that shoots high is often used. If you are using a new installation of DryFire V4, select **Trap gun** from the **Shotgun** list on the toolbar.

Click the **Align** button to [recalibrate the shotgun's muzzle insert](#) so you're sure DryFire knows where it is pointing when you take your shots.

 You should configure DryFire so that it knows the real-world Point Of Impact of your shotgun, the type of choke you may have fitted and the characteristics of your cartridge so that DryFire can use that information to more accurately determine whether you would hit or miss the clay.

For more information on how to do this, see the [Shooter and Gun settings section](#).

You could select a specific target from the list to practise just that target as you did previously, but this time we'll practise the entire layout as a complete round.

 The preview window is useful when you're practising a whole round as it shows you the view of the next clay's trajectory from the stand you will take the next shot from while DryFire shows the result(s) of your last shot(s) in the main window.

If the preview window isn't already shown, press **F9** to display it.

When practising a whole round of targets you can configure DryFire to announce your scores and provide minimal spoken instructions. To do this: Select the **Setup, System configuration** menu to show the [System configuration dialog](#), locate the

[Program options section](#) and set the **Speech** to **Chatty** then click the **OK** button.

To practise a round (five simultaneous doubles from each of the five stations), select **<All targets>** in the **Target** list then click the **Start** button.



You can also press **Ctrl L** to practise a whole round of targets.

As before, the DryFire status circle is green and you should hear a “ping” when DryFire is ready to release a target.

Let’s just take a look at the target initially, without trying to shoot it - call “pull” and look at the wall.

Pick up your gun and take up your shooting stance behind the simulator or wherever you have told DryFire you will stand.

When you’re ready, call “Pull” then acquire and shoot at the laser as you would the clay on the real range – give as much lead as you would normally.

As before, DryFire will show you the results of your shots in the main window, maintain your score in the toolbar and update your score card in the sidebar.

DryFire will show which target is to be released next in the **Target** drop down list on the toolbar, on the left side of the status bar and in the preview window’s title bar.

Keep calling pull when DryFire’s status circle is green or you hear the “ping” sound to take shots at all targets in the round.



If you don’t want to complete the whole layout, click the **Finish** button on the toolbar to stop immediately.

When practising an ATA Single, Double or Wobble Trap layouts you can change the trap settings by selecting the **Setup, ATA trap settings** menu to show the [ATA trap settings dialog](#).

When practising ATA Single Trap layouts, the current shooter’s ATA handicap yardage is applied. To change the handicap yardage, [edit the shooter’s settings](#).

In Move around the room mode

OK, now you’ve seen how DryFire allows you to practise a whole layout from one position in your room with DryFire showing the targets on the wall as they would appear from the perspective of each stand on the range, let’s try the same but in **Move around the room** mode.



Move around the room mode works best when the simulator is positioned mid-way across the width of the main projection wall as it will position the room stands and anchor points symmetrically either side of the simulator using whichever is the shorter of the **Wall left/right of simulator** distances.

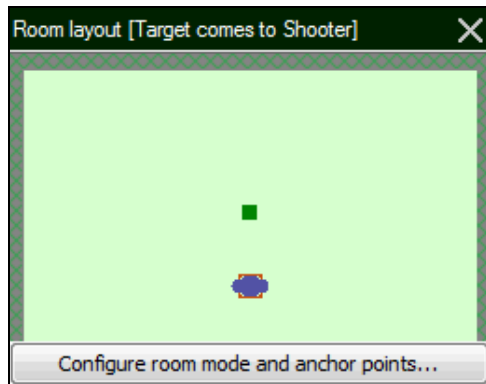
Since the room, you and your gun are not all similarly scaled the room stand locations calculated by DryFire may not produce the same pattern (i.e. a straight line or an arc) as you see on the real range – this is not wrong, DryFire is ensuring the angles are correct.

Before DryFire can accurately calculate where you should stand in the room to view the trap locations on the wall accurately it needs to know more details of your room and especially the width of the main projection wall (or canvas).

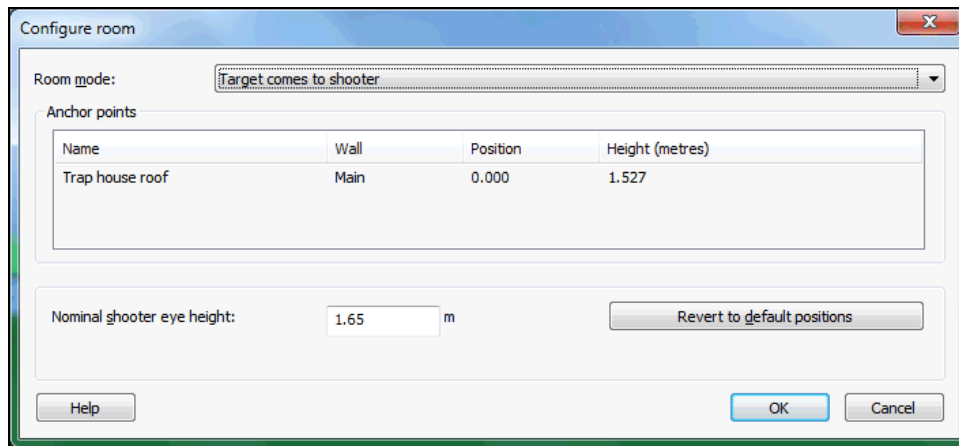
1. Select the **Setup, System Configuration** menu to display the [System Configuration dialog](#).

2. Review and edit the settings in the [Simulator Settings](#) section of the dialog.
3. Click the **OK** button to close the [System Configuration dialog](#).

If it isn't already displayed, press **F8** to show the DryFire sidebar which includes the **Room layout**:



Click the **Configure room mode and anchor points** button to show the [Configure room dialog](#):



The active room mode is initially **Target comes to shooter**, click on the down arrow at the end of the **Room mode** setting to see a list of possible room modes:

- **Target comes to shooter**

This is the way that previous versions of DryFire have worked and is supported by all layouts.

All shots are taken from the same physical location at in the room and the clay's trajectory is shown on the wall as it would appear on the range when viewed from the appropriate stand/station.

- **Move around the room**

In this mode shooters stand in different physical locations in the room depending on the station/stand that the target being presented relates to and DryFire shows the clay(s) emerging from or passing through fixed points on the wall, known as anchor points.

This mode is useful when you want specific points on the wall to relate to points on the range, such as trap houses or stakes, especially when using a scenic wall canvas such as those available via www.dryfire.com or your local DryFire dealer.

For “trap” layouts such as ATA, DTL, Olympic or Universal Trench, there are two sub-modes:

- **Prioritise anchor alignment**

DryFire prioritises the anchor point location over individual shooter height and, when appropriate to the discipline, handicap.

- **Prioritise target accuracy**

DryFire prioritises individual shooter height and, when appropriate to the discipline, handicap when showing clay trajectories – the clay launch point may vary.

Select **Move around the room (Prioritise anchor alignment)**:

Name	Wall	Position	Height (metres)
Trap house roof	Main	0.000	1.527

Nominal shooter eye height: 1.65 m

Revert to default positions

Help OK Cancel

DryFire automatically calculates the appropriate height for the open layout’s trap on the wall and positions it directly in front of the simulator on the Main projection wall.



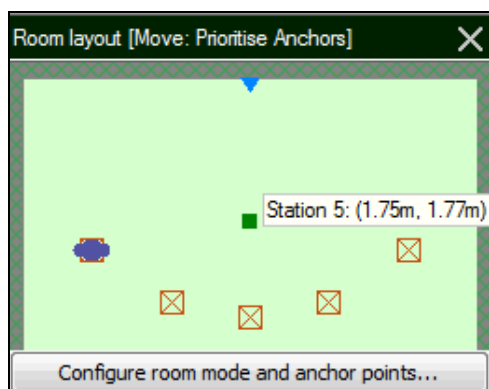
The **Nominal shooter eye height** and, when appropriate to the layout, **Nominal shooter handicap** are used to calculate anchor point heights and clay trajectories. For best results, set these to match the shooter or the average of the shooters, and then click the **Revert to default positions** button to recalculate the anchor’s height and the room stand locations.

To directly change the height of the anchor point on the wall, i.e. the trap location: double click on the value in the **Height** column, edit the value then press **ENTER**. DryFire will tell you if it cannot use the height you enter then revert back to the previous height.

For now, leave the value as it is.

Click the **OK** button to apply the selected room mode and settings.

The **Room layout** in the DryFire sidebar changes to show the **Move around the room** mode is active:



It includes the original and some more elements:

- The main projection wall is represented by the horizontal line at the top of the room diagram.
- The simulator's location is represented by the small green square.
- The location(s) where shooters stand, depending on their next target, are represented by red checked squares.
- Fixed points on the wall, known as anchor points, related to trap houses and stakes are represented by blue triangles.
- The current shooter's location is shown by the blue ellipse.

You can use the elements in the **Room layout** as follows:

- Click on the red squares and blue triangles to see details of their locations, relative to the point on the main projection wall directly in-front of the simulator and to cause DryFire to project a laser dot on the wall directly at or, for room stands, in front of that element's location in the room.
- To mark each room stand(s) in your physical room:
 - Click on the red checked square that represents the room stand in the room plan - DryFire shows the room stand's position left/right of the simulator on the wall.
 - Measure out, perpendicular to the wall from that laser point, the distance DryFire shows on the room layout.

In the above example, the user has clicked on right most red square which represents Station 5, DryFire will have projected the laser at the wall directly in front of where Station 5's room stand should be (1.75m to the right of the simulator) and you should measure out 1.77m from the wall at that point to mark the Station 5 room stand.

- To locate the anchor points on the wall(s):
 - Click on the blue triangle that represents the anchor point in the room plan - DryFire shows the anchor point's location on the wall so you can position a marker there.

OK, if you've marked the location of the trap on the wall by clicking the blue triangle on the **Room layout** and marked the location of the 5 room stands on the floor by clicking on each red square in the **Room layout** and measuring out from the wall where DryFire projects the laser the distance DryFire shows on screen, then we're ready to shoot the layout.

As before, select **<All targets>** in the **Target** list then click the **Start** button.

DryFire will show the blue ellipse on station 1, you should stand where you have marked Room stand 1 and prepare for the clay to emerge where you have marked the trap house on the wall.

When you're ready, call "Pull" then acquire and shoot at the laser as you would the clay on the real range – give as much lead as you would normally.

As before, DryFire will show you the results of your shots in the main window, maintain your score in the toolbar and update your score card in the sidebar.

DryFire will show which target is to be released next in the Target drop down list on the toolbar, on the left side of the status bar and in the preview window's title bar.

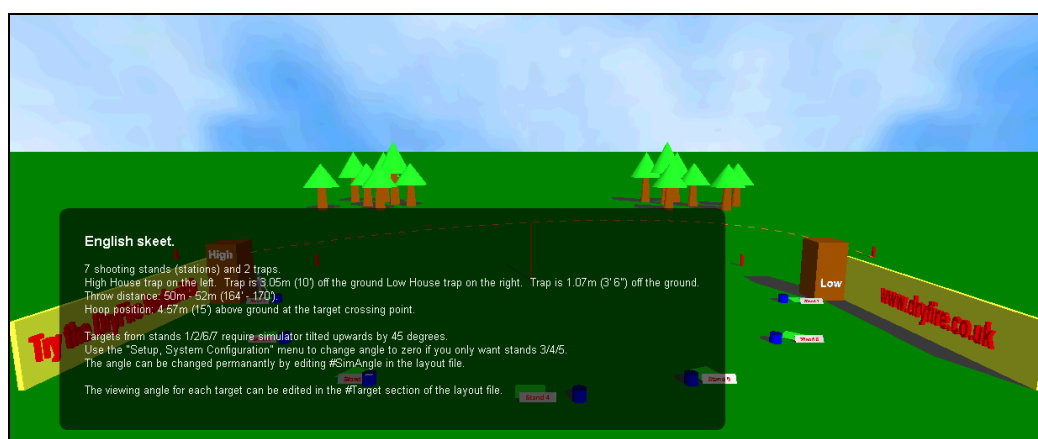
After every 5 targets you will advance to the next station/stand, the blue ellipse in the **Room layout** will move to indicate which room stand you should shoot from.

Example 3: English Skeet

For this example we'll use the **English Skeet** layout to demonstrate single and double skeet targets.

Select the **File, Open layout file** menu and double click on the **Skeet English** entry in the left column.

The main DryFire window shows you the view from the front of the layout and information about it:



This layout requires the simulator to be inclined at 45° so that targets from stands 1, 2, 6 and 7 can be shown more completely.

When DryFire needs you to change the simulator angle (e.g. from 0° to 45° or from 45° to 0°) it includes this information in the black background information box and automatically reconfigures itself on the assumption that you will incline the simulator as required. Make sure you check the displayed information in case you need to change the simulator angle.

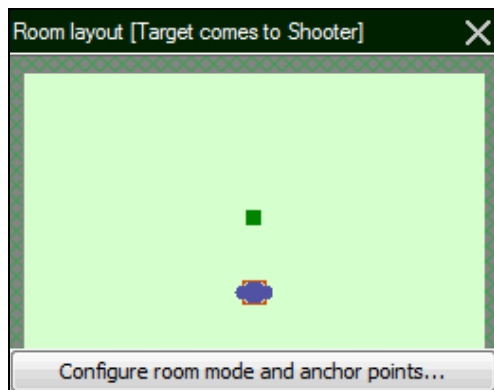
If you only want to shoot targets from stands 3, 4 and 5 then you can leave the simulator horizontal, but you must tell DryFire by selecting the **Setup, System configuration** menu to show the [System Configuration dialog](#) and then set **Simulator Angle** to zero in the [Simulator settings section](#).

In Target comes to shooter mode

With this layout, and most none Sporting layouts, DryFire V4 can operate in either **Target comes to shooter** or **Move around the room** modes. We'll shoot some targets in the

default **Target comes to shooter** mode initially and then take a look at how these same targets appear in **Move around the room** mode.

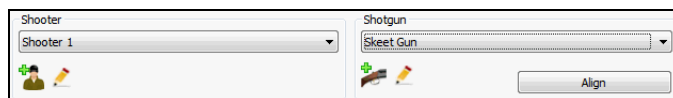
Check the active **Room mode** shown in the title of the **Room layout** diagram at the top of the sidebar (press **F8** to show the sidebar if it is not already displayed):



If the active mode is not **Target comes to shooter**, click the **Configure room mode and anchor points** button, select the **Target comes to shooter** room mode and click the **OK** button.

Unless you have previously reconfigured this layout to operate in **Move around the room** mode **Target comes to shooter** mode will be selected.

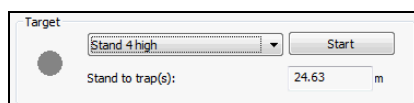
When shooting skeet you usually use a gun that shoots 50:50, sometimes known as "flat". On the right side of the DryFire toolbar click on the currently selected **Shotgun** to see a list of guns associated with the currently selected Shooter, if you're using a new installation of DryFire V4 select **Skeet gun**:



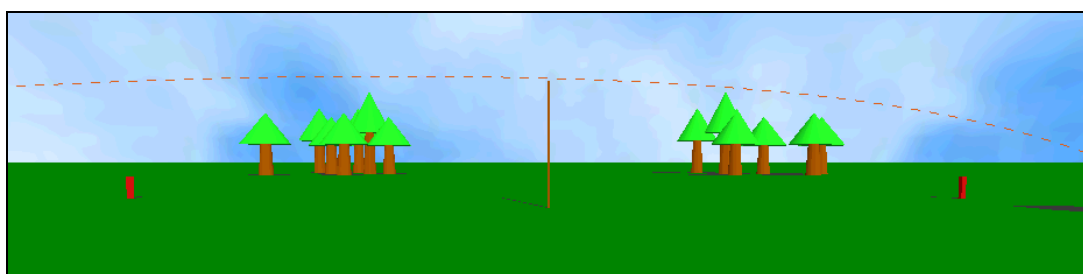
Click the **Align** button to [recalibrate the shotgun's muzzle insert](#) so you're sure DryFire knows where it is pointing when you take your shots.

Stand 4 high-house single

Let's start with a single skeet target from the high-house taken from stand/station 4. Select **Stand 4 high** from the **Target** list on the left side of the toolbar:



The display changes to show the view from the newly selected stand/station and the new target's trajectory:



Now you're looking directly at the crossing point and, as before, the dashed orange line represents the path the clay would take from the high house on your left to ground on your

right. When this target is released DryFire will show as much of the centre of this trajectory, where you would normally take the shot, on the wall as it can.

Click the **Start** button to the right of the **Stand 4 high** target selection.

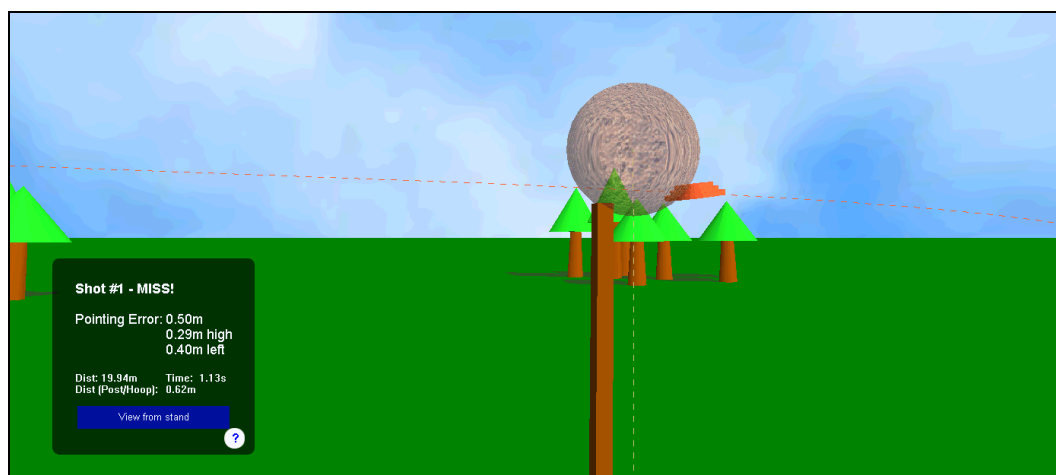
When the status circle on the DryFire toolbar is green or you hear the “ping” sound, look at the wall to see the clay’s trajectory and call “Pull” loudly.

OK, now let’s try to hit it!

Pick up your gun and take up your shooting stance behind the simulator or wherever you have told DryFire you will stand. DryFire isn’t a substitute for an instructor or coach, so stand and prepare for the shot as you’ve been told to do on the real range.

When you’re ready; glance to the left, from where the high-house clay will appear, and call “Pull” loudly. As you see the laser appear, start your swing, acquire the clay, allow for lead as normal and press the trigger switch to shoot – if you have sound enabled you should hear a bang from the PC. If you hit the clay the laser dot will disappear immediately.

As DryFire detects your shots it will show the results on the screen:



If you missed, use the results to learn why – perhaps you gave too much or too little lead. When you’re ready to try again, take up your shooting stance again and call “Pull” to take another target then repeat this until you’re happy.

Click the **Finish** button on the DryFire toolbar when you want to finish practising this target.

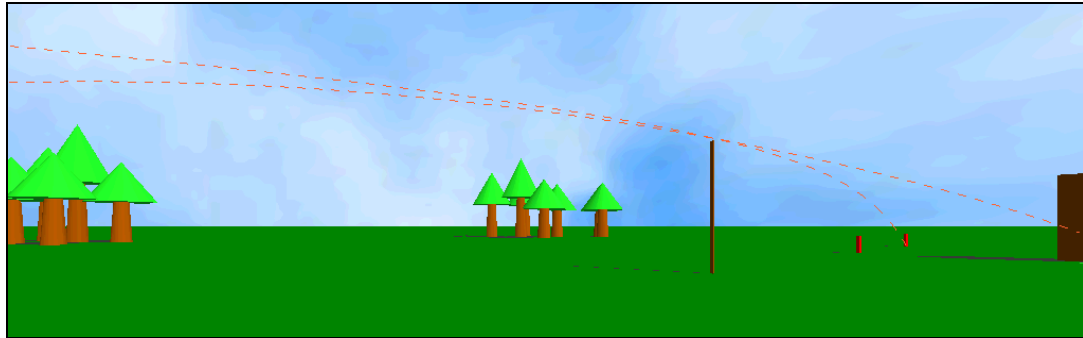
Stand 2 High-Low double

Let’s try a doubles target – you can do this even with a single head simulator.

Select **Stand 2 High-Low** from the target list:

Target	Stand 2 High-Low	Start
Stand to trap(s):	10.56 / 38.93 yds	

Notice that DryFire now shows two dashed orange lines on the view from stand 2 – one represents the trajectory of the clay from the high-house to your left and the other represents the trajectory of the clay from the low-house to your right:



Click the **Start** button and call “pull” then watch the clays as they arc across the wall.



You can shoot doubles using DryFire whether you have a single head or a double head simulator.

When using a single head simulator:

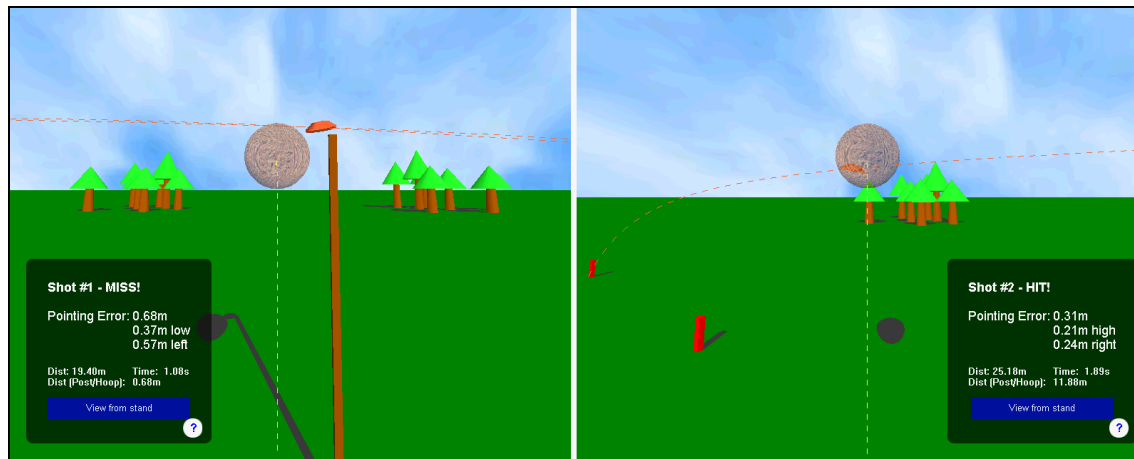
- DryFire can only show one clay at a time.
- By default DryFire will switch to show the second clay, at whatever point it would have reached in its flight, if you hit the first clay with your first shot or you are required to shoot at the second clay with your second shot.

You can [configure DryFire](#) to show the second clay after you shoot at the first clay even if you miss the first, so long as the second shot is permitted to be taken at the second clay.

If you are using a double head simulator, since the clays should be shot in a specific order, DryFire will explain the order in the upper left corner.

When you're ready to try to hit the clays, pick up your gun and take up your shooting stance behind the simulator or wherever you have told DryFire you will stand – remember you'll shoot the High-house clay from your left first. Call “Pull” and, as you see the laser appear, start your swing, acquire the clay, allow for lead as normal and press the trigger switch to shoot – if you have sound enabled you should hear a bang from the PC. If you hit the clay the laser dot will disappear immediately. Then acquire and shoot at the second clay.

As DryFire detects your shots it will show the results on the screen, up to two shots:



Results for your first shot will always appear on the left side of the screen and results for your second shot on the right side, irrespective of which side of the wall you shot at.

When the order you should shoot the clays is significant, as in this case:

- If you shoot at the wrong clay and miss, the distances will be from the clay you should have shot at.
- If you hit or aim at the wrong clay DryFire will show **WRONG CLAY**.

Click the **Finish** button on the DryFire toolbar when you want to finish practising this target.

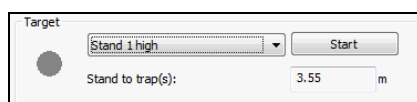
Stand 1 high house

Let's try a target from a different perspective – stand 1 high-house.

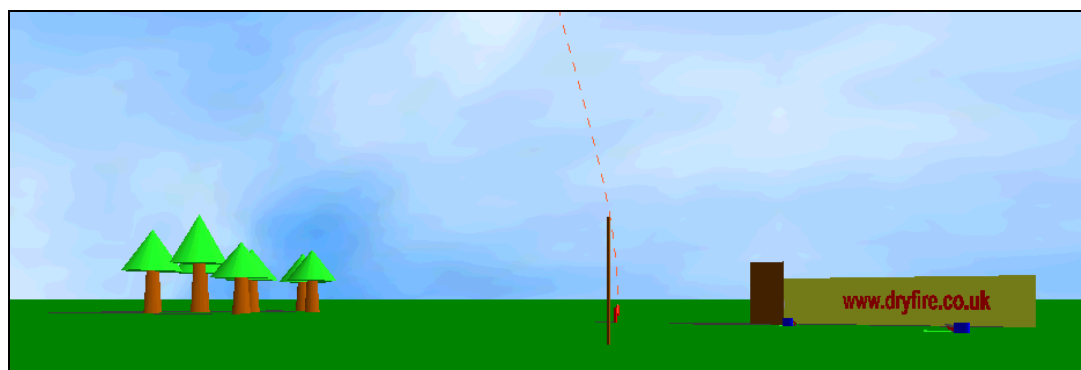


It may sound obvious, but take a moment to consider how much clearance you have to the ceiling and whether there are any other obstructions above your shooting location. This target starts behind you and appears overhead; take care not to hit anything with your gun!

Select **Stand 1 high** from the **Target** list:



Notice that the view on the screen from stand/station 1 of the trajectory of the high-house clay reflects what you would see from that stand on the real range looking towards the crossing point and is quite different to the previous views:



The dashed orange line shows the clay is coming from over your left shoulder and going away from you to land in the distance.

Click the **Start** button and call “pull” then watch the laser clay on the wall. You should see that this time the clay is shown coming down the wall from slightly left of centre – DryFire shows you the clay as you would see it if you were physically standing on stand/station 1 on the real range while you remain in the same physical location in the room. In other words, DryFire brings the target to you.

When you’re ready to try to hit the clay, pick up your gun and take up your shooting stance behind the simulator or wherever you have told DryFire you will stand. By default you stand in the same location as for previous targets and DryFire shows you the clay as it would appear from the perspective of stand 1.

When you’re ready; glance up, from where you now know the high-house clay will appear, and call “Pull” loudly.

As normal, DryFire shows the results of your shot.

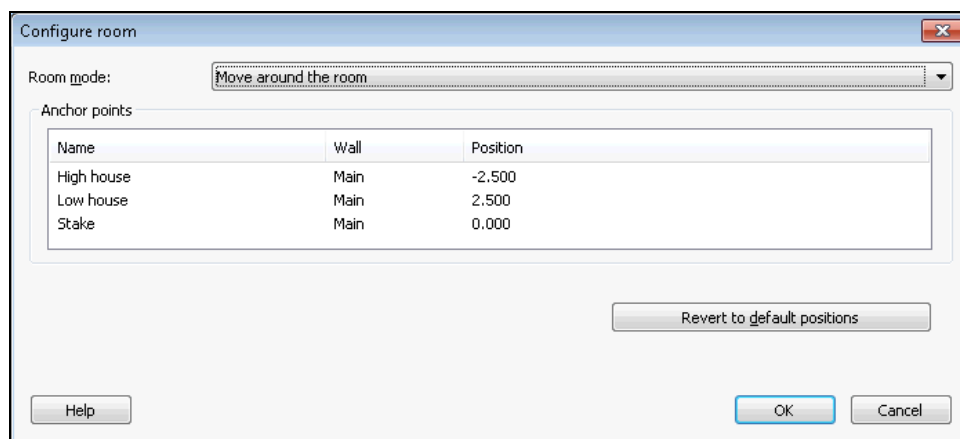
Click the **Finish** button on the DryFire toolbar when you want to finish practising this target.

In Move around the room mode

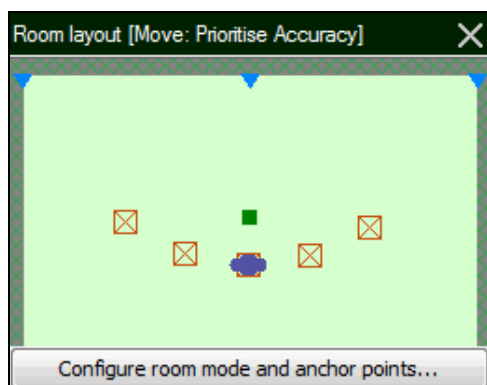


Skeet layouts work best in **Move around the room mode** with wide walls, ~5m or 5.5 yards. If you have a narrower room you should consider using **Target comes to shooter** mode for skeet layouts.

OK, now let’s try those targets again, but in **Move around the room mode**. Press **F8** to show the sidebar if it isn’t already displayed then click the **Configure room mode and anchor points** button below the **Room layout** diagram to show the [Configure room dialog](#) and set the **Room mode** to **Move around the room** as shown below then click the **OK** button:



The **Room layout** diagram is updated to indicate that **Move around the room** mode is active:



As before the room diagram uses blue triangles to represent anchor points but this time there are three representing the high-house, stake and low-house respectively.

The red squares represent the room stands – click on them and measure out the distance DryFire then displays from the laser on the wall to mark the room stand locations.



In Skeet layouts it isn't possible to stand in the room at a location that would provide the same perspective of the clay's trajectories as would be seen from Stations 1, 6, 7 or 8 on a real range – to do so would require you to stand directly against the main projection wall. So shots at these targets are taken from Station 4's location and they are not anchored to the High or Low house.

In effect this means that you stand at Station 4 to take Station 1, 6, 7 or 8 targets and the clay's trajectories for these targets are always shown in Target comes to shooter mode.

Select the target you want to practise from the **Target** list on the toolbar, or select **<All targets>** to practise a whole round of targets, and then click the **Start** button.

DryFire will name the next target to be shown in the **Target** field, show the view of that next target in the **Preview window** and indicate the room stand the shooter should stand on with a blue ellipse in the **Room layout** diagram.

More detailed configuration



This section refers to several dialog boxes that DryFire displays so that you can configure it. For details of these dialog boxes refer either to [Appendix B](#) in this guide or you click the **Help** button on the dialog itself.

Now that you've used DryFire, take some time to fully configure it so that it knows more about the dimensions and layout of the room in which you are using it and more about you and your shotgun(s).

Room Settings

On installation you are required to tell DryFire some basic information about your room's layout. If DryFire is to show you laser clays most accurately you need to provide more information about your room:

1. Select the **Setup, System Configuration** menu to display the [System Configuration dialog](#).
2. Review and edit the settings in the [Simulator Settings](#) section of the dialog.
3. If your room has a sloping ceiling or you want to use part of the side walls to show the trajectory of wide targets, click the **Advanced** button to show the [Advanced](#)

[System Configuration dialog](#) then review and edit the settings in the [Room settings section](#) of the dialog.

Click the **OK** button to close the [Advanced System Configuration dialog](#).

4. Click the **OK** button to close the [System Configuration dialog](#).

Passwords

On installation DryFire V4 shooter passwords are disabled but the default administrator password is “dryfire”.

If you are not importing settings from an earlier DryFire V3/USA Friendly installation the default password for **Shooter 1** is “red”.



The administrator password can be entered at any time that a shooter's password is requested to gain access to the protected function.

To enable or disable password usage:

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).



If prompted, enter the administrator password (default=dryfire).

2. Click the **Advanced** button to show the [Advanced System Configuration dialog](#).
3. In the [Advanced options section](#), tick or clear the **Enable shooter passwords** option.



You are always required to enter the administrator password to disable passwords.

4. Click the **OK** button repeatedly to exit.

When shooter passwords are enabled:

- The current shooter's password, or the administrator password, must be entered to edit shooter and gun settings via any of the following means:

- The **Edit, Shooters and their Guns** menu.



If the administrator password is entered or the currently selected shooter is a “master” shooter then the [Shooters dialog](#) is displayed, double click on any shooter to edit their settings, change their password, edit their existing gun's settings or add a new gun.

If you enter the administrator password you can promote the shooter to a “master” shooter by ticking the **This shooter is a “master”** option or demote an existing “master” shooter to a basic shooter by clearing this option.

- The **Edit shooter** toolbar button.



- The **Edit shotgun** toolbar button.



- The **Add shotgun** toolbar button.



- The administrator password, or that of a “master” shooter selected on the toolbar, is required to access to the [System configuration dialog](#) via the **Setup, System configuration** menu.
- “Master” shooters or the administrator password is required to [add shooters](#).
- The administrator password is required to [delete shooters](#).

Any shooter can [change or set their own password](#) if they know their existing password.

The administrator password can be used to change any shooter’s password.

Shooter and Gun settings

On installation, unless settings are imported from an earlier version, DryFire V4 creates a single shooter (**Shooter 1**) with two guns (**Skeet gun** and **Trap gun**). These have standard properties, which you will need to edit so that they match your own – including the shooter’s eye height and, for each shotgun barrel, the type of choke(s) fitted, the Point Of Impact [POI] and the cartridge characteristics.



The following sections explain how you can use the toolbar buttons to add/edit shooters and guns, but you can also do this via the **Edit, Shooters and their Guns** menu.

If shooter passwords are enabled:

- To be able to edit any shooter or gun properties, either enter the administrator password or select a “master” shooter on the toolbar before selecting the **Edit, Shooters and their Guns** menu then enter that “master” shooter’s password.
- The administrator password is required to create new shooters.

Editing a shooter’s settings

To, for example, change the shooter’s name, eye height or password; edit any of their guns or define new guns:

1. Select the shooter and click the **Edit shooter** button in the **Shooter** section of the toolbar:



If shooter passwords are active, enter the shooter’s password, or the administrator password.

2. The [Shooter details dialog](#) is displayed.

Edit the shooter’s name, eye height, ATA handicap yardage and/or password as required.



Eye height: The height of the shooter’s eye from the floor when they have mounted their gun.

ATA handicap yardage is applied when shooting ATA American Single Trap layouts.

3. To edit one of the shooter’s guns, double click on the gun in the list to show the [Shotgun details dialog](#) and change the settings as required then click the **OK** button.

To define a new gun, click the **New gun** button to show the [Shotgun details dialog](#) and define the settings as required then click the **OK** button.

4. Click the **OK** button to exit.

Creating a new shooter



If shooter passwords are enabled, the [administrator password](#) is required to do this.

1. Click the **New shooter** button in the **Shooter** section of the toolbar.



2. Complete the [Shooter details dialog](#) with the new shooter's name, eye height and password.



Eye height: The height of the shooter's eye from the floor when they have mounted their gun.

3. Each shooter must have at least one gun, so click the **New gun** button to show the [Shotgun details dialog](#) and complete the dialog as appropriate then click the **OK** button.
4. Click the **OK** button to exit.



You can use the DryFire [pattern board](#) to confirm that each barrel of each of your guns is shooting as your real gun shoots.

You can review the properties of the chokes known to DryFire and define more via the **Edit, Chokes** menu using the [Choke details dialog](#); these chokes can then be associated with shooter's guns.

Deleting a shooter



If shooter passwords are enabled, the [administrator password](#) is required to do this.

1. Select the **Edit, Shooters and their Guns** menu to show the [Shooters dialog](#).
2. Select the shooter to be deleted then click the **Delete shooter** button.
3. Click the **OK** button to exit.

Editing a shotgun's settings

To, for example, change a gun's POI or cartridge settings or select a different choke:

1. Select the shooter in the **Shooter** section of the toolbar then, in the **Shotgun** section of the toolbar, select the gun and click the **Edit shotgun** button:



If shooter passwords are active, enter the shooter's password, or the administrator password.

2. The [Shotgun details dialog](#) is displayed, change the settings as required.
3. Click the **OK** button to exit.



You can use the DryFire [pattern board](#) to confirm that each barrel of each of your guns is shooting as your real gun shoots.

You can review the properties of the chokes known to DryFire and define more via the **Edit, Chokes** menu using the [Choke details dialog](#); these chokes can then be associated with shooter's guns.

Creating a new shotgun

1. Select the appropriate shooter in the **Shooter** section of the toolbar then, in the **Shotgun** section of the toolbar, click the **New shotgun** button:



If shooter passwords are active, enter the shooter's password, or the administrator password.

2. Complete the [Shotgun details dialog](#) as appropriate.
3. Click the **OK** button to exit.



You can use the DryFire [pattern board](#) to confirm that each barrel of each of your guns is shooting as your real gun shoots.

You can review the properties of the chokes known to DryFire and define more via the **Edit, Chokes** menu using the [Choke details dialog](#); these chokes can then be associated with shooter's guns.

The DryFire Pattern Board

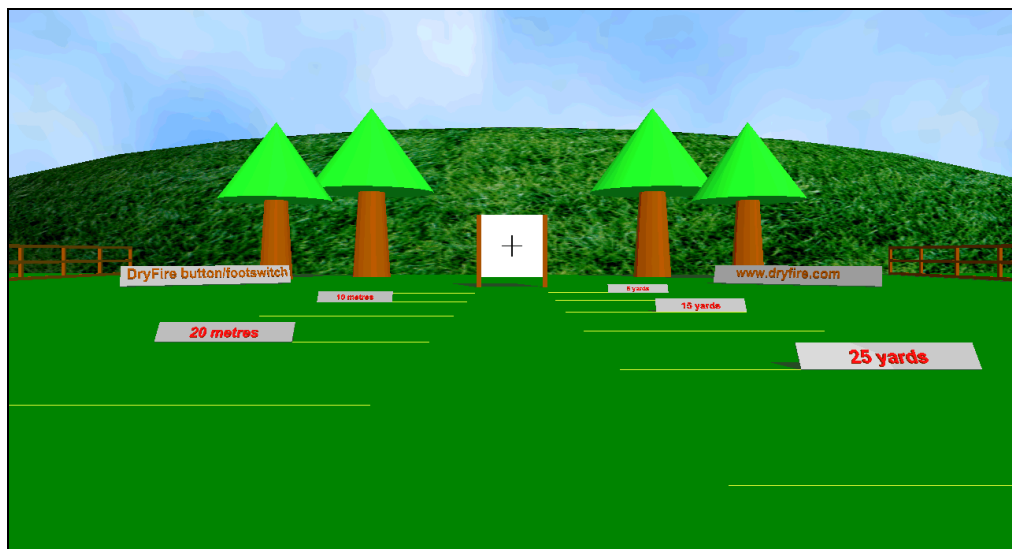
DryFire provides a pattern board so that you can confirm your DryFire gun shoots like your real gun, taking into account both the choke fitted to and the Point Of Impact [POI] of each barrel in your shotgun as well as gravity and distance.



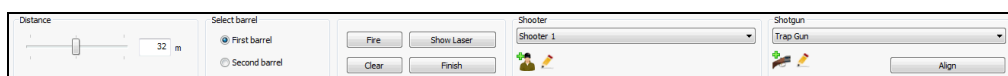
You can also use the DryFire pattern board to [calculate equivalent POI at different distances](#).

After [aligning the muzzle insert](#), use the DryFire pattern board as follows:

1. Select the **Setup, Pattern board** menu (or press **F7**), the DryFire Pattern Board target is displayed which you can use to pattern your gun:



2. The pattern board toolbar is slightly different:



3. Use the slider or edit the number in the **Distance** frame to change the distance you are standing from the pattern board.

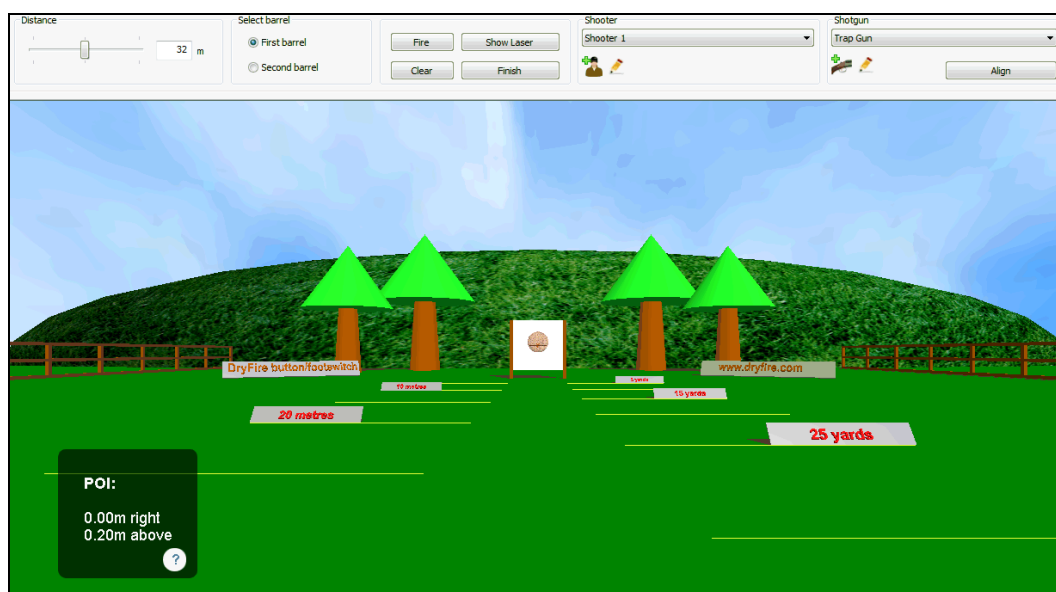
The default distance will be the distance at which the POI for the selected gun's barrel is defined – so in the above example the POI for the first barrel of Shooter 1's Trap gun is defined at 32m. The middle tick mark on the slider control also corresponds to the POI distance.



Click on the main window then use the mouse scroll wheel (or “8” on the keyboard's number pad) to zoom in.

4. Select the appropriate Shooter, Gun and Barrel on the toolbar.
5. Click the **Fire** button to have DryFire show you where the shot cloud would appear for a shot aimed perfectly at the centre of the pattern board from the current distance.

DryFire will report the distance above/below the aim point – if you are shooting from the distance your gun's POI is defined at then this should match your POI, as shown by the following **Trap gun** which shoots 70:30 (or 0.2m) high at 32m:



6. If you want to take a shot yourself, click the **Show Laser** button and DryFire will show a static laser on the wall for you to aim directly at.



This will also demonstrate your POI, but only if you aim perfectly, so it is often best to use the toolbar's **Fire** button to confirm the POI.

7. Click the **Clear** button to clear the pattern board.
8. If necessary you can select another gun, edit the currently selected gun or recalibrate the muzzle insert for the current gun using the controls in the **Shooter** and **Shotgun** frames on the toolbar.
9. When you've finished using the pattern board, click the **Finish** button.

Calculating equivalent POI at different distances

You can also use the pattern board to have DryFire calculate the POI equivalent to your gun's POI at a different distance – this can be useful if your gun needs a POI defined at 37 yards but you need to pattern it in the real world at a shorter distance so that you can see where the pellets hit the board.

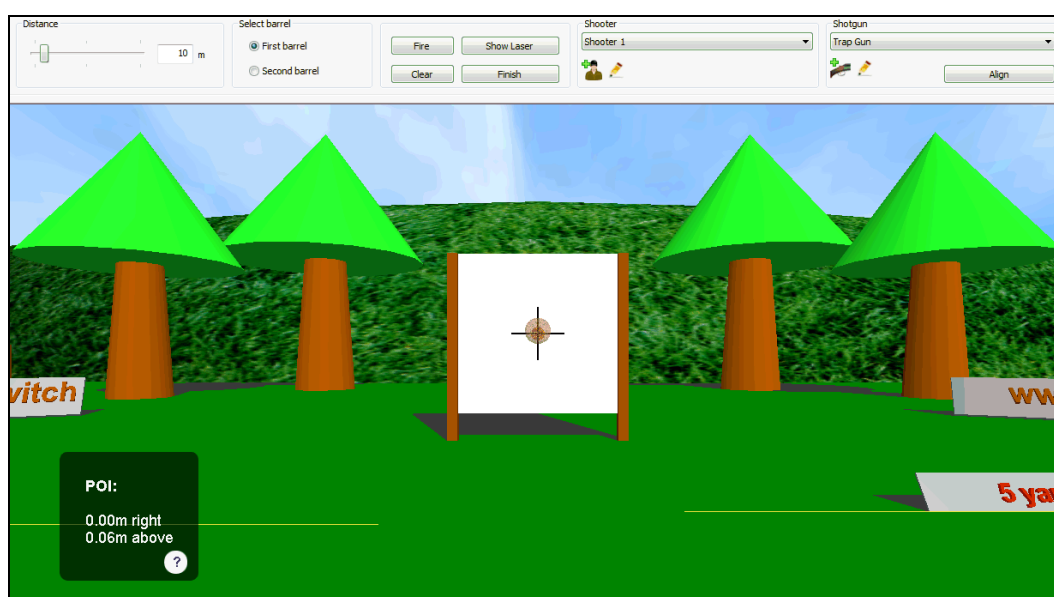
First, [configure your existing shotgun](#) or [create a new shotgun](#) in DryFire with the primary POI you want to calculate an equivalent POI to, e.g. 0.2m high at 32m or 7.9" high at 35 yards.

Then select the **Setup, Pattern board** menu (or press **F7**) to display the DryFire pattern board.

Make sure that the appropriate shotgun and the main POI distance, e.g. 32m or 35yards, is selected are selected on the DryFire toolbar then click the **Fire** button. You should see that the result box confirms your gun's POI, i.e. **0.2m above** or **7.9" above**.

Use the toolbar's **Distance** slider to select the alternative distance for which you want to calculate an equivalent POI, or type the alternative distance into the distance value field. Click the **Fire** button again – the equivalent POI is now shown by the **above** value in the result box.

In the following example using the default **Trap gun** which is configured as POI 70:30 (or 0.2m, with no choke) high at 32m you can see that the equivalent POI is 0.06m high at 10m:



More uses for the DryFire Shot Results

Once you've used DryFire's shot results to get more consistent hits you can consider using it in other ways.

For away targets, such as those presented by the **Trap starter** layout, you might:

- Practise to take the shot sooner, while the clay is closer.

If you can do this while retaining a reasonable and consistent [pointing error](#) you can consider a wider choke since the pellets will retain sufficient energy to break the clay at the closer range.



Consider using the [Stop motion](#) function to show where the clay will reach on the wall at the time you want to shoot and where you should aim to hit that clay then use the [Slow motion](#) function to reduce the clay's speed and try to shoot by the marked point. When you can hit the clay consistently at this point, gradually increase the clay speed until you're back to full speed and still hitting the clay by the desired point.

- Practise to reduce the [pointing error](#).

If you can do this then you can use a tighter choke so that more of the pellets are likely to strike the clay when it is further away.

You can, via the [Shotgun details dialog](#), configure DryFire for different chokes in each barrel, perhaps a more open choke for your first shot and a tighter choke for the second shot when the clay will be further away.

For crossing clays, such as skeet, consider the distance the clay is from you when you shoot – if you can shoot when the clay is closer maybe you can use a more open choke to increase the probability of a hit.

Replaying, Exporting and Analysing previous shot results

DryFire can maintain a log of the shots you take, so that you can either review them within DryFire or process them in another application such as Excel.

The optional [Report Generator module](#) takes this by allowing you to analyse your logged shot data showing such information as:

- Average shot time, from clay launch.
- Average distance of the clay from the shooter at the point it is closest to the shot cloud.
- Average pointing error



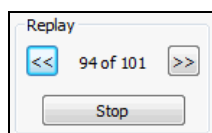
Logging of shots is not turned on by default. It can be turned on by selecting the **View, Reply previous shots, Export previous shots data** or **Report generator** menus then responding **Yes** when asked if you want to start logging shots.

Replaying shots in DryFire

Once shots have been logged, select the **View, Reply previous shots** menu to review your shots within DryFire.

The DryFire toolbar will show the target, shooter and gun used for the shot being replayed and the main window will show the shot results.

Use the **Previous** (<<) and **Next** (>>) toolbar buttons in the **Replay** portion of the toolbar to move forward and backward through the previous shot results:



When you have finished replaying your previous shots, click the **Stop** button in the **Replay** portion of the toolbar to return to normal DryFire mode.

Exporting previous shot data

Once shots have been logged, DryFire can export the previous shot data as a .CSV file which you can then open in, for example, Microsoft Excel.

To do this, select the **View, Export previous shots data** menu and enter a filename.

Using Report Generator



Report generator is an optional module. If you do not already have the Report generator option, visit www.dryfire.com for more information.

Once shots have been logged, select the **View, Report generator** menu to review statistics of your (or any other DryFire shooter's) shots.

The [Report generator dialog](#) is displayed:

The list shows the shots you have taken

Selection criteria

Shooter: Chris From date: 23/05/2012

Layout: <All layouts> To date: 31/05/2012

Shot: All shots

Target: All targets

Shot	Date/Time	Layout	Target	Shot	Time	Range	Hit/Miss	Distance
1	31/05/2012 09...	Trap-Olymp...	Station 5	2	2.048	52.0...	Hit	0.23m high 0.11m left
2	31/05/2012 09...	Trap-Olymp...	Station 5	1	1.094	37.6...	Hit	0.21m low 0.06m ri...
3	31/05/2012 09...	Trap-Olymp...	Station 4	2	2.156	52.8...	Hit	0.03m high 0.02m left
4	31/05/2012 09...	Trap-Olymp...	Station 4	1	1.130	38.1...	Hit	0.19m low 0.05m left
5	31/05/2012 09...	Trap-Olymp...	Station 3	2	2.174	52.6...	Hit	0.08m low 0.18m left
6	31/05/2012 09...	Trap-Olymp...	Station 3	1	1.256	40.3...	Hit	0.24m low 0.03m ri...
7	31/05/2012 09...	Trap-Olymp...	Station 2	2	2.444	55.5...	Hit	0.26m high 0.06m left
8	31/05/2012 09...	Trap-Olymp...	Station 2	1	1.274	40.9...	Hit	0.32m low 0.39m ri...
9	31/05/2012 09...	Trap-Olymp...	Station 1	2	2.174	52.5...	Hit	0.19m low 0.01m ri...
10	31/05/2012 09...	Trap-Olymp...	Station 1	1	1.076	38.3...	Miss	0.37m low 0.62m ri...
11	31/05/2012 09...	Trap-Olymp...	Station 5	2	1.940	50.6...	Miss	0.35m high 0.46m left
12	31/05/2012 09...	Trap-Olymp...	Station 5	1	1.130	38.2...	Hit	0.34m low 0.16m left

Print... Save as PDF... Statistics... OK Help

Initially details of all shots logged for the current shooter are displayed. By clicking the downward pointing arrows next to each item you can change the items listed to:

- Show shots taken by another shooter.
- Show shots taken at a specific layout and, optionally, a specific target in that layout.
- Show only the first/second shot results.
- Show shots taken between selected dates.

Click the **Print** or **Save as PDF** buttons to print or save the report for future reference in the following form:

Report.PDF - Adobe Reader

File Edit View Window Help

Tools Sign Comment

Chris

Chris, <All layouts>, 23/05/2012 - 31/05/2012, All shots, All targets

Shot	Date/Time	Target	Shot	Time	Range	Hit/Miss	Distance
Trap-Olympic-Double-Mens-(Scheme-C)							
1	31/05/2012 09:35	Station 5	2	2.048	52.038 m	Hit	0.23m high 0.11m left
2	31/05/2012 09:35	Station 5	1	1.094	37.624 m	Hit	0.21m low 0.06m right
3	31/05/2012 09:35	Station 4	2	2.156	52.805 m	Hit	0.03m high 0.02m left
4	31/05/2012 09:35	Station 4	1	1.130	38.101 m	Hit	0.19m low 0.05m left
5	31/05/2012 09:35	Station 3	2	2.174	52.667 m	Hit	0.08m low 0.18m left
6	31/05/2012 09:35	Station 3	1	1.256	40.315 m	Hit	0.24m low 0.03m right
7	31/05/2012 09:35	Station 2	2	2.444	55.548 m	Hit	0.26m high 0.06m left
8	31/05/2012 09:35	Station 2	1	1.274	40.981 m	Hit	0.32m low 0.39m right
9	31/05/2012 09:35	Station 1	2	2.174	52.512 m	Hit	0.19m low 0.01m right
10	31/05/2012 09:35	Station 1	1	1.076	38.340 m	Miss	0.37m low 0.62m right
11	31/05/2012 09:35	Station 5	2	1.940	50.693 m	Miss	0.35m high 0.46m left

Click the **Statistics** button to show the [Statistics dialog](#) on which the listed shots are analysed as demonstrated by the following example:

The screenshot shows the 'Statistics' dialog box for a user named 'Chris'. It displays various statistics for shots taken between 23/05/2012 and 31/05/2012. The top section shows summary statistics: Average time (1.45 sec), Average range (39.57 m), Average pointing error (0.41 m), Hit percentage (63), Hits (210), Misses (121), and Total shots (331). The bottom section shows a detailed breakdown of shot results based on clay trajectory characteristics, including Hits, Misses, Average, and Total for various categories like 'Clay travelling left to right', 'Clay travelling right to left', 'Clay rising', and 'Clay falling'.

	Hits	Misses	Ahead		Behind		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay travelling left to right:	101	52	0.24	67	0.28	85	0.24	84	0.22	69
Clay travelling right to left:	109	69	0.27	76	0.27	102	0.33	96	0.22	82
			Left		Right		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay rising:	141	52	0.21	84	0.22	108	0.26	89	0.22	104
Clay falling:	69	69	0.34	77	0.33	61	0.31	91	0.22	47

Buttons at the bottom: Print..., Save as PDF..., Print all..., OK, Help.

The upper section summarises your shot results and the lower section analyses the shot results based on the clay trajectory's characteristics, so that you might identify which sort of shots (e.g. rising clays travelling from left to right) you miss more often.

You can compare statistics to, for example:

- Compare results for the same target at different times, to see if you're improving.
- Compare results for different targets, to identify which you miss most and therefore offer the best possibility for improvement.



To compare statistics for two or more lists of shots:

1. Set the selection criteria on the [Report generator dialog](#) to show the first list of shots.
2. Click the **Statistics** button to analyse the current list of shots on the [Statistics dialog](#).
3. Click the **OK** button to return to the [Report generator dialog](#).
4. Set the selection criteria on the [Report generator dialog](#) to show the next list of shots.
5. Click the **Statistics** button to add the analysis of the current list of shots to the [Statistics dialog](#).
6. Switch between the tabs on the [Statistics dialog](#) or click the **Print**, **Save as PDF** or **Print all** buttons on the [Statistics dialog](#) to compare the shot statistics
7. Repeat steps 3 to 6 as necessary.

The following examples show Chris' first shot results for Station 1 targets and Station 5 targets in the Olympic Double Trap Scheme C layout:

The first screenshot shows the 'Statistics' dialog for Station 1. It displays performance metrics for Chris, including average time (0.98 sec), average range (36.29 m), average pointing error (0.52 m), hit percentage (53%), hits (8), misses (7), and total shots (15). Below this, a detailed table shows performance for different clay targets and directions.

	Hits	Misses	Ahead		Behind		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay travelling left to right:	0	0	0.00	0	0.00	0	0.00	0	0.00	0
Clay travelling right to left:	8	7	0.00	0	0.41	15	0.16	4	0.29	11

The second screenshot shows the 'Statistics' dialog for Station 5. It displays performance metrics for Chris, including average time (0.99 sec), average range (36.04 m), average pointing error (0.36 m), hit percentage (80%), hits (12), misses (3), and total shots (15). Below this, a detailed table shows performance for different clay targets and directions.

	Hits	Misses	Ahead		Behind		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay travelling left to right:	12	3	0.25	4	0.26	11	0.07	6	0.25	9
Clay travelling right to left:	0	0	0.00	0	0.00	0	0.00	0	0.00	0

By switching between the tabs, using the **Print**, **Save as PDF** or **Print all** buttons you can compare the results.

The above two dialogs show, for example:

- Chris' hit percentage is better from Station 5 (80%) than Station 1 (53%) though he takes his first shot in similar times (0.98 or 0.99 seconds) after clay launch. Perhaps this is because Chris is right handed and on Station 1 the clays were travelling from right to left whereas on Station 5 they were travelling from left to right.
- For Station 1 targets Chris is always hit consistently the clay, so needs to allow more lead on these targets.
- The average time Chris takes to make his first shot, with practise he could aim to reduce that time while maintaining a good hit percentage.



Consider printing (or saving as a PDF) Report Generator's lists or statistics for specific layouts or targets on different dates as you use DryFire over a period of time for filing in a journal so you can compare to them later.

Stop and Slow motion functions

Normally DryFire shows clays moving across the wall as you would see them from the stand on the range.

DryFire also provides functions to show clays moving at slower speeds (slow motion) and to show static clays at the point the clay would have reached at a specific distance or time into its flight (stop motion).

You can use these function in various ways, some of which are outlined below.

Using slow motion to practice mount, swing, acquire and shoot

If you are learning the process of shooting clays you might like to start practising at a slower speed and, once you're happy at that speed, gradually build the speed back up to normal.

You can easily do this with DryFire for any layout and any target as follows:

1. Selecting the **Setup, System configuration** menu to display the [System configuration dialog](#).
2. Locate the **Clay speed** setting in the [PC Settings section](#) of the dialog. A value of 1.00 in this field produces clays that move at normal speed, i.e. 100% of normal speed. To cause DryFire to show clays at 50% of their normal speed set **Clay speed** to **0.5**.
3. Click the **OK** button to close the dialog.

Now, having first [aligned your muzzle insert](#), open the layout and select the target you want to practise and click the **Start** button – everything remains the same except the speed the clay moves across the wall.



Remember: Though the speed at which the clay is shown moving across the wall will change the lead required to hit it will be unchanged.

As you get more confident, increase the **Clay speed** value gradually back to 1.00 (100%) until you're able to go through the mount, acquire, shoot and follow through process at normal speed.

Using stop motion to show clays at set points in their trajectory

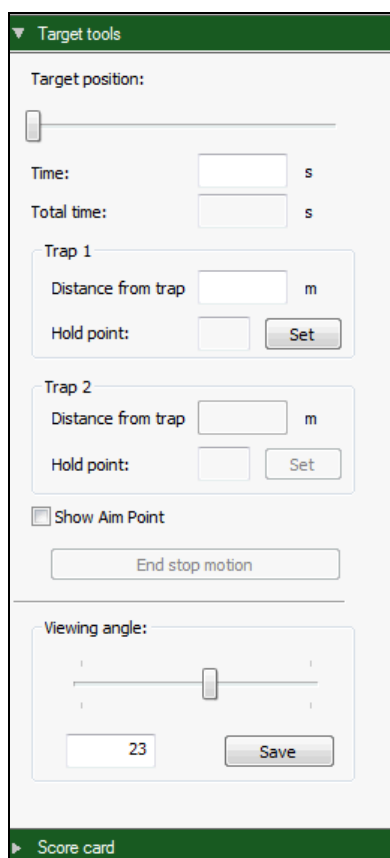
Sometimes even slow motion clays move too fast!

DryFire's stop motion function can project a static laser to show, at any point in time, where a clay would be on its trajectory – from launch to landing.

DryFire will tell you on screen what the appropriate vertical and horizontal lead would be to hit the clay at that point, taking into account your gun and cartridge settings as well as the distance the clay is from you. DryFire also provides an option to show the correct aim point for each clay on the wall.

Use the stop motion function as follows:

1. Select the **View, Sidebar** menu or press **F8** to show the **Sidebar** on the left then click the **Target tools** heading:



The screenshot shows a sidebar titled 'Target tools' with a green header. It contains several sections: 'Target position' with a slider; 'Time' and 'Total time' input fields with 's' units; 'Trap 1' and 'Trap 2' sections, each with 'Distance from trap' and 'Hold point' input fields and a 'Set' button; a 'Show Aim Point' checkbox; an 'End stop motion' button; and a 'Viewing angle' section with a slider, a numeric input field showing '23', and a 'Save' button. At the bottom is a green bar with a 'Score card' link.

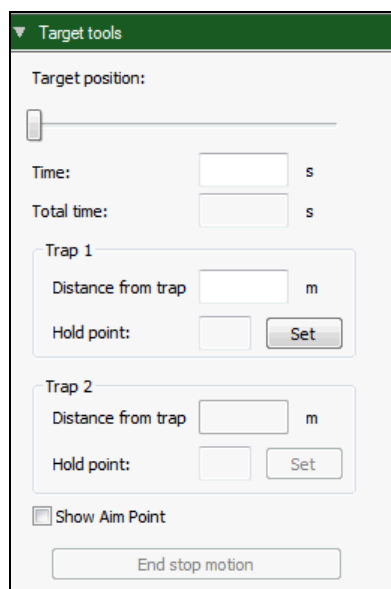
2. Use the **Target position** slider to select the clay's position along its trajectory; the left end of the slider represents launch and the right most represents landing. As you move the slider DryFire will:
 - Show on the wall:
 - The position of the clay(s).
 - Show on the screen:
 - The position of the clay(s) along a dashed orange line that represents the clay's trajectory
 - The lead required to hit the clay(s), taking into account such things as distance, choke, POI and cartridge.
 - The horizontal distance of the clay from the trap and the time from launch.

If you want to show a specific time or distance into the flight you can enter these into the **Time** or **Distance from trap** fields instead of using the slider.
3. Tick the **Show aim point** option to cause DryFire to show on the wall where you should point your shotgun to hit the clay at the current position along its trajectory instead of the clay's position.
4. Click the **End stop motion** button to turn off the stop motion function.

Hold points

Hold points are positions in a clay's flight at which you might position yourself before calling "Pull" in readiness for the clay appearing. DryFire maintains a shooter specific list of hold points for each target in each layout.

Each shooter sets their own hold points via the **Stop Motion** function in the **Target tools** section of the **Sidebar**. If the **Sidebar** isn't already displayed press **F8** to show it and then click the **Target tools** section heading.



Having selected the appropriate **Target** and **Shooter** on the DryFire toolbar, type a time/distance into the appropriate trap's field or use the slider to show the clay's position on the wall at a specific point in its flight.

When the laser is showing the location you want to treat as your "Hold" point for this target, click the **Set** button.

When a hold point has been defined for the currently selected Shooter and Target DryFire will show the hold point as well as the launch, intermediate and landing positions when you press **F2** or select the **View, Clay positions on wall** menu.

Squadding module

The optional "Squadding" module allows a group of shooters to practise a layout at the same time, as if on the range.

Shooters take it turn to shoot, either all from the same stand (e.g. skeet or sporting) or each from a different stand/station (e.g. ATA, DTL or Olympic trap) before moving to the next stand while DryFire maintains separate scores for each shooter.

Each shooter has their own gun settings, so DryFire applies personal settings depending on who is shooting.

Before you can create a squad and select it to shoot as a group you need to define all the shooters that will be in the squad, this process is the same as for single user mode:



If shooter passwords are enabled, the [administrator password](#) is required to do this.

1. Click the **New shooter** button in the **Shooter** section of the toolbar.



2. Complete the [Shooter details dialog](#) with the new shooter's name, eye height and password.



Eye height: The height of the shooter's eye from the floor when they have mounted their gun.

3. Each shooter must have at least one gun, so click the **New gun** button to show the [Shotgun details dialog](#) and complete the dialog as appropriate then click the **OK** button.
4. Click the **OK** button to exit.

Once all the shooters and their guns have been defined, create the squad as follows:

1. Select the **Edit, Squads** menu to display the [Select squad dialog](#).
2. Click the **New squad** button to display the [Squad details dialog](#).
3. Enter the new squad's name and then tick the check boxes next to up to 6 shooters that form this squad.
4. Click the **OK** button to close the [Squad details dialog](#).
5. To create additional squads, repeat steps 2-4.
6. Click the **OK** button to close the [Select squad dialog](#).

Having created a squad you can now, and in the future, shoot a layout as that squad:

1. Select the **File, Start squad session** menu to display the [Select squad dialog](#).



It is possible to create a new squad at this point by clicking the **New squad** button to display the [Squad details dialog](#).

2. Select the squad that is to shoot from the list and then click the **OK** button to display the [Squad login dialog](#).
3. Check that the appropriate layout is selected; click the **Browse** button to select a different layout via the [Open layout dialog](#) if necessary.
4. If a squad member is not present, clear the **Present** check box for that shooter to temporarily omit them from the squad.
5. If passwords are enabled, each shooter is required to confirm their identity by entering their password and clicking their **Login** button.

After logging in they can select which of their guns they want to use for this squad session and, if the layout supports it, confirm their handicap yardage.



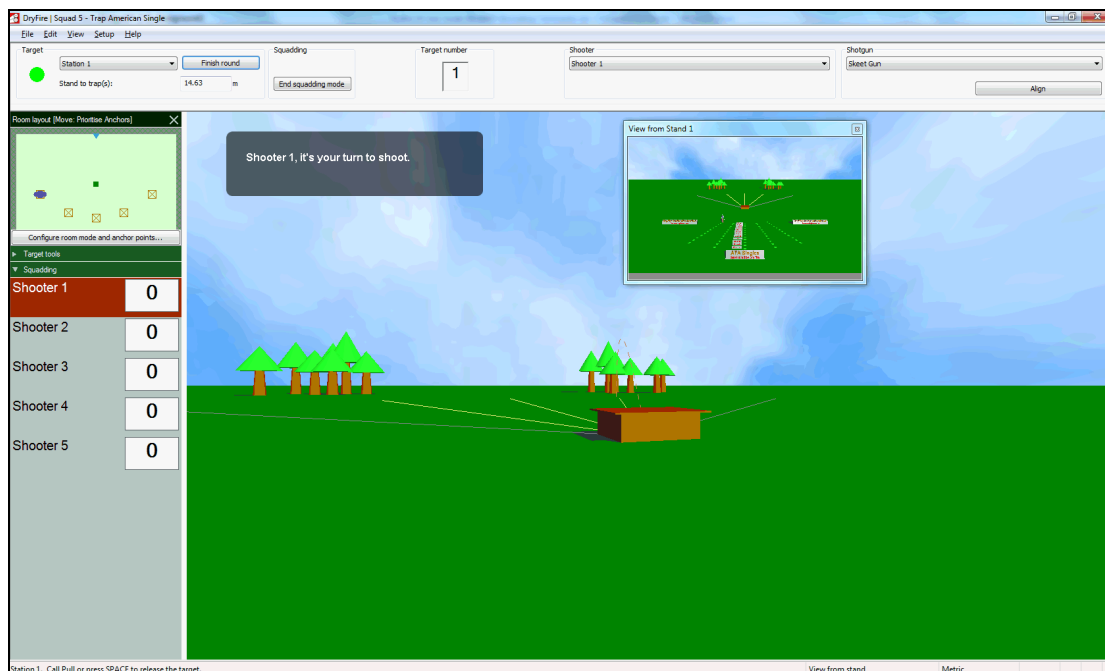
If the [administrator password](#) is entered instead of a user's own password then all shooters are immediately logged in.

6. Each shooter is allocated a stand. Depending on the layout selected all shooters may be on the same stand (e.g. skeet or sporting) or each shooter may be on a different stand (e.g. ATA, DTL or Olympic trap).



7. When all present shooters have logged in and configured their settings appropriately, click the **OK** button to start squad shooting session.

DryFire now switches to operating in Squadding mode for the selected layout and squad:



The toolbar and sidebar show different settings and information when operating in squadding mode

Toolbar

In squadding mode the DryFire toolbar is slightly different:



The **Target**, **Shooter** and **Shotgun** lists show the next target to be shot and which shooter and shotgun will shoot.

The **Align** button can be clicked at any time to align the current shooter's shotgun.



It's a good idea for each shooter in the squad to align their gun before releasing their first target unless they have already done so in the current DryFire session.

The **Target number** field increments as shooters move through the targets in the current layout.

To end squadding mode, and return to single user DryFire, click the **End squadding mode** button.

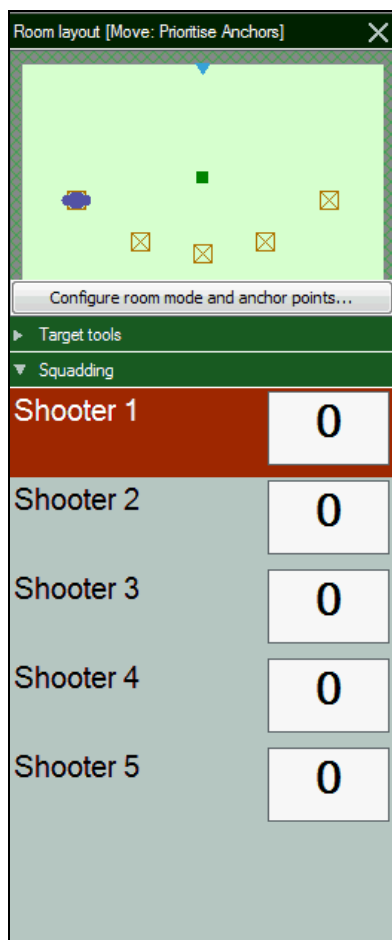
To stop practising the current layout, click the **Finish Round** button to be returned to the [Squad login dialog](#).



If **Prompt for passwords between rounds** is ticked on the [Advanced system configuration dialog](#) each shooter will be required to login again before you can start a new round.

Sidebar

The squadding mode sidebar (press **F8** to show or the sidebar) shows a plan view of the room, a button to configure the room then each shooter's name and current score:



The **Room layout** diagram shows the active room mode and location of any room stands and anchor points. The **Configure room mode and anchor points** button is used to change the room mode and edit the anchor point locations. For more information refer to the practicing examples earlier in this guide.

As the round progresses, DryFire:

- Shows each shooter's current score next to their name in the sidebar.
- Highlights the name of the shooter that should shoot next in the sidebar and notes it in the upper left corner of the main window.
- Shows the next shooter's view of the next target in the "preview" window.
- Shows the current target number in the toolbar.

At the conclusion of the round statistics for each shooter are shown on the [Squad results dialog](#) with options to print or save the reports as a PDF.

Trap exercise module

The optional "Trap exercise" module allows one or more shooters to practise the specific type of shots (e.g. hard left/right) from the stand they want to concentrate on for ATA single trap, DTL or ABT layouts.

Shooters take it in turn to shoot, either all from the same stand or each from a different stand/station.

Each shooter has their own gun settings, so DryFire applies personal settings depending on who is shooting.

Shooters, or their coach, define a training plan that consists of at least one exercise. Each exercise defines one of two sorts of angles:

- **Fixed angles**

A list of up to 10 specific angles is defined.

e.g. 10 degree left, 20 degrees left, 15 degrees right, 25 degrees right, 0 degree straight-away.

DryFire V4 shuffles the list of angles, to introduce some degree of variation, and an angle can be included more than once to increase the frequency with which clays are thrown at that angle. You might use this to define the troublesome angles most, but include a few other angles to break the practise up and stop the shooter anticipating the next clay trajectory.

- **Wedge of the pie**

A wedge is defined within which DryFire V4 will throw the clay at random angles.

The wedge is defined as a centre line angle and a trap oscillation angle. You could use this option to create a standard ATA, DTL or ABT left/right range of targets, but more often you'll define a wedge to one side of the straight-away line, so that you get the sort of targets you want to concentrate on.

e.g. A wedge with a centre line at 10 degrees left of straight-away with a trap oscillation angle of 15 degrees would produce targets anywhere in the range from 25 degrees left to 5 degree right of straight-away

Each exercise can define the criteria upon which a hit will be judged, either:

- **Based on pellet energy (default)**

As in normal usage, DryFire determines whether you hit and break the clay is based on the energy present in the pellets likely to strike the clay.

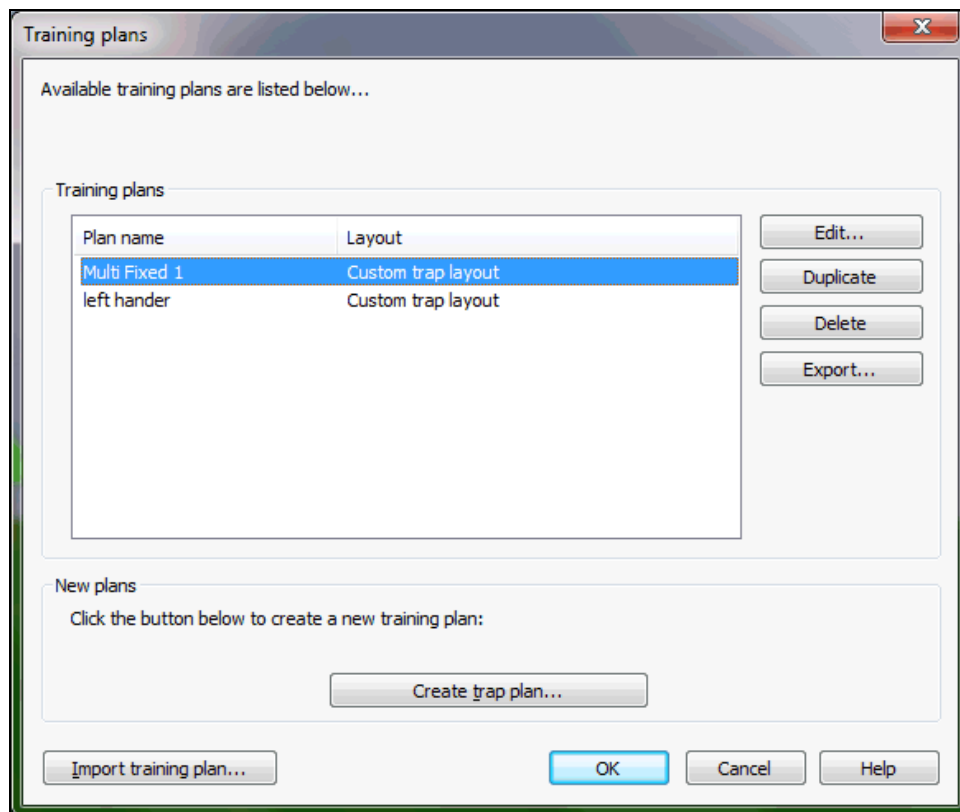
- **Maximum pointing error**

DryFire determines whether you hit and break the clay based solely on the distance from the centre of the shot cloud to the centre of the clay when they are closest (the pointing error) – if it is closer than is set for the exercise then DryFire considers the shot a hit.

- **Maximum pointing error & range**

DryFire determines whether you hit and break the clay based on a combination of the pointing error (as above) and the distance from shooter to clay at that point.

To create a DryFire V4 Training plan, select the **Edit, Training plans** menu to show the [Training plans dialog](#):



Initially no training plans are defined.



If you have received a training plan from another DryFire V4 user or PC, click the **Import training plan** button to import it into your copy of DryFire.

Once you have created a training plan:

- Click the **Export** button to save the plan so that you can copy it to another PC running DryFire V4 or email it to another DryFire V4 user that also has the Trap exercise module.
- Click the **Duplicate** button to create a copy of the plan that you can then edit to meet specific requirements – its sometimes quicker to start with a copy of an existing plan than to start each plan from scratch.

To create a new plan, click the **Create trap plan** button. To edit (or review) an existing training plan, select the training plan in the list then click the **Edit** button. Both cause the [Trap exercises dialog](#) to be displayed:

Define or edit the training plan's name in the upper box.

When creating a new plan a default exercise is created for you – edit this as required.

To add another exercise to the training plan, click the **Add** button. To remove an existing exercise from the plan, select the exercise then click the **Delete** button.

Exercises are practised in the order listed, to change the order select an exercise and then click the **Up** or **Down** buttons.

For each exercise you can:

- Set the name, this is displayed when you're practising the exercise.
- Set the type of exercise, either **Wedge of the Pie** or **Fixed angles**.
 - For wedge of the pie (shown above) you then define the centre line angle trap oscillation angle and Intermediate height.
 - For fixed angles you tick up to 10 check boxes then define their specific angles:

- Set the target characteristics:
 - Use the **Clay speed** value to control the speed the target moves. A value of 1 here means normal speed, 100%. 2 means twice normal speed, 0.5 means half normal speed.
 - Set **Maximum target delay** and **Minimum target delay** to the same value to introduced a fixed delay, or different values to introduce a random delay, when **Pull** is called.
- Set the **Wind** characteristics.
- Set the **Hit criteria**.
 - **Based on pellet energy (default)**
As in normal usage, DryFire determines whether you hit and break the clay is based on the energy present in the pellets likely to strike the clay.
 - **Maximum pointing error**
DryFire determines whether you hit and break the clay based solely on the distance from the centre of the shot cloud to the centre of the clay when they are closest (the pointing error) – if it is closer than is set for the exercise then DryFire considers the shot a hit.
 - **Maximum pointing error & range**
DryFire determines whether you hit and break the clay based on a combination of the pointing error (as above) and the distance from shooter to clay at that point.

When all the exercises to be included in a training plan have been defined, click the **OK** button again to return to the [Training plans dialog](#).

Having created or imported a training plan, now you're ready to shoot it.

Select the **File, Start training session** menu and the [Start training session dialog](#) is displayed:

Shooter	Stand	Handicap	Training plan	Info...	Ad Hoc...
<input checked="" type="checkbox"/> Chris	Stand 1	16 yards	Left Hander	Info...	Ad Hoc...
<input checked="" type="checkbox"/> Bill	Stand 2	16 yards	Left Hander	Info...	Ad Hoc...
<input type="checkbox"/> Trinity	Stand 3	16 yards	Left Hander	Info...	Ad Hoc...
<input type="checkbox"/> Eric	Stand 4	16 yards	Left Hander	Info...	Ad Hoc...
<input type="checkbox"/> Frank	Stand 5	16 yards	Left Hander	Info...	Ad Hoc...
<input type="checkbox"/> Hans		16 yards	Left Hander	Info...	Ad Hoc...

Select the layout and number of shots that should be taken for each exercise then, for each shooter taking part in this training session, tick a check box and complete the row of settings appropriately for that shooter, then click the **OK** button.



Click the **Ad Hoc** button to display the [Trap exercises dialog](#) and define a temporary training plan, just for the shooter's current training session then select it from the

Training plan list.

The selected shooters then take it in turns to shoot the targets for each of the exercises that form their selected training plan. During this process the sidebar shows a scorecard for each shooter that includes entries for the exercises that the training plan they are shooting includes:

Score card	
Key:	<div><div></div> Hit</div> <div><div></div> Miss</div> <div><div></div> Hit then Miss</div> <div><div></div> Miss then Hit</div>
Chris	9
left hander, Stand 1	
Ex1 (Fixed angles)	<div><div></div><div></div><div></div><div></div><div></div></div>
Ex2 (Fixed angles)	<div><div></div><div></div><div></div><div></div><div></div></div>
Bill	10
left hander, Stand 2	
Ex1 (Fixed angles)	<div><div></div><div></div><div></div><div></div><div></div></div>
Ex2 (Fixed angles)	<div><div></div><div></div><div></div><div></div><div></div></div>

The name of the shooter that should take the next target is highlighted in red in the sidebar.

When all exercises in the selected training plans have been completed for all shooters DryFire displays statistics about the results on the [Training session results dialog](#):

Training Session Results																																																					
Chris Bill																																																					
All exercises																																																					
Average time:		0.89		sec		Hit percentage:		81																																													
Average range:		31.00		m		Hits:		9																																													
Average pointing error:		0.33		m		Misses:		2																																													
						Total shots:		11																																													
<table><thead><tr><th></th><th>Hits</th><th>Misses</th><th colspan="2">Ahead</th><th colspan="2">Behind</th><th colspan="2">Above</th><th colspan="2">Below</th></tr><tr><th></th><th></th><th></th><th>Average</th><th>Total</th><th>Average</th><th>Total</th><th>Average</th><th>Total</th><th>Average</th><th>Total</th></tr></thead><tbody><tr><td>Clay travelling left to right:</td><td>3</td><td>0</td><td>0.24</td><td>3</td><td>0.00</td><td>0</td><td>0.00</td><td>0</td><td>0.19</td><td>3</td></tr><tr><td>Clay travelling right to left:</td><td>6</td><td>2</td><td>0.24</td><td>4</td><td>0.24</td><td>4</td><td>0.30</td><td>3</td><td>0.15</td><td>5</td></tr></tbody></table>											Hits	Misses	Ahead		Behind		Above		Below					Average	Total	Average	Total	Average	Total	Average	Total	Clay travelling left to right:	3	0	0.24	3	0.00	0	0.00	0	0.19	3	Clay travelling right to left:	6	2	0.24	4	0.24	4	0.30	3	0.15	5
	Hits	Misses	Ahead		Behind		Above		Below																																												
			Average	Total	Average	Total	Average	Total	Average	Total																																											
Clay travelling left to right:	3	0	0.24	3	0.00	0	0.00	0	0.19	3																																											
Clay travelling right to left:	6	2	0.24	4	0.24	4	0.30	3	0.15	5																																											
<table><thead><tr><th></th><th>Average</th><th>Total</th><th colspan="2">Left</th><th colspan="2">Right</th><th colspan="2">Above</th><th colspan="2">Below</th></tr><tr><th></th><th></th><th></th><th>Average</th><th>Total</th><th>Average</th><th>Total</th><th>Average</th><th>Total</th><th>Average</th><th>Total</th></tr></thead><tbody><tr><td>Clay rising:</td><td>9</td><td>2</td><td>0.16</td><td>8</td><td>0.30</td><td>3</td><td>0.30</td><td>3</td><td>0.16</td><td>8</td></tr><tr><td>Clay falling:</td><td>0</td><td>0</td><td>0.00</td><td>0</td><td>0.00</td><td>0</td><td>0.00</td><td>0</td><td>0.00</td><td>0</td></tr></tbody></table>											Average	Total	Left		Right		Above		Below					Average	Total	Average	Total	Average	Total	Average	Total	Clay rising:	9	2	0.16	8	0.30	3	0.30	3	0.16	8	Clay falling:	0	0	0.00	0	0.00	0	0.00	0	0.00	0
	Average	Total	Left		Right		Above		Below																																												
			Average	Total	Average	Total	Average	Total	Average	Total																																											
Clay rising:	9	2	0.16	8	0.30	3	0.30	3	0.16	8																																											
Clay falling:	0	0	0.00	0	0.00	0	0.00	0	0.00	0																																											
Print... Save as PDF...																																																					
Print all... OK Help																																																					

Each shooter's results are displayed on a separate tab, click the appropriate tab to show the results for a different shooter.

For each shooter DryFire will show statistics for all and each exercise in the training plan the shooter shot – use the drop down list below the shooter's name to change the statistics displayed.

The **Print** and **Save as PDF** buttons allow an individual shooter's results to be printed or saved – the saved PDF can then be emailed to a coach so that they can review the shooter's results. The **Print all** button can be used to print results for all shooters that participated in this training session.

Appendix A: Frequently Asked Questions

This section includes answers to some frequently asked questions; many answers include clickable hyperlinks to other parts of this guide.

How do I...

... disable or enable shooter passwords?



If shooter passwords are enabled, the [administrator password](#) is required to do this.

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).
2. Click the **Advanced** button to show the [Advanced System Configuration dialog](#).
3. In the [Advanced options section](#), tick or clear the **Enable shooter passwords** option.
4. Click the **OK** button repeatedly to exit.

See the [Passwords section](#) for more information.

... open a layout

To see and practise a different set of targets:

1. Select the **File, Open Layout file** menu or press **Ctrl O** to show the [Open layout dialog](#).
2. Either:
 - a. Select a layout in the left column to preview it on the right then click the **OK** button to open it.

Or:

- b. Double click on a layout in the left column to open it.

... edit a shooter's settings?

Refer to the [Shooter and Gun settings section](#).

... edit a shooter's gun settings?

Refer to the [Shooter and Gun settings section](#).

... create additional guns?

Refer to the [Shooter and Gun settings section](#).

... create additional shooters?

Refer to the [Shooter and Gun settings section](#).

... delete existing shooters?

Refer to the [Shooter and Gun settings section](#).

... practise just one target from a layout?

After [opening the required layout](#):

1. Select the target you want to practise from the toolbar's **Target** list.
2. Click the **Start** button, or press **Ctrl T**.
3. Call "Pull", press the foot switch or the SPACE BAR.

... practise all targets in a layout, as a round?

After [opening the required layout](#):

1. Either:
 - Press **Ctrl L**.
- Or:
 - Select **<All targets>** from the toolbar's **Target** list then click the **Start** button.
2. Call "Pull", press the foot switch or the SPACE BAR.

... review/edit/delete/create a choke?

1. Select the **Edit, Chokes** menu to show the [Choke details dialog](#).
2. Refer to the section describing the [Choke details dialog](#) for more information.

... show the second clay with a single head simulator if my first shot misses?



If shooter passwords are enabled, either the [administrator password](#) must be entered or a "master" shooter selected on the toolbar to do this.

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).
2. In the [Program options section](#), tick the **Show second clay even if first missed (doubles)** option.
3. Click the **OK** button.



DryFire will:

- Not show the second clay if you miss the first and you are required to shoot again at the first clay.
- Always show the second clay if your first shot misses and you are required to shoot at the second clay with your second shot.

... show clays moving slowly

See the section about [Slow Motion](#) for more information.

... set the Point Of Impact [POI] for my shotgun?

Your shotgun's POI is defined via the [Shotgun details dialog](#); click [here](#) for more information.

... check DryFire is applying the POI I have defined correctly?

Use the [DryFire pattern board](#) as follows:

1. Select the **Setup, Pattern board** menu (or press **F7**) to display the pattern board.
2. Ensure the appropriate **Shooter**, **Shotgun** and **Barrel** are selected on the toolbar.
The **Distance** should be set to the distance at which the POI is defined for the selected barrel.
3. Click the **Fire** button.
4. Check the **above** value in the results box matches your POI.

... calculate an equivalent POI?

Use the DryFire pattern board to [calculate an equivalent POI](#).



... count “Not broken” clays as “Hits”?



If shooter passwords are enabled, the [administrator password](#) is required to do this.

DryFire considers the energy required to break a clay, how many pellets are likely to hit the clay and how much energy each pellet retains at the point the shot and clay are closest to decide whether the clay would break or not. A shot is only considered a “Hit” if the pellets likely to strike the clay would collectively have sufficient energy to break it.

You can reduce the energy required to break the clay, potentially to zero, so that on-target shots are more likely to break the clay as follows:

1. Select the **Edit, Clays** menu to display the [Clay details dialog](#).
2. Select the type of clay that the trap throws from the list at the top of the dialog.
 Layouts provided with DryFire use either the **Standard** or **Rabbit** clays, depending on whether it is a Rabbit trap.
3. Reduce the **Energy required flat-on** and **Energy required edge-on** values.
 To disable DryFire’s energy to break clay calculations and have all on-target shots count as “Hit”, set both to zero.
4. Click the **OK** button.

... review/edit/delete/create a clay?



With the possible exception of the **Energy required flat-on** and **Energy required edge-on** values, so as [to have “Not broken” clays count as “Hit”](#), we do not recommend this.



If shooter passwords are enabled, the [administrator password](#) is required to do this.

1. Select the **Edit, Clays** menu to show the [Clay details dialog](#).
2. Refer to the section describing the [Clay details dialog](#) for more information.

... switch between metric and imperial measurement systems?

1. Double click the **Metric** or **Imperial** label in the DryFire status bar.

... configure the trigger switch to operate in set/release mode?

The DryFire trigger box normally shoots when you press the trigger switch. To reconfigure it to shoot when you release the trigger switch:

1. Connect the trigger switch to the red trigger box.
2. Hold down the trigger switch for more than 5 seconds.

To confirm the trigger switch is now operating in set/release mode, watch the LED on the red trigger box as you press hold and then release the trigger switch – you should see the LED lights as you release the switch instead of as you press it.

... configure the trigger switch to operate when pressed?

This is how the trigger switch operates by default.

If you have intentionally or accidentally reconfigured it to [operate in set/release mode](#) you can revert back to shooting when you press the trigger switch as follows:

1. Remove the batteries from the red trigger box.
2. With the trigger switch connected to the red trigger box, hold down the trigger switch for about 15 seconds.
3. Put the batteries back into the red trigger box.

To confirm the trigger switch is now operating when pressed, watch the LED on the red trigger box as you briefly press then release the trigger switch – you should see the LED lights as you press the switch instead of as you release it.

... change the simulator camera's exposure setting?



If shooter passwords are enabled, the [administrator password](#) is required to do this.

First confirm there is no direct or reflected sunlight onto either the projection wall or the simulator.

Then, if either shots you take are not detected or shots you don't take are detected:

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).
2. In the [PC Settings section](#), either:
 - Edit the **Camera exposure** setting(s).



The Exposure should be as high as possible without the camera seeing stray light and detected false shots. Try values of 16, 24, 32, 40, 48, 56, 64, 72, 80.

Or:

- Click the **Auto Camera Exposure** button to show the [Automatic camera exposure dialog](#) and have DryFire try to calculate a suitable value.
3. Click the **OK** button.
 4. Press **F7** to show the [pattern board](#), click the **Show Laser** button then shoot at the laser to confirm check shots are detected correctly.
 5. Click the **Finish** button.



You can quickly access the [Automatic camera exposure dialog](#) by selecting the **Setup, Automatic camera exposure** menu or pressing **F6**.

... change the handicap yardage for ATA trap layouts?

This is a property of the shooter. Refer to the [Shooter and Gun settings section](#).

... change the ATA trap angles, throw distances and stand angles?

After [opening an American Trap layout](#):

1. Select the **Setup, ATA trap settings** menu to display the [ATA Trap settings dialog](#).
2. Edit the settings as required.
3. Click the **OK** button.

... change the Wobble trap angles, throw distances/heights and stand angles?

After [opening the Wobble Trap layout](#):

1. Select the **Setup, ATA trap settings** menu to display the [ATA Trap settings dialog](#).
2. Edit the settings as required.
3. Click the **OK** button.

... change the ISSF table used for Olympic Trap singles?

After [opening the Olympic Trap Singles layout](#):

1. Select the **Setup, Olympic single trap settings** menu to display the [Olympic single trap settings dialog](#).
2. Select the required table.
3. Click the **OK** button.

... practise the “finals” round of Olympic Trap Singles?

After [opening the Olympic Trap Singles layout](#):

1. Select the **Setup, Olympic single trap settings** menu to display the [Olympic single trap settings dialog](#).
2. Tick the **Practise final round** option.



This option controls whether 1 or 2 shots at each single clay target are accepted, in the “finals” round only the first shot is detected.

3. Click the **OK** button.

... align my muzzle insert when it has inserted or moved?

See the section on [Muzzle Alignment](#).

... have miss distances expressed as in DryFire V3?



If shooter passwords are enabled, either the [administrator password](#) must be entered or a “master” shooter selected on the toolbar to do this.

By default DryFire V4 always uses left/right and high/low relative to horizontal and vertical axes to describe the position of the shot relative to the clay.

The alternative mode, as used in previous versions of DryFire, uses different terms depending on and relative to the clay’s trajectory at the time the shot cloud is closest to the clay. To use DryFire V3 terminology:

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).
2. Click the **Advanced** button to show the [Advanced System Configuration dialog](#).
3. In the [Advanced options section](#), clear the **Always use left/right and high/low for shot distances** option.
4. Click the **OK** button repeatedly to exit.


... have DryFire give more or fewer voice feedback



If shooter passwords are enabled, either the [administrator password](#) must be entered or a “master” shooter selected on the toolbar to do this.

DryFire can give instructions and read scores when practising a whole round as a single user or, when the squadding option is purchased, when practising as a squad.

To change the amount of voice feedback provided:

1. Select the **Setup, System configuration** menu to show the [System configuration dialog](#).
2. In the [Program options section](#), set the **Speech** option as required.
 **Basic** gives voice feedback in the optional squadding mode, **Chatty** also gives voice feedback in single user mode when practising a whole round.
3. Click the **OK** button.

... use WDF (layouts) I created using Course Designer V3 with DryFire V4

You must copy the WDF files from the DryFire V3 "Layouts" folder into the DryFire V4 "Layouts4" folder. If you have installed DryFire V4 into the default folder the DryFire V4 "Layouts4" folder will be either "C:\Program Files\DryFire V4\Layouts4" or, when using a 64-bit version of Windows, "C:\Program Files (x86)\DryFire V4\Layouts4".

Other Questions and Problems

What are the default passwords

See the [Passwords section](#) for more information.

No shots or too many shots registered

Check that the projection wall is not dark green, concrete, stone or brick background – the Infra-Red dot may not be seen on such surfaces.

If you find that DryFire is sounding like a machine gun during alignment or going bang as soon as you release a target it is probably detecting background infra-red light. Check that you don't have direct or reflected sunlight onto the wall or DryFire simulator.

Check that the simulator is close enough to the wall, between 1m and 2m (40" and 80")

Check that the shooter is close enough to the wall, between 2m and 3m (80" and 120").

Check the gun assembly:

1. Watch the LED on the red trigger box, does it flash when you press the trigger switch, flash when you release the trigger switch or not flash at all?

If the LED doesn't flash at all, check the trigger switch cable is connected to the red trigger switch and that the 3 LR44 button cells batteries are all present in the red trigger box. If all appears OK, try replacing the 3 LR44 batteries then try again.

If the LED flashes when you release the trigger switch and you want to shoot when you press the trigger switch, [reconfigure the gun assembly to operate in press to shoot mode](#) then try again.
2. If the LED on the red trigger box flashes appropriately, check the muzzle insert laser as follows in a very dark room with the muzzle insert and trigger switch both connected to the red trigger box:
 - Hold the muzzle insert's laser about 1cm from a white sheet of paper and press the trigger switch so that the LED flashes.
 - Do you see a faint flash of red light on the paper?

The muzzle insert LED is infra-red but there is just about enough visible red in it to see it close up in the dark.

- If you don't see the feint red flash of light and the LED flashes then the laser in the muzzle insert may have failed – contact your supplier or visit www.dryfire.com.

[Check the simulator camera's exposure setting.](#)

Trigger problems? Note about set/release triggers

To shoot when you press the DryFire trigger switch, reconfigure the trigger switch as described [here](#).

To shoot when you release the DryFire trigger switch, reconfigure the trigger switch as described [here](#).

Replacement trigger switches are available from www.dryfire.com or your DryFire supplier.

Clays shown much too low or much too high on the wall



If shooter passwords are enabled, either the [administrator password](#) must be entered or a “master” shooter selected on the toolbar to do this.

When changing from or to layouts that include overhead clays, including skeet, DryFire will note that the simulator should be inclined from or returned to horizontal and presume that you do so. If you do not do as prompted DryFire will show targets incorrectly.

To check what angle from horizontal DryFire thinks the simulator is inclined at, select the **Setup, System configuration** menu to display the [System configuration dialog](#) and review the **Simulator angle** setting in the [Simulator settings section](#) of the dialog, then click the **OK** button.

You can either edit the value on the dialog to reflect the real angle of the simulator or reposition the simulator to reflect the angle defined in DryFire, but if DryFire suggests you incline the simulator then you should do so to allow DryFire to show more of the overhead clay's trajectory.

Shot sound sometimes delayed

Problems within the Windows audio drivers for the PC's sound card can cause this issue, especially when operating on slower PCs on which DryFire is using “software rendering” to draw its screens rather than “hardware rendering” as is possible with later graphics cards.

Check that you are using latest audio drivers available for your PC and that the **Enable software rendering** setting on the [Advanced System Configuration dialog](#) is not ticked.

If the problem persists:

- Clear the **Play sound effect during clay movement** setting on the [System configuration dialog](#) in the [Program options section](#).
- Consider updating your graphics card to one that supports hardware rendering.

No text shown (e.g. layout information and shot results) in the black text boxes

Try updating your display adapter drivers and if the problem persists:

1. Select the **Setup, System configuration** menu to open the [System configuration dialog](#).
2. Click the **Advanced** button to display the [Advanced System configuration dialog](#).

3. Tick the **Enable software rendering** option.
4. Click the **OK** button to close the [Advanced System configuration dialog](#).
5. Click the **OK** button to close the [System configuration dialog](#).
6. Restart DryFire.

Appendix B: Dialogs

This appendix shows the various dialogs that DryFire provides to allow you to change settings and configure how DryFire behaves.

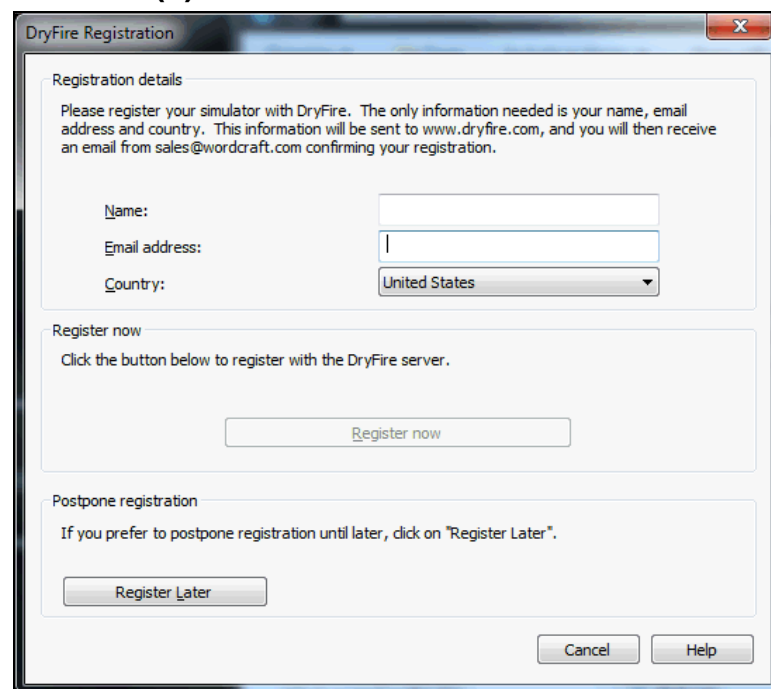
For each dialog you will find details of how to reach the dialog, an image of the dialog, what it is for as well as, when appropriate, details of the settings on the dialog.

DryFire Registration dialog

This dialog is displayed if the connected simulator has not yet been registered either:

- As DryFire starts.
- When the **Help, Registration and Features** menu is selected.

Screenshot(s)



Usage

Click the **Register Later** button to defer registration and start DryFire V4 – you will be prompted next time you start DryFire V4. You cannot defer registration indefinitely.

To register your simulator:

- Enter your name, email address and select your country.
- Click the **Register now** button to quickly register your DryFire simulator.
- DryFire will now attempt to connect to the DryFire.com website to register your simulator.

If this process is successful DryFire will tell you and ask that you check for an email that will contain a licence key for you to enter to confirm the registration.

If DryFire cannot connect to the DryFire.com tell you and provide options.



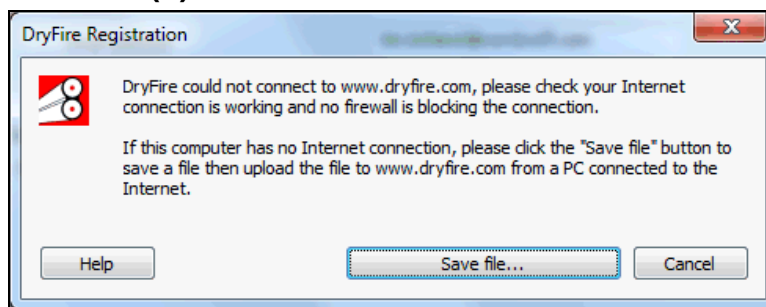
A registration key is sent via email to the address you entered which you then load into DryFire V4 to complete the registration process, so you must enter your real email address.

The email is from sales@wordcraft.com, so please check your spam filter doesn't intercept it.

DryFire Registration – No Internet connection dialog

This dialog is displayed when you attempt to register your DryFire simulator but a connection to the DryFire.com website cannot be established.

Screenshot(s)



Usage

Click the **Cancel** button to either try connecting again or defer the registration until later.

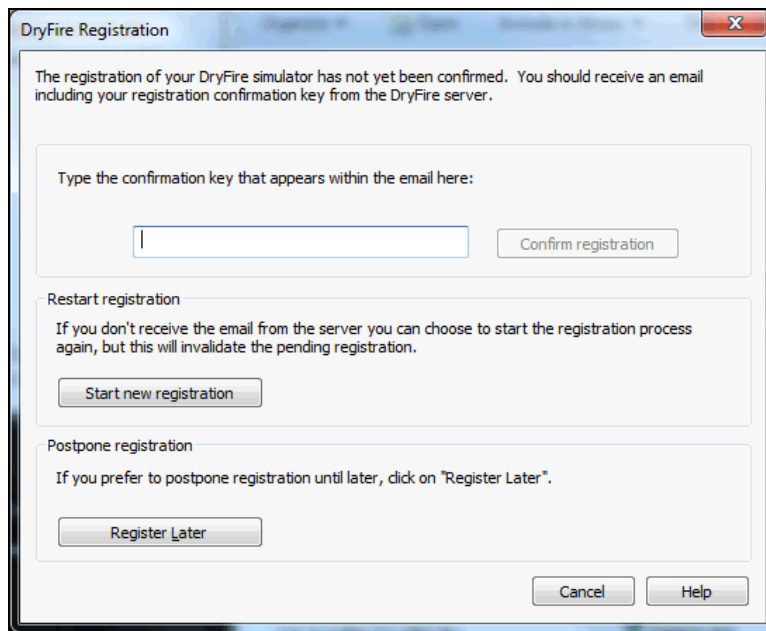
If you do not have an Internet connection from this PC, click the **Save file** button to save a file that you can then transfer to another PC which does have an Internet connection so that you can upload it to www.dryfire.com. Remember where you save the file and with what name, after you save it DryFire will give you more instructions.

DryFire Registration In-Progress dialog

This dialog is displayed if the connected simulator has not yet been registered but you have started the registration process either:

- As DryFire starts.
- When the **Help, Registration and Features** menu is selected.

Screenshot(s)



Usage

To confirm the registration:

- Type the confirmation key from the registration confirmation email into the box on this dialog then click the **Confirm registration** button.

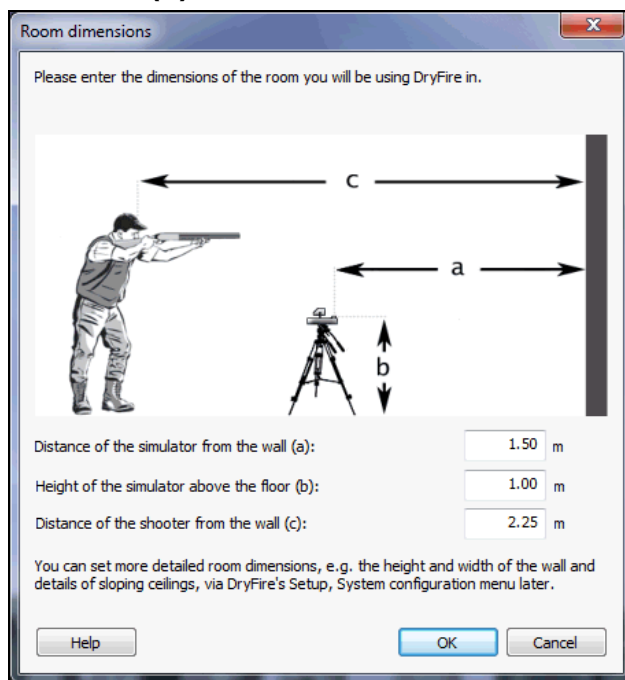
To defer the completion of the registration process temporarily:

- Click the **Register Later** button.

Room dimensions dialog

This dialog is displayed when DryFire is first installed so that you can quickly define the essential room dimensions before starting to use DryFire.

Screenshot(s)



Usage

The dialog is used as follows:

- To change the settings: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.
- To discard any changes you may have made and proceed using the defaults, which might not be appropriate for your room: Click the **Cancel** button.



We recommend that you position the simulator midway across the wall's width and stand directly behind the simulator.

If you cannot do this then you can tell DryFire where you will stand and the amount of wall to the left and right by selecting the **Setup, System configuration** menu to show via the [System configuration dialog](#) then edit the [Simulator settings](#) section's settings as appropriate and click the **OK** button.

Settings on this dialog

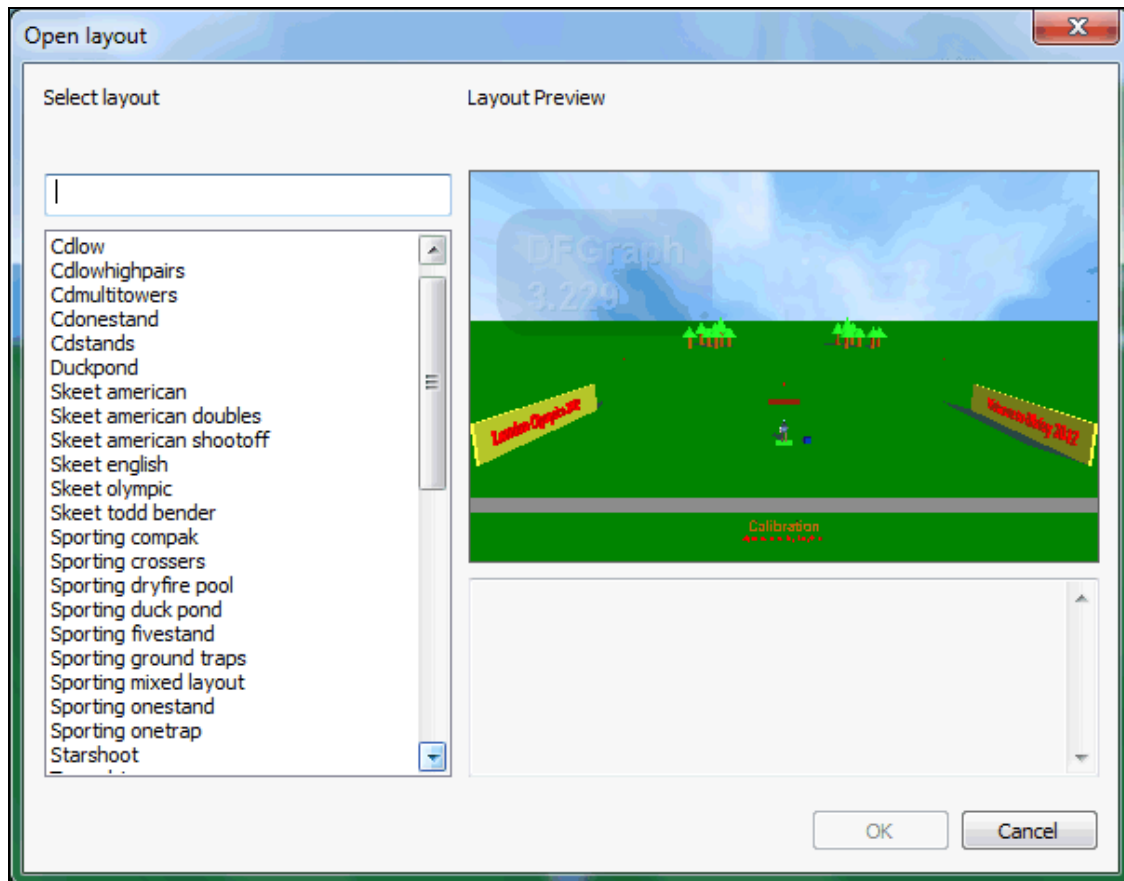
Item	Description
Distance of the simulator from the wall	The distance, when the simulator is horizontal, from the centre of the simulator's spirit level to the wall. As a guide, 1m (39 inches) to 1.5m (59 inches) is a reasonable distance. Do not exceed 3m (118 inches) for this distance or the camera may not be able to see your shot.
Height of the simulator above the floor	The distance, when the simulator is horizontal, from the simulator's spirit level bubble to the floor. As a guide, between 0.7m (27 inches) and 1m (40 inches) is a reasonable height.
Distance of the	The distance from Shooter's eye to the wall, when their gun is

Item	Description
shooter from the wall	mounted.

Open layout dialog

This dialog is used to open a new layout so that you can review or practise targets related to the applicable discipline, e.g. Skeet, DTL, ABT, ATA. It is displayed by selecting the **File, Open layout file** menu or by pressing **Ctrl O**.

Screenshot(s)



Usage

The dialog is used as follows:

- The left column lists available layouts; if you know the name or sort of layout you want you can type part of it in the box above the list to show only layouts with matching names.
If you've opened a layout before, click the down arrow at the end of the box above the list to select it from a shorter list of previously used layouts.
- Either:
 - Select a layout in the left column to preview it on the right then click the **OK** button to open it.
- Or:
 - Double click on a layout in the left column to open it.

System Configuration dialog

This dialog is used to define settings that affect all DryFire shooters. It is displayed by selecting the **Setup, System Configuration** menu.

Screenshot(s)

Metric measurements

The screenshot shows the 'System configuration' dialog box with the 'Metric measurements' tab selected. The dialog is divided into three main sections: PC Settings, Simulator settings, and Program options. The PC Settings section includes fields for Clay speed (1.00), Minimum Target Delay (0.20 s), Pause between targets (0.00 s), Voice Release Sensitivity (60), Shot Cloud Zoom (75 %), Camera 1 exposure (48), and Camera 2 exposure (48). The Simulator settings section includes fields for Shooter to wall (2.25 m), Simulator to wall (1.50 m), Simulator height (1.00 m), Simulator angle (45 deg), Shooter right of simulator (0.00 m), Ceiling height (2.40 m), Wall left of simulator (2.50 m), and Wall right of simulator (2.50 m). The Program options section includes checkboxes for 'Enable logging of replay data', 'Play sound effect during clay movement', and 'Highlight clay position on screen', a Speed dropdown menu set to 'Basic', and a Wind section with Direction (270 deg) and Speed (0.00 mph) fields. At the bottom, there are buttons for 'Defaults', 'Advanced...', 'OK', 'Cancel', and 'Help'.

Imperial measurements

The screenshot shows the 'System configuration' dialog box with the 'Imperial measurements' tab selected. The dialog is divided into three main sections: PC Settings, Simulator settings, and Program options. The PC Settings section includes fields for Clay speed (1.00), Minimum Target Delay (0.20 s), Pause between targets (0.00 s), Voice Release Sensitivity (60), Shot Cloud Zoom (75 %), Camera 1 exposure (48), and Camera 2 exposure (48). The Simulator settings section includes fields for Shooter to wall (88.6 in), Simulator to wall (59.1 in), Simulator height (39.4 in), Simulator angle (45 deg), Shooter right of simulator (0.0 in), Ceiling height (94.5 in), Wall left of simulator (98.4 in), and Wall right of simulator (98.4 in). The Program options section includes checkboxes for 'Enable logging of replay data', 'Play sound effect during clay movement', and 'Highlight clay position on screen', a Speed dropdown menu set to 'Basic', and a Wind section with Direction (270 deg) and Speed (0.0 mph) fields. At the bottom, there are buttons for 'Defaults', 'Advanced...', 'OK', 'Cancel', and 'Help'.

Usage

The dialog is used as follows:

- To see the [Advanced System Configuration dialog](#): Click the **Advanced** button.
- To revert to default settings: Click the **Defaults** button.
- To change the settings: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.

- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

The settings on this dialog are described below.

PC Settings

Item	Description
Clay speed	<p>Controls how fast the clays move on the wall. A value of 1 here means normal speed, 100%. 2 means twice normal speed, 0.5 means half normal speed.</p> <p>Note: This setting does not change anything except the speed of the clay on the wall. It does not change the clay throwing distance (the trap spring strength) or any intermediate hoop/post height.</p> <p>Most importantly, it does not change the amount of lead required – this allows you to practise acquiring and shooting at slower moving clays while still giving the normal amount of lead. If you're having trouble visualising the sight pattern you need to hit the clay, slow the clay speed down slightly until you're regularly hitting the clay then build the clay speed back up again – remember to give the same lead no matter what clay speed you're using.</p>
Minimum Target Delay	<p>Specify the minimum time, in fractions of a second, it should take for the clay to leave the trap's throwing arm here.</p> <p>Note: This value changes as you load a new layout to the default associated with that layout.</p> <p>DryFire imposes a minimum of 0.2 seconds to reflect the time it takes a person or system on the range to release a clay on hearing the "Pull" instruction.</p> <p>You can define a longer Maximum Target Delay on the Configure delays dialog to achieve a different random delay for each target by clicking the All delays button.</p>
Delay between targets	<p>DryFire normally prepares for the next target as soon as it has finished showing the previous one.</p> <p>You can set a delay between shots to force you to relax; we do not normally stand with gun at the ready all the time when on the range and the gun can become very heavy unless you relax between shots. The value is set to "0" seconds by default, changing it to "5" would introduce a delay of five seconds between targets.</p> <p>Note: When using DryFire in the USA this setting defaults to 3.5 seconds. This is to allow shooters to cock their gun again when using the DryFire USA acoustic trigger release system without the simulator hearing the sound of the gun being cocked and treating it as a "pull" instruction.</p>
Voice Release Sensitivity	<p>This sets the sensitivity (values 1 to 255) of the microphone used for acoustic release. The lower the number, the more sensitive the microphone will be.</p>

Item	Description
Shot Cloud Zoom	<p>This determines, when showing the result of a shot, what point along the shot's trajectory DryFire should "zoom" to. This makes it much easier to see the relationship between the clay and the shot pattern at the point when they are closest to one another.</p> <p>The default is 75%</p>
Camera 1 exposure Camera 2 exposure	<p>The Camera 1 exposure and, if you have a double head simulator, Camera 2 exposure settings control the simulator's sensitivity to infra-red [IR] light, so that it doesn't confuse background IR (such as that in sunlight and some artificial light) with the DryFire shotgun laser. Lower values make the simulator less sensitive to background IR, but setting it too low will mean it doesn't see the shotgun laser either.</p> <p>If you find that DryFire is sounding like a machine gun during alignment or going bang as soon as you release a target it is probably detecting background infra-red light. Check that you don't have direct or reflected sunlight onto the wall or DryFire simulator. If problems persist, try reducing the camera exposure setting in steps of 8 until there are no false shots.</p> <p>Alternatively, click the Auto camera exposure button to have DryFire try to calculate a suitable value.</p> <p>Note: The lower the camera exposure the less likely DryFire is to see your real shots.</p> <p>If you take clays at the left/right limits of the trajectory (not recommended) then you may need a higher camera exposure setting.</p> <p>Values below 16 or above about 96 should be avoided - the camera sensor work best with mid-range values. If your camera still sees stray light when using a value of 24 you need to darken the room.</p> <p>The amount of background infra-red light will vary depending on the time of day in a room that has any sunlight, so the camera exposure setting may need to be changed - run the automatic camera exposure test in DryFire by selecting the Setup, Automatic camera exposure menu or by pressing the F6 key.</p>

Simulator settings

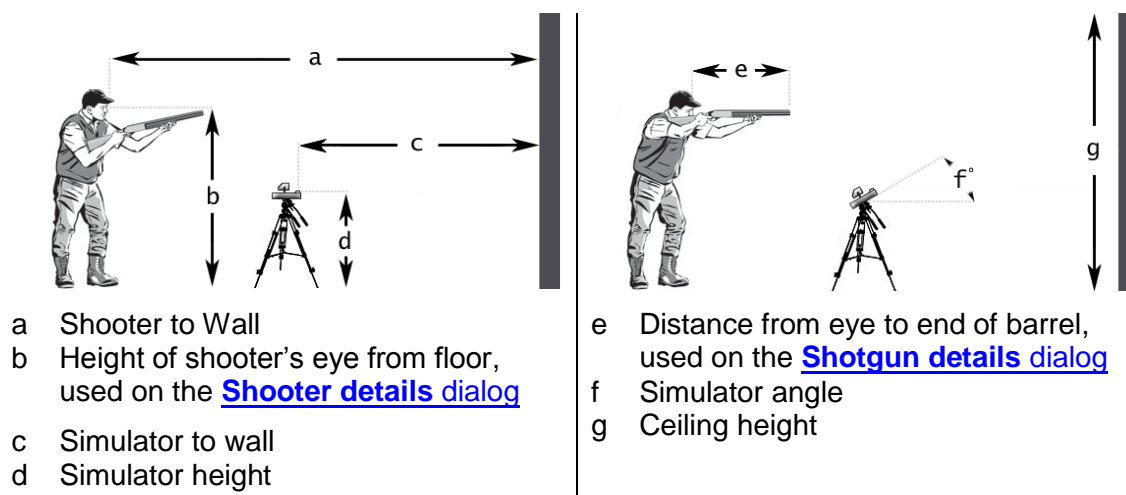


DryFire's ability to accurately show clay trajectories on your wall depends on these distances being defined accurately.



You can change between metric and imperial measurements via the **Use imperial measurements** setting on the [Advanced System Configuration dialog](#) or, when no dialog is displayed, by double clicking the **Metric** or **Imperial** label in DryFire's status bar.

When entering settings, refer to the following diagrams:



Item	Key	Description
Shooter to Wall	a	The distance from Shooter's eye to the wall, when their gun is mounted.
Simulator to wall	c	The distance, when the simulator is horizontal, from the centre of the simulator's spirit level to the wall. As a guide, 1.5m (60 inches) is a reasonable distance. Do not exceed 3m (120 inches) for this distance or the camera may not be able to see your shots.
Simulator height	d	The distance, when the simulator is horizontal, from the simulator's spirit level bubble to the floor. As a guide, between 0.7m (27 inches) and 1m (40 inches) is a reasonable height.
Simulator angle	f	The angle of the simulator pointing upwards, from horizontal. Normally the simulator will be horizontal and this setting will be 0. DryFire sometimes needs the simulator to be inclined to 45° so that all laser clays can be presented accurately, e.g. when displaying Skeet layouts. DryFire will prompt you to incline the simulator as you open a layout when this is necessary.
Shooter right of simulator		The distance to the right of the simulator that you will stand to take your shots. Note: We recommend that you position the simulator midway across the wall's width and stand directly behind the simulator. If you do stand directly behind the simulator, leave this setting as 0.00 . If you cannot stand directly behind the simulator, enter how far you are to the right of the simulator. If you are to the left of the simulator, enter a negative value in this field.
Ceiling Height	g	The height of room's ceiling.
Wall left of simulator Wall right of simulator		The amount of projection wall (or, if using one, wall canvas) available to the left (or right) of the simulator. We recommend the simulator is positioned midway across the projection wall's width or, if using one, wall canvas.

Program options

Item	Description
Enable logging of replay data	<p>The software can record details of each shot so that you can review your performance via the View, Replay previous shots and View, Export reply data menus.</p> <p>The replay file can become quite large, so consider using the View, Clear replay file menu periodically to delete old shot data.</p>
Show second clay even if first one missed (doubles)	<p>This applies only to single head systems.</p> <p>DryFire normally shows the second clay of simultaneous doubles only when you break the first one.</p> <p>Selecting this option will show the second clay (and thus turn off the first one) even if you miss the first one. To indicate that you fired and missed, DryFire will “beep” after the first shot, rather than playing the normal “bang” sound.</p> <p>Note: DryFire will:</p> <ul style="list-style-type: none">• Not show the second clay if you miss the first and you are required to shoot again at the first clay.• Always show the second clay if your first shot misses and you are required to shoot at the second clay with your second shot.
Play sound effect during clay movement	<p>The software will help to give a 3D impression of the clay's flight by generating a sound which will be highest when the clay is closest to you and lowest when it is furthest away.</p>
Highlight clay position on screen	<p>Sometimes the clay can be difficult to see on screen in the shot results or stop motion displays, particularly if it is in the distance. When active, this option causes DryFire to show a translucent sphere around the clay to highlight the clay's location.</p>
Speech	<p>Select whether DryFire provides spoken results and instructions as you practise and, if so, how much.</p> <p>Basic gives voice feedback in the optional squadding mode, Chatty also gives voice feedback in single user mode when practising a whole round.</p> <p>The .WAV files played to provide voice feedback are stored in the \Program Files\DryFire V4\Sound folder structure.</p>

Wind

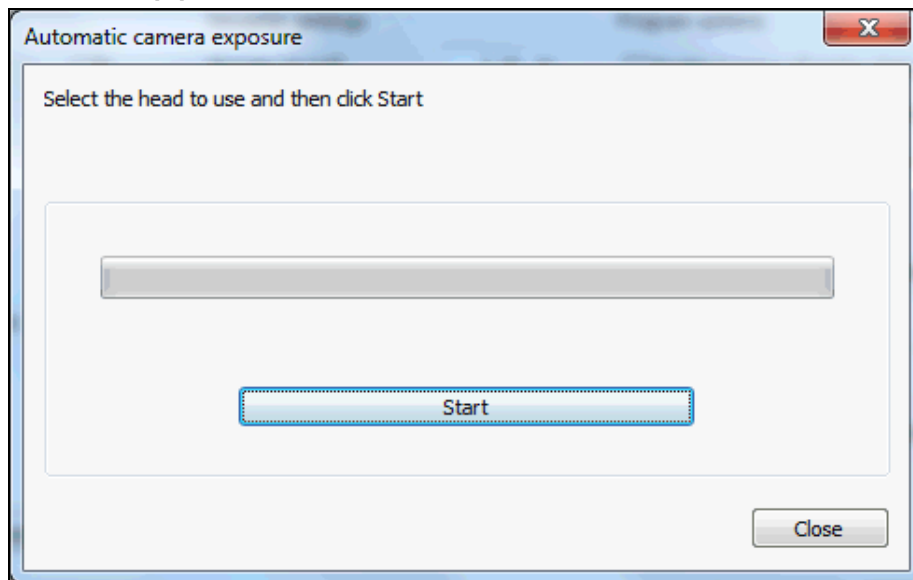
Item	Description
Direction	<p>Maximum and minimum wind direction (where the wind is coming from) in degrees. North is 0 degrees, E is 90 degrees, S is 180 degrees and W is 270 degrees.</p> <p>Note: Set different minimum and maximum wind directions to create random wind directions between the two directions.</p> <p>Unless you have specifically configured a layout differently, when you open a layout and select the View, From front of</p>

Item	Description
	layout (Ctrl F) menu the view shown is looking North.
Speed	<p>Maximum and minimum wind speed and units.</p> <p>Note: Set different minimum and maximum speeds to create random wind speeds between the two speeds.</p> <p>Set both values to the same value above zero for constant wind speed.</p> <p>Set both values to zero for no wind.</p>

Automatic Camera Exposure

This dialog is used to automatically configure the DryFire camera exposure setting(s) by detecting background infra-red light. It is displayed by clicking the **Auto camera exposure** button on the [System Configuration dialog](#), selecting the **Setup, Automatic camera exposure** menu or pressing **F6**.

Screenshot(s)



Usage

To calculate an appropriate camera exposure setting, click the **Start** button.

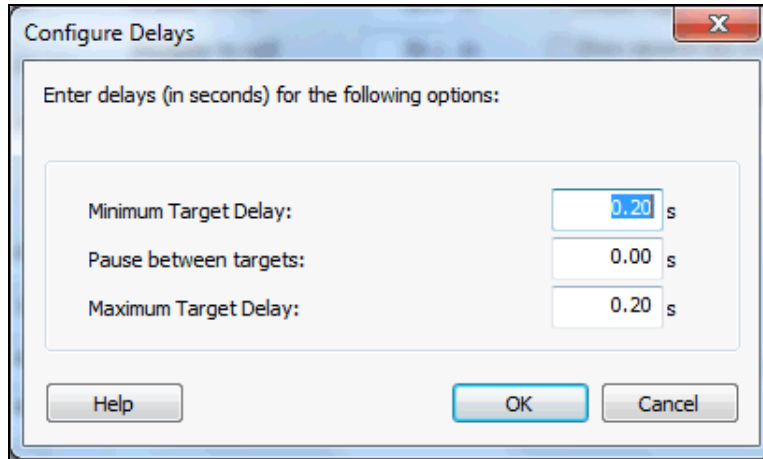
DryFire will briefly scan the wall to determine the highest camera exposure setting it can use without detecting spurious background infra-red light.

When DryFire tells the exposure value it has determined click the **OK** button to apply it.

Configure Delays

This dialog is used to configure various delays that affect all DryFire shooters. It is displayed by clicking the **All delays** button on the [System Configuration dialog](#).

Screenshot(s)



Usage

The dialog is used as follows:

- To change the settings: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.
- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

Item	Description
Minimum Target Delay	<p>Specify the minimum time, in fractions of a second, it should take for the clay to leave the trap's throwing arm here. See note 1 below.</p> <p>Note: This value changes as you load a new layout to the default associated with that layout.</p> <p>DryFire imposes a minimum of 0.2 seconds to reflect the time it takes a person or system on the range to release a clay on hearing the "Pull" instruction.</p>
Maximum Target Delay	<p>Specify the maximum time, in fractions of a second, it should take for the clay to leave the trap's throwing arm here. See note 1 below.</p> <p>Note: This value changes as you load a new layout to the default associated with that layout.</p>
Pause between targets	<p>DryFire normally prepares for the next target as soon as it has finished showing the previous one.</p> <p>You can set a delay between targets to force you to relax - we do not normally stand with gun at the ready all the time when on the range and the gun can become very heavy unless you relax between shots. The value is set to 0 seconds by default so changing it to "5" would introduce a delay of five seconds between</p>

Item	Description
	<p>targets.</p> <p>Note: When using DryFire in the USA this setting defaults to 3.5 seconds. This is to allow shooters to cock their gun again when using the DryFire USA acoustic trigger release system without the simulator hearing the sound of the gun being cocked and treating it as a “pull” instruction.</p>

Notes

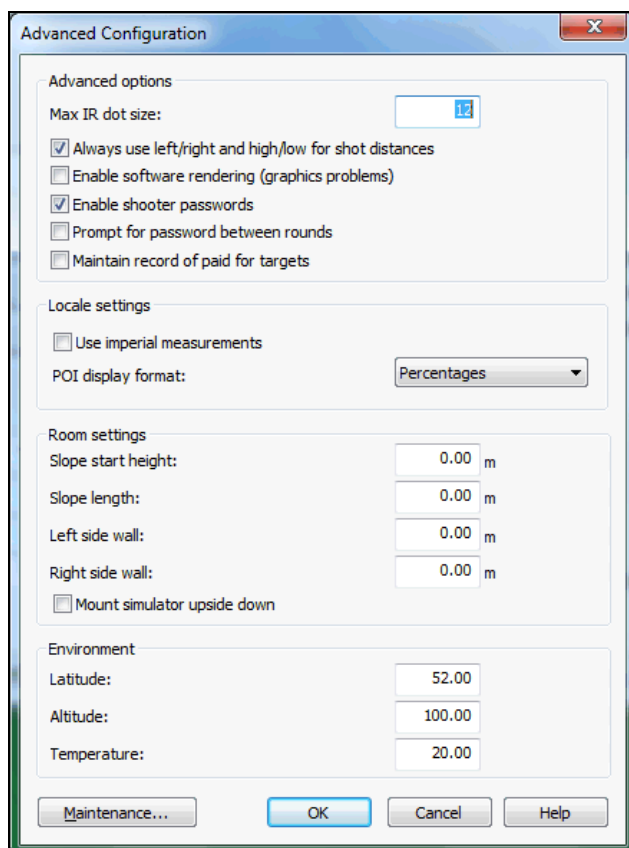
1. Set the **Minimum Target Delay** and the **Maximum Target Delay** to the same value for a fixed delay. Set them differently for different random delays, between the two limits, for each target.

Advanced System Configuration dialog

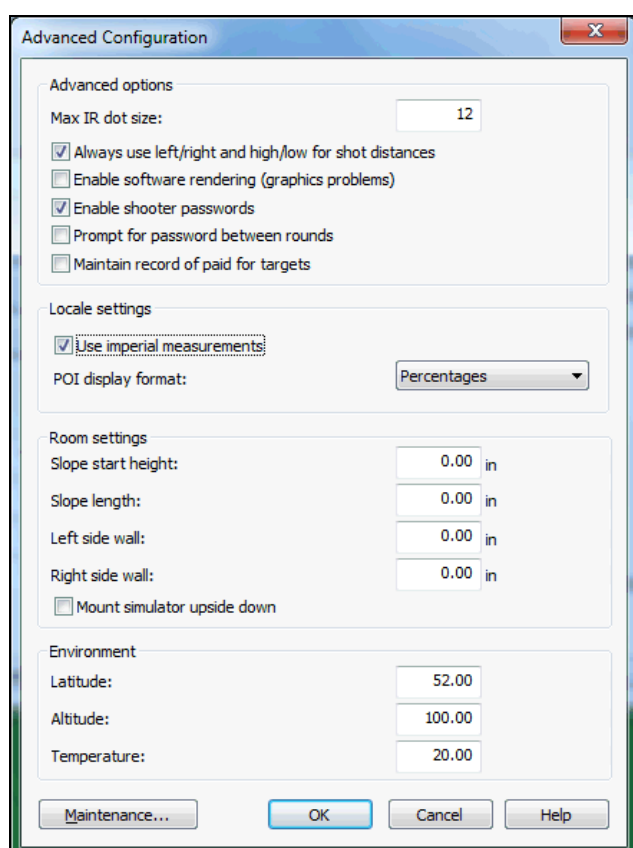
This dialog is used to define advanced settings that affect all DryFire shooters. It is displayed by clicking the **Advanced** button on the [System Configuration dialog](#).

Screenshot(s)

Metric measurements



Imperial measurements



Usage

The dialog is used as follows:

- To change the settings: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.
- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

The settings on this dialog are described below.

Advanced options

Item	Description
Max IR dot size	DryFire sees your "shot" as a dot of invisible infra red (IR) light on the wall. The dot size is in pixels as seen by the camera in the simulator head. If the dot size is too large DryFire assumes that it is stray light and ignores it. This value sets the size above which DryFire ignores light.
Always use left/right and high/low for shot distances	Controls whether DryFire always uses left/right and high/low relative to horizontal and vertical axes to describe the position of the shot relative to the clay. This is the default mode in DryFire V4. The alternative mode, as used in previous versions of DryFire, uses different terms depending on and relative to the clay's trajectory at the time the shot cloud is closest to the clay.

Item	Description
Enable software rendering (graphics problems)	<p>DryFire uses OpenGL (Open Graphics Language) to draw images on your PC screen and uses functions provided by the graphics cards/chips hardware to speed up the process. Unfortunately some graphics cards/chips have bugs in their OpenGL firmware – such bugs might result in blank or single colour screens.</p> <p>If you find DryFire's views aren't shown correctly, try ticking this option and DryFire will draw the images on the screen itself.</p>
Enable shooter passwords	<p>Controls whether shooter passwords, or the administrator password, are required to access DryFire functions.</p> <p>See the Passwords section for more details.</p>
Prompt for passwords between rounds	<p>Used with the squadding option, after a round completes with this option selected the "Select squad" dialog is displayed and shooters are required to login again before they can shoot another round.</p>
Maintain record of paid for targets	<p>This option is only available when passwords are enabled. When selected DryFire will maintain a count of all targets shot at by each shooter whether as part of a squad or in single user mode.</p> <p>The totals are shown by selecting the Setup, Target report menu on the Target report dialog where the administrator can indicate who has paid for targets and see the balance of paid/unpaid targets for each shooter.</p>

Locale settings

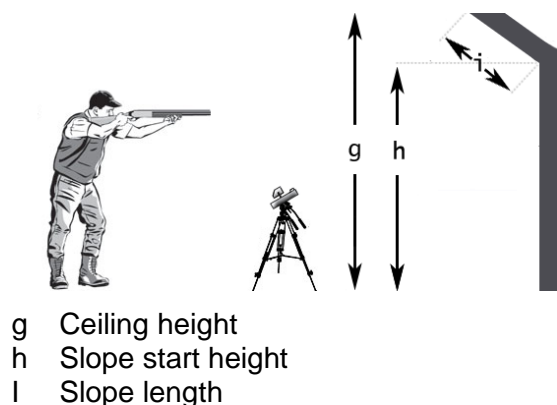
Item	Description
Use imperial measurements	<p>DryFire uses the International Standard metric system. Select this option for Imperial measurements. Measurements are stored as metric values between sessions and converted into imperial for display and editing purposes only.</p> <p>Note: You can also change between metric and imperial, when no dialog is displayed, by double clicking the word Metric or Imperial in DryFire's status bar.</p>
POI display format	<p>You can define the Point Of Impact [POI] for each barrel of your shotgun at a specific distance. The POI can be defined either as a specific distance that the centre of the shot cloud hits above the aim point at that distance, or as a percentage/ratio of the shot could that will be above the aim point at that distance.</p> <p>If you prefer to express the POI as a percentage/ratio rather than an actual distance, select percentage/ratio here.</p>

Room settings



You can change between metric and imperial measurements via the **Use imperial measurements** setting on the [Advanced System Configuration dialog](#) or, when no dialog is displayed, by double clicking the word **Metric** or **Imperial** in DryFire's status bar.

When entering settings, refer to the following diagram:



Item	Key	Description
Slope start height	h	The height from the floor at which your wall start to slope inwards - a roof conversion or attic perhaps. Set to zero if your wall does not have a sloping section.
Slope length	i	The length of the slope starting from its height above the floor up to the point where it reaches the ceiling. Set to zero if your wall does not have a sloping section. Note: Instead of measuring the length of the slope, you can measure how far the slope comes into the room - i.e. the horizontal distance from where the slope meets the wall and the ceiling. If you are specifying this distance, enter the length as a negative number.
Left side wall		If any amount of the left-hand side wall can also be used to show wide targets enter the length of side wall to be used.
Right side wall		If any amount of the right-hand side wall can also be used to show wide targets enter the length of side wall to be used.
Mount simulator upside down		Tick this option if the simulator is mounted upside down, on the ceiling.

Environment

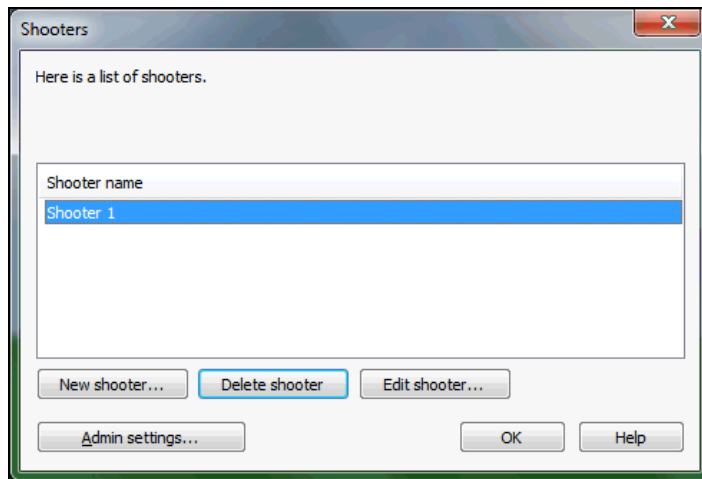
These settings influence the clay and shot trajectories.

Item	Description
Latitude	Enter the latitude of the simulated shooting range.
Altitude	Enter the altitude of the simulated shooting range.
Temperature	Enter the average temperature of the simulated shooting range at the time you will use it.

Shooters dialog

This dialog displays a list of the already configured shooters and provides a means to add, edit or delete shooters and their guns. It is displayed by selecting the **Edit, Shooters and their Guns** menu.

Screenshot(s)



Usage

The dialog is used as follows:

- To create a new shooter: Click the **New shooter** button – the [Shooter Details dialog](#) is then displayed.
- To edit an existing shooter's properties or their gun(s) properties: Either select the shooter in the list and then click the **Edit shooter** button or double click on the shooter's name – the [Shooter Details dialog](#) is then displayed.
- To delete an existing shooter, and all their guns: Select the shooter in the list and then click the **Delete shooter** button. You cannot delete all shooters.
- To change the Administrators password: Click the **Admin settings** button to show the [Admin Settings dialog](#).
- To stop editing shooters: Click the **OK** button.

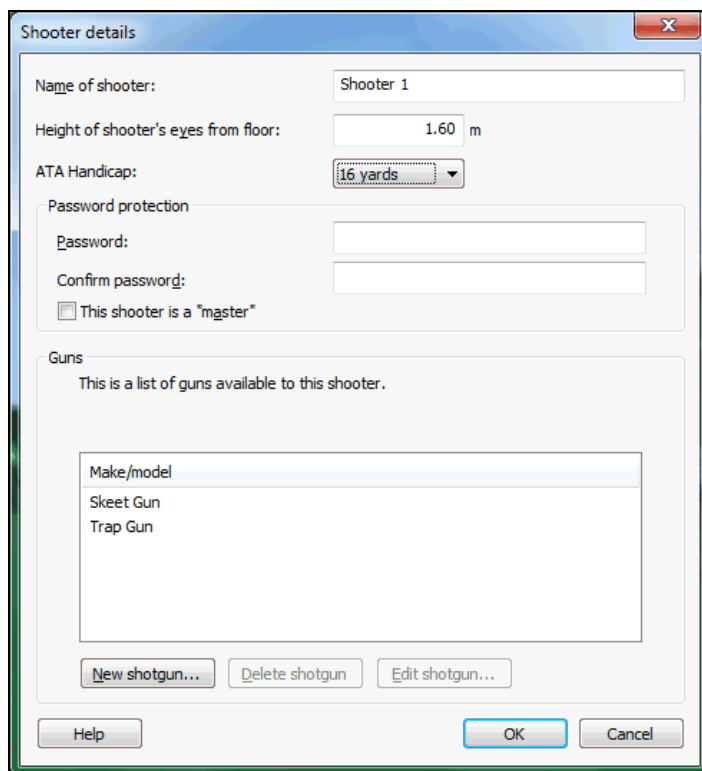
Shooter details dialog

This dialog displays the name of the shooter, their eye height and a list of their guns. It also provides a means to change their password and to specify they are a “master shooter” with greater access to the DryFire settings. It is displayed when defining a new shooter or editing an existing shooter from the [Shooters dialog](#) and when the **New shooter** or **Edit shooter** toolbar buttons are clicked.



Screenshot(s)

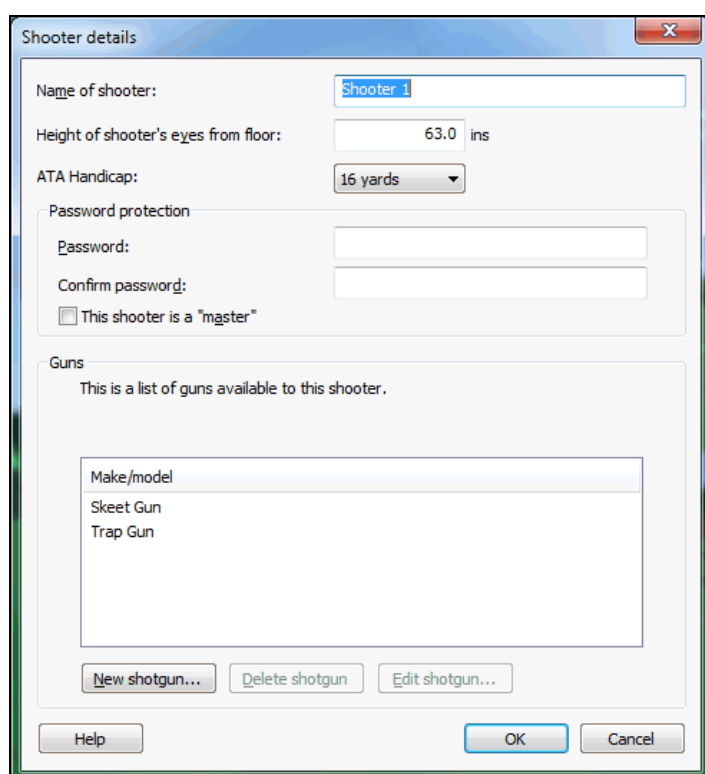
Metric measurements



The screenshot shows the 'Shooter details' dialog box with the following fields and controls:

- Name of shooter:** Text box containing 'Shooter 1'.
- Height of shooter's eyes from floor:** Text box containing '1.60' with a unit dropdown set to 'm'.
- ATA Handicap:** Dropdown menu set to '16 yards'.
- Password protection:**
 - Password:** Text box.
 - Confirm password:** Text box.
 - ☐ This shooter is a "master"
- Guns:**
 - Text: 'This is a list of guns available to this shooter.'
 - Table with columns: 'Make/model', 'Skeet Gun', 'Trap Gun'.
- Buttons:** 'New shotgun...', 'Delete shotgun', 'Edit shotgun...', 'Help', 'OK', 'Cancel'.

Imperial measurements



Usage

The dialog is used as follows:

- To edit the selected shooter's name, eye height or ATA handicap yardage: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.
- To change the shooter's password: Enter the new password in both the **Password** and **Confirm password** fields.
- To add a new gun: Click the **New shotgun** button – the [Shotgun details dialog](#) is then displayed.
- To edit the properties of an existing gun: Either select the gun in the list and then click the **Edit shotgun** button or double click on the gun's name – the [Shotgun details dialog](#) is then displayed.
- To delete an existing gun: Select the gun in the list and then click the **Delete shotgun** button.
- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

The settings on this dialog are described below:

Item	Description
Name of shooter	The name by which the shooter will be known and selected in DryFire.
Height of shooter's eyes from floor	The height of the shooter's eye from the floor when they have mounted their gun. See (b) in the Measurements diagram .

Item	Description
	Note: DryFire's ability to accurately show clay trajectories on your wall depends on this distance being defined accurately.
Password and Confirm password	To change the shooter's password, enter the new password into both these fields.
This shooter is a "Master"	<p>Tick this check box to allow the shooter greater access to the DryFire system.</p> <p>"Master" shooters can access the System configuration dialog, add new shooters and edit existing shooter and gun settings.</p>
ATA Handicap	If you shoot ATA American Single Trap, set your handicap yardage.

Shotgun details dialog

This dialog is used to define properties of your real gun so that DryFire can mimic your real gun's behaviour in the DryFire virtual world. It is displayed when you:

- Click the **New shotgun** or **Edit shotgun** buttons in the **Shotgun** section of the toolbar:



- Select a gun on the [Shooter details dialog](#) and click the **Edit shotgun** button, or double click on a gun on the [Shooter details dialog](#).
- Click the **New shotgun** button on the [Shooter details dialog](#).

Screenshot(s)

Metric measurements

Shotgun details

Name of gun:

Distance from eye to end of barrel: m

Shotgun gauge:

First barrel

Choke:

Muzzle velocity: m/s

Shot weight (g (oz)):

Shot size:

Second barrel

Choke:

Muzzle velocity: m/s

Shot weight (g (oz)):

Shot size:

First barrel point of impact (POI)

Average hit distance: m

Percentage above aim point: ☒ 50.00

Distance above aim point: ☐ 0.00 m

Second barrel point of impact (POI)

Average hit distance: m

Percentage above aim point: ☒ 50.00

Distance above aim point: ☐ 0.00 m

OK Cancel Help

Imperial measurements



You can change between metric and imperial measurements via the **Use imperial measurements** setting on the [Advanced System Configuration dialog](#) or, when no dialog is displayed, by double clicking the word **Metric** or **Imperial** in DryFire's status bar.

Usage

The dialog is used as follows:

- To change the settings: Edit the data as appropriate (see table below) and then click the **OK** button to save the changes.
- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

The settings on this dialog are described below:

Item	Description
Name of gun	A brief name by which you can select the gun within DryFire
Distance from eye to end of barrel	The distance from your eye to the end of the barrel when you are in the mounted position ready to shoot. See (e) in the Measurements diagram . Note: DryFire's ability to accurately show clay trajectories on your wall depends on this distance being defined accurately.
Shotgun gauge	Select your shotgun's gauge. The current muzzle insert is designed for 12g but it will squeeze down to fit in 20g/28g
Per Barrel: Choke	Select the choke fitted to the barrel, or True Cylinder if no choke is fitted. See note 1 below . Note: You can edit the properties of existing chokes and define new chokes using the Edit, Chokes menu.

Item	Description
Per Barrel: Muzzle velocity	This information will be on your cartridge box, in the manufacturer's sales leaflets or on the manufacturer's web site. See note 1 below.
Per Barrel: Shot weight (g (oz))	This is the weight of the shot in your cartridge expressed in grams and/or ounces. The information is on your cartridge box. See note 1 below.
Per Barrel: Shot size	This is the size of shot in the cartridge. This is normally expressed as a "number". No 7, No 8, No 9 etc. The information is on your cartridge box. See note 1 below.
Per Barrel: Point Of Impact (POI)	<p>This defines where the centre of the shot cloud is relative to the point you aim at when you shoot from a specified distance from the target.</p> <p>It is expressed either as a distance or a percentage above the aim point.</p> <p>See note 2 below.</p>

Notes

1. You can, if you wish, have different choke and cartridge definitions for each barrel. You might like to have a fairly open choke, smaller shot size, lower shot weight and lower velocity load for the first barrel and a tighter choke, larger shot size, larger shot weight and higher velocity for the second barrel to go after longer distance doubles. This would probably not be allowed in real competition.
2. Not all guns shoot where you aim. For example, the rib on trap guns is designed so that when you have the correct sight picture the gun will fire slightly high so that you do not have to cover a rising clay. Some specialist guns, for ATA trap doubles for example, are designed so that the two barrels have different points of impact. The second barrel is designed to shoot higher than the first so that it can take the second, further away, clay while retaining the same sight picture.

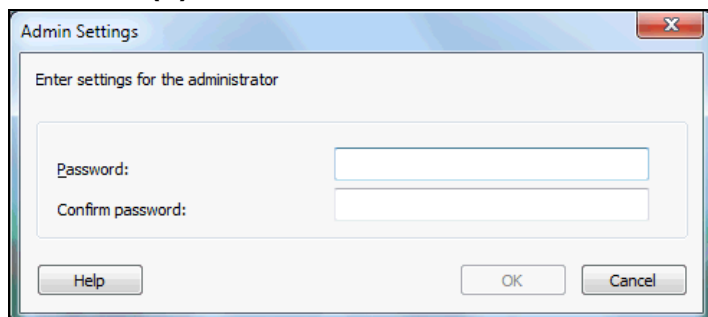
The effect of gravity means that shotgun pellets are falling relative to the aiming point as soon as they leave the barrel. The rib is designed to compensate for that at certain distances. POI is therefore calculated for a known distance and indicates where the centre of the shot pattern will be in relation to the aiming point at **that distance**.

You can see the effect of the POI very easily using DryFire's [pattern board](#).

Admin Settings dialog

This dialog is used to change the administrator password that provides access to all DryFire functions. It is displayed by clicking the **Admin Settings** button on the [Shooters dialog](#).

Screenshot(s)



Usage

The dialog is used as follows:

- To change the administrator password: Enter the new password into both fields then click the **OK** button to save the changes.
- To leave the administrator password as it is: Click the **Cancel** button.

Settings on this dialog

Item	Description
Password and Confirm password	To change the administrator password, enter the new password into both these fields.

Choke details dialog

This dialog displays a list of the already configured chokes and their properties as well as providing a means to add, edit or delete chokes. It is displayed by selecting the **Edit, Chokes** menu.

DryFire defines chokes by the spread of pellets they create at two different distances - 10m and 30m by default. This is sufficient to define any choke because it shows how the shot cloud expands with distance.

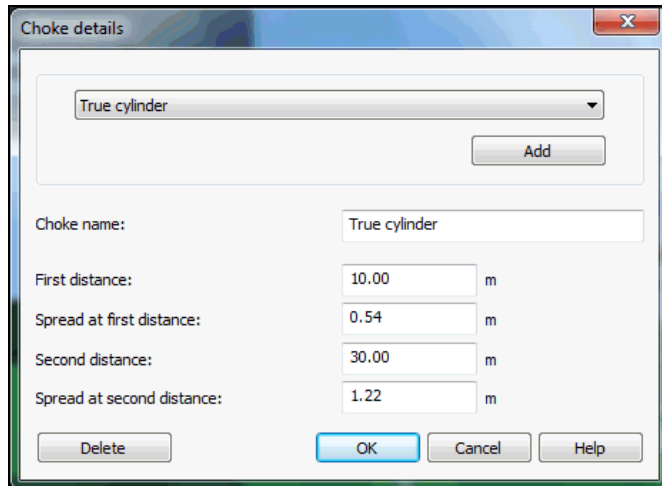


You can change between metric and imperial measurements via the **Use imperial measurements** setting on the [Advanced System Configuration dialog](#) or, when no dialog is displayed, by double clicking the word **Metric** or **Imperial** in DryFire's status bar.

DryFire defines chokes by the spread of pellets they create at two different distances - 10m (10.94 yards) and 30m (32.81 yards) by default. This is sufficient to define any choke because it shows how the shot string expands with distance.

Screenshot(s)

Metric measurements

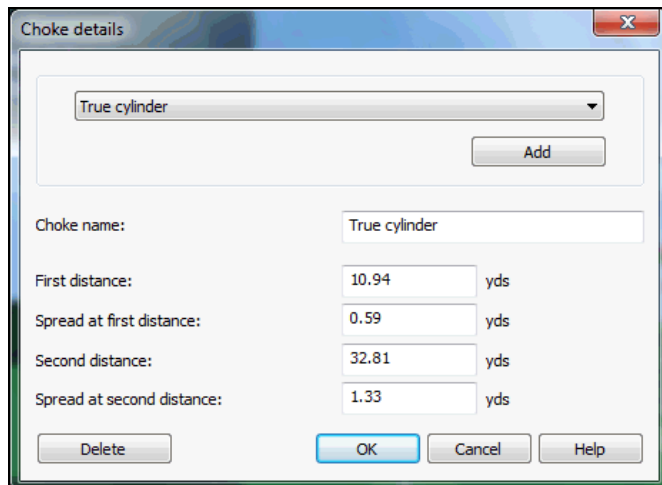


The 'Choke details' dialog box is shown with the following fields and values:

Field	Value	Unit
Choke name:	True cylinder	
First distance:	10.00	m
Spread at first distance:	0.54	m
Second distance:	30.00	m
Spread at second distance:	1.22	m

Buttons: Delete, OK, Cancel, Help

Imperial measurements



The 'Choke details' dialog box is shown with the following fields and values:

Field	Value	Unit
Choke name:	True cylinder	
First distance:	10.94	yds
Spread at first distance:	0.59	yds
Second distance:	32.81	yds
Spread at second distance:	1.33	yds

Buttons: Delete, OK, Cancel, Help

Usage

The dialog is used as follows:

- To view or edit an existing choke's properties: Select the choke from the top list to see its properties in the lower section, edit the properties as required (see table below) then click the **OK** button.
- To delete an existing choke: Select the choke from the top list then click the **Delete** button.

You cannot delete a choke that is used by a gun.

- To add a new choke: Click the **Add** button, define the choke's properties in the lower section (see table below) then click the **OK** button.
- To discard any changes you may have made: Click the **Cancel** button.



Chokes must be associated with a shooter's gun for changes to be effective. Refer to the [Shooter and Gun settings section](#).

Settings on this dialog

The settings on this dialog are described below:

Item	Description
Choke name	The name by which this choke will be known within DryFire when you configure your gun(s).
First distance	The first distance at which the shot cloud spread is defined, often 10m.
Spread at first distance	The shot cloud spread at the defined first distance from the shotgun.
Second distance	The second distance at which the shot cloud spread is defined, often 30m.
Spread at second distance	The shot cloud spread at the defined second distance from the shotgun.

Clay details dialog

This dialog displays a list of the already configured clays and their properties as well as providing a means to add, edit or delete clays. It is displayed by selecting the **Edit, Clays** menu.



We do **not** recommend that you try to edit this data.

That said, some shooters have set **Energy required flat-on** and **Energy required edge-on** to zero so that DryFire considers a clay hit if the shot cloud covers the clay no matter the distance.



You can change between metric and imperial measurements via the **Use imperial measurements** setting on the [Advanced System Configuration dialog](#) or, when no dialog is displayed, by double clicking the word **Metric** or **Imperial** in DryFire's status bar.

Screenshot(s)

Metric measurements

The 'Clay details' dialog box displays the following values for the 'Standard' clay:

Property	Value	Unit
Mass	0.11	kgs
Area flat-on	0.009	m ²
Area edge-on	0.003	m ²
Energy required flat-on	0.80	J
Energy required edge-on	1.00	J
Drag on top surface	1.20	
Drag on bottom surface	2.00	
Minimum drag	0.40	
Minimum drag angle	-6	deg
Drag shape on top	100	
Drag shape on bottom	10	
Positive lift	1.55	
Negative lift	1.20	
Lift angle positive	14	
Lift angle zero	-6	
Lift angle negative	-17	
Friction	1.00	
Display radius (rabbits)	0.00	

Imperial measurements

The 'Clay details' dialog box displays the following values for the 'Standard' clay:

Property	Value	Unit
Mass	3.74	oz
Area flat-on	0.142	in ²
Area edge-on	0.042	in ²
Energy required flat-on	0.80	J
Energy required edge-on	1.00	J
Drag on top surface	1.20	
Drag on bottom surface	2.00	
Minimum drag	0.40	
Minimum drag angle	-6	deg
Drag shape on top	100	
Drag shape on bottom	10	
Positive lift	1.55	
Negative lift	1.20	
Lift angle positive	14	
Lift angle zero	-6	
Lift angle negative	-17	
Friction	1.00	
Display radius (rabbits)	0.00	

Usage

The dialog is used as follows:

- To view or edit an existing clay's properties: Select the clay from the top list to see its properties in the lower section, edit the properties as required (see table below) then click the **OK** button.
- To delete an existing clay: Select the clay from the top list then click the **Delete** button.

- To add a new clay: Click the **Add** button, define the clay's properties in the lower section (see table below) then click the **OK** button.
- To discard any changes you may have made: Click the **Cancel** button.

Settings on this dialog

The settings on this dialog are described below:

Item	Description
Clay name	The name of the clay type
Mass	The weight of the clay.
Area flat-on	The area of the clay when looked at flat-on from above.
Area edge-on	The area of the clay when looked at edge on.
Energy required flat-on	The amount of energy required to break the clay when the shot hits the flat side/belly of the clay. If you are not breaking clays when you hit them dead-centre, and you think you should be breaking them, try reducing this value. See note 1 below .
Energy required edge-on	The amount of energy required to break the clay when the shot hits the edge of the clay. If you are not breaking clays when you hit them dead-centre, and you think you should be breaking them, try reducing this value. See note 1 below .
Drag on top surface	Coefficient of drag, Cd, flat-on, top-first.
Drag on bottom surface	Coefficient of drag, Cd, flat-on, bottom-first.
Minimum drag	Coefficient of drag, Cd, at minimum drag.
Minimum drag angle	Angle of attack giving minimum drag (degrees).
Drag shape on top	DryFire determined value - must be >1.
Drag shape on bottom	DryFire determined value - must be >1.
Positive lift	Coefficient of lift, Cl, when upwards lift is maximum.
Negative lift	Coefficient of lift, Cl, when downwards "lift" is maximum.
Lift angle positive	Degrees.
Lift angle zero	Degrees.
Lift angle negative	Degrees.
Friction	Coefficient of friction, Cf, which is unit-less. Used for rabbit.
Display radius (rabbits)	Radius of the clay as displayed on the PC screen i.e. not the radius of the real clay. This is only required for rabbits and enables them to be shown running on the surface of the ground rather than under it! This value is not used in shot calculations and is set by trial and error until things look right!

Notes

1. A small load of small pellets will not break clays at medium to long distances - insufficient pellets will strike the clay with insufficient energy to break it.

Trap details dialog

This dialog shows details of up to the first 6 traps defined in the current layout. It is displayed by selecting the **View, Details of traps** menu or by pressing **F3**.

Screenshot(s)

Metric measurements

The screenshot shows a window titled "Trap details" with a close button (X) in the top right corner. The window contains a table with 6 columns labeled "Trap 1" through "Trap 6" and 5 rows of measurement data. The data is as follows:

	Trap 1	Trap 2	Trap 3	Trap 4	Trap 5	Trap 6
Throw distance	20.00	20.00				
Intermediate distance (post/hoop)						
Intermediate height (post/hoop)						
Clay flight time (seconds)	4.30	4.30				
Clay flight distance	51.89	51.89				

Below the table, a note states: "Distances shown are in metres. The values for some traps are not present in the layout file and will not be shown in the table." A "Close" button is located at the bottom right of the dialog.

Imperial measurements

The screenshot shows a window titled "Trap details" with a close button (X) in the top right corner. The window contains a table with 6 columns labeled "Trap 1" through "Trap 6" and 5 rows of measurement data. The data is as follows:

	Trap 1	Trap 2	Trap 3	Trap 4	Trap 5	Trap 6
Throw distance	787.4	787.4				
Intermediate distance (post/hoop)						
Intermediate height (post/hoop)						
Clay flight time (seconds)	4.30	4.30				
Clay flight distance	170.2	170.2				

Below the table, a note states: "Distances shown are in feet. The values for some traps are not present in the layout file and will not be shown in the table." A "Close" button is located at the bottom right of the dialog.

Usage

The dialog provides information, you cannot change the settings.

Settings on this dialog

The settings on this dialog are described below:

Item	Description
Throw distance	The distance, measured along the ground, from the trap to where the clay lands. See note 1 below.
Intermediate distance	When a trap has a defined intermediate point this defines the distance from the trap to the intermediate point.
Intermediate height	Where appropriate this defines the height of the clay at the intermediate point.

Item	Description
Clay flight time	The time the clay takes to fly from trap to ground. See note 1 below.
Clay flight distance	The distance the clay travels, measured through the air. See note 1 below.

Notes

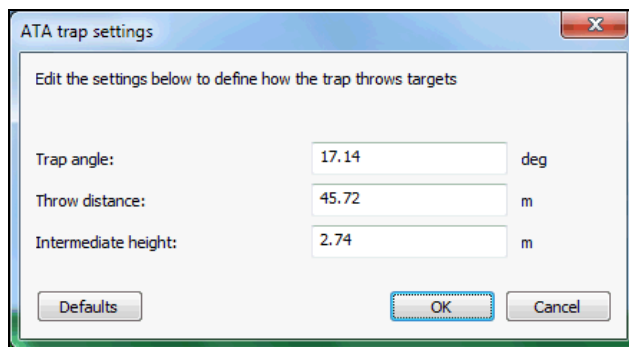
1. Wind settings will change the flight time and distance. Set zero wind via [Wind section](#) of the [System configuration dialog](#) to see initial values.

ATA Trap settings dialog

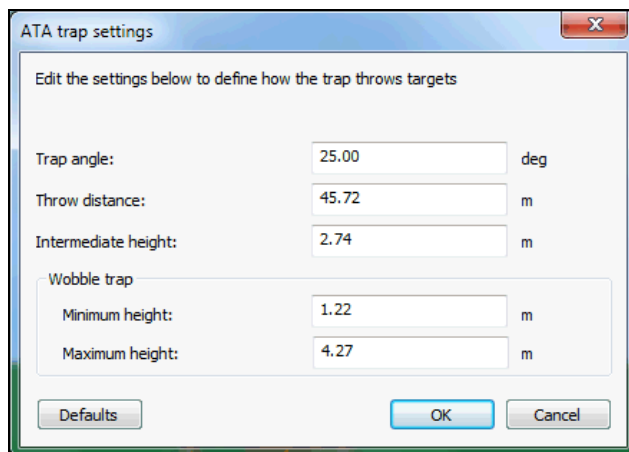
This dialog is used when shooting ATA or Wobble trap layouts to review or change the trap settings. It is displayed by selecting the **Setup, ATA trap settings** menu.

Screenshot(s)

ATA Single or Doubles Layout



Wobble Trap Layout



Usage

Edit the values on this dialog to create your revised version of an ATA layout and then click the **OK** button. Click the **Defaults** button to revert to normal values or click the **Cancel** button to discard any changes you may have made.

Settings on this dialog

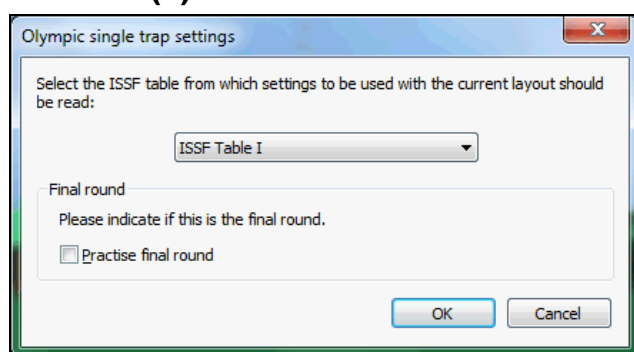
The settings on this dialog are described below:

Item	Description
Trap angle	The maximum angle either side of straightaway that the trap can throw clays.
Throw distance	The distance that the trap throws clays.
Intermediate height	The height the clay must be at when it reaches the intermediate distance.
Minimum height	Sets the minimum height for the wobble trap.
Maximum height	Sets the maximum height for the wobble trap.

Olympic single trap settings dialog

This dialog is used when shooting the **Olympic Trap singles** layout to select which ISSF table is used to define the properties of the traps and whether the finals round is being practised. It is displayed by selecting the **Setup, Olympic single trap settings** menu.

Screenshot(s)



Usage

The dialog is used as follows:

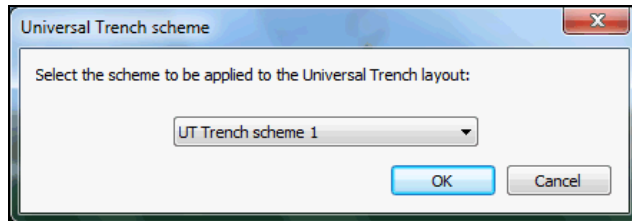
- Select the table to be used to define the properties of the trap.
- Tick the **Practise final round** option to allow only one shot at each clay.

Click the **OK** button to apply the changes, or click the **Cancel** button to continue using the current settings.

Universal Trench scheme dialog

This dialog is used when shooting **Trap universal** layouts to select which scheme is used to define the properties of the traps. It is displayed by selecting the **Setup, Select Universal Trench scheme** menu.

Screenshot(s)



Usage

Select the scheme to be used to define the properties of the trap then click the **OK** button, or click the **Cancel** button to continue using the current scheme.

Select squad dialog



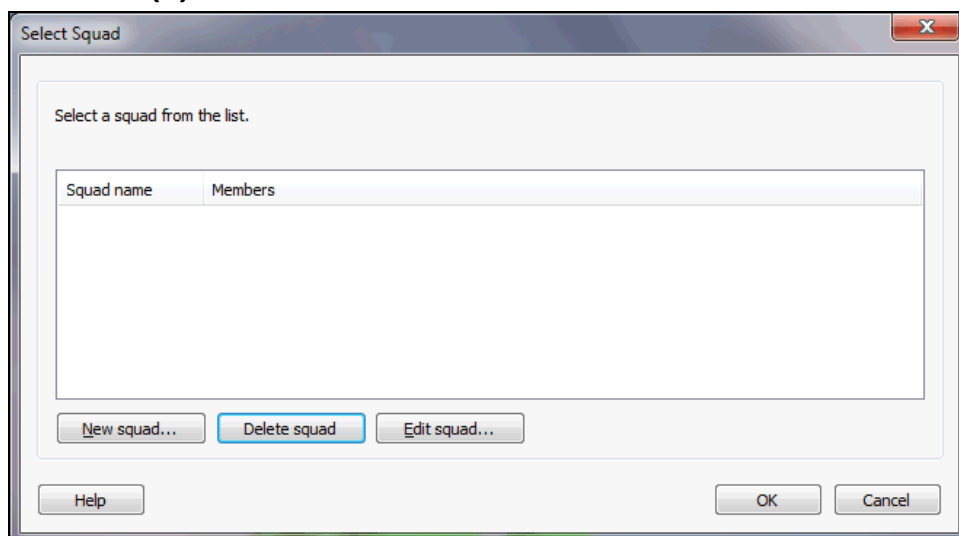
This dialog is only available when the [Squadding](#) option has been applied to your DryFire V4 simulator. If you do not already have the squadding option, visit www.dryfire.com for more information.

See the [Squadding section](#) for more details.

This dialog is used to create, modify or delete squads of shooters as well as to select a squad of shooters who then shoot a layout as they would on a range. It is displayed by selecting either the **Edit, Squads** or **File, Start squad session** menus.

It lists the existing squads and the shooters in each squad.

Screenshot(s)



Usage

The dialog is used as follows:

- To create a new squad of shooters: Click the **New squad** button to display the [Squad details dialog](#).

- To delete an existing squad of shooters: Select the squad in the list and then click the **Delete squad** button.
- To change the shooters in an existing squad: Select the squad in the list and then click the **Edit squad** button to display the [Squad details dialog](#).
- If you used the **File, Start squad session** menu to display this dialog, select a squad from the list and click the **OK** button to start practising a layout as the selected squad of shooters.
- If you used the **Edit, Squads** menu to display this dialog, click the **OK** button to close the dialog

Squad details dialog

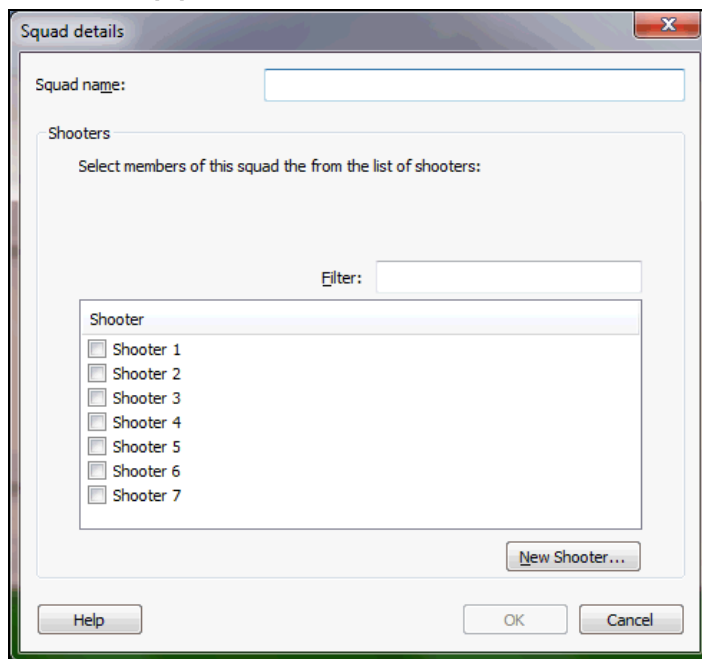


This dialog is only available when the [Squadding](#) option has been applied to your DryFire V4 simulator. If you do not already have the squadding option, visit www.dryfire.com for more information.

See the [Squadding section](#) for more details.

This dialog is used to define the squad's name and which shooters are members of the squad. It is displayed by clicking either the **New squad** or **Edit squad** buttons on the [Select Squad dialog](#).

Screenshot(s)



Usage

The dialog is used as follows:

- Type, or edit, the name of the squad in the **Squad name** field.
- Tick the check box next to the name of a shooter if they are a member of this squad.



Use the **Filter** field to find specific shooters among a long list of shooters more quickly: To find a shooter named "John", type "John" into the **Filter** field.

- If you entered the administrator password when you selected the **File, Start squad session** or **Edit, Squads** menu then the **New shooter** button can be used to define new shooters and their guns.
- Click the **OK** button to close the dialog

Squad Login dialog



This dialog is only available when the [Squadding](#) option has been applied to your DryFire V4 simulator. If you do not already have the squadding option, visit www.dryfire.com for more information.

See the [Squadding section](#) for more details.

This dialog is used to indicate which squad members are present, where each will start shooting from and which gun each shooter will use.

Screenshot(s)

Before passwords are entered

Present	Shooter	Password	Stand	Shotgun	Handicap
<input checked="" type="checkbox"/>	Shooter 1		Login		
<input checked="" type="checkbox"/>	Shooter 2		Login		
<input checked="" type="checkbox"/>	Shooter 3		Login		
<input checked="" type="checkbox"/>	Shooter 4		Login		
<input checked="" type="checkbox"/>	Shooter 5		Login		

After passwords are entered

Present	Shooter	Password	Stand	Shotgun	Handicap
<input checked="" type="checkbox"/>	Shooter 1		Station 1	Trap Gun	16 yards
<input checked="" type="checkbox"/>	Shooter 2		Station 2	Gun 2	16 yards
<input checked="" type="checkbox"/>	Shooter 3		Station 3	Gun 3	16 yards
<input checked="" type="checkbox"/>	Shooter 4		Station 4	Gun 4	16 yards
<input checked="" type="checkbox"/>	Shooter 5		Station 5	Gun 5	16 yards

Usage

The dialog is used as follows:

Check that the appropriate layout is selected and click the **Browse** button to select another layout via the [Open layout dialog](#) if necessary.

If a squad member is not present, clear the **Present** check box for that shooter to temporarily omit them from the squad.

Each shooter is required to confirm their identity by entering their password and clicking their **Login** button. After logging in they can select which of their guns they want to use for this squad session and, if the layout supports it, confirm their handicap yardage.



If the [administrator password](#) is entered instead of a user's own password then all shooters are immediately logged in.

Each shooter is allocated a stand. Depending on the layout selected all shooters may be on the same stand (e.g. skeet or sporting) or each shooter may be on a different stand (e.g. ATA, DTL or Olympic trap).

When all present shooters have logged in and configured their settings appropriately, click the **OK** button to start the squad shooting session.

Squad results dialog



This dialog is only available when the [Squadding](#) option has been applied to your DryFire V4 simulator. If you do not already have the squadding option, visit www.dryfire.com for more information.

See the [Squadding section](#) for more details.

This dialog is displayed when a squadding round completes, either as a result of all squad members having shot at all targets or someone clicking the **Finish round** or **End squadding mode** buttons.

It displays, and provides options to print or save as a PDF, each shooter's report for the squadding session just finished.

Screenshot(s)

Squad Results

Shooter 1 | Shooter 2

Average time: 1.05 sec
Average range: 34.47 m
Average pointing error: 0.64 m

Hit percentage: 37
Hits: 15
Misses: 25
Total shots: 40

	Hits	Misses	Ahead		Behind		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay travelling left to right:	8	8	0.52	15	0.50	1	0.12	8	0.14	8
Clay travelling right to left:	7	17	0.47	20	0.66	4	0.46	19	0.11	5

	Left		Right		Above		Below	
	Average	Total	Average	Total	Average	Total	Average	Total
Clay rising:	0.11	12	0.39	25	0.39	25	0.11	12
Clay falling:	0.32	1	0.03	2	0.03	2	0.32	1

Print... Save as PDF...

Print all... OK Help

Usage

Click a shooter's name on the tabs along the top of the dialog to see the report for that shooter.

Click the **Print** or **Save as PDF** buttons to print or save the current shooter's report.

Click the **Print all** button to print reports for all the squad members.

Click the **OK** button to close the dialog when you have finished reviewing the results.

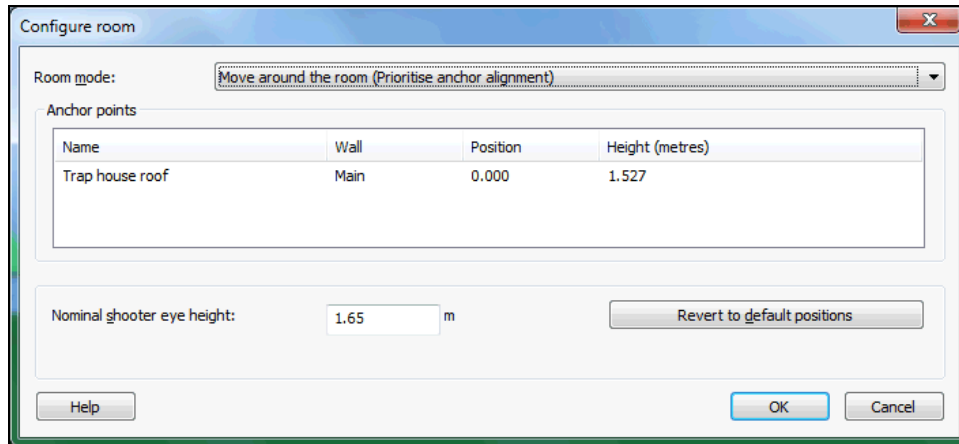
Configure room dialog

This dialog is used to switch between DryFire's **Target comes to shooter** and, when using a compatible layout, **Move around the room** modes:

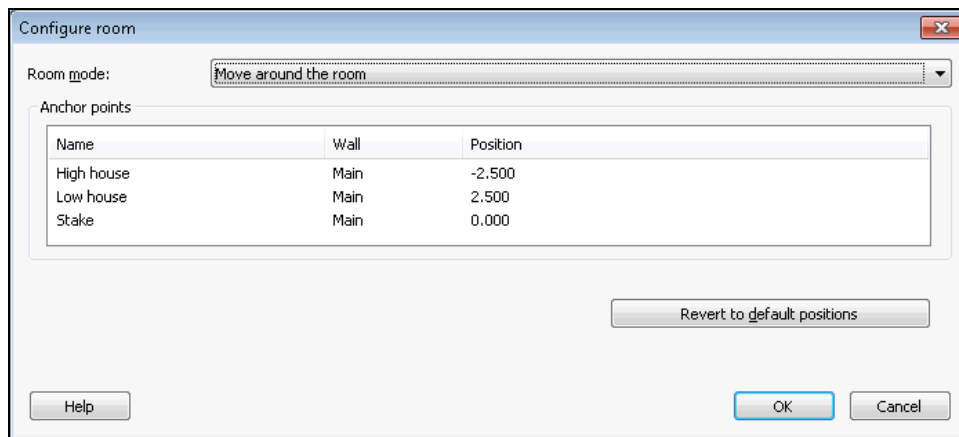
- Target comes to shooter** mode is the mode used by earlier versions of DryFire.
 In this mode all shooters stand at the same physical location in the room when taking all targets and DryFire shows the clay's trajectory on the wall as it would appear from the real stand/station on the real range.
- Move around the room** mode is useful when you have specific points on the wall that relate to points on the range, such as trap houses or stakes, or are using a scenic wall canvas such as those available via www.dryfire.com or your local DryFire dealer.
 In this mode shooters may stand in different locations (room stands) depending on the station/stand that the target being presented.
 The room stands will be spread across the width of the room, up to a maximum width of 6m.

Screenshot(s)

DTL example



Skeet example



Usage

Select the **Room mode** from the list at the top of the dialog:

- **Target comes to shooter**

This is the way that previous versions of DryFire have worked and is supported by all layouts.

All shots are taken from the same physical location at in the room and the clay's trajectory is shown on the wall as it would appear on the range when viewed from the appropriate stand/station.

- **Move around the room**

In this mode shooters stand in different physical locations in the room depending on the station/stand that the target being presented relates to and DryFire shows the clay(s) emerging from or passing through fixed points on the wall, known as anchor points.

This mode is useful when you want specific points on the wall to relate to points on the range, such as trap houses or stakes, especially when using a scenic wall canvas such as those available via www.dryfire.com or your local DryFire dealer.

For “trap” layouts such as ATA, DTL, Olympic or Universal Trench, there are two sub-modes:

- **Prioritise anchor alignment**

DryFire prioritises the anchor point location over individual shooter height and, when appropriate to the discipline, handicap.

- **Prioritise target accuracy**

DryFire prioritises individual shooter height and, when appropriate to the discipline, handicap when showing clay trajectories – the clay launch point may vary.



The **Nominal shooter eye height** and, when appropriate to the layout, **Nominal shooter handicap** are used to calculate anchor point heights and clay trajectories. For best results, set these to match the shooter or the average of the shooters, and then click the **Revert to default positions** button to recalculate the anchor’s height and the room stand locations.

To change the wall on which the anchor point is positioned, double click on the anchor point’s existing wall name and select an alternative (options are **Main**, **Left** and **Right**).



To operate in **Move around the room** Skeet layouts require either a wide room (~5m or 5.5 yards) or for the High and Low house anchor points to be relocated onto the left and right side walls.

As normal, the simulator should be located perpendicular to the wall’s midpoint.

To change an anchor point’s position on the wall, double click on the anchor point’s current position and type a new position. For anchor points on the main wall a negative distance means to the left of the simulator and a positive distance means to the right of the simulator. For anchor points on the left or right side wall the distance is the distance out from the main wall.

DryFire recalculates room stand positions immediately and will tell you if it is impossible to position room stands to accommodate alterations you have made then revert to the last possible setting.

Use the **Revert to default positions** button to reset the anchor points to their default locations, taking into account the current **Nominal shooter eye height** and, when appropriate to the layout, **Nominal shooter handicap**.



Since the room, you and your gun are not all similarly scaled the room stand locations calculated by DryFire may not produce the same pattern (i.e. a straight line or an arc) as you see on the real range – this is not wrong, DryFire is ensuring the angles are correct.

Click the **OK** button to apply the settings.

Target Report dialog



This dialog is only available when both **Enable shooter passwords** and **Maintain record of paid for targets** are ticked on the [Advanced system configuration dialog](#).

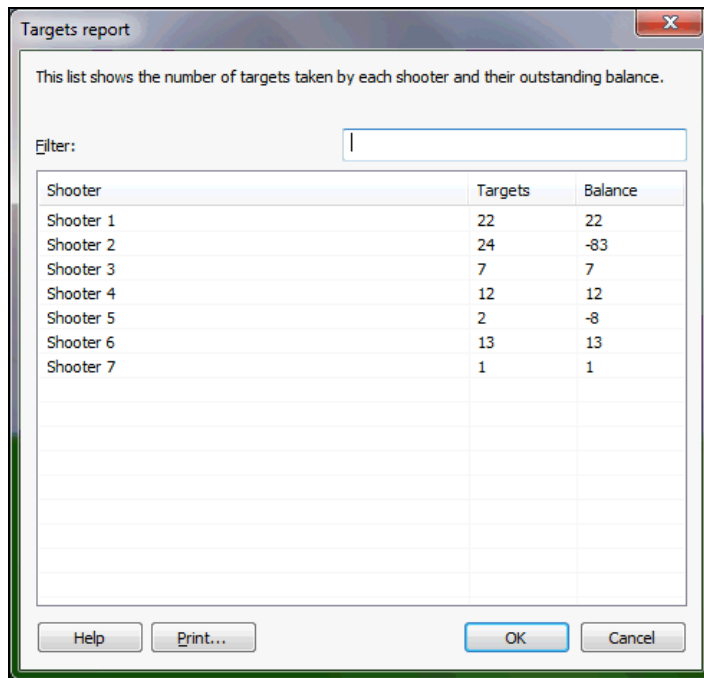
The [administrator password](#) is required to access this dialog.

This dialog is displayed by selecting the **Setup, Target report** menu. It displays, and provides an option to print, the number of targets shot by each shooter and their outstanding balance.

A negative balance indicates the shooter has paid for more targets than they have shot.

A positive balance indicates that the shooter has shot more targets than they have paid for.

Screenshot(s)



Usage

Type a shooter's name into the **Filter** field to filter the list to show only those shooters that match the text typed.

Click the **Print** button to print the report.

If you are charging for targets, when a shooter pays for targets:

- Double click on the shooter's balance entry.
- Edit the entry accordingly and then press **ENTER**.

For example, if the shooter buys 100 targets subtract 100 from their current balance.

Report generator dialog



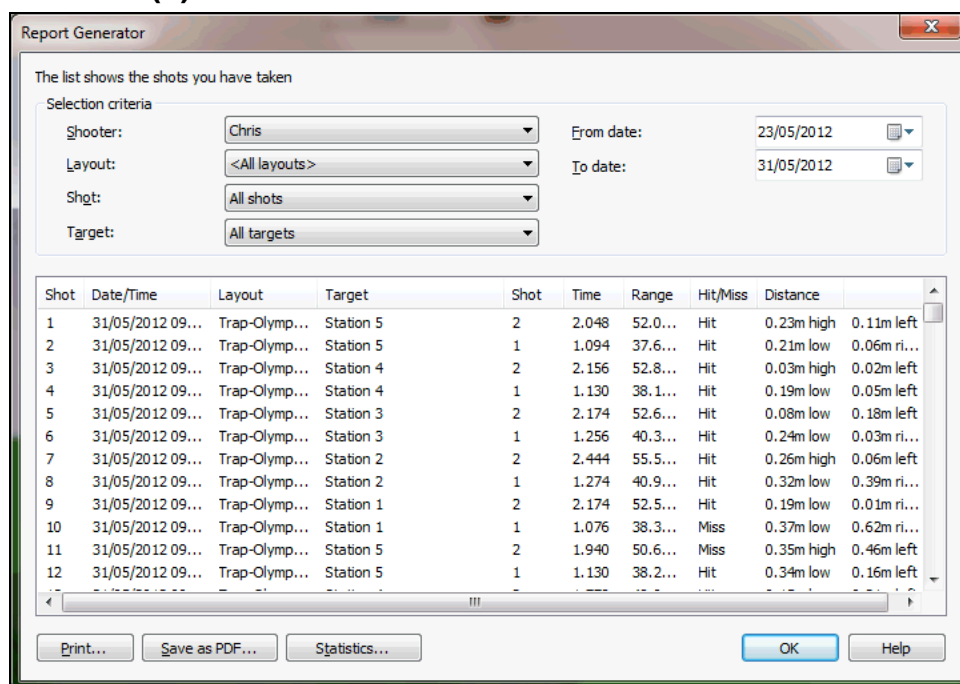
This dialog is only available when the [Report generator](#) option has been applied to your DryFire V4 simulator. If you do not already have the Report generator option, visit www.dryfire.com for more information.

See the [Report generator section](#) for more details.

This dialog is displayed when the **View, Report generator** menu is selected while shot data is being logged.

It displays, and provides options to print, save as a PDF and analyse shot data related to targets previously shot using DryFire V4. The listed data can be filtered, by changing the settings on the dialog, to show results related to different shooters, a specific range of days, specific layouts and targets.

Screenshot(s)



Usage

To filter the list of shots, change the settings in the **Selection criteria** section at the top of the dialog by clicking the downward pointing arrows.

Click the **Print** or the **Save as PDF** buttons to or save the current list as a PDF.

Click the **Statistics** button to analyse the list and display related statistics on the [Statistics dialog](#).



To compare statistics for two or more lists of shots:

1. Set the selection criteria on the [Report generator dialog](#) to show the first list of shots.
2. Click the **Statistics** button to analyse the current list of shots on the [Statistics dialog](#).
3. Click the **OK** button to return to the [Report generator dialog](#).
4. Set the selection criteria on the [Report generator dialog](#) to show the next list of shots.
5. Click the **Statistics** button to add the analysis of the current list of shots to the [Statistics dialog](#).
6. Switch between the tabs on the [Statistics dialog](#) or click the **Print**, **Save as PDF** or **Print all** buttons on the [Statistics dialog](#) to compare the shot statistics

7. Repeat steps 3 to 6 as necessary.

Click the **OK** button to close the dialog when you have finished reviewing the results.

Statistics dialog



This dialog is only available when the **Report generator** option has been applied to your DryFire V4 simulator. If you do not already have the Report generator option, visit www.dryfire.com for more information.

See the **Report generator section** for more details.

This dialog is displayed when the **Statistics** button on the **Report generator dialog** is clicked.

It displays, and provides options to print or save as a PDF, statistics calculated from the shots listed on the **Report generator dialog**.

Screenshot(s)

Statistics

Chris

Chris, <All layouts>, 23/05/2012 - 31/05/2012, All shots, All targets

Average time:	1.45	sec	Hit percentage:	63
Average range:	39.57	m	Hits:	210
Average pointing error:	0.41	m	Misses:	121
			Total shots:	331

	Hits	Misses	Ahead		Behind		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay travelling left to right:	101	52	0.24	67	0.28	85	0.24	84	0.22	69
Clay travelling right to left:	109	69	0.27	76	0.27	102	0.33	96	0.22	82

	Hits	Misses	Left		Right		Above		Below	
			Average	Total	Average	Total	Average	Total	Average	Total
Clay rising:	141	52	0.21	84	0.22	108	0.26	89	0.22	104
Clay falling:	69	69	0.34	77	0.33	61	0.31	91	0.22	47

Print... Save as PDF...

Print all... OK Help

Usage

The tabs show the name of the shooter that the statistics on that tab relate to, click the tabs to show the different sets of statistics. Below the tab DryFire shows a summary of the shot selection criteria that the statistics relate to.

Click the **Print** or the **Save as PDF** buttons to or save the statistics on the currently selected tab on the **Statistics** dialog.

Click the **Print all** button to print the statistics on all the tabs on the **Statistics** dialog.



To compare statistics for two or more lists of shots:

1. Set the selection criteria on the **Report generator dialog** to show the first list of shots.
2. Click the **Statistics** button to analyse the current list of shots on the **Statistics dialog**.
3. Click the **OK** button to return to the **Report generator dialog**.
4. Set the selection criteria on the **Report generator dialog** to show the next list

of shots.

5. Click the **Statistics** button to add the analysis of the current list of shots to the [Statistics dialog](#).
6. Switch between the tabs on the [Statistics dialog](#) or click the **Print**, **Save as PDF** or **Print all** buttons on the [Statistics dialog](#) to compare the shot statistics
7. Repeat steps 3 to 6 as necessary.

Click the **OK** button to close the dialog when you have finished reviewing the statistics.

Training plans dialog



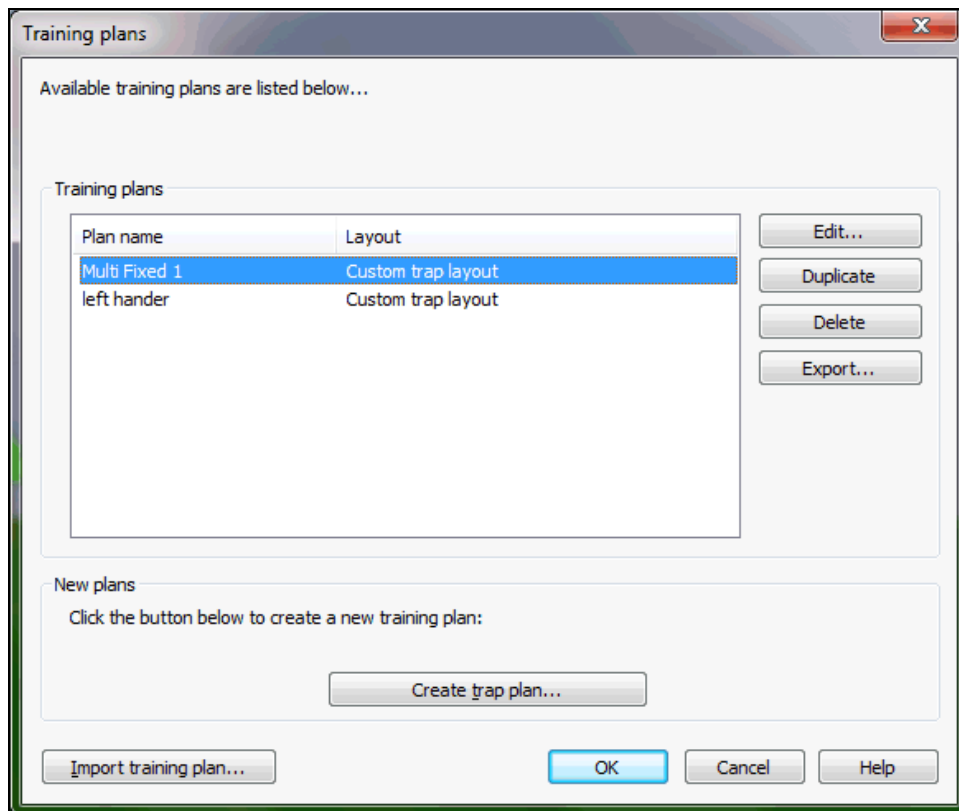
This dialog is only available when the [Trap exercise](#) option has been applied to your DryFire V4 simulator. If you do not already have the Trap exercise option, visit www.dryfire.com for more information.

See the [Trap exercise section](#) for more details.

This dialog is displayed when the **Edit, Training plans** menu is selected.

It lists DryFire training plans and provides a means to create new; export, delete or edit existing as well as import plans received from elsewhere.

Screenshot(s)



Usage

Initially no training plans are defined.

To create a new plan, click the **Create trap plan** button. To edit (or review) an existing training plan, select the training plan in the list then click the **Edit** button. Both cause the [Trap exercises dialog](#) to be displayed.



If you have received a training plan from another DryFire V4 user or PC, click the **Import training plan** button to import it into your copy of DryFire.

Once you have created a training plan:

- Click the **Export** button to save the plan so that you can copy it to another PC running DryFire V4 or email it to another DryFire V4 user that also has the Trap exercise module.
- Click the **Duplicate** button to create a copy of the plan that you can then edit to meet specific requirements – its sometimes quicker to start with a copy of an existing plan than to start each plan from scratch.

Trap exercises dialog



This dialog is only available when the [Trap exercise](#) option has been applied to your DryFire V4 simulator. If you do not already have the Trap exercise option, visit www.dryfire.com for more information.

See the [Trap exercise section](#) for more details.

This dialog is displayed when the **Edit** or **Create trap plan** buttons on the [Training plans dialog](#) or the **Ad Hoc** button on the [Start training session dialog](#) are clicked.

It lists the exercises in the currently selected training plan and is used to edit, delete or re-order those exercises.

Screenshot(s)

Usage

Define or edit the training plan's name in the upper box.

When creating a new plan a default exercise is created for you – edit this as required.

To add another exercise to the training plan, click the **Add** button. To remove an existing exercise from the plan, select the exercise then click the **Delete** button.

Exercises are practised in the order listed, to change the order select an exercise and then click the **Up** or **Down** buttons.

For each exercise you can:

- Set the name, this is displayed when you're practising the exercise.
- Set the type of exercise, either **Wedge of the Pie** or **Fixed angles**.
 - For wedge of the pie (shown above) you then define the centre line angle trap oscillation angle and Intermediate height.
 - For fixed angles you tick up to 10 check boxes then define their specific angles:

- Set the target characteristics:

- Use the **Clay speed** value to control the speed the target moves. A value of 1 here means normal speed, 100%. 2 means twice normal speed, 0.5 means half normal speed.
- Set **Maximum target delay** and **Minimum target delay** to the same value to introduced a fixed delay, or different values to introduce a random delay, when **Pull** is called.
- Set the **Wind** characteristics.
- Set the **Hit criteria**.
 - **Based on pellet energy (default)**
As in normal usage, DryFire determines whether you hit and break the clay is based on the energy present in the pellets likely to strike the clay.
 - **Maximum pointing error**
DryFire determines whether you hit and break the clay based solely on the distance from the centre of the shot cloud to the centre of the clay when they are closest (the pointing error) – if it is closer than is set for the exercise then DryFire considers the shot a hit.
 - **Maximum pointing error & range**
DryFire determines whether you hit and break the clay based on a combination of the pointing error (as above) and the distance from shooter to clay at that point.

When all the exercises to be included in a training plan have been defined, click the **OK** button again to return to the [Training plans dialog](#).

Start training session dialog



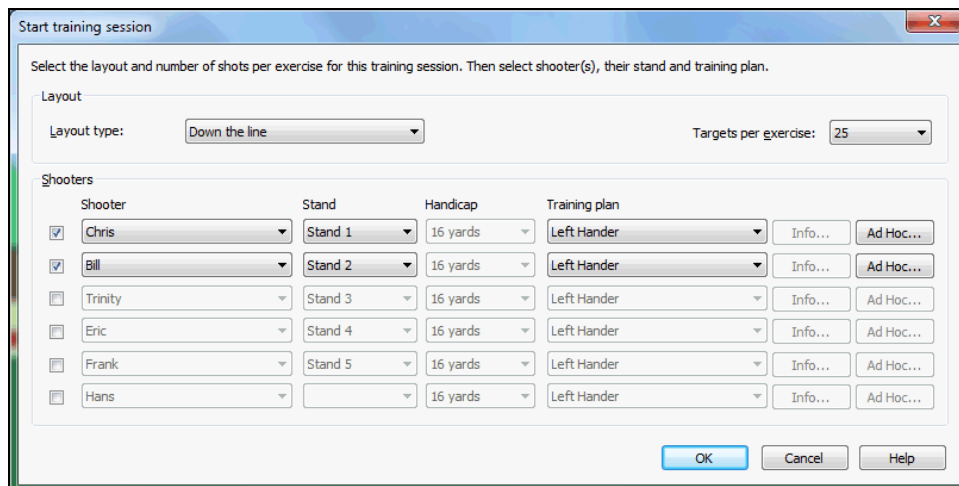
This dialog is only available when the [Trap exercise](#) option has been applied to your DryFire V4 simulator. If you do not already have the Trap exercise option, visit www.dryfire.com for more information.

See the [Trap exercise section](#) for more details.

This dialog is displayed when the **File, Start training session** menu is selected.

It is used to select the layout (ATA, DTL or ABT) to be used for the training session, the number of targets to show for each exercise and settings for each shooters that will be participating in this training session.

Screenshot(s)



Usage

Select the layout and number of shots that should be taken for each exercise then, for each shooter taking part in this training session:

- Tick a check box.
- Select the shooter.
- Select the stand they will practise the targets from.
- If shooting ATA, select the handicap yardage.
- Select the training plan they will be shooting.

If there is information related to the selected training plan available the **Info** button is enabled – click it to see the information.

Click the **OK** button to start the training session for the selected shooters.



Click the **Ad Hoc** button to display the [Trap exercises dialog](#) and define a temporary training plan, just for the shooter's current training session then select it from the **Training plan** list.

Exercise exchange dialog



This dialog is only available when the [Trap exercise](#) option has been applied to your DryFire V4 simulator. If you do not already have the Trap exercise option, visit www.dryfire.com for more information.

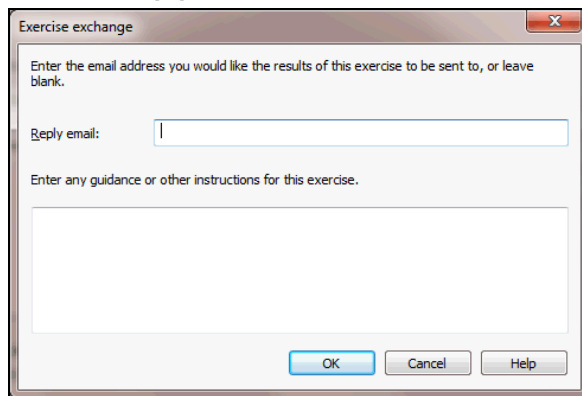
See the [Trap exercise section](#) for more details.

This dialog is after the **Export** button on the displayed when the [Training plans dialog](#) is clicked and a filename has been defined.

It is used to define an email address that the results of shooting the exported training plan should be returned to and a brief message explaining the training plan – both are displayed

when the exported training plan is subsequently imported and used in another copy of DryFire V4.

Screenshot(s)



Usage

Enter the email address to which any shooter that uses this training plan should send their results and any brief instructions that should be shown to the shooter.

Training session results dialog



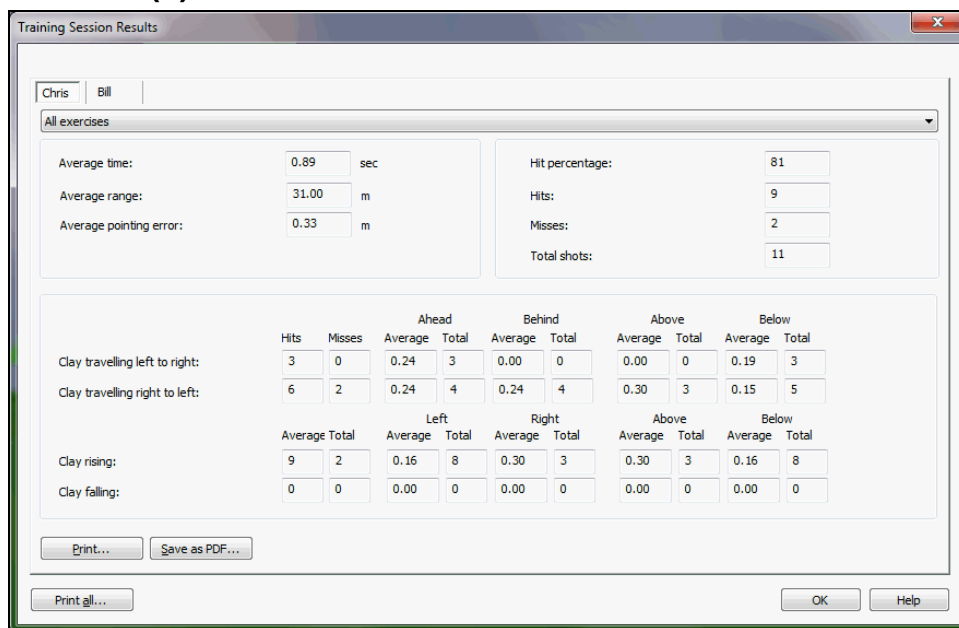
This dialog is only available when the **Trap exercise** option has been applied to your DryFire V4 simulator. If you do not already have the Trap exercise option, visit www.dryfire.com for more information.

See the **Trap exercise section** for more details.

This dialog is displayed when all shooters participating in the current training session complete their training plans.

It displays, and provides options to print or save as a PDF, statistics calculated results of the exercises included in each shooter's training plan.

Screenshot(s)



Usage

Each shooter's results are displayed on a separate tab, click the appropriate tab to show the results for a different shooter.

For each shooter DryFire will show statistics for all and each exercise in the training plan the shooter shot – use the drop down list below the shooter's name to change the statistics displayed.

The **Print** and **Save as PDF** buttons allow an individual shooter's results to be printed or saved – the saved PDF can then be emailed to a coach so that they can review the shooter's results. The **Print all** button can be used to print results for all shooters that participated in this training session.

Add features dialog

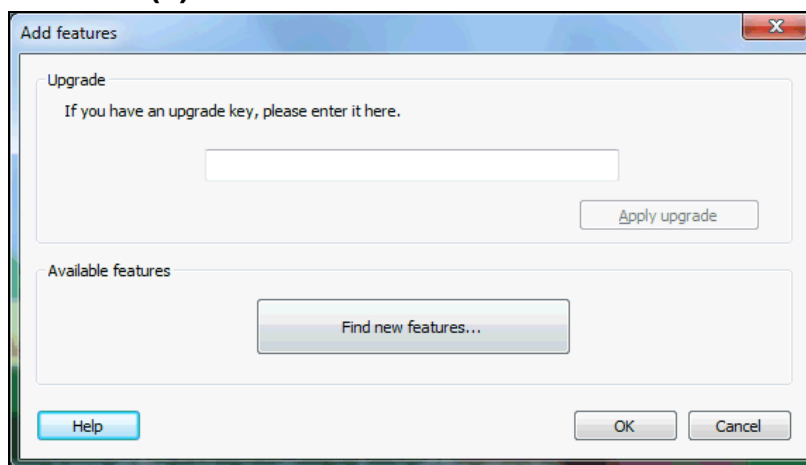
This dialog is used to learn about optional features available for the connected simulator and to apply tokens to activate those optional features.

Optional features include:

- [Report generator](#)
- [Trap exercises](#)
- [Squadding](#)

It is displayed when the **Help, Registration and features** menu is selected when a registered simulator is connected

Screenshot(s)



Usage

To find out about and purchase optional features not yet activated on the connected simulator, click the **Find new features** button to access www.dryfire.com.

If you have a feature token, type it into the box on this dialog and then click the **Apply upgrade** button to add the feature associated with the token to the connected simulator.