CTARGET - Instructions

Overview

The **CTARGET** system supports up to 20 targets and is used with a special version of the **Crystallite Phaser**.

Crystallite Phaser

CTarget uses a modified versions of the Crystallite Phaser as the guns for the system.

Unlike the Crystallite Phaser as used in Laser Tag gameplay only the rear trigger needs to be pressed in order to fire. Firing is unlimited and the number of shots fired is indicated at the bottom right of the LCD. This value resets every one hundred shots.

When operational the LCD will show 'CTarget' and the phaser ID. Odd numbered phasers are red phasers, even numbered phasers are green phasers. What effect the phaser colour has when firing will depend on the mode of operation of the game.

- If playing in confined spaces, reflection problems can be addressed by reducing the IR power output of the phaser. To do this hold the grenade button (very front of the phaser) and then press either of the front triggers. The display will indicate the new IR level - for instance IR Power 25%. Release the front trigger and wait until the CTarget screen re-appears. You can then press the front trigger again to change the IR power again. The settings that this routine cycles through are 10% - 25% - 50% - 100%.
- If not used for 20 seconds the CTarget version will enter sleep mode. The display will show 'Sleeping' and the display backlight will be switched off. Sleep mode will be exited either by firing the phaser (rear trigger) or changing the IR power with the grenade and front triggers.

Mounting the Targets

The targets are supplied with the IDs already set and the cover fixed by just two screws. The rest of the cover screws, plus some M4 fixing screws are contained in a bag under the cover. Each target is marked with its ID and we suggest that you mount them in some sort of logical order. The targets can be mounted on a lightweight (typically 6mm ply) backing panel, with the leads passed through a hole drilled behind each target.

Connection

Connecting the system up could not be simpler. Link the targets using the RJ45 patch leads provided. Targets can be linked in any order. A final lead is used to connect the target nearest to the Interface to the RJ45 connector on the Interface. A return lead should be used to complete a loop from the last target back to the Interface.

The Interface is powered by a 12v power supply – supplied with the system. Connect the Interface to your PC using a 9 pin 'D' lead. The PC needs a conventional serial port. Not all PCs are manufactured with serial ports. In the event that your PC does not have a serial port you can easily obtain a serial port card. We have received occasional reports that shop assistants have advised that 'serial ports are obsolete'. Nothing could be further from the truth and such comments demonstrate a profound ignorance. Googling 'serial card' is a good way to put the lie to such statements!

Setting Up

If you have had a PC supplied with your system then much of the setting-up will already have been done. However, you will want to tailor the system to your requirements.

Comms Port

Set the Comms Port by clicking **Ctrl+F7**.
You also need to decide how many targets you want to operate at a time, and for what period you want them to operate.

Setting up the game is done via the Set –Up Window which is accessed by clicking the F5 function key.

Game Duration

Set the Game Time in minutes using the drop down menu. Any game may be stopped prematurely by clicking the STOP button.

Target Groups

You can add interest to the game by changing the number of targets that are active at any time. You can also vary this number during the game, having more or less targets available towards the end of the game. A random element can also be added.

More…

On Periods

The period each selection of targets is active for can be fixed or made to vary gradually as the game progresses. The variable time can be made to increase or decrease with time.

You can also add a random element to either the fixed or varying period.

Set the period for which the targets activate at the start of the game with the Start Rate selection box.
Set the period for which the targets activate at the end of the game with the End rate selection box.

If Randomise Changes By is set to zero then the period of activation of the targets will change smoothly from the start value to the end value as the game progresses.

- Whether the activation period increases or reduces during the game is your choice entirely.
- If Randomise Changes By is a non-zero value and less than the automatically generated activation period then the activation period will vary by a random number up to the selected value.

Points

You can allocate points for players hitting their own, and the other teams targets.

You can also scale the points awarded (Scale Points By) so that the set points are only awarded for a speedy hit after a target group change. If for instance you have the scaling set to 50% then a target that is hit right at the end of the target 'on time' will only gain 50% of the maximum available.

- Note that in Individual Mode all players may hit all targets and are not penalised for hitting opposite colour targets.

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Allow Hit Red+Green

If this box is checked then all players can hit all targets. Otherwise players can only hit their own (colour) targets).

- This applies to team games only. In Individual mode all players may hit all targets.

Show Control Hints

If this box is checked then, if your mouse hovers over a control the program will (after a short delay) display a hint. Uncheck this box to avoid seeing hints.

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Sounds

Click this button to open the Sounds Editor.

Before first playing a game you need to set

1) The number of targets.
2) Whether players can hit the opposition targets (Allow Hit Red + Green).
3) Points awarded for hits.
4) The maximum number of guns (phasers). If you set this value to 1 then the Individual Player mode will switch to Free For All.

Free For All - If you set Max Guns to 1 then the system will operate in All For One mode, with a single score that increments with any hit, regardless of gun ID or colour.

You will also need to decide how you want to present the target groups and for how long you want them to operate as well as the overall duration of the game.

- Use the Close button to return to the main window.
- You can alter game parameters mid-game if you wish.
- Check/Uncheck the Hints box to display/hide hints.
- Click the Sounds button to edit/include/exclude sound effects

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Display Mode

Hot Key F4 will toggle the way the scores information is displayed in the Main Window. There are three options which are selected cyclically by repeatedly pressing the key. The current mode is displayed at the top of the screen on the Title Bar.

- Small Display shows the maximum amount of information including which targets are active, plus a Progress Bar elapsed time indicator.
- Big Display mode the team titles are removed, along with the target group information and progress bar and the scores are displayed full screen.
- Individual Display is a solo mode and is used so that players individual scores can be displayed. In this mode all players may hit all targets without penalty
- Display Mode may only be changed when a game is not playing.

Sounds

Access the Sounds window by clicking the Sounds button in Set Up.

Select the sound you want to edit using one of the radio buttons. Events that have already been allocated a sound will be marked in white, otherwise the title will be in grey.

If a sound is already allocated, then the path and filename will appear in the edit box. Either type or preferably use the Browse button to select a sound, then click Save to save that sound.

- To stop any sound being played, simply select the sound, clear the edit box and save the null entry.

If hits on several targets coinicide, then only the sound for the lowest target ID will be heard.

Playing a Game

When ready, start a game by clicking the large 'GO' button at the bottom right of the window. You can then stop the game at any time by clicking the same button, now labelled 'STOP'.

A graphical representation of the targets will apears under the progress bar, showing the active red and green targets. Inactive targets are 'greyed out'.

The normal way to play is to have the HIT ALL check box checked. Players can then hit either red or green targets, but if they hit the other team's targets then they may lose points depending on how you have set points in Set Up.

- You can show individual player's scores by selecting Individual Score Mode. The display mode may only be changed when a game is not playing.
- You may pause a game at any point by clicking the Unexpired Time panel at the bottom left of the window.
- Edit the sounds that accompany game events in the Sounds window.
- The targets are interrogated 60 times a second. If hits on targets coinicide, then only the sound for the lowest target ID will be heard.

Hot Keys

The following hot keys are used to control **CTarget.EXe**.

F1	Context-sensitive help (Non-Vista)
F2	Start/Stop game
F4	Change the Display Mode - show team or individual scores – Free For All mode
F5	Set Up
F12	Help File
Ctrl+X	Quit CTarget
Ctrl+F6	Diagnostics
Ctrl+F7	Set Comms Port

CTarget Address Setting

To change the address on a CTarget Module, first remove the front cover.

Looking at the target the 'right way up' ie with the text on the PCB readable you will see a five way twin header block. Over the top right of the right hand end of the block you will see the legend '16'. This is to identify the right hand pair of contacts which have a value of 16. So, from the left end of the block, the pairs have pins have the value 1, 2, 4, 8, 16.

Where the letter J appears in the following list, a jumper should be fitted to connect the two pins of the appropriate pair.

	1	2	4	8	16
Target #1	J	-	-	-	-
Target #2	-	J	-	-	-
Target #3	J	J	-	-	-
Target #4	-	-	J	-	-
Target #5	J	-	J	-	-
Target #6	-	J	J	-	-
Target #7	J	J	J	-	-
Target #8	-	-	-	J	-
Target #9	J	-	-	J	-
Target #10	-	J	-	J	-
Target #11	J	J	-	J	-
Target #12	-	-	J	J	-
Target #13	J	-	J	J	-
Target #14	-	J	J	J	-
Target #15	J	J	J	J	-
Target #16	-	-	-	-	J
Target #17	J	-	-	-	J
Target #18	-	J	-	-	J
Target #19	J	J	-	-	J
Target #20	-	-	J	-	J

- The maximum number of targets is 20
- If you fail to assign a valid address (or no address at all) then the target will alternate flashing red and green and will not report to the system

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