
Clicker 4

Using with Switches

Quick Guide

Created
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SM

Clicker 4 can be accessed with either one or two switches. This means that Clicker can be used with pupils with physical disabilities. Switch access can also be set to provide auditory scanning feedback (called 'scan sound' in Clicker 4) if required.

Switch Access

If you are using switches for the first time, check if the switch access has been installed by going to *Options* and then looking to see if '*User Access*' is there. If not then you need to get the original Clicker 4 CD and run it, making sure you tick the box 'Install switch access'. You may need to get ICT services technicians to do this. (It is worth trying to make sure that ICT services know that they should always install Switch Access when they install Clicker 4 in the first place.)

Creating Grids

When you are creating grids for switch access don't set up the access method for the user until the very last minute. Just set up all the grid(s) and pages the way you want them to be, and only change over to switch access at the very last minute before the user starts to work on the system.

However, if a grid is to be used by a switch and scan user, you need to take this into account at the design stage.

- It is easier to see and scan through cells if they are in straight lines not scattered all over the screen.
- It will be quicker and easier for the user to have a smaller number of cells per page (if you need more, use linked pages instead of packing lots of cells on to one page).
- Leave plenty of space between the cells, so there is room for a good thick scanning box to move round the outside of each cell.
- You will need clearly contrasting colours so that a scanning box can be seen easily, so keep the colour scheme simple.
- You need to be clear in advance about whether you want the user to do row-column, or column-row scanning (see Page 3, below) as that will affect where on the display you position certain word /pictures, and how efficient (i.e. fast/easy) the grid design will be for the user.



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Adapting grids

Remember that if the grid was last set up for use by a switch user, it will automatically save the settings and 'wake up' next time in switch and scan mode. You will have to pop it back into mouse access (options - user access - mouse pointer) before you can alter the grid. When you are finished adapting the grid, put it back to switch user so that it is ready for the user to use.

Organising User Files



Because of this automatic saving of switch access setting along with the grids, it is a good idea (essential!) to organise your different grids by user. Add the name of your switch user as a User and always log-in by that name from the opening screen each time. That means that his/her grids will be ready to use in switch and scan mode, but other children (or you) are not confused by finding themselves in switch and scan mode.

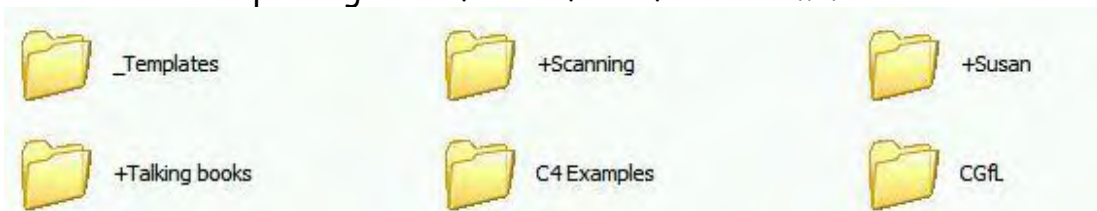
Changing from User to User / Log In Options

If you want to change from that user to another user, later, you do not need to Quit / Exit and close down Clicker then re-open it again. You can switch between users quickly and easily. Go to *Options - Log In Options*.

(You can save 'general' grids outside specific users' folder (i.e. Log in as 'none') or in a folder called 'class' or suchlike)



When you add a User, an empty folder is created automatically for them, inside the Clicker 4 folder, into which all their grids will be saved. A user folder is recognisable because it has a plus sign + in front of the folder name.



All the necessary utilities will automatically be put into this folder for you, by Clicker.

Setting up Special Access

Once you have finished making the grid and are ready to set it up for the user, go to **Options ~ User Access**

There are 5 different tags along the top - you will need to make settings in each of these sections. It may be wise to experiment and try the different settings out yourself, before setting the user off, so you are clear about how it all works.

First click on **Access Method**.

There are two different switch access methods on offer.

Single switch

Single switch access is least demanding physically but quite demanding cognitively and in terms of control: it requires good understanding of what is going on, good visual concentration, and accurate timing of switch presses.



Two switches

If they can possibly manage to operate more than one switch, two-switch access is sometimes easier for the user to understand, and it relies less on accurate timing though it is more physically demanding.

The user has to hit Switch 1 each time, to move along from cell (or block of cells) to the next cell (or block). He/ she has to hit Switch 2 to select a cell (or block of cells).

If regular (word) grids are used, the system can be set to scan EITHER **Column** first (across from left to right) then down, row by row OR **Row** first (down from top to bottom, row by row,) then across each column from left to right.

Setting up for Switch use

To start with, click **Single Switch**

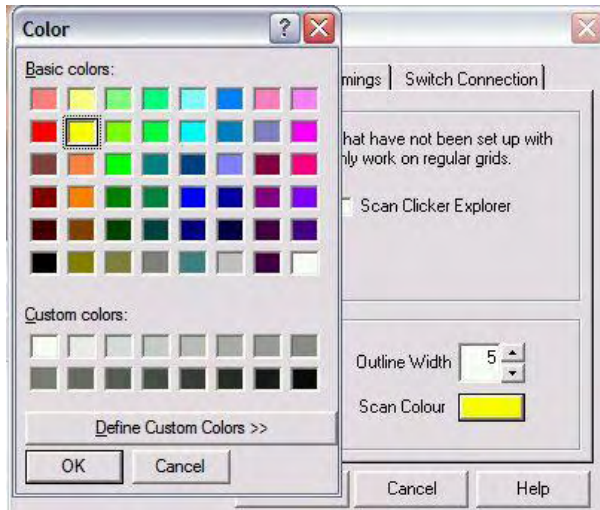
It's probably better to click on '**Restart scan at beginning...**' to start with, as this is easier for the user to understand, although it's a slower method. This can get frustrating later on, so you may wish to unclick this later, once the user has grasped the whole operation, to speed up his/her selections.

Scan Type

Then click on the **Scan Type** tag at the top of the box.

For now, choose **Simple** and **Outline Scan**

This means the scan will be a coloured frame around the outside of the cells. Choose the width of this frame - the exact size will depend on the size of your cells and the space between them. You want the frame to be as big as possible so it's easy to see, but not so thick that it starts to cover up other areas on the screen. Anything between about 10 and 25 is likely to suit - just try 'til you get it right.



Now choose the colour of your scan frame box. Again, the best colour will depend on the background colours of your grid. (e.g. red is good against a white background, yellow on blue is good.)

(On the Mac, the easiest way to get a colour may be to use the 'crayon picker' (though you should experiment with the other methods as well.)

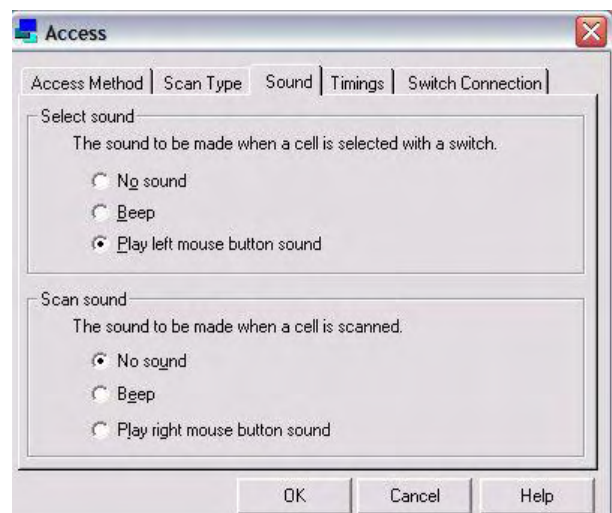
- ❖ **Outline scan** - places a border around the scanned cell or selected cells and the width of this can be changed in Outline width.
- ❖ **Fill scan** - as it moves along, the scan fills each cell or selected cells with a colour (that is changed in Scan Colour). This can be a bit confusing!
- ❖ **No scan** - turns off scanning in this cell or selected cells.
- ❖ **Invert** - when selected inverts the colours used in the cell or selected cells when it or they are scanned. Can be very confusing!

Sound

Now click on the **Sound** Tag at the top. There are two different things to be decided here.

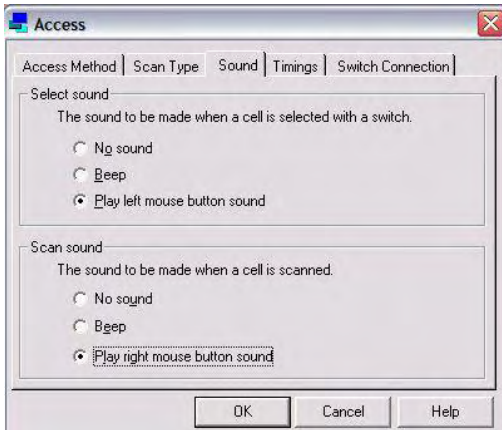
1. What sound should Clicker make when the scanning box is stopped by the switch user to make a selection?

Usually, the default **Play left mouse button sound** (on a Mac, this is **Play mouse button sound**) is best. That is, it says whatever the cell is set up to say just as it would with a mouse click.



- 2) What sound (if any) do you want while the scan box is moving, scanning through the cells? Usually, **no sound** is best (a beep may SEEM like a good idea in theory but it will drive everyone mad!)

Auditory Scanning



There is one important exception. For users who have a visual impairment or a difficulty perceiving the cells or scanning box (or even just a difficulty concentrating), an **auditory scan** may be useful. To get this, you simply select the bottom item

Play right mouse button sound
(on the Mac, ***Play control + mouse button sound***)

Timings / Scan Speed

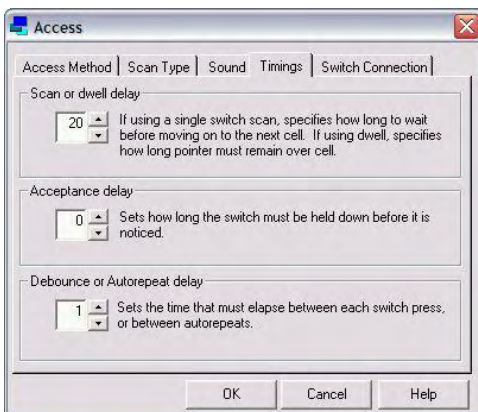
Now click on the ***Timings*** tag at the top, and make selections from this screen. ***Scan or dwell delay*** is the speed of the scanning box. Select 20 to start with (The higher the number, the slower the scan. 10 = 1 seconds, approximately, 20 = 2 secs, 30 = secs and so on.)

Acceptance Delay is how long the switch needs to be held down before the signal is picked up.

- For users who find switching effortful or difficult, this will normally be set at 0 (so that even the slightest touch will operate the selection).
- For user with a tremor, or who might brush accidentally over the switch at other times when they are not meaning to make a selection, you might try setting this at a higher number (you'll have to experiment). You might want to try setting it at quite a high number (10 or above) for users who have a tendency to hit the switch repeatedly (to 'lock them out' for a while, and/or to give them time to register the effect of their switch press).

Debounce or Autorepeat

- Some users can hit the switch but have trouble releasing it again. You don't want the system to register this as a string of unwanted repeats, so don't set this to 0. Set it higher to avoid repeats.

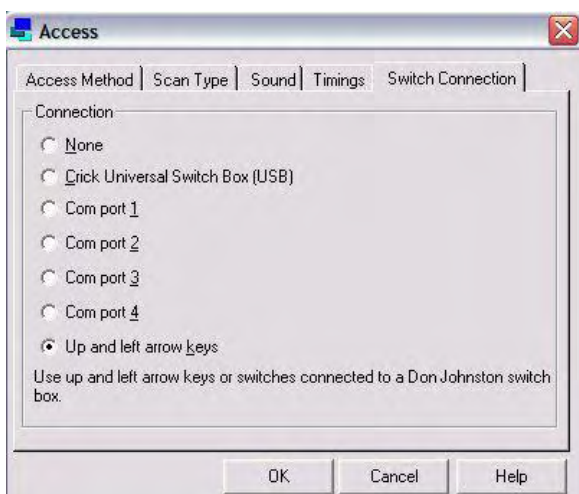


Many users don't actually need either of these settings changed at all from the default - don't fiddle with them unless you really need to (or of you do - write down what they were set to before you started changing them).

These last two settings interact with each other in quite a complex way, so experiment with them but leave one at 0 while trying the effect of the other, until you are clear which does what. If you change them both at once you'll get confused. Keep a note of the effect of each change.

The last of the Access setting tag along the top of the User Access box is also very important.

Switch Connection *Windows PC version*



If this is set to None, then all your settings done so far will not take effect.

To try your settings out without actually connecting up the switches and working with the user yet, set this to the bottom setting, **up and left arrow keys**.

If you are using a Don Johnston Switch Interface, this up and left arrow key setting will also work the switches.

Click **OK** and watch your setting take effect. Use the left arrow key on your keyboard as a single switch to make a selection as if you were the user using his/ her switch. (Up arrow key will scan along if you are in two-switch setting). After testing, unless you are using a Don Johnston switch interface, remember to switch back to the appropriate switch setting for the user to use their switches.

Mac version

You can try your settings without having switches attached.

Options Menu - User Access - Switch connection tag

Click Don Johnston Switch Interface

OK

You can then use the 0 (zero) key as a single switch. (The 3 key will scan along if you are in two-switch setting).

Note: *If you are trying to use a Crick Switchbox and you can't see it on the list of connection options, then you need a later version of the Clicker software - this can be downloaded from www.cricksoft.com but you will need the licence number to upgrade your copy, and if you are on a network, you will have to get IT Services to do it.*

Adapting User Access and scan settings

You can alter the above settings while the scan is running - you do not need to set the User Access back to mouse. Go to Options - User Access and change settings as required, then click OK to see them in action.

Once you are happy with the settings, you can connect up the switches for real.

Connecting up the Switches

There are various switch connection boxes you can use. For example - Don Johnston Switch Interface Pro (PC and Mac, USB connection) or, for the PC only, Cricksoft supply a switch box that works with Clicker (but not necessarily with all other programs).

- Shut down your computer
- Connect switch box as per instructions
- Plug in switch(es) to switch box
- Start Computer (even if you are using a USB switch box, it is wise to shut down for connection and restart)
- Open Clicker
- Log on in switch user
- Go to Options Menu - User Access - Switch connection and select the one connected.

Test out the switches and be clear what is happening yourself, before bringing the user in to use it!

Mouse Dwell Setting

There is one other special access setting option that can be useful for a user who just about manages to move the cursor using a mouse or joystick, trackball or - especially - another kind of mouse alternative (such as a head mounted optical pointer), but who might have difficulty also clicking.

Options Menu - User Access - Access Method - Mouse Dwell - Timings - Scan or Dwell Delay - try about 15 to start with (experiment - too short a dwell delay is frustrating as all sorts of mis-selections are made and have to be deleted, but too long a dwell time is too hard to manage and may be physically too demanding or tiring). ***OK***
Try it. Just point the mouse at the cell you want, and wait.

Switch and Scan

Scan Order

The user needs to be able to scan through the cells on a grid in a sensible order, from left to right / top to bottom order (not jumping around all over the screen).

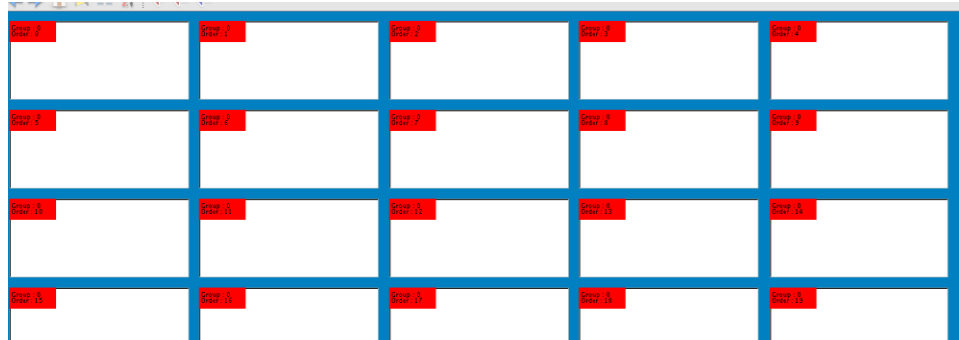
This is quite straightforward if you make a regular grid-shaped grid (e.g. using one of the 'picture grid' or 'word grid' templates) - it will automatically assign a regular scan order to the cells. But you may have problems if

- a) you create an irregular grid (Clicker will not know in what order to assign the scan);
- b) you adapt a grid and delete, insert or move cells around (they take their scan order with them, so will get out of sequence);

- c) you use a pre-made Clicker Grid downloaded from the internet (www.learninggrids.com) which probably wasn't set up with scan and switch users in mind and may either scan erratically all over the place when you change to switch access, or which may be set up in scan groups (see below) that you want to alter / simplify.

To check out the order of the scan, do **File - New Grid**. Select the default word grid that comes up. Then go to **Grid - Show Scan Order**. The grid will now appear with little red boxes in the top left hand corner of each cell with numbers in them. The grid now looks like this.

The first number in the red box is the Group (these are all 0 on this simple regular grid) and the second number is the order in which the cells will scan.



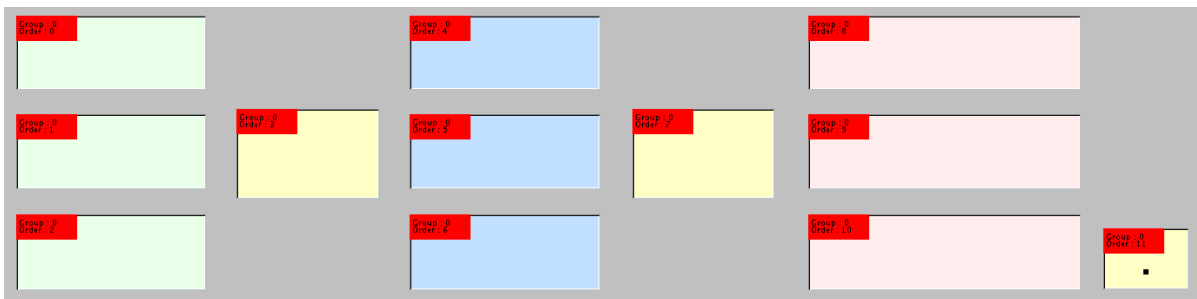
Scan groups

With a competent switch user, if you want to scan more complex grids (especially for writing sentences, for example some of the 'sentence building' templates within Clicker, or some ready-made grids from the internet), you may need to adjust the scan order.

First check the existing scan order.

The grid below is one of the 'sentence building' templates in Clicker. The grid was not created for switch use, so the scan order will need to be checked and possibly altered.

When you look closely at the scan order it is just a straight run through **Group 0** and then **Order 0 to 11**.



But in order to work on a particular type of sentence structure exercise '*Subject EAT Object BUT NOT Object*' (or whatever), the user may need to scan through the grid in separate sections or **groups**, and then through the cells numbered within each group.



For example, choose which animal first (Group 0, 0-3), then add the verb EAT (Group 1), then select an appropriate food (Group 2, 0-3), then BUT NOT (Group 3), then a relevant other object (Group 4, 0-3).

To make such changes, go to **Grid** and the **Show Scan Order**. You will then see the red boxes in the corners.

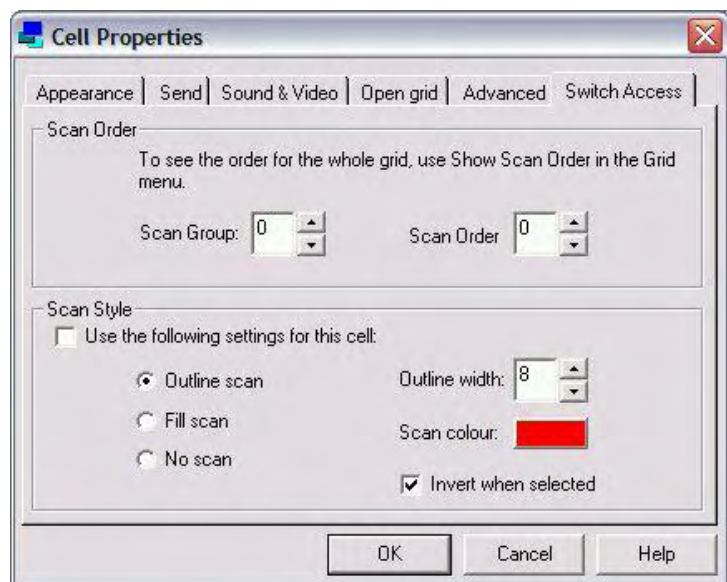
To make the changes to the scan order you need to change each cell individually. Firstly move the mouse over the cell and **Shift + Right Click** (PC) or **Command + Click** (Mac)

The Cell Properties window comes up.

Within **Cell Properties**, click on the **Switch Access** tab at the top.

You then get a chance to change the Group and / or the Order.

(Here you can also change other settings for the scan style including the colour and width if you wish)



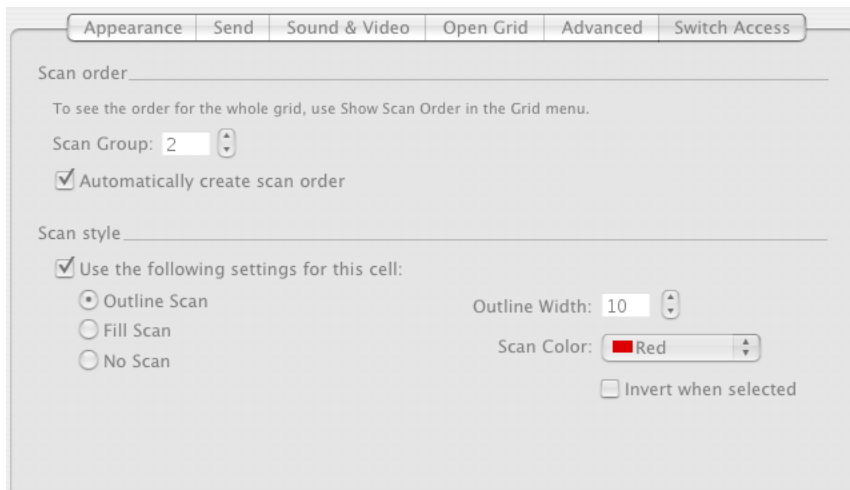
TIP / Short Cut:

To change a whole group of cells at once, you can select the cells you want, using **CTRL + left click** or (Mac) **CTRL + Command click**.

Then **Grid - Cell Properties**, then change the Group number for all the cells at once.

Then click to tick the **'Automatically Create Scan Order'** box.

If it still isn't quite right, you will need to go in and change each cell individually.

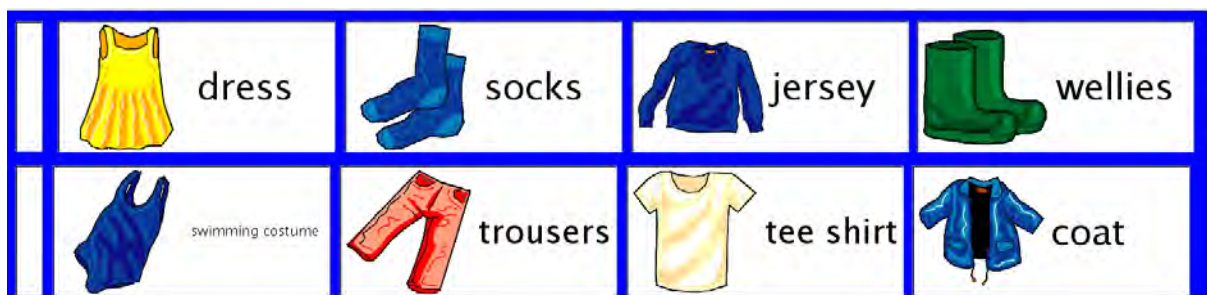


You will find all this needs a little thought about the language and the order that is needed to construct the sentence or story, and about how a switch user needs to access it. Unfortunately, most switch users need carefully designed, simpler grids - it is often not as easy as just taking a pre-made grid and 'translating it into an appropriate scan order

Phantom Row / Cell

Many switch users find it particularly difficult to select accurately the first cell of the scan (or of a row/ column scan, or within a group scan) as they have to hit the switch once to set the scan going then immediately again to select the row or group, then again to select the first cell within it.

One way round this is to create a sort of 'phantom' row that gets scanned (to take the pressure off and give the switch-user time to get organised) but doesn't have any items in it.



Clicker Explorer

Clicker Explorer can also be scanned, giving the skilled switch user independent and fast access to both grids and Clicker Writer documents.



To make Clicker Explorer scan:

1. Make sure you are in Clicker Explorer and then go to **Options** and then **User Access**
2. The **User Access** will open up. Now click on the **Scan Type** tab and click on **Scan Clicker Explorer**.

