System 1200 Newsletter – No.8

Jobs and Properties of Jobs

As described two newsletters ago a job can be thought of as answering the question "**where do I want to store my data?**"

There is more to a job than just a storage place for the points and measurements which are made during a survey – a job can also be thought of having certain "properties". These properties include the codes which will be used during a survey, the coordinate system to be used, the averaging behaviour and averaging limits.

This newsletter focuses on jobs and the properties of jobs – and of course, what is written below applies to both TPS1200 and GPS1200– the creation, use and properties of jobs is identical on both instruments.

What Is A Job?

This sounds like a simple question, but what actually is a job? What is created when a new job is made?

A System1200 job is in fact a database – the **System1200 DBX** database – and it is the "structure and design" of this database which allows TPS measurements (angles and distances) and GPS baselines and all other point related information such as coordinates, codes, annotations and even application program results (such as stakeout results and COGO results) to be stored and to be used on both TPS and GPS instruments. It is the **System1200 DBX** database that makes the **X-Function** of System1200 a reality.

The database itself is a collection of individual files which are stored in the **DBX** folder of the memory device (either the CF card or internal memory) – so when a new job is made, a new DBX database is created and stored into the DBX folder. Note, it is very important never to delete indivi dual files from the DBX folder.

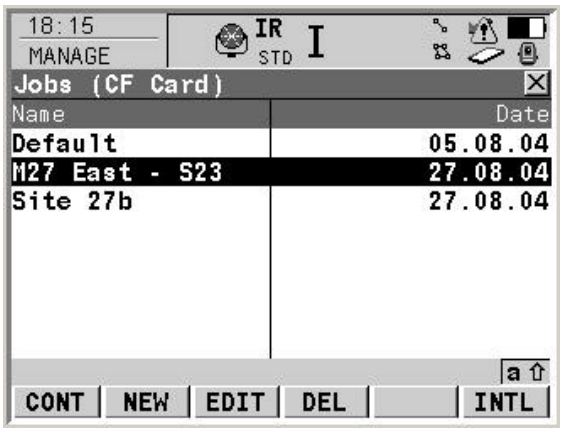
There is always an "active" job on a System1200 instrument – generally speaking, this is the job which was last used on the instruments. This active job is remembered even after turning off the instrument, so when you turn on the instrument again, this last used job is still the active job and is suggested as the job to be during survey and all other application programs.

Creating New Jobs

All jobs currently stored on the CF card can be viewed in the **MANAGE Jobs** panel. To access this panel from the main menu, choose **3 Management…** and then choose **1 Jobs**.

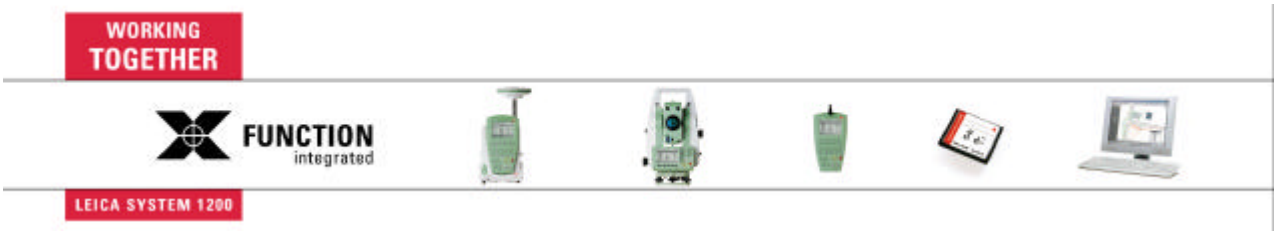
Note, this panel can also be accessed by opening the **Job** closed list box in any application begin panel. Or even better, put this panel onto a hot key or into the USER menu - this makes it even less key presses to access the panel.

Note, if the instrument is fitted with internal memory then **F6(INTL/CFCRD)** allows you to toggle between using the internal memory and CF card and displays the individual jobs stored on each memory device.



At least one job is always available to be used – even if the memory device has just been formatted then a job called **Default** is automatically created.

Press **F2(NEW)** to create a new job and access the **MANAGE New Job** panel.



The way that this screen is split into 4 page views helps the user – the **General**, **Codelist**, **Coord System** and the **Avge** page view – these are "prompts" to help you remember what properties of a job may be selected when creating a job.

The General Page View

The **General** page view allows the job name and other general information to be entered. Remember that to enter a **Description** and /or **Creator** information can be useful – this can then be later output in a format file.

The Codelist Page View

The **Codelist** prompt in this page view displays all the codelists which are currently stored on the System RAM of the instrument and allows the required codelist to be selected.

The coding possibilities on System1200 (**thematical coding** (point, line and area) or **free coding**, or a combination of thematical and free coding) are more flexible than any other survey system on the market and will be described in detail in a future newsletter. For this newsletter it is sufficient to explain what happens when a codelist is selected and the new job is stored.

When the job is stored (by pressing **F1(STORE)**) then the codes within the codelist shown in the **Codelist** prompt are actually copied into the job being created. Note – the codelist itself is **not** attached to the job – only the codes themselves are copied to the newly created job and no link is retained between the job and codelist.

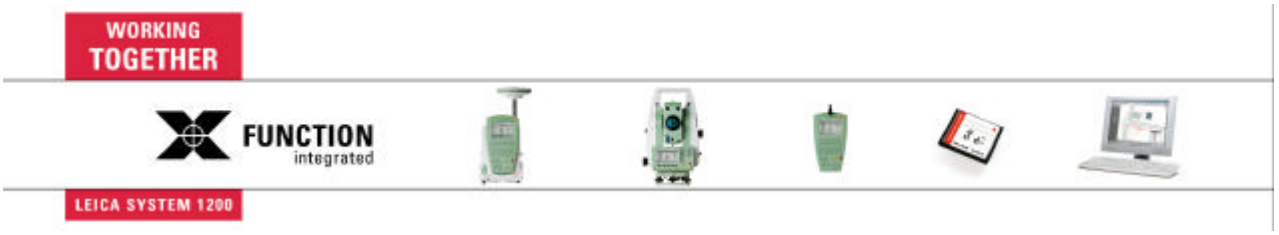
The reason for this is that this job can now be passed to another instrument and all codes which the surveyor may need are still available – there is no need to have the same codelist on the second instrument because all codes are in the job itself

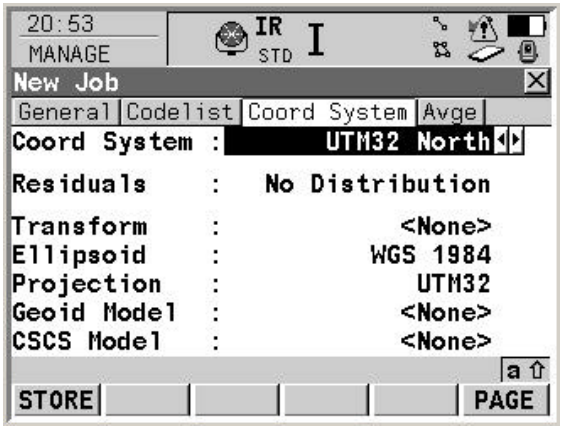
This behaviour is different to both System500 and TPS1100 where codes were not immediately copied into the job. The individual codes were only copied to the job when that code was used. If that job was then passed to a second instrument, then the same codelist had to be stored on that instrument – this of course was not always the case.

The Coord System Page View

The **Coord System** prompt in this page view displays all the coordinate systems which are currently stored on the System RAM of the instrument and allows the required coordinate system to be used to be selected.

A future newsletter will discuss in greater detail the used of coordinate systems, coordinate conversions, coordinate types and other coordinate and datum related issues. Again, for this newsletter it is sufficient to explain what happens when a coordinate system is selected to be used and the new job is stored.





When the job is stored, a copy of the coordinate system is created and copied to the job. Again this means that this job can now be passed to another instrument and the required coordinate system is still attached to the job and will be used – there is no need to have the same coordinate system stored on the second job. This is also an advantage when importing data from a job into an LGO project – the coordinate system which was being used with that job can then be automatically attached to that LGO project – the import is therefore very simple.

System500 users may remember that the coordinate system which was to be used was actually selected in the configuration set. This was somewhat misleading because actually even on System500, the coordinate system was always a property of the job and not the configuration set – it is much clearer with System1200 that the coordinate system is a property of the job.

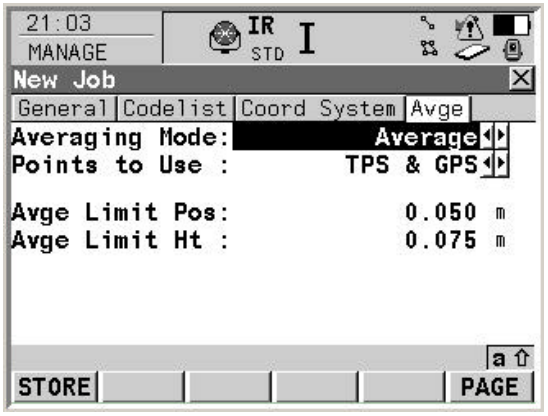
THE AVGE PAGE VIEW

The **Averaging Mode** prompt in this page view allows the averaging mode (or duplicate point behaviour) for the job to be defined.

A future newsletter will explain in detail about the coordinate triplets, the different coordinate classes and why they are needed. But for now it is sufficient to know the following.

Basically, a **MEAS** (measured) point is created when a TPS point which was measured with a distance or an RTK GPS point is stored. If a second (or subsequent) **MEAS** point is then stored in to the same job with the same point ID as an existing **MEAS** point then an **AVGE** (average) point is automatically made in addition to the existing **MEAS** points. The coordinates of this **AVGE** point is computed from the coordinates of the **MEAS** points (actually, a weighted average is made since the CQ of the individual **MEAS** points is also taken into account).

The **Averaging Mode** setting in the **Avge** page view defines the behaviour of the instrument when the second point is stored.



If **Average** is selected, then an averaging limit check in both position and height can be configured. This means that when a **MEAS** point is stored and one or more **MEAS** points of the same point ID already exist in that job then a check is made on the positional (horizontal) and height difference between the point being stored and the **AVGE** point. The appropriate message is then shown as to whether the limit is exceeded or not.

If **Absolute Diff** is selected in the **Averaging Mode** prompt then when the second **MEAS** point is stored then a check is made on the positional (horizontal) and height difference between the point being stored and the already stored **MEAS** point – that is, the absolute difference between the 2 points. Again, an appropriate message is then shown as to whether the limit is exceeded or not.

If **Off** is selected, then no check is made when the second (or subsequent) **MEAS** point is stored.

Editing An Existing Job

Existing jobs can of course be edited and the properties of the jobs can be changed. The appearance of the **MANAGE Edit Job** panel is basically the same as the panel where a new job is created with the following differences.

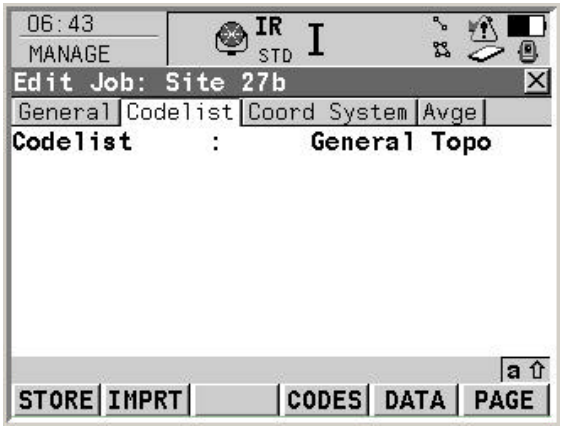
In all pages, the **F5(DATA)** button accesses the **MANAGE Data** panel and allows the points stored in the job to be viewed.

The Codelist Page View

The appearance of the **Codelist** page view depends on if codes have yet been stored in the job.

If a codelist was not selected when the job was created, then it is still possible to choose a codelist and the codes from this codelist will be copied to the job as previously described.

If a codelist had been selected then the name of that codelist is displayed and it is possible to view the codes stored in the job using **F4(CODES)**. If you now wish to copy additional codes from another codelist into the same job then this is possible by using the **F2(IMPRT)** button.



Note, it could also be that you have created new codes in the job as you were actually surveying. In this case, it could be useful to copy all the codes from the job into a codelist stored on the system RAM so that this "extended" codelist can be used again in the future. This is possible by using the **shift F2(EXPRT)** button – the codes can be copied to an existing codelist or you can create a new, empty codelist.

Edit Jobs At Any Time

Jobs can of course be edited at any time – the name of the job can be changed and as already described, additional codes can be imported into the job or exported from the job, the coordinate system can be changed or the averaging settings or limits can be changed.

If you do need to easily access the **MANAGE Edit Job** panel at any time then put this panel onto a hot key or into the USER menu – it is then only one key stroke to access the panel.

Remember

A job is a collection of individual files which make up the **DBX** database – this stores all measurements, points, coordinates, codes and attribute and much more.

There is always one active job on the memory device – this is remembered even after turning off the instrument.

When creating a new job, the page views help you to remember what needs to be selected – enter a name, choose the codelist, the coordinate system and the averaging properties.

It is always possible to edit a job and change properties – including to add more codes to the job or export codes from the job.