Testing results on Rev 1.00 software in a TXB-B

I have been going over this set of test results and have some questions, observations and explanations.

1. I did not implement auxes or on screen display capabilities. This was partially an over site (for the auxes) and partly because I thought that doing a full implementation of Burle on screen character display logic would use up too much memory on the PIC processor.

   When I get a more "final" version of this error report, I'll add in AUX 1 and 2 functions as ON/OFF 5 and ON/OFF 6 functions.

   Since "finishing" the code, I have talked to Alfio and he suggested a simple way to do partial labels. I will implement this method in the next software revision.

2. Testing is supposed to be testing the TXB-B, not the inherent features of the Spectra/Esprit. It appears that many of the problems arise where the Spectra/Esprit do not support the tested abilities.

3. Many of the reported problems relate to capabilities that the included camera can not perform. I.e. the Hitachi camera does not have external control over the focus and zoom speeds, etc.

4. Spectra/Esprit software revision levels have not been consistently identified.

5. Esprit model numbers are not valid and thus it can not be determined if those systems support all options.

6. There was no indication given that reversing the input signals, from $\pm$ to $\mp$, was tested.

7. I assume that the MPT9500 that was used for some of the "counter testing" was operating in D protocol mode, not in Coaxitron mode.

8. Does the Esprit have multiple zoom/focus speeds?

Additionally I have been thinking about possible problems, and talking them over with Dave Micon, about what might be happening with the TXB-B *vs.* Spectra/Esprit. He and I have come up with the following:

1. The basic logic of the TXB-B is that it sends commands out as fast as it can. This means that, as a minimum (or would maximum be better here?), the TXB-B will send commands out about every 31 ms, if data is coming in fast enough. Burle repetition rates vary from about 32.8 ms (for an LTC-8801) to 53.6 ms (for a TC-8501 (with 46 ms being the LTC-5136

[1] `$Header: d:/ecr6171/RCS/test.tex,v 1.48 2000-12-28 16:37:25-08 Hamilton Exp Hamilton $`
[2] `$Header: d:/ecr6171/RCS/err1.inc,v 1.1 2000-12-28 16:37:13-08 Hamilton Exp Hamilton $`

rate which is the middle). There is some suspicion that the Spectra/Esprit may not be able to process data coming in this fast. No Pelco equipment using either P or D protocol generates data this rapidly. (Coaxitron does and does not appear to cause any problems similar to those that the TXB-B is having.)

Pelco equipment generates a start motion command. Which is then followed by nothing until the operator either changes the motion command (e.g. from slow pan to fast pan, etc.) or stops the motion.

Burle constantly sends motion commands. I may have to change my logic to not send out repeated commands and to send out the stop command multiple times so that if one of them is lost that the Spectra/Esprit will not "run away".

2. There are a lot of problems relating to zoom. Processing a zoom commands takes the Spectra longer than other types of commands. This might be a problem with rapid command repeats.

3. There are many problems with the Esprit. Are these Esprit problems that are just now being identified?

4. Does sending multiple rapid IR filter action commands, cause the IR filter logic to mess up?

5. Scan and auto pan may be different from what a Burle user might expect. But what can I do about it with the current capabilities of a Spectra/Esprit? Tell me an I'll try to do it.

Spectra/Esprit Equipment used:

DD5BC22 Hitachi color camera with 22× optical zoom.

DD5TAC LG color camera with 16× optical zoom.

DD5BCBW Sony color camera with 18× optical zoom.

ES3010 LG Unknown camera type.

ES3010 Unknown camera type.

ES3012 Unknown camera type.

Burle Setup : LTC 8553, TC8568, LTC 8801						
Commands Software	DD5-BC22 —	DD5-TAC 4.63	DD5-BCBW 1.09	ES3010 LG —	ES3010 —	ES3012 —
PTZ	Pass	Pass	Pass	Pass	—	Pass
Set Focus/Zoom Speed	Fail 50%*	Fail 50%*	Pass	Fail 50%*	—	Fail 50%*
Scan	Pass*	Pass*	Pass*	Pass*	—	Pass*
Auto-Pan (random scan)	Pass*	Pass*	Pass*	Pass*	—	Pass*
Spin 180 Degrees	Pass	Pass	Pass	Pass	—	Pass
Pre-Set Scene	Pass	Pass	Pass	Pass	—	Fail*
Pre-Set Recall	Pass	Pass	Pass	Pass	—	Fail*
Record	Pass	Pass	Pass	Fail	—	Fail
Continuous Playback	Pass	Pass	Pass	Pass*	—	Pass*
Menu (ON-45-ENTER)	Pass	Pass	Pass	Pass	—	Undet-ermin-ed
Zone Labels	Fail	N/A	Fail	Fail	—	Fail
On-Screen Display	Undet-ermin-ed	Pass	Undet-ermin-ed	Pass	—	Pass
Factory Home Position (Set)	Pass	Pass	Pass	Pass	—	Pass
Factory Home Position (Shot)	Pass	Pass	Pass	Pass	—	Pass
Left Limit (Auto)	Pass	Pass	Pass	Pass	—	Pass
Right Limit (Auto)	Pass	Pass	Pass	Pass	—	Pass
Left Limit (Manual)	Pass	Pass	Pass	Pass	—	Pass
Right Limit (Manual)	Pass	Pass	Pass	Pass	—	Pass
Auxiliary	N/A	N/A	N/A	N/A	N/A	N/A

* See notes for more clarification on pass/fail status.

Burle Setup : LTC 8501, TC8568, TC8501						
Commands Software	DD5-BC22 —	DD5-TAC 4.63	DD5-BCBW 1.09	ES3010 LG —	ES3010 —	ES3012 —
PTZ	Pass	—	Pass	Pass	—	Pass
Set Focus/Zoom Speed	Fail 50%	—	Pass	Fail 50%	—	Fail 50%
Scan	Pass*	—	Pass*	Pass	—	Pass
Auto-Pan (random scan)	Pass*	—	Pass*	Pass*	—	Pass*
Spin 180 Degrees	N/A	—	N/A	N/A	—	N/A
Pre-Set Scene	Pass	—	Pass	Fail*	—	Fail*
Pre-Set Recall	Pass	—	Pass	Fail*	—	Fail*
Record	Pass	—	Pass	Pass	—	Pass
Continuous Playback	Pass	—	Pass	Fail*	—	Fail*
Menu (ON-45-ENTER)	Pass	—	Pass	Pass	—	Pass
Zone Labels	Fail	N/A	Fail	Fail	—	Fail
On-Screen Display	Undet-ermin-ed	—	Undet-ermin-ed	Undet-ermin-ed	—	Undet-ermin-ed
Factory Home Position (Set)	Pass	—	Pass	Pass	—	Pass
Factory Home Position (Shot)	Pass	—	Pass	Pass	—	Pass
Left Limit (Auto)	Pass	—	Pass	Pass	—	Pass
Right Limit (Auto)	Pass	—	Pass	Pass	—	Pass
Left Limit (Manual)	Pass	—	Pass	Pass	—	Pass
Right Limit (Manual)	Pass	—	Pass	Pass	—	Pass
Auxiliary	N/A	N/A	N/A	N/A	N/A	N/A

* See notes for more clarification on pass/fail status.

Burle Setup: LTC 5136 Direct Mode Keyboard						
Commands Software	DD5-BC22 —	DD5-TAC 4.63	DD5-BCBW 1.09	ES3010 LG —	ES3010 —	ES3012 —
PTZ	Pass	Pass	Pass	Pass	—	Pass
Set Focus/Zoom Speed	Fail	Fail 50%*	Pass	Fail 50%	—	Fail 50%
Scan	Pass*	Pass*	Pass*	Pass*	—	Pass*
Auto-Pan (random scan)	Pass*	Pass*	Pass*	Pass*	—	Pass*
Spin 180 Degrees	Pass	Pass	Pass	Pass	—	Pass
Pre-Set Scene	Pass	Pass	Pass	Pass	—	Pass
Pre-Set Recall	Pass	Pass	Pass	Pass	—	Pass
Record	Pass	N/A	Pass	Pass	—	Pass
Continuous Playback	Pass	N/A	Pass	Pass	—	Pass
Menu (ON-45-ENTER)	Pass	Pass	Pass	Pass	—	Pass
Zone Labels	Fail	N/A	Fail	Fail	—	Fail
On-Screen Display	Undet-ermin-ed	Undet-ermin-ed	Pass	Pass	—	Pass
Factory Home Position (Set)	Pass	Pass	Pass	Pass	—	Pass
Factory Home Position (Shot)	Pass	Pass	Pass	Pass	—	Pass
Left Limit (Auto)	Pass	Pass	Pass	Pass	—	Pass
Right Limit (Auto)	Pass	Pass	Pass	Pass	—	Pass
Left Limit (Manual)	Pass	Pass	Pass	Pass	—	Pass
Right Limit (Manual)	Pass	Pass	Pass	Pass	—	Pass
Auxiliary	N/A	N/A	N/A	N/A	N/A	N/A

* See notes for more clarification on pass/fail status.

Notes:

I have placed my comments in this set of notes in italic type.

1. Scan and Auto-pan (random scan), these functions pass because they function as all Pelco receivers do with this command. They both respond to Auto-Pan limit stops. In the Burle manual ON-1-ENTER is not supposed to be affected by the limit stops in place. The Auto-Pan (random scan) or ON-2-ENTER by Burle manual is supposed to be a scan (not random scan) that is affected by limit stops. *Do you have any suggestions as to what I can substitute here?*

2. When testing the ES3010 LG and the ES3012 the continuous playback does play back the correct pattern programmed. But, when manual limit stops are set the pattern played back does not go to the proper starting point. This happens even if the starting point is within the manual limit stops. The receiver would happen when the programming of the pattern would not respond to the PTZ commands that were programmed. *Huh?* This was also tested with the MPT9500 and the pattern would start at the correct reference point. This has not yet been tested with the Spectra units.

3. When playing back a pattern on both of the Esprit units that have been tested, the pattern will not run past the manual limit stops. *Is it supposed to?* It also did this with the MPT9500; therefore, this may be an Esprit issue. This has not yet been tested with the Spectra units.

4. When recording a pattern with the ES3010 and ES3012 the Esprit did not respond well to pan/tilt commands. For example, when panning left then immediately switching to pan right the receiver would continue panning left. This was also tested with the MPT9500, this issue did not occur with this controller. (These commands were tested with the Burle Matrix LTC 8801.) This also happened with the Spectra DD5BCBW. When the DD5BCBW reached the down tilt limit the Spectra did not flip as it does when not recording a pattern. *Huh?* This issue was not noticed on the other Spectras to be tested, but needs more examination.

5. When running a pattern with the manual limit stops set then stopping the pattern with a pan/tilt command, the receiver will zoom to tele/wide limits. This was tested with both Esprit units but has not yet been tested with the Spectra. This also happened with the MPT9500 and may be an Esprit issue. *So?*

6. Commands ON-31-34-ENTER does not change the zoom speed on either of the Esprit and Spectra units. With the DD5BCBW, OFF-31-34-ENTER, all function by changing the speed of the zoom. On the DD5TIC and the ES3010, OFF-33-34-ENTER is the same zoom speed (fast). OFF-31-32-ENTER is the same zoom speed (slow).

   *Please explain what is meant by "*ON-31-34-ENTER*". Does this mean "*ON-31-ENTER *or* ON-34-ENTER*" or do you mean "*ON-31-ENTER *through* ON-34-ENTER*"?*

   Is this normal Esprit operation?

7. When sending pan left then immediately sending pan right command to the DD5TAC Spectra with the LTC 8801, the receiver will continue to pan left. This could be repeated with this specific camera 4 out of 6 times tested. This has not been tested with a Pelco controller yet and needs further examination with other Spectra receivers.

8. When sending short zoom commands (tele or wide) the ES3010 would continue zooming to the limit. This happened 3 out of 5 times. When repeating at times when zooming tele, the receiver would zoom wide to the limit. This happened even if sending zoom tele commands.

9. When zooming wide or tele with the ES3012 (described above) the receiver would not zoom to limit but instead would zoom tele and immediately zoom wide.

10. Sending multiple commands to the DD5BCBW (specifically PTZ commands and then selecting SHOT-1-ENTER) receiver will drift. SHOT-1-ENTER is a preset recall command. This issue has not yet been tested on other receivers but needs further examination.

11. When setting a preset with the ES3012 the receiver will not zoom to the programmed preset. This also happened with the MPT9500 and may be an Esprit issue.

12. Zones can be programmed but zone labels cannot. With no zone labels enabled the function is not working as it is expected. *Labels are not implemented, but I'll try to do it.*

13. The IR Filter commands are not consistent. It is possible to hear the filter click on but the menu does not reflect the change. The OFF-39-ENTER and the SHOT-89-ENTER does not reflect the changes (removing the IR Filter) that it is expected. The ON-39-ENTER and the SHOT-88-ENTER, will work 3 out of 6 times, where you hear and see the change.

14. ES3010-8501 Matrix, During presets the camera would not zoom (tele or wide) to the proper preset.

15. ES3010-8501 Matrix, the camera responded properly to the commands given when programming a pattern. During playback the picture wasn't focused. The camera would stay out of focus while manually panning. It would focus when sending a zoom command or a focus command. Verified auto-focus was enabled.

16. The Esprit units would not pan smoothly with the 8501 matrix. When sending a quick pan command the camera would pan in larger increments than it is expected to. *Remember that the 8501 is a fixed speed system. Did you change the pan/tilt speed? Should I reduce the default value?*

17. ES3012-8501 Matrix, sent two zoom tele commands and then panned right. The camera continued panning although commands were not being sent. After 5 seconds the Esprit timed out. I could repeat this 3 out of 10 times. This also occurred with the ES3010 but could not be repeated. *Is 5 seconds the Esprit "run away time out" value?*

18. ES3012-8501 Matrix, when programming a pattern the camera did not respond to zoom commands programmed during playback.

`TXB-B`

`December 13, 2000`

Jennifer Hild

TXB-B Test.doc

Index