SLOT TECH MAGAZINE

uick & Simple Repairs #39 Slot Machine Technology for the North American Gaming Industry

Does your WMS Blue-bird monitor or bonus screen LCD not light up or does it look dim or dark?

You can fix it inexpensively by just replacing the cold cathode lamps. See page seven for more information

As seen at NIGA show



Transmissive Reels allow technicians to view WMS Blubird faults and other conditions on the overlay screen! Who left the door open?

On Display at NIGA - Really Cool! Multicolored LEDs illuminate the reels of this WMS Bluebird slot machine

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Slot Tech Magazine

I do a lot of flying in this job. Sometimes it's domestic as I fly around the country bringing my two-week slot tech school to various casinos across the USA. Other times, I get to fly to someplace interesting like Aruba or Netherlands or London for the ICE show. I enjoy traveling. It gives me a good excuse to get out and see the world from someplace other than my office chair and Google Earth.

While I'm out, I have found it interesting to observe what some people do to attract the attention of someone like a waitress or flight attendant. I

Randy Fromm's Slot Tech Magazine

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have a friend, a well-respected industry professional, who, while seated at a restaurant, assures himself of an instant refill on bread by holding the empty bread basket on top of his head. It's like a miracle. You can say "excuse me, excuse me" all day and get the "be right with you" response but when you sit there with an empty breadbasket on your head for all the other diners to see, employees take notice and respond. On a recent flight somewhere (it's all a blur, blur, blur) the flight attendant's namebadge declared her nom de guerre "Oh Miss." I guess she figured if she can't beat 'em, join 'em.

And so James Borg wonders who's calling him and why when he responds to "Pssssst!" I don't want to give it away. It has something to do with a mystery fault (aren't they all?), a mystery woman, a gold tooth and a bad smell. All the usual stuff. James' article begins on page six.

On page 14, Pat Porath brings us his Quick & Simple Repairs #39. In it, he presents us with a Bally Cinevision with a "bill validator system error." The BV under discussion was from JCM so I ran Pat's article past Jack Geller, Supervisor of Technical Services for JCM Global. His response contains some important information about JCM's Intelligent Cash Box system which we have reprinted here. Pat also presents us with an IGT S2000 "Reel 2" Tilt as well as some more printer repair tips.



Hey! Ceronix invites you to a monitor class! July 29-30 2008 at their plant in California. The class will be held by Troy Nofziger. Some of vou already know Troy from TechFest. He really knows his Ceronix monitors. That's good 'cause he knows nothing else. This is all he has ever done professionally, is to fix Ceronix monitors. Get the feeling he's kinda good at it? He'll show you the easy way to fix Ceronix CRT and LCD monitors.

There is also a review of SlotFest (featuring TechFest 17) at Mystic Lake Casino, held May 6-8. We had quite an international gathering with folks from Aruba, St. Maarten, Mexico, Canada, an international cruise liner and Casinos across the USA.

That's all for this month. See you at the casino.

Kandy Fromm



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Slot Tech Feature Article



y ears reacted. Have I become somebody's pet without realizing it and my master is calling me? Is it a full moon and had I turned into a werewolf without realizing it? Hmmm. A quick look at my hands showed no fur, no rippling muscles bursting through my shirt. I wasn't howling and I was still wearing my shoes. Those are all signs that I hadn't become a furry pet.

"Pssssttttt" echoed once again.

I followed where the noise was coming from. It was emanating from the direction of a woman client who was sitting at an IGT Game King with a look of disappointment and panic on her face. The woman had difficulty sitting down on her chair. She seemed somehow distressed. A million and one reasons could be to blame for that but I won't

"Pssssttttt!"

By James Borg

know what's going on before I get closer. She certainly wasn't happy and I had a feeling I was going to find out all about it within the next few minutes. Whatever the case, I don't like being called by "Psssssssttt." It's degrading and it upsets me a wee bit.

Approaching the client and her machine, it seemed that the machine was just restarting as if it had been switched off and back on again. Strange, as these machines don't usually do that unless something's afoot. I had to wait and keep the client company for what seemed like an eternity before the machine went through all its pretty colours on the screen and eventually start up again precisely where it had left off. There was a strange odor emanating from the client's vicinity. A rather unpleasant whiff. Could be classified as a stench or a pong. Not quite sure how to exactly describe it but it certainly wasn't "Red Door" and it wasn't that pleasurable. Not to mention it was doing my orifices in the upper region a lot of damage, probably irreparable. It wouldn't have been so bad if I had a cold and my sense

of smell had died a death but as it was, to my detriment, my nostrils were still in full working order.

I asked her if she could move back a couple of inches so that I could quickly open up her machine to give it a swift inspection. It was a major effort on her part moving back but eventually I had access and I could open the door and have a peek inside. None of the connections seemed wobbly but I still checked them out just in case. A look at the door to see if there were any coins which had accidentally got wedged near the coin comparator and somehow shorting a supply rail proved fruitless. Nothing. Nada. No-Go-Joe. I couldn't see a single thing out of place.

"Please try again and give me a shout if the same thing happens again. I'm James, by the way."

The client forced a grin exposing a tooth made of gold that glittered off a spotlight. With that I walked slowly away, occasionally glancing back over my shoulder to see if the machine kept on working. It

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<u>Cold Cathode Lamps for all LCD Monitors & Displays</u>

Konami belly glass lamps broken? Dark or dim? Don't light up anymore?

Don't pay Konami \$225 for their replacement when you can buy our Konami belly glass lamp kit for less than \$10. Our kit includes a dual cold cathode lamp assembly and a much higher quality 12 volt dual output cold cathode inverter. Part #8700



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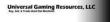














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did.

All seemed quiet on the western front. Hostesses busily keeping clients topped up with snacks and hot and cold drinks while keeping themselves fit at the same time. The number of miles our hostesses cover in this place must be astronomical but they do it with a smile that gets positive feedback from all. A survey of the place showed that all was in order. It's a nice place here. People from all walks of life come and spend some time and money in our casino. They enjoy the company. They enjoy the machines. They enjoy our service and most of all, they enjoy winning. Who doesn't after all? Having said that, you can't please them all but we surely go the extra mile. Is it worth it? Yes.

While patrolling the grounds, I made my way past Golden Tooth specifically to see if it was still glittering and glittering it was so I was pleased. It was time to chill out a bit and so ordered a hot chocolate from the main bar and was happily going to enjoy it in the office while the going was good when the annoying noise came again. Pssssssttttt! Shields up! Phasors set on stun! Woe is me. Heaven help me as this could prove to be a long night. Hardly surprising was the fact that on approach I couldn't see any form of tooth glittering. It

was well and truly hidden. Stench ahoy!

The client kindly moved out of the way before being prompted and I had better take another look inside. This time I got my trusty LED flashlight to assist. One good thing about these IGT machines is that some very nice person installed a service lamp inside so whoever's got his head in the machine can actually see something. This service lamp goes off when the door is closed and comes back on again when the door is open, just like a refrigerator.

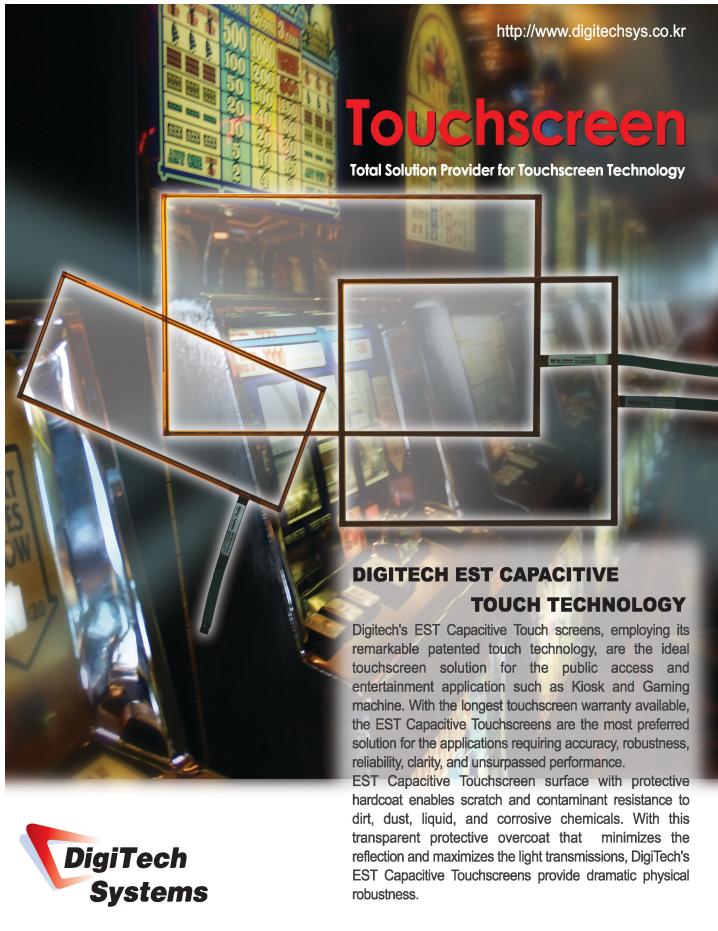
It's amazing what can hide in the dark corners of these machines. In any dark corner come to that. Thank goodness nothing was found looking back at me, especially if it had feelers! I hate it when that happens. I'm not fond of creepy crawlies, especially those creepy crawlies that run like the blazes and can take to the air. I can't understand why my wife, Jill, starts to laugh at me when I find myself confronted by such creatures. Radiation doesn't seem to damage them as much as the end of my boot does, providing they stay in the same place long enough. Stuck in a room, it's either the offending creature or myself to enjoy its comforts. This town just isn't big enough for the both of us.

Letting the idea of creatures

drift gently out of my train of thoughts, it was time to get back to the problem in hand and of course the woman with the golden tooth. Still nothing was evident from my inspection why the machine was resetting as if it was switched off and on by an invisible hand. A check of the mains juice was fine. Even tugging at the cable a few times to see if somehow it was broken inside. Nada. A check of the ON/OFF switch proved fine. A check of the fuse holders proved fine as well but there was obviously something that wasn't fine which had eluded me so far. It must be looking at me straight in the face and I just can't see it. So terribly frustrating!

Not wanting to jump the gun with wild and weird conclusions and assumptions, it could also be something to do with the logic board. What if the logic circuits are being corrupted hence resetting the system? Point worth noting that, Watson. It could be at this stage something to do with the power supply unit, which made sense (excluding the logic board trail for the time being). The supplies on these babies are pretty complex but if this one is playing up it will definitely need some closer attention.

The woman with the 24 carat tooth was paid out whatever credits were left in the machine and she found















herself another machine's buttons to push. It's much better like that than having a client breathing down my neck and asking how long the job will take. It gets even worse when the client starts to suggest what could be the problem.

Aaaarrggghhh! I hate that when it happens so it's a case of biting one's tongue and excusing myself with the excuse of needing to get something from my workshop to do some more tests. With that thought, I turned left and exit.

It certainly seems like an intermittent fault and that can be a bugger to locate. It would be easier to locate a needle in a haystack or the lost treasures of Treasures of Montezuma. The missing link perhaps? While we're on this subject, how about looking for Bigfoot or the Yeti or both of them at the same time just to be adventurous?

Usually intermittent faults denote either a faulty solder joint or a poor connection along the way. Mind you this isn't always the case as it could be that there's a component that is going out of spec and is upsetting the fine equilibrium of the whole unit. Things that have happened, and will happen again.

Knowing my luck, I tend to start from the wrong end of the stick with my investigations. It's referred to as Sod's Law or at times even

Murphy's Law. It all depends on the angle of the dangle which best suits the occasion. This sort of thing can easily make me pull my hair out. Still, I was starting to have nasty thoughts at a very early phase of the process and it's not healthy, not healthy at all. Surely there was no reason for that, or was there? Why was I getting bad vibes about this? Why was my big toe vibrating strangely? Was it a sign of bad things to come? It was a hunch I just couldn't shake off no matter how many times I tried.

The easiest and most practical thing to do is to replace the whole power unit. No big deal. Once done it will eliminate a great part of the problem, if not totally. How's that for being optimistic?

I got burnt a few times on the service lamp located behind the stacker during the process. I have to admit that this does help to see inside the machine but it doesn't do my skin a lot of good. It's hot, really hot and the smell of restaurant food in the air certainly beats the smell of burning hair and skin. It didn't take all that long and I was pleased at the minimal time consumed to carry out the replacement operation. The woman in question came running back to continue playing on her game and with a smile I left her at it, pushing at buttons and

having a buzz at seeing her credits going down and coming back up again. Seems like a job well done, emphasis on seems. Big toe still vibrating strangely.

A few moments had passed by when...Pssssttttt! Oh no! I don't believe it! It can't be, can it? Is it a bad dream? Has the crap hit the fan? Shall I go and have a look? Do I dare?

I had no choice. I had to face the music and even worse, the stench! My big toe was vibrating even more. Looking at the screen changing colours again, my heart missed a beat or two. Are the Klingons invading? Have I failed? Did I make a boo boo? No good crying about it now as the fault was still there even after replacing the power supply unit, one way or another it had to go. No more Mr. Nice Guy!

By the time I opened up the machine, the game had come back up again. For how long nobody knows. The service lamp was helping me to see reason in there. Accidentally touching some wires leading behind the stacker made the game go off and then restart again.

"Hmmm. This looks interesting," I heard myself say as my eyebrows lifted half an inch. Checking plugs and sockets in the area was a waste of time as I had done that more than once

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before. Touching the same wires behind the stacker made the game go off again. "Hmmm" (one more time). There's something smelling rather fishy in there, and it wasn't anything to do with the client this time.

Doing it a third time, the same thing happened. Surely it can't be a coincidence. Falling off a ten story building and landing safely on a moving truck carrying a cargo of cotton wool is a coincidence. There was something more sinister in there. Something evil. I was brave enough to put my hand in there even deeper and I got burnt again on the service lamp (major OUCH!). Then it hit me like a ton of bricks! It could also have been a crate of fish considering the aromatic circumstances. There were cables passing by which were very close to the lamp. Could these in some way have been damaged due to the heat? It really didn't make much sense as once the machine door was closed the lamp should go off. Following this set of clues even deeper, I found out that the switch which turned on and off the lamp was damaged, leaving the lamp constantly on in there. The heat generated actually damaged the insulation on the low voltage rail and the bare copper was only a hair's distance away from the cage where the stacker is housed. No wonder I couldn't see anything! The damage was behind the stacker and I didn't get

close enough due to the heat from the lamp and the fact that it was blinding me when I got really close. The slightest vibration (like hitting the machine in a loving sort of way) would get the copper to short to ground, overloading the supply unit and obviously resetting the game. Bingo! Phew! Wow! Eat your heart out Sherlock Holmes as you have met your match.

is that it just doesn't get boring. There's usually something different going on. A new challenge. New people to meet. A different experience. Different aromas. A new beginning. A new horizon. To boldly go where no man has gone before (gas masks recommended of course!).

> - James Borg jborg@slot-techs.com

Insulating the bare copper wire and pulling the cables away from the service lamp (and of course changing the switch which turned on and off the lamp) did it. I heard myself breathe a huge sigh of relief. That was a really weird fault. Probably one of the weirdest of the lot for a while actually. I think I'll remember that one for many years to come. One good thing about this job





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Slot Tech Feature Article



Bally Cinevision with a "bill validator system error"

his game took me a good part of the shift to get back running. I wasn't working on it steadily but off and on and it took some time. The casino where I work has been doing bill validator upgrades (like everyone else has recently) and we ran into a few "speed bumps" along the way. Upgrading the bill validator is how the problem began with the Cinevision. The new UBA-10 software was downloaded into it and then the error appeared. We were told that the processor board on the game did not have to be turned off during the download on a "Golden Monkey" game but it is much safer to do so. Why wouldn't the error clear? A different main processor board was tried in the game and that's what the cure appeared to be but I checked into the problem further. I tried an NV RAM and EPROM clear on it. After all of that ordeal, the

Quick Simple Repairs #39

Pat Porath

error came right back. I swapped bill validators with the game next door and the problem stayed in the game. Maybe it was a bad main processor board after all. I even took the two batteries out of the main board to do a "memory reset" on it but no luck there either. By this time, to me, it was looking like a bad main board as previously diagnosed. Then a coworker mentioned something: the stacker box. What in the world would the stacker box have to do with a "bill validator system error"? Come to find out it had EVERYTHING to do with it. As soon as the other tech mentioned it, I could hardly believe it. I didn't even think about the stacker and thought he was kidding. As soon as the switch on the stacker was flipped in the opposite position that it was in, the error cleared. ALMOST UNBELIEVABLE! Because the stacker box has the small box on it, with a switch inside, and it needed to be in the opposite position that it was, the BV error would NOT clear. The stackers are called "UBA Intelligent Cash Boxes."

These are the boxes that have an additional small box located above the handle attached to them (The technical name of it is an ICB module box.). Inside is a small switch and, as mentioned earlier, it simply had to be flipped in the opposite position. Don't make the mistake that I did. If a "bill validator system error" occurs on a Bally Cinevision, check to see if the game has a standard cash box or an ICB. Here at



Slot Tech Magazine

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NONSTOP TICKETING Maximum play

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the Island Resort and Casino in Michigan, we do not use the JCM ICBs for what they are designed for, even though we do have some of them on the gaming floor. I don't know much about them simply because we don't use that aspect of them.

Editor's note: For clarification of this casbox issue, I forwarded this to JCM's own Jack Geller. He is their Supervisor of Technical Services. Here is his response:

Looks like they have had their ICB boxes turned on for a while and are just now noticing it. The ICB function has been in our software since 2002. Recently there have been some changes to some of the functions that may be the culprit in this case. While doing some training about two months ago, it was brought to my attention that a casino was having a problem with some new games they had just put on the floor. It seems after the drop, the Validators would go out of service until the cash box was reseated. When I investigated this I noticed they had ICB cash boxes. Occasionally manufacturers will ship ICB units even if they are not specified in the order.

The Software has a few fail safes to insure cash boxes are not introduced into machines with information from another game. One of the first things an ICB capable Validator will do when a new cash

The same of the sa

I/O cards shake loose. It's tempting to just give 'em a push but you should power down first.

box is inserted is to query the memory module on the cash box to see if there is another machine number assigned. If there is no machine assigned to the cash box, the validator assigns the asset number of the game to the cash box. With earlier versions of software if the ICB function was not turned on, the validator never communicated with the box. This ran into problems when Validators were exchanged but not properly enabled. The data for that drop was not recorded because the unit wasn't properly enabled.

The latest version of software will now look for an ICB cash box weather or not the ICB function is enabled. This way, if a casino is using ICB and the cash boxed are turned on, but the validator isn't properly enabled, the validator will set an error code and force the tech to check the validator to see what is wrong.

There are error codes visible on the diagnostic LEDs in a UBA that will distinguish what is going on during an initialization cycle if an ICB error is occurring. These can be found in the UBA manual on the JCM web site at http://www.jcm-american.com/docs/manuals/960-000097.pdf. Page A-13 Initialization codes.



JCM's Intelligent Cash Box or ICB

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The simple rule for ICB capable cash boxes in a Non ICB environment is since you aren't using the ICB, make sure they are turned off. the method for this is explained in the March tech bulletin on the JCM web site http://www.jcm-american.com/docs/bulletins/bulletin-200803.pdf.

Also if the ICB isn't being used by the casino, it is a simple matter to remove the module from the cash box. Two screws to remove the cover, and two more to remove the module.

Hope this helps.

Jack M Geller, Supervisor of Technical Services

JCM Global
www.jcmglobal.com

IGT S2000 "Reel 2" Tilt

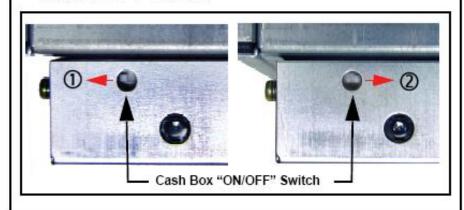
While testing a GEN 2 printer in the game, after a reboot, a "reel 2" error didn't want to clear. The reel was given a spin by hand and there wasn't any voltage on it. Kind of weird,

all I was doing was testing out printers and now I have a reel tilt. I reseated the reel, and rebooted the game, still the error wouldn't clear. Next, the game was powered down once again and the I/O board next to the main

Technical Notes

Perform the following steps to quickly Enable or Disable an ICB Unit:

- To Enable an ICB, move the Cash Box Switch to the Left (see ① Below).
- To Disable an ICB, move the Cash Box Switch to the Right (see @ Below).





processor board was checked to see if it was seated properly. It seemed to be a little bit loose so I snugged it in place and fired up the game. This time, after the second door reset, the error cleared. A slightly loose I/O board was causing the problem. When checking the boards to see if they have come loose, it is always a good idea to shut the game OFF. Otherwise there is a good chance that you will fry the board.

Quick Repairs for Printers – Continued

The first FutureLogic printer, known at the time as "Seiko" or "GEN 1" is capable of printing three inches per second, has diagnostic LEDs and comes in two different types. One of them is called the PSA-66-001N. The "N" stands for NETPLEX which is associated with IGT games. The other is a PSA-66-ST. These are used in games other than IGT. There are two LEDs on the unit. One is marked "status" and the other is marked "error." These aren't on the printer just to look pretty. They can be used for troubleshooting.

This is how they work:

STATUS LED-ON ERR LED OFF-the unit is ready for printing STATUS LED-OFF ERR LED ON-out of paper STATUS LED -OFF ERR LED ON-the print head may be up STATUS LED-OFF ERR LED medium blinking-unit may have a temperature error

STATUS LED-OFF ERR
LED slowly blinking - may
have a voltage error
STATUS LED-OFF ERR
LED quickly blinking-may
have a print head error, a
paper jam, or it may have
missed the black index
mark.

When working on this printer, try to keep in mind which software that it has downloaded on it because a PSA-66-ST RS232 unit will NOT work in an IGT game unless the motherboard has been "flashed" (or programmed) to a PSA-66-001N NETPLEX type. Once again (as well as all other printers) a simple cleaning cures a lot of the problems. Dust will buildup on the optics and cause the units to malfunction. I first inspect the printer to see if there is anything obvious wrong with it, such as the ribbon cable. On the GEN 1, the cable is quite wide and I have run across a few that have had bare wires showing. They had gotten pinched in a game and the wire was exposed, which could cause other problems such as taking out the power board.

The power or COM board is located directly behind the printer paper tray and the ribbon cable plugs into it. There are two different types of these also. If the board has dip switches on

it, then it is used in games other than IGTs. If the board does NOT have dip switches, then it is used in Netplex (IGT) games. The white connector on the one with the dips has 14 pins, while the other only has

After the unit is inspected and cleaned, I power it up to see if it will feed paper. If it does, I test it to see it will print out a "self demo ticket" a.k.a. "sample configuration ticket." If it prints a good ticket, it tells me what version of software that it has downloaded in it, the model, and the print quality. To print one, press and hold the "feed button" then power up the printer. Once the ticket starts to print, release the button. If it is going to print, it should start in a few seconds, if it doesn't then there may be a problem such as a bad motherboard or a dirty optic or even a software conflict. In a situation where the printer does print a "sample config. ticket" I will still test the unit in a game. Currently we can connect the GEN 1 printer up to the desktop PC in our other shop but for me it is faster and closer to test the printer directly in a game.

Some Tips on the GEN 2 and the GEN 2 Universal Printers

The vast majority of the time, dusty dirty optics are the cause of the problem. A quick cleaning and a lot of

Slot Tech Magazine

June 2008



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the time they will be RFI (ready for installation). If a printer prints fine on the bench and fine in a game with the door open but when a customer plays the game the ticket jams, the problem may be a bent or misaligned bezel. I've seen a few in which the metal bezel was bent just a bit, but enough to cause jams. Another item to look for if a ticket is still jamming on its way out of a game is the machine printer bezel. I haven't seen very many problems with upright games but on slant tops, we have had a few problems. There is a "slot machine bezel" for AGATE slant top games that has a clear plastic piece in it that helps guide the ticket out of the game during a print. When you see the clear plastic material, it may be mistaken for an item that was used for shipping the part. The plastic piece IS NEEDED. Do not remove it from the bezel. Once in a while, I will swap out a motherboard in one, but overall in my opinion, the GEN 2 and the GEN 2 Universal run quite well.

Ithaca Epic 950

We recently received a few of these on the gaming floor in some Bally games. So far so good, I haven't had any problem with one thus far. It's pretty easy to tell the difference between the Netplex and the RS232 type of units. The Netplex has a 10 pin connector on the

communication board and the RS232 type has 14 pins on the board. (Transact Netplex communication board part number 95-05001, The RS232 communication board part number is 95-04998.). The 950 even has a USB port. There are four pins on the communication board. The Transact part number 95-05007. Does it include diagnostic lights? Answer: Yes it sure does, and they are as follows:

Ready LED ON- the printer should be A-ok Ready LED ON and Open LED ON- the printer cover is open Ready LED ON and Open LED Blinking-the chassis is open (printer not all the way in game) Ready LED ON and Paper LED ON- printer out of paper Ready LED ON and Paper LED Blinking-printer is low on paper Ready LED blinking and Fault LED Blinking (not good) -printer has a temperature error Ready LED ON and Fault LED Blinking-paper jam

Ready LED Blinks twice, pauses, then blinks twice again and the Fault LED is ON (not a good sign) - printer has a RAM error Ready LED Blinks 4 times, pauses, then blinks 4 times again and the Fault LED is ON (also not good)-printer has a "checksum error" (software problem)

Hopefully this will help in maintaining the Epic 950 printer.

An Aristocrat With a Com Host Failure

After an Aristocrat game had a full RAM clear preformed on it because of some corrupt meters, the "com host failure" error didn't want to clear. This type of error often is caused when the game loses communication with the tracking system. At the casino I work at, we use Oasis, which I still like to call CDS. Since it was a COM error, why not take a look at the Aristocrat SPC COM board? If the small red light is blinking at a fast rate, it means that there is more than likely good communication. If the light is blinking slowly, like it was in this case, there was a problem. Since the game had recently been RAM cleared, maybe it was a software issue? While checking out the "game option software", such as machine number and denomination, I noticed that the SPC board option was set at 0 instead of 1. Because the setting was not at 1, this caused the machine not to talk to the SPC board and the SPC board not to talk to the Oasis tracking system. I simply changed it to 1 and within a minute, the game communication was working perfectly.

- Pat Porath - pporath@slot-techs.com

Slot Tech Show Report

Randy Fromm visits the NIGA show in San Diego, California



Aruze, inventors of the transmissive reels technology, showed some really outstanding machines, in some REALLY interesting cabinets. They also demonstrated their "Rescue Pay" scheme that well, I'll stop short of saying that it rewards total losers but it is a sort of "slot insurance" that may interest players.



New, large display technology allows for some pretty impressive machines. What was the name of this game, again? Oh yeah. I think it was called ebay or something. Some little gaming company called IGT was showing it.



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Slot Tech Show Report - Randy Fromm visits the NIGA show in San Die















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n San Diego, California



Above left: I never in a million years thought I'd see my friends from UNICUM (Russia) here in my hometown of San Diego! It is unfortunate that their booth remained empty for much of the time as UNICUM is a very good company that makes very good slot machines.

Above and left: I really like the transmissive reels in the WMS Bluebird (in fact, I like the entire WMS Bluebird system). This image is bad. I was actually forbidden by a WMS employee to take photographs of the WMS machines while on the WMS stand at the NIGA show. I had snapped this one before I was politely but forcefully told in no uncertain terms that I was not to take any additional photographs of WMS equipment. I was told that I could download the images. Um . . . No thanks. I can download a picture of Hulk Hogan too but I'd really rather take a photo of him myself (and I have!).

Left: Gary Platt and Bob Yabroff react to their halarious ad in the April issue of Slot Tech Magazine.

Bottom left: Nova's Felix the Cat - One of my favorite cartoon characters!

Bottom middle: Amelie Bergeron of Nanoptix shows their high speed coupon printer for casinos. Imagine being able to quickly print a couple of hundred tickets any time you need 'em. The printer also bursts the tickets, detaching them from the stack.

Bottom right: When a Big Bertha just isn't big enough . . . you need something Colossal!

June 2008

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Slot Tech Press Release

ARISTOCRAT TECHNOLOGIES RECEIVES MULTIPLE CERTIFICATIONS FOR VIRIDIAN™ CABINET

Award-winning VIRIDIAN™ Certified for Jurisdictions Across North America Company Filling Orders From Coast to Coast

A ristocrat Technologies has announced that it has received multiple test lab certifications for its new award-winning VIRIDIANTM cabinet in key markets in North America. The groundbreaking product is now certified in most GLI jurisdictions, New Jersey, and three Canadian provinces.

In addition to the certifications, the VIRIDIAN cabinet completed its Colorado field trial ahead of schedule, and is in the final stages of field trial in Nevada. VIRIDIAN was initially placed in select approved markets in late March and has received an extremely positive response from players and operators alike.

Aristocrat Sr. Vice President of Sales Sean Evans said, "Our reports show that customer acceptance is very high, and early numbers indicate improved casino performance with more than a 50 percent increase in multiple locations. We believe that can be directly attributed to VIRIDIAN's unique features including its dynamic scorecard, easy-play interface, and high impact cabinet presence."

The industry immediately embraced VIRIDIAN at its debuts at G2E and NIGA, and Global Gaming Business magazine named it the year's "Best New Slot Product."

The VIRIDIAN cabinet is de-

signed for optimal player comfort and operator serviceability and features a slimmer footprint, high resolution dual LCDs and unique, wrap-around belly art, creating a truly unique product offering. VIRIDIAN embraces environmentally responsible design and production methods, resulting in a 100 percent RoHS-compliant product and increased energy efficiency for operators.

Driven by an IntelTM processor, the innovative GEN7 platform features dynamic scorecards and an enhanced Easy Play onscreen interface, including player-selectable denominations. The new platform utilizes Smart card and flash card technology, and, in addition to offering an enhanced player experience, GEN7 paves the way for downloadable, server-based and wireless gaming, supporting the technology of today while driving the technology of the future

Aristocrat Technologies Inc. is a subsidiary of Aristocrat Leisure Limited (ASX: ALL), a leading global provider of gaming solutions that consistently outperform the competition. The Company is licensed by over two hundred regulators and its products and services are available in over ninety countries around the world. Aristocrat offers a diverse range of products and services including electronic gaming machines, inter-

active video terminal systems, electronic tables, and casino management systems. For further information visit the company's website at ww.aristocratgaming.com.



Slot Tech Magazine

June 2008

Slot Tech Press Release

Octavian International Selects FutureLogic as the Preferred Technology Partner for Its Next-Generation Ticket-In/Ticket-Out Systems

International, a leading global developer of gaming systems and software solutions. According to the agreement, Octavian will integrate, support and promote FutureLogic's thermal ticket printers and promotional couponing technology across their full range of electronic gaming machines and casino management systems.

FutureLogic's GEN2TMprinters and promotional couponing technology will be integrated with all existing and new server-based games and slots equipped with TITO (Ticket-In/Ticket-Out) technology and controlled by Octavian's ACP (Accounting, Control, Progressives) casino management systems. Octavian will also provide technical service and system integration support for FutureLogic products.

"With its history of technical innovation and demonstrated leadership in TITO printer reliability and performance, FutureLogic was the ideal choice to help take Octavian International to the next level of global brand preference," said Peter Moffitt, President of Octavian International. "The GEN2 Printer's enviable position as the number one preferred printer for casinos and EGMs worldwide will be instrumental in further solidifying Octavian's leadership in the rapidly developing international gaming market."

"The timing of this key strategic partnership with Octavian International represents a tremendous opportunity for FutureLogic," said John Edmunds, VP International Markets. "The rapid growth of TITO across EMEA, APR and South America, coupled with Octavian's proven gaming industry expertise and product portfolio, greatly boosts our ability to provide casinos and gaming manufacturers with reliable, innovative printing and marketing solutions."

For further information, contact FutureLogic Europe at: +44.1628.760.083 for sales enquiries, or: +44.1628.760.082 for technical service.





Press Release

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www.heber.co.uk

Belvedere Mill, Chalford, Stroud, GL8 6NT, UK

Press release title Heber launches Pluto 8

Date of release: 15 May 2008

Publish date: IMMEDIATE

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Release reference: PR97, 80-16549 Issue 74

Contact: Russell Mort Russell.Mort@Heber.co.uk

Release starts...

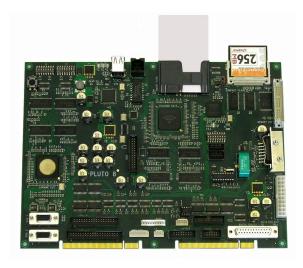
Heber, the world's leading manufacturer of embedded and PC-based reel and video gaming control systems, is proud to announce the launch of the eagerly awaited Pluto 8.

Already making ripples in the global gaming community, Pluto 8 is the latest addition to the internationally successful Pluto range from Heber. Pluto 8 has been designed to meet the demands of the ever evolving gaming industry and was created to power multi-games, dual video, embedded and Linux gaming systems.

Russell Mort, Marketing Executive at Heber, said "People in the industry have already shown significant interest in the latest Pluto launch. Our team of specialist engineers are dedicated to innovative design and creative engineering and, based on feedback from the industry, Pluto 8 has been designed to meet our customer's needs and exceed their expectations."

Coinciding with the launch, Heber will be releasing the Pluto 8 Development Kits. These provide an ideal test environment for gaming system developers and speed up development, while reducing the time-to-market.

Pluto 8 and Pluto 8 development Kits will be available from 1 June 2008.



Slot Tech Press Release

Kingbright LED Brochure

Kingbright Corporation, a TS 16949, ISO 9001, ISO 14001 certified LED manufacturer has released its 2008 LED Brochure, a complete LED Solution Guide for Gaming Applications. Tailored to meet design engineer's ultimate design needs, this full-color brochure features detailed product descriptions, specifications, and diagrams for its customized LED selections including Ultra-Bright RGB Full Color, Bi-Color, & Single Color SMD LEDs, Special Color LEDs including pink, purple, & ice blue, High Brightness Light Bars, Low Profile SMD Displays in various sizes and types, Right Angle SMD LEDs and many more. With utmost quality, reliability, and capability, Kingbright offers 3D specifications on the website as well as full custom LED options in package with desired shape, form, and color further enhancing engineer's design solutions.

About Kingbright

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For more information, please contact Kingbright Corporation, 225 Brea Canyon Road, City of Industry, CA 91789 Tel (909) 468-0500

e-mail: sales6@KingbrightUSA.com Website: www.KingbrightUSA.com

Editor's note: I have this brochure and it is very slick and very interesting. If you are involved in game or signage design, I hope you'll request a copy. And no, you can't download it (I asked!) - rf







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Ceronix, Inc. is offering a two day monitor repair class for Technicians at our facility in Auburn, California. Troy Nofziger will provide you with two days of familiarization and hands-on repair of Ceronix CRT and LCD monitors. Day one will entail CRT troubleshooting, missing colors, monitor shut down, auto bias, power supply circuits and much more! Day two will entail the direct replacement LCD. Including troubleshooting, becoming familiar with our electronic revisions, and lamp replacement.

WHEN

Tuesday July 29, 2008 7:30 A.M. - 4:00 P.M.

Wednesday July 30, 2008 7:30 A.M. - 4:00 P.M.

Meals will be provided by Ceronix, Inc.

Class Fee: \$200 will be used as credit toward the purchase of new units or parts upon completion of the class.

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Make your reservation by mailing in the registration form (see reverse side) and class fee to Sheri Bomhoff at sheri@ceronix.com or Peggy Dube' at peggy@ceronix.com

Slot Tech Press Release

GLI HOLDS INCREDIBLY SUCCESSFUL REGULATORS ROUNDTABLES ON TWO CONTINENTS

Gaming Laboratories International has success fully completed regulators roundtables on two continents, and the reviews have been very positive.

GLI's 7th annual North American Roundtable drew more than 200 regulators from 93 jurisdictions across the United States and Canada. Its 5th annual European Roundtable attracted 47 regulators from 18 jurisdictions across the continent, from the U.K. to Lithuania.

GLI's Roundtable is a great opportunity to become more familiar with new technologies and current world practices in adopting them. We found the roundtable very useful, and we are impatiently waiting for the next meeting, â•? said Danielius StaÅįys, Head of Gaming Devices Inspection and Register Division, State Gaming Control Commission in Lithuania.

GLI Sr. Director Engineering and Client Services Ian Hughes said, "We are thrilled with the way the roundtables went. Today, 111 jurisdictions around the world are more informed and more prepared for their regulatory challenges, and that is extremely beneficial to the global gaming industry. No other company offers such an experience, and we are proud to present the roundtables and to do it free of charge?"

GLI will be conducting condensed versions of the roundtables in multiple international jurisdictions over the remainder of 2008. Next for GLI is a series of training sessions throughout the year in the company's GLI University program. The trainings are also presented free of charge to regulators.

Gaming Laboratories International operates nine fully accredited testing laboratories worldwide, in addition to fully accredited inspection bodies in America, Europe and Africa. GLI is the only independent testing laboratory of its kind to hold both U.S. and International accreditations for compliance with ISO 17025 and 17020 standards for technical competence in testing and inspection services.

Contact: Christie Eickelman, Director of Worldwide Marketing Gaming Laboratories International +1 (702) 914-2220 or c.eickelman@gaminglabs.com

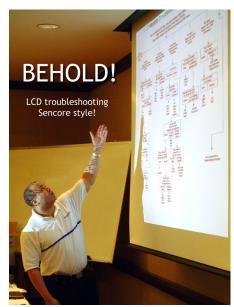




Slot Tech Event - SlotFest 17









Above: Ken Moberly leads the SlotFest, slot managers program.

Left: Mystic Lake's Norm Hohenstein lead a daily tour of the facilities.

Left: Sencore's Bobby Ruffin runs through some LCD troubleshooting procedeures.

Bottom: Suzo-Happ's David Oldham presented both MEI and FutureLogic training.



♦ lotFest (featuring TechFest 17) was held May 6-8 2008. Once again, the event was held at Minnesota's Mystic Lake Casino and while TechFest itself may have been a clone of last year's event (same speakers of course but as always, the latest technical presentations) the addition of the University of Nevada, Reno's slot management program attracted attendees from international casino operators with operations in Aruba, St. Maartin,





Slot Tech Event - SlotFest 17

Mexico and Canada as well as USA, of course.

Generally speaking, I am not one to walk around with a puffed-up chest proclaiming how great I am or how awesome Slot Tech Magazine is but I must say that I am enormously proud of the TechFest program and my cadre of presenters, all of whom come from the manufacturers themselves or their service facilities. Together, we make a truely awesome team. I am very pleased to welcome UNR Adjunct Professor Ken Moberly (that's a fancy way of saying this guy has tons of real-world experience but lacks an actual degree in education so he can't be called "professor" or all the

SIC goodle bad of Ski products (not related) as casing, such as bandales, glass cleaner (still a progress, the steasures commented in low I have to go by commented



real professors freak out) to the event, which, as you have likely noticed, I'm now calling "SlotFest."

Ken's teaching style fits in perfectly with the spirit of TechFest. Any of you that have attended the event in the past know that while we cover a ton of stuff (sometimes very detailed) we try to keep things loose and inject a little humor and

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June 2008 Slot Tech Magazine



On-Site Slot Tech Training Customized Classes Available

Randy Fromm's Casino School is a practical, no-nonsense look at how gaming machines work and how to repair them when they don't. No previous knowledge of electronics is required to get the most out of the school. The Casino School is geared for those who want to learn how to fix gaming devices without having to learn complex electronic theory or purchase expensive test equipment.

Be prepared for six hours of accelerated learning each day. Class begins at 9:00 am sharp each day and continues until 4:00 pm. The Casino School provides each student with reference materials and troubleshooting guides that will be valuable aids for repairing equipment on location and in the shop.

Students learn how to work with:



THE DIGITAL MULTIMETER

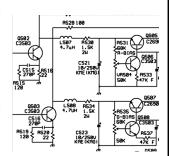
This relatively inexpensive piece of test equipment is easy to operate. Casino School students learn to use the digital multimeter to perform tests and measurements that will pinpoint the cause of a failure down to a single component.

ELECTRONIC COMPONENTS

The individual components used in games are introduced. Parts such as resistors, capacitors, diodes, potentiometers and transistors are covered individually. Students learn how the components work and how to test them using the meter.

SCHEMATIC DIAGRAMS

Schematic diagrams are the "blueprints" for electronics. Learning to read schematics is easy once you know how the parts work!



POWER SUPPLIES

Power supply failure is a common complaint in many different types of systems.. Power supply failures are discussed during the class, along with shortcuts for troubleshoot-

ing and repairing them.

CRT at MONIT The mo video slot

CRT and LCD MONITOR REPAIR

The monitors used in video slots are designed for quick, easy, and safe repair. Students will

learn the theory of operation of all types of monitors and how to repair monitors down to the component level. Of course, monitor safety will also be discussed.

You do not have to send your slot techs to Las Vegas or Atlantic City for training. The Casino School brings the training to you. Contact Randy Fromm's Casino School today to reserve a date for your tech school

Randy Fromm's Casino School 1944 Falmouth Dr. El Cajon, CA 92020-2827 tel.619.593.6131 fax.619.593.6132 e-mail CasinoSchool@slot-techs.com

For a complete brochure, visit the website at: slot-techs.com

Slot Tech Event - SlotFest 17

fun into things. Slot math can be fun? Ken thinks so and he proves it to the class. Casino layout? There is a lot to learn but it's not rocket science. After a day on the subject, you know what you're doing. Now, grab your scissors and prove to your classmates! Anyway, the whole slot management course was highly rewarding and a whole bunch o' fun, with rave reviews from everyone who attended except for one disgruntled attendee who complained that the meeting room was too small for the class size. He was 100% correct and we moved the class to a much larger room after the first day. Sorry, Bro. We had some unexpected defectors, dirty rotten scoundrels that bailed from TechFest and joined The Overlords, A.K.A. Slot Management (actually, they accidentally had been signed up for the wrong event).

Anyway, there were far too many attendees to list here. If you came to the event and you want download the class picture, it's actually a huge .jpg file. It's around 20 MB. Visit the website at slot-techs.com and you'll find a link somewhere.

- Slot Tech Magazine



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Why back issues of Slot Tech Magazine are
important to own...

Slot Tech Magazine is strictly technical. As such, the magazine's contents are not time critical. The repair information and technical data contained in past issues is just as valid today as it was the day it was published.

Additionally, current and future articles more-or-less assume that readers are already familiar with what has been covered in past issues. This editorial policy assures that Slot Tech Magazine's contributing writers are not limited to "writing down" to the level of a novice technician but are free to continue to produce the most comprehensive technical articles in the gaming industry.

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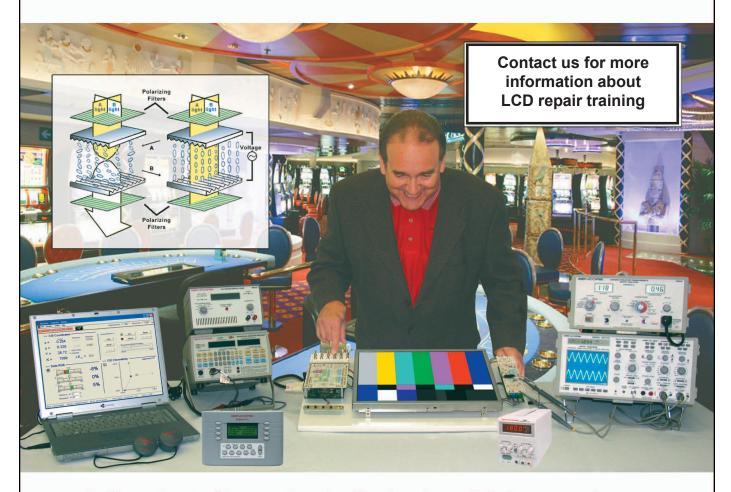
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