

Bally Colour Code

Post by: OldReno
Bally colour code.

1. Red
2. Blue
3. Yellow
4. Green
5. White
6. Brown
7. Orange
8. Black
9. Grey (gray if you prefer)

The pneumonics are "Red blooded Yankee girls wear brown or black garters."

0. Means it is a solid wire, and there is no trace. Solid wires often carry voltage other than signals.

10 means a red wire with no trace.

20 is a blue wire with no trace, generally your 6V light feed.

70 is a solid orange, which is your 50V feed, or source.

All wires have minimal 2 digits. If it's solid, there is a 0 at end. If it has a trace, the 2nd digit is not a zero. The body colour is the first digit, and the trace is always the 2nd digit.

A dash (-) after the wire denotes its next re-use. For example, on a schematic a 93-1 wire is not the same wire as a plain 93. So be cautious, often Bally had to use the same colour wire for different circuits, although I don't know that they used any solid wire(0) as a duplicate. Expect a solid wire to remain true.

How the coin lockout coil works

by: OldReno

There are probably about 7 or 8 switches in the coin lockout coil circuit, and while I don't have schematic handy, most of them are in series, except for a couple of them.

So, when the coin lockout coil is off, the little bar of the paddle pokes through your coin acceptor, keeping the machine from taking any coins.

Let's figure out when we DO want this coil off, and therefore unable to accept money.

It should be off during reel spin. Probably a NC switch on the 'C' stack on your reel mech, that opens during spin. A series switch.

It should be off during handle pull, which is your dashpot switch opening which is attached to your pump on the reel mech. A series switch.

It should be off during pays, therefore a NC switch on the payout relay on the hopper. A series switch.

It should be off during jackpots, otherwise you could coin off a jackpot pay. Probably one or two switches in the top unit, on relays labelled JP#1 and JP#2. Parallel switches, NC, open during jackpot.

Note, there is a N.O. switch to the lockout, by the way, which overrides the JP switches above, or bypasses them. This is your jackpot reset key switch, on the side under the handle, another parallel switch, I believe, along with the two JP# ones. Of course, to bypass the jackpot reset switch, just open the door and push down the coin in switch. It still works, but the lockout coil is off, keeping a coin from hitting it. Your finger works just as well, and no JP key needed.

And finally it should be off after you have inserted maximum coins, which is a little switch attached to your odds step up disc in the top unit. Of course you need a switch on your coin relay on the reel mech to overcome the max coin switch in the top from killing the machine forever. Two parallel switches.

So, I count about 8 switches.

The nearest one I generally check is the dashpot switch. You can do this from the outside of the machine if you have good ears. Wiggle the handle a little bit, and you should hear the lockout coil turning on and off. If your handle is out of adjustment, this is usually the bad switch. Or you can open the door and pull on the pump arm to check it.

If the machine only takes 1 coin, and all others are rejected, then check your odds unit disc switch in the top unit.

If it won't take any coins After playing max odds, then it is probably your coin relay switch is staying open. Check this by pushing the coin in switch down one time, and then your lockout coil should start working after your odds reset and your handle drops.

Yes, I know this is kind of a hazy post, but I hope to get you some idea of how the lockout works, and where some of the controlling switches are.

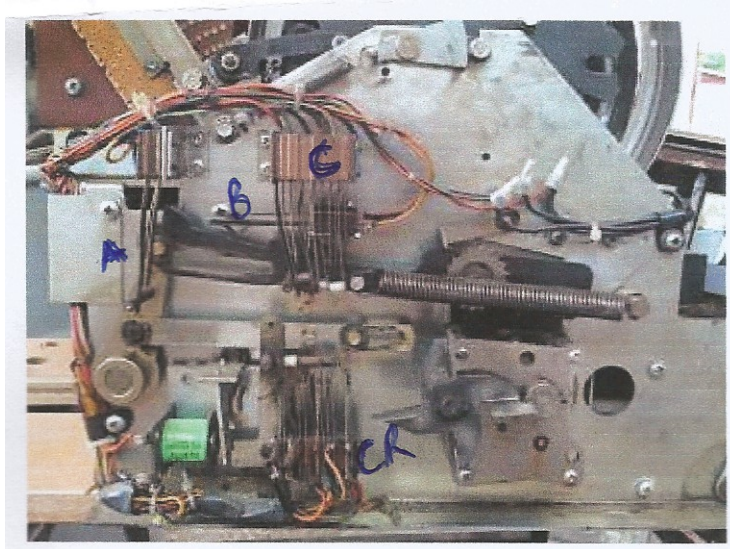
A lot of times you can use process of elimination to eliminate the suspected problem switches which may not be problems after all.

And you can always tell if your lockout coil is on, by pushing gently on the armature tab to see if you feel any resistance, or hear buzzing when you push it.

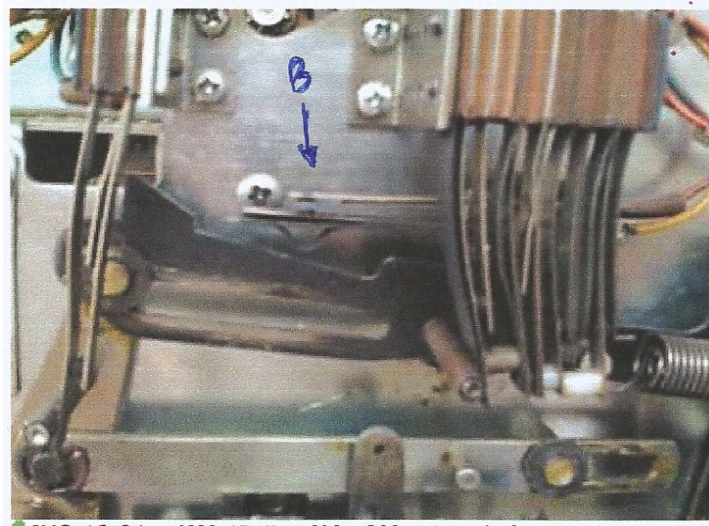
Also I forgot the coin in switch, which if it is pushed down, will probably kill power to the lockout, too. Sorry. That makes about 9 switches.)

I don't know that information will do anyone any good, but there it is

You can verify all these things by putting a little piece of paper in between the NC switch contacts in this circuit, one by one, and then play the game and see how that effects the operation. Something fun to do on a lazy afternoon. The coin lockout coil is a stand-alone circuit -- all it does is turn on and off the ability of the machine to accept coins. Like the Terminator, that's all it does.



Looking at the left side of the reel mech, we see the 4 different switch stacks that help run the machine.
 At the bottom, in front of the green coil is your coin relay stack.
 Above the coil are your A switches.
 Just to the right of them (shown horizontally) are your B switches.
 The last set to the right (just above the coin relay stack) are your C switches.



Shown here is your B switch stack (the horizontal set). They are normally open switches, and their only purpose is to reset the hopper, when handle is pulled and after a payout.

How to tell if your EM fuses are good without opening the door

1. If there are any lights on at all, the 120V is good.
2. If the insert coin, coin accepted, winner paid, or any line lights are on, the 6V is good.
- 3, If you pull forward on the handle, and hear the coil lockout coil click (or on a \$ machine, push the coin reject button), then you've got 50V.
If all of the above work, your fuses are fine.
4. If none of the above work see if there is a pay on the machine, then pull out the hopper and look for the pilot neon light being on. In that case push the reset button, because the hopper probably timed Out.
If all of the above are bad, make sure it's plugged in
In most cases you can diagnose the condition of your fuses without opening the door.

How to set up pays on your Bally EM

1. push down on the coin in switch and release.
2. pull the handle.
3. reach back in and stop the spinning fan (left side reel mech) with your finger.
4. move the reel to whatever winning combination you want to check Hold them in that position.
5. release the fan.
6. release the reels.
7. catch the coins coming out of your hopper, if all is well.

How to easily trace your wiring.

So you've got a bad coin accepted light on your door, and you're not sure where it goes.

There are a multiple of ways of tracing that wire.

You could clip one lead of your ohm»meter onto the wire, and then start poking the other lead into all the pins on your Beau plugs until you find one that ohms»out. Pretty time consuming.

Or, you could pull out those beau plugs, and look behind them until you find the wire colour you're looking for. Always a bad idea, because you will weaken the integrity of the plug and the wires.

don't dick around with your beau plugs unless absolutely necessary, please.

Or you could do it the easy way. Every wire goes somewhere, either to the door, reel mech, hopper, top unit, or case.

So, if you're looking for an 18 wire (red with black) from the door, then pull out your reel mech, gently set it on its back, and look at the wiring side of you beau plug until you find it soldered in place. If it's not there, then pull out the hopper, and look again at the wire side of your plug to see if you can find it.

And then do the same with the top unit, and finally look at the wiring in the cabinet. All wires go somewhere.

Bally tried very hard to maintain its wiring integrity, so please remember that wires do not magically change colour in the loom. Colour changes occur across switches, and not arbitrarily in the harness.

Once you have noted down the correct location on your plugs, then you can go in with your meter from plug to plug to ensure that you have a good circuit.

This method can save you a lot of time when shot gunning, and also, if you want to, you can easily make a drawing of all your plugs wiring so that you can use it as a reference for further problem solving.

It's also a good idea to learn the Bally colour code as a shorthand method for following wiring

1 red

2=blue

3=yellow

4=green

5=white

6=brown

7=orange

8=black

9=grey

0=no trace.

Print it out and use it as a handy guide.

Or, remember the following phrase "Red Blooded Yankee Girls Wear Brown Or Black Garters."

Thanks,

Old-Reno

How to accurately check closed switch contacts.

When you are checking any of your relay leaf switches, remember that to actuate them properly, you must simulate what the machine does.

Push down on the coil armature (Hat plate), and NOT at the fibre or plastic assembly which operates the switch ends. Doing that pushes down the actuator blade further than the machine would normally do it. There's some slight slop there.

Many folks have adjusted their switches doing that, but often they do not fully contact, or, even worse -- release -- (which could lead to burning coils if something is stuck on.)

Look for the actuator blade to slightly physically push the static blade when it contacts. And also make sure they cleanly open.

Always adjust the static blade(s) to the actuator(s). Only bend the actuator if really really necessary.

Always adjust the blade nearest to the stack of micas (insulators) rather than at the other end.

If your machine has come from a wet climate to dry one, you might want to slightly snug up the 2 screws that hold the switch-stack together.

Here in Reno, we'd have to do that to all new machines after a few days, because the machine heat would drive off moisture into our dry air and the stacks would loosen.

Unless your switches are arcing a lot, you shouldn't have to often clean contacts. Very rarely if at all. If they push and move when contacting, they should be self cleaning.

If you're familiar with your machine, you would be able to check every switch on it in a few minutes.

OK, I'm timing you

Now, if you want real accuracy checking switches, use your VOM. Especially if you have to troubleshoot.

If you have gotten a new machine, with any problems, one of the first things to do is go through and check all your switch stacks.

Note, something important came in mind for when you check your switches with an ohm-meter

It is vital that you check your switches by placing the leads of your meter onto the tabs of the switches (where the wires are soldered in), rather than touching the switch leafs themselves with your probes.

If you touch the leafs, you are liable to put extra pressure on the switch, and thus force it closed when it is not really making contact. This in turn may lead to your misdiagnosing the problem, and looking elsewhere, when in fact that might have been the original problem.

Checking your switches in the correct manner will lead to much more accuracy.

And, again, look for some movement when your switches naturally close, that lets you know they're making contact. If they are clean, and you see some 'push' when they close, then they are probably 100%

Using jumpers on your Bally EM

A good set of jumper wires with alligator clips can help you diagnose many common problems with your Bally.

The circuits are played out so that the solid yellow (30) wire is the common wire between your 50V supply, and your 6V supply.

You could call it the return for both voltages if you wish.

A good place to clip on your jumpers, is the 30 wire (yellow-learn your Bally colour code) on the coin in switch on the door.

The 70 wire (orange, learn your Bally colour code) can be found behind the coin acceptor on the lockout coil.

The 20 wire (blue, learn your Bally colour code) can be found on any 6V door light.

To check a coil on any sub-unit, remove it, (the sub unit, not the coil...) and then touch your jumper wires to both leads of the coil.

Make sure your jumper alligators don't touch case when you're doing this.

If you wish you can put a small fuse in-line on your jumpers, but not really necessary.

Be warned, some of these coils energise with great vigour, so don't jump and hurt yourself when you do this.

And, just touch them momentarily, as voltage applied to a coil for a long time WILL melt the coil.

Don't be dicking around with 120V coils on the case, as that's a bad mix.

Generally if a coil has an (orange) 70 wire on one side, then it is a 50V coil. Experiment, and enjoy.

Also, for you folks with top units on your machines, you can often remove the 4 screws holding the light-board onto the unit, so that you can watch and see what your top unit is doing as you play the machine.

A set of 2 jumpers is a must-have for any Bally mechanic.

Remember, the 30 wire connects to the NON~Orange or NON-blue side of your component.

Checking your Bally EM for shorts.

The Bally was designed to have only a case ground. The only ground is from the green ground wire of your 120V plug to the case.

None of the circuits should connect with case, although some folks used to intentionally put shorts into the machine to prevent cheaters from manipulating the machine's circuitry. Most commonly people would run a jumper from the 70 wire on the coin lockout coil to the case. This would in essence put half a short into the machine, so that if a driller tried to cheat the machine by contacting a switch, then it would blow the fuse and blackout the machine or take out the 50V.

There are two ways to check for shorts, the mechanics way, and the safe way. The safe way, is to unplug the machine, set your VOM for ohms, and with one lead on case, check the 70 wire on the door (coin lockout coil is a good spot), the 20 wire (any one of your 6V bulbs, and the 30 wire (coin in switch). If you have a short, it will show low or zero ohms. If you find a short, then start isolating it.

Remove the top unit. Check again. Remove the reel mech. Check again. Remove the hopper, and check again. When the short disappears, then you have found the bad subunit, and somewhat isolated your problem.

Most often, 6V shorts are the result of one of your door light bulb sockets touching to case. Move the tab away from case and it should disappear.

50V shorts are a little more tricky, as often some switch somewhere is touching to case ground.

If you want a pristine machine, to factory specks, get out those shorts.

The mechanics way of finding shorts is a little more hairy, and if there is interest I will share with you how to do that.

Voms? We don't need no VOMS. We got jumpers, we don't have to show you no stinking VOMS

Checking your Bally EM for shorts 2

Since no one has inquired on how mechanics quickly (and dirty) check for shorts, here it is.

With your pocket plain end screwdriver, remove the coin acceptor. Behind it you will see the coil lockout coil, and one of its wires is a 70 (orange) wire. Ground your screwdriver to case, and quickly 'rake' the 70 wire. If you see sparks, then you have a short.

If there are no shorts, you should be able to hold it indefinitely with no ill effects.

Be aware that there is enough energy in the 50V system (70 wire) to melt a good chunk of a nickel if it falls behind your acceptor and shorts across the lockout coil.

You can actually weld a small screwdriver to case if you're not quick enough with this test. Trust me on this

To check 6V , just slide screwdriver along the 20 (blue) wire of any door bulb to case, and look for a small spark.

Once you have determined you have a short, remove hopper and try again.

Remove reels and try again.

Remove top unit and try again.

You should be able to isolate your short to a subunit, and if you can't then it's probably in the case.

Get rid of those shorts, they may shorten your machines Lifespan.

Checking your Bally EM for shorts another quick check

Unplug your top unit, and pull out your hopper, and reel mech.

Also unplug your door- both connectors.

Put in a new fuse, and one by one plug these units back in to see which one blows the fuse.

If the fuse blows with all units unplugged, then you've got some kind of short to case I suspect.

Otherwise, determine which sub-unit is blowing the GV, and then you at least have it narrowed down.

Then do your ohms check on that specific unit until you find the short.

If you find short on the door, then you will have to check those two bulbs which illuminate the coin tray. Often the sockets of the bulbs will touch to ground and give you faults. Make sure all bulb sockets do not touch cabinet, and also the soldered tabs on them.

Does it blow fuse when you pull the handle, or during pays, or just when it's setting there?

The hopper

4 ways to reset your hopper.

1. Drop in a coin and pull the handle.

2. Push back fully on the variator bar on the left hand side of your reel mech. Its that long skinny (usually black) bar that sets just above your clock and fan. when you do this it automatically closes the 'B' switches (located above it) and pulses the hopper reset coil. This is a full reset, and forces the winner paid light to go off. This is how mechanics generally check pays, because you can do it over and over and over and over to check for shortpays or overpays without having to pull the handle and hold the reels in place.

3. Pull out the hopper, and press down on the protruding 'L' shaped piece attached to your step up arm. This S part #A-1765-16 (in my parts book, #27 page 17).

Looking at his top photo (CIMG1448), the 'L' is shown sticking out just to the left of the bracket that holds the set of horizontal switches in place. You can see it there pointing up toward the hop of the photo. Pushing this down will allow the hopper wiper fingers to reset to zero. However it is not a full reset because the 2nd pawl assembly (the reset ami #A-1766-1) is not latched out when you do this. No biggie, the spiral and pay fingers will reset to zero, and the only thing is that your winner paid light will stay on, and the 100 tooth gear is not latched out.

4. Reach way back behind the payboard assembly and push on the reset solenoid plunger. This will latch out the winner paid light, and simulate full reset. The plunger is shown in picture (CIMG1449) and is at the top left of the photo, and as shown the payboard assembly has been dropped down for viewing. Remove top screw of payboard bracket and assembly to drop it down.

You old timers already know this, but am posting to provide some help to those who may be just beginning their adventure with a Bally EM.

Understanding the Zero switch.

The zero switch resets the hopper. It's kind of like the Terminator, that's what it does -- that's all that it does.

If the zero switch never closes, then you will have short pay and eventually no-pay problems because the pay board will not reset.

Of course, if your winner paid lite goes off after you pull the handle, then you know hopper has reset, and the zero switch is working just fine.

We really don't need the zero switch to ever be open. The machine will run perfectly fine if it is permanently closed all of the time,

There are generally only 2 switches in the whole hopper reset circuit, the hopper zero switch, and the reel mechanism 'B' switch.

the B switch is closed when handle is pulled by the action of the variator which lives just above the clock and fan.

Every time the handle is pulled, and the variator moved, the B switch closes.

To check this, set up a pay. After it pays, push back(on the variator bar, and you should hear the

hopper reset, and it will pay again. Try it again. And again.

This is how we checked for short pays on the machines, without having to coin it, pull the handle and hold the reels each time we wanted to check a specific pay.

You can do it over and over and over and over.

The only reason the zero switch is in circuit, is to keep the hopper reset coil from pulsing every time handle is pulled. `

However, by adding the zero switch, Bally was able to keep that from happening, and now the hopper resets ONLY when needed, which is only after a pay, and after the zero switches close.

The only 'bad' thing that will happen if your zero switch never opens is that you may shorten the life of your hopper reset coil (maybe after a couple of years...), and you may eventually get annoyed at hearing the hopper reset whenever you pull the handle.

If your zero stop bumper gets gummy and worn, you can always bend the zero switch closed so that you can continue to play your machine until you get a replacement bumper in the mail from one of your slot sources.

You really don't need it to play the machine, or to get it to pay

Just fyi

Hopper high pays and the CO (Carry Over) circuit.

Because of the slop in the outboard wiper assembly (driven by the spiral cam), it is impossible to accurately get a high pay (50, 100, 200 coins) to stop at exactly that amount. Try it, it might do it once if you're lucky but not twice. Therefore Bally designed in the carry over circuit.

Any time the machine is paying the CO is hot. The reason it isn't used all the time, is that the lower pay inner wiper fingers never reach to the CO area during low pays.

If you pull off the spiral cam, you will see several CO circuits on the board. You want to adjust your high pay outboard wiper fingers, so that they go off the tab after the inner spiral wiper fingers have gotten well onto the CO circuit. In the case of a 100 coin pay, adjust your outboards to go off the 100 tab when the inner spiral fingers are at about 75 steps. Do a similar adjust on the 50 pay and the 200 pay with their CO circuits respectively.

If you look at your board, you will see the CO tab stops at exactly 100 coins. Same with the 50, etc

Just step your board once, to lock it in, and then rotate the inner wipers up 75 steps. Then you can adjust.

You can actually meter this with your ohm-meter if you want to get fussy, but there's really no reason to get that precise.

If you are moving off short, then just pull slightly on the horseshoe shaped carriage (holding the outboards), and you will often notice that the pay will continue, showing that it's maladjusted (like me).

Hope that is some help.

The CO provides for a very accurate and precise count, and if the outboards step off before the inboards reach it, you'll never finish that high pay.

The hopper Arc switches by op-bell

the contact shorts out the wiper board to keep the win relay held in as long as there's a coin on the ramp. that does several things.

One, it ensures the motor keeps running until the coin is driven all the way out.

Two, because the wipers move when the coin leaves the ramp and not when it enters, it provides an alternative path and the wiper is never relied on to pass current while it's moving.

And three, when it's properly adjusted it makes sure the current doesn't break until after the wiper steps off the end of the track so avoiding arcs and sparks that could damage it. It's always the last Contact to break that gets the spark.

The fat resistor across the relay coil also serves as spark suppressor, and slightly delays the relay dropping out to make sure it doesn't chatter and arc as the hopper steps

How to Ohm-out hopper pay boards

The bottom solder-tabs of your pay board should all be labelled.

Your pay tabs are generally 2, 5, 10, 14, 18, and 20 coins for the lower pays, and 50, 100, and 200 for the high pays.

In addition, you have 2 other tabs labelled CO (carry over), and F for Feed.

The Feed is the common to all these other tabs.

Pays work basically like this:

When 50V is sent from the reels (having a winning combination on them), each type of win powers one of the pay-segments on the pay board.

1 cherry will light up the 2 coin pay, 3 oranges light up the 10 pay, etc, etc.

When the pay fingers carry the power(?) from a hot tab to the Feed ring (the very innermost ring on the pay board) then that powers the hopper to turn and spit out coins. When the pay fingers step off that hot tab, the hopper loses power and pay is over. This is a simplified version, and others may be able to explain it better.

You can accurately check all this with your VOM set on ohms. Clip one lead to the F tab at bottom of board. Clip other lead to the 2 tab (for single cherry pay) Manually step up hopper 2 times. You should lose continuity AFTER the second step. Move lead from 2 tab to the 5 tab (2 cherry pay)

Manually reset pay board, and step hopper 5 times. You should lose the circuit AS the 5th step happens. Move to 10 tab, do same thing. Continue on all tabs to check all pays,

this is a much more accurate way to check your pay board than just 'eye balling' it. Sometimes you cannot visually see well what is going on under the pay fingers, and a meter will let you know precisely what's going on. You can also use one of those little circuit testers for auto-mobiles that you can get cheaply from your auto pal's store. the won with a small battery and bulb in them to check continuity.

This works for your lower pays, however to check the high pays, you will need to clip on to the CO or Carry Over tab to check them.

Hope this is of some help.

Oldreno

How to test your hopper torsion spring

The manual says to wind your hopper spiral torsion spring 2 turns (so I've heard). I generally go 2 and 1/2, but it doesn't matter all that much. There are, however some things you should bear in mind.

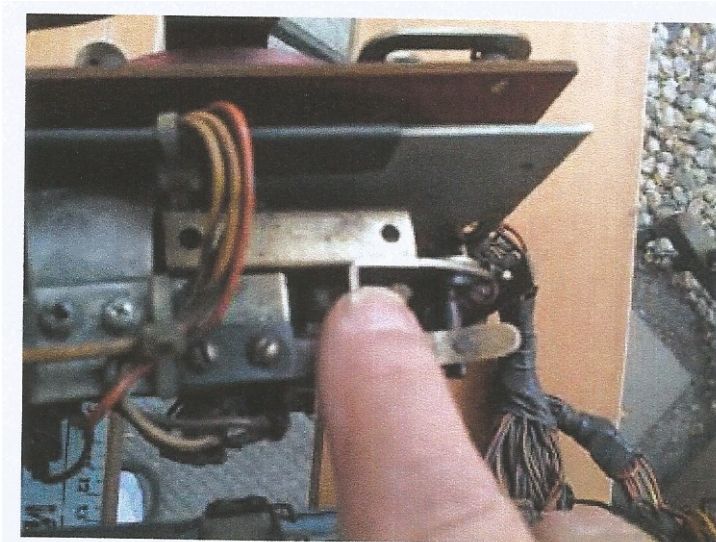
1. Don't overlap the spring onto itself. Pay attention and look to see that this doesn't happen.
2. There are at least 4, (maybe 8) positions you can place the short end of your spring on the 100 tooth gear. Use the one that best suits you.
3. Make sure your hopper board is at zero or near zero. Manually step it up one step to lock in the spiral cam and gear. (otherwise it will turn as you wind up the spring).
4. Make sure that after you reposition your spring, that you manually step the hopper spiral up to the maximum pay of the machine. This is very important, because if your spring is too light, it may start to bind when it gets wound up. I've had machines that would lock up at about 180 Coins on a 200 coin pay, and that would pretty much dump the hopper. (good luck on getting that money back from a customer)

Also check one of my posts on adjusting out-board wipers using the carry Over (CO) which should be here in Electro-mechanicals somewhere. I always step it to the Max whenever I adjust that spring, and ALSO when I am PM-ing new equipment.

If your spring is too tight, it will dump, if it's too loose it will double step and cause short pays.

Hope this is of some help.

If you push here, the pay board will reset, but will still be latched in. The step up assembly will still be engaging the 100 tooth pay gear, which is really nice for when you want to adjust your torsion spring. That's OK. Fold your pay board back up, and you will see where this reset pawl is. It's very easy to reset your pay board this way, and may save you a lot of time.



The handle Releasing stuck handles on ElectroMechanicals

5 known ways.

1. As you pull gently on the handle, simultaneously push on the pump arm on the right side of the reel mech.
 2. Reach waaay up behind the right side of the reel mech. Pull out the hopper, reach up with your left arm into the right rear corner of the machine and you'll feel a lever arm about in the middle of the back of the handle. It's about 3/4 inch by 1, I think, and sits horizontally. Release pressure by slightly pulling down on the handle arm, and pull down on the release lever. That should free the handle.
 3. Drill a 1/2 inch or so hole in the centre of the handle hub, and see if the handle securing bolt has a slot in it. Sometime you can get lucky and unscrew the handle bolt to the inside, enough to release the reels.
 4. Get two long screwdrivers and try to pop the 2 latch lock levers free from lock mechanism. Be careful. Don't get your fingers in there.
 5. Break off the hub with a hammer and drill out the bolt. Then try to pop off the handle fork from the 1/2 gear on the reel mech. Big John used to snap off the handle for us on the floor so we could get the reels out & replace the handle. Worked occasionally.
- There are a lot of ways for the handle to lock up, & each situation requires different brain cells.
- Sometimes if you're lucky you can get the reels out, and sometimes not. Once the reels are out, it's usually no problem.

Helping diagnose handle release problems.

There are (too) many ways to not get a handle release. Circuits all throughout the machine may keep this from happening, so here is a little tip which may help in diagnosing some problems.

When you first push down on the coin in switch several things happen. Most importantly, it must trip the coin relay coil and assembly, which is located on the lower left side of your reel mech, in the back behind the clock. This is a latching relay, it is electrically tripped on coin in down stroke, and mechanically reset when you pull the handle.

If you don't trip the relay, you won't ever get handle pull on the upstroke, because there is a Nominally Open switch on that relay which prevents handle release. (If this switch were closed all the time, you would have a free handle pull try it. Or you could remove the armature on the relay to do the same thing.)

It is easy to tell if it has tripped, you will see the 'coin accepted' light come on. (see above sentence)

If you see the coin accepted light, you don't even have to pull out the reel mech to check your relay, you know it has done its thing.

You know that you got coin in down-stroke, so your problem is probably with the upstroke. Or somewhere else.

God knows where else but at least you know the CR is good, Another function of the down-stroke is that your odds will reset then.

So, down-stroke release CR coil, lights the coin accepted light, and resets the odds. Upstroke releases the handle.

If you physically trip the relay, when you push the reel mech back in you should hear the handle release.

If everything seems OK, but still no handle, pull forward on your dashpot, to make sure the dashpot switches close. That is one of the more common reasons for no handle release. If door is closed, push BACK on your handle, which may be enough to close dashpot.

Now you should know, as I discovered I had forgotten, the sequence of putting this back together is important. Especially if you are rebuilding or replacing your handle box. You must screw in the pan mount BEFORE you tighten up the 7/ 16 nuts. There is a little bit of slop in the right hand shelf bracket, and if you tighten the two 7/16 nuts first, your holes for the pan bracket may not line up. A handy tip here, if you ever have to replace one of the two screws that hold the pan bracket in place onto the handle box, please do NOT use a longer screw. If you do, it will for sure hit onto your handle gears and lock up the handle. I've seen mechanics replace a handle box, and when they're done, the handle won't pull. It is because they put too long a screw in there. I've done it too, and my first thought was that I put a bad handle in. However, since then, I always bench test a new handle before I even think about installing.

Some other bits and bob`s

Belly glass

If it's the belly glass, it is held in by two screws. Look at Page 76 of your downloaded Bally em manual, and you will see the unit.

The two screws are:

1. Just below the lock cam, next to the fluorescent starter, and

2. on the other side, just behind your lower door plug.

Make sure you wrap the fingers of your left hand around the glass as you take the screws out,

otherwise the glass may fall out and break. After the 2 screws are out, the top pulls away, and the bottom lifts up.

If it's the reels glass, there are probably 4 or 5 of them on there. Two in upper comers, and another 2 or 3 you'll have to look for them.

A great description from op-bell on the handle release coil wires Bally 742a was working and is now bust

Handle release coil - I have several diagrams for the that don't agree. The consensus seems to be as follows, the precise order and wire colours may vary.

One side of the coil goes to 50V (orange). The other side goes as follows:

- White/blue wire to a contact near the coil that opens and cuts off the power when the release arm drops

- Black/yellow to a normally open contact on the coin relay, closed when the relay is operated

- Blue/white to the dash pot switch, closed when the handle is fully upright

- White/orange to a normally closed contact on the payout relay on the hopper, closed when not paying out

- » Brown wire to the C1 switch, a vertical stack on the left hand side of the reel mech, closed when mech is at rest

- Gray/red no the A switch, a single vertical switch at the rear on the left hand side, closed when the mech is at rest

- Orange/green to the normally closed contact of the coin micro-switch

- Yellow wire to 50V return.

Another great description on how a coin in works on a 873 from op-bell

Problem:

Bally electromechanical wont accept coins anymore.

If it helps, when the coin is dropped into the slot, the downward strike upon the coin wire lights the first line, the second line lights as the coin wire returns.

That might be a clue. You said you changed the micro-switch. Is it possible you wired it backwards ~

NC to NO, and vice versa, or crossed over the common (yellow) with one of the other contacts?

Probably not, but that's something to check

Following through the schematic, this is how it's supposed to work

1. When the coin switch closes (wire down), current passes through the NO contact to the odds reset unit, which resets immediately.

2. When the coin switch opens (wire up) after the first coin, current passes through the NC contact to the handle release coil, which should click loudly.

3. A contact on the handle release coil changes over, and routs subsequent coin switch closures to the odds relay.

*** Since the handle release isn't supposed to happen until the coin switch is released, there should not be a circuit to pull in the odds relay at this time

4. when the coin switch closes on the second coin, the current is routed through the NO contact and the handle release contacts to the odds relay. This relay pulls in and latches itself on.

5. When the coin switch opens again, current passes through its NC contact, through a contact on the odds relay to the odds step-up coil, which advance one coin and drops out the odds relay.

So what's happening is you're getting steps 4 and 5 happening on the first coin, instead of depending on handle release step 3. Most likely the change-over contact on the handle release is changed over too soon, either because it needs adjusting, or because the handle is releasing on the first coin down-stroke instead of the release

