

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Kim W](#) on Sat, 07 Apr 2007 12:56:34 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

It's a rectifier bridge.

(Or as I call 'em... "rectumfriers").

<http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>

It's actually not one diode, but four, prewired to convert AC into

DC. (Usually followed by some hefty electrolytic capacitors.

(Oh yeah..... yanks call those "condensers".

My guess is that there was something else that caused this to blow.

If I were to replace this, I would put a larger capacity equivalent in it's place. (just get the + & - right, the ~ refers to the AC input, so it don't matter.)

Stick a 4 amp, 100V unit in it's place, and you'll be right.

THEN, find out what caused it to blow.

Kim

"Rich Lamanna" <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)> wrote:

>

>

>Hello, Easter greetings by the way. Hey the other day I smelled smoke =

>and heard a crinkling sound in the back of my preamp rack and later =

>discovered the cause was my Presonus M80's power supply which is now =

>deep fried. Well I took the supply apart and found that this dark grey =

>thing on the cuircuit board, I think it's a diode ->I, melted right off =

>of the board. Any one know what this is? I can't get a picture just yet

=

>up on the net but I'll try and describe it.

>

>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =

>solder to the cuircuit board, dark grey colored and is coded:

>

>-->| RS\*202L

>RU A 90=20

>+ AC -

>

>Anyone of you electronics wizards know where the heck I can find one of

=

>these?

>

>You guys are great,

>Thanks

>Rich

>

>PS. By the way I broke down and got a Myspace site now. Check it out.  
> http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>id=3D172230696  
>  
>  
>  
>  
><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
><HTML><HEAD>  
><META http-equiv=3DContent-Type content=3D"text/html; =  
>charset=3Diso-8859-1">  
><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
><STYLE></STYLE>  
></HEAD>  
><BODY>  
><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>other day I=20  
>smelled smoke and heard a crinkling sound in the back of my =  
>preamp=20  
>rack and later discovered the cause was my Presonus M80's power supply =  
>which is=20  
>now deep fried. Well I took the supply apart and found that this dark =  
>grey thing=20  
>on the cuircuit board, I think it's a diode ->I, melted right off of =  
>the=20  
>board. Any one know what this is? I can't get a picture just yet up on =  
>the net=20  
>but I'll try and describe it.</FONT></DIV>  
><DIV><FONT size=3D2></FONT> </DIV>  
><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on  
=  
>the=20  
>bottom which solder to the cuircuit board, dark grey colored and is=20  
>coded:</FONT></DIV>  
><DIV><FONT size=3D2></FONT> </DIV>  
><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
><DIV><FONT size=3D2></FONT> </DIV>  
><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>the heck I=20  
>can find one of these?</FONT></DIV>  
><DIV><FONT size=3D2></FONT> </DIV>  
><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
><DIV><FONT size=3D2>Thanks</FONT></DIV>  
><DIV><FONT size=3D2>Rich</FONT></DIV>  
><DIV><FONT size=3D2></FONT> </DIV>  
><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site =

```
>now. Check=20
>it out.</FONT></DIV>
><DIV><FONT size=3D2><A=20
>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
>on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
>
>
```

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Kim W](#) on Sat, 07 Apr 2007 13:05:45 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Oops,  
Better rethink those specs.  
Hell, you can buy a 5 amp, 200 volt rectifier for a couple of dollars from any electronics supplier, so just get one that's rated higher than the one that blew, and can still be readily soldered into its' place.  
Just get +,-,~ right.

"Kim W." <no@way.com> wrote:

```
>
>It's a rectifier bridge.
>(Or as I call 'em... "rectumfriers").
> http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201 .html
>It's actually not one diode, but four, prewired to convert AC into
>DC. (Usually followed by some hefty electrolytic capacitors.
>(Oh yeah..... yanks call those "condensers".
>My guess is that there was something else that caused this to blow.
>If I were to replace this, I would put a larger capacity
>equivalent in it's place. (just get the + & - right, the ~ refers
>to the AC input, so it don't matter.)
>Stick a 4 amp, 100V unit in it's place, and you'll be right.
>THEN, find out what caused it to blow.
>Kim
```

```
>
>
>
>
>"Rich Lamanna" <richard.lamanna@verizon.net> wrote:
```

```
>>
>>
>>Hello, Easter greetings by the way. Hey the other day I smelled smoke =
>>and heard a crinkling sound in the back of my preamp rack and later =
```

>>discovered the cause was my Presonus M80's power supply which is now =  
>>deep fried. Well I took the supply apart and found that this dark grey  
=  
>>thing on the cuircuit board, I think it's a diode ->l, melted right off  
=  
>>of the board. Any one know what this is? I can't get a picture just yet  
>=  
>>up on the net but I'll try and describe it.  
>>  
>>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =  
>>solder to the cuicut board, dark grey colored and is coded:  
>>  
>>-->| RS\*202L  
>>RU A 90=20  
>>+ AC -  
>>  
>>Anyone of you electronics wizards know where the heck I can find one of  
>=  
>>these?  
>>  
>>You guys are great,  
>>Thanks  
>>Rich  
>>  
>>PS. By the way I broke down and got a Myspace site now. Check it out.  
>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>>id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>>  
>>  
>>  
>>  
>><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>><HTML><HEAD>  
>><META http-equiv=3DContent-Type content=3D"text/html; =  
>>charset=3Diso-8859-1">  
>><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>><STYLE></STYLE>  
>></HEAD>  
>><BODY>  
>><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>>other day I=20  
>>smelled smoke and heard a crinkling sound in the back of my =  
>>preamp=20  
>>rack and later discovered the cause was my Presonus M80's power supply  
=  
>>which is=20  
>>now deep fried. Well I took the supply apart and found that this dark =  
>>grey thing=20

>>on the cuircuit board, I think it's a diode ->l, melted right off of =  
>>the=20  
>>board. Any one know what this is? I can't get a picture just yet up on  
=  
>>the net=20  
>>but I'll try and describe it.</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on  
>=  
>>the=20  
>>bottom which solder to the cuircuit board, dark grey colored and is=20  
>>coded:</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
>><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
>><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>>the heck l=20  
>>can find one of these?</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
>><DIV><FONT size=3D2>Thanks</FONT></DIV>  
>><DIV><FONT size=3D2>Rich</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
=  
>>now. Check=20  
>>it out.</FONT></DIV>  
>><DIV><FONT size=3D2><A=20  
>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>>on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
>><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>  
>>  
>>  
>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Kim W](#) on Sat, 07 Apr 2007 13:11:33 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Found this:  
<http://www.datasheet4u.com/download.php?id=344102>

"Kim W." <no@way.com> wrote:

>

>Oops,

>Better rethink those specs.

>Hell, you can buy a 5 amp, 200 volt rectifier for a couple of

>dollars from

>any electronics supplier, so just get one that's rated higher than the one

>that blew, and can still be readily soldered into its' place.

>Just get +,-,~ right.

>

>

>"Kim W." <no@way.com> wrote:

>>

>>It's a rectifier bridge.

>>(Or as I call 'em... "rectumfriers").

>> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>

>>It's actually not one diode, but four, prewired to convert AC into

>>DC. (Usually followed by some hefty electrolytic capacitors.

>>(Oh yeah..... yanks call those "condensers".

>>My guess is that there was something else that caused this to blow.

>>If I were to replace this, I would put a larger capacity

>>equivalent in it's place. (just get the + & - right, the ~ refers

>>to the AC input, so it don't matter.)

>>Stick a 4 amp, 100V unit in it's place, and you'll be right.

>>THEN, find out what caused it to blow.

>>Kim

>>

>>

>>

>>

>>"Rich Lamanna" <richard.lamanna@verizon.net> wrote:

>>>

>>>

>>>Hello, Easter greetings by the way. Hey the other day I smelled smoke

=

>>>and heard a crinkling sound in the back of my preamp rack and later =

>>>discovered the cause was my Presonus M80's power supply which is now =

>>>deep fried. Well I took the supply apart and found that this dark grey

>=

>>>thing on the cuircuit board, I think it's a diode ->I, melted right off

>=

>>>of the board. Any one know what this is? I can't get a picture just yet

>>=

>>>up on the net but I'll try and describe it.

>>>

>>>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which

=

>>>solder to the cuicut board, dark grey colored and is coded:

>>>  
>>>-->| RS\*202L  
>>>RU A 90=20  
>>>+ AC -  
>>>  
>>>Anyone of you electronics wizards know where the heck I can find one of  
>>=  
>>>these?  
>>>  
>>>You guys are great,  
>>>Thanks  
>>>Rich  
>>>  
>>>PS. By the way I broke down and got a Myspace site now. Check it out.  
>>> <http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friendid=3D172230696>  
>>>  
>>>  
>>>  
>>>  
>>><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>>><HTML><HEAD>  
>>><META http-equiv=3DContent-Type content=3D"text/html; =  
>>> charset=3Diso-8859-1">  
>>><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>>><STYLE></STYLE>  
>>></HEAD>  
>>><BODY>  
>>><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>>>other day I=20  
>>>smelled smoke and heard a crinkling sound in the back of my =  
>>>preamp=20  
>>>rack and later discovered the cause was my Presonus M80's power supply  
>=  
>>>which is=20  
>>>now deep fried. Well I took the supply apart and found that this dark  
=  
>>>grey thing=20  
>>>on the cuircuit board, I think it's a diode ->I, melted right off of =  
>>>the=20  
>>>board. Any one know what this is? I can't get a picture just yet up on  
>=  
>>>the net=20  
>>>but I'll try and describe it.</FONT></DIV>  
>>><DIV><FONT size=3D2></FONT> </DIV>  
>>><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins  
on  
>>=

>>>the=20  
>>>bottom which solder to the cuicut board, dark grey colored and is=20  
>>>coded:</FONT></DIV>  
>>><DIV><FONT size=3D2></FONT> </DIV>  
>>><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
>>><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
>>><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
>>><DIV><FONT size=3D2></FONT> </DIV>  
>>><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>>>the heck I=20  
>>>can find one of these?</FONT></DIV>  
>>><DIV><FONT size=3D2></FONT> </DIV>  
>>><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
>>><DIV><FONT size=3D2>Thanks</FONT></DIV>  
>>><DIV><FONT size=3D2>Rich</FONT></DIV>  
>>><DIV><FONT size=3D2></FONT> </DIV>  
>>><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
>=  
>>>now. Check=20  
>>>it out.</FONT></DIV>  
>>><DIV><FONT size=3D2><A=20  
>>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>>>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>>>on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
>>><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>  
>>>  
>>>  
>>  
>

---

Subject: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sat, 07 Apr 2007 13:15:41 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_004D\_01C778EC.EE85A760  
Content-Type: text/plain;  
 charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Hello, Easter greetings by the way. Hey the other day I smelled smoke =  
and heard a crinkling sound in the back of my preamp rack and later =  
discovered the cause was my Presonus M80's power supply which is now =  
deep fried. Well I took the supply apart and found that this dark grey =  
thing on the cuicut board, I think it's a diode ->I, melted right off =  
of the board. Any one know what this is? I can't get a picture just yet =



up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which = solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can find one of = these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check it out.  
<http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696>

-----=\_NextPart\_000\_004D\_01C778EC.EE85A760

Content-Type: text/html;  
charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<HTML><HEAD>

<META http-equiv=3DContent-Type content=3D"text/html"; =  
charset=3Diso-8859-1">

<META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>

<STYLE></STYLE>

</HEAD>

<BODY>

<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. Hey the =  
other day l=20

smelled smoke and heard&nbsp;a crinkling sound&nbsp;in the back of my =  
preamp=20

rack and later discovered the cause was my Presonus M80's power supply =  
which is=20

now deep fried. Well I took the supply apart and found that this dark =  
grey thing=20

on the cuircut board, I think it's a diode -&gt;l, melted right off of =  
the=20

board. Any one know what this is? I can't get a picture just yet up on =  
the net=20

but I'll try and describe it.</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on =  
the=20  
bottom which&nbsp;</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>--&gt;| RS\*202L</FONT></DIV>  
<DIV><FONT size=3D2>RU&nbsp;</FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics wizards&nbsp;</FONT></DIV>  
the heck I=20  
can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site =  
now. Check=20  
it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&amp;friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&amp;friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>

-----=\_NextPart\_000\_004D\_01C778EC.EE85A760--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sat, 07 Apr 2007 14:55:17 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Kim, I like your name for them much better. There are actually 2 of these RS202L's side by side, so do you still think it a good idea to ramp up the capacity? You say that something else caused it to blow, what could that be? I wasn't using it at the time. Something I left out is that the power is always on when my rack is switched on, which probably isn't a good idea and I believe my phantom power was on for most of the channels, again probably not a good idea. Thanks for the help. I assume pos and neg are in the same direction as the other rectumfrier beside it?

Thanks,  
Rich

"Kim W." <no@way.com> wrote in message news:46179502\$1@linux...

>  
> It's a rectifier bridge.  
> (Or as I call 'em... "rectumfriers").  
> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>  
> It's actually not one diode, but four, prewired to convert AC into  
> DC. (Usually followed by some hefty electrolytic capacitors.  
> (Oh yeah..... yanks call those "condensers".  
> My guess is that there was something else that caused this to blow.  
> If I were to replace this, I would put a larger capacity  
> equivalent in it's place. (just get the + & - right, the ~ refers  
> to the AC input, so it don't matter.)  
> Stick a 4 amp, 100V unit in it's place, and you'll be right.  
> THEN, find out what caused it to blow.  
> Kim  
>  
>  
>  
>  
> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
> >  
> >  
> >Hello, Easter greetings by the way. Hey the other day I smelled smoke =  
> >and heard a crinkling sound in the back of my preamp rack and later =  
> >discovered the cause was my Presonus M80's power supply which is now =  
> >deep fried. Well I took the supply apart and found that this dark grey =  
> >thing on the cuircuit board, I think it's a diode ->I, melted right off =  
> >of the board. Any one know what this is? I can't get a picture just yet  
> =  
> >up on the net but I'll try and describe it.  
> >  
> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =  
> >solder to the cuicut board, dark grey colored and is coded:  
> >  
> >-->| RS\*202L  
> >RU A 90=20  
> >+ AC -  
> >  
> >Anyone of you electronics wizards know where the heck I can find one of  
> =  
> >these?  
> >  
> >You guys are great,  
> >Thanks  
> >Rich  
> >  
> >PS. By the way I broke down and got a Myspace site now. Check it out.  
>  
> <http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=>

```
> >id=3D172230696
> >
> >
> >
> >
> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
> ><HTML><HEAD>
> ><META http-equiv=3DContent-Type content=3D"text/html; =
> > charset=3Diso-8859-1">
> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>
> ><STYLE></STYLE>
> ></HEAD>
> ><BODY>
> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =
> > other day I=20
> > smelled smoke and heard a crinkling sound in the back of my =
> > preamp=20
> > rack and later discovered the cause was my Presonus M80's power supply =
> > which is=20
> > now deep fried. Well I took the supply apart and found that this dark =
> > grey thing=20
> > on the cuircuit board, I think it's a diode ->I, melted right off of =
> > the=20
> > board. Any one know what this is? I can't get a picture just yet up on =
> > the net=20
> > but I'll try and describe it.</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on
> > =
> > the=20
> > bottom which solder to the cuircuit board, dark grey colored and is=20
> > coded:</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>
> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =
> > the heck I=20
> > can find one of these?</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>
> ><DIV><FONT size=3D2>Thanks</FONT></DIV>
> ><DIV><FONT size=3D2>Rich</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site =
> > now. Check=20
> > it out.</FONT></DIV>
```

```
> ><DIV><FONT size=3D2><A=20
>
> href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
> >
> >
>
```

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Neil](#) on Sat, 07 Apr 2007 15:44:02 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Exactly - and if a bridge rectifier shorts, then that means it could have passed current with the wrong polarization on to components past it inline... Rich this is something you ought to just send off for proper repairs - even though it might look like there's only something wrong with one component, it could just as easily be more than that, and then yer fukt as soon as you power-on again with the new bridge recto in place.

If it were an Alesis somethingorother that cost a hundred bucks, then sure why not experiment, but this is a \$1,700 item.

Where'd you get it? New? any chance it's still under warranty or has perhaps barely run out of warranty where the dealer could step in & help you at least get a pro-rated price on the repairs?

Neil

"Edna" <edna@texomaonline.com> wrote:

>"Something else" causing it to blow is probably right. If you just replace

>the rectifier, it may do the same thing again. Maybe a blown semiconductor

>component causing a short to that circuit. Also maybe a shorted filter

>capacitor. Look for burned or dark resistors or burned circuit board to

>trace to a faulty component. Did it blow a fuse or circuit breaker?

>Edna

>"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message

>news:4617a41b@linux...

>> Kim, I like your name for them much better. There are actually 2 of these  
>> RS202L's side by side, so do you still think it a good idea to ramp up  
the  
>> capacity? You say that something else caused it to blow, what could that

>> be?  
>> I wasn't using it at the time. Something I left out is that the power  
is  
>> always on when my rack is switched on, which probably isn't a good idea

>> and  
>> I believe my phantom power was on for most of the channels, again probably  
>> not a good idea. Thanks for the help. I assume pos and neg are in the  
same  
>> direction as the other rectumfrier beside it?

>>  
>> Thanks,  
>> Rich  
>>  
>>  
>> "Kim W." <no@way.com> wrote in message news:46179502\$1@linux...

>>>  
>>> It's a rectifier bridge.  
>>> (Or as I call 'em... "rectumfriars").  
>>> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>  
>>> It's actually not one diode, but four, prewired to convert AC into  
>>> DC. (Usually followed by some hefty electrolytic capacitors.  
>>> (Oh yeah..... yanks call those "condensers".  
>>> My guess is that there was something else that caused this to blow.  
>>> If I were to replace this, I would put a larger capacity  
>>> equivalent in it's place. (just get the + & - right, the ~ refers  
>>> to the AC input, so it don't matter.)  
>>> Stick a 4 amp, 100V unit in it's place, and you'll be right.  
>>> THEN, find out what caused it to blow.  
>>> Kim

>>>  
>>>  
>>>  
>>>  
>>> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
>>> >  
>>> >  
>>> >Hello, Easter greetings by the way. Hey the other day I smelled smoke  
=  
>>> >and heard a crinkling sound in the back of my preamp rack and later  
=  
>>> >discovered the cause was my Presonus M80's power supply which is now  
=

>>> >deep fried. Well I took the supply apart and found that this dark grey  
=  
>>> >thing on the cuircuit board, I think it's a diode ->I, melted right off  
=  
>>> >of the board. Any one know what this is? I can't get a picture just  
yet  
>>> =  
>>> >up on the net but I'll try and describe it.  
>>> >  
>>> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
=  
>>> >solder to the cuircuit board, dark grey colored and is coded:  
>>> >  
>>> >-->| RS\*202L  
>>> >RU A 90=20  
>>> >+ AC -  
>>> >  
>>> >Anyone of you electronics wizards know where the heck I can find one  
of  
>>> =  
>>> >these?  
>>> >  
>>> >You guys are great,  
>>> >Thanks  
>>> >Rich  
>>> >  
>>> >PS. By the way I broke down and got a Myspace site now. Check it out.  
>>>  
>>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>>> >id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>>> >  
>>> >  
>>> >  
>>> >  
>>> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>>> ><HTML><HEAD>  
>>> ><META http-equiv=3DContent-Type content=3D"text/html; =  
>>> >charset=3Diso-8859-1">  
>>> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>>> ><STYLE></STYLE>  
>>> ></HEAD>  
>>> ><BODY>  
>>> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>>> >other day I=20  
>>> >smelled smoke and heard a crinkling sound in the back of my =  
>>> >preamp=20  
>>> >rack and later discovered the cause was my Preonus M80's power supply  
=  
=

>>> >which is=20  
>>> >now deep fried. Well I took the supply apart and found that this dark  
=  
>>> >grey thing=20  
>>> >on the cuircuit board, I think it's a diode ->I, melted right off of  
=  
>>> >the=20  
>>> >board. Any one know what this is? I can't get a picture just yet up  
on =  
>>> >the net=20  
>>> >but I'll try and describe it.</FONT></DIV>  
>>> ><DIV><FONT size=3D2></FONT> </DIV>  
>>> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins  
on  
>>> =  
>>> >the=20  
>>> >bottom which solder to the cuircuit board, dark grey colored and is=20  
>>> >coded:</FONT></DIV>  
>>> ><DIV><FONT size=3D2></FONT> </DIV>  
>>> ><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
>>> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
>>> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
>>> ><DIV><FONT size=3D2></FONT> </DIV>  
>>> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>>> >the heck I=20  
>>> >can find one of these?</FONT></DIV>  
>>> ><DIV><FONT size=3D2></FONT> </DIV>  
>>> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
>>> ><DIV><FONT size=3D2>Thanks</FONT></DIV>  
>>> ><DIV><FONT size=3D2>Rich</FONT></DIV>  
>>> ><DIV><FONT size=3D2></FONT> </DIV>  
>>> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
=  
>>> >now. Check=20  
>>> >it out.</FONT></DIV>  
>>> ><DIV><FONT size=3D2><A=20  
>>>  
>>> href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>>> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>>> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>  
>>> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>  
>>> >  
>>> >  
>>>  
>>  
>>  
>  
>

---

---



Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?

Posted by [Edna Sloan](#) on Sat, 07 Apr 2007 16:09:42 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

"Something else" causing it to blow is probably right. If you just replace the rectifier, it may do the same thing again. Maybe a blown semiconductor component causing a short to that circuit. Also maybe a shorted filter capacitor. Look for burned or dark resistors or burned circuit board to trace to a faulty component. Did it blow a fuse or circuit breaker?

Edna

"Rich Lamanna" <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)> wrote in message news:4617a41b@linux...

> Kim, I like your name for them much better. There are actually 2 of these  
> RS202L's side by side, so do you still think it a good idea to ramp up the  
> capacity? You say that something else caused it to blow, what could that  
> be?

> I wasn't using it at the time. Something I left out is that the power is  
> always on when my rack is switched on, which probably isn't a good idea  
> and

> I believe my phantom power was on for most of the channels, again probably  
> not a good idea. Thanks for the help. I assume pos and neg are in the same  
> direction as the other rectumfrier beside it?

>

> Thanks,

> Rich

>

>

> "Kim W." <[no@way.com](mailto:no@way.com)> wrote in message news:46179502\$1@linux...

>>

>> It's a rectifier bridge.

>> (Or as I call 'em... "rectumfriers").

>> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>

>> It's actually not one diode, but four, prewired to convert AC into

>> DC. (Usually followed by some hefty electrolytic capacitors.

>> (Oh yeah..... yanks call those "condensers".

>> My guess is that there was something else that caused this to blow.

>> If I were to replace this, I would put a larger capacity

>> equivalent in it's place. (just get the + & - right, the ~ refers

>> to the AC input, so it don't matter.)

>> Stick a 4 amp, 100V unit in it's place, and you'll be right.

>> THEN, find out what caused it to blow.

>> Kim

>>

>>

>>

>>

>> "Rich Lamanna" <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)> wrote:

>> >

>> >

>> >Hello, Easter greetings by the way. Hey the other day I smelled smoke =  
>> >and heard a crinkling sound in the back of my preamp rack and later =  
>> >discovered the cause was my Presonus M80's power supply which is now =  
>> >deep fried. Well I took the supply apart and found that this dark grey =  
>> >thing on the cuircuit board, I think it's a diode ->I, melted right off =  
>> >of the board. Any one know what this is? I can't get a picture just yet  
>> =  
>> >up on the net but I'll try and describe it.  
>> >  
>> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =  
>> >solder to the cuicut board, dark grey colored and is coded:  
>> >  
>> >-->| RS\*202L  
>> >RU A 90=20  
>> >+ AC -  
>> >  
>> >Anyone of you electronics wizards know where the heck I can find one of  
>> =  
>> >these?  
>> >  
>> >You guys are great,  
>> >Thanks  
>> >Rich  
>> >  
>> >PS. By the way I broke down and got a Myspace site now. Check it out.  
>>  
>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>> >id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>> >  
>> >  
>> >  
>> >  
>> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>> ><HTML><HEAD>  
>> ><META http-equiv=3DContent-Type content=3D"text/html; =  
>> >charset=3Diso-8859-1">  
>> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>> ><STYLE></STYLE>  
>> ></HEAD>  
>> ><BODY>  
>> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>> >other day I=20  
>> >smelled smoke and heard a crinkling sound in the back of my =  
>> >preamp=20  
>> >rack and later discovered the cause was my Presonus M80's power supply =  
>> >which is=20  
>> >now deep fried. Well I took the supply apart and found that this dark =  
>> >grey thing=20

>> >on the cuircuit board, I think it's a diode ->, melted right off of =  
>> >the=20  
>> >board. Any one know what this is? I can't get a picture just yet up on =  
>> >the net=20  
>> >but I'll try and describe it.</FONT></DIV>  
>> ><DIV><FONT size=3D2></FONT> </DIV>  
>> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on  
>> =  
>> >the=20  
>> >bottom which solder to the cuircuit board, dark grey colored and is=20  
>> >coded:</FONT></DIV>  
>> ><DIV><FONT size=3D2></FONT> </DIV>  
>> ><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
>> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
>> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
>> ><DIV><FONT size=3D2></FONT> </DIV>  
>> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>> >the heck I=20  
>> >can find one of these?</FONT></DIV>  
>> ><DIV><FONT size=3D2></FONT> </DIV>  
>> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
>> ><DIV><FONT size=3D2>Thanks</FONT></DIV>  
>> ><DIV><FONT size=3D2>Rich</FONT></DIV>  
>> ><DIV><FONT size=3D2></FONT> </DIV>  
>> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site =  
>> >now. Check=20  
>> >it out.</FONT></DIV>  
>> ><DIV><FONT size=3D2><A=20  
>>  
>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>  
>> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>  
>> >  
>> >  
>>  
>  
>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Edna Sloan](#) on Sat, 07 Apr 2007 18:05:49 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Good advice! I thought it was just a power supply unit.

"Neil" <OIUOIU@OIU.com> wrote in message news:4617bc42\$1@linux...  
>

> Exactly - and if a bridge rectifier shorts, then that means it  
> could have passed current with the wrong polarization on to  
> components past it inline... Rich this is something you ought  
> to just send off for proper repairs - even though it might look  
> like there's only something wrong with one component, it could  
> just as easily be more than that, and then yer fukt as soon as  
> you power-on again with the new bridge recto in place.  
>  
> If it were an Alesis somethingorother that cost a hundred  
> bucks, then sure why not experiment, but this is a \$1,700 item.  
>  
> Where'd you get it? New? any chance it's still under warranty  
> or has perhaps barely run out of warranty where the dealer  
> could step in & help you at least get a pro-rated price on the  
> repairs?  
>  
> Neil  
>  
>  
>  
> "Edna" <edna@texomaonline.com> wrote:  
>>"Something else" causing it to blow is probably right. If you just  
>>replace  
>  
>>the rectifier, it may do the same thing again. Maybe a blown  
>>semiconductor  
>  
>>component causing a short to that circuit. Also maybe a shorted filter  
>  
>>capacitor. Look for burned or dark resistors or burned circuit board to  
>  
>>trace to a faulty component. Did it blow a fuse or circuit breaker?  
>>Edna  
>>"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message  
>>news:4617a41b@linux...  
>>> Kim, I like your name for them much better. There are actually 2 of  
>>> these  
>>> RS202L's side by side, so do you still think it a good idea to ramp up  
> the  
>>> capacity? You say that something else caused it to blow, what could that  
>  
>>> be?  
>>> I wasn't using it at the time. Something I left out is that the power  
> is  
>>> always on when my rack is switched on, which probably isn't a good idea  
>  
>>> and  
>>> I believe my phantom power was on for most of the channels, again

>>> probably  
>>> not a good idea. Thanks for the help. I assume pos and neg are in the  
> same  
>>> direction as the other rectumfrier beside it?  
>>>  
>>> Thanks,  
>>> Rich  
>>>  
>>>  
>>> "Kim W." <no@way.com> wrote in message news:46179502\$1 @linux...  
>>>>  
>>>> It's a rectifier bridge.  
>>>> (Or as I call 'em... "rectumfriers").  
>>>> [http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201 .html](http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html)  
>>>> It's actually not one diode, but four, prewired to convert AC into  
>>>> DC. (Usually followed by some hefty electrolytic capacitors.  
>>>> (Oh yeah..... yanks call those "condensers".  
>>>> My guess is that there was something else that caused this to blow.  
>>>> If I were to replace this, I would put a larger capacity  
>>>> equivalent in it's place. (just get the + & - right, the ~ refers  
>>>> to the AC input, so it don't matter.)  
>>>> Stick a 4 amp, 100V unit in it's place, and you'll be right.  
>>>> THEN, find out what caused it to blow.  
>>>> Kim  
>>>>  
>>>>  
>>>>  
>>>>  
>>>> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
>>>> >  
>>>> >  
>>>> >Hello, Easter greetings by the way. Hey the other day I smelled smoke  
> =  
>>>> >and heard a crinkling sound in the back of my preamp rack and later  
> =  
>>>> >discovered the cause was my Presonus M80's power supply which is now  
> =  
>>>> >deep fried. Well I took the supply apart and found that this dark grey  
> =  
>>>> >thing on the cuircut board, I think it's a diode ->I, melted right off  
> =  
>>>> >of the board. Any one know what this is? I can't get a picture just  
> yet  
>>>> =  
>>>> >up on the net but I'll try and describe it.  
>>>> >  
>>>> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
> =

>>>> >solder to the cuicut board, dark grey colored and is coded:  
>>>> >  
>>>> >-->| RS\*202L  
>>>> >RU A 90=20  
>>>> >+ AC -  
>>>> >  
>>>> >Anyone of you electronics wizards know where the heck I can find one  
> of  
>>>> =  
>>>> >these?  
>>>> >  
>>>> >You guys are great,  
>>>> >Thanks  
>>>> >Rich  
>>>> >  
>>>> >PS. By the way I broke down and got a Myspace site now. Check it out.  
>>>>  
>>>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>>>> >id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>>>> >  
>>>> >  
>>>> >  
>>>> >  
>>>> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>>>> ><HTML><HEAD>  
>>>> ><META http-equiv=3DContent-Type content=3D"text/html; =  
>>>> >charset=3Diso-8859-1">  
>>>> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>>>> ><STYLE></STYLE>  
>>>> ></HEAD>  
>>>> ><BODY>  
>>>> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>>>> >other day I=20  
>>>> >smelled smoke and heard a crinkling sound in the back of my =  
>>>> >preamp=20  
>>>> >rack and later discovered the cause was my Presonus M80's power supply  
> =  
>>>> >which is=20  
>>>> >now deep fried. Well I took the supply apart and found that this dark  
> =  
>>>> >grey thing=20  
>>>> >on the cuircut board, I think it's a diode ->I, melted right off of  
> =  
>>>> >the=20  
>>>> >board. Any one know what this is? I can't get a picture just yet up  
> on =  
>>>> >the net=20  
>>>> >but I'll try and describe it.</FONT></DIV>

```
>>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>>> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins
> on
>>>> =
>>>> >the=20
>>>> >bottom which solder to the cuicut board, dark grey colored and is=20
>>>> >coded:</FONT></DIV>
>>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>>> ><DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
>>>> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>
>>>> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>
>>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>>> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =
>>>> >the heck l=20
>>>> >can find one of these?</FONT></DIV>
>>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>>> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>
>>>> ><DIV><FONT size=3D2>Thanks</FONT></DIV>
>>>> ><DIV><FONT size=3D2>Rich</FONT></DIV>
>>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>>> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site
> =
>>>> >now. Check=20
>>>> >it out.</FONT></DIV>
>>>> ><DIV><FONT size=3D2><A=20
>>>>
>>>> href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
>>>> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
>>>> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
>>>> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
>>>> >
>>>> >
>>>>
>>>
>>>
>>
>>
>>
>
```

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [chuck duffy](#) on Sat, 07 Apr 2007 18:44:31 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Kim,

Be assured that we yanks call electrolytic capacitors electrolytic capacitors.  
We yanks have other terms for wanking, taking the piss, making a bird, and

sex with barnyard animals, but not for electrolytic capacitors.

Chuck

"Kim W." <no@way.com> wrote:

>  
>It's a rectifier bridge.  
>(Or as I call 'em... "rectumfriers").  
> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>  
>It's actually not one diode, but four, prewired to convert AC into  
>DC. (Usually followed by some hefty electrolytic capacitors.  
>(Oh yeah..... yanks call those "condensers".  
>My guess is that there was something else that caused this to blow.  
>If I were to replace this, I would put a larger capacity  
>equivalent in it's place. (just get the + & - right, the ~ refers  
>to the AC input, so it don't matter.)  
>Stick a 4 amp, 100V unit in it's place, and you'll be right.  
>THEN, find out what caused it to blow.

>Kim

>

>

>

>

>"Rich Lamanna" <richard.lamanna@verizon.net> wrote:

>>

>>

>>Hello, Easter greetings by the way. Hey the other day I smelled smoke =  
>>and heard a crinkling sound in the back of my preamp rack and later =  
>>discovered the cause was my Presonus M80's power supply which is now =  
>>deep fried. Well I took the supply apart and found that this dark grey

=

>>thing on the cuircuit board, I think it's a diode ->I, melted right off

=

>>of the board. Any one know what this is? I can't get a picture just yet

>=

>>up on the net but I'll try and describe it.

>>

>>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =  
>>solder to the cuicut board, dark grey colored and is coded:

>>

>>-->| RS\*202L

>>RU A 90=20

>>+ AC -

>>

>>Anyone of you electronics wizards know where the heck I can find one of

>=

>>these?

>>



>>You guys are great,  
>>Thanks  
>>Rich  
>>  
>>PS. By the way I broke down and got a Myspace site now. Check it out.  
>> <http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friendid=3D172230696>  
>>  
>>  
>>  
>>  
>><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
>><HTML><HEAD>  
>><META http-equiv=3DContent-Type content=3D"text/html"; charset=3Diso-8859-1">  
>><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
>><STYLE></STYLE>  
>></HEAD>  
>><BODY>  
>><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
>>other day I=20  
>>smelled smoke and heard a crinkling sound in the back of my =  
>>preamp=20  
>>rack and later discovered the cause was my Presonus M80's power supply  
>>=  
>>which is=20  
>>now deep fried. Well I took the supply apart and found that this dark =  
>>grey thing=20  
>>on the cuircuit board, I think it's a diode ->I, melted right off of =  
>>the=20  
>>board. Any one know what this is? I can't get a picture just yet up on  
>>=  
>>the net=20  
>>but I'll try and describe it.</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on  
>>=  
>>the=20  
>>bottom which solder to the cuircuit board, dark grey colored and is=20  
>>coded:</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
>><DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
>><DIV><FONT size=3D2>+ AC -</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
>>the heck I=20  
>>can find one of these?</FONT></DIV>

>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
>><DIV><FONT size=3D2>Thanks</FONT></DIV>  
>><DIV><FONT size=3D2>Rich</FONT></DIV>  
>><DIV><FONT size=3D2></FONT> </DIV>  
>><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
=  
>>now. Check=20  
>>it out.</FONT></DIV>  
>><DIV><FONT size=3D2><A=20  
>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>>on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
>><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>  
>>  
>>  
>

---

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by Nil on Sat, 07 Apr 2007 19:05:12 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Yeah, we only call em "condensers" when it's a type of microphone.

Neil

"chuck " <c@c.com> wrote:

>  
>Kim,  
>  
>Be assured that we yanks call electrolytic capacitors electrolytic capacitors.  
> We yanks have other terms for wanking, taking the piss, making a bird,  
>and  
>sex with barnyard animals, but not for elecrolytic capacitors.  
>  
>Chuck  
>  
>"Kim W." <no@way.com> wrote:  
>>  
>>It's a rectifier bridge.  
>>(Or as I call 'em... "rectumfriers").  
>> http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201 .html  
>>It's actually not one diode, but four, prewired to convert AC into  
>>DC. (Usually followed by some hefty electrolytic capacitors.  
>>(Oh yeah..... yanks call those "condensers").

>>My guess is that there was something else that caused this to blow.  
>>If I were to replace this, I would put a larger capacity  
>>equivalent in it's place. (just get the + & - right, the ~ refers  
>>to the AC input, so it don't matter.)  
>>Stick a 4 amp, 100V unit in it's place, and you'll be right.  
>>THEN, find out what caused it to blow.  
>>Kim  
>>  
>>  
>>  
>>  
>>"Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
>>>  
>>>  
>>>Hello, Easter greetings by the way. Hey the other day I smelled smoke  
=  
>>>and heard a crinkling sound in the back of my preamp rack and later =  
>>>discovered the cause was my Presonus M80's power supply which is now =  
>>>deep fried. Well I took the supply apart and found that this dark grey  
>=  
>>>thing on the cuircuit board, I think it's a diode ->I, melted right off  
>=  
>>>of the board. Any one know what this is? I can't get a picture just yet  
>>=  
>>>up on the net but I'll try and describe it.  
>>>  
>>>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
=  
>>>solder to the cuircuit board, dark grey colored and is coded:  
>>>  
>>>-->| RS\*202L  
>>>RU A 90=20  
>>>+ AC -  
>>>  
>>>Anyone of you electronics wizards know where the heck I can find one of  
>>=  
>>>these?  
>>>  
>>>You guys are great,  
>>>Thanks  
>>>Rich  
>>>  
>>>PS. By the way I broke down and got a Myspace site now. Check it out.  
>>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>>>[id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>>>  
>>>  
>>>

```

>>>
>>><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
>>><HTML><HEAD>
>>><META http-equiv=3DContent-Type content=3D"text/html; =
>>>charset=3Diso-8859-1">
>>><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>
>>><STYLE></STYLE>
>>></HEAD>
>>><BODY>
>>><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =
>>>other day I=20
>>>smelled smoke and heard a crinkling sound in the back of my =
>>>preamp=20
>>>rack and later discovered the cause was my Presonus M80's power supply
>=
>>>which is=20
>>>now deep fried. Well I took the supply apart and found that this dark
=
>>>grey thing=20
>>>on the cuircut board, I think it's a diode ->|, melted right off of =
>>>the=20
>>>board. Any one know what this is? I can't get a picture just yet up on
>=
>>>the net=20
>>>but I'll try and describe it.</FONT></DIV>
>>><DIV><FONT size=3D2></FONT> </DIV>
>>><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins
on
>>=
>>>the=20
>>>bottom which solder to the cuicut board, dark grey colored and is=20
>>>coded:</FONT></DIV>
>>><DIV><FONT size=3D2></FONT> </DIV>
>>><DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
>>><DIV><FONT size=3D2>RU A 90 </FONT></DIV>
>>><DIV><FONT size=3D2>+ AC -</FONT></DIV>
>>><DIV><FONT size=3D2></FONT> </DIV>
>>><DIV><FONT size=3D2>Anyone of you electronics wizards know where =
>>>the heck I=20
>>>can find one of these?</FONT></DIV>
>>><DIV><FONT size=3D2></FONT> </DIV>
>>><DIV><FONT size=3D2>You guys are great,</FONT></DIV>
>>><DIV><FONT size=3D2>Thanks</FONT></DIV>
>>><DIV><FONT size=3D2>Rich</FONT></DIV>
>>><DIV><FONT size=3D2></FONT> </DIV>
>>><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site
>=
>>>now. Check=20

```

```
>>>it out.</FONT></DIV>
>>><DIV><FONT size=3D2><A=20
>>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
>>>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
>>>on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>
>>><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
>>>
>>>
>>
>
```

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Neil](#) on Sat, 07 Apr 2007 19:24:34 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Yes, it could've just gone kablooeey, affecting no other components, but what a bridge rectifier does is to turn the various cycles of AC current into steady & polarized DC. If that thing went kablooeey and created an open circuit in the process, than it's possible no other components were affected; if it kablooied into a short, then whatever components that are next in line after it got a nice dose of AC, which may have caused a subsequent kablooation of those parts as well.

Just 'cause they don't "look" bad, doesn't mean they ain't.

Neil

"Rich Lamanna" <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)> wrote:

```
>
>
>Neil, Edna, couldn't the rectifier just have gone Kablooeey? As you say =
>it could be symptomatic of another problem but if you read my last post,
=
>I may have been overloading the thing. Looking at the circuit board =
>carefully, I see no other browned or burned resistors, etc. Maybe I'll =
>send it in, but I might try to fix it myself as it will be only a couple
=
>of bucks if it doesn't work. The unit was bought used from another owner
=
>a few years ago, on ebay, and I'm not sure if it is still under =
>warrantee. I'll have to look into this. I probably know just enough to =
>get this wrong, but wish me luck. I know..... I'll soon be hearing, =
>"I told you so"! :-)
```

>  
>Thanks,

>Rich  
>  
> "Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
>news:46178cc2\$1@linux...  
> Hello, Easter greetings by the way. Hey the other day I smelled smoke  
=  
>and heard a crinkling sound in the back of my preamp rack and later =  
>discovered the cause was my Presonus M80's power supply which is now =  
>deep fried. Well I took the supply apart and found that this dark grey =  
>thing on the cuircuit board, I think it's a diode ->I, melted right off =  
>of the board. Any one know what this is? I can't get a picture just yet  
=  
>up on the net but I'll try and describe it.  
>  
> It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
=  
>solder to the cuicut board, dark grey colored and is coded:  
>  
> -->| RS\*202L  
> RU A 90=20  
> + AC -  
>  
> Anyone of you electronics wizards know where the heck I can find one =  
>of these?  
>  
> You guys are great,  
> Thanks  
> Rich  
>  
> PS. By the way I broke down and got a Myspace site now. Check it out.  
> =  
> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>  
>  
>  
>  
><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
><HTML><HEAD>  
><META http-equiv=3DContent-Type content=3D"text/html; =  
>charset=3Diso-8859-1">  
><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
><STYLE></STYLE>  
></HEAD>  
><BODY bgColor=3D#ffffff>  
><DIV>  
><DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have gone =  
>Kablooey? As=20

>you say it could be symptomatic of another problem but if you read my =  
>last post,=20  
>I may have been overloading the thing. Looking at the circuit board=20

>I'll send=20

>of=20

>bucks if it doesn't work. The unit was bought used from another owner a  
=

>few=20

>years ago, on ebay, and I'm not sure if it is still under warrantee. =

>I'll have=20

>to look into this. I probably know just enough to get this wrong, but =

>wish me=20

>luck. I know..... I'll soon be hearing, "I told you so"! =

>:-)/FONT></DIV>

><DIV><FONT size=3D2>Thanks,</FONT></DIV>

><DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>

><BLOCKQUOTE dir=3Dltr=20

>style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =

>BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">

> <DIV>"Rich Lamanna" <<A=20

> =

>href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=

>A>>=20

> wrote in message <A=20

> href=3D"news:46178cc2\$1 @linux">news:46178cc2\$1 @linux</A>...</DIV>

>other day I=20

>preamp=20

> rack and later discovered the cause was my Presonus M80's power supply

=

>which=20

> is now deep fried. Well I took the supply apart and found that this =

>dark grey=20

> thing on the cuircuit board, I think it's a diode ->I, melted right =

>off of=20

> the board. Any one know what this is? I can't get a picture just yet =

>up on the=20

> net but I'll try and describe it.</FONT></DIV>

> <DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins

=

>on the=20

>

> coded:</FONT></DIV>

> <DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>

> <DIV><FONT size=3D2>+ AC -</FONT></DIV>

>the heck l=20

> can find one of these?</FONT></DIV>

> <DIV><FONT size=3D2>You guys are great,</FONT></DIV>

> <DIV><FONT size=3D2>Thanks</FONT></DIV>

> <DIV><FONT size=3D2>Rich</FONT></DIV>

> <DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
=  
>now.=20  
> Check it out.</FONT></DIV>

> <DIV><FONT size=3D2><A=20  
> =  
>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
>on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>

> <DIV><BR><FONT size=3D2><BR></DIV></BLOCKQUOTE></FONT></BODY></HTML>

>

>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sat, 07 Apr 2007 20:13:12 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_0020\_01C77927.4285D120  
Content-Type: text/plain;  
 charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Neil, Edna, couldn't the rectifier just have gone Kablooey? As you say =  
it could be symptomatic of another problem but if you read my last post, =  
I may have been overloading the thing. Looking at the circuit board =  
carefully, I see no other browned or burned resistors, etc. Maybe I'll =  
send it in, but I might try to fix it myself as it will be only a couple =  
of bucks if it doesn't work. The unit was bought used from another owner =  
a few years ago, on ebay, and I'm not sure if it is still under =  
warrantee. I'll have to look into this. I probably know just enough to =  
get this wrong, but wish me luck. I know..... I'll soon be hearing, =



"I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I smelled smoke =  
and heard a crinkling sound in the back of my preamp rack and later =  
discovered the cause was my Presonus M80's power supply which is now =  
deep fried. Well I took the supply apart and found that this dark grey =  
thing on the cuircuit board, I think it's a diode ->I, melted right off =  
of the board. Any one know what this is? I can't get a picture just yet =  
up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which =  
solder to the cuircuit board, dark grey colored and is coded:

```
-->| RS*202L  
RU A 90=20  
+ AC -
```

Anyone of you electronics wizards know where the heck I can find one =  
of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check it out.  
=  
[http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)

```
-----=_NextPart_000_0020_01C77927.4285D120  
Content-Type: text/html;  
 charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable
```

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
<HTML><HEAD>  
<META http-equiv=3DContent-Type content=3D"text/html"; =  
 charset=3Diso-8859-1">  
<META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
<STYLE></STYLE>  
</HEAD>
```

<BODY bgColor=#ffffff>  
<DIV>  
<DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have gone =  
Kablooey? As=20  
you say it could be symptomatic of another problem but if you read my =  
last post,=20  
I may have been overloading the thing. Looking at the circuit board=20  
carefully,&nbsp;I see no other browned or burned resistors, etc. Maybe =  
I'll send=20  
it in, but I might try to fix it myself as it will be&nbsp;only a couple =  
of=20  
bucks if it doesn't work. The unit was bought used from another owner a =  
few=20  
years ago, on ebay, and I'm not sure if it is still under warrantee. =  
I'll have=20  
to look into this. I probably know just enough to get this wrong, but =  
wish me=20  
luck. I know..... I'll soon be hearing, "I told you so"! =  
:-)</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Thanks,</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
  <DIV>"Rich Lamanna" &lt;<A=20  
  =  
  href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
  A>&gt;=20  
  wrote in message <A=20  
  href=3D"news:46178cc2\$1@linux">news:46178cc2\$1@linux</A>...</DIV>  
  <DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. Hey the =  
  other day I=20  
  smelled smoke and heard&nbsp;a crinkling sound&nbsp;in the back of my =  
  preamp=20  
  rack and later discovered the cause was my Presonus M80's power supply =  
  which=20  
  is now deep fried. Well I took the supply apart and found that this =  
  dark grey=20  
  thing on the cuircuit board, I think it's a diode -&gt;l, melted right =  
  off of=20  
  the board. Any one know what this is? I can't get a picture just yet =  
  up on the=20  
  net but I'll try and describe it.</FONT></DIV>  
  <DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
  <DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins =  
  on the=20  
  bottom which&nbsp;solder to the cuicut board, dark grey colored and is =

coded:</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>--&gt;| RS\*202L</FONT></DIV>  
<DIV><FONT size=3D2>RU&nbsp;  A 90 </FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics wizards&nbsp; know where =  
the heck I=20  
can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site =  
now.=20  
Check it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
=  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&amp;friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&amp;friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT size=3D2><BR></DIV></BLOCKQUOTE></FONT></BODY></HTML>

-----=\_NextPart\_000\_0020\_01C77927.4285D120--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sat, 07 Apr 2007 20:15:17 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Edna it is a separate power supply unit for the M80.

Rich

"Edna" <edna@texomaonline.com> wrote in message news:4617d077@linux...  
> Good advice! I thought it was just a power supply unit.  
>  
> "Neil" <OIUOIU@OIU.com> wrote in message news:4617bc42\$1@linux...  
>>  
>> Exactly - and if a bridge rectifier shorts, then that means it  
>> could have passed current with the wrong polarization on to  
>> components past it inline... Rich this is something you ought  
>> to just send off for proper repairs - even though it might look  
>> like there's only something wrong with one component, it could  
>> just as easily be more than that, and then yer fukt as soon as  
>> you power-on again with the new bridge recto in place.

> >  
> > If it were an Alesis something or other that cost a hundred  
> > bucks, then sure why not experiment, but this is a \$1,700 item.  
> >  
> > Where'd you get it? New? any chance it's still under warranty  
> > or has perhaps barely run out of warranty where the dealer  
> > could step in & help you at least get a pro-rated price on the  
> > repairs?  
> >  
> > Neil  
> >  
> >  
> >  
> > "Edna" <edna@texomaonline.com> wrote:  
> >> "Something else" causing it to blow is probably right. If you just  
> >> replace  
> >  
> >> the rectifier, it may do the same thing again. Maybe a blown  
> >> semiconductor  
> >  
> >> component causing a short to that circuit. Also maybe a shorted filter  
> >  
> >> capacitor. Look for burned or dark resistors or burned circuit board to  
> >  
> >> trace to a faulty component. Did it blow a fuse or circuit breaker?  
> >> Edna  
> >> "Rich Lamanna" <richard.lamanna@verizon.net> wrote in message  
> >> news:4617a41b@linux...  
> >>> Kim, I like your name for them much better. There are actually 2 of  
> >>> these  
> >>> RS202L's side by side, so do you still think it a good idea to ramp up  
> > the  
> >>> capacity? You say that something else caused it to blow, what could  
that  
> >  
> >>> be?  
> >>> I wasn't using it at the time. Something I left out is that the power  
> > is  
> >>> always on when my rack is switched on, which probably isn't a good  
idea  
> >  
> >>> and  
> >>> I believe my phantom power was on for most of the channels, again  
> >>> probably  
> >>> not a good idea. Thanks for the help. I assume pos and neg are in the  
> > same  
> >>> direction as the other rectumfrier beside it?  
> >>>

> >>> Thanks,  
> >>> Rich  
> >>>  
> >>>  
> >>> "Kim W." <no@way.com> wrote in message news:46179502\$1@linux...  
> >>>>  
> >>>> It's a rectifier bridge.  
> >>>> (Or as I call 'em... "rectumfriers").  
> >>>> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>  
> >>>> It's actually not one diode, but four, prewired to convert AC into  
> >>>> DC. (Usually followed by some hefty electrolytic capacitors.  
> >>>> (Oh yeah..... yanks call those "condensers".  
> >>>> My guess is that there was something else that caused this to blow.  
> >>>> If I were to replace this, I would put a larger capacity  
> >>>> equivalent in it's place. (just get the + & - right, the ~ refers  
> >>>> to the AC input, so it don't matter.)  
> >>>> Stick a 4 amp, 100V unit in it's place, and you'll be right.  
> >>>> THEN, find out what caused it to blow.  
> >>>> Kim  
> >>>>  
> >>>>  
> >>>>  
> >>>>  
> >>>> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
> >>>> >  
> >>>> >  
> >>>> >Hello, Easter greetings by the way. Hey the other day I smelled  
smoke  
> > =  
> >>>> >and heard a crinkling sound in the back of my preamp rack and later  
> > =  
> >>>> >discovered the cause was my Presonus M80's power supply which is now  
> > =  
> >>>> >deep fried. Well I took the supply apart and found that this dark  
grey  
> > =  
> >>>> >thing on the cuircuit board, I think it's a diode ->I, melted right  
off  
> > =  
> >>>> >of the board. Any one know what this is? I can't get a picture just  
> > yet  
> >>>> =  
> >>>> >up on the net but I'll try and describe it.  
> >>>> >  
> >>>> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom  
which  
> > =  
> >>>> >solder to the cuicut board, dark grey colored and is coded:

> >>>> >  
> >>>> >-->| RS\*202L  
> >>>> >RU A 90=20  
> >>>> >+ AC -  
> >>>> >  
> >>>> >Anyone of you electronics wizards know where the heck I can find one  
> > of  
> >>>> =  
> >>>> >these?  
> >>>> >  
> >>>> >You guys are great,  
> >>>> >Thanks  
> >>>> >Rich  
> >>>> >  
> >>>> >PS. By the way I broke down and got a Myspace site now. Check it  
out.  
> >>>>  
>  
>>>> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
> >>>> >id=3D172230696  
> >>>> >  
> >>>> >  
> >>>> >  
> >>>> >  
> >>>> >  
> >>>> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
> >>>> ><HTML><HEAD>  
> >>>> ><META http-equiv=3DContent-Type content=3D"text/html; =  
> >>>> >charset=3Diso-8859-1">  
> >>>> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
> >>>> ><STYLE></STYLE>  
> >>>> ></HEAD>  
> >>>> ><BODY>  
> >>>> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =  
> >>>> >other day I=20  
> >>>> >smelled smoke and heard a crinkling sound in the back of my =  
> >>>> >preamp=20  
> >>>> >rack and later discovered the cause was my Presonus M80's power  
supply  
> > =  
> >>>> >which is=20  
> >>>> >now deep fried. Well I took the supply apart and found that this  
dark  
> > =  
> >>>> >grey thing=20  
> >>>> >on the circuit board, I think it's a diode ->I, melted right off of  
> > =  
> >>>> >the=20

```

> >>>> >board. Any one know what this is? I can't get a picture just yet up
> > on =
> >>>> >the net=20
> >>>> >but I'll try and describe it.</FONT></DIV>
> >>>> ><DIV><FONT size=3D2></FONT> </DIV>
> >>>> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4
pins
> > on
> >>>> =
> >>>> >the=20
> >>>> >bottom which solder to the cuicut board, dark grey colored and is=20
> >>>> >coded:</FONT></DIV>
> >>>> ><DIV><FONT size=3D2></FONT> </DIV>
> >>>> ><DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
> >>>> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>
> >>>> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>
> >>>> ><DIV><FONT size=3D2></FONT> </DIV>
> >>>> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =
> >>>> >the heck l=20
> >>>> >can find one of these?</FONT></DIV>
> >>>> ><DIV><FONT size=3D2></FONT> </DIV>
> >>>> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>
> >>>> ><DIV><FONT size=3D2>Thanks</FONT></DIV>
> >>>> ><DIV><FONT size=3D2>Rich</FONT></DIV>
> >>>> ><DIV><FONT size=3D2></FONT> </DIV>
> >>>> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace
site
> > =
> >>>> >now. Check=20
> >>>> >it out.</FONT></DIV>
> >>>> ><DIV><FONT size=3D2><A=20
> >>>>
>
>>>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofi
l=
> >>>>
>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
> >>>> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
> >>>> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
> >>>> >
> >>>> >
> >>>>
> >>>
> >>>
> >>
> >>
> >
> >
>
>

```

>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?

Posted by [Rich Lamanna](#) on Sat, 07 Apr 2007 20:25:07 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

No Edna it didn't blow a fuse or circuit breaker, no burnt or brown marks either on the board.

Rich

"Edna" <edna@texomaonline.com> wrote in message news:4617b541@linux...

> "Something else" causing it to blow is probably right. If you just replace

> the rectifier, it may do the same thing again. Maybe a blown semiconductor

> component causing a short to that circuit. Also maybe a shorted filter

> capacitor. Look for burned or dark resistors or burned circuit board to

> trace to a faulty component. Did it blow a fuse or circuit breaker?

> Edna

> "Rich Lamanna" <richard.lamanna@verizon.net> wrote in message

> news:4617a41b@linux...

>> Kim, I like your name for them much better. There are actually 2 of these

>> RS202L's side by side, so do you still think it a good idea to ramp up the

>> capacity? You say that something else caused it to blow, what could that

>> be?

>> I wasn't using it at the time. Something I left out is that the power is

>> always on when my rack is switched on, which probably isn't a good idea

>> and

>> I believe my phantom power was on for most of the channels, again probably

>> not a good idea. Thanks for the help. I assume pos and neg are in the same

>> direction as the other rectumfrier beside it?

>>

>> Thanks,

>> Rich

>>

>>

>> "Kim W." <no@way.com> wrote in message news:46179502\$1@linux...

>>>

>>> It's a rectifier bridge.

>>> (Or as I call 'em... "rectumfriers").

>>> <http://www.chipdocs.com/datasheets/datasheet-pdf/RECTR/RS201.html>

>>> It's actually not one diode, but four, prewired to convert AC into



> >> DC. (Usually followed by some hefty electrolytic capacitors.  
> >> (Oh yeah..... yanks call those "condensers".  
> >> My guess is that there was something else that caused this to blow.  
> >> If I were to replace this, I would put a larger capacity  
> >> equivalent in it's place. (just get the + & - right, the ~ refers  
> >> to the AC input, so it don't matter.)  
> >> Stick a 4 amp, 100V unit in it's place, and you'll be right.  
> >> THEN, find out what caused it to blow.  
> >> Kim  
> >>  
> >>  
> >>  
> >>  
> >> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
> >> >  
> >> >  
> >> >Hello, Easter greetings by the way. Hey the other day I smelled smoke  
=  
> >> >and heard a crinkling sound in the back of my preamp rack and later =  
> >> >discovered the cause was my Presonus M80's power supply which is now =  
> >> >deep fried. Well I took the supply apart and found that this dark grey  
=  
> >> >thing on the cuircuit board, I think it's a diode ->I, melted right off  
=  
> >> >of the board. Any one know what this is? I can't get a picture just  
yet  
> >> =  
> >> >up on the net but I'll try and describe it.  
> >> >  
> >> >It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
=  
> >> >solder to the cuicut board, dark grey colored and is coded:  
> >> >  
> >> >-->| RS\*202L  
> >> >RU A 90=20  
> >> >+ AC -  
> >> >  
> >> >Anyone of you electronics wizards know where the heck I can find one  
of  
> >> =  
> >> >these?  
> >> >  
> >> >You guys are great,  
> >> >Thanks  
> >> >Rich  
> >> >  
> >> >PS. By the way I broke down and got a Myspace site now. Check it out.  
> >>

```
>
>> http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofile&friend=
>>> >id=3D172230696
>>> >
>>> >
>>> >
>>> >
>>> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
>>> ><HTML><HEAD>
>>> ><META http-equiv=3DContent-Type content=3D"text/html; =
>>> > charset=3Diso-8859-1">
>>> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>
>>> ><STYLE></STYLE>
>>> ></HEAD>
>>> ><BODY>
>>> ><DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =
>>> > other day I=20
>>> > smelled smoke and heard a crinkling sound in the back of my =
>>> > preamp=20
>>> > rack and later discovered the cause was my Presonus M80's power supply
=
>>> > which is=20
>>> > now deep fried. Well I took the supply apart and found that this dark
=
>>> > grey thing=20
>>> > on the cuircuit board, I think it's a diode ->I, melted right off of =
>>> > the=20
>>> > board. Any one know what this is? I can't get a picture just yet up on
=
>>> > the net=20
>>> > but I'll try and describe it.</FONT></DIV>
>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>> ><DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins
on
>>> =
>>> > the=20
>>> > bottom which solder to the cuicut board, dark grey colored and is=20
>>> > coded:</FONT></DIV>
>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>> ><DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
>>> ><DIV><FONT size=3D2>RU A 90 </FONT></DIV>
>>> ><DIV><FONT size=3D2>+ AC -</FONT></DIV>
>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>> ><DIV><FONT size=3D2>Anyone of you electronics wizards know where =
>>> > the heck I=20
>>> > can find one of these?</FONT></DIV>
>>> ><DIV><FONT size=3D2></FONT> </DIV>
>>> ><DIV><FONT size=3D2>You guys are great,</FONT></DIV>
```

```
> >> ><DIV><FONT size=3D2>Thanks</FONT></DIV>
> >> ><DIV><FONT size=3D2>Rich</FONT></DIV>
> >> ><DIV><FONT size=3D2></FONT> </DIV>
> >> ><DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site
=
> >> >now. Check=20
> >> >it out.</FONT></DIV>
> >> ><DIV><FONT size=3D2><A=20
> >>
>
>>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
> >> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
> >> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
> >> ><DIV><BR><FONT size=3D2><BR></DIV></FONT></BODY></HTML>
> >> >
> >> >
> >>
> >
> >
>
>
```

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Edna Sloan](#) on Sat, 07 Apr 2007 21:00:46 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

```
-----=_NextPart_000_00A8_01C7792D.E8534910
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable
```

Its possible, but not likely, especially if its not a new unit, which =  
would be more likely to have a defective component. Something caused a =  
current overload through it to burn it up. But apparently not a direct =  
short which would have blown the fuse as well. I've seen many leaky =  
filter caps do this - these are the large caps that filter the ripple =  
voltage or small ac component off the DC. A blown voltage regulator is =  
another likely suspect, as far as the PS itself. Can the PS run by =  
itself w/o being connected to the M80? =20

ich Lamanna" <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)> wrote in message =  
news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooey? As you say =  
it could be symptomatic of another problem but if you read my last post, =  
I may have been overloading the thing. Looking at the circuit board =

carefully, I see no other browned or burned resistors, etc. Maybe I'll =  
send it in, but I might try to fix it myself as it will be only a couple =  
of bucks if it doesn't work. The unit was bought used from another owner =  
a few years ago, on ebay, and I'm not sure if it is still under =  
warrantee. I'll have to look into this. I probably know just enough to =  
get this wrong, but wish me luck. I know..... I'll soon be hearing, =  
"I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I smelled =  
smoke and heard a crinkling sound in the back of my preamp rack and =  
later discovered the cause was my Presonus M80's power supply which is =  
now deep fried. Well I took the supply apart and found that this dark =  
grey thing on the cuircuit board, I think it's a diode ->|, melted right =  
off of the board. Any one know what this is? I can't get a picture just =  
yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom =  
which solder to the cuircuit board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can find one =  
of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check it =  
out.

=  
<http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696>

-----=\_NextPart\_000\_00A8\_01C7792D.E8534910  
Content-Type: text/html;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD>
<META http-equiv=3DContent-Type content=3D"text/html; =
charset=3Diso-8859-1">
<META content=3D"MSHTML 6.00.2900.2180" name=3DGENERATOR>
<STYLE></STYLE>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV><FONT face=3DArial size=3D2>Its possible, but not likely, =
especially if its not=20
a new unit, which would be more likely to have a defective =
component.&nbsp;=20
Something caused a current overload through it to burn it up.&nbsp; But=20
apparently not a direct short which would have blown the fuse as =
well.&nbsp;=20
I've seen many leaky filter caps do this - these are the large caps that =
filter=20
the ripple voltage or small ac component off the DC.&nbsp; A blown =
voltage=20
regulator is another likely suspect, as far as the PS itself.&nbsp; Can =
the PS=20
run by itself w/o being connected to the M80?&nbsp;&nbsp;</FONT></DIV>
<DIV>&nbsp;</DIV>
<DIV>ich Lamanna" &lt;<A=20
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=
A>&gt;=20
wrote in message <A=20
href=3D"news:4617ee9b$1 @linux">news:4617ee9b$1 @linux</A>...</DIV>
<BLOCKQUOTE dir=3Dltr=20
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
  <DIV>
    <DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have gone =
Kablooey?=20
    As you say it could be symptomatic of another problem but if you read =
my last=20
    post, I may have been overloading the thing. Looking at the circuit =
board=20
    carefully,&nbsp;I see no other browned or burned resistors, etc. Maybe =
I'll=20
    send it in, but I might try to fix it myself as it will be&nbsp;only a =
couple=20
    of bucks if it doesn't work. The unit was bought used from another =
owner a few=20
    years ago, on ebay, and I'm not sure if it is still under warrantee. =
I'll have=20
    to look into this. I probably know just enough to get this wrong, but =
wish me=20
```

luck. I know..... I'll soon be hearing, "I told you so"! =  
:-)</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Thanks,</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Rich Lamanna" &lt;<A=20  
=  
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20  
wrote in message <A=20  
href=3D"news:46178cc2\$1@linux">news:46178cc2\$1@linux</A>...</DIV>  
<DIV><FONT size=3D2>Hello, Easter&nbsp;&nbsp;&nbsp;greetings by the way. Hey the =  
other day=20  
I smelled smoke and heard&nbsp;&nbsp;&nbsp;a crinkling sound&nbsp;&nbsp;&nbsp;in the back of =  
my=20  
preamp rack and later discovered the cause was my Presonus M80's =  
power=20  
supply which is now deep fried. Well I took the supply apart and =  
found that=20  
this dark grey thing on the cuircuit board, I think it's a diode =  
&gt;l,=20  
melted right off of the board. Any one know what this is? I can't =  
get a=20  
picture just yet up on the net but I'll try and describe =  
it.</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 =  
pins on the=20  
bottom which&nbsp;&nbsp;&nbsp;solder to the cuicut board, dark grey colored and =  
is=20  
coded:</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>--&gt;l RS\*202L</FONT></DIV>  
<DIV><FONT size=3D2>RU&nbsp;&nbsp;&nbsp;A 90 </FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics wizards&nbsp;&nbsp;&nbsp;know =  
where the heck=20  
I can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace =

site now.=20

Check it out.</FONT></DIV>

<DIV><FONT size=3D2><A=20

=

href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&amp;friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&amp;friendid=3D172230696</A></FONT ></DIV>

<DIV><BR><FONT =

size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></FONT></BODY ></HTML>

-----=\_NextPart\_000\_00A8\_01C7792D.E8534910--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?.....PICS

Posted by [Kim W](#) on Sun, 08 Apr 2007 04:24:44 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

---=\_linux46186e8c

Content-Type: text/plain

Content-Transfer-Encoding: 7bit

Hi.

I second the capacitor/regulator idea.

They are cheap and easy to replace, so why not give it a shot.

If anyone's interested, I've attached a couple of pics that show problems that I've had in the past.

First pic shows a capacitor that's been anchored to the circuit board with some kind of contact cement. This is common practice.

With time and heat, this goop can become conductive.

If it was blobbed over exposed wire links or component leads during manufacture, the conductivity can cause the equipment to fail.

(Happened to my SPX90 some years ago). Just scraping it off or carefully cutting it with a scalpel blade fixes the problem.

The second pic shows examples of bad caps that were released, in billions, onto the market, when (allegedly), an unperfected formulation for higher density (smaller packages/higher capacitances) was the subject of industrial espionage, and stolen.

So a huge number of motherboards and other equipment has electros that dry up after only a couple of years, (depending on how hot they get).

In the pic, the cap on the left is actually bulging on the top of the can, and the one on the right has leaked a brown substance on the top.

These should be replaced immediately if you spot them, as they WILL cause failure.

(The pic is actually of a friends' Dell mobo which has become flakey....spontaneous rebooting/blue screens etc...)

Kim

"Edna" <edna@texomaonline.com> wrote:

>

>

>Its possible, but not likely, especially if its not a new unit, which =  
>would be more likely to have a defective component. Something caused a

=

>current overload through it to burn it up. But apparently not a direct

=

>short which would have blown the fuse as well. I've seen many leaky =

>filter caps do this - these are the large caps that filter the ripple =

>voltage or small ac component off the DC. A blown voltage regulator is

=

>another likely suspect, as far as the PS itself. Can the PS run by =

>itself w/o being connected to the M80? =20

>

>ich Lamanna" <richard.lamanna@verizon.net> wrote in message =

>news:4617ee9b\$1@linux...

> Neil, Edna, couldn't the rectifier just have gone Kablooeey? As you say

=

>it could be symptomatic of another problem but if you read my last post,

=

>I may have been overloading the thing. Looking at the circuit board =

>carefully, I see no other browned or burned resistors, etc. Maybe I'll =

>send it in, but I might try to fix it myself as it will be only a couple

=

>of bucks if it doesn't work. The unit was bought used from another owner

=

>a few years ago, on ebay, and I'm not sure if it is still under =

>warrantee. I'll have to look into this. I probably know just enough to =

>get this wrong, but wish me luck. I know..... I'll soon be hearing, =

>"I told you so"! :-)

>

> Thanks,

> Rich

>

> "Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =

>news:46178cc2\$1@linux...

> Hello, Easter greetings by the way. Hey the other day I smelled =

>smoke and heard a crinkling sound in the back of my preamp rack and =

>later discovered the cause was my Presonus M80's power supply which is =



>now deep fried. Well I took the supply apart and found that this dark =  
>grey thing on the cuircuit board, I think it's a diode ->I, melted right  
=  
>off of the board. Any one know what this is? I can't get a picture just  
=  
>yet up on the net but I'll try and describe it.  
>  
> It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom =  
>which solder to the cuircuit board, dark grey colored and is coded:  
>  
> -->| RS\*202L  
> RU A 90=20  
> + AC -  
>  
> Anyone of you electronics wizards know where the heck I can find one  
=  
>of these?  
>  
> You guys are great,  
> Thanks  
> Rich  
>  
> PS. By the way I broke down and got a Myspace site now. Check it =  
>out.  
> =  
> [http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=  
>id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewprofile&friend=id=3D172230696)  
>  
>  
>  
>  
><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
><HTML><HEAD>  
><META http-equiv=3DContent-Type content=3D"text/html; =  
>charset=3Diso-8859-1">  
><META content=3D"MSHTML 6.00.2900.2180" name=3DGENERATOR>  
><STYLE></STYLE>  
></HEAD>  
><BODY bgColor=3D#ffffff>  
><DIV><FONT face=3DArial size=3D2>Its possible, but not likely, =  
>especially if its not=20  
>a new unit, which would be more likely to have a defective =  
>component. =20  
>Something caused a current overload through it to burn it up. But=20  
>apparently not a direct short which would have blown the fuse as =  
>well. =20  
>I've seen many leaky filter caps do this - these are the large caps that  
=

>filter=20  
>the ripple voltage or small ac component off the DC. A blown =  
>voltage=20  
>regulator is another likely suspect, as far as the PS itself. Can =  
>the PS=20  
>run by itself w/o being connected to the M80? </FONT></DIV>  
><DIV> </DIV>  
><DIV>ich Lamanna" <<A=20  
>href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
>A>>=20  
>wrote in message <A=20  
>href=3D"news:4617ee9b\$1@linux">news:4617ee9b\$1@linux</A>...</DIV>  
><BLOCKQUOTE dir=3Dltr=20  
>style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
>BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
> <DIV>  
> <DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have gone  
=  
>Kablooey?=20  
> As you say it could be symptomatic of another problem but if you read  
=  
>my last=20  
> post, I may have been overloading the thing. Looking at the circuit =  
>board=20  
> carefully, I see no other browned or burned resistors, etc. Maybe =  
>I'll=20  
> send it in, but I might try to fix it myself as it will be only a =  
>couple=20  
> of bucks if it doesn't work. The unit was bought used from another =  
>owner a few=20  
> years ago, on ebay, and I'm not sure if it is still under warrantee. =  
>I'll have=20  
> to look into this. I probably know just enough to get this wrong, but  
=  
>wish me=20  
> luck. I know..... I'll soon be hearing, "I told you so"! =  
>:-)</FONT></DIV>  
> <DIV><FONT size=3D2></FONT> </DIV>  
> <DIV><FONT size=3D2>Thanks,</FONT></DIV>  
> <DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>  
> <BLOCKQUOTE dir=3Dltr=20  
> style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
>BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
> <DIV>"Rich Lamanna" <<A=20  
> =  
>href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
>A>>=20  
> wrote in message <A=20

```

> href=3D"news:46178cc2$1@linux">news:46178cc2$1@linux</A>...</DIV>
> <DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =
>other day=20
> I smelled smoke and heard a crinkling sound in the back of =
>my=20
> preamp rack and later discovered the cause was my Presonus M80's =
>power=20
> supply which is now deep fried. Well I took the supply apart and =
>found that=20
> this dark grey thing on the cuircut board, I think it's a diode =
>->|,=20
> melted right off of the board. Any one know what this is? I can't =
>get a=20
> picture just yet up on the net but I'll try and describe =
>it.</FONT></DIV>
> <DIV><FONT size=3D2></FONT> </DIV>
> <DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 =
>pins on the=20
> bottom which solder to the cuicut board, dark grey colored and =
>is=20
> coded:</FONT></DIV>
> <DIV><FONT size=3D2></FONT> </DIV>
> <DIV><FONT size=3D2>-->| RS*202L</FONT></DIV>
> <DIV><FONT size=3D2>RU A 90 </FONT></DIV>
> <DIV><FONT size=3D2>+ AC -</FONT></DIV>
> <DIV><FONT size=3D2></FONT> </DIV>
> <DIV><FONT size=3D2>Anyone of you electronics wizards know =
>where the heck=20
> I can find one of these?</FONT></DIV>
> <DIV><FONT size=3D2></FONT> </DIV>
> <DIV><FONT size=3D2>You guys are great,</FONT></DIV>
> <DIV><FONT size=3D2>Thanks</FONT></DIV>
> <DIV><FONT size=3D2>Rich</FONT></DIV>
> <DIV><FONT size=3D2></FONT> </DIV>
> <DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace =
>site now.=20
> Check it out.</FONT></DIV>
> <DIV><FONT size=3D2><A=20
> =
>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=
>e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=
>on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>
> <DIV><BR><FONT =
>size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></FONT></BODY ></HTML>
>
>

```

---=\_linux46186e8c



Eb/5tVchh2NfJ+IB10+7+sgFAmlQiJCyT20TuvOrgC4DknjXxhPS+29/pVQX  
6kDQaDUpsO2qs2C2NrmhzZBI3slewb5f0Ed+eN9grJLQ9r8UwGhsH31Oal/  
RuTTKWwDIMUB0ak/pAywmvUB511brqdv8ITvxrK77KY3+mfpRyOWuVyrMx62  
bWtdR7y4jWwODuW+01f2G2/o1UvylL7nWj2ilAED2N+ju2/uoAknZfQA0Qf6  
IGpe5hD2/SrO5o+CEAiVmHDXnQp4OrHkFxl1V/VMdjBSxmyq4NycWrHqAJLg  
19HrW79/6vkVvY+qqv8ASekg2fZrDTluy3VsfW4PyMhm9jXBvtqt2h7bK/d6  
Wyv/AAqf6vZ2K3Bupzi5tGlZc8Od9C5zG+m+qr9LZW233+pv/R2f8apX10ZV  
PpYLpw3vc5llzSw17fe9mO99gp9JlljKdn857/USI1WRNit7/YjxM7Ju6q2j  
Joj+0UvfjuxjW6XNtaa/0/upqs3OZ/NZNn+G/m0UU/VkY15HT6PVaTX+nyLq  
7haS7az7NQbaqGO9J21nrV/8Z6SXT22ZmDaGs3WNLaxkNc1khg3sZfHofaPT  
eK/0l77fpqeQMjTPqWXXsz80OsvbfVP6Vu1npbdIVde+6xz/AORXZ/pK0NQD  
XTvom7Ni9R01Vh51V9rsSnFqwcNhckSxGlafVbo19+VcW5OZkO9Znov9f+a/  
mq1z/X6n02PxLHGRYbfe7WRP09Nr7Xsf/wBuLRo9Tdbm12/p6fT3PD2tMRtp  
bd6uyzb6LLaa9jP9CytT69R9pwaOrVnN7PDraQ13trLnMHvh/wDNb/p2/wA7  
/Of8Glfc7pjqlX6PluDMve5wLTGgPnwo8Uj+UZ+5HzW27nEkvgNI3MNgNrb  
KC8e9rPCAUWRi/RrW+Un5pWaQ0dtE/0rZPA1TN91k+GqSn//0MTAZZTmW4mS  
0sJlt9EkhgP0fC/e30X+3b79ibpRbS+6i1xY/wBY4tzNS01XNex+1v8AN1OZ  
bRt/nN7/AFf+DRKh611WeGZDz7Rba5np1bHex3vdY/lvf+k/0nv/AOKSyW3U  
dRtpEMfk07nNeHTNcZG1jWC1zbHOxPTp/r/pnpo0n5sZ1gD+6a/xvU8/fS9u  
+myfUZuY5o/faYdP/XGqnr4ra68wM6g66ufTyWsub57x7//AAdl6xogub2B  
0+B1T5LcOhkFBFbS7dBgRoSTwUOOyM0mA5sAkCPiDymFmZeijUzP2E8GE7q  
mNBO2eXS7uG/SUw8t+llaO0diPel0SbTbc9tde6xzuK62ue7X6MNZuQS1SAS  
SBAnhNH4rdxfqb9ZMmDV0vJgkQbGioEfG41/RWpi/wCKz613n9M3HxWn/SW7  
j/m0Ms/6pORTg9lybcXMruYQwWA1v0BEOMase236Fmx/0VvZjqX1UMyWI9Nd  
oeTe/wBQl8uoyKfddX6FDa9j7Ps2P+n9Ov317Fs4n+KDIDSMvqbBPaqknyPu  
ssb/ANSp/WT6s5eBfVXXkB9GTVFjq8aoXPsYGWOfk2Orax97f5f/bicdQwc  
Mok9r0ebzaHDqu266zGblMAPogNLnt/RNqspreW7N/77kn41uF1WjDt3shrb  
H/aHbXO3aS9jvUY9rnN+hs/S11od1fq4ZyGNDfs7ydWgcH/D2Od+nt+hZ+jZ  
6fqllzQ/BZl4gAfQ/wBYtEOdv+lFYW/R2+o3ftezZ6XpJgFADfxXS1Mjt+nT  
Ypsbj9YFNQGO14BZbjg2OJ1fuqrcbK6rbbPp11fQrpQsTHyHZGV028MIDI2y  
zllcxhu/Rs3NY5tb8nJe7+X9BLJ/TdPqyqansOHttDG1gVhji0Pc+71dzt2z  
1XVUV/q+/wDwdaLlxsOpMpvY0W5FrnYIVbgamutc0bXusc/9J9mb+k9Ktn8/  
k41PqPS06/X6K226axHeM3jbqLKH34oeXekYsiQHNaZr3NcG/RVMAh73PEEC  
YOh1W/1Lppx6m5N812kvrsoLfcamONNlzv8A0IFlbP8ASejk/wDB+pjZL/Wf  
Zba/a52usngbWM/BOXwYazNGOd46BJvtrLv3tEn+1rWd+T8Sns0hg7flSXP  
/9HC6jPoGizbXbiPa2hkMYTVY3duNVNlZvZdV9H/AALP5zYrz/2fX9n6hcNj  
G1uewklzi9wY6mzbUXv/AJzfX+kZsf8A4Tys/qVFTtmY26qtvphwqfZV6z2n  
3VtqxMJU2j2v/SV2KdbX29MNUbW1B53ANa8WM91Ld1r/AH1u3O/4Wv6CabsE  
d2lfpAjpp/gSOvVTg0FsD7G+zFJaWuG3+fx/dX7f5llq594/SDwcl+5b+Ex1  
vSOpyzWNLaqzKD/zy2s7/T/ccxrPX/N377lh2NhhJ5rliPlwn9FsTUx46Mdi  
nX6g9rRJOpSDXakcH8im+sgaltZjTe4Nnsdod7nf2UxnY+9rfcdoHnB4XrH+  
KezFf9XLG1NaLq8h7b3tADnTD2b3fSdta7avE8kEWRu3eYmP+IC9J/xLZ+zJ  
zenE6XMFzB/KY7Y//ovR2U+spJ0kVKWD9c8Z1nRnXsdtOI5tpdvsYAwe25zz  
ih17msqc5+2tbj3sYJe4NHiTCrZdmPfiXV7mva5jhA906eDZ3JllsPkDGUO9  
O11U0u3v9b0TW1tjqxSaPtWd9o9aqtvpv9n9l9Sxij0yW/acXc25g2hrCXAO  
DjsdYxm39Jsr979+z1FK/qNFuZtrdfe9z2sry8u57w0ueNmSzF2M2en/ADrK  
rUs3EOZkGrpzrMu7HluUSNrWjdtY51mQ6v6Nu+t7PSrQYbH2dGGH9oqDcP0G  
3suseyq20AVxWHDIteGn27a2+rdZdv8ASqr/AODVCsNz7aKXH08TGq95YZ2V

NO/Jubu+lKZnr/7eTdRUtG1gxWt6f12NooyS69/plhNbNrQ6HDIq3U1Yuax3  
6VjKr3+jVVd/hPTVOyvJxRdg2MZXAxVvuEw4t2epjt/4tvq+rs/nPU/n/wCj  
1paRs91srOm4iwuudkXutc0MaRsZUDlBWG+kyhn8iqn9Eudvq9J76HAOggNc  
4T7fpNc3+ut2HNMcFUOqUucBePzPY494P0f816bE6pxEiW+hcgHfbPYa/ck3  
3WT4ao2TY1z3PaxtYcAAG8aDX/OQmCKyf3z+RPbD/9Kh0y0ZHR/sTQXvcHVu  
orFjnhxc39Bh01+p+ju278nN/MVHoWwusrtd6QLGku2jd7T6Vob9P3e791L  
pWRQ1t1OU9gpEWNZdbeyuna9vo4X6S99n6N30q/5IDr/Q9RFjKzVXYZZsr9  
Ju142H0ftO9/ptuY/wDSfpEBqOzDtKJ36JejObj9U9K33Msa+h4JEO2/mB2x  
27e32bK/p/6RZt/TczGtaz0hYXXOX62Egl76nelY59bfe2nc33b1HqmXdVIC  
7GMWtcHzvDod+b+k9u57trnP9iB0vPDM71c6wMrcSDO55G6B7NfY38+x6Rut  
O+vkuhAXcunyvZ9N+r+TVgONeDj5VjwfUybA0Pb4/Z6TYxIP+bYqfUvq/caf  
Vy8RmVSNS9hHqVgnb9Orb+cugwKWenWWe4taACPokfmuY789XcjFfSwuq9t9  
VLLij6Qc8td7f5SfwgbAL+lI8l610gYOUKa3m2q2sXYz3RuLzf6bY9vqVwtn  
/FrlvxPrFiWM13C6sjyLd3/fUfqt7eqdWZjYbWNqpd6Vjgfa61wsfb6TP9HU  
36Sp/URj29axDwWutGun5jkw/tS+4m/lsra9jgwO/kyfxKTKy4/prrHeQO0f  
dWGobHFtNY49vCbeCYP4cpJbba8WvVrWz4xJ+9yxPrTcK+mZLmktD2NrDmO2  
uabHtp3Nd+a5u9aBs0g/euY/xgZlr6Fa1xhtr6qz8J9Qx/mJLZbF4ujqdGC6  
1g6bhW2sdtY+0Pt2lpe1/wDSbLfU3u/kVqlkG/qGVda+s2XZT3WuZW1zpdYd  
/sYPdct53sTOycDHGTiycxpG7GyK6g1zrBt2bvX/AEzcfdv3s+mpZd+b0plj  
8bLfQL6sd9dIBLK7a7j6hqtbtfx6f6T8z/B2ob9GEwOg7p7MrCzLHWdRIw7  
TAsza9atBsZ9owvpM9rPT/Un1/8AhRNj1P3tusbVdUYLBY520gH2WseC1zNv  
5n/gISxcXLOWdz6GWNa/Wqxx2gQ42XW2S36DV1tOE3ljadtbxFNxaXtPt3sr  
0P0Xbv6aZMyGgbGHBA2Z6uJTFj32VYwc6i+0R6GXDGyB/gM4uax/qf8P6Kf  
Kw3MLsbKY/Hc4Dcy0Ro76L63fQtb+45qbr+D9nxHV3t/Skh7bGEGolxa2t2P  
BdZ/pfVrWphY+U3ozXua/Ma6vf8AZW1+tRLXNrsufTY1t1Nb/wBLW/Jw/wCb  
vr/nEpUP7FmTGAbF9+0njLaq6/WrvaTY0FIZaYAcD9J37zXNVWyA4MH5oA+a  
1+regcwXU1enXc2TXu3M9Rn021GGvZW9m32O/wC3FnWU0tuBrcXjbuffliHH8  
z+ypAbCQbD//0+cwMp2DmsyA6xuzc1/ov9Owtc11b212lr/T3bv3ETqH2rlc  
CcU0vZScpjrrH3vsr9r2e6zd+6+xjWtp/wAJ6irlptsZ6bS5121zGNBcSbAH  
NY1rfc76S16/XpbQ/q2l+uumiynELn+gbHgD9Df6jbXO3Ms9Kr9GxRxJpjl1  
16F4nqD7r8kudLj+ZDYEGD7P85QordY57HTvDS5s6mW8tK2vrN07JxLQx11V  
VdTW0149T5403WV2NrJfb6djrKrLrX/APF/oPTWHj2Cq5pcCRPYwYP0t3Ke  
vB0djpH1k630kNbiXF1LZ202t9Rjf6rT7mLcv+uVvVGXv6vk5NQfR6LKOnVM  
q9Ug72tycvc99dW/wDnPTauZexrXHaDAOvjqlY1zWb4laXbmk9wDtdtRtTP  
pF3o9Sx7YDQHiQOAJ81ufVao0fW2zDPFN98DkQ5rtpWBQyLDzrq0tG6P7K3a  
b7MLreB1qtgcM2v31ngPpP2blbun+c2MfYmk1ukakDvo+vs9zGEdmwmJc13x  
0OmhWNmfXHpOJ08mre/NfW447Hsds3wft9Ujb+ja7b6mx6xaf8ZnUW4NVZ6a  
xvUNW5FxmUTJDLKGy+xzXM2/nlcce6ToakRE766PYxk2MLqyy8NJEggcfNcX  
/jJuJ6ZhNmPWYJDPHZW7+9ZXR/rP1job877IKrKuo3nJe2yQ5lr/AOedRP6J  
3qfuvQ+iGzq7H5lr7bLGVV+k65pazadSubTpt7/pK2f8Em+9HTxQDEi7+nV5  
hzHNc0k7AfomCTu/NHt9zf8ANVDPa+t3pl2ncf8AS939VdwOh9lxGj7dIWl5  
kOppYymCOQ59zrr/AO19mXOfWijprBW7p7TWJiwOe6yY+i97rK6v0nu/wfsR  
GSJIQP8ABJQ1r7fV9jQxW+lhes6WuLt1ZInUfnLZ6b1nHx720ZGTb0sVje2  
7Hb9or9Uj+dbjGyrZva7a/a/YsnLc1mNj0tbAY0AunnTc/8A6TIVrp9Vh7Dd  
E+Sduq6bVmXk9TzqqrHnlfYK62kCtsuOxsMZ7WcrsOr3ZuHTX0xzqwwsqfT  
fS54ccerczFq2v8A5qv1N2Uzb/OLlfqvgNz+vUUucGVNLnveXiva1gP6QWS3  
3M+mxamZk+tdZkWWueHn22WRuLR7a9+0Mb/Nhv5iJAYcsztqkuY/q1F1GT6T  
raan5DM1wi9pqE7dzHV/bfV/mdlzL7f0nq/4Nc3VVde2aq3PB8BMDuNy035N

+RVZT073vIHqkQCGg7vY5/5+5dBRXdiYFDXBI9jlbkWuBbstPvYxzGH9JW5n  
+G/w1ibrGj/ANYvxD03Ox/3T//U5no59b9nne5hFjaXWMeK3N2PgOZe/wBl  
Nnpbstf9BafU29MxvQspNd128GxxvdkvLCP5vKG30P5X6L89YHSXTJ31967  
G2AeTwa3f9JfZe/06nEAnUAtdZ9sy52n7n0IGNJEeKzJ4dfzdo1Wlg9DGYO  
n5Dg23JyKBJNd6gNTWU5W12T6Hpb77fsfoVWWLjOp9N+xQ0WV2iXs9Stw2E  
MdsZbX/hNlv0272LfDup5xc9z7rqKa3XNkucxtNcVOcx/wDMN2Rs21v9mz0l  
oYXSa+p2WeoxmOKLzW61tla+L2ur3WVZTrafQx9jvZ6fq49lidda7ljxCVVZ  
LzDQLKa3g7d7NzidPeJbwz+qiY1dl+JeGMBDGgNk8F3u9v8AW9N6I9kt6bIP  
6dfW5rPXeMey0aabQ9rtn+E9N1T3tb+/WrOHQ5j727T+Isr2NEEFpJ9TX6D9  
u9FkDj417nXVBxgDQnxC6gZGLZ9XHtY4fb8K71jUYMU5LG4+6thnf6dttdbrP  
+NXNYtPo9VOPewEUvey1rvEE1f1fpLoqw2ua2BrWuEQICRFoq250eOp4GPVk  
WtobjvNbrHg7WtAl41d79rGsVuvouO/Kpx63jKssc+p302N9atou+zsqaKsh  
vrNbY31bLPTWb0Eu+25nT73kscA+SRBrsbp/0tq6kUWsoqfbjht2Vdufc/dX  
TXeWvpxbfs1dbPZt9L6HrenZ+IsUEALkB/eH+GycxG+CctbAjLzx+n/ouPf1  
DpjMdowaW4lziQ+1+xziACfRfU5mVfX67f8AC+v9NAzesZ2aRXkZFR6wBW9r  
ttRdXHvbY6H3etS9rf8ASVXlvVujOLcT7BRbZftNeVWGI1u5wsyGudsY6z0  
7cfOZv2/zfpVrn2dUcLgxvuqAbtLY924B4jb/J/0ieYgC96WY4CVA9a/uuhX  
i9RyAx2HQ/lyPabRS2x1jS0uD7GW+51fqs9rFW6pWLunv6eMZjcpnc42WtL  
bm11y/7O31Pbtrqa9+/0q3rpvqx9ZMim4MfZVvVjv0LYse1o77MfH2uyLP37L  
9/8A1tY31mxMVmRZdji19TiQL7Meusn841NYGv/AO/qtDmpe4ISiBqfE/1d  
f/QW3k5GAHEJkEAV+7Lv/LjeTz3myxjvote0Fh7QfgrDaXVNrG0AyAPAkRuf  
/nOT49OXbktqx6HZvpkvFNbS50AjfY3aHu/rOW07oWd1XMZV0boubTWNHjNJ  
FTAfc/fkvDfZuO9XQbDUKcNOzldGxmNouufrY520N0Ldgl2797dvVPqmQ51m  
yYHddjm9AuWMTbRWbsbFbtyeoBuyu26x/vdQ1/vfj0uNeJT/AMT6i43Kofd1  
BmOwS6wgQP8Apf8ARSYI65JEs+nWfZX13eoaQxpL3Bu8uLvo1NY72btv5/5i  
9G6d1X6n9Vx7L2vy+nW2tlyKCTkVgn8x2llzvd+krd+iXnnUW0NLmYr/AFKa  
nEut+jvB/P2n6Lf8HWxP0a/pLcmeo35WG30yGZOK1rnNtkfz1T3N9XG2fufp  
UgNbZwdH/9XisMGjq+RiO5Pq1fNh9Rn/AJ7W30rMxsG1+XbS++5hAxw1+yts  
h3qfaBss9au1ns9P/jFQ+s9Y6d9brbRArday8EcbXxv/AO/LQPSc9tVuS7Ht  
ZiVD33EBoDQdvqsbZt9Xbu/MUZ0I5j8VswSBXdITXdnsbgWPnLMeu6yto3SW  
uc299NIZc2nb/hGbkIodJtGKRVS914eHFjNpuDrl3N/RMn+cdWzeldi4/TbD  
bgWsysc3Hftd6zWhpbo2i6it/07N53P2es/8A6a0KMy6yn0Hfan4+RU6lry4P  
DrLBtqdiYeOBZ/P7v03p/wA0kCSDp5lqMTtcq9WvE5VvTcd3R82rrBfS6vJH  
rkFpdRZtLW5VDRu9X376Mqr1v01Xp/4eupDwP8Wn1gy3n087HZS07RZvc5wA  
19INP0fa/wDwnorX6v1OjFw6un+jdX1Oyumwj06x+IYw0UWtse6xZR3M/dr  
3+p/No7m01dYpstaqddurYMXqFzrLLhsqY/8Am3bK/wBFs2Wemz1b/wDg/wDC  
KNGxqPAJscVROhryeM6n9Xv2L1PqNGXkm++hzllaQ63fWL5G5z/pbtlm9ynW9  
rmNeDuaQCD5EStH622ZRy6MizT1PUqD3udY9zf6Tj73u9uxjXX49Xu9T9F71  
kYBaa/Sb/g9ADzHzTwuDYojG6jXc13p73Na9/IDXs0v093t3LrcMuys2vKxD  
/k1tTm35jA+t1jSw+qb7/TyPTYx9DPp1/n+z+dXNY5c0uvAY51LHNG/US4Ru  
/d3sbv8ApKj1DPzb2BuTa81VCKabbTtaG6itIDP0e1MMAZk+HD/3S8n0Af1u  
L7PS9ZjVdWy8V11GN6uQ3ldaS6GNtpj+av2to9ZINtb2M3Oq/kMXnTG+nYaH  
DY9m72u5kO4s2/RftXYdFsdmfVS6msvDsNznWgHQ7Xep+kLXepssxL9IFVrP  
p4t36RcjkN+zZZbtDXtsFjDwC18Nc3+qlepFaseM1Kiej131M6BkdYpsvvtX  
oY9VnpuY0Bz3PaN3vafa1n9ff/UXc5/RGZ+OyjgGbkWVMADW7m1t08WVMY1y  
89+puJ17MzMvo/R85vT2N/TZTnn3GD6bdmxu/f8A1Hvr0LD+rWXi4VmPkdRp  
ufclfa/G9V2v8vltt3/21VzYjfgPF9eBIIKZJ4uZGER+URjf+NJ4jqPS6fq  
f9ZunZWG67lxswWVUyYw1uk+zYy+k7/pOqf7ldyOv9fzchlwX5Ljilp9Rj9r

rdgJDqHXVsZY7d/hPUZ+kr/4JUfrb9R7+k0U9R6XI3ZOR6wDmtqazYNr7fXH  
o/RZW2v9lp25f2jJbnMaD9qZusYwe0Oj0bmNbud+ex2z/rSs4r4Brdb/AO+1  
ckwaqfH0Mq4eLx4Wnc65xHqvdYWtAZucXDaB7Gt3H91YGXQ6vqL7HD27JZ2n  
s7/yK6duHfYG+2ABEnwSzOk4eQMZ+Vb6RoodRY0QA/dbZkepJ93t9XZ/YT7W  
YxRJO1PD5JdHgX6u15AKbHwszLdtxsey0+LWkj/OK64N+q2CS9ITb3M5e4b4  
/wA72qwOv3Wfo8KkDT26f5oa1v7yXF2DL7nYW//Wwvr7Q22vpuezX1qTS8/y  
mLSw6B1PpIN4wsvNntx2/rN+QKsap4b6BNDXfT9G1v8A3xeapJkt/qUS+U2+  
hMsOfVte4MLH6Nx6zY+QwNbY5/5tf5qjm5eXZ0us1W+IVS8FIVYDA0tOlhf/  
AEix+53q77bP6nprz9JHrosjuOJ69grfXtaZvLHmTJO5p3sc138pdbTGf0On  
L9Nz24VzbHBpElmRtZ6Xv/wXqta+z3fmLyNJl7skvlL6n9bcVx6aK2Md6mM0  
2Ma17SD9nlva+ytv0WfZ7cprWexctgTbm+jRE2wA7yaN3tXKpJBaE06hZZjV  
5NdYs2PNbXWAGQH/AEi3+t9Fqo1YwVmWWY2DTZY+qt11tlmQGD3u2O/TeyVz  
KSKS+g/VPazcPFv6q5td2KCW3Y7gfVYa2es64fu+r0+/LZXu/nP9EsL6y9MZ  
iZttTHPNmOXCWAFvpg+y3d+7bW5jv7a5tJR/pfypb+kP2PWfV6zrVfV/R+r5  
9DOsqMh20A1wHkF929j2+Hk/W6rDvb1LFsyshwPp2jLqqbXA0d+iavHEIBz  
Gwu+/df/ADV54+M8Hsbf5auN9Ot6xgCit2bnX5LyN4qdY5/uja79Gza3us2/  
6wtZY2rGw3MJIDA6Ggk6N9gXBpKaFcl2/ta/Q3venDX8v8V74jr+Vc2o2MxP  
UtdlIILSTG1zfpoPS7MTp/1hdi/WVtlmPX6teU0lw3ED9Ft/m3/S9/01w6SI  
8Vw4LFb/ANb/ANCfTOj4nTMbpGd1e2ofZM1z68Wm4Au+x1TvudHt9W6wtpbY  
ue6PVn9U3xkDB6fR7TYIDv5FbXfSe/auUSUkKZOmj//Z/+0lalBob3Rvc2hv  
cCaZLjAAOEJJTQQIAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAADhCSU0D7QAAAAAA  
EAC0AAAAAQABALQAAAABAAE4QkINBCYAAAAAAAA4AAAAAAAAAAAAAAAAAP4AADhC  
SU0EDQAAAAAABAAAAB44QkINBBkAAAAAAAAQAAAAeOEJJTQPzAAAAAAAAJAAAA  
AAAAAAAAABADhCSU0ECgAAAAAAAAQAAOEJJTScQAAAAAAAAKAAEAAAAAAAAAAjhC  
SU0D9QAAAAAASAAvZmYAAQBsZmYABgAAAAAAAAQAvZmYAAQChmZoABgAAAAAA  
AQAYAAAAQBAAAAABgAAAAAAAAQA1AAAAAQAtAAAAABgAAAAAAAThCSU0D+AAA  
AAAACAAA//////////wPoAAAAAP//////////  
//////////8D6AAAAAD//////////A+gAAAAA  
//////////wPoAAA4QkINBAgAAAAABAAAAABAAAC  
QAAAAkAAAAAEOEJJTQQeAAAAAAAAEAAAAADhCSU0EGgAAAAADRQAAAAAYAAAAA  
AAAAAAAAAAeAAAAKAAAAACABJAE0ARwBfADAAMgA1ADIAAABAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAoAAAAHgAAAAAAAAAAAAAAAAAAAAEA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAEAAAAAABudWxsAAAAAgAAAAZib3Vu  
ZHNPYmpjAAAAQAAAAAAAFJjdEAAAAEAAAAAFRvcCBsb25nAAAAAAAAABM  
ZWZ0bG9uZwAAAAAAAAAAQnRvbWxvbmCAAHhGAAAAAFJnaHRsb25nAAACgAAA  
AAZzbGljZXNWbExzAAAAAU9iamMAAAABAAAAAAAFc2xpY2UAAAASAAAAB3Ns  
aWNISURsb25nAAAAAAAAAAAdncm91cEIEbG9uZwAAAAAAAAAGb3JpZ2luZW51  
bQAAAAxFU2xpY2VPcmInaW4AAAANYXV0b0dlbmVyYXRIZAAAAABUeXBIZW51  
bQAAAApFU2xpY2VUeXBIAAAAAEltZyAAAAAGYm91bmRzT2JqYwAAAAEAAAAA  
AABS3Y3QxAAAAABAAAAABU3AgbG9uZwAAAAAAAAAAATGVmdGxvbmCAAIAAAAAA  
AEJ0b21sb25nAAAB4AAAAABSZ2h0bG9uZwAAoAAAAADdXJsVEVYVAAAAEA  
AAAAAABudWxsVEVYVAAAAAEAAAAAABNc2dlVEVYVAAAAAEAAAAAAAZhbHRU  
YWdURVhUAAAAAQAAAAAADmNlbgXUZlZ2h0SXNIVE1MYm9vbAEAAAAIY2VsbFRl  
eHRURVhUAAAAAQAAAAACWhvcnpBbGlnbmVudW0AAAAPRVNsaWNISG9yekFs  
aWduAAAAAB2RIZmF1bHQAAAAJdmVydEFsaWduZW51bQAAAA9FU2xpY2VWZXJ0  
QWxpZ24AAAAAHZGVmYXVsdAAAAAtiZ0NvbG9yVHlwZWVudW0AAAARRVNsaWNI  
QkdDb2xvclR5cGUAAAAATm9uZQAAAAI0b3BPdXRzZXRs25nAAAAAAAAAAps  
ZWZ0T3V0c2V0bG9uZwAAAAAAAAAAAMYm90dG9tT3V0c2V0bG9uZwAAAAAAAAAAL



cmlnaHRPdXRzZXRs25nAAAAAA4QkINBCgAAAAAAwAAAABP/AAAAAA4  
QkINBBQAAAAAAQAAAABOEJJTQQMAAAAAB+2AAAAQAAAKAAAAB4AAAB4AAA  
4QAAAB+aABgAAf/Y/+AAEEpGSUYAAQIAAEgASAAA/+0ADEFkb2JIX0NNAAH/  
7gAOQWRvYmUAZIAAAAAB/9sAhAAMCAgICQgMCQkMEQsKCxEVDwwMDxUYExMV

ExMYEQwMDAwMDBEMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMAQ0LCw00  
DRAODhAUDg4OFBQODg4OFBEMDAwMDBERDAwMDAwMEQwMDAwMDAwMDAwMDAwM  
DAwMDAwMDAwMDAwMDAz/wAARCAB4AKADASIAAhEBAxEB/90ABAAB/8QBPwAA  
AQUBAQEBAQEAAAAAAAAAAwABAQFBgclCQoLAQABBQEBAQEBAQAAAAAAAAAAB  
AAIDBAUGBwgJCgsQAAEEAQMCBAIFBwYIBQMMMwEAAhEDBCESMQVBUWETInGB  
MgYUkaGxQiMkFVLBYjM0coLRQwclklPw4fFjczUWorKDJkSTVGRFwqN0NhfS  
VeJl8rOEw9N14/NGJ5SkhbsVxNTk9KW1xdXl9VZmdoaWprbG1ub2N0dXZ3eH  
l6e3x9fn9xEAAgIBAgQEAwQFBgcgHBgu1AQACEQMhMRIEQVFhcSITBTKBkRSh  
sUljwVLR8DMkYufYypjDUxVjczTxJQYWorKDBYy1wtJEk1SjF2RFVtZ0ZeLy  
s4TD03Xj80aUpIw0lcTU5PSltcXV5fVWZnaGlqa2xtbm9ic3R1dnd4eXp7fH  
/9oADAMBAAIRAxEAPwDCys7Fy6rmfZZyMardUbfYla5ova+mp1f85U716/f9  
P1VRqyMxmJbk03V4tO8VOrobsdY4D1AzdTX7tn0911//AE1bbcy/pbqbHze1  
5FWri58f8ABVvfbZr/ADIt3sZ/wdaJdYc3otoLy70mV3tB7Gr9UuiP+67P  
W/64iAwyve7sfi5h6nspDX47bLD6jTdcS4kWe76Ov6Vln6RlqGes536MC0N9  
JzHsLGgOaa2+ix3qEb/5tVchh2NfJ+IB10+7+sgFAmlQiJCyT20TuvOrgC4D  
knjXxhPS+29/pVQX6kDQaDUpsO2qs2C2NrmhzZBI3slewb5f0Ed+eN9grJL  
Q9r8UwGhsH31Oal/RuTTKWwDIMUB0ak/pAywmvUB511brqdv8ITvxrK77KY3  
+mfpRyOWuVyrMx62bWtdR7y4jWwODuW+01f2G2/o1UvyLL7nWj2iAED2N+j  
u2/uoAknZfQA0Qf6lGpe5hD2/SrO5o+CEAiVmHDxNqp4OrHkFxL1V/VMdjBS  
xmyq4NycWrHqAJLg19HrW79/6vkVvY+qqv8ASekg2fZRdTIuy3VsfW4PyMhm  
9jXBvtqt2h7bK/d6WYv/AAqf6vZ2K3Bupzi5tGIZc8Od9C5zG+m+qr9LZW23  
3+pv/R2f8apX10ZVPpYLpw3vc5llzSw17fe9mO99gp9JlljKdn857/USI1WR  
Nit7/YjxM7Ju6q2jJog+0UvfjuxjW6XNtaa/0/upqs3OZ/NZNn+G/m0UU/Vk  
Y15HT6PVaTX+nyLq7haS7az7NqbaqGO9J21nrV/8Z6SXT22ZmDaGs3WNLaxk  
Nc1khg3sZfHofaPteK/0l77fpqeQMjTqWXXsz80OsvbfVP6Vu1npbdIVde+  
6xz/AORXZ/pK0NQDXTvom7Ni9R01Vh51V9rsSnFqwcNhcKsXGlafVbo19+Vc  
W5OZkO9Znov9f+a/mq1z/X6n02PxLHGRYbfe7WRP09Nr7Xsf/wBuLRO9Tdbm  
12/p6fT3PD2tMRtpbd6uyzb6LLaa9jP9CytT69R9pwaOrVNn7PDraQ13trLn  
MHvh/wDNb/p2/wA7/Of8Glfc7pjqlX6PluDMve5wLTGgPnwo8Uj+UZ+5HzW  
27nEkvgNI3MNgNrbKC8e9rPCAUWRi/RrW+Un5pWaQ0dtE/0rZPA1TN91k+Gq  
Sn//0MTAZZTmW4mS0sJlt9EkhgP0fC/e30X+3b79ibpRbS+6i1xY/wBY4tzN  
S01XNex+1v8AN1OZbRt/nN7/AFf+DRKh611WeGZDz7Rba5np1bHex3vdY/lv  
f+k/0nv/AOKSyW3UdRtpEMfk07nNeHTNcZG1jWC1zbHOxPTp/r/pnpo0n5sZ  
1gD+6a/xvU8/fS9u+myfUZuY5o/faYdP/XGqnr4ra68wM6g66ufTyWsub57  
x7//AAdl6xogub2B0+B1T5LcOhkFBFBs7dBgRoSTwUOOyM0mA5sAkCPiDymF  
mZeiwjUzp2E8GE7qmNBO2eXS7uG/SUw8t+lla00diPel0SbTbc9tde6xzuK6  
2ue7X6MNZuQS1SASSBAnhNH4rdxfqb9ZMmDV0vJgkQbGioEfG41/RWpi/wCK  
z613n9M3HxWn/SW7j/m0Ms/6pORTg9lybcXMruYQwWA1v0BEOMase236Fmx/  
0VvZjqX1UMyWi9NdoeTe/wBQl8uoyKfddX6FDa9j7Ps2P+n9Ov317Fs4n+KD  
IDSMvqbBPaqknyPussb/ANSp/WT6s5eBfVXXkB9GTVFjq8aoXPsrYGGWOfk2O  
rax97f5f/bicdQwcMok9r0ebzaHDqu266zGblMAPogNLnt/RNqspreW7N/77  
kn41uF1WjDt3shrbH/aHbXO3aS9jvUY9rnN+hs/S11od1fq4ZyGNDfs7ydWg  
cH/D2Od+nt+hZ+jZ6fqllzQ/BZI4gAfQ/wBYtEOdv+lFYW/R2+o3ftezZ6Xp

JgFADfxXS1Mjt+nTYpsbj9YFNQGO14BZbjg2OJ1fuqrcbK6rbbPp11fQrpQs  
THyHZGV028MIDI2yzlIcxhu/Rs3NY5tb8nJe7+X9BLJ/TdPqyqansOHttDG1  
gVhjiOPc+71dzt2z1XVUV/q+/wDwdaLIsxOpMpvY0W5FrnYIVbgamutc0bXu  
sc/9J9mb+k9Ktn8/k41PqPS06/X6K226axHeM3jbqLKH34oeXekYsiQHNaZr  
3NcG/RVMAh73PEECYOh1W/1Lppx6m5N812kvrsoLfcamONNlZv8A0IFibP8A  
Sejk/wDB+pjZL/WfZba/a52usngbWM/BOXwlYazNGOd46BjvtrLv3tEn+1rW  
d+T8Sns0hg7flSXP/9HC6jPoGizbXbiPa2hkMYTVY3duNVNlZvZdV9H/AALP  
5zYrz/2fX9n6hcNjG1uewklzi9wY6mzbUXv/AJzfX+kZsf8A4TYs/qVFTtmY  
26qtvphwqfZV6z2n3VtqxMJU2j2v/SV2KdbX29MNUbW1B53ANa8WM91Ld1r/  
AH1u3O/4Wv6CabsEd2lfpAjpp/gsoVVTg0FsD7G+zFJaWuG3+fx/dX7f5llq  
594/SDwcl+5b+Ex1vSOpYzWNLaQzKD/zy2s7/T/ccxrPX/N377lh2NhhJ5rl  
iPlwn9FsTUx46MdinX6g9rJOpSDXakcH8im+sgaltZjTe4Nnsdod7nf2Uxn  
Y+9rfcdoHnB4XrH+KezFf9XLG1NaLq8h7b3tADnTD2b3fSdta7avE8kEWRu3  
eYmP+IC9J/xLZ+zZenE6XMFzB/KY7Y//ovR2U+spJ0kVKWD9c8Z1nRnXsdt  
OI5tpdvsYAwe25zzih17msqc5+2tbj3sYJe4NHiTCrZdmPfiXV7mva5jhA90  
6eDZ3JllsPkDGUO9O11U0u3v9b0TW1tjxSaPtWd9o9aqtvpv9n9I9Sxij0y  
W/acXc25g2hrCXAODjsdYxm39Jsr979+z1FK/qNFuZtrdfe9z2sry8u57w0u  
eNmSzF2M2en/ADrKrUs3EOZkGrpZrMu7HluUSNrWjdtY51mQ6v6Nu+t7PSrQ  
YbH2dGGH9oqDcP0G3suseyq20AVxWHDlTeGn27a2+rdZdv8ASqr/AODVCsNz  
7aKXH08TGq95Y2ZVNO/Jubu+lKZnr/7eTdRUtG1gxWt6fl2NooyS69/plhNb  
Nr6qHDIq3U1Yuax36VjKr3+jVVd/hPTVOyvJxRdg2MZxaXVvuEw4t2epjt/4  
tvq+rs/nPU/n/wCj1paRs91srOm4iwuudkXutc0MaRsZUDlBwG+kyhn8iqn9  
Eudvq9J76HAOggNc4T7fpNc3+ut2HNMcFUOqUucBePzPY494P0f816bE6pxE  
iW+hcgHfbPYa/ck33WT4ao2TY1z3PaxtYcAAG8aDX/OQmCKyf3z+RPbD/9Kh  
0y0ZHR/sTQXvcHVuorFjnvhxc39Bh01+p+ju278nN/MVHoWwusrtd6QLGku2  
jd7T6Vob9P3e791LpWRQ1t1OU9gpEWNZdbeysuna9vo4X6S99n6N30q/5lDr  
/Q9RFjKzVXYZZsr9Ju142H0ftO9/ptuY/wDSfPEBqOzDtKJ36JejObj9U9K3  
3Msa+h4JEO2/mB2x27e32bK/p/6RZt/TczGtaz0hYXXOx62Egl76nelY59bf  
e2nc33b1HqmXdVIC7GMWtcHzvDod+b+k9u57trnP9iB0vPDM71c6wMrcSDO5  
5G6B7NfY38+x6RutO+vkuhAXcunyvZ9N+r+TVgONeDj5VjwfUybA0Pb4/Z6T  
YxIP+bYqfUvq/cafVv8RmVSNS9hHqVgnb9Orb+cugwKwenWWe4taACPokfmu  
Y789XcjFfSwuq9t9VLLij6Qc8td7f5SfwbAL+lI8l610gYOUKa3m2q2sXYz  
3RuLz6bY9vqVwtn/FrlvxPrFiWM13C6sjyLd3/fUfqt7eqdWZjYbWNqpd6V  
jgfa61wsfb6TP9HU36Sp/URj29axDwWutGun5jkw/tS+4m/lsra9jgwO/kyf  
xKTKy4/prrHeQO0fdWGobHFtNY49vCbeCYP4cpJbba8WvVrWz4xJ+9yxPrTc  
K+mZLmktD2NrDmO2uabHtp3Nd+a5u9aBs0g/euY/xgZlr6Fa1xhtr6qz8J9Q  
x/mJLZbF4ujqdGC61g6bhW2sdtY+0Pt2lpe1/wDSbLfU3u/kVqlkG/qGVda+  
s2XZT3WuZW1zpdYd/sYPdct53sTOycDHGTiycxpG7GyK6g1zrBt2bvX/AEzc  
fdv3s+mpZd+b0plj8bLfQL6sd9dlBLK7a7j6hqutbtfX6f6T8z/B2ob9GEwO  
g7p7MrCzLHWdRlw7TAsza9atBsZ9owvpM9rPT/Un1/8AhRNj1P3tusbVdUYL  
BY520gH2WseC1zNv5n/gISxcXLOWdz6GWNa/Wqxx2gQ42XW2S36DV1tOE3lj  
adtbxFNxaXtPt3sr0P0Xbv6aZMyGgbGHBA2Z6uJTfj32VYwc6i+0R6GXDGY  
B/gM4uax/qf8P6KfKw3MLsbKY/Hc4Dcy0Ro76L63fQtb+45qbr+D9nxHV3t/  
Skh7bGEGolxa2t2PBdZ/pfVrWphY+U3ozXua/Ma6vf8AZW1+tRLXNrsufTY1  
t1Nb/wBLW/Jw/wCbvr/nEpUP7FmTGAbF9+0njLaq6/WrvaTY0FIZaYAcD9J3  
7zXNVWyA4MH5oA+a1+regcwXU1enXc2TXu3M9Rn021GGvZW9m32O/wC3FnWU  
0tuBrcXjbuflHH8z+ypAbCQbD//0+cwMp2DmsyA6xuzc1/ov9Owtc11b212  
lr/T3bv3ETqH2rlcCcU0vZScpjrrH3vsr9r2e6zd+6+xjWtp/wAJ6irlptsZ

6bS5121zGNBcSbAHNY1rfc76S16/XpbQ/q2l+uumiynELn+gbHgD9Df6jbXO  
3Ms9Kr9GxRxJpjl116F4nqD7r8kudLj+ZDYEGD7P85QordY57HTvDS5s6mW8  
tK2vrN07JxLQx1IVVdTW0149Tw5403WV2NrJfb6djrKrLrX/APF/oPTWHj2C  
q5pcCRPYwYP0t3KevB0djpH1k630kNbiXF1LZ202t9Rjf6rT7mLcv+uVvVGX  
v6vk5NQfR6LKOnVMq9Ug72tycvlc99dW/wDnPTauZexrXHaDAOvjqlY1zWb4  
laXbmk9wDtdtRtTPpF3o9Sx7YDQHiQOAJ81ufVao0fW2zDPFN98DkQ5rtpWB  
QyLDzrq0tG6P7K3ab7MLreB1qtgcM2v31ngPpP2blbun+c2MfYmk1ukakDvo  
+vs9zGEEdmwmJc13x0OmHWNmfXHpOJ08mre/NfW447Hsds3wft9Ujb+ja7b6m  
x6xaf8ZnUW4NVZ6axvUNW5FxmUTJDLKGy+xzXM2/nlcce6ToakRE766PYxk2  
MLqqy8NJEggcfNcX/jJuJ6ZhNmPWYJDPHZW7+9ZXR/rP1job877IKrKuo3nJ  
e2yQ5lr/AOedRP6J3qfuvQ+tGzq7H5lr7bLGWV+k65pazadsubTpt7/pK2f8  
Em+9HTxQDEi7+nV5hzHNc0k7AfomCTu/NHt9zf8ANVDPa+t3pl2ncf8AS939  
VdwOh9lxGj7dlWI5kOppYymCOQ59zrr/AO19mXOfWijprBW7p7TWJiwOe6yY  
+i97rK6v0nu/wfsRGSJIQP8ABJq1r7fV9jQxW+lhes6WuLt1ZInUfnLZ6b1  
nHx720ZGTb0sVje27Hb9or9Uj+dbjGyrZva7a/a/YsnLc1mNj0tbAY0AunnT  
c/8A6TIVrp9Vh7DdE+Sduq6bVmXk9TzqqrHnlfYK62kCtsuOxsMZ7WcrsOr  
3ZuHTX0xzqwwsqfTfS54ccerczFq2v8A5qv1N2Uzb/OLIfqvgNz+vUUucGVN  
LnveXiva1gP6QWS33M+mxamZk+tdZkWWueHn22WRuLR7a9+0Mb/Nhv5iJAYc  
sztqkuY/q1F1GT6Traan5DM1wi9pqE7dzHV/bfV/mdlzL7f0nq/4Nc3VVde2  
aq3PB8BMDuNy035N+RVZT073vIHqkQCGg7vY5/5+5dBRXdiYFDXBI9jlbkWu  
BbstPvYxzGH9JW5n+G/w1ibrGj/ANyvxD03Ox/3T//U5no59b9nne5hFjaX  
WMeK3N2PgOZe/wBINnsubstf9BafU29MxvQspNd128GxxvdkvLCP5vKG30P5  
X6L89YHSXTj31967G2AeTwa3f9JjFZe/06nEAnUAtdZ9sy52n7n0IGNJEEkz  
J4dfzdo1Wlg9DGYOn5Dg23JyKBjNd6gNTWU5W12T6Hpb77fsrfoVWWLjOp9N  
+xQ0WV2iXs9Stw2EMdsZbX/hNlv0272LfDup5xc9z7rqKa3XNkucxtNcVOcx  
/wDMN2Rs21v9mz0loYXSa+p2WeoxmOKLzW61tla+L2ur3WVZTrafQx9jvZ6f  
q49lidda7ljxCVVZLzDQLKa3g7d7NzidPeJbwz+qiY1dl+JeGMBDGgNk8F3u  
9v8AW9N6l9kt6blP6dfW5rPXeMey0aabQ9rtn+E9N1T3tb+/WrOHQ5j727T+  
lsr2NEEFpJ9TX6D9u9FkDj417nXVBxgDQnxC6gZGLZ9XHtY4fb8K71jUYMU5  
LG4+6thnf6dtdbrP+NXNYtPo9VOPewEUvey1rvEE1f1fpLoqw2ua2BrWuEQI  
CRFoq250eOp4GPVkwTobjvNbrHg7WtAl41d79rGsVuvouO/Kpx63jKssc+p3  
02N9atou+zsqaKshvrNbY31bLPTWb0Eu+25nT73kscA+SRBrspb/0tq6kUWs  
oqfbjht2Vdufc/dXTXeWvpxbfs1dbPZt9L6HrenZ+lsUEALkB/eH+GycxG+C  
ctbAjLzx+n/ouPf1DpjMdowaW4lziQ+1+xziACfRfU5mVfX67f8AC+v9NAze  
sZ2aRxxkZFr6wBW9rttRdXHvbY6H3etS9rf8ASVXlvVujOLcT7BRbZftNeVWG  
l1u5wsyGudsRy6z07cfOZv2/zfpVrn2dUcLgxvuqAbtLY924B4jb/J/0ieYg  
C96WY4CVA9a/uuhXi9RyAx2HQ/lyPabRS2x1jS0uD7GW+51fqs9lrfW6pWLu  
nv6eMZjcphe42WtLbm11y/7O31Pbtrqa9+/0q3rpvqx9ZMim4MfZVVjv0LYs  
e1o77MfH2uyLP37L9/8A1tY31mxMVmRZdji19TiQL7Meusn841NYGv/AO/q  
tDmpe4lSiBqfE/1df/QW3k5GAHEJkEAV+7Lv/LjeTz3myxjvote0Fh7QfgrD  
aXVNrG0AyAPAkRuf/nOT49OXbktqx6HZvpkvFNbS50AjfY3aHu/rOW07oWd1  
XMZV0boubTWNHjNJFTAfc/fkvDfZuO9XQbDUkCNOzldGxmNouufrY520N0Ld  
gl2797dvVPqmQ51myYHddjm9AuwMTbRWbsbFbtyeoBuyu26x/vdQ1/vfj0uN  
eJT/AMT6i43Kofd1BmOwS6wgQP8Apf8ARSYI65JEs+nWfZX13eoaQxpL3Bu8  
uLvo1NY72btv5/5i9G6d1X6n9Vx7L2vy+nW2tlyKCTkVgn8x2llzvd+krd+i  
XnnUW0NLmYr/AFKanEut+jvB/P2n6L8HWxP0a/pLcmeo35WG30yGZOK1rnN  
tkfz1T3N9XG2fufpUgNbZwdH/9XisMGjq+RiO5Pq1fNh9Rn/AJ7W30rMxsG1  
+XbS++5hAxw1+yth3qfaBss9au1ns9P/jfQ+s9Y6d9brbRArday8EcbXxv/

AO/LQPSc9tVuS7HtZiVD33EBoDQdvqsbZt9Xbu/MUZ0I5j8VswSBXdITXdns  
bgWPNLMeu6yto3SWuc299NIZc2nb/hGbKlodJtGKRVS914eHFJNpuDrl3N/R  
Mn+cdWzeldi4/TbDbgWsync3Hftd6zWhpbo2i6it/07N53P2es/8A6a0KMy6y  
n0Hfan4+RU6lry4PDrLBTqdiYeOBZ/P7v03p/wA0kCSDp5lqMTtcq9WvE5Vv  
Tcd3R82rrBfS6vJHrkFpdRZtLW5VDRu9X376Mqr1v01Xp/4eupDwP8Wn1gy3  
n087HZS07RZvc5wA19INP0fa/wDwnorX6v1OjFw6un+jdX1Oyumwj06x+Yw  
0UWtse6xzrG3M/dr3+p/No7m01dYpstaqddurYMXqFzrLLhsqY/8Am3bK/wBF  
s2Wemz1b/wDg/wDCKNgXqPAJscVROhryeM6n9Xv2L1PqNGXkm++hzllaQ63f  
WL5G5z/pbTm9ynW9rmNeDuaQCD5EStH622ZRY6MizT1PUqD3udY9zf6Tj73u  
9uxjXX49Xu9T9F71kYBaa/Sb/g9ADzHzTwuDYojG6jXc13p73Na9/IDXS0v0  
93t3LrcMuys2vKxD/k1tTm35jA+1jSw+qb7/TyPTYx9DPp1/n+z+dXNY5c0  
uvAY51LHNG/US4Ru/d3sbv8ApKj1DPzb2BuTa81VCKabbTtaG6itIDP0e1MM  
AZk+HD/3S8n0Af1uL7PS9ZjVdWy8V11GN6uQ3ldaS6GNtpj+av2to9ZINtb2  
M3Oq/kMXnTG+nYaHDY9m72u5kO4s2/RftXYdFsdmfVS6msvDsNznWgHQ7Xep  
+kLXepssxL9IFVrPp4t36RcjN+zZZbtDXtsFjDwC18Nc3+qlepFaseM1Kie  
j131M6BkdYpsyvtXoY9VnpuY0Bz3PaN3vafa1n9ff/UXc5/RGZ+OyjqGbkWV  
MADW7m1t08WVMY1y89+puJ17MzMvo/R85vT2N/TZTnn3GD6bdmxu/f8A1HVr  
0LD+rWXi4VmPkdRpuflfa/G9V2v8vltt3/21VzYjfFGPF9eBlIKZJ4uZGER  
+URjf+NJ4jqPS6fqf9ZunZWG67lxswWVuYyw1uk+zYy+k7/pOqf7ldyOv9fz  
cHlwX5Ljilp9Rj9rrdgJDqHXVsZY7d/hPUZ+kr/4JUfrb9R7+k0U9R6XI3ZO  
R6wDmtqazYNr7fXHo/RZW2v9Ip25f2jJbnMaD9qZusYwe0Oj0bmNbud+ex2z  
/rSs4r4Brdb/AO+1ckwaqfH0Mq4eLx4Wnc65xHqvdYWtAZucXDaB7Gt3H91Y  
GXQ6vqL7HD27JZ2ns7/yK6duHfYG+2ABEnwSzOk4eQMZ+Vb6RoodRY0QA/db  
ZkepJ93t9XZ/YT7WYxRJO1PD5JdHgX6u15AKbHwszLdtxsey0+LWkj/OK64N  
+q2CS9ITb3M5e4b4/wA72qwOv3Wfo8KkDT26f5oa1v7yXF2DL7nYW//Wwvr7  
Q22vpuezX1qTS8/ymLSw6B1PplN4wsvNtt2/rN+QKsap4b6BNDXfT9G1v8A  
3xeapJkt/qUS+U2+hMsOfVte4MLH6Nx6zY+QwNbY5/5tf5qjm5eXZ0us1W+I  
VS8FIVYDA0tOlhf/AEix+53q77bP6nprz9JHrosjuOJ69grfXtaZvLHmTJO5  
p3sc138pdbTGf0OnL9Nz24VzbHBpElmRtZ6Xv/wXqta+z3fmLyNJl7skvlL6  
n9bcVx6aK2Md6mM02Ma17SD9nlva+ytv0WfZ7cprWexctgTbm+jRE2wA7yaN  
3tXKpJBae06hZZjV5NdYs2PNbXWAGQH/AEi3+t9Fqo1YwVmWWY2DTZY+qt11  
tlmQGD3u2O/TeyVzKSKS+g/VPAzcPFv6q5td2KCW3Y7gfVYa2es64fu+r0+/  
LZXu/nP9EsL6y9MZiZtTHPNmOXCWAFvpg+y3d+7bW5jv7a5tJR/pfypb+kP  
2PWfV6zrVfV/R+r59DOsqMh20A1wHkF929jl2+Hk/W6rDvb1LFsyshwPp2jL  
qqbXA0d+iavHEIBzGwu+/df/ADV54+M8HsbF5auN9Ot6xgCit2bnX5LyN4qd  
Y5/uja79Gza3us2/6wtZY2rGw3MJIDA6Ggk6N9gXBpKaFcl2/ta/Q3venDX8  
v8V74jr+Vc2o2MxPUdtdIILSTG1zfpoPS7MTp/1hdi/WVtlmPX6teU0lw3ED  
9Ft/m3/S9/01w6SI8Vw4LFb/ANb/ANCFtoJ4nTMbpGd1e2ofZM1z68Wm4Au+  
x1TvudHt9W6wtpbYue6PVn9U3xkDB6fR7TYIDv5FbXfSe/auUSUKZOmj//Z  
OEJTTQqHAAAAAABVAAAAAQEAAAAPEEAZABvAGIAZQAqAFAAAaABvAHQAAbwBz  
AGgAbwBwAAAAEwBBAGQAbwBiAGUAIABQAGgAbwB0AG8AcwBoAG8AcAAgAEMA  
UwAyAAAAQA4QkINBAYAAAAAAAf//gAAAAEBAP/hQetodHRwOi8vbnuMuYWRv  
YmUuY29tL3hhcC8xLjAvADw/eHBhY2tldCBiZWdpbj0i77u/liBpZD0iVzVN  
ME1wQ2VoaUh6cmVTek5UY3prYzlkIj8+Cjx4OnhtcG1ldGEgeG1sbnM6eD0i  
YWRvYmU6bnM6bWV0YS8ilHg6eG1wdGs9IjMuMS4xLTEXMSI+CiaGlDxyZGY6  
UkRGIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1y  
ZGYtc3ludGF4LW5zlyl+CiaGlCAglDxyZGY6RGVzY3JpcHRpb24gcmRmOmFi  
b3V0PSliciaGlCAglCAglCAglHhtbG5zOnRpZmY9Imh0dHA6Ly9ucy5hZG9i

ZS5jb20vdGlmZi8xLjAvlj4KICAgICAgICAgPHRpZmY6T3JpZW50YXRpb24+  
MTwvdGlmZjppcmllbnRhdGlvbj4KICAgICAgICAgPHRpZmY6WUNiQ3JQb3Np  
dGlvbmluZz4xPC90aWZmOllDYkNyUG9zaXRpb25pbmc+CiAgICAgICAgIDx0  
aWZmOlhSZXNvbHV0aW9uPjE4MDAwMDAvMTAwMDA8L3RpZmY6WFJlc29sdXRp  
b24+CiAgICAgICAgIDx0aWZmOllSZXNvbHV0aW9uPjE4MDAwMDAvMTAwMDA8  
L3RpZmY6WVJlc29sdXRpb24+CiAgICAgICAgIDx0aWZmOllJlc29sdXRpb25V  
bml0Pjl8L3RpZmY6UmVzb2x1dGlvblVuaXQ+CiAgICAgICAgIDx0aWZmOk1h  
a2U+Q2Fub248L3RpZmY6TWFrZT4KICAgICAgICAgPHRpZmY6TW9kZWw+Q2Fu  
b24gUG93ZXJTaG90IEE0MzA8L3RpZmY6TW9kZWw+CiAgICAgICAgIDx0aWZm  
Ok5hdGI2ZURpZ2VzdD4yNTYsMjU3LDI1OCwyNTksMjYyLDI3NCwyNzcsMjg0  
LDUzMiw1MzEsMjgyLDI4MywyOTYsMzAxLDMxOCwzMTksNTI5LDUzMiwzMDYs  
MjcwLDI3MSwyNzIsMzA1LDMxNSwzZmZmMjMzREMjMUUxNDQwQTAzNjQ3QkI0  
QzBDNTM5QTVFRTQ0MDwvdGlmZjppOYXRpdmVEaWdlc3Q+CiAgICAgICAgIDwvcmRm  
OkRlc2NyaXB0aW9uPggogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
OkRlc2NyaXB0aW9uIHJkZjphYm91  
dD0ilgogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
b20veGFwLzEuMC8iPggogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
NC0wOFQxMzoxNDoxNyswOTozMDwveGFwOk1vZGImeURhdGU+MjAwNy0w  
NDx4YXA6Q3JiYXRIRGF0ZT4yMDA3LTA0LTA4VDEzOjE0OjE3KzA5OjMwPC94  
YXA6Q3JiYXRIRGF0ZT4KICAgICAgICAgPHhhcDpNZXRhZGF0YURhdGU+MjAw  
Ny0wNC0wOFQxMzoxNDoxNyswOTozMDwveGFwOk1ldGFkYXRhRGF0ZT4KICAg  
ICAgICAgPHhhcDpDcmVhdG9yVG9vbD5BZG9iZSBQaG90b3Nob3AgQ1MyIFdp  
bmRvd3M8L3hhcDpDcmVhdG9yVG9vbD4KICAgICAgPC9yZGY6RGVzY3JpcHRp  
b24+CiAgICAgIDxyZGY6RGVzY3JpcHRpb24gcmRmOmFib3V0PSlicAgICAgICAg  
ICAgICAgIHhtbG5zOmV4aWY9Imh0dHA6Ly9ucy5hZG9iZS5jb20vZXhpZi8x  
LjAvlj4KICAgICAgICAgPGV4aWY6RXhpZiZlcnNpb24+MDIyMDwvZXhpZjppF  
eGlmVmVyc2lvbj4KICAgICAgICAgPGV4aWY6Rmxhc2hwaXhWZXJzaW9uPjAx  
MDA8L2V4aWY6Rmxhc2hwaXhWZXJzaW9uPggogICAgICAgICAgICAgICAgICAgICAg  
ciNwYWNIPjE8L2V4aWY6Q29sb3JTcGFjZT4KICAgICAgICAgPGV4aWY6Q29t  
cHJlc3NIZEJpdHNQZXJQaXhldD4zLzE8L2V4aWY6Q29tcHJlc3NIZEJpdHNQ  
ZXJQaXhldD4KICAgICAgICAgPGV4aWY6UGl4ZWxYRGltZW5zaW9uPjY0MDwv  
ZXhpZjppQaXhldFhEaW1lbnNpb24+CiAgICAgICAgIDxleGlmOIBpeGVsWURp  
bWVuc2lvbj40ODA8L2V4aWY6UGl4ZWxYRGltZW5zaW9uPggogICAgICAgICAgICAg  
ZXhpZjppEYXRIVGltZU9yaWdpbmFsPjllwMDgtMDQtMDdUMTM6MDQ6NTQrMDk6  
MzA8L2V4aWY6RGF0ZVRpbWVpcmlnaW5hbD4KICAgICAgICAgPGV4aWY6RGF0  
ZVRpbWVEaWdpdGI6ZWQ+MjAwOC0wNC0wN1QxMzowND01NCswOTozMDwvZXhp  
ZjppEYXRIVGltZURpZ2I0aXplZD4KICAgICAgICAgPGV4aWY6RXhwb3N1cmVU  
aW1IPjEvNjA8L2V4aWY6RXhwb3N1cmVUaW1IPggogICAgICAgICAgICAgICAgICAg  
TnVtYmVyc2lvbj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
dXR0ZXJtcGVIZFZhbHVIPjE4OS8zMDwvZXhpZjppTaHV0dGVyU3BIZWRWYWx1  
ZT4KICAgICAgICAgPGV4aWY6QXBicnR1cmVWYWx1ZT4xOTIvMzI8L2V4aWY6  
QXBicnR1cmVWYWx1ZT4KICAgICAgICAgPGV4aWY6RXhwb3N1cmVCaWFzVmFs  
dWU+MC8zPC9leGlmOkV4cG9zdXJlcmhlc1ZhbHVIPggogICAgICAgICAgICAgICAg  
ZjppNYXhBcGVydHVyZVZhbHVIPjE4OC8zMDwvZXhpZjppNYXhBcGVydHVyZVZ  
hbHVIPggogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
cmVlc291cmVlIj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
IjJlc291cmVlIj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZjppGaXJlZD4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
dXJuPggogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg

















AAAZGVzYwAAAAAA  
AAAU SUVDIDYxOTY2LTlU MSBEZWZhdWx0IFJHQiBjb2xvdXlgc3BhY2UgLSBz  
UkdCAAAAAAAAAAAAAAAAAAU SUVDIDYxOTY2LTlU MSBEZWZhdWx0IFJHQiBjb2xv  
dXlgc3BhY2UgLSBzUkdCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGRlc2MAAAAA  
AAAALFJIZmVyZW5jZSBWYWV3aW5nIENvbmRpdGlubiBpbiBJRUM2MTk2Ni0y  
LjEAAAAAAAAAAAAAAAAACxSZWZlcmVUy2UgVmlld2luZyBDb25kaXRpb24gaW4g  
SUVDNjE5NjYtMi4xAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB2aWV3AAAA  
AAATpP4AFF8uABDPFAAD7cwABBMLAANcngAAAFYVWogAAAAABMCMVYAUA  
AFcf521IYXMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKPAAAAANpZyAA  
AAAAQ1JUIGN1cnYAAAAAAAAEAAAAAAAAUACgAPABQAGQAeACMAKAAtADIANwA7  
AEAARQBKAE8AVABZAF4AYwBoAG0AcgB3AHwAgQCGAIsAkACVAJoAnwCkAKkA  
rgCyALcAvADBAMYAywDQANUA2wDgAOUA6wDwAPYA+wEBAQcBDQETARkBHwEI  
ASsBMgE4AT4BRQFMAVIBWQFgAWcBbgF1AXwBgwGLAZIBmgGhAakBsQG5AcEB  
yQHRAdkB4QHPfIB+glDAGwCFAIdAiYCLwI4AkECSwJUAI0CZwJxAnoChAKO  
ApgCogKsArYCwQLLAtUC4ALrAvUDAAMLaxYDIQMtAzgDQwNPA1oDZgNyA34D  
igOWA6IDrgO6A8cD0wPgA+wD+QQGBBMEIAQtBDsESARVBGMEcQR+BlwEmgSo  
BLYExATTBOEE8AT+BQ0FHauRBTofSQVYBwCfDwWGBZYFpgW1BcUF1QXIBfYG  
BgYWBicGNwZIBIkGagZ7BowGnQavBsAG0QbjBvUHBwcZBysHPQdPB2EHdAeG  
B5kHrAe/B9IH5Qf4CAslHwgyCEYIwGhuCIIllgiqCL4l0gjnCPsJEAKICToJ  
TwlkCXkJjwmkCboJzwnlCfsKEQonCj0KVApqCoEKmAquCsUK3ArzCwsLlgs5  
C1ELaQuAC5gLSAvIC+EL+QwSDCoMQwxcDHUMjgynDMAM2QzzDQ0Njg1ADVoN  
dA2ODakNww3eDfgOEw4uDkkOZA5/DpsOtg7SDu4PCQ8ID0EPXg96D5YPsw/P  
D+wQCRAM EEMQYRB+EJsQuRDXEPURExExEU8RbRGMEaoRyRHoEgcSjHJFEmQS  
hBKjEsMS4xMDEyMTQxNjE4MTpBPFE+UUBhQnFEkUahSLFK0UzhTwFRIVNBVW  
FXgVmxW9FeAWAxYmFkkWbBaPFrIW1hb6F0XQRdIF4kXrhfSF/cYGxhAGGUY  
ihivGNUY+hkgGUUZaxmRGbcZ3RoEGioaURp3Gp4axRrsGxQbOxtjG4obshva  
HAICkxSHHscozxMHPudHh1HHXAdmR3DHeweFh5AHmoelB6+HukfEx8+H2kf  
IB+/H+ogFSBBIGwgmCDEIPAhHCFIIXUhoSHOIpsiJyJVloliyLdlwojOCNm  
I5QjwiPwJB8kTSR8JKsk2iUJJTglaCWXJccI9yYnJlcmhya3JugnGCdJJ3on  
qyfcKA0oPyhxKKl01CkGKTgpaymdKdAqAio1KmgqmyrPKwlrNitpK50r0SwF  
LDksbiyiLNctDC1BLXYtqy3hLhYuTC6CLrcu7i8kL1ovkS/HL/4wNTBsMKQw  
2zESMUoxgjG6MflyKjJjMpsy1DMNM0Yzfo4M/E0KzRINJ402DUTNU01hzXC  
Nf02NzZyNq426TckN2A3nDfXOBQ4UDiMOMg5BTICOX85vDn5OjY6dDqyOu87  
LTtrO6o76DwnPGU8pDzjPSI9YT2hPeA+ID5gPqA+4D8hP2E/oj/iQCNAZECm  
QOdBKUFqQaxB7klwQnJCtUL3QzpDfUPARANER0SKRM5FEkVVRZpF3kYiRmdG  
q0bwRzVHe0fASAVIS0iRSNdJHUIjSalJ8Eo3Sn1KxESMS1NLmkviTCpMcky6  
TQJNSk2TTdxOJU5uTrdPAE9JT5NP3VAnUHFQu1EGUVBRm1HmUjFSfFLHUxNT  
X1OqU/ZUQISPvntVKFV1VcJWD1ZcVqIW91dEV5JX4FgvWH1Yy1kaWWIZuFoH  
WIZaplr1W0VblVvIXDVchlzWXSddeF3JXhpebF69Xw9fYV+zYAVgV2CqYPxh  
T2GiYfViSWKcYvBjQ2OXY+tkQGSUZOlPWWSZedmPWaSZuhnPWeTZ+loP2iW  
aOxpQ2maafFqSGqfavdrT2una/9sv2yvbQhtYG25bhJua27Ebx5veG/RcCtw  
hnDgcTpxIXHwcktypnMBc11zuHQUDHB0zHUodYV14XY+dpt2+HdWd7N4EXhu  
eMx5KNmJeed6RnqlewR7Y3vCfCF8gXzhfUF9oX4BfmJ+wn8jf4R/5YBHgKiB  
CoFrgc2CMIKSgvSDV4O6hB2EgITjhUeFq4YOhnKG14c7h5+IBlhipiM6JM4mZ  
if6KZlrKizCLlov8jGOMyo0xjZiN/45mjs6PN0+ekAaQbpDWkT+RqJIRknqS  
45NNk7aUIJSKIPSVX5XJlJSWn5cKi3WX4JhMmLiZJmQmfyaaJrVm0Kbr5wc  
nlmc951kndKeQJ6unx2fi5/6oGmg2KFHobaiJqKWowajdqPmpFakx6U4pamm  
GqaLpv2nbqfgqFKoxKk3qamqHKqPqwKrdavprFys0K1ErbiuLa6hrxavi7AA



zuLFpFyNBg4oJPih0OGYFkOSNBtUKgUAToGpY5AbiNFxCW646kPeY7o0e7G4  
Kkeajl3yYdgu7LiGkA9XSy5i820ns6Y5GEgSx6FOnqYbo34PC+oRujXi+aY1  
fs0ZVhkqXWOMd+fBMoxHOluplYqmQo0hADVI7rwgFMdEKiM0RdcJGtlLs5Hu  
dDL9owZON5kR62P/AMZj/u4//MmJwwZo9NKGalluB832Y/8Ainn/AA/qT0+S  
MwPhO7/T/vXf8RxDfNkl/DLz4z/5TyfzGBP/AL0s/iMwDGAEYbvUgPtY5bvU  
c83WSzT9XIATWo+y8Zvs6QwZMgJiCREXP/CyJLMHpdF1MpxMDKhEaOonDUSN  
gjV8zFMRiYjQnv8AxavTHGJa5J7TWzs4dZZ1VsDnwTGLIN17DpPZ8UoPqz6O  
IEJ5YEQEqySM90oY5PkTgYxjl6dnGfUZZTqcjle0u5OaWJPWwjizThD4Yylj  
ru8n/jE4qExZoT8knv6rpNmCOQxAGU+WX2sX/IL0+TK43GV2GHQ9Hqemx4qM  
JXLicXYdVE4oQkDux/Ad3k+L1f5uL/vHhx4sk4gwrXT/AFPr9FM7PTnMQ2Xp  
GO7JI/8AFrsRhpzLMsv4jOZnpQnplfL0/wDefzfVyrty9R6csshtOkCfsw/t  
uHVYPQmQLo+Yb47JOQ/EJiPpCgBxKt0v+8/ILsJB6Mug9MZDIkSgY/B8Oyf7  
/wDmt5uu6UYJgRImJDcCGut6uUYwICRNgcCvH3f+Y/8Ayi8uPMYyGTkixTK8  
DAnxLzXHaZdgnqhl6ndnEdB/c2+WP/mtz6TJEExn+/8A3jLNpSOCOVdKyZjA  
R/3Yof4Ybv8A4q9ubqjkkTCJ526B4elzDpMwnlbgPsl9Hp8v7RKRA8u7f6d+  
X98acMVbWBy9RizZTKVWMY2m/i/7186esX3M0IRs2I6Svzbsktz4mUSjplUW  
x0I+pxndklxjjs57NthMpnHPcOUykZndLktNrQykWHqjhMxbzzjUqRSo6Bgu  
l0HMoAdYx0chy7IGcmSkoQKqkqBoiSBKqsUDThktMFACuHa/9Hyv2rJOPo3  
cLsRfQn03oREpyAEwJbfjfl4OvL6PSYjkAIYG3+NGUZZTj21Gz4I5I5CLj2O  
hfWzYsURrME0doiHyTpKx79PKiPvPR6D9nOGfrAXHzj+KSeiyRlhjhuEyfs  
iU/5f/d43DohGOUxyDaSDtMvsT/8zJwHZ1EhM6/Z2fBv/wDFdO0hX4teXHiz  
VRMfTn/4zE+XPkSHcPt5sZn02WBU4SGaJkNstmT+XIfE5x+4ozYEjTO4hqrQ  
YWjKjcykdx1QnINuiHJ3WmApVBRRVKAqDRsISgdo9TIOwBc8OATJvsXbpbX  
D3lj5cpH8Tg0P7PCBs8BqM8czQpHUxJhp2eKB2kFJSNDryx9Lzw0awZDMA8h  
0yD1In2vHhnsrwtUNCc0TGRDvhwCt0nWeKOTV0AoUE3gIMZZ4w0DY25RqHO  
eSGM1WqwzSmaiGQDcDaKeHqY7ZX4u+ac4C7DxymZcm21W4Zccg5PPC7gBXLk  
ruDISSTZQNfVAKhVQFVVAuJsUWmBoW9XSOVsGGE9sgez72I48uGGTIL9EnFK  
/N/Ky/8AA5sn/icz89w+3+ESjkkcUz5csfSP9X/ou0zuGOXFDfkwkiZPmxHH  
H/ef+7GMuTJOXr4omImBimfsSyf283/m17xj/kRljjWTBKskoAfY/u+g/5j  
0Gsm6Ogx5omWP+H1v97/AOLzMNngZMP7NkrPHtYET/F/b/8AMb2Ys+TMQMYj  
Gx8RHm8v8t063p5dRhGQ0MsT6M4D4v8AucLznJDCfTMdxFWMg27Z/wC9/tsL  
3k9VjyGRjOW4gbo/6f77wXRspFPriAYxil+O2Lw7b07jIGXj8J29IY9XI4eo  
mQJA7Dfki/8qMz/AA7Fjgd2WJnXljDdk83/ALreTaBrer6XRiJoykl/bif8  
X9tFrOjJx9Tkj08cAj5Yn1BL/Gx0/UZPUjrtobTKI8/py/u+MfQnLFAVKZI  
Wu3btflZQlh0Ooku4tlu36Tt/EZ4dGEJynP/AB/wyfKht3wFa7uSfJ/5T/IP  
b0vSR6iJnkyCNfZ+Kbv0n4fDLMxmSKPIIH/wRsYGU8ZMpxEADZ5O69s//GOU  
8Mb8h5G6v8UXf05RmccTRJPP8bx5AYGpHUPFVactnR2TRth6j0cOXGBZyR2P  
nHpzE6kX/hdyDW48JAs8X7j+/qPRGJcBjklmPlkAJafwvoQ6nD6ElmxlBA/  
ih6bwQwTyAyAJA1O1rBMRnEyrTyy/pl/vERTqz0wJSILHOBMZHDp04/w/wBr  
0f8Aylmw/wDoV4vxCM9wOQ613+P/AMzPX1XUDBvjil6kQBt2y27HOUCTjnGI  
kJRMJeX+L/f7z/xP/mJ0aanY+e6ga064ogg3r2Y6mJiW8RBHh3YVaFYcoxg  
xLySO6Vus4n4vFyARQS4cy3JhFKgLLRRDQJmgZrEWVTFA1IHaaci2XNAWosO  
oGiAkubRZQFqIzED//S8KRvs9XS3kjiASRWn9LzbiRXbs69POQIUCQfYjmt  
T0Z9IZa7RDW7mfM8HU4owNxxDr8P2nPLlyXRLloelnKJy6bQPtS86LizIZCZA  
6Ah7+tlGTGSRtHI3Q275R/73+T/6DfLAJHue2RGXpRwJY5cfbnCbTJ6elb8u  
3UwyQlhHIIIGH/pt/dfAIESYV5tb/ANL6+PLWOE8ZJ2GM5CpS8/8AvfUy/wDd  
PF+KYxh6oyHBlyD+nlg1gcMfBlsgkDQIOkiHSE5QBIDplVJGMNznnrRLOnZ1  
nEU4g0w60eAeEKrDYQR318EKhAKqtlHT0sqlXi7Z/LU/AvCLGoUyMuWRiWT0

J5YVRPL5yqkoDN49RKIEI6m0JAbBAgns3jyygfYwqB2+tjmPMyeohAeV41c  
8SyVkyHlbLmIXRBVNapnHaasH3IEJVeUBtVC8IBSar2spBpAXQGw58lqPNNR  
iywLEjEiQ5dMEvNXi5FQaNh0c9UfR/hssuliM9MeYERkf8DpjyAYpR3C8Et2  
OV/3l/8Axp5enmOp6WeEcw/n4/8A6pfKNnTlyanCT3pdT0sMkydY5Y3Lb5vS  
yvKc+DqeoGTP5YkzfDD+KI/9+PlgePL6fSdKcuGcZRqRHqYZ18Xp/wB7FjZr  
gVN6nHmxxllwWYE7YbnfJDIMcYGMY1xKP8Acnu/mfzv/faMQhGIM5Xfm8vx  
xnuBl1WEHclmUxxKctzSyjg80tCf+U1GEyaiCT7GchkZWxp/D9pykTPllt3H  
ZHf/AOVciMYSdObJEiN/FXmccuQyxgCJlj8UntBjjwmwBkhMenOA3b//ACn6  
39jK65Jj1MornHc8Z8m+Vf3sWL+b/wCM/uJVNu2xwdJ1MRmiSRAAUJbfh0/f  
+Y+ucmOtJbpVV/HL/wAp/wA18Y9GIY45r3RI/D8Ucn/d/wA1uWOYxE3Rj7/h  
l/6DbMGcdTfHPDmyTnlGojuhHds3Zlf3HDq88M4jOMlxBNy2/Hu/8Y+dASic  
kTZNeXYN3mdcWsTCYII9ly2aiAjDLLGUYAGMtYymf7P/Alr/AMYuMZMMTj3j  
Xw+Ly/7tyrnwA3aljn9liQGuk4Ttgs7B1Gfpoy23GOQbZHbt3PIDuuQN/xP  
q58mHJhO/LKUzUtn2d7yZ+qydQADARFbY7I7fLF13GcHqHpJRxEbPjN7jPzQ  
fSILNIAMVAi/IHx4QjOQiZbNfi+Pb/5rfRicuQDHDQQjev2tzm0xgdK9py9f  
0MfS3x+InV8KBrQv037L61Qll17P4n53qsRwZCD4qrlFahlxhd1xTgRTvE3G  
weA4E26lZS5ZesYCRbzEeakUscMSbcygbuPDDoEAS0YakWUBAsujMGigSWUs  
oFRbZi0dED//0/FkDC4dr4dOmzy6aW/GBv7H+FHUZvWynLEVblHysOaPSzH1  
z62Qx3S1LBxRyVHGN8rrZ/E1h6cZMYmPnr8LqMclxkAQJAXGnG531qeTKOw1  
WodcPUemCNkZA/Fu+JylMSJJ1L1dBjx5ZmMzoQa/r/3b0TPOtTp6GUPTIHeY  
yNjb5p/y/wDyl/5UR+JgZemw5hyQcUv9DBI6PqgQfKa3D/DP+7hdNon02bFE  
2MchlGf8H9tpTyJ/Zl4hEjSjWBHgUHZBHMdzz8F6BHxc8kRH5pm6NSSghQrk  
6iqqgKaQm+YAEoBSgKGgikBDQQEoCtJCUCSEOgiTqohZo9kCTXZkh12ULHCa  
AqQ+bAZbTSiBlvs65LPJRHWOoukDlgljDrk4HbtTnTQBvPNVygPCLSqArdaq  
qlaUQikiZkKPZSbdHJ4M9H8Mz+jljKXANS/on/LyvqfsPTx9bFOhOJ3Ypk/Y  
l/afncUtsr7PpnFAY4ZTOzu2ZYX54xj/AN3/AOY0xXWDoHU9NjllkQJHafVA  
8sN3/wBcJ6f8SGEbIRNCe6N/Zx/93/5qTDpOn9YbTeKYPmlZsm6jqen6cY5  
wFzXkwybR8cP++/+BsNHndd08sHUGOOtsvPC/wCCbh+zzkTVSH8UfhejrUqn  
1ZjcaqwP6f8Au/8AvHfppnpoSjOB1HltjNJfsmCt0YyJ2ee5f7/AP7z/wAU  
+UfvfWjnyX5Y/c+VM0arVzVtlvCOiH4gMXTy6eYsSON+H98i5OunkEZxobY+  
l/ilCbywxyyEchqJPmnW7ZF0ngjEkY5GQ8a2upgwkmgngpDGMVki9B/C3h6  
jNiiYH4bv+pOho83qUIncBv1H2f/ADInJmyZNZG9vf8Ah3LTEkyoIGWWK/TO  
3d4PVgwfteMky/mxlrflbD0ngB3d6973wxYZYoGGuYG54pHyh/8DWoj/rGH  
VdJ6Eb9SEpcbIHc5RliXETjsj4jL7T6kJ9LtzQl2gny7h58WX/uv/Nry9d1  
kOq2SAlmBWRsInWbdJij6ZyRGvwyB80fN/4x6ceSMI9riPJ/8C/8yPBLMJGs  
Og52n+GMWz0uSMDuPb1K+1tcQ5OkqDn6rIMuSU9u34Y0Ph8v/IR26fMcP80n  
caMR9r/xTx5seyRvUJxQ9SWyFndwPtOzmpT0O8HNKibA5eDr+ikl+pl3uJN/  
wvofTQjGMD8UQ83VdQcsBD27nmpn/dOtmoxfqPDxnsPTkjtN72gADrqHoSTc  
dR/LEfB4hqbbmKOiKCKCbK6TLmUAX1LoWcda2mXCBBZSo1QNIjRBaYkUCVVM  
QgWNEskWcGf/1PEMTEAtSIILcAAP4Q+1PpzkkcXpAExO25bf/Mr4uSOzy1Uh  
8TIMHT0/8wmEdBV09MOnogl4elkYzu9T5ae3ad2rzthDOtMUef1MduQg8sYD  
EZI7/hvzPd+IAXOoHm824jzvnbsHqjhbBnsfimCGKEMkKERosfL/AOK/+Oom  
DLHL1ETuv1oenkj/AAZ2vBPCZ9LGYBJ3Ss/4lt4894ISMgJYp6R/ih/8TaXc  
8+jjnLGfaP8AKMR00fQ/FsYxdScg+GW3IP8AZI8B8sqRh6gvwc8movwbl10Q  
YWEFCZjokshLk7iqVQAqqgKUNDRAQD2XaeXWfvoMw/hPdgBGNtxjYurTERie  
dURIQI8UUJAgVI8lviEpXVdmyZHWggMdRqLpSalZ78sCNI+yZRqj2QKIIURy  
xelU0QIkEcNnuLsIAjzS8NXMk/NqNjUBcvNnkoGRVOiGkFVVAVVKAFWkoDHI  
12uY0dr0t0jjeZiETy+i0YxZbGY1cSlz/gyx/tPADrTrgNSrt8X/ACUYnE7o



TxiEBHaJxuU5T+1/5T/7pvrcuKWUekfLlfzdg8m5c56U5JSiCYyAMBHy+nN0  
hPp448WWQG6EvPGPxZl/+VGHwYJxddiERHJG/KcU/wDF/wCV/wB8rj0OQCvS  
Nggj+hvJm6XdOoylkbh/g3f/AALK88MpiNn2Sxsq6ncM8eliy8PVC5GVVfD6  
UxiilmNai9HDq5xyYxXIP/NedcHB1upUnD0s448sZSAMQfPE/wAL6suow48m  
UYRuxTj8A/i/f+Y+Jd6E0Hu6ACc4xjfqE+UfYepwUf8AUOiGfJhEMti4Ax/i  
9SP958/qv7hkRqTu/wCU+9j6ORFxEIHZD4f95j/3X818j8RxwhMGMxMEbv6U  
aemBxY4GchEVZNebyxfU6fFh3CUyfUjcfJ9qL5uPlcchIDg2+jg6jHLNvENs  
Te8A+VPqZo9jbLGOSxjhrI+aUj8T5Uo7JGMhqO76Y6mAkAObeLq6MzIcn4/8  
MnCbeP0sl/xEdNtOSJuiCNP4n2Y5cMD6dATswjGX8z4f7f8A5TfAAMJDcH1M  
PT45kCdyqXkljPl3y/8AKzoxV9Tm6qU8kyDVgRI/pl/3X/IN5Yxl1HZ97qRQ  
+ERIOMoieSXm8n+4fAle7XRpGIJv05Oeddp/TL/AHb6x6adSGwQB7yl8Mv/  
Al444YjH0m/HKyJXkx6f+g8v9z/u0dP1cMglhyD4/gl8cvV/3Hpf+U0all8z  
rOihKU9shURvH+L/AMpY3y4SsPsdCJQyTjmoy77f3/8AQb4pGyVIJmgiZFgu  
+HTX5OeSNHTujRhLVI6DgPLgRrSKXEUETaYkbKBLUQy3EIFObcnNADcWXQal  
AJYbkwgf/9XP9p6jLlxjERnVxP8W7/ePmZhPfLd8Vnc7jqshjDYCDj09QLL  
puoz5fOPNPzeb7SeLg59pywNESHINvqHNOXsB/hDwy6OQh6hP2tko/wvbjzA  
wAAGnI3ScWR0oyMguG7KDIC61fPjCjQs32D6cpcyyRljPwnXyh8/PshMjESY9  
jIbZNRm+D1PR/DIQzg4pk6mtu4x2xk8/TgRII6ckAES2yl/FD/4I59DKpkyk  
Yijwdm7/AMplXzsf7QJiPlvWM/P/AOMdmNTbro+t0uHL3jeGX+j+0+ZkNiM7  
uw+/6BOLqOnNEXlzQp8CtDGuDaJbqTuQZFCWkgwloWImNURcnZaBute6qrCi  
QoVQgKqIAoAyAPhopAHe0woggoJB4FMBcREg6LAgA+KIkDW6Ru81juilEfaB  
t272O7kRliqoMx9pQLiQCQeEyNiuSziCJ0bjOzZrRAndpSDMoMiUW0gk9u7J  
UlliTwECVKTE92th4QM0tGFajUNiMdBygZKkgBaQFDSTHwQJpqK7bahEg8NR  
mylB9obuiJOv7POXESXWHQ5pitpacIbPsx4h1fSmAoTxkSj/AOKyM4fw/H+0  
S6eZJNUJCPw5Hf8ADekz4Jgzj5SDjn/RJ4OuydRinsnl+QkQKOi0xOmXS4IR  
x5TpslszxPm36/zPSeLqfSx5ycVSxnr/wDgf/mJ4zKUuXaOKeQERje0bj/S  
wampJzRMwaAMY/0x/wC8dThjYhKV9ht/qZEj0dQMaMhchL4Jep/b9NMeqzA1  
CIHbiMl0h/xHFMenlXPlDomiZ5I1IQN/GfsJzY5fFLm9snPca29mbGdH/un  
R1cckchx7/U15j9r/wAqOuLFijjMJQ35SfjMvJGDfTQyZlXzSAOOB9K//Qqy  
lvJnjidoP9W1jnY61S1fpOCYMZGJ+gB6/wANjHJkOOV0RLy/xy/7ty6mUjK5  
Ag3/AEUANE9pyep2DBljl+WqP2vii9uwZBOPEZgSyAD7cP8A0ncOmyDBCRyG  
9w05+JI6k2do4FuZc4HVJRieWQTd9h3L19LKYicdnYSJS/qcc2GYAybfLI+W  
f2V6bKcUwTrG/PD+N2ccE/8AXY9jZtjXkHifi3f7t4Opw8yj5tBuk9PT5ISh  
MnQXcB/U16+OikPY4bcwdoUHimXbsjZMVIWPB6+l6U9TIGoq183+GLr+JZ45  
JjHj/t4xsx//AAT/AMyOzjjqeeRLb1J7vF1EPtPdZGoYnHddqQsMTjwndo6  
5RciPBwljhlUhV6h6MYsiR5R1Nhhkj6evL51XK3qyZAlenWoOh/wvNFFATTm  
XSTEt4IAAdAKYiNXRAiTKSUIBjy2iASUCSyqoH//1vPwvJGGWKVizuBj9r/  
AMa6n8SMRjEYi4WBf+J4OnwS6ieyOj2Y+hGWEyJeaGv+GcU9TnqjLJnnUsYI  
2zqchF26OURCUZ3d6PTjwYcOSInG4zjrvPwy/wDGPPjA9fYSDAXGMmNbGk8T  
eOWMCDt0/wATw9Ti2+YkeY6Rj8UX0/SjD/IPB10QZb4DQhxU3fqctbpAE/N7  
+t6EdHCMwYyvinzNK72+jmgcnTwnlktQrHUfJ/4nLk/7x6HE7unyCObFMARx  
5o+kRH+N8HJA4sssZ9sf+S92ACXT+pAefIGRv7CfxfHtzjMPhml5f8Alf3W  
hqTyDoi797pkj5mBojK0JnqHMF1pzruxnSoVShhsVSUICiCaQEOpil6Ufe5O  
sSBWpCB11ifFAa3eYkd0iR7AAMAw7n2liAeTTWwAXaxiNt1ZtATLTmy1Ejax  
wRYpEhtJCKWBU14CREE1TMTYotkSJ0OiBOWWPAp5v6ncdNlyARiS92L8F6jJ  
8UaUA8kAmweERkSdfc/S4/8Ay3JkVKVD2Pbi/wDLcwx+LVsA+RI0I7dkYsZ1  
0L9zD8E6eGu164dBhhxEKBJ8BHocs/hgXqx/gvUT7U/eDDGPAaEAGkPjcf8A  
5buQ/Eae3H/5bcftF+n2rSB42P8AAenJyLeqH4XghxEPoKgYR6aEeAGxiiOz

oqBGwPndd0uPJUpgEA6vqOOeAnEg8lh8jldNillxkx2Ebsf2pxmjqPxITIDJ  
jBjOtmSh8cf/AH490Tp8GHqttR9OY2y3ebZP/wAprMieKMTjMpYJDdpt/k//  
ABZpg8eU5dVIG6Qj2839vHD/ALT3jPEBcrJ4O1584GQnLEERJ/0u3S4jsqfl  
EvNCX+LGwKdC5zOQGOONX5r9ra8JiQeSD7H1JTx8znr4Y4vmZ5iUyY8MaDa  
W5vgySwTuQFVe2fwPXjE+YAyie17fTnE/wDuvM+ZCZgRKJ80TYD34s0ckY+n  
fqVITv4N8v7TQugc+KWWjJQrwO6T5e4h9mYlmsncZEa6fb8n/iv7f8x4Oqxb  
JcVetlWTIhluOyrPvfWh+l48QxzlvIAceSIG3+XJ8npgkcsJZD5ARKWz4nql  
0keozSOE1A3OO74trGFp/vlZeuBxSwCH8vdugf8Au938x87cQeb7avu4h/KH  
Tz1gDu4827/xj4/U4fRySjyAWJpmrJrQ7Tnw747/ADRAju+zv+D/ALv/ALp7  
D1PS48ZjCjLHLfiNf3Nf7eR8OyOOHv8Aw3pozkcX+3jG6X/AMDbJnE6fxDq  
JYZjLiG0ZoDfH7f/AMRfJGOZuQBoVem516vqT1OU5CeeB/DF9Hoc+XqBtOWO  
OIAjfljOcvIPGkKNd3t/DunHUzvJpjxjfkP+F0/Eem25fJ5r8u7f6k8km+uA  
6PDHo4fFLz9RL/6naTvPO62X7bOebgHTHH/BH+0+fjmCKlpT2nweHLjInp3Z  
JauTMIBqvatlabNMURLkWjMAPD5ORkRwwTaKXEJkaSOGJFAIVTEWUCwNESLT  
EjZQJVUxFlA//9fzsGDJi254kAXtP+F9TJgO7ICTRiJR9Pyx/wDNT5scuecJ  
QxxqlO47R5otdL1EsxJyEykE3CkxVTgcZynbslqAiMyDY7PRnhGM7I0I4eby  
g0Tp4hkziTFOGz0t0shlJqqv/U4ziDDuYx+L/U9WKMZQjOURI1y6zE5wO0VQ  
3aM5LQ6ccJPEiLOj6PR3kh+zzlAJuO6EpfEjospjllMhEn7co+o9mY+nlHmM  
xMbDPJ/Lj/5jdl5wcXQ4YyyZMFk2Jbdh8s5Qd+tgMnR48n2oE4pOUr6brKvb  
R5x/Z/8ANj2bLh1HSnkfzYyP2tqB87MAxBc7p0AuMh4auVNMBvVzmKdD7GJp  
m6gAsJREpcnQVStlASpSUAaV7W8Z1qmALTHym0DWNbaPYrt8prVzM7JI0tWF  
KgdCCmMqBBPLmkU0hVx7WV3s1a0eUAgmRfqPwr8JiQJz1L8vE6gv3v4VPdiC  
B6GPP4QGgDslgJCWgFJpVQFVVAVVKAFSqaAFSqaAoSqaESaQUd5v8AFsmPFA45  
aSvdCQeCX4qd4njifg2S3ebf/wCMff6/FisZMoBiNDb896+DHjyY7BllvweX  
9/8Azl0wziEs04GG3yDkV/5ryt9H0WTrJbMXYO2b8SIKe7CNTxEJj+J5un6v  
L0kjLGdplpMJrcyz4zjmYSBBBqi9PUdEMGOOQ5lyMxcoR+z/wB241LMTPWU  
r8/8W17cnQH1AcY/lkebd9lh0g8uNS0Ogerp80ccfSkAAZbzkH9zyvHOO0ke  
DUALBne29aac04wPX9W4+a9Pt38W/wDs5P8A308eaPqAyib21r/FCX/wN7MU  
d2yBEal3QnP/AN1M9TljlEqsRljpp/5m9X/AMSw3geXA7j5uP8ACHv6f+Qf  
UxyBNHyj4v8AxXp+/XzomtRRejp4zMqxfEQeE2jKUf8R2GOWVSlodq4Z+jl  
HGcoNm/M9J6oQxxxkeYW4y6nfAwkSBL4qDhTP+6dW01i/UedCMpyEY6k6Pq9  
flHTYo9HA6jzZj/5U/8Aibh0OfH00zklrKv5X8Pqf95keLJI5JGR1J1eqOGK  
RmkSI4Xa79N056jJHFHklExPQ/DgMMJdZl4hpAf95lfPnklkckzcpHc9n4j  
miZR6bF/bw6f+My/73K+eS50K8fT/wA4UdSlzgNo1A/5yQ12YhMHI86pMiQB  
2DWSPpzl8WPa6OyxCMMpi3lwlNO5zHZsckUPDBaLmSgJbgGHQaBAS5tyYQFu  
AYdAgf/Q5eo62HrSyYgalHYXj6PLHFkuYsU+ofRxQx5PKJxlr9rdD/yq+b1W  
TH6xlij1jytjnMM366cc22U17aHY7niMQD7Pa9XU/iMupgMe2MYj+CO15GaBt  
Nno9PmMY+kDoNQQ745SJJPyt4+hnGOTzXRGtPflIMEojx/EXD1O1cVqZ4CJ5  
wfliljz9jJP/wAqtdWZHDIZsokb3Y4xO7c8vUzjl3ZN206EQ2/G+eQ9Di9T  
0fxAZMkY5jDaKiJH/wCCPVgyn18OWctwnH0jpt8v9l58vV4p4pc75RjCQ+x5  
P9844Zylg2XEbJepG/7n/mJo3OTNj9DPLGfExeUii+v+Mx/mxzx4nGOR8vMK  
kjD1JvRmWoT719yKZR5dAXN0Hdk6hpDQQijSKSpQBStKgTSatMdDq6GluqQM  
Qk68NgDUlgRE8sAmJAAtErGhRv0lZlktA1gQDq/XfgmW4bfB+K313fpPwHPUt  
qKfaRLTljNh1dEFVsgKqqAqqoCqqgKqqAqqoChKoHJ1WIZYGB4kKflMf4bGe  
HJKyMsCYmP8AT/8AE37LILD8l+M4pY8gyQsDJzX/AHkWmbGXSDfgybcxgYEV  
v+Jyz5sWTBsHxY5HYf8AyjJ4x0uWUtoid1bqemH4eRGGXIQMcvtfFKDNjG8E  
YupllEQaia2ykPtf+VXWQyZN2+dEEimZ9JHp8s94IKEPLvj/ABY/4f1EHqpT  
qQgCfh3UyDU9SM+CO0Thxwf6nn2n4Y693oyDNlOTFA8Pjss0eyMuP+E9TD0s

J9OMkJn1b/tf4XHpxHBIZpAS2yqWGX8LWHNOcBDb/Lx67oj+P/vXUDZdSjQ/  
1f8AoNKDfRnJ1xicm4ADd59sf93u/wBy8wNcPR1MonalM6Fbnrx4cGSMRCE5  
zl8+0+WM/wDklw4b/wBR5pyXy9HS4cnUS2YjrX+nb/5Vcc2I4ZmExUhyH08m  
38O6YAaZsup/wYIBFgeRRiSg6asmZ7oLozoOpfW6f/wDpjn/AN7I8mH/AAw/  
3vUPL+H9MepyCJ0gPNkl/gi31nU/tWUzGkl+TFH+HHFF0xOWqHtRSSbSBWrj  
UaDqoFrdrROvZGYk5uphYsch5AX0qvR86cdkjFqOtXsCR3GyhVadCZMNFAR  
qXViAaKBMjBkqgGPLozEJPCB/9HCfRwx4DI0M4yqUf8AC8XX7DkvGABUfh+F  
6/8Aq/JOU4zIUgN9f944ZukhwRy67j2I8qRzZw8NCRqnMm3WEiAR4ohWOZh  
qDWr6noRNHcDYt8yEtp4v2F68WeMAN9KDs4eJ0o+Jp1GMGAGMeYaSt87cle/  
h7JT/aJGGIEmXER9p48uGWKRjMGJH2ZNSM2f+RmTq9vTYpZZbsdGQ8x+zGLx  
zxyh8Qp6ug6mPT5Dv1hIbZfadmU2ej1uO+juuHnxy2SH9b4MhcAfDR+jGWPV  
nNiAl3QjOO7+PG/OxGko+HmRLGQNJPsRaWkM8kaTDVuUQRfdzgXLOtcUWjJ  
ZYaKACZ1ejPGq32QKBUtY6JqWgQfYgSSmc7A1UhiSBO+nIzaLkWgTlotCoBD  
7n4TI2ZA+GH0ellskCxhH6TgluiC9AfO/D8m/GC+iGgKUJQFVVAVVUBVVQFV  
VAVVUBVVQAQ+J+I4TOEoj4o/zsf+j+4+2+f1wMDHIOx1/pRGeDm/FgJRywj5  
wNst3w7ZPn5vxKc4SwgAQkb/AKf/ACm9/wD1XCfUzwyItFb8dOP7Fjx4TkIX  
qQn54H7WOKMOTj/apyjIEk7wBk/hlGP9p3w4zgx3llqY3R2nc9UPR6bLMSI9  
HILr4/i/3f8A4zE+b1OXFkzXjG2OnlQTg3lmxRrUmjuH2fM82eUZ0REgm9x/  
iesYBEkxhYNShL/30jMD6dH4hwB5mM1jucG+vgsA8goBMjSCtcHTVAnPwNjg  
IHICaMPtavT0eURyHCDPZI/Dj+08mTFInETjqboh0qXTTjOJqQA/TJGn3Hb  
1/TjBljmEJRx6fH5pyk+f1fUS6nKZz1Jdup63N1YEZkn2X8SI/huejKUdoAs  
mflDGX0RxiN8qYUaF1elpvSq+b0dBLHjy+pl1jEGVfxS/wB2wkbHZ1A/YemH  
Tj+7I8+b/Bj/AN3hfNPg3kyyzTlln8UjbmWNjV/7tQJQrgobrRNkiidAyrSF  
XTydvG/MOz0nRiVEUWyVYOTgBrVQpFeVFOjqbDBYefJHaae/HmAhtxZDulaK  
ACgiTRLmSgBVTEWga1Qtgt+xzQP/0uU9dmyzEscdQNug3OUodTlxa36d/wCn  
c3+GdXHpchIPginef4jACcYRPnN6sRh6GOP8HyyyjFLSxu3PDMenPZlchV7c  
v4lNyUR5SNPK+fI3mZM/i723Uy8AyIBsPfcTTwmPpyGQCvUjL4p/wDIfE8R  
xgAEG7Gv+F6ul2y8stARyw0p3HpvV6ae+B2yDPWZsmbJuyndJ6TkxdzKRDh1  
OSEXyjrKqmivQ4iDTA5dtxqr0Y23wkzm1/1j24Sjj6nHIE4kVHGQP6fSfJ6v  
F+z9TKHazF9fp5QI0pvTbH2f3P8Avf8AvHj/ABobpQ6gfbjGX+qDorxR5EhR  
1UBvLRN+LHGrtC0DVinEaF2cpR1cs6ULT96AfFsDS2HQhMQ0NUmJCEery7DC  
gxEBZ1DJRYMaX0Zy4DY60xFRiB7XOfUSlyWkBLAR8RAeeYA7tkkucxTQZqqo  
BevEaAeR6sfAQPt/wTNugA/QRfjvwDLR2v2EDYYistKq0gqqoCqqgKqqAqi0  
bggUrllLEd3M9TEIHSryftV8BlykoHTbydXU4GJNX4t+o8XWwOWGyJoni0Dx  
PxPLCIXnHMHJEbJSj/C+LkyTyGySS6yhtkRkNUSP9TzmykcbGISEdbq+PsvZ  
+GQhPPDdKiTppueAW9PRGOPNAz+G9WMJ4nrS6bHD1cUp1KPMw2fiiwOvxdPI  
ZoAEzhtljH+7yReLr8cul6iUbsfZMvN5Jvn8IsFdoNM8hKRIHgsx3HgXXsfV  
6XpcPUdLInTLE829cc3TY5xy45bYGPp5BX2o/wBv+WiY6ni5Rn2icgRE/Cfh  
3Pd0uKPT4JdTmFmQ2YYy/wDdr19NOPWR/ZauMT/c/wDKUHg/EuqGfJtx6Y4e  
WEUWNzgzxOOQmOQbD65j1PXD18cdsSex8sp/+KzPjtjLOloEge9kkWAcvT5M  
R2ziQS4xhvl/S+90kT0/TS6udykfJivzbHwzcSSO/KbwNJbsckJH4TStxyx2  
7SPMnQuJJxa09VTNWzBmq5aZJVNUUXMi3RCBydTCqI9LjzoHvyQ3RIL5500  
dl6VYRLb72OTbQU66tKQWG5FhFA6RBAtgOt6IALKZG9EIH//0/HxAGY3cXq+  
/LpMGDNGgDAjzby/Oxfb/Y4SwQzAmRNXGR8rDC0K6jN046eWKNboy8IPldfl  
jnkMkQdQN1/xxfc29LgIKMhECUf6tsnys/U4p9MMAid0TYk1EscEYyIEnsGs  
flkCxAmOorRIIla3SMqD1hglE2CAPa59R6YxiF3RsyQBvAIPW2hgsSNbRt7/  
AMaOuJ50ZC70/wBTmTR0dZ4zA7Z6E6sTgl8GwlGhycnph+yQIH+y+oSNvqDd  
Ha69ZiMukMTW7DMx0/hm8XQgHLEGW0HSw+vDpo45ZOn3GRyQMvN/HD+2loaZ

80Ruxj2aOYF600IXvj83GmnPqFMMRyyERyy6jL6l8vxFln0OtFjL+EM+n2Gm  
8eC9A54fUILXW33emjHF5jy4hnXA5cX4RmmbEaBTl6E4jtnoQ+rL8UyA+QB4  
c3UHPImfJbxEnMccQOXOfTeqKtueMjUIGTa64oknmZegnHUavLKEo8v0EMgl  
yssMMuhDYIfO2pFvf1fQnF5o8PADTAZIDrOFiw5UgL1Q4eanpx8lHs/g2Tbl  
Afu8R0fzv8PntyxL91gzWAXFPQS4+ozLIRw0hutvGc0+wczLJJA7zMBg5oju  
8XpylyW44I92FNj1UWP2gngNwxHZ0EAEDD+ZL2JGGR5L0gJpAxGCPdsYojs  
6laQzMQHKej0F58iBmS+J+Jdbk6f4OS+zJ8D8RiJ5Bu+Ecoy5jA8I5DI2dSX  
WGHJkPkiT8nu/bunxf2cl98/Op/F8so7R5f6PLFhd44vwbqcmgl/1F64fg  
mOA35Mli68gds34ni24sxNzj8UHkyfieL+ZGETU/Nz8MkWEV+OREDjjRuMa3  
H7UXxHt6vr59XGMZgeXweJhGGyNFCLC2iSj3vTI0nRA4xcsnxzH2YPhEPR0/  
XZunPkOn8J+B7jm6TrtMsfSmftw/ttLqeRotvoZ/wrJjG/H/ADlfxweAitO6  
MwzWOXLHGQJHYeY25zyGdXyiVDWJu+UGiOK+bSuS5Y4zAEQd37/209PjhUt8  
tpA8n9SenzejITF7h8Jj9l7h1mDqdOphR/73H5f/AEEsNBjqebHJ46OmjvDB  
LIZwwDfEez7LxmMsZqqLiOhptf5GuwOZBCRlrSQ+bpYooYTj/p9RiroYsGJC  
MgPseLPjqV+L2uWbHvia5ajScM4gLQQ1WI90OzoZkWyRT6WHAJR3PJ1EdppF  
MYho6NYxXLMkCFVCB//U8QcvqdH0kuqwyO8jb9l8t7OjlnFww99ZOTCPRw9D  
i2wyzuidsxNwzSxdPPNiiRsl8n9Th6GbJj9SUvIDUtth/wDMb0j8lgZmMpkj  
aJj/AFOkGeLCWyVhvcPCwjLD05mJ7Gmjt5GnsTMY9T0+hJywlt029npx1lkt  
PPI+Z0cxA1E6nl6JEnWJvu4abZ2VIBw5YASl7guZiKu/9L19ZKR8ACb/ANTy  
RiSDrTtHJ9w4ye3lfbP8jPDNORMyY2SP5coyfDidpp9fFI9XiGORiJRFRJvf  
5UtQtEcHX4h0/VSieLP/AD3hGOUj5QX1/wAYHqRxZx9qOv8AVjd8WalxCeI0  
873ddFyOIkq2v+J4WTGcluWh8GMOI5Dfd1z31E77Pb0XSgG7anOvxG4/5p0Y  
sYhEDu7+jli244o7tTo+jjOKOhehk8g4pRZMCeQ/RA9PXZymMZ+EKSHixxSl  
oAp6OR5FF9QSES1kO/UIHzk4GJorCZiX3z0+LLC+75U+nMSQimuOYzx2kPz/  
AFvT+jM+Bfcwy9lvP+JwGSO4Jg8OB7OeSO0t0Rq6ZY3ESYDkerENHmenF8KB  
1dMamD7X7Tpp6B+KwfGPe/ZdMPKGA9GJejkPNB6gNGgzIUBoqgNJQm0Ccxq05  
JtA1W3O02gXbJLG5bQCS45AeQ3dsTkgc87p+elOc884jUU/Q5CAH5eOSI6k7  
5GMSakY/woy2c3UYz08/C/BwEgDZGngHfrCBkO0mUb8pl/C88p37WGHqE86c  
MplIvoKpVrVsUiYB2SMdw44Ql+LWOBmaHKCKUkaEUD4rYdYYMhjviDt43PVD  
8LySyelliMq3C/tlqOEihZ4RbU7iTEnjxwhgdODq8vTm8ciH1wcfWYvV6nH  
tB4y4/8A35hfCyEE2AB7LeSXWTGkSa8EbSO/PiEJ7cZ3R7SYGE909NIOQah6  
ttavJtnoVanP6QX03bcg5doMau2GoPKHU5MGTdjQR4PqYfxuGYbesgJ/wCO  
PlyPGenEtXmydMRqHsmcXU9CscwTA63pH/Ck4TiBjKjLx/+JvkQySxmw/Q9  
L+MHJEQzgZl/4vj/APNrGc4jQ4d8o/ELaEweH1f2Tp+ss9NLbL/u8j5vUdHP  
AamCPayBPX1EbQViAJC+O6D5Y7rs+Cl5YyLCcf8ASzh6jH6cyO1uL3dRETjY  
5DxO0zSnc1x5TEbXCZ3SSWR4tNBpzkXSR0cSgKQLKGohA//V8QvZ0nVRw7oz  
FxnNa+J41Dkxud/7btxyxQjpl8sHN1GY3G7iNvl/gfQMen/ZoTAG4EGX8X/I  
R2l+J9PjyGUASJAcfxRaGeDI6bLGAzSHllwXKMARD6/wvfn/ABA5cJwbdL0k  
8ENx0i6MYG2Dy5Aew5fR8sBRnp7A+TrHV9EYBICW27DDa0/0mefJCcRtBIBe  
LfIPpzxilKZVGxpH/E+ZK4jdGzX2kRrtMyaOr39H1EReMgky7x+L/wAU+Xky  
GR1YGUxlkOQglsd2bq516VeSBJEf4XCHUnZscpdQN0iOJBxxnxY1J0rgehhH  
i90biPK+Xiz0aD6+MbogsSxNN4G2AeL1yPg4YYvTtehgMDejrEkOcYmJdSUC  
BDcVyQMB03j1k69SPKiHNAmldNscoo8oMSIW8wmQbDCkZ+nMHI6kVj1fRGbe  
ak8P4ptxAUeUyni5yNBTMoD00ZZichTR+AuEU82npxfC8/d6MPwuiHTgPnHv  
fs+nPID8ZhHmD9f0+kQwHp4tXq7PNgGlvQeGgCsraAVRaLQCtlfprwQDafaw  
m0CrZWIQC5TL04z5QOfqDUCX4/PO5k+1+q63JtxEvychZtjcHOxep7v83XD0  
5y8UL8XExbwTljmCNe7mzhYDLXK0P4jpn0QhG7s+7yvJCNyp9LB6vV3K9L4e  
Xq8Jwz17pTP+6auksf8ASyYhsJBo+5JiAAbBQRpdi/Bzllnl0Y0PZ6P8Tx4M

PpTjZ822v8aJ/jM8phIAb47ojTdvfHnCclDjTO08ScMcv3E17karjqdU8py  
kyIAJPDmTHd5rl/w/E55J44nxc55ozIERSLxUyVluXliER6SY1ldoyGOiXpx  
9THIno5cts6VqjTEBABuRMjo6bAAxu1Hg4Oxlh3KDGzo7ZKuoahymdgtRiWY  
RhmhKOseHOEt2kuHQZZOuPppZImYGgekM58kzz+pwCt0XkhMwNvq7N9inysk  
dsiGoxZHpwNBYBi+h0/4lkxD081Sx94zG58bo5/ZfROGUomYFgcyZoctzt9Hp  
eqP8o+nP+Gfwf+bHj6j8OyYviH+ofC74fw+eXFvBFknBH7UtrPT9blweW7j/  
AAS+FzMjtODL0+2G4Ss/wvm7gX6Uy6XqtD/Kl/ysb4f4h0M+jndgxl8Mo/C6  
RpOTm5RTQbxyjGQMhY8Gg55lzeiUN8iYigxPGYtKZOgDEQ7Ad0D/1vEUJQ4R  
hnpdD0A6uEpbqMezseh48EM/J3eeL52DqcmEEYzVrWWZ262ezSndtYcuTH  
KhCcfKf4XyAdpeg9LkMPURQHf6m+r6CXSbdxsSFuznic/qEmwPk9UMmSePy  
6AF55CPMdA7YskIAxskFhpdrLICWkpSvWiHOeWWGMsY+GXP+I1Imxx+CNvHI  
nvn59llhqEcsyOzmQS9M8mKJ8o1Ymt2rSmG0tRjejaAdpRTt6eEcesn1OmzR  
yeUPzxmS64MxxStiWMIk+pjAA6cPUJDs+b03URzCg9sIGPudmTbINFMSSHSM  
JELxRZ6rh6sOInl5uuG0IFilli+T5mSJgX1OmBlht8/Pd6opzykALL871mc5  
p1ege3r+qryRfNxAGXm4cspqcG2O568WHdiJLllkJVEcPo4gPTpyinzc9JF2  
w6hnPCpl1wRuLSG+EeYP1uGPID8riFTD9Zhl5QkD0cHD0dnDENHYyoU0AKEK  
gFB0QVthQ2mwxnVaAshFJaBsqhCIWHGfLqC4S5QPL/FJH0350SjGcRPgl9z  
8YmY49PF+Zlly5Y1JmJPosuDpsUD41zb4lybDYY3Xyzl2zitDWjTXptU7OI/  
EJdLu2ixLxc+p6ufUm5PK1GO4E+DYSdx1PZ6Tpeny4rIMmdfBEPIZAYEG6F9  
L8I6o4iYcTdbPxOP4nCHrAmV7vj/AMKRzdQjqBm6KWKR82M74/0yfG2SIEzi  
NA9fVQwxj/KJJ8fsvCMpETHsWm0ZmRLpgjctXlinbBzaKdHUSFCIT0mORIYC  
YiJl5+HplI9KNQc9iNLqejjG6OrEKNhz6XqBONS5ezBg3ahzBtMnp57Z1VvX  
lxYOojppJ551ikNHeMB8RCiA3Jwz6MYom9T2cMfVZMMTAHQvrRzxBo6h4usx  
45SuOjtPqYdeh5+6XIL58gJ5PMXuyyGMF86Pnl72TleGB6PR9LE5aMtoPcvs  
4MOTATDJ/ZmKIP4of+MfHxCRyCML9u1930Z9Li9TDk3R+1CThmXqcnT9XHPz  
6c7IGMt0JR/f/evBln6kzlaWSX3ldHj67GMu3Zl/wf8AwJ8/P+G5cVmPnj4w  
amZaPOLh1O6cOeHplpgxsNRmYPOxm9C1LlicfTm3y6NnT05jWvLI1MgdA53T  
nl2WgYhoghQEHwRT/9fxUFKC4RlmmM7ZA+BfoOo/EcEZQyx8xj2/qfnA+zg6  
DFI6X1dd7UNjnn10SMsYx8s9R/gcc2bP1WMbxcl/ap9Mx6bBmxyiYmBGybhD  
rcWHFkwHXU7CHWxhnc7CRuA04XEPNZ7lqRPI1cTOQ0Ya0Z1yjKI20B7Xgzz0  
prNMy1u3kkbaalJUSIRXdNWil+ogysskUFFBAsikh0jHfFyIpa3w55YTYfe6  
X8TjMvLI+bSDSB9thzxlwXvxVy/B4uqyYuC98PxiKBTZlfcwmDw8H4jEbbfA  
x/js4Di3l6n8Tz9RzoGFPo+n67HgxVlvzvX/Alockilcl6T8N6nrj5Qa8T8L  
19V+AS6SHqZCD7kd583M2Wto7ZpAGouHKBvhPi+x0xSPiY+X1+jPZgPK64bc  
hpPSzoO34IERnZdy4JdkDuxG5j3v1eleUPyeD4w/WYSaFpA9HELDjXxOszo  
0E21bISwooW0WgUCO6SPBztrciFUi2dy3bQG0bmSUWgaW4F0ug5S4QPA/G8m  
gi+A+v8AjRPqAF8dEFaJ4SBbJlRRahkMOHEybG2Q05CA7iDaJTvnVBEoi+z  
BOjCNFZMxnEAmq8HlaLDSi9GHQOHL04o0EDSQ3B1x7ZDaeUVtDiZUWFOoY5R  
Gj29N1hwCpPJ03Uj4ZvTmjDJ8LC9x0ZOq9U29uDq8Zx7ZcvjCO3RzzbwPKCF  
BqT1skoY9SeXzc/VRsvznM8lyUdTPLoXlynlfYxEHkKOXohQO0d26GdT1vw  
fbjkJTkYzPwmvK+j1kv2jPHFUQQfi+zN8/p+qhhiBKAKY8PR0PV4Me6OeF7j  
e7+BzBmTu6jJ+yiUtpxSl8m3zQnN8XH1ubDLfE6k2Xb8R6gZZ7YSMoD4dxEB  
sGXY9OPVYOpFZo7ZH/eQXJ+FSMTPARKiP4fi/wDNb5jrizzwm4SI9zEhyk4O  
rwGlsiiHmibD9P8A9Y4uqGzq4Aj+OPlm/N54xx5SIHy9nZqrJSQCNBSCKQih  
iCeGTq3ZiPeygf/Q8YjVDcxRYeZBAAdRnnGO0EiPg490tZhdBBD6f4fgwZSfW  
Jodgx1+LEJAYBID/ABOkRo5OnwTzXt+bn1GI4pbS9PSiUMmzueyevwyiBlhz  
OMHTj6ZPPqO3cTTyE8vUMZyAxHPLjLBs0J1dBGIZbELO3u1HFkUhCtTo0pla  
QHSeM45GM+RoWNB70Dfpz2ayxouOH4tXqyQtgOXhNplHaUgW0EgtxkjYF9NA

3jMB6MfUQjy8G2nSOO0D6npP/LjxdNj2bbp8v8T/ABvL1/l+GH8lfJIAUoSZ  
qqoFQ5fT6GXmfMi9/THYQWA0/FoaAvk4TUn3vxGO/FYfnxpJA9Pp/jHvfrpC  
Afkum+Me9+tw8BA7sejsTejhB3poBSUqwE0zw2ghAi00u0rtl2QJka5ZuuGM  
s44/7kgHo6cY8guJtoMSSXM2H1fTDnPCJIHAJWFItO3YaROVC0D5b8bkPXoe  
D5T2fixLLOSHkGqAKKyGOC6Rx3rfC7fFAzjtia5dMmKMhcTR9jIMC7ijHjnL  
QHRgLjAbaLzGG2VEvYQYii8swCUVnNLQ0impiizbSC9mMcPLjiZyEQ+jCAia  
LGA5DEGnntay1ucCaSBoMdx3lJllHu7Ryj0TDu8IULYpNWSUQe1+G/icOmm  
JZI7n6LN+P8AQzxEBbJHw7YvwW60bnRk7epzQnlyiKBeQyYtUA3b2dFj9XLE  
cvE+1+CRiMhyTsCluwkzK62bosJEYR8mQnbtmfs/968XVdFPptT5oHicfhfZ  
6Td1c5ZpVP7G37cYf96+f+J5YCXp4rA+3D7O5phnlGxohOq+9hgCSNuhXk6c  
KtFpZArDDfMRHvL0/i2PCcO7aBMcEJ/DM+LDM+sLBY/E5wzSMcfw9nOMnarS  
qeEDYakKYjEg09EMEpOpgupjKW4qHtj0roOkc8kXiz//OfLyhydpkSiDHhyF  
Vry80RkIKfbsY3PQ/DMphk2ggbhVyenrhCcNwyGcovl4pjHMSOtHh78nX49s  
o4obTP4morPPhMiQIHkPZ1EJ5cW+XF95f++3boOgh1GGWQk7h2ezL0WHHGE4  
EakXu/xJrEqeGJ83ggDkAJox8Tt+JdPi6WUZycgyeP8Ahe7LLDiyTjMDzDy7  
Xwp86lqZILOfU9SIAINs5c0sszki8R1ZkGadFASTy0LZplISARlGvbe6lLyx  
Ak9OKNimAzkFAdp4qYAolhCbUV3SI6WgCRsJgWpR26MR0aBmrUjowECZBQWi  
zSKXAW9OPhXhTULidWMHrGPqdM+BkjtL9B0s92Mw7vj9Tjom+WENukNmL9d  
0/AfjOknXyfp/wAP6sZTt8GmowPbi78vPA29wg0hIS077Hyvxf8AEo/h8RpZ  
KB3NiL8z0H/lwjNIEMgoF+oGSFXbChEaa0Dx5vxDFj+0Hy+o/F4j4TabSKk2  
eR/5cZMs/IJoDhH/AJbfWSjkOMnQuHXZf2iZk+b0uc9JmE+ziOTKeMH6hGVh  
TKu783D8dgYgRkLYyfiBy6Rk12g0qyer1OeGMkkvh9d+IGUajpay3Ea6l4pY  
jmkIDkuHY0kkcHV4TjkDdgjdbhAE6h9PqsZOKj8WM7T/AEvn49HVXKOYRCRN  
tbABqm7dl4py1AJdSWDMRpBBHD6GL8Nz5dQK972Y/wAEJv1Je6mSIPAKPF5p  
xrl+tH4b0+L4uQ8fXYMWWBGMdTWUiD5rNqAXEPRnhs0HDztRDTCDvFPpyG0a  
8vN0canfL1ZZbh40xIOKZouMnbNPcKpxAtpAX2Uail4SNWgBFMukhTICBKGS  
CmEA3T6/RZZ4sZiOJcviQjulD9Lg6fDm2Y4kwIH8yUvh3MM2O0dbgl9UEwnt  
2GEHxZyMjZNnu79V0k+mIvWJ+GQ+083f3o5tgv71T2ruj2ozlj3KeF7+9fY  
0HXjjhDdkiJdq+1F4MuYQRlymMaeGUjI2yDpXH/AIT0slhnO6gC90cQHD4n  
T7xLycv00OeylMxq8rVbeB6K2UEGFdkwxykeHT9piRw5HqiDQasvqR2P/9Ly  
OnO7FXgyQjoZaSi3lavPcMkBRsvZ0fQT6kSIEgU1GGciH1R+G7cUc0tblRi9  
2Lpenw5tsgNshpu+y2AeN0mbKJeljPxHh1/E8UseQR2mlri9ziZnFmkcPYmq  
TDqjPLGWYmVH7TcSYRBv0eDp80JftEiJV/L2/wAT5c+InIGUR5Qat+m6jqum  
wZY5l0dKqL5eTq8QOT0xpLhQWTyM3SSwECfcW8ktofQ6rqJZwBLS8JxWcFBG  
kZGV8BmnQAUBysNKNI3w5CC89ukNDaB17jdHhk8ty4BczywgKCQSmUWaQKkb  
CAE8u56eUcYydiimEhbmOXUOJ5aC0EU0EoDCVO28HkuAGtOvpMIb9PIMZg9n  
v/EsMMc9xGkxcXzBERqn3s//AIT0cmnePILih6HzOE7ZkPp9DkOOdvBkhsyA  
9i98Al6sszpQ+n6bqoy5L6R/EMMdL1fIMJBGh1dcguNuebRvhOJ72X8Uxx76  
Pzv4p1MerkK4DwykZHVlcmcltal86YOGYkOxfap436kBE6PJKAlyz6MB2bMo  
ivAMvVRn3JTDzC2hCI4CY6aMwjArzGxc5Yoy5DtSKcnM55dPE8aFvGZw+LUe  
Lrw0lgtl7mlZo7I9RAw1Orh65Et0dKLMMM5aRBeiH4dmn9mv6mM27Nm3WQEP  
CY+HLH/nPIY+nrJtyDR9TJiyQ24ZESrUCP2Xj+KVDIjwEzv6fDgxHzRD3S6z  
DAVED5PFI6eUNpycc0CxLqhjiBCIjXf7TW3/Alo6Ybs6Z/iMulXlnPLnnHcZ  
CIP/ACngydTKZsuZyE6s9T1f/pMnKi2Ouccc4+ecifY88sWLHAKTOv2XGUi4  
zG4Wkol8ydDh6mjxq8sRZp6s0XkB2m3ujJ3dNIwB8VMiFhIkbfVJGhLAcSzZ  
QCmUmS6AkWUwGrNuuld0CpCzQUAVTQ4tYjVEMMnLATM6IARTo6aNzD9b0GLI  
cJMIxmJH+YD8b85+HSGOYnlWB2fpeo6/p54icNwmdNsfKkYep5XVTG4wgTs/  
hl9mTy8hMju17osBHIB8V4+bEjhwllRUjfdog5Ry8csrMZGRRtVlybsh04c

9pD6PTjSnqOOMvLTz5HZVwB0GEYqyy5fT6n/AMJjugNQ8+3bERK9NkOGfseh  
k5KI0bjCw93VdPu/mwefFoP/0/A6GRGSh3erKKL5uKRjMEeL6uaPd5vUPQwp  
7ek66XSWALt4nu6Dof22Rjuqg1GH2Ez67LMGN1E/ZcZ5Z5DciSX04dBAY5k3  
vgf9MnsxnDizY5ERjGUWIPmgdperF08cojImgWvxCMPWI6esV6fKlx2Vfdpi  
vRIDpsYmNpvsVfth5z5TjJrwLoZ5iPLEAFz35OnrLEkS/wDJI2dUvwnFDaZy  
0NiX9T5X4hixRjH0+eJU3kzzazJOtvScnRjpTDaTmuxNgUM+d2EmmJCi9Er  
BsMnESCXRuzBQWgGKRTuABxg3qjYeWcA3Chy7SjKI1YQiUrYt0BAu3OXsQEP  
QJkxrs4xOjUdGINBGxYDz5Brb34sh2EA1bwZSgMS0S4RIRbJQKE/M7xkSdOH  
jldbevFpr2YQ3gLBB1fa/DCMmOeDxFh8WE7NDu+7+CgxfLftcsHjZ8V6dw1  
kjEY9wNHwe/8Tw+Jnl7HzPj9TLWnK6Eq4Z2dDOhRfW3xMX53p853UX18U7eW  
ZXGT3ZbmsHNkjUixT09RHW3OMJSBIBIHNO6qUeG6izRiQh2w4znntGnvdo/h  
+TLMwEhUe5dQYOJQRb34oYsBnryVI9pBvpsvT4wl+nuyE8lsCDihGU9lxJem  
H4b1GTttH+J9UZp+qMNxhp9gNS6WWXEZTkTOJ8fLtRYPPH+HYsX97KP6YtSx  
9NuiMJNfaMm/xLpsY25MdajgPIgUeVBcEfSdL1McsP YgAKGIOOYk4ZbpeeBf  
F9Q4jcDRY2zz3RuRZCLvB6UurxYmSc+kt0fNEfZfLz5YnlZQFAmw4ygYSqT1  
Dp45YfyrJ+1/hUikNz/ukHPPJ5i4iRnKuGsGf0jtNUdF6v04kHEd3i3EsYL/  
AL4c2CeLUluPVAYvTI18XMdZKOMwoa/aLigEzyAkaDUiWTWNTbDs33Lh0ngl  
IJliHIYywhjIUTb6X4d1+PDAwycxbBIOMGeT1P4dPHRyGhLgvjZlbJGPgX6  
LreqjmxRgAd0eC+BK8mTVqUG05O2MajEOeWRjoHTsHnyFI0YIF0pQ0FRITw7  
fDgVFGCUhx3dJeaVlgJAABrGLNlKrfCApdtA5Z8IAanVktYsZySACKd/TxqD  
t7UnGcXlkKIqDNGHneLATRcZSbke7zzk00kRObzyLbU5OSOiqU0BQTyGuj16  
RFd0UrBllkAeH2MdRO4vz450fR6QzIOJOsQeHFflubTPazTGhAcAQeX6zHhwd  
VjB2iqcZ/g2CXFh3JmDxsHUAeSXDy9Vi2SuPwI9nJ+CHmEvpebP0mTHDbMfN  
A//U+VfXFSxgJwfl9PpJiWLB3DixQPf+HnPjJyYrDdV4SH0Pw7rY9NuEuCE  
jJ0iHUdRHfuAjl11Br/q6MM3pTJkCPIXnh+JDHAwhHUm7ccv4jmySErojims  
yZdReGRxy7aOeAiMxLt3c8k5ZDulqXN0jHKGe0cslCjLT2PLn6vGY7lixY5d  
N0WXqgTDs9o/B9sl5JS0JG4lStnlxG7h7Oi/D5dXPZEDjmX2X0eqA/DliOKI  
lkOZPBjzZemHq45Vfg53NKFqc34l+HS6LJslqavR5algdNkevP1M+plvyGy5  
5M5OH0a0vIYhNao8aUSjae705JjbrUd3mJJdGjbp57Do9WWRPLwwFG30J3k  
9ujAYiPi3ljEDRBJlpk8lGdtBgNhpTrhCUBZGheXPAjV9bJunhhch/S8nUV6  
fm5YDyIm1KtAQ9uOtujxPTEjbxDENsZ1fa6LqRhybZS2xkHxsJjWvLnLMRMS  
5pyU+m/FRHLijmHbyvzWQi9X3cXXx6jFLHmjQ+zT4eTGTI1wjMYyZbgCCH2O  
ll3fllik+h0pO0exxdYHoy3jB6GSO4avqQ6MYoR2HyTre+cBuFlf2qVjFOR2  
cCnNDOYsZPQHRdPjnlE1pcDbx5cWKKWCo/wBy/i/icepilAUCnocoG6Mu2oek  
HHsOXp8URIAyfCX0uqwYoQ3YhUhrb5/WHzbo8cvu4cePjgE5yGo4cuZLVKGj  
yZfiBNTjECY5l/Ess2fKDO+fieOYEZGuLRj6z0ZURuB+y1zsSvRlwlUANTNBr  
Ng9Mbh8Pi8mWZySjGgPZTKUwlyJlbGMljCDsw54ZymGQiNfa/ieKWxbLyXod  
Gp4REWFFRAI7KFBo0z5pdQBURGmMeKcQQJGj4J3iRoBfNlgclGccQ9Si9VVp  
pXg47CCD3d44pSOjms1ZutW9Dkz4xE6cFxfjHaX3cP4RlzD2PUf/AC3pVy8/  
eW3PM/4KGnl7WtSp8/Qd554zglxjRHd36n8NlgNW+fMTh3dVza20ObyL1/0j  
OMiNXhyYjA7vF6vV7SdUV2DHi2G/Lq9Zk5Krq8TggTIU5TJk6YpEStrNirzj  
gtNnl1GG87RyyWsd3o0HRjicd32TiGpk6R42nktbBGFjIEMDLn2ojHcaSqa1  
4LUJGHm5YDKlHWns6MGExldtXCrNvXg0NIjeB2Zcss0zknyXGX3t+xzka1Rx  
MZl5pl3m8uRHSpivVWnQvFG5O2Q2XPGKfPEbKlb9NjBIZ4euXVjETGLwzJj8  
LlduYnU1MI9jovxTLinYkQ/S4vxuVDcBJ+Dunt6fqzHyydEk/QMP4phyjU7T  
7XXN1OA4zukCK8X4uGQS4aJJ5RcD/9X5Qvd0EgCY+Lxl26SWzIPa5alFO2Y1  
Ua6BvKNXNwjIOCIBS6ZIFREaO677MiltQWPUj46ujMtoj1Om62PRicY+bcNC  
j/rXKcXpae984ncHG5yPI0U4Fxbg68nU5MukySHME1V6ORuMqly6jUKdyRDh

m2Tp8kliR4PDnHpMuYE44mW34qbn1WTJEQkbEfhero/xXL0oMYAarEJ1k8XJ  
i1ovR1X4fiw9NHOMgOQnzYv4HeWLJ1EyRGzyaYyfhmWWP8AZRavaDxH0Ojm  
CCHDqukn0xqXdHTHabR0OqUfNouw110I3BgZN2gQMc0aNhmLvmBAo6vPG7QP  
SI/Zia1/ic5R9SJoupgrgBONscoXNExRTy5BI0yAxJBYtpAgPXHpyYh5IS8w  
fXx6hAxh09cu0MMRq2toG2PwccgFpElmAgc2SYjqXbpcgv2PL1ETTPSSMZUX  
DxUG1g0z6DFkBFOXUwujHm0QA+I3lj8rwThnbMU1wOzN0OU47yUNL5eLoATm  
AEN9/Zc98pmiTXvfWHQ48M8ZjKr+LV7nk3lHH+ISmaEoiMQfKAjFHFiwj1DI  
SP2ae6UOnxzyQnKzL4S8vWdTDJgED8YKhPUjbTk8rKRKXI4Z6zo/SxwzRNiX  
/Nk+p0n4dHqI7zLR0I03qdPkwcmHni0JNYs+eibCbYh/D4NU02aQjvuzq6gR  
eYEjhkypkFOreB5RqQ2DfsePHko27457zZ4ed3Gh2pWdTtw4zINDjxfSwnB0  
2stS+PPqxHSKcREjuyHR8lqt42PWo+FH1OD8QObTFC3pnHqJjQxi+L0/4tHE  
NslvXL8RikjUdCfBe5FYu83/AlMs5PKc+itOP+r/AKQ8rrehmSTPJZfGy9Lt  
+0+1m6Pqc2oBfMzdBnhysu3+8dLJf+aWoe9OSatjLi9MOssOWLzZlPu+tPtP  
PZLoZE629ESCNh1HLzkguZvkPRHnaLljsmnbDh2+aWgcoSe3pNk8gExY8GmT  
nkbIYdcpBiDE/J+hPQ9LPGCISBHxPI9R0eME7Lr2tB5XHtURMjQdMsBDS2t8  
ICgiGcgMfGr6HT9NWD15ck7YvHiwnNMADI+i/EscenxYunHMRukwj0PlqnOQ  
+51vu5zHZHFHNN5cj1zeTlJrUxUK3ijuk06GsvLAOkMZEdx7uvoGchHs3mlj  
5QwhyTIRcSW8vLlruihGq7SER8xocuvSPLQVizyxnR7odbGWhZ6L8Ky9b/a1  
prqPwbqen1IAoH//1vlinHLblHwKssB7WWyNx7vO64rnhBOrm810DAWomtUI  
Do56MrJKOTmg82LIMUt9XTsYWxk6aWE+fs9Q6hQWrcjOeTNK+CUDDRO46o9U  
37Xuz/hnUYoRySAqXw15pM0Onac2LEZy8ou+zYBgaPZ7Pw78PyzyCQugdSj8  
SxjF1Eojgt2OdtUzLqMmKUQICi5dNRyxj4t5elOMCR4KcOCZPqDiKIJGUm7Y  
nqZoS6ee6Jq3bpQMsZRlq6ZDDNjjLW2cEvRIYqLjGf8AdPRhB4H4oZ5ZCBGk  
dA+RrDQv1nXdMZCWUGJAP+rzPk4/w89ZuANGIsOIO5ybSZwY8h4erFiiQSTr  
2fOIMTslOQ9nTGN6mmitpkCS4xj5tXr3RyDTIk47NIA6MhMsG29B2cMMpYz  
rrFqBMQqe7thib14RTy+q+MmqBeUvsfjEYcCtj4p8YtIXiITq+pglYfPwg09  
mE0aQOtSgKtAaqkiwxbpGdBAYnG4G3zscyJvsY5xIMZPj5Y7cujham3oe5hl  
uAL6QG6Fvk9FLSn0cRNU8L4M7VxRn6MpUYCyD5g+lKxgyjO6rlzx9LK4mMqE  
zq7w6OAM4ZNSPhk964o81sGeNniWTcOLfUHR/tsBkkREV2Xqo48uACNbh4OH  
SREBsnEykfhF+VpjEehjsySwg3R0emX/AIP1Eb4I5JOebpZjNGtulkeLydTH  
0pDziZHgjU+k8vrMP7P1EodrZ2Hvo+x+LYBnhDqY6Aipl6n8F29L616gbmlW  
h4k5wiObPseKebfKovRgzY8cgvGIPLGpTMhwio3ia0dfV7B5nXHQ97zaO9Xs  
bY9PaXojG/iLzDJWg5d4yEdTqXIY7VZ6HT4DLnQP0PRnp8I5G5+VhlnLh6YQ  
yS5NPnaaf1Z1a4t/wDpM+n6n8Rrx4Y3HUvzHVfiM8xPZ2PTxlpZkUn8LnViC  
d+TnMsY48F6K/wDXuePPMT3cJSe7qOllj5hT50wYnh9FYehzbtuiZ7SPa85F  
O0yD73MjxeyObxIIAhqE5RNjQvX0PS5Osn6eOvm+t/672WHxC/6C7OR5mP8A  
F+pxRMBLQuU+vyT51fVP4BljTcD/AEpxf+W5llVgtkh4EpmZt7Oh/DsvWTAg  
NO5fqOm/8tzHA3kN+x9kQw9FCwBGIYDi6f8ADcHQY989TEXuL871eeXU5TM9  
31utyy6vF6l1C6jD+NMfw6GGeOUhujMeb/DJsGHieBXs0Ylxb9PLp4QxZcQr  
TWFvzckYag5Jh4sr35HgysN1MXq6SOtI5QLfXwY4wxXLlptnd1Eo44bo8kPj  
k2bKZ5CdCdHKcvBhCco1pzKerSt/LyZJWWIDjyHHLcG55jOW5xpR7UU9j8L  
/F8n4fK46g8gv1WD/wAufpsg/mAxP/Kfz207igf/1/mZijTmXo6mO2ZeZgPS  
6HzQlvhsii83QECdHuHryCi83qGQEE9J4RabtHSOb6FRfcGPB1eCG+QjKPP8  
TeL8OxRjHJ4Vuv4ZOkh0/S5yZUlyGgdbjY8HJhwjLQl5R9p9bJ1nrdN6eOBJ  
j9t8fKljiTHWN6PZj/FcmPGccAADox1lIV4UM5sXWZojaJEW805mRsmY7ASy  
G+Sx6MieHRzcsRkIKgTYD39D1I6eVzFj+F5I4C7xxOWpZ0rMHP9PKUgcUtNb  
/pdl9PCW4E6xePHMmVyNu0+oPSgkC7Whrj1PP6mcch07I6TN6GQS7d3KWWWWQ  
GY0D0dL0WTqtY8eLjEkQc/43+HbZ+vj+GfmfJjkrynI+2jCMR+x5yDfwSfn+



u/DTimYkUfF1MCTghLumXU605S6fJj41DBP8Q1dGpOn1CdWh1JHd5xOPiU7Y  
nu0ht1fVHPERP2XgOr1SiK0BJeeESZUinTj8tU7A62kY9OG44j3YDWJtLMdG  
g0Dt7pARdNgGSBnLI45Ruer3y4cMmKzblo0mXhlskH14ZAHxCCH0cUjIAvPM  
W50y3sepjIPNH04mvawOkz5JTEpeaA/5TfTeWpeDIm66UMhOPS/itZbwgxmr  
GQdF1ERlxy8h683UAj+WKPi+KJE5Qe5L78Pw+RFyOjXqZrDWJy9TtGlyyz35  
Ps0xh/DznxjJYAeLq8Yx5DGJsPX+FziOJx6kh2YUS0TPqdmCXTEXryxP1c/S  
Slmaj5dn+FevxHHksirccPXHpzogIcE8bdWdxVg+LPnpxjf1qAljRcsTCevK  
ZHTRppAjw3G2Yi07mM2jYTEdO7tiF6y4eWpIXUiR9zzaOyZ3ftlj5YB6cH8w  
+c6Pn4scj8lfRw9DklqXjaDSda/F6D6PpJ9NirbVvVI6/DjF3fufDxdDOPsd  
v2GUuS4q71wrwqcrXyW5dsy5x9d+l+qTti+JlmT2fpj+G33c5fhp7G21XEj/  
ACKafDU+QmHE6P1Ob8LJ5i+L1fQSxajh9FbrRmZVvhYPwvqZdPmEo6l+vx/j  
cAKyRIL8N0+U4Mgn4F+7wSw58QyyIAkPtPZHkx0YvxXp8p2iVH2vbGcZaxIL  
8p1WLFcRijNx9n8TzwyxfDIgtZIM+0nMYwZSNAPyf4h18uqmQD5Bw45euzZ  
obZSsPlyTLsd3S9eeniYGIIH/F9lyl1uWYoyO27DzX3KfejEvYMskpakkksE  
dk8ao7e9EMMg7vnZn08ofMzco6Vlxixy9hJAefB3ejkUWm3qZzLgS6zN6MkCr  
7sKEzOMad3nkb1akWQ0o2qQFKAKQm0IH/9Dw/wAQhtmS+e+3+Kx1t8UsBrgl  
tyAni31MovUPjA0X2jITgCPBxbVDYxawwEjqaDKADu07tqc7dTql1WXb6e47  
Q4zkZ6yNpyQljPmYa3iNUPLYxykPBsYZCHqfZcpkaWWMqU6nZ+HG+eXpzx2y  
eLo5Rhk9hfR6kWAQEmdlg5bTTn6huqaJkdKdA0hQOpd+rnAw2jl4ziyCqGni  
90Pw6U5RGWQjGX2nDYPIB2xIPBe/8OkBYkSB2Ae7r8PT4scYYfMRzJ4cBICY  
2aJNLANNm/V4fJEwjLcTzJcXVRzD0OqGvab19Uc0xcpACHmfnsuUznuLo5vD  
U7up/DMmPzQ80PGLjj/C8uX7H0vr9NkOPpBlxayB80Xv6XrpZR5sZj7WcQeN  
i/8ALdvXJQfRw/gfTY+RZfTh1GPIaBF+DsAGwag8fqehxQgdkQH4/DiBzy9j  
+iZ47okPwWaJ6fqZe9BHSYgDV4OryGPDrlymeg4eXLEyGqSKdEDugC0Hk6aX  
lp6gXQCm0KgachxNu0WJ6IGc9Q+j+GCER3I848N4xQtzZSjddT6U5MOMVEvl  
dSLnp3eLEZSlpq+1HAc8oGcaj7HFa8WXNcqDII0YERK9X1o9B1U8Y3zFEePw  
ul/DdxqU6j9ljrp5MljjOS48O9TmsDy8ul4pkSNt9D6gy/yZUZc2xONHU2+j  
+zQgYEA7dDOSwOeMyYdZgmPNKQnLvt8z5+XFOEBkl8p7v02PEIZj6fwSDn1G  
AHAcmglgfDIIpdT4bN8TEvB7uuxYsMtJbi8GSQIRDTaNcm9KTt7uECQbD0E7  
nLOiJu30/wAP6M9VLXh8mXI0fofwPLRpy6yiWvxX+8e7g6HHhGgeoRA4aCXj  
B4m29QUmkotEGk0gyA5YOeA5IYXi+hptD5P4vhAx7g+h+1Y/4g8/WZMeXERY  
4aE2nJ8FI50fR6bPvwjFWsTy8GeO2Rp7vw6BlT9NT1X0N9apMzIDXu6ZMUhD  
f2ulljixxifiGje04vDAqOAYl9ouLnkxmMQRrb1YidIUwO7/S558ZE9OCN  
yDWBhtull24Zqjfldsct26B7uVaUOUZAa5Zlobau9K4Qalplj0lyAfS+Zlhc  
qfWMdK8Hlz4hDH6neRR0rqcmMVw1MpxiwiQ0pGzE6rYprRcgA1CKYFluJAOq  
kWdGIIV09KR4d8fRTmiSjlWiX1sf4bfL24/w+MezJJyP/9HP8Vw+W35mQov2  
f4jDdAvx2UVIhgM31+llvxV4PkPo9BPQwc20KjWmTobdNup7MkWxanO2g7jN  
J0UBqeHICARy61ZnFL/eDASnrxTnME6vVj6fKNKq3rw9AZ2b4cydEnEnFgxZ  
c3mjHQPtYOMMPNmkBGvhfJlkyYiRZFaNHqiYiNOYLzO8HpRkO7WLVrsGP8A  
tQB97wdP0wzx3E1rT04+kjEE9x4u0Q6YdVDqobZc38MA8nWTGOVC4iu7phn6  
OYCFa+K/iUCSN0txPZW0li+jHr4NvJDni6XITYHDp+F5BkgYyBNjSnsxx6mR  
lgAB7XLxOqcGX4jgE8QN8cvk4D0uGN5okz8H0c2PPC4T5u3yetxT9QHldD3d  
V1OVtD2Og6+GbdjxREaFxfIzdb1WW9TQ/hfQw9Bgx4zMTJIXMWcGXDPAce7Z  
IHzX9p2Zxg8/D0ucyibMd3En3ekllwkwyTsjhwx9ZHqJRxAUB3dMh2T8x4cO  
xutDc/i0IHblBiXwvxWOOcvVhqC9/wCIRjmMTDXTzPN1WfCMBhQUiMTxhLcL  
HdiWsacIzk8o4b3NNYGOE7bD2xNh5wBbtA1o0hpbqUqCrQGJrhOQd2Qab5CBI  
GO+QIO76UunjHXd4+mkIzLLrn6ozlo83MnWqwOjp82HpzuyOuX8cHw4o/S+  
VIG7UuMxpbqDDOjN1/UZL81ex498swuRJLZliRfdyM4wvY0heHNKM9sjo/R9

NHKcYmT/ACweH5U5DKQk/UZd2HDD0yTCYty9ZMm/4h1uTHIDGaiR2fGzZp5P  
iJL6uePr9IJH4ocviyctsyed1ltyxw3RL05tXnxT2utjdcTEEWL1wllG3LPE  
E2O64ZV5StVJ00cEz1L6X4Xl2TDxTxbS1GQhwkyWrJ9yeuxQiCS8eX8ZhH4X  
5X1SeS1GVvJolcqm/rPoP+tMuQ+UPX08M+Y6mrfn4ZZj4Q+I0/UZh3L58xM9  
IK1Xw8Kn0cfw+JHnJJeHrfwvHEWJEOcet6mqAJ+TxdVHqs/IkyE16KXy7f8A  
jnlzMP15ILV/0HI9TiGPiTwyySHcvoz/AA3OdSC4ZPwwLHkF9FcNTja1XoeV  
KT6fQ9TEERL5+fBLEaLljkYyBe66nF4n2fUY4YsRnW6M/wDmPk+XhRv32fRw  
dTLqOm26XCpV/E8OQjLlzlppyYcMtsGQa3eUu2aB2GJ5gf8AmvNu9Q2RT0ep  
uAme42SRNTnsxojWmslCV/xahkRqwOU8xo8hhDOtp8bSaB1CnzajsvlStllq  
7dvxrCMWHEI9xblGpPofjeH1MWKUeKpl3XqfNYDZpcsTA6vTh6OV2Xr/AGO+  
WGpPH2k8NDp5zfcj0cYu0cMR2UklNh4/w4y5ezF+GgcvqCICbAQxOfH0kY9n  
cYox7KZ0ycoQwNQAE2HkPUAOM+qrhE5H/9L0uqhvg/F9ZDZMv2I7oPyv4njq  
ZLAeW9fQzMcleLyt4pGMwR4pqUEerkFFh9CHSHNAzkaAenH+GiOIZZam+Hmi  
M8cA9no6SZ9aJkfZq+7DFixZqEQAR3fE6qo5z6YuvB1oRHudSAKLGDJGMqJ5  
eaeXfhuV7g8NzAEnMYnTkkjbrgd5AFh87aZmuz62L8Sn0wJABMht8zxQEpef  
s6iDk2rODphmj0sNoN32cJ9dkloAnAN+Ubhy+iMPpDaQOXSLxODADKUZ5vg  
7vo5svT5hsxae1w6g4/TMb1JR0X4fDMDLdoNNEHgafh3Ux6TITLW+709R+Mm  
OTycUwOnwgr0qV1Z+0+b+LkDLtoAgfZYkV2aWbfVfiPrG43o8ebqZZ6B7PKJ  
09fRxjkybZcexuhn1W1PpOkIKOEVEDTI8HP0k5ZzHQk+byvo9KAN0M0zXaLZ  
wXMZcAJjHSRRYk8uOSOPyg0bfZhk6bZUyTJ8blIxykc2+hp5ZQo2PNbmEaq2  
Tk3SidnIA/6Ly9P00sgkRRFd3vhpLaaNvPks6fjgtl0pk+blhODKYsblDf4  
nglgyiV8sGVjRpoEqHDUJauRBSDB2hWccxJ1sFolaiiRpYG0DfFhvUuOWon  
yvSLpwzTEA4jE6coUI45ZZHhiUZga93qklkUOTq5x+HzF0YMjioi+Gc8BE6c  
NTzCQoBynk3ADwaQgv0H4V1OTJARkN0Mb8+++EdYOmykT+GQ2ljB73T5o9T  
OWLgSHD42XGYSMT2fZx4cODHHPGXmv4f8Lx/iePbk31QkLcPQw0eLli+eNCQ  
+vKi+Z1MNpsKr2KmAAdcKLOO91FkS3ccumKdSFujrMms7J1YL0ZwBHc8YIZBY  
sSvA978M/Bz1fmloH6PD+AYMY11Lx/gefy0/RDIKTqpxOPOdTxn/huDHrtDv  
HDjjwAu/xQTrfZYLQko0sBbDjKvSbmOxh3NZSBLM5AiqY3M24djDsfK/+XDg  
EKIEU/OYobpP2f43g9aAHtfl6n8NHR1Wol5d00OlbRUr8PzehOu0hsLpnEwT  
il0jq8ANG30s2QzhHJA+YjbMPRkTIHLuryDUNihcB3XZQuqk0Md61q5lZy81  
E/NoxkCD2LsMbQgApLBzjh2LccRGnZ6BFPCHEXGMB6ZTM4CB4jw5XTJyAMNQ  
kabQEVOc4DjPqaRJR3GYcpZAHZ9WS4y6iRaTk9j0znAcpdUHkiCRbzTkYyY  
lZ3y6glzOQl5ozt02kuoHEoXlRkjTpCDtDD6h1UG0j//0+7p5XF8b8Wx931u  
klYeb8SxXESZT5lqGpiiWGkPpuh6z08XnG4Fif4hIkDEGo+DzfheM9QPTt9b  
F+EjeYyPAeelZ5c8+TKbkSacyJRN6h+i/Y8UMV0LieXk/FhjIGJiRZdGGY4z  
KMBwdy48R3ASNg9nGHUiENnJHdH7Teo5UQWUDqcZhLaeziJcBck5ZTzsrLFO  
AuqtGdNdbBGUpChQv4n3D08MV+pK+4t8aHVenh9OnKUcuUCciTFqgM7es6rp  
4mQxC9w/5zwdL1uXpgdnBcuo2CtkSK+KTzGcgKDTcl6Z9VkycnvbnKZmblqW  
YV3eiQBj5OyNGO01bWGZhMUa9rpjyyGIW5Zvi4pgPZxz2T0kKjvr9NHPmhLC  
DGMBzJ8DHkhKEfTiRLvJ9fpl4lkepMgVrr8UmA8jJGPT5ZRuz8Nt4oSyYyN3  
B7O34jixzyXg+Hxa6fCcWkfNuHm/wo5pQ8SsOMRIJOob68nfGzcKtqOKI+I0  
XfJ6BwkUTID4mwak8D8Wninj0Go4fKwyEo+19yPTetimK/pL4UAcmzjlygnJ  
pqXM+DuC5kVJFOrgAA3EuAm3DVFNJmWlRd/TJDznyyQO6JsPB1WcA7at6ZTq  
NvmV6s0QHqSKYEfad43kHI7OUo7uOWgck8ZFRFFxknabWRA0KIZ23A0QWEop  
9R1OPfGE8XEhw79TjOfpAZfFDQvn/g3VZlakbo4/sl9Lps8eryTjIUJDQPPC  
TLR87OAGoeHOX18+PZlXpYvBlwk8MT6kk8y6dRMS5WeGUXOMTb0NpnREyOnl  
RsPJek+WlpyMg5k3En0H4N1MYGiX6L9rx/xB/PY5DHh1GeR7stiY9tPc+8PX  
Y+8gj9vxnTc/ExkT3fW6HHjmfMXja3FHSv46f+R9CeqhV24T/EcUeS9+DD0+

3Si+Z+J4+lJxVvLIZJWfD1/6P+kCyMuz4r3SZfi+Ed2P+ucZ4BfLh00Jmw9E  
emiHuqyee1KJwgdX18uoG2ApzLJnIlz4D0+kAmqeiUBdEcY6YB0EBEU7khy  
lIOicUiWo04yyAOcuoAYJSOslgyAeGfVjs4S6kIE5dD0zmAcZ9UA+ZLMS5mR  
KGJ3y6vvcJdQS8pJdscARZQVZOvDIS5ay9PliwNGOhiJZYxPFv3/AOzYzDZt  
FUjaqfm4xE8uZgRKn2/xPpB08iY8PmdNjOXIAitHrdD0fqRsvN+JdBtFxGo5  
feiP2fG8s57o3LlpqD5vBDxeqoh5uqyiEzteSWeUu7oh6cssYuR60Q1D54uZ  
d49KZclH/9TbpJUad+siJQfPwS2yfTyDdBMHxfUx2zLg9/Xw2zeFgPT/AAAnM  
cWSx730+o/Eckp7o+v8HpTWQP0//AFdCMI5ZGweXLmQzy5dRInoSdWfSnKO6  
jQfosXSYS7AFEAOU54oCeMkUjDPnjhkBZenolgZMT4OEsupXFkkDcRq6xML  
imejuEBVahE8sJgRka11cfQy5pHcWv2OIBBNmkdJZzTIGTy+YPXATIE2dv8A  
heDbR00e3DOMNZ+a2EquipGUZcmMxFbXzX0pjHOxImL5xluhw1HQQ9kZR2amn  
jSiG2LdfIR1A1tzhKi9GWJ2aglp0css4mEKoPqdLkEY/CJGJ1fC6Qx3gTkY  
x8X18AJulxy8n8TGDv6rDlkBkyREldoh8qHV5BlmPzfqchM+n3EjUPzeGAwi  
Uux0aYep1zliRla2jHMSILcNCHqHowgO+jkOpjA0I6HysKeSMk4eSB7vh9XC  
ePOd/L7ssf8A4RsOnd4vxnDG993IJEU7nJVCyXEHW13XEIDTRtDzPfiw0LfO  
xmiH3MUbGk5aCJaB86RuT6EoSOjw5MEonhhScsqg8mKew2+hn6esUcg78vnR  
gZS2hEN4SEJbonns55Mgskcl0n00oR3F5wQOAgXDdPQllil+LR9b8lw/tEzE  
mn0fxP8ACYDHugdQpB8uleGr634d+HHq47ohwx9KBevZ9X8CzmEpYfmGSETi  
6KfR9SIHWMxTnAnpeo9xfZ6zDKO3KdTEvB+LYwJxyR4kHMBksZ/iuPbk3jiQ  
t8uchEW+7ml6roxLvB+dzG9AmIjnE5sua9A80i9OLCchJcMsNhoukbSwNMWQ  
7aPCDkgHbFEGO15MsKNM1Z0xSk2gDINRD0/sGXmi1+F/E/ZQiNo0c2wOFrtH  
xf7JIHYvRghkx3oX6wwj4I2R8Hm3JFn2R83DL1EeAXHJDqMhuQL9VtiOzz9V  
IRi5SScwaf5F3geV0kqFF7DIB8n1qkSzPqz2etTm3B6sswDzT6sB8ifUyJ5Y  
1m9CqWd+Trh2eWfWEpjjFauM8YDJRv23EsBzyku4yYqnp6TGMkqazEEwxk1  
lg00fQn0ezUM14uTokoPPj0xly+h0/QxmNU2A9fSRMpKRxPH63pfROndwmRj  
o/VfiXQGcNw5flpYzdF0Zg6OkY7ZCQ7F+uh+NRjjoV+GiTilo9J6mRCNzB2  
fiXXS6mVdn0PwPpNx3yD4OGBzZAH7Tp4R6bD8tUyamfXnUQHvfL6vL6cKeo5  
DMmcnwwxHPuNBpo83LPfllgCzQV7Ohxb5WWmTq6PoSdZPswwwgKcxMYhTjPq  
h2bBD//Z

---=\_linux46186e8c--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?.....PICS

Posted by [Kim W](#) on Sun, 08 Apr 2007 04:27:54 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

---=\_linux46186f4a

Content-Type: text/plain

Content-Transfer-Encoding: 7bit

I'll try again with the pics....

"Kim W." <no@way.com> wrote:

>  
>  
>  
>Hi.  
>I second the capacitor/regulator idea.  
>They are cheap and easy to replace, so why not give it a shot.  
>If anyone's interested, I've attached a couple of pics that show  
>problems that I've had in the past.  
>First pic shows a capacitor that's been anchored to the circuit board  
>with some kind of contact cement. This is common practice.  
>With time and heat, this goop can become conductive.  
>If it was blobbed over exposed wire links or component leads  
>during manufacture, the conductivity can cause the equipment to fail.  
>(Happened to my SPX90 some years ago). Just scraping it off or  
>carefully cutting it with a scalpel blade fixes the problem.  
>  
>The second pic shows examples of bad caps that were released, in  
>billions, onto the market, when (allegedly), an unperfected  
>formulation for higher density (smaller packages/higher capacitances) was  
>the subject of industrial espionage, and stolen.  
>So a huge number of motherboards and other equipment has electros  
>that dry up after only a couple of years, (depending on how hot  
>they get).  
>In the pic, the cap on the left is actually bulging on the top  
>of the can, and the one on the right has leaked a brown substance  
>on the top.  
>These should be replaced immediately if you spot them, as they  
>WILL cause failure.  
>(The pic is actually of a friends' Dell mobo which has become  
>flakey....spontaneous rebooting/blue screens etc...)  
>Kim  
>  
>  
>  
>"Edna" <edna@texomaonline.com> wrote:  
>>  
>>  
>>Its possible, but not likely, especially if its not a new unit, which =  
>>would be more likely to have a defective component. Something caused a  
>=  
>>current overload through it to burn it up. But apparently not a direct  
>=  
>>short which would have blown the fuse as well. I've seen many leaky =  
>>filter caps do this - these are the large caps that filter the ripple =  
>>voltage or small ac component off the DC. A blown voltage regulator is  
>=  
>>another likely suspect, as far as the PS itself. Can the PS run by =  
>>itself w/o being connected to the M80? =20

>>

>

---=\_linux46186f4a

Content-Type: image/jpeg; name="cap 1.jpg"

Content-Transfer-Encoding: base64

Content-Disposition: attachment; filename="cap 1.jpg"

```

/9j/4AAQSkZJRgABAQEAAtAC0AAD/4R87RXhpZgAASUkqAAgAAAkAA8BAgAG
AAAAhgAAABABAgAVAAAAjAAAABIBAwABAAAAAQAAABoBBQABAAAAoQAAABsB
BQABAAAAqQAAACgBAwABAAAAAgAAADEBAgAcAAAAAQAAADIBAgAUAAAAzQAA
ABMCAwABAAAAAQAAAGmHBAABAAAA5AAAAABQEAABDYW5vbgBDYW5vbiBQb3dl
clNob3QgQTQzMABAdxsAECcAAEB3GwAQJwAAQWRvYmUgUGhvdG9zaG9wIENT
MiBXaW5kb3dzADlwMDc6MDQ6MDggMTM6MTI6NTYAAAAAHgCaggUAAQAAAFIC
AACdggUAAQAAAFoCAAAAKAcABAAAADAYMjADkAIAFAAAAGICAAAEkAIAFAAA
AHYCAAABkQcABAAAAAECawACKQUAAQAAALoCAAABkgoAAQAAAJICAAACkgUA
AQAAAJocAAAEkgoAAQAAAKICAAAFkgUAAQAAAKoCAAHkgMAAQAAAAUAAAAJ
kgMAAQAAABkAAAAKkgUAAQAAALICAAACGkgcACAEALoCAAooAcABAAAADAx
MDABoAMAAQAAAAEAAAACoAQAAQAAAIACAAADoAQAAQAAAQOABAAAFoAQAAQAA
ANwDAAAQOogUAAQAAAMIDAAAPogUAAQAAAMoDAAAQogMAAQAAAAIAAAAXogMA
AQAAAAIAAAAAowcAAQAAAAMAAAABpAMAAQAAAAAAAACpAMAAQAAAAAAAAD
pAMAAQAAAAAAAAPeAUAQAAANIDAAAGpAMAAQAAAAAAAQAAADwA
AAA6AAAACgAAADlwMDg6MDQ6MDcgMTM6MDE6MzgAMjAwODowNDowNyAxMzow
MTozOAAADAAAAAQAAAL0AAAAGAAAogAAACAAAAAAAaAAAKIAAAAgAAAA
YFQAAOgDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAQyIAvAAAEAAAGgCNAAAA4AgAAOAIAAAAAAAAQAAQACAAQAAABSOTgAAgAH
AAQAAAAwMTAwARADAAEAAADgCAAAAhADAAEAAACoBgAAAAAAAAABgADAQMA
AQAAAYAAAAaAQAAQAAAGIEAAAbAQAAQAAAGoEAAoAQMAAQAAAIAAAAB
AgQAAQAAAHIEAAACAgQAAQAAAMEaAAAAAAAAASAAAAEAAABIAAAAQAAAP/Y
/+AAEEpGSUYAAQIAAEgASAAA/+0ADEFkb2JIX0NNAAH/7gAOQWRvYmUUAZIAA
AAAB/9sAhAAMCAgICQgMCQkMEQsKCxEVDwwMDxUYExMVExMYEQwMDAwMDBEM
DAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMAQ0LCw0ODRAODhAUDg4OFBQO

```

```

Dg4OFBEMDAwMDBERDAwMDAwMEQwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAw
M

```

```

DAz/wAARCAB4AKADASIAAhEBAxEB/90ABAAK/8QBPwAAAQUBAQEBAQEAAAAA
AAAAwABAQgQFBgclCQoLAQABBQEBAQEBAQAAAAAAAAABAAIDBAUGBwgJCgsQ
AAEEAQMCBAIFBwYIBQMMMwEAAhEDBCESMQVBUWETInGBMgYUkaGxQiMkFVLB
YjM0coLRQwcklPw4fFjczUWorKDJkSTVGRFwqN0NhfSVEjI8rOEw9N14/NG
J5SkhbSVxNTk9KW1xdXl9VZmdoaWprG1ub2N0dXZ3eHI6e3x9fn9xEAAgIB
AgQEAwQFBgcHBgU1AQACEQMhMRIEQVFhcSITBTKBkRShsUIjwVLR8DMkYuFy
gpJDUxVjczTxJQYWorKDBY1wtJEk1SjF2RFVTZ0ZelLys4TD03Xj80aUpIW0
lcTU5PSltcXV5fVWZnaGlqa2xtbm9ic3R1dnd4eXp7fH/9oADAMBAAIRAxEA
PwDiczVwxAPe7Ww+DfpOXZdLb+1+gV1XM9XafQsO4NI2D6XqRY/vX+YuUpXR

```

TRZvM32e4k9wfitv6l5zcf fluxby4V3QWBok7xw3Z+9YoMsuLUfonRsRx8l13  
lsscSpj+gZWA+WdRwhLdzDJsQpQ1bHta722Nbt962umOr6gzGcGS1rC5pnVx  
sDXMZ/Jqqodsfu+mo5Tun5Quzbsa3Ge39FRbYDTYdki0B9b/AH+7+V+kWL9T  
+rMxOqMxr7Sa7a3Vtj6lcx2+n2/8U9zE6M+McJFdCxGNajzbln1OxcizMr6f  
nA5TXFxx3V7WB4/wbbvpe130n7FgZdDr80vuDgalqyGPnd6jS4Gqfa76Puf/  
AOfF3PWBRgZFPXqHRTW5rOp1VnV1Dne3NpH/AHJxXv8A0n+mp/qLkft215r8  
m6l1j8uyx4yHD273WH3RPs/QNr2sVjGCDwhjJvXd2cXo9HU3NFVbcOqshj3A  
S1vGr2f6RbFHRem44EUNkcvsaHOM/uyI0NzG9NxntAixm97j3LzK0WDeQ3aX  
OJ0A5/spkpSJIXCms/EwnM2vorcGjUFjf/Mdqzeo/V0U0G3GkW6OGI4S7aRu  
3ssd7m00/R0v+mtzulmKXOaQ+0xLjq1rgfzB+c9QedCSSTM7jrM/1k0SIO6X  
jem3U0dRxcM+svZQ4va+fcGkOY7d/V3bti6PqdLXVy2CwiQfEHv/AGIm5PS3  
2dRv2FtdTrNXPBDP5v7TI/R/0P03/wDGqwG9Stw6m1hoprYWC0yCdpO2ZG92  
9n8n9GhzELEZ7Xouxy1Md3j+r9OrJc6lvpWkES3SfuQ/qziWY+dfa8zOJdHc  
8N5WIIYVITbKnvNpkkOdyAf+qVPozXNy8wO5GLZr5SxMhLSrtMo63T0EN9HC  
HhWTHyCv9PyziZAsH0To8eIWc5zg3Dj/AERKLW+GgqQD81h/Y9oa68iqfpMs  
Gh/iuC+vFr8CvGDeRcRI8A0+5dN0bqDmn7K/3N/MCzvt0d3VumbqQDfik2M  
aO4/PZ/mo8Otovo8103reLa1td1gx3EmNT6RP724bnUu/fZtW/RiZdjPUrab  
Ga++sh4On/Aut/6S43pf1O+sPUQLKsd1NDubbvbp/wAU73PXZdJ/xe4GNU12  
Xfc+7uGvLW8R9Fm3aj9EP//Q57Lota/1Cd28kNYzUgfR2OaPoud+YxBxKbjl  
MqxyTY5wLiwF2glLjWG/S2+2ti7pvQOm2WI9pL6CCA7dtkz7m/oh9Hb7fYhb  
+pwcXpOAZp1NbnAvbpuj/Ceo/wDk/uKCEJdaDayZYaiNy/AOVmPeLBkZ1T22  
vY2aXagB0scdm7063Ob/AIP9J6dv9hc5ndO/ZnVamxuo8PYQNNp+C7h1DKx  
jDKsruvZY4WOkOAFgM7y/wDOY8MsVbrvTz1XFY/BYLL8Z4LbdrvSj85j7Wj9  
391LUSoA/wBnRjFEW4/1ktYzoZ9O5zm2kDSwlpAT8fd/bWVhXNt6bjVWGK3N  
LR47hMBF+sTAzH2Osa2zRza31tNkt+bkshtzW/yq/UWViunAFZkhlij5yYc1  
Wly9QLFW72n1W6j6YHRsw+IY0zivsMNLXHe6rf8Avtd/NrqZDSa2aAftSjg/  
L9xi81qzacqg1ZDjXc3Wp8DYfzTu3fvfnrW6H1L6zuyqunNb9prdLveZARA  
P UeyvK/Mc76FXrez1E+WlyNiv4+S3ip69tkCZhhEbTxCjfkY9DHW2PbWwH887  
dXD27nkbdv8ALU8VtGTWLqTbaxxl2uaWvaR9Km1kex9bvpsQOPmj1qsXLYwY  
wa6/Jqfy8EOx8av0x7/0lj7LP+spR5eROpWnMBsC43Uciyo35FeW4Vtax9tL  
2h9J9Ys2U/pfdW/La37dXjtb/RamW5H84rmFnW3/AFdxs8tDxbZabjJ0DrH6  
t/k7lyPvRWUPs6abLraqlAzAqte47WWBrnMf/U/9Rrqvqc8O+r9OHYPURELR  
WY0cPUsrs/spnOAcMQNQCvwXZJ6hyurGqq1u4+20hrlkjXzVHEpNeRmuAhhx  
HbXeJLmbmq51ijabOn3u1af0b+DB91bv6zXKI03JfdVI1WCLaqC20/yt7G8f  
uvb71VgNbZ5Gw37pH2SO1Q48yiVgNjQiTpPCFnl1b6A3T9E2Vok7miNeJCsR  
2+rEd261xY4PH0m6groG9UwK66xtc6yAukaNXONmYPJ0Vqqyr9oV1WiWQAF  
DylC6RVtrrPWeq4trBjV/onDnbumUv2r1G6qtzsY0CP0j/E+P8IX787pmJls  
sD3ztaxolHaWX1ajcHD5Jx16o+j/AP/RudHtltsotaWtsaLKKQTEmpE/B/W+kr  
uf0/l6lbWKsh1FYG2ymtpdl/eb7m7nfv+ouQZ1fJdkVWudJo2ljeBDT9FdXk  
2ZvUsJrsE7GP92xvs0l/e0/6bkBvST3YPw8XpTXVMBvybG0dUbd2sdHtcWf  
zawvtXWcblpq6651tFhDRL5bXP7ja9ldf+atvpvQs1mFY/lt23AyGRvaGx/h  
rvzf7Kj9YsRmR0u6trmXXY7N7thD4LeQdijycVabdWSFXR3eRuquzen5TXH1  
rKCDucYI2lzPb7fouWNgDdXk1u5jdHwC6vplFtrqxSwvL6yLoHNcid+7+U5Y  
P2Q4fU8igjUNd9wPt/6tIS189VEfg57iYLDIP5fBan1RzL6eqEstcw+i8CD5  
tP8ABZe0h4jg8DIXfqyY6txzXYI+StYybYJjQ+T2d/UeoWkP+35FbgNp9N8N  
l/l1x6b/APq1Cipoc60zZc+C+5/0jHGv7rW/QYq99rqxSGQTbZsl3AG1752j  
bu+gj473i0tc4uBYHRtDQDu2qcnRhAcPqbR+173AtD9tT2nSSCCxzWDX933u  
b/39bv1dttd0vG9MIOPssxuA8lz32WNLW+79P/22y5YvVd7esajc22gbgf5L

ntb/AJv+v+jf0vRMAtwKBaN1T22B0Egsc10tg1lv0q/o/wDF/wDCKrzJFDzb  
GlfkHnPrKcyxr7cmz1iCHU2gQCxw37NrW/R2/pFQ+rjXu/aL3d6a2jv/AIRd  
n9YsRgxbKwCRdvc0AS0QNzwY9rf0v6Rn/GWLVq9SW0dS00/V2sPfvz+VWEh  
Rpl4Tdun1Bh9VhI4qYPLlxSxhB07qxnSjvAaNGtamoqdPHJUkT6VpGqcNBgH  
SfyqOL7s+x5Gjf4I5qJGvLdfuVbCdBybPAEymkpAdTorsS5j8h9lfcXuG52u  
gOm1ad2S8sDGgNH8IZHqM7cBhOm6TPxV+OCNfikZFHCH/9Kpn1YeNi4+b9Xs  
f7dS9xAvmS17Pbc25z9rnv7C0vq5I33MdjWOaH1/pWAH2hj/pfS/dcs8dRb  
ThV4V1fp20gMds+gCPz2tb7f0iF0zD6szqjLcbGfbQxwcHH2sLHn9lwOdt3f  
ve1Nu9V1USHp83p4zD7s11dLgn1G67B/V3OaxDqHQsbGNPc+6+2WOBB2R+8  
58NZt/4taWTiY99DqMkCqp0GXHa6R+dXW2XblXrbg4v9GxwXCIssMu0SIVUV  
Rvo82zDvwuluzKnAek9tT2tcSSC9lb28fQs+k1C+s3TbKM3FzXNO3IaWPce4  
cD6T/wDX89WsrNzLur2dFc1vo9Qcw1WNBAreHC1zfTn6H6NdBThXV51nT+oV  
/bsJ+5+Lba0Phrj6jq7f3XVWweooowJvXY7+C8yA+ofJWQbHMdpzofFWOge3q  
9B/eLmEf1mub/wBUus+tH1NwKOoDIxrnYdOQ0u2wHsY5v86Tvc17a3N9/wBN  
YWPPhdJx8mtjsq7Js9VjXBlJpEyA39Nc/1dv8qqTwiZAlw68Q8D+bERY8Hevq  
e5jCwbnV2NfBMcbmu1P8I6sY9dxc22xuwFpY0amZLXbt0N8E/wCsMkVNFg4B  
d/Oz/wAY79G7/tun+uoBr3uLbGuYw/T3kbn/AMj2ud+j/f8A3/5tWDLTXRHE  
dWpkV+r1FijTDbKC2p0xuDX7tzhHua5382xdH0Jov6UK7anXVVWuYCCBOxwd  
ud7m/wCFWLmyMzGZ6ZddYxwo8CQQTjt9LmW/6T011/T8avp+HXQRqxu1w  
blmx36S303N/lu2qhz6rxOl/wDSbWEdkOQacip9EFr3NMNclJj/AKpcT0qn  
0aUOVO0lycSn/p2rvsk1mwvjaGe8iJI0+jp9Jcj1GkYufYwaDL6nglvaQQ5/  
8VBikSGWWyfJD2fabq2tsfW5gDHabh+c0H83+srGM3HyGV5FM+nYJbPI/ea7  
+Wx/sco2isMzS8tY1twB3dxt97W/2Ssbo/WLBe/EFTt1jnPayCAHfSdt/wCM  
r/Sf10/1a0xSIBF7F372MzS9wOsaLHrdsWmp/BgfitHJtuGMfUZtJ85WXZI  
6a8f6RzW/e5Ojdap06Oz04enh1s/kj8ith0jTVAYIraweA4RRIA1mE4oD//T  
1un09ENFOW2p2RkvqaQ54B2k+6Jd7fb/ACGLQZnZAn0opk8tEvj931Xbn7Vg  
fVa+u/plQbJFYNeVmt9q366ieFDxaVsya3ugLSSXHUzqTqUwaYPdXGY+8Ok  
6BSONW0bjJQtTww1iuyMHR2Jm0fTr22AdjtMOB/aaV2OD9aukZeOLPV2PP06  
jqQf3Vx9d6K7qNm6oxdRWXmb+8CdWrD6lwurO33mSHRo4a8WM+l/bT4S1IRO  
NxBert6g/Lz22MYIra5rGWCQQfpixpH+EZ+Ys3qP1TxM2belZRwnHUYt7fVq  
a4a/oX/z1TN3/Gq3gVPFjPTZuNcO2cCP/M/zf31Zu6n04uDay22wae32aTta  
3f8A6Td7GM2WfpFFm9yOTix70OIjgBw6/Rqv6Zk0t3PD3aDc6slzZj3ce/6X  
0dyr4rMq81Px8QkWlstdudaGu7n2imt1c77N1i6TE2uaHse5kgENfoYIDv8A  
OVp7mBhPrNkRt3EI+6fzmfRc1GHO5BpLHHiHXb/mrTgH7xrs5+H0pITq77wL  
r2S6pwEsq3DaSz96x30PUVrefoD6epazTdp319qm+wTz6ju54H9ZD3FriQRL  
oj4qvMyyTmP/y/qs0liloKFewkdhEHvr4n95cj9ZHWnruHXcWNqry8a2oxBc  
0bt255d9Nnua72rq9znA9/FZX1m6EesdMLKtMqoGyl3BkD6LVJjIB89FTFh5  
8WYd2bk9TyKn5mNTk3Y/o1Etk7a7K5tZuftu3eg9ja1T6jl5WVc7lXqKum1Y  
oaxlYBqsdB/RPHql1mW/3e9/5IS0/qRi2YvTsjHtfutGS9zjxlC2qHfgtHqu  
BXIUuY4BzwPa53j8U+RokVdME8QmL67uWxwfhMvBJ9Vm7XX5ldgmjHr/ANJc  
z8BuUm0Px8CrFclcxnHhJPt/sp3geviV+G95+Q2hOC/p9HZAcRB08Cnaf00T  
Igaef8IPMN/10SDLHO3EjZEAj6SBOyqf/9Sp/i/yfUZfQ4w5jg8j4iHf9Su5  
9WljYJk915j9Ssn7L9YhjuPtvY5hH8pq9EygGccEKCQ1LL0DM54qc4t4Onkg  
uznPO0nTgLNycjaDlnXuqTuoPaRtlCadGWGLiF29BU4HKrdxva9p+IAf/wB9  
Vc9E6XkvAyKQzIraGI7XGtzx++HVuZuTdOtttrssbtc25o8JDgayf8AprXL  
WuYQ8AgSTIkf9JNi+aKqx2a9FGJgUDGxhuMksr3F730OsvC7c7b/AC7PoKVO  
BRjgONTTaPc55Gu4xve3d9Dc5cp1b6xZVlZsbph+x47JBdUNr7D/ACns9zWt  
/dYh9D6z1CjOqqdZbk0WPDbk3uNm00031K/U3OZs3bk4YpcNg76reMXR8nuQ

dD8EA5eGHWD1WTSB6smNs+7VVH5luP1Qt9QX1OqJdVuaDWazEtPtbtfu/wAJ  
/wCk1yH1u6scjqON6DfSbZLXAOBL2tJ9z2t9rdiZGBK4mnp3fWUWe7DpFtZ1  
bZY/bug/mMY170XA69j5OSzDvrdjZdn820ncx8Aud6dnt9+1v83YxcLdIRe1  
tjfVqx5ZW0PLDH/GMV3odV563g5BhzrHuc0OsLiQGO+le71HMap54ocJI6B  
jjOVi+r6ABxyZ4Eij7WU1utdMVguO1pc6BztYPcsz9o0+jWLi4HIPpljNwMk  
7XzYC30G/wBd6q1dSym4dJZc0MFpr9WR6ha0x9B+/Y1rPpPVcQkfBk4h5tXP  
29O6xVn0mMDqjeZ0FkbtB9H37IK/KcSQBvEwXKti0N6jgZGLkEM+zOdve92j  
bAfUpvpqa9uPTTucz6Pr2WMe/wDSU/o6kPDe+6omyv8AT0uNGTWdCyxnoV7L  
ILQ66kafwWbfXVlcd7d543AePGqDWPV6kyTIZUPxKs21+myljtHPe50eQDWO  
OC39evJ/N2t+4SiEF1XOER4JhYY5QbbdsJ63SJJ+KRCn/9XnM7Cf0nr2Pmsb  
toNzH+GjztcA35uXp78c3YzLB3asbqfRaepdLLKmzcG7qbHauP8AhPpu9/vX  
Q/Vs/aeiYtjXFkPHg4e1wUAlxVXZmqgfN5vPxHVuleIB5J0Crsbh4tZt2+p  
eB7XHUAc+xh/O/ILd+teOKen3Zu6KqSNx7BcvjvORE+p4LW1bfUb3JcNzWT+  
b7fcq/MSkaANAFmPg3OTGM8Up6mOkY+JbfTHZN+X6zAdrGh9o7bR9D+06xdO  
4j88aHkDwXK4I4symtqu9CiyxlZc0msBhO2z/NaXLpnVmGsqO2tkNAOujdG/  
SlyWMgitqP5rOYPPFi7iv8V4D7M+rq1+JINkNftAkDYdtDm7f3q3LQr2VC  
toDamFztGaSB7t3K0Op9Kqs6oy+y70LNoDZBebYlvsYP8JVP0WI+HigXurox  
zvbDn5OSBDS76HpY9bm+523/AAisifpapjq07cVoyQ3GO4mya3Tt3NJ9rq9G  
v9NIXq12e/8AnVi/WjGtty8NwpNbAbGNE7gHM3Nuq4Z79+3+w/euvw8d5zbK  
8vHFray51OQW+2XO3/1Pf6vt+n6X6ZZ31rwnvyMPla6ag8tdWBHvc0B1znT7  
nPrqZX/YQEvUB36qIeTxpe98l/0mw12kH2jb7v5XtW90KxozqTj7XvopseW  
GY3emGnWG7/z/az/ALcWJdbXbfa9ntbYQWg8kgQdf5S1/qxi5FI919Yc37OG  
uDgPF35v721jHvUszUSgdHfAsyW2hz2uN59ar2PYzcpexpZaP0m+r/rb/wBl  
gY+PeKcnJrZsosAY8WV+8NkerdXo2p72fT2f6Nn+EsWrThYppbdXWxtplzLG  
6kkn1O/5r7G/nf4NWcQXPoYb2GmyPc0kOl/tDc1VzMVQXiJ+1zWdDppZZc8i  
yxpDxubAPp/m3fS9X2epX/1z9Gq3VjXjZIXsfXEzQKs2ZA8KMgt/wCg5bIN  
Ho0MqY4ua0aufBJ/6lqyutZLmvOHksBwL64scAXOI0a7WfY+v6daEZSMkkAC  
3OzMiet4OIDu2ucO/dzv++p8cH7VmOb2uc2f6o2qniYVzPrN0tlxl2My2s9  
5aA70Xb/AM/9G/6a0/q9V9rw35YEi+220HydY8t/6DVKfTXkFg1vzaOdnCq3  
bEn/AFKs9Lyftbm1NgOc0gTwCfaJWd1fAfbmPIMAO+6NP4KXTHjF3+/Y6tgL  
DJBdBbura4B22yxqRIIloboqi/wD/1uvx3McwQdBp8Dw5v+cidOxeoMdkY9FI  
VOKbPVpsALrCbBNrNksrr2WfQf8Anr53SVXHv4Niez9G5P1cwbaLvtYOc91Z  
a63JJe4Tyav8HVtb9FIVS4X9I3DPvxMW21jrn7musYdzmta3c6hrBve/YvLE  
kM/DpxfLp/0td04OP1cPb/ncPpfa8X6h5FzAbLbMZ7iJyLPpFvu9jMRp9v8A  
161dUOm49OJ6Vcu9JgDbnke4tHu3Rt2/yvavmpJOHtV6auvqsl7vW9/o+9ZG  
L619ORXZ6VIILZiQWH3fRIql6dL72WFjTYwSx5iYn80futteBpJnqoL9H6Cs  
c/Y8VlrX67S/6IP8qlXOfWHKff0yriY0usxi6y2oAyWt9lj2bfa7b/l/MXkC  
SMPmHewiW30esrOPa0bPcZ0LTMfH91dj0p+Tg3vzb6nHHy2ihg4e4tDrG2w9  
zttX5j33PXkSSsTvgN1XVjG47vtj8jK1xcKtFYIBNIDmw6S53qg11Vubt2u  
2KxV1SrHoYzJeLb2t/Smr3CB+dv9rPo7d+xeFpKD01/DdeLfoA30ufs3tc7w  
BICzcYZVGxoBsaQ+vfXuH77fd7dq8ESTBvouO2r7N1HpmVh4dfUK3h2TiNsa  
7SQKnj2tmG/zH7y0PqvTRifV7Brteyt4x6y8OcBBLNzt0/ynrwlJTG+EX3Yx  
V6PqvU8qp9pNFb8kPtLbLa2ksYOffZ7Wbv3EMvD6w+qHVtAO8agfymx9JeXJ  
J8Oq2T//2f/tIJJQaG90b3Nob3AgMy4wADhCSU0EJQAAAAAAEAAAAAAAAAAAA  
AAAAAAAAAAAA4QkINA+0AAAAAABAAtAAAAEAAQC0AAAAAQABOEJJTQQmAAAA  
AAAOAAAAAAAAAAAAAD+AAAA4QkINBA0AAAAAAQAAAAeOEJJTQQZAAAAAAAE  
AAAAHjhCSU0D8wAAAAACQAAAAAAQAAAAQA4QkINBAoAAAAAAEAADhCSU0n  
EAAAAAACgABAAAAAAAI4QkINA/UAAAAAEgAL2ZmAAEAbGZmAAYAAAAA



AAEAL2ZmAAEAoZmaAAYAAAAAAAEAMgAAAAEAWgAAAAAYAAAAAAAEANQAAAAEA  
LQAAAAAYAAAAAAAE4QkINA/gAAAAAAHAAAP/////////  
//8D6AAAAAD//////////A+gAAAAA/////////  
//////////wPoAAAAAP//////////8D6AAA  
OEJTTQQIAAAAAAAQAAAAAQAAAKAAAAJAAAAAADhCSU0EHgAAAAAABAAAAAA4  
QkiNBB0AAAAAA0UAAAAGAAAAAAGAAAAAAHgAAACgAAAAAgASQBNAEcAXwAw  
ADIANAyAAAAQAAAAAAGAAAAAAGAAAAAABAAAAAAGAAAAAABAAAAAABAAAA  
4AAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAABAAAA  
AAAAbnVsbAAAAAIAAAAGYm91bmRzT2JqYwAAAAEAAAAAAABSy3QxAAAAABAAA  
AABUb3AgbG9uZwAAAAAATGvmdGxvbmCAAAAAAAAEJ0b21sb25nAAAB  
4AAAAABSZ2h0bG9uZwAAAOAAAAAGc2xpY2VzVmxMcwAAAAFPYmpjAAAAQAA  
AAAABXNsaWNIAAAAEgAAAAdzbGljZUIEbG9uZwAAAAAAGH3JvdXBjRGxv  
bmcAAAAAABm9yaWdpbmVudW0AAAMRVNsaWNIT3JpZ2luAAAADWF1dG9H  
ZW5lcmF0ZWQAAAAAVHlwZWVudW0AAAKRVNsaWNIVHlwZQAAAAABJbWcgAAAA  
BmJvdW5kc09iamMAAAABAAAAAUAUmN0MQAAAAQAAAAAVG9wIGxvbmCAAAAA  
AAAAAExlZnRsb25nAAAAAABABCdG9tbG9uZwAAAEAAAAAUAmdodGxvbmCA  
AAKAAAAA3VybFRFWFQAAAAABAAAAAAbnVsbFRFWFQAAAAABAAAAAATXNn  
ZVRFWFQAAAAABAAAAAAGYwX0VGFnVEVYVAAAAAEAAAAAA5jZWxsVG9uZwV4dElz  
SFRNTGJvb2wBAAAACGNlbGxvZUZh0VEVYVAAAAAEAAAAAAlOb3J6QWxpZ25l  
bnVtAAAAD0VTbGljZUhhcncpBbGlnbG9uZwAAAdkZWZhdWx0AAAACXZlcnRBbGln  
bmVudW0AAAPRVNsaWNIVmVydEFsaWduAAAB2RIZmF1bHQAAAAALYmdDb2xv  
clR5cGVlbnVtAAAAEUVtBGljZUJHQQ29sb3JUeXBIAAAAAE5vbmUAAAAJdG9w  
T3V0c2V0bG9uZwAAAAAAGKbGVmdE91dHNldGxvbmCAAAAAAADGJvdHRv  
bU91dHNldGxvbmCAAAAAAAG3JpZ2h0T3V0c2V0bG9uZwAAAAAEOEJTTQqo  
AAAAAAMAAAAAT/wAAAAAAGOEJTTQQUAAAAAAEAAAAAThCSU0EDAAAAAa  
3QAAAAEAAACgAAAAEAAAAEAAAOEAAAAawQAYAAH/2P/gABBKRKIGAAECAABI  
AEgAAP/tAAxBZG9iZV9DTQAB/+4ADkFkb2JlAGSAAAAAAf/bAIQADAgICAKI  
DAkJDBELCGsRFQ8MDA8VGBMTFRMTGBEMDAwMDAwRDAwMDAwMDAwMDAwMDAwMDAwM  
DAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwM  
DAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwM/8AAEQgAeACgAwEi  
AAIRAQMRAf/dAAQACv/EAT8AAAEFAQEBAQEBAAAAAAAAAAAQAIEBQYHCAkK  
CwEAAQUBAQEBAQEAAAAAAAAAAQACAwQFBgcICQoLEAABBAEDAgQCBCqGCAUD  
DDMBAAIRAwQhEjEFQVFhEyJxgTIGFJGhsUlJJBVSwWlZNHKCOUMHJZJT8OHx  
Y3M1FqKygyZEK1RkRcKjdDYX0iXiZfKzhMPTdePzRieUpIW0lcTU5PSltcXV  
5fVWZnaGlqa2xtbm9jdHV2d3h5ent8fX5/cRAAICAQIEBAMEBQYHBwYFNQEA  
AhEDITESBEFRYXEiEwUygZEUobFCi8FS0fAzJGLhcoKSQ1MVY3M08SUGFqKy  
gwcmNcLSRJNUoxdkRVU2dGXi8ROEw9N14/NGIKSFtJXE1OT0pbXF1eX1VmZ2  
hpamtsbW5vYnN0dXZ3eHl6e3x//aAAwDAQACEQMRAD8A4nM1cMQD3u1sPg36  
TI2XS2/tfoFdVzPV2n0LDuDSNg+l6kWP71/mLIKcUU0WbzN9nuJPcH4rb+pe  
c3HyLsW8uFd0FgaJO8cN2fvWKDLLi1H6J0bEcfCNdyLLHEqY/oGVgPlnUcIS  
3cwybKj6tWx7Wu9tjW7fetrpq+oMxnBktawuaZ1cbA1zGfyaqqHbH7vpqOU  
7p+ULs27Gtxnt/RUW2A02HZItAfW/wB/u/lfpFi/U/qzMTqjMa+0mu2t1bY+  
iHMdvp9v/FPcxOjPjHCRXQsRjWo825Z9TsXIszK+n5wOU1xccd1e1geP8G27  
6Xtd9J+xYGXQ6/NL7g4GiKshj53eo0uBqn2u+j7n/wDnxdz1gUYGRT16h0U1  
uazqdVZ1dQ53tzaR/wBycV7/ANJ/pqf6i5H7diOa/JupdY/LsseMhw9u91h9  
0T7P0Da9rFYxgg8IYyb13dnF6PR1NzRVW3DqrY9wEtbxq9n+kWxR0XpuOBF  
DZHL7GhzjP7spdDcxvTcZ7QIsZve49y8ytFg3kN2IzidAOf7KZKUiSFwprPx  
MJzNr6K3Bo1BY3/zHas3qP1dFNBTxpFujhiOEu2kbt7LHe5jtP0dL/prcrPZ

ilzmkPtMS46ta4H8wfnPUHnQkkkzO46zP9ZNEiDul43pt1NHUcXJvrL2UOL2  
vn3BpDmO3f1d27Yuj6nS11ctgslkHxB7/wBpZuT0t9nUb9hbXU6zVzwQz+b+  
05f0f9D9N/8AxqsBvUrcOptYaKa2FgtMgnaTtmRvdvZ/J/RocxCxGe16Lsct  
THd4/q/TqyXOpb6VpBEt0n7kP6s4lmPnX2vMziXR3PDeVpZWFZU2yp7zaZJD  
ncgH/qIT6M1zcvMDuRi2a+UsTIS0q7TKOt09BDfRwh4Vkx8gr/T8s4mQLB9E  
6PHiFnOc4Nw4/wBESi1vhoKkA/NYf2PaGuvlqn6TLBof4rgvrxa/Arxg3kXE  
SPANPuXTdG6g5p+yv9zfsAs767dHd1bpm6kA34pNjGjuPz2f5qPDraL6PNdN  
63i2tbXdYMdxJjU+kT+9uG51Lv32bVv0YmXYz1K2mxmvrleDp/wLrf+kuN6  
X9TvrD1ECyrHdTQ7m2726f8AFO9z12XSf8XuBjVNdl33Pu7hry1vEfRZt2o/  
RD//0Oey6LWv9QndvJDWM1IH0djmj6LnfmmQcSm45TKsck2OcC4sBdoCC41h  
v0tvtrYu6b0DptlpfaS+gggO3bZM+5v6lfR2+32IW/qcHF6TgM6dTW5wL26b  
o/wnqP8A5P7ighCXWg2smWGojcvwDIZj3iwZGdU9tr2Nml2oAdLHHZu9Otzm  
/wCD/Senb/YXOZ3Tv2Z1WpsbqHvD2EDTafgu4dQysYwyrK77mWOFjpDgBYDO  
8v8AzmpDLFW67089VxWPwWCy/GeC23a70o/OY+1o/d/dS1EqAP8AZ0YxRFuP  
9ZLWM6GfTuc5tpA0sJaWk/H3f21YVzbem41VhitzS0eO4TARfrEwMx9jrGt  
s0c2t9bTZE/m5Llbc1v8qv1FIYrpwBWZIZY4+cmHNViMvUCxVu9p9Vuo+mB0  
bMPpWNM4r7DDS1x3uq3/AL7Xfza6mQ0mtmgH07CYPy/cYvNas2nKoNWQ413N  
1qfA2H807t373561uh9S+s7sqrpzW/aa3S73mQK2j1HsryvzHO+hV63s9RPI  
iMjYr+Pkt4qevbZAmYYRG08Qo35GPQx1tj21sB/PO3Vw9u55G3b/AC1PFbRk  
1i6k22scSNrmlr2kfSptZHsfW76bEDqZo9arFy2MGMGuvyan8vBDsfGr9Me/  
9JY+yz/rKUeXkTqVpzAbAuN1HlsqN+RXluFbWsfS9ofSfWLNIP6X3Vvy2t+  
3V47W/0WpluR/OK5hZ1t/wBXcbPLQ8W2Wm4ydA6x+rf5O5cj1a1ID7Ommy62  
qiwMwKrXuO1lga5zH/1P/Ua6r6nPDvq/Th2D1K3i0VmNHD1LK7P7KZzgHDED  
UAr8F2SeocrqxqqtbuPtllayJl181RxKTXkZrglYcR213iS5m5qudYo2mzp9  
7tWn9G/gwfdW7+s1ypdNyX3VZdVgi2qggttP8rexvH7r2+9VYDW2eRsN+6R9k  
jtUOPMolYDY0Ik6TwhZ5dW+gN0/RNITpO5ojXiQrEdvqxHdutcWODx9JuoK6  
BvVMCuusbXOssALpGjVzjZmDydFaqsq/aFdVolkAHw8pQukVba6z1nquLawY  
1f6Jw527plL9q9Ruqrc7GNAj9l/xPj/JV+/O6ZiSLLA987WsaJR2II9Wo3Bw  
+ScdeqPo/wD/0bnR7SLbKLWlrbGiykExJj3gf1vpK7n9PyOpW1irlDRWBtsp  
raXSP3m+5u537/qLkGdXyXZfVrnSaNpY3gQ0/RXV5Nmb1LCa7BOxj/dsb7NC  
P3tP+m5Ab0k92D8PF6U11TAb8mxjnVG3a9rHR7XFn82sL7V1nGyKauuudbRY  
Q0S+W1z+42vZXX/mrb6b0LNZhWPyLdtwMhkb2hsf4a783+yo/WLEZkdLura5  
l12Oze7YQ+C3kHYo8nFWm3VkhV0d3kbqrs3p+U1x9aygg7nGCNpcz2+36Llj  
YA3V5NbuY3R8Aur6ZRba6sUsLy+si6BzXInfu/IOWD9kOH1Plol1DXfcd7f+  
rSEtFPVRH4Oe4mCwyD+XwWp9Ucy+nqhLLXMPovAg+bT/AAWXtlel4PA5V36s  
mOrcc12CPkrWMm2CY0Pk9nf1HqFpD/t+RW4DafTfDSP5dcem/wD6tQoqaHOt  
M2XPgvuf9lxxr+61v0GKvfa6sUhkE22bJdwBte+do27vol+O94tLXOLgWB0b  
Q0A7tqnJ0YQHD6m0fte9wLQ/bU9p0kggsc1g1/d97m/9/W79XbbXdLxvTJdD  
7LMbgPJc99ljS1vu/T/9tsuWL1Xe3rGo3NtoG4H+S57W/wCb/r/o39L0TALc  
CgWjdU9tgdBILHNdLYNZb9Kv6P8Axf8Awiq8yRQ82xiH5B5z6ynMsa+3Js9Y  
gh1NoEAscN+za1v0dv6RUPq417v2i93emto7/wCEXZ/WLEYMWysAkXb3NAEt  
EDc8GPa39L+kZ/xli5b6vUItHUtNP1drD31c/IVhIUaZeE3bp9QYfVYSOKmD  
y5cUsYQdO6sZ7CbwGjRrWpqKnTxyVJE+laRqnDQYB0n8qji+7PseRo3+COai  
Rry3X7IWwnQcmzwBMppKQUH6K7EuY/IfSH3F7hudroDptWndkvLAxoDR/JWR  
0Ju3AYTpkuz8VfjgjX4pGRRwh//SqZ9WHjYuPm/V7H+3UvcQL5ktez23Nuc/  
a527+wtL6uZd9zHY1jmh9f6VgB9oY/6X0v3XLPHUW04VeFdX6dtlDHbPoAj8  
9rW+39lhdMw+rM6oy3Gxn20MchBx9rCx5/SMDnbd373tTbvVdVEh6fN6eMw+  
7NdXSxp9Ruuwf1dzmsQ6h0LGxjRj3PuvtljgQdkfvOfDWbf+LWlk4mPfQ6jJ

AqqdBlx2ukfnV1tl25V624OL/RscFwiLLDLtEpVVFUb6PNsw78LpbsypwHpP  
bU9rXEkgvZW9vH0LPpNQvrN02yjNxc1zTtyGlj3HuHA+k/8A1/PVrKzcy7q9  
nRXNb6PUHMNVjQQK3hwtc305+h+jXQU4V1edZ0/qFf27Cfufi22tD4a4+o6u  
3911VnqKKMCb12O/gvMgPqHyVkGxzHac6HxVjoHt6vQf3i5hH9Zrm/8AVLrP  
rR9TcCjqAyMa52HTkNLtsB7GOb/Ok73Ne2tzff8ATWFj4XScfJrY7KuybPVY  
1wZSaRMgN/txP9Xb/KqrViMwJcOvEPA/mxEWPB3r6nuYwsG51djXwTHG5rtT  
/JerGPXcXNtsbsBaWNGpmS127dDfBP8ArDJFTRYOAXfzs/8AGO/Ru/7bp/rq  
Aa97i2xrmMP095G5/wDI9rnfo/3/AN/+bVgy010YRHVqZFfq9RZY0w2ygtqd  
Mbg1+7c4R7mud/NsXR9CaL+iCu2p11VVrmAggTschbne5v8AhVi5sjMxmemX  
XWMcKPAkeF7Y0/S7f5lv+k9Ndf0/Gr6fh10EasbtcGyJsd+kt9Nzf5btqoc3  
Oq8Tpf8A0m1hHZDkGnlqfRBa9zTDXCCY/wCqXE9Kp9GrqFTtCMnEp/6dq77J  
NZsL42hnlvliSNPo6fSXI9RpGLn2MGgy+p4Jb2kEOf/FQYpEhllsnyQ9n2m6t  
rbH1uYAx2m4fnNB/N/rKxjNx8hleRTPp2CWzyP3mu/Isf7HKNorDM0vLWNbc  
Ad3cbfe1v9krG6P1iwXvxBU7dY5z2sggB30nbf8AjK/0n9dP9WtMUiARexd+  
9jGUvcDrGix63bMDKfwYIn4rRybbjhH1GbSfOVI2SOmvH+kc1v3uTo3WqdOj  
s9OHp4dbP5I/IrYdl01QGCK2sHgOEUSANZhOKA//09bp9PRDRTltqdkZL6mk  
OeAdpPuiXe32/wAhi0GZ2QJ9KKZPLRL4/d9V25+1YH1Wvrv6ZUGyRWDXRzLf  
at+uonhQ8WlbMpGt7oC0klx1M6k6IMGmD3VxmPvDpOgUjjVtG4yULU8L9Yrs  
jB69iZtH069tgHY7TDm/2mldjg/WrpGXjz1djz9Oo6kH91ZPXeiujZuqMX  
UVlzG/vAnVqw+iMLqzt95kh0aOGvFjPpf20+EtSETjCQXq7eoPy89tjGCK2u  
axlgKEH6YsaR/hGfmLN6j9U8TNm3pWUcJx1GLE31amuGv6F/89Uzd/xqt4FT  
xYz02bjXDtnAj/zP8399Wbup9OLg2sttsGnt9mk7Wt3/AOk3exjNln6RRZvc  
jk4se9DiCYAcOv0ar+mZNLdzw92g3OrJc2Y93Hv+l9Hcq+KzKvNT8fEJFpbL  
XbnWhru59oprDXO+zdYukxNrmh7HuZIBDX6GCA7/ADlae5gYT6zZebdxJfun  
85n0XNRhzuQaSxx4h12/5q04B+8a7Ofh9KZU6u+8C69kuqcBLKtw2ks/esd9  
D1Fa3n6A+nqWs03ad9fapvsE8+o7ueB/WQ9xa4kES6l+KrzMskzKf8v6rNCI  
iKChXsJHYRB76+J/eXI/WR1p67h13Fjaq8vGtqMQXNG7dueXfTZ7mu9q6vc5  
wPfxWV9ZuhHrHTCyrTKqBspdwZA+i1SYyAfPRUxYefFmHdm5PU8ip+ZjU5N2  
P6NRLZO2uyubWbn7bt3oPY2tU+o5eVIXOyMairptWKGsZWAarHQf0Tx6pdZI  
v93vf+ZUtP6kYtmL07lx7X7rRkvc48SHNqh34LR6rgV5VLmOAc8D2ud4/FPk  
aJFXTBPEJi+u7lscH4TLwSfVZu11+SHYJox6/wDSXM/AbJtD8fAqxXCHMZx  
4ST7f7Kd4Hr4lfhvefkNoTgv6fR2QHEQdPAp2n9NEyIGnn/JTzDf9dEgyxzt  
xl2RAI+kgTsqn//Uqf4v8n1GX0OMOY4PI+lh3/UrufVpY2CZPdeY/UrJ+y/W  
IY7z7b2OYR/KavRMoBnHBCgkNSy9AzOeKnOLEdp5lLs5zztJ04Czcnl2gyJ1  
7qk7qD2kbSAmnRlhi4hdvQVOByq3cb2vafiAH/8AfVXPROI5LwMikMyK2hpe  
1xrc8fvh1bmbk3Trbba67LG7XNuaPCQ4Gsn/AKa1y1rmEPAIEkyJH/STZfmi  
qsdmvRRiYFAxsYbjJLK9xe9zjrL3O3O2/wAuz6CITgUY4DjU02j3OeRruMb3  
t3fQ3OXKdW+sWVZc7G6YfseOyQXVda+w/wAp7Pc1rf3WlfQ+s9QozqqnWW5N  
Fjw2yt7jZtDjt9Sv1NzmbN25OGKXDYO+q3jF0fJ7kHQ/BAOXhh1g9Vk0gerJ  
jbPu1VR+Zbj9ULfUF9TqiXVbmg1msxLT7W7X7v8ACf8ApNch9burHI6jjeg3  
0m2S1wDgS9rSfc9fa3YmRgSuJp6d31fNuw6RbWdW2WP27oP5jGNe9FwOvY  
+TksW763Y2XZ/NtJ3MfALnenZ7fftb/N2MXC3ZUXtbY31aseWVtDywx/xjFd  
6HVeet4OQYc6x7nNDRc4kBjn/pXu9RzGqeeKHCSOGY4zIYvq+gAccmeBCI+1  
INbrXTFYlJtaXOgc7WD3LM/aNPo1i4uByD6ZYzcDJO182At9Bv8AXeqtXUsp  
uHSWXNDBaa/VkeoWtMfQfv2Naz6T1XEJHwZOlebVz9vTusVZ9JjA6o3mdBZG  
7QfR9+5SvynEkAbxMFyrYtDeo4GRi5BDPsznb3vdo2wH1Kb6amvbj007nM+j  
69ljHv8A0IP6OpDw3vuqJsr/AE9LjRk1nQssZ9L+y5S0OupGn8Fm311ZXHe3  
eeNwHjxqg1j1epMkyGVD8SrNtfpspY7Rz3udHkA1qDgt/XryfzdrfuEohBdV

zhEeCYWGOUG23bCet0iSfikQp//V5zOwn9J69j5rG7aDcx/ho87XAN+bl6e/  
HN2Mywd2rG6n0WnqXSyyps3Bu6mx2rj/AlT6bv710P1bP2nomLY7VxZDx4O  
HtcFAJcVV2ZqoHzebz8R1biHiAeSdAq7G4eLWbdvqXge1x1AHPsYfzv5S3fr  
Xjinp92buiqkjcexL47zkXvqeC1tW31G9yXDc1k/m+33KvzEpAADQH5j4Nz  
kxjPFKepjpGPiW30x2Tfl+swHaxofaO20fQ/tOsXTul/PGh5A8FyuJeLMpra  
rvQossZWXNJRAYTts/zWly6Z1ZhrKjtrZDQDro3Rv0pcljllraj+azmDxT4u  
4r/FeA+zPq6tfiZTZDbX7QJA2HbbQ5u396ty0K9lQraA2phc7Rmkge7dytDq  
fSqrOqMvsu9CzaA2QXm2Jb7GD/CVT9FiPh4oF7q6Mc72w5+TkgQ0u+h6WPW5  
vudt/wAlrIn6WqY6tO3FaMkNjxJsmt07dzSfa6vRr/TZV6tdnv/AJ1Yv1ox  
rbcvDcKTWwGxjRO4BzNzbquGe/ft/sP3rr8PHec2yvLxxa2sudTkFvtlzt/9  
T3+r7fp+l+mWd9a8J78jDyGumoPLXVgR73NAdc50+5z66mV/2EBL1Ad+qiDX  
k8aXvfJf9JsNdpB9o2+7+V7VvdCsaM6k4+176KbHlhmN3php1hu/8/2s/wC3  
FiXW1232vZ7W2EFoPJIEHX+Utf6sYuRZfdfWHN+zhrq4Dxd+b+9tYx71LM1E  
oHR3wLMltoc9rjefWq9j2M3D3saWWj9Jvq/62/8ASIGPj3inJya2bKLAGPFI  
fvDZHq3V6Nqe9n09n+jZ/hLFq04WKaW3V1sbaZcyxupJJ9Tv+a+xv53+DVnE  
Fz6GG9hpsj3NJDip7Q3NVczFUF4iftc1nQ6aWWXPIssaQ8bmwD6f5t30vV9n  
qV/9c/Rqt1Y142ZV17H1xM0CrNmQPCjllf8AoOW5TR6NDKmOLmtGrnwSf+pa  
srrWS5rzh5LAcC+uLHAFziNGu1n2Pr+nWhGUjJAAatszInreDiA7g9rnDv3  
c7/vqfHB+1Zjm9rnNn+qNqp4mFcz6zdLZcZdjMtrPeWgO9F2/wDP/Rv+mtP6  
vVfa8N+WBlvtttB8nWPLf+g1Sn015BYNb82jnZwqt2xJ/wBSrPS8n7W5tTYD  
nNIE8An2iVndXwH25jyDADvujT+Cl0x4xd/v2OrYCwyQXQW7q2uAdtssakSC  
KG6Kov8A/9br8dzHMEHQafA8Ob/nlnTsXqDHZGPRZVTimz1abAC6wmwTazZL  
K69ln0H/AJ6+d0IVx7+DYns/RuT9XMG2i77WdNpdWWutySXuE8mr/B1bW/RZ  
VUuF/Zdwz78TFttY65+5rrGHc5rWt3Ooawb3v2LyxJDPw6cXy6f9LXdODj9X  
D2/53D6X2vF+oeRcwGy2zGe4iciz6Rb7vYzEafb/ANetXVDpuPTielXLvSYA  
255HuLR7t0bdv8r2r5qSTh7Vemrr6rJe71vf6PvWRi+tfTkV2elZSC2YkFh9  
30ZapenS+9lhY02MEseYmJ/NH7rZXgaSZ6qC/R+grHP2PFZa1+u0v+iD/KiF  
zn1hyn39MqyGNLrMYustqAMlrfZY9m32u2/yPzF5AkjD5h3sllt9HrKzj2tG  
z3GdC0zHx/dXY9Kfk4N782+pxx8tooYOHuLQ6xtsPc7bV+Y99z15EkrE74Dd  
V1YxuO77Y/lytcXCrbRWCATSA5sOkud6oNdVbm7drtisVdUqx6GMyXi29rf0  
pq9wgfmb/az6O3fsXhaSg9Nfw3Xi36AN9Ln7N7XO8AZQs3GGVRsaAbGkPr38  
bh++33e3avBEkwb6Ljtq+zdR6ZiYeHX1Ct4dk4jbGu0kCp49rZhv8x+8tD6r  
00Yn1ewa7XsreMesvDnAQszc7dP8p68JSUxvhF92Mvej6r1PKqfaTRW/JD7S  
2y2tpLGDn32e1m79xDLw+sPqh1bQDvGoH8psfSXlySfDqtk//9kAOEJJTQQh  
AAAAAABVAAAAAQEAAAAPAEAAZABvAGIAZQAgAFAAAaABvAHQAbwBzAGgAbwBw  
AAAAEwBBAGQAbwBiAGUAIABQAGgAbwB0AG8AcwBoAG8AcAAgAEMAUwAyAAAA  
AQA4QkINBAYAAAAAAf//gAAAAEBAP/hQetodHRwOi8vbnMuYWRvYmUuY29t  
L3hhcC8xLjAvADw/eHBhY2tldCBiZWdpbj0i77u/liBpZD0iVzVNME1wQ2Vo  
aUh6cmVTek5UY3prYzlkIj8+Cjx4OnhtcG1ldGEgeG1sbnM6eD0iYWRvYmU6  
bnM6bWV0YS8iIHg6eG1wdGs9IjMuMS4xLTEXMSI+CjAgIDxyZGY6UkRGIHht  
bG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3lu  
dGF4LW5zIyI+CjAgICAgIDxyZGY6RGVzY3JpcHRpb24gcmlRmOmFib3V0PSli  
CiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
dGlmZi8xLjAvLj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZjpPcmllbnRhdGlvb3JkICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
Zz4xPC90aWZmOllDYkNyUG9zaXRpb25pbmc+CjAgICAgICAgICAgICAgICAgICAg  
ZXRnbHV0aW9uPjE4MDAwMDAvMTAwMDA8L3RpZmY6WFJlc29sdXRpb24+CjAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg

WVJlc29sdXRpb24+CiAglCAglCAglDx0aWZmOlJlc29sdXRpb25Vbml0PjI8  
L3RpZmY6UmVzb2x1dGlvbVuaXQ+CiAglCAglCAglDx0aWZmOk1ha2U+Q2Fu  
b248L3RpZmY6TWFrZT4KICAgICAgICAgPHRpZmY6TW9kZWw+Q2Fub24gUG93  
ZXJTaG90IEE0MzA8L3RpZmY6TW9kZWw+CiAglCAglCAglDx0aWZmOk5hdGI2  
ZURpZ2VzdD4yNTYsMjU3LDI1OCwyNTksMjYyLDI3NCwyNzcsMjg0LDUzMCw1  
MzEsMjgyLDI4MywyOTYsMzAxLDMxOCwzMTksNTI5LDUzMiwzMDYsMjcwLDI3  
MSwyNzIsMzA1LDMxNSwzMzQzMjtdDQ0I5REM4MEEwNkU4QjQ0MTM1NEQzM0JE  
NjU2RjNGNzwwdGlmZjpOYXRpdmVEaWdlc3Q+CiAglCAglDwvcmRmOkRlc2Ny  
aXB0aW9uPggogICAgICAgICAgCA8cmRmOkRlc2NyaXB0aW9uIHJkZjphYm91dD0ilgog  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
LzEuMC8iPgogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
MzoxMjo1NiswOTozMDwveGFwOk1vZGlmURhdGU+MjAwNy0wNC0wOFQx  
Q3JIYXRIRGF0ZT4yMDA3LTA0LTA4VDEzOjE5OjU2KzA5OjMwPC94YXA6Q3Jl  
YXRIRGF0ZT4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
OFQxMzoxMjo1NiswOTozMDwveGFwOk1ldGFkYXRhRGF0ZT4KICAgICAgICAg  
PHhhcDpDcmVhdG9yVG9vbD5BZG9iZSBQaG90b3Nob3AgQ1MyIFdpbmRvd3M8  
L3hhcDpDcmVhdG9yVG9vbD4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
IHhtbG5zOmV4aWY9Imh0dHA6Ly9ucy5hZG9iZS5jb20vZXhpZi8xLjAvIj4K  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
c2lvcj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
aWY6Rmxhc2hwaXhWZXJzaW9uPggogICAgICAgICAgICAgICAgICAgICAgICAgICAg  
PjE8L2V4aWY6Q29sb3JtZGFjZT4KICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZEJpdHNQZXJQaXhlcD4zLzE8L2V4aWY6Q29tcHJlc3NIZEJpdHNQZXJQaXhlc  
bD4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
aXhlcFhEaW1lbnNpb24+CiAglCAglCAglDxleGlmOIBpeGVsWURpbWVuc2lv  
bj40ODA8L2V4aWY6UGI4ZWxZRGltdW5zaW9uPggogICAgICAgICAgICAgICAgICAg  
YXRIVGltZU9yaWdpbmFsPjIwMDgtMDQtMDdUMTM6MDE6MzgrMDk6MzA8L2V4  
aWY6RGF0ZVRpbWVpcmlnaW5hbD4KICAgICAgICAgICAgICAgICAgICAgICAgICAg  
aWdpdGI6ZWQ+MjAwOC0wNC0wN1QxMzowMTozOCswOTozMDwvZXhpZjphYXRl  
VGltZURpZ2I0aXplZD4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
NjA8L2V4aWY6Rmlyb3N1cmVUaW1lPggogICAgICAgICAgICAgICAgICAgICAgICAg  
PjU4LzEwPC9leGlmOkZOdW1iZXI+CiAglCAglCAglDxleGlmOINodXR0ZXJT  
cGVlZlZhbHVlPjE4OS8zMjwvZXhpZjphYXRhV0dGVyU3BIZWRWYX1ZT4KICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
cmVWYX1ZT4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
cmVWYX1ZT4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
PC9leGlmOkV4cG9zdXJlcmh1c1ZhbHVlPggogICAgICAgICAgICAgICAgICAgICAg  
cGVyZHVyZVZhbHVlPjE2Mi8zMjwvZXhpZjphYXRhBcGVyZHVyZVZhbHVlPggog  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZGU+CiAglCAglCAglDxleGlmOkZsYXNoIHJkZjpwYXJzZVR5cGU9IlJlc291  
cmNlIj4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZD4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
ZT4KICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg  
bExlbmd0aD4yMTYwMC8xMDAwPC9leGlmOkZvY2FsTG9uZ3R0PggogICAgICAg  
ICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAg

















AAAAAAAAACxSZWZlcmVuY2UgVmllld2luZyBDb25kaXRpb24gaW4gSUVDNjE5  
NjYtMi4xAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB2aWV3AAAAAAATpP4A  
FF8uABDPFAAD7cwABBMLAANcngAAAAFYWVogAAAAABMVCVYAUAFAAFcf521I  
YXMAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAKPAAAAAnNpZyAAAAAAQ1JU  
IGN1cnYAAAAAAAAEAAAAAUACgAPABQAGQAeACMAKAAtADIANwA7AEAARQBK  
AE8AVABZAF4AYwBoAG0AcgB3AHwAgQCGAIsAkACVAJoAnwCkAKkArgCyALcA  
vADBAMYAywDQANUA2wDgAOUA6wDwAPYA+wEBAQcBDQETARKBHwEIASsBMgE4  
AT4BRQFMAVIBWQFgAWcBbgF1AXwBgwGLAZIBmgGhAakBsQG5AcEByQHRAdkB  
4QHpAfIB+gIDAgwCFAIdAiYCLwI4AkECSwJUAL0CZwJxAnoChAKOApGcogKs  
ArYCwQLLAtUC4ALrAvUDAAMLaxYDIQMtAzgDQwNPA1oDZgNyA34DigOWA6ID  
rgO6A8cD0wPgA+wD+QQGBBMEIAQtBDsESARVBGMecQR+BlwEmgSoBLYExATT  
BOEE8AT+BQ0FHAUrBTofSQVYBwCfDwWGBZYFpgW1BcUF1QXIBfYGBgYWBicG  
NwZIBlkGagZ7BowGnQavBsAG0QbjBvUHBwcZBysHPQdPB2EHdAeGB5kHrAe/  
B9IH5Qf4CAsIHwgyCEYIWghuCIlllgicL4l0gjnCPsJEAKICToJTwlkCXkJ  
jwmkCboJzwnlCfsKEQonCj0KVApqCoEKmAquCsUK3ArzCwsLIgs5C1ELaQuA  
C5gLsAvIC+EL+QwSDCoMQwxcDHUMjgynDMAM2QzzDQ0NJg1ADVoNdA2ODakN  
ww3eDfgOEw4uDkkOZA5/DpsOtg7SDu4PCQ8ID0EPXg96D5YPsw/PD+wQCRAM  
EEMQYRB+EJsQuRDXEPURExExEU8RbRGMEaoRyRHoEgcSjHJFEmQShBKjEsMS  
4xMDEyMTQxNjE4MTpBPFE+UUBhQnFEkUahSLFK0UzhTwFRIVNBVWFXgVmxW9  
FeAWAxYmFkkWbBaPFrIW1hb6Fx0XQRdlF4kXrhfSF/cYGxhAGGUYihivGNUY  
+hkgGUUZaxmRGbcZ3RoEGioaURp3Gp4axRrsGxQbOxtjG4obshvaHALcKhxS  
HHscozxMHPUdHh1HHXAdmR3DHeweFh5AHmoelB6+HukfEx8+H2kflB+/H+og  
FSBBIGwgmCDEIPAhHCFIIXUhoSHOIfsiJyJVloliyLdlwojOCNml5QjwiPw  
JB8kTSR8JKsk2iUJJTglaCWxJccl9yYnJlcmhya3JugnGCdJJ3onqyfcKA0o  
PyhxKKIo1CkGKTgpaymdKdAqAio1KmgqmyrPKwlrNitpK50r0SwFLDksbiyi  
LNctDC1BLXYtqy3hLhYuTC6CLrcu7i8kL1ovkS/HL/4wNTBsMKQw2zESMUox  
gjG6MflyKjJjMpsy1DMNM0Yzfo4M/E0KzRINJ402DUTNU01hzXCnf02NzZy  
Nq426TckN2A3nDfXOBQ4UDiMOMg5BTICOX85vDn5OjY6dDqyOu87LTtrO6o7  
6DwnPGU8pDzjPSI9YT2hPeA+ID5gPqA+4D8hP2E/oj/iQCNAZECmQOdBKUFq  
QaxB7klwQnJCtUL3QzpDfUPARANER0SKRM5FEkVVRZpF3kYiRmdGq0bwrZVH  
e0fASAVIS0iRSNdJHUljSalJ8Eo3Sn1KxESMS1NLmkviTCpMcky6TQJNSk2T  
TdxOJU5uTrdPAE9JT5NP3VAnUHFQu1EGUVBRm1HmUjFSfFLHUxNTX1OqU/ZU  
QISPVntVKFV1VcJWD1ZcVqIW91dEV5JX4FgvWH1Yy1kaWWIZuFoHWIZaplr1  
W0VblVvlXDVchlzWXSddeF3JXhpebF69Xw9fYV+zYAVgV2CqYPxhT2GiYfVi  
SWKcYvBjQ2OXY+tkQGSUZOlPWWszedmpWASZuhnPWeTZ+loP2iWaOxpQ2ma  
afFqSGqfavdrT2una/9sV2yvbQhtYG25bhJua27Ebx5veG/RcCtwhnDgcTpx  
IXHwcktyprnMBc11zuHQudHB0zHUodYV14XY+dpt2+HdWd7N4EXhueMx5KnmJ  
eed6RnqlewR7Y3vCfCF8gXzhfUF9oX4BfmJ+wn8jf4R/5YBHgKiBCoFrgc2C  
MIKsgvSDV4O6hB2EgITjhUeFq4YOhnKG14c7h5+IBlhipiM6JM4mZif6KZlRk  
izCLlov8jGOMyo0xjZiN/45mjs6PNo+ekAaQbpDWkT+RqJIRknqS45NNk7aU  
IJSKIPSVX5XJlJSWn5cKI3WX4JhMmLiZJmQmfyaaJrVm0Kbr5wcnlmc951k  
ndKeQJ6unx2fi5/6oGmg2KFHobaiJqKWowajdqPmpFakx6U4pammGqaLpv2n  
bqfgqFKoxKk3qamqHKqPqwKrdavprFys0K1ErbiuLa6hrxavi7AAsHWw6rFg  
sdayS7LCszizrrQltJy1E7WKtgG2ebbw2i34LhZuNG5SrnCuju6tbsuu6e8  
lbybvRW9j74KvoS+/796v/XAcMDswWfB48JfwtvDWMPUxFHEzsVLxcjGRsbD  
x0HHv8g9yLzJOsm5yjjKt8s2y7bMNcy1zTXNtc42zrbPN8+40DnQutE80b7S  
P9LB00TTxtRJ1MvVTtXR1IXW2Ndc1+DYZNjo2WzZ8dp22vdbgNwF3lrdEN2W  
3hzeot8p36/gNuC94UThzOJT4tvjY+Pr5HPk/OWE5g3mlucf56noMui86Ubp



S883mnJ2ajAysvodBI9PICO+jwe10wnzBr0MrU+sxyMhq3Ty9ld8be0QJ1eJ  
ppbGJgCKfL63oxzHk6B9kjr4pHfmET2DUzJ5MMOfBoLan1WWtsg+5KIIfP6n  
ECDTm0ZhM8XDL08r2T6g4c8Zk6HI8vNlxI7Q9OUDJJE3p/54yfSdJkE5SI4  
voAph/hWTFB9uGjpaGXqYdTg9YUf3k+F14n0sgZagv0pcOs6WPVYjjPPZ1BD  
zOyjJHI9PFlvyHns/KYpT6LKcU9NX6XCB1GPfH4g5WBTz/xfJUcDy+V0sJR  
ju7yenrrzZdh7dncgQhQdLFwTRHJDBPjQA1HGYNV74ESAA8sg885ncbOr0eg  
TBu7U+t0+IQjo+Z0/nyC32qrh5s0VAE6jSmiL45Y3auhqgb17uQT2SBv0KAd  
FB1YAV9CKdBILsvWKBzSsWSwLJNupjrj1HGeAOWkKgNw0emGOOMXk58FgY4Y  
6alwMtx1YUqeaUjrxYrREg0OECdO7O3wal4Mm0DzvxDDYExyHiJp9nLDdEg  
viR5ou0QoVwSmQ1FahExVANxIWjoHb0MiCYeL3yGIPkYZHHIT9r2Zup1qLws  
sTaZcjTz5MgAtkz9QGJleeyLhJzBZOXL1EhrWhaEtwcc2Mg8WnDEgataQDJw  
kS9RDz5BaQMTKmDI9kyYGjoyej+G3uL19WXI/DzrQenquUUrjpo9WT4Xk6d6  
svwtZEcYPmejKPLHI3DURIWlgNNIXaQwGgg4pUX08eSw+QDT0YsiB6gNqQ5  
Y527bmAylFwyw0d5Sc5ahoPjfxDGRkJfOL9H+JdNer8/KJBNorM7XjUlpSiF  
iaSPa5rqgaxlTtDq5ROvC4OiyZu1DxfW6b8ljXyf8SEHnj5cB6v2mY+zb6  
cPw3b2p6o9FSKf/S8AYwOHeMdo3H5BsQHz8Gcl3ry8Zk9MQaGQMbHxPLMF13  
HgMT8CkGYEWGo6EFJjrSgeYOjB7HQZzCQvg6Psy6mERZ0p+Zxmw+nhjDqB/N  
BNeDiNxYrJ+LYQatzh1MZZBOosf4mOp6DFIP8uJHtL1dP0kcMNvKcbGVO50y  
mKeDPPIMjLDpzH/ovJlzRkOWQWTz84EpWiMhsMSxkkCXOwdHojLO/wDDM+w0  
/T4solficUjpmPB+h6bPYBB+btGGe2JW0Dbx48xp19Z2ZPN/Guh9aHqwHmi8  
P4R+IHCdp7cvvTyiQIL8h1UT02Y1wxoqZ09dkjLqyYHRvJ1G6NB87EDPJ8n0  
o4RkFcFJ4lgmPWzAruIOTefM82bCYGmYmnrqjOh6vQm8xrin2Q+D+HS/m+99  
0aPK2pooDwbHDHCiRcFK9jVhmk7S0FVpookQdERd8WPdqeECYRBIZDWTJWgW  
eQVQczLcPawAAsaolDXw8sbkA0GSfBNI0ApAJLbalvInUIDo+JOMRIIPBL7c  
qAs9nj6PpRikc0xp9I3UjwMs2DDsBidXbD0QiLlqSxlhHNmEIDjl6eqyDFHa  
OXpBiWcGbDKGo4DtliMICPNOYjKNGR5D6OPAliw8szA6VxPKGcUpC41Xd1yd  
OJGy+jKH0uMovCTpB588YDzkUXvmHkkNWFMBxIF6SKcpB0Q4pxci9Ug4SFO  
zLO/8M+lvT1fLz/hg1Lv1XLSFdO9Ob4Xm6YvTm+FMHDEXJ2qnKPLty1EYxtt  
ztu2kKUFClOGrUTTKop24shesF8zHOi98JWEQ05QUGS8oHJ1GPeH5frenMJW  
/ZGF8vmdZ0vqCgio+RTHGZ6DI9nH+EGUrlw+vg/C4w7Ih8vi6DLIOgr3vq4P  
w0YxxcvF+ih00Yim/SAUCTzcPR+L6GPClugjTfCA0tltbQP/0+ExENbt5yYk  
EF2zWPzDzCr830PBHqYI6EGvpTI2a09jIh3JSGkM5CvcEYzVyTPU06GMY1A+  
8tlaQltH0PV0uY45jwLwCW2Nm7OreGVi3SRizPo5caPBk6rlQTHgOmHOSNsn  
HqYRidBy4SgjMBkkZCiST8TpnwRkONXUT9MV/sa8046imsh4GXEilyAp9LqcJ  
D58o01MNAkO76PT7o6wL53Z9Hoz270iHfDqa0mKeiPUQrlziNKoodl4YHkO8  
TLgxzddGloPgdXmOWVI9vOlxGgD4GY3lPkUGnSmpgvsQrnv2fE6c0fm+qZXw  
xGgZb13a28kxtL07zPQoy49/veiwMmOHJ6Uxldi/UwkJgSD8pVmn2Pw7qNw9  
M8jhl1OJUer7IplFaFQ8yjdNAkIRCy7HbiHiUAemYxuWnsZOY1XZE5mfK0Cw  
EjUpMvBd3ZiraQ1GQSG2TMsew+xkCmxKueGFJMbcQPFuUBzBzB8UAEJrRSbS  
dNEDn6qeyDz4/wARBjUhXbR6RWeUokWB3fJyYZCRjAXq9a4ly4eB6PT5MOMn  
aefFEsQy5N92PB8fJjyw1mCHTFkMibol2Zg9Hq5R0j3fSBql9z8/kz+sBY8w  
fosYGwX4B8+dsdcvQwLjxn7G8+cRO0auZkCLDwxOko5jZFyFF5p8vbKlXzDQ  
ZFYkHUHktBzSi4Si9hjby5DRoNTIzu/DQAS31fxM/hwOttV8TsyV0wejN8L  
z9M75/hayHHH1B0cougaiMWgU8pjFpAgtRQRSQgWqAIFEaF68U+zyOmOVFg  
PRAaiEYfMHPGMujJnsQcYLvQDEigZjGA3oGtKknz59qB2bwu8Phy6srHrCpL  
B7iCC8PT9SCdXqn1ApgKJAczkeSWeysZ2yQf/9TgkKHNSjp5QHqSjUCLj/ie  
giMSd3xexZ5TkqJNRfNJ7IOLJlz4AADFiF6yWgZhh3HXs6JAlwuJyEaBz1  
I75Ok5mXl+yECGm/v9lpGRMM6H9L1YIR6WNz+JjpsEybovp4egPM/obrgjm4

WL+I44GXUy8o0D0g+oNk9JB7cfSRwndH5uHVYvtx5DYgzMmJznYa0co5fNHX  
n4IntNEaEucYx3+c6lh15cYlt8jqMW0vvYjHJGojQPF1eHTRxuaPBlcT7Hu6  
MjR55xot4L7PRMzB7sHYGg8GHqa8s9D4/Zes5ARoQ9EYaOPqpaF8GepfY6uY  
o6viylroxhF4D5wPF9K5Djh8nHplEvr45aVJmjLsSZDcPB3yjabDyZpgGnTH  
MSesbmSJAnzMwyHHISGj3CAMbeXJi1scNTB9B02cZ433ezHjMuX5XBkPTncH  
6HpuvjiBwXnZQU7t3pgxDjypleqA4KJ05bEaFoA8VIM1tLSEE2pNsgtgdyw  
oSkFgoJpoNNxjqEilOvfwYA0ZNxYDSuxccm+XlgOfI6nJOMNx4fO/6wyYwf  
B6Vr1Mt9D0Mkh08PTh8RYsdHi3y+lufQkZrzz1I4eDPLJ+IZvTGkBy9UjHZ/  
zzt6LqJdWJGY8vZ82VY5yjHi31M+SPR4vThzwHwZ5DG75Lp6Err/ALpUCd1P  
12LWA9z8TikZT9r9rhH8uPuD4sw9FTg6nEMfmjweXDHKjR4L6maAkKL5JG0n  
Gfk4RX1N5CnmnF3jLcKPlcsjGaRy5ZDGLYxz3uHUxlzengjDPwalgSTpLw58  
VHcHtPizOO5LAM2/DeD4r1PxNdAKse1jqPjehk06d2z8OXTOmc6JkON1gaYD  
cQ6RGVaRKIAb2hpCd1tBghuJQNfAKWAK2hUU7+my09h6gAPIY2pyKkQdU+q  
1WOa3gu3SBpSIOWyt8/qQS+hAWHLNjBaQ8M6lt7cnTEucelJLCmcJkcO/qSk  
74+kp6B0zSHCLdoF6JYHlx2uSn//1ZOMak0JDjH/ABf+McJRBFx1P2v8D6U+  
jJOoqPh/vJ/+OYn08YR1NewPIWOh7G0tTy/SuqFe1Zgy8mMe+T7OHpYyHvem  
HTwhwHoqvU52zFojwsf4ZPJQOkX1On6CMDchb3epjxzfzy9fClqlAeiqnd  
sBhCHgGDmxxHiXzcvUGRsOBkS6wMHoZOp9Q6aButwfNgX08OsQ87m6nmjCN8  
sZ07h64dHCGvJZ6mO3JGY8Xso6UXLZUMMdCnHPisPQCpFinJo+X6rEYy9jOE  
aPp9fh7vl4cgy5KPBdojPQx7cg8fYs+mgeLDOTpjLzYzReeefqMWhjfyepzM  
+owxAfPIAevJnlMaingKJSYAGXg+riNxfKqn0OnlcEwis3scoEg6Opjvuuzi  
BReIWZZ6WPzR0dAY1TwY820vTCp+bxaoDLLHabrRrdrcS9MsW7QnR4J4pY5U  
NqliU9PD+JGGk9R4vr4s+LILiX5KUurax5DA2CnWSSfXiYA97mZXo+Fj/ABOc  
eX0+j6gdVZHlcOjEo67A5W7ScMjrawxEcrgxyQBXdOhLoMQbEQHXDqTkZ7Sd  
Uxx62XS2SXSrGhh2OX8QmlwAfK6roswj6kTdjWL09dP1eox4x46vqdqdxih  
HynSdfPppUdR3D60fxLEI7gKkXD8R6GMT6sB73zcJhKVS4dwhgzXJ1E82QyP  
Z4skt5JfRyQs0e/Z48pgl7Y9uXlbE0jHCdsn7bppXjj7g/EQ+J+s6fJs2+BA  
/wCU+a6OtT0CHz+rw/aHlfQvRyyRt5HQ8fdR3fS3KnPNH05EdjwzjnptLp4m  
VgY5RYp84E4p12fUny8PU4rFhlnR8cravR4unyXoeXsEhSalmdfSBwz/ABO3  
Ry3ajxcc3xl0iG3TignOnBwjqNGg54kN24bmoyt2jLNgWwXKLoCiFFQEEtRK  
BYVFPyAhUJCKbQ4ZmWo8OcywCHaGMycYal9HHHRCRgKCSLdKSA7MmXphPpB3  
EFkKQMxEBos20ECClCj43rpiQYU//9b15nc4TxCaJ9UCdHelFWWI022OObAo  
OhhXLByVwwZEtmnm9YTGRrh5Y+Z9XNg9Vzx9EI6IFPOETLQOsOlnJ9SOKMOA  
3KoMEnHj6QDU6vUMewacli1EIDTUuP7UcmiEsjqo742OzpgkJRt580vJTUM4  
hEAavNo2jriZsQ+bzerLJxonF08svAJXESDOYZIOXyT+Hnddv0P7Fs1mQHH  
JjjF1xMyeVjE8lo6j2OwyRkNG5AB4+qjt80Q2YGpPUgVo+PPI6cmQvLM22SR  
BBerpz5SHld+n5ITCNpaGwzKVtkW5k9j2agxt1xZzBwHOqTo9E+pk9aHVRnG  
q1DlkvJqHhkMdXaPUm/c6joJMpYZMWYvoDIJCyzLFGTZ6kOISMjQ7vsY+ky  
dDWaJv8AjDjOnQ78oI7av0vp6UeGmW4M+n6mOeNxdnx59Pk6TL6mP4DzF9PF  
I5RYTMwaErbQxSPZoYJEMBkS55DtFl6fSEEs+d+I9VDFHZHUI2iHN0WI5sss  
0vdF9Kcx4seUYoAd3KU5ZOeENS+pyicDEa6Pzw8srHi+7ONRPufBlyXFmbq  
jqy9RGHtJHLwRiZmhyWZEkuuCydNP4v6XGprQsiOOZiPY/Q4qFRlwQC/NSlu  
nu9r9WcW7DEjKAU8b4M6V0OjDksbTyGzq8kJbgJ9x/0XsgL17PNo0mcPVYhM  
e18zyzBqH3ckbD4vUxOOd9ixMNGZnu1c5iwxv2n2J3W2BJwTHpTvsXcysbhy  
FzQEhTy4shidpdrEyz2vw7WF+1nL8RdOgFQ04c8nxFFOnpxUUdU1h+FnqkDi  
SE1QQ7RIm0S6Bwi6RLSFIMVAtoCmFDSPswCkBJh0jggadnnnJ6CaDyZDZYUv  
HLV9XBLc+PF78E9qTDPsmQFjIB5p56DyT6gh1JmD0p9QlvMepEnzp5TLIYE2  
ySwergVugLy4gaekB0ZKBUqrCn//1weHfp81+UuF6MY57JW5NHrAEhRoVxkz



GjoiAfE0gYglzz5BhGvLv6oiKDwdZCWQbmkMpdaXmn1EpPPIEN48M8vwi0IH  
eXXHPV1j0EyLL0Y+iEeWFM4YJZj5Q9I6KMBumQHohHZ8L5/4hklEacpISaDP  
0uE/xH/Ep/FojywNPzhl48tQnt4Y7LY0qvc9qXUZMnDIOWQXu97jh6kvZYzR  
o8uOTLBxRzgm5nJuntPB0eWQ83tahYPLsyPU4gOA+bIPuZ42Hx8saLIGmYN  
4dJME0uM+YOzJ31bzyFF6Q45RqkGZ8rfizwW7EhXDoyJqnOyGqZlo6RCo5CH  
UZ5Dh5Ugu1YkHu/hWcnlb7B+gj1L8n+HHZl9f3OpMNYnsftUa1cc34j6Q8gB  
fNFqY3ysCYnZj/Hly0Ohbn+JXw+Rk6aE3MdNOHwS+luHQano5etPJ4fN2S6q  
e+XHZ0jinM/zNQ9YAHDJLoQMdDQuoVeGAehYfn8gqRfeJt8PPpMj2sZqo4+n  
3+aR2h1uHww+EfFL+Jeoiz7lx5l4QBGJ2D4Y6y/xzYAdRtlI8ooaRp+qwESx  
R9wfk5YzHKL5Or7cJmiNdw4eN8TpU3mPRnfYvXhn27dnCeP1cdXq5Yclxrg  
5mjtyTERZ4fMzmGaJANvJ1EiY6yJP8LjGY9XTyitVBZMJki4nkPPcuxeq41  
5x83z5OkZzcpEayLhLncGiN3BYA7NlfQ/h2uLSYI8Tf4dphDEuS5ZpHVIFAW  
59W64juAcur5QObsu0NVogPRaGWEBoBdEhpDSLydMhQFhSqsAqXIARaI6NKA  
gGR0eWXL0z0DylnhTXGHsgHlxvXHHAnIxn2mZ0byS1p6+ngKaiMwx9JfL1w6  
YB6QAE7g6ICGKnTYGN6nlpAZUHlyRKdubmSwf//Qx3M629GHHa5Me0sKdnSZ  
SY09BsnV8vDP05ex9QSEhokGIDelUxRTTSGR6bHd1b0Q2wFAUiOvDp6QjrJh  
SLvhnldgsuvqRHDy9TIEhTSGR6k8B5eqByQSOXQgHlyaPF/ZpnszLp5R1p+k  
jijWjzZMfLyk6Hg48lcPq9Nmt4uoxbNWMOTaUBzfy8pqliNxAJZz+ad+KMfl  
l15epzOyeGUo2JPI58JidS+7iG7Ho+f1cHEmjxpRpMTRdJhxGmjseyE2xlf  
6pxHRco0QOaWpRq2Y6cse52ZDuBPFiki1qw0GahSI0Q9H8NreX2C+F0RjyB9  
qyHSMmTWAbWy6IUUgsaoF8ohqm2ALaARSgbTR7pAVgJk+F1WmUvuHV8brh/N  
LGWpUISEAR8U+/8ADBFCluPbSH+Of/eJx5jkiIcRA80kA35+B/u//gyKTOe+  
cYDkHI9rFAkbo1q+D04/mB+iw7cURM+FPCx0QccpiYBHK5o+IPeOJaSWWSeQ  
VAVfd2hjlkbxvPDg0cmbCNMo/1Pn5YCWQk6j7L6mHS8c/6Xnljne3imkOCU  
CI0XzSCCR4Pp9RjMDQsl4M0TE2EDnIN12Rt1bPsajq0h7/Qj+QPc5HI36Mfy  
B7nCtS5NHXh0Acuq+J3xjhyz6yTBzclbkGSKdoywpAUJDQUHSLDoAwFBpACW  
FFIZJTE2wEzC8/d6MjzjIFoJE9N0HDEHWfDCHHknUnu6bJo+bPWT3dOHSDPR  
EltiLbAKfFsACUKVCB//9HTBIDIHUTjyC8HrG2Jzs8oG0slvpdJPfGhy+MC  
9vQ5hjnq5NHtDHIugEY8uJz2NHMyJdGQ5up2fC8OTrJkaoyyNvHkLSGn7TLx  
dIZN/LwwR04J0DDR2igk8LLBkA3EaMbqFFyU7o8IkNwRhHI97qQ8ToeR1eLQ  
vkSiQfc/R9RCw+F1BIE1bUAx84FtZMVASiWMcgQDw9MTbtGWadLkJiBpSOph  
YcRGNH+lCPTG5w15TReeHljReaQrV9DqYUXjlagzoxHyh2yVt15ccPGjrk4a  
Q5JFmMturchXlc3RBHOrdCmGouiGRCA2eKZAaQ7Oh/uB9si3xOh/uh9t2jFh  
pIRSQKdEEqxklak05jqYy+EEoh0NPMJ5JcCvexlxz2GRkiwd4S54vgHubYC  
ZHa+N1tHIT7H15nxfK/ER5wR4MZVqOOEPQuRoXcv8SyB275ir7f4f91gcOnh  
GcrmajHzEPWcvrDfXlJx/Uw1BGOAxyERYat9nFRBxkWA+PCBjKJPxHI9WYlj  
AyjS/LL/AOCPGzNo1jOUjtgKpnflhMRJseD0YpiRvsXcxv4Q8zRydVdaRIHl  
+L+hMvMN/L2bNPM8fTw25fRPwn4T/V/8DSDObMLD43Uw1fdywOOUsZ5iafJ6  
uCKeYBrSxuJo8uko1q57/OCPF2ZPpcEduEe55XthrivxeLu4KduMcOWb4noj  
2efN8RRTAoEbUpGj0RkNUsU8qAiFhsMBslpYVIVyCZBYtEIARTLKXKPLpkc4  
8oHXjbyclxjRGY6MBwXcn0cA0fOjrJ9PDw0jOkNWYEsKC1taWkAJQIA//9Ly  
b1UlqSimoLcTRxiXUAlYU9fp8u8avVH2vkdMSDRfXxgy4SK0YZsO42HjyY  
j4PsiHi1tj4OjB8/DppzPD6/R9MMGp5egRHZqIJYUskS0PDzZOniXrGlk1w4  
TyQxnzGw0hOPHtFBucJAeZjN+IQAqDzHrJZdCsBiXONh8PrIvLV96OofL/EM  
Xd4HZHDAUKD0gAB5cUdoovULp0jLMhHcD4W9WlwiNsAWujwRyWZdi9xgligE  
2IPF6vG+XIU/Q9TisPhZoUUgT01EH2O8ya9zj0w8x9od5ajV0Q4yWSG5c0sq  
qnZkivFK0kAF0QxkgNTFFAq9WkOrpDWSL7r4XS/3l+99x2jNg+1pgN8OjBw/  
iGoj73fHpEaOHXnyg+16l+YD3luxoCjMf5Z9ygLkiTEj2MBWA+SPuduXDpv7

YdgwpmMW+d+lJWJfUifO/EIWloLU8/FiOSXhEayL1iQmNwFRiahH+OTz4oGZ  
9MHY/FJ64CyCBQ4xD/6ocmy8cDuF9u+/P/ePvwxbsW2Xe3yIAbQBw+3gO7HE  
961fPc6l4ulid5wn4ux/ieyEr0PI5Zy45RkM0OYm3TLMZMm6A0lqf6nOqGjK  
ccuK6kOY6u99mZCxi5k0ef1GT1cu6Xccvm9UNHtl02SM+QR/E83UQoNkiR5  
MxejhHFtkDegeqYcwKLtBo+jj/YBPg8Q1L31WEe54sYs/NhDujy82XI6oii8  
mTUsKZUvLptUB6lwTSQGgEiLQAB0iEAOgDCgppqkMKNMkU2AzJgOXIWYJylg  
gdeNnPW3j4cuoOiBy4hZfTxDR83ALL6mNpDYNMhUUNqhLATSaSpQP//T8ci3  
fH005+x93D+G4sUfGXi4ZI7DQRTyj05g9mOIMVvV3eQdXGBIGqldN7Tb6uHN  
5RT4B6je9/R5twoudzWx6e+y6AuEWwWkNNzlk63YNoS83UYjyGkln1k5HI5s  
mWUzqgxJOjQ6eZ7IGdu2MvRi6K9ZPdi6WER7Walkwx2YvP1cJTIX0xhI4Gjy  
Z9llw6xiaTPnoXZejFoGYxBNO8MbIFZr02T05a8F1/aJSOjzyjpo49LkuRba  
gelOskbfD6vHRfajGjR4PDx9bi0tmjKjx8J2zD0ZBQeaXINvbl1jbojPOnyg  
tTYHLOMFAlkKTFMho0GMmWizdujJvgNTifa+/dvzsDRt+iibiC7RmwQlaV0Z  
OXro3iPsdR8sfcz1QJxSpGA+SPuQ2N2pDyn3Mx8UzmljVgl6X+2A9DzdJpD  
Xxekhnp6geDr4+Ue976eLrpXUO/LAjm6UxgJGfgNP4npiNxO7Q15v8EP+5cu  
mxxkbA1jr/qdpjkDT+MvNs3GJeKW86cPu4yDAEcU+BhG0H3F9npJbsYHg8bH  
RGsiTEEx9jx4o5ZHUVXd9LakReZogC+VMXQ6clQMjwfN6mGj65FvB1MwKpM5C  
iWO70ZRRcByHaB9HMVhHueDD8Xzfr6jTE8HTC5MldvFvLLI6yKeX7SBYikQb  
yS9P3uWDPvNSamZK20kxHZ3MGBDRSDKIdQERi6iKbKQinQhdrJBADnMu5Gjz  
ZGpg5Z8tYxbEi6Ymg6Y6PN1JeocPF1JQH30cbwdO+jBpDVC2qAUspYUVKoK  
B//U9WGQd3Dq8elh+Xl1uWcrt+m6XL+14xlosHzfVZMkpbS8g+J+i6roomVv  
NPpoR1ARDkxYzJ6sX8ssQIWiyJcs0j2sU7DvGBk8X4fmiY+bl9A5b4aiMqMB  
HlqUhlUXEzJRGy0hpGMB2bodmBtj8RcMvWCOkUDqqudHqx5MMBqbL89LqJzc  
zlnlA97qfxCB62D5xPqB44l6lkgacuLYo2jhyYjhyUeC9uPp5y7aOeYTyxAP  
IO57OlyZCK1H9TxczmzKfTbAfHaS+Nh+O36OcfKe5IL85iHmdVlz2xD1lgjkO  
eaO+L29FUMu2Xwyb6rp/TIXY8O3ipMrA+Pz49snWJvHXg9XXYKNvLDS4+LEa  
Zwzcy65YGJLiXqcy4ty4c4l0toMO60mWnvQHRkulfewG8Y76PhRD7XRG8QDp  
Eeh0BK0mnRgzyR3QIHJeXHDPgljQ07vfTJDQcwx5JHzSr+l2hijzyfa3HHKZ  
0D0RwxjG5SGnZy2iqTOlapF3xwrCgyTGOO54c2liHqS+II2jeaW77A+H/E6d  
SP5Z+TGarXylyJqJq+Xq9MAUeB2/+CPLhJExT2xkJjaOx5/iebeBsxzSENB3  
fQ6CRAMub/8Alvm5/j2+BfZ6GNYxfcW8rOEu3OU1wVGeuQXcQBZMe1PHkbMh  
1A9rYyxlwWMkNvDnPHWrZB0H2PP1ETSMUyNC6T8wdIHvzVwqTxxHmA9o+t9T  
ro0+bjF5lg95R+t0gfRdXpieDotZ/J7Ot8uN4vw/WZ9y2MndPu8w1kA9OTgv  
Pj+Me9A6MsLFvk5BKEjIPsTJ18HhkACQe7hOGZZv0vUetHXkPQHx8U/QyaPs  
DUW6eBU5AA6BgcthhRKotbRRk8mV6ZF5cjpEZYsdcLmXXG6ldN6Pn9QbL39n  
zxsuSB09ONHui8uAaPUGkNFtCEC1YDbCihKoH//V4uj6SMvPJ9iJEBURXufH  
6DLR2l9eMgdHJojLLdq8k9XsmQBTxS5aQ4soMDad9hvMLeSMq0QOzp8myT7e  
GW8aPzkS+30Oe47WFPQGPxaArhY6t06MnPhvjo+TIEGn3rFPLlpYylaB5mM  
kHTV2j08pnwfTj08YjQOggAgcUOjA1L0wwh33wHLjLPtNxWCGLMOpwbPM44c  
3YJ6nNLI+R+1+jKjy87qdDdcNT3xkAfAxzke99Lp+r9Qa6U8EPPmlj3LIKC  
s9GfUgEelqn0cvUDqMQyXqHx+s6SUIcFgjpOouO0vSIMtyd2TpPWGvd48v4Q  
eYHUPq9LPdGj2elqSjLPjeq6ScNJDV8sjXwf0HNgjIFEPyv4h+GyhO48FsQJ  
k8gaHVoF1n0WWA3VY/wuWwtRBEgNJCwzEJq3WEWgRGg9PTZjhPFx7sxwzI8M  
Sfk+l0XTTjEiYoHxXJINGsMkcgUj0YPSY4GwSPZBmXWekaMKH8XxN5TojMH  
THGTzojyQ/xFgZBkFg2zIGjXLYb1ZCpZjLTgMjikV4pGjqEtCFBwll5penH4  
R8clnkll+nj5+0f4XfHAYo0GFKAEQA0Ax1A/llDOUXAhjKjzoRjL144/wDJ  
GsijHAUSTURyUb/XlhEVD7X7/wDIR5RJ0bJOKU/5h+19n+p+hhAYwAOwp8zp  
IHPm3cRHH+h9aXLwzXsWpURbRyVoA1jkLo9m5Rjdh5pG5MZREg5GHa3rkBVh

5hpyzQpzyhRtscJPgo0dVB5nX47Fvj4o3mgP8Uf+k/Q9VGwXw8Uazw/qD0le  
p+IGoPH+Gayl7no/EZeV5/wnUzPsi62MnflGhLhi+MPTmFQLzYvjY9AdOSNG  
/F4+ohdSHle7MLGjyXu07h59pGcebHu8z19Fm3x2nkPHky1LagE45bouzKwP  
YBat58eUSFt+qGG5LtpxEw2JhQBkdHlyO8y82R3UMwPLtjce7vBpDYnR86es  
3vvnw+eNZoHo4Ro9IDhiGju0glm2iyQgVEtuYDTChSGE2wH//1vMGKeKpPcM2  
luk/MKeCth2lwnJ0ag6Tm3IGS9Hnq0xFOjBrONvn5dC+tjwynwNHT/qzcbkg  
eRB9HoBMTsjR9LD0WOAoB649P/CFBZES0TZdBhr4tE7oQaZJjMnQwENS4Sz  
ns5ymTyySwayy+DkchLCuZnQLJaQWAXyAU+B12lwlvd9DkGj4/Ux81lpDjw9  
VKBGt32foujXRIP1AOWfnBGMT0/U/hkaxhLUr0O+WIZImJ7vz2Tp5dNIMex4  
fpg8/UyI5hryOHOYPO6bNsNngvrRNvBDpTdEPfGliGIFPF1mHfF7g45uGkPn  
4zMDTrHbPmIPyYyw89BjPklhoVV/afM1DhHRaSdHpQjqYRAc5dXgx8GP+gPI  
dRhy5PNuMnmjAxOrtUnVg9XL+Jf92PnJPTdRLMTuNvmEPV0B85Hse1apGWem  
itNeE7aSA9DmYT6eJ1j5T7GP52PTSQetqMEDjHUx7iiiWQ5Ttxd+ZPXKAPIZ  
ERHQaIEY4DGKDqyNGtS5ksBtw6kkQvtb0xjS5sfqQIHv2UNImDzB1ljjnA/a  
+F3hD0sYgPjmLI/hi+cl2dX3+nxx6me4cfaP/vljfFF1OzoMXpY9x5L0xIJT  
LwCwjXsfA3Lk6pQVQYIMjQFE9wNg6IHmKNGkZ2GZkJOgKDiRrZSUglHdSva3  
LPDJONYztl4l6lg5o7ovhwhXUx979AAdtS57vkSx7eqj7/0aDL8UIWjH4NqJ  
n+n/AMmx+LS8zf4GbhP+ofU9HoY3PSz/AAPPg1yPR1IAhffR5en1m5Kd8o28  
JG0kns9GTqow41LwZ8spXfBYkRs83OSZmYaGcEatSw7rLzDHTtpHNs7cGe/K  
9gJfLxgwkD2fbhi0B7FkkViBboHUQAT5UbTMJlwmXoyVejzT5SNGY5d4OMeX  
ojoy0DI0i8OPWT25zo8eHWSB6mlaOrnj4bLSCqpQCGmUsKKkISwH/1xAuOfFu  
4fQ6fpjkFI7Y9NGHteSTOlmxchQSyDXR9HF0MMfOr6EMJPGgWUBE6vUwYAC  
Pwh2xYDk9iyzRAoOQzkcMbCR2jFjxGzqnJ1UQKD58skpcssksGk8xm5JIQwo  
CqSqAFQQS0BTANlppBQMp8Pj9YaL7MtXx+ui0HnGVP1H4ZIEsYD8nlvqfhfU  
bDVpBn1sZLzq5Y8gkHYUBQehzCzSUoCHDNLR0nPa8HU5aFDkoHLGIMt3te3N  
0kOpx7Tp4F48cdCPB68OXadp7vku2rSdq6HgdRhydJLbMe4/xOJyiXxB+yy4  
8fUQ2ZBYfn+r/BZRJIhNj+EvWtqv/iMHI7Yy4XDH05iQLGXDKwmpghx3kPZJ  
7CT3hNO4M9P/ADMcz+lddgdYnPAG8L6rXphOxQxKM95PZG0ku+0BPGrelkzj  
jb205ZOrxYtCRfsdrEgCOC64mZYapNngfJkt4cBymhx4sbSQSk4P2I5cxjDg+  
Yy/gfdxYY4YiMNAG8eIY9Gi+HMvyO9UT4e9041c6rRd1aF5HQo8IFBFm6qkS  
HYIEXvl7A1trVTHaFvs9EoA127NEKktlQXzuoJWWmvf9T3ZcgxR3HgPiZ+sl  
kl5Y6Ds6SkjZx/ievmd/wQfypH/H/wCRePrc3qx8sZe+T2/gQ/kSJ/j/API4  
3pbQwtT0erPKHvD5ZmQPKaL6HXGoj3vk6zhURZDkpEBMHcHrkDkotfh+IZsg  
jkNA6P0mPo+n6X4jqeLbqYaxPC6fo55JAAGmOt/DZdOd0+/D7EvxKOCNYxx3  
fB678TydSBu7MaObUowkY1T0dP1R27D2fNM9ywltkC5S6mKKNT1/VJSJkuED  
u1d4xdnoSKvVym6uMkaJjy7w5cYcu2PIAjqTo4dONXXqSx0wSB6MHRzjo1bS  
BW1QwpSDPskBynHW2NhGt20GIHRsJA//0On8Oz7q3HR9SWWMOH5roMlxD6cS  
S5TNTdLqz2cJTMuWAmmsBSFpKAUstBgAVpKoApDSKQAqaVAUNlpAgvk9eNH  
1yHz+thcS1A8Ai28RMDYUx1ajFhT2uj6vxL6+PqQe78gJnGbD24+sPd2mYaP  
qfVB7sSzAd3w49WTw362SfGjqtJ25uo2vMCZHfJEcYHmUX6n9LBBelN3u3p  
1py5DI6glFvDMW51qy8WahRejdbxnVqMq0eBo6JwjMUQCHhzhfWdINI7f6Xq  
9RsSdK7Rlo4sXRehDZE2PazKJjzo+gCkxEhR1eqzrLUw6HmszlsiZckdntI0  
kfsmnCfST1Ght9Fc6r/3Tm6NHI4+ozdR/bEYx/iPmdv2SUtcmQn2DyRb6XpM  
2EGJj30eqOCZ7PTmuog4z0mlxMRED2p6OROMR7jyvdHpJHnR6um6PDgiTHWR  
PLztmI0qsywdGcnmnoPD7T2DbCox+Sbll32WgC+W93Y6KsGZkdwB7tnThlhu  
Q8zZmSbocJiKUXz3dkC5SpymZQAMI7iTr/8ABWcUzkJsVRekB2IABTmlgHxd  
i5TjuFNKUR4Mx+hootElyRE4kHgvzmaHp5CDYPi/Sk0+N+IYdw9Qch3VmWef  
1R3QEezv+EDbhl/xF4+oybeeHfoMwjDXxJd20MrU7PxCVRB97h+DTMchlV0H

k6/qNwAdfwU7t/s2/wDk2PQu5rkntykx8utt9X1RnKJvjkr1XT+p5o8vnnp  
cmX3higjRObPR97hjP7RcDQ/xfwvVP8ADsmQhy/Y5QsDnumzm6mcOhy5AZQF  
iPJczDS+760+u9LB+zxFD+L+J8zfcU+wzB1dHKxRe+qfK6aY3AB9cjRh2qZv  
PJ3LhJ0UcbvjccbvBA5epLFTBx6g6vT0w0SDOtIUN0iAStKih4c5m23M2GMF  
RDducZW6pA//0fO/D5dn24ah8PpRtL7Wl6PPc6M6A0iLaICkqUglCIQlAmIS  
QtIAQW6XagQtOm1r0ygZALTrsWggYkPF1Ubi+hJ484sNQPnSNVGj25Om1eW  
UKcSbluzT0Yx4PKebvCbFO0YZ1QllDg6bsh4oMRDqHZkY4zl+c3/wBF3JrQ  
OUbLqEQID2YYmUS8oD1YTUS876Gq6ljH2LM8Pg6binca1fNDOhzbSEgkcu24  
d1ERLVgJEmoz1pdjRFjRgKBbDIGJJoWxFAJmAdvdqjSxieaUzEdC6Am04yCL  
aNduHDITAH2nRoOgke9i7LEBXHdMgR8PKAdQjgNgd5M7gwAINU5VWgbJv3OU  
5iBAN+Y7Q6SBqG7YGjJlcq7OgWT4lslgc2WkUQjQGwp9qOUQPLjkhfudRqkh  
oPlutwGBrt/5F8wZTh0Jfqt6ffEl+X6rGePB6pyjm8DHL3dw+z+BkbJn2v  
z20h+h/Ao/y5f1f+RVtAtT3BwtVqojo2RYp5mzKtXDNI81vTto/JmUQWA8zP  
0wJt8+WlxsPu5l3o+d1EaUnJ1OLpwRMF9oGw+Vij56fUidHRqpMuHnk7S4cS  
6KVDh3jw4xGjtxFA4cxuT1YdHklrN7segQOqlbZidEoBpVQZIBCJoBpzlJyw  
XGFNEsRlBQigf//S8fFmESAX3MErD81y+70U7iHmzpqepE26OUHYlg00AtJi  
GAQE01VJQM6SA0VigERaMWgghgAKUpAWkCEHlqQYJ1aCSHlzDR6yXny8NBEc  
QnG/Y+d1XT7dX1+n+FnPiEw4NHZG4Rlvh6hhrzR4cM+ljlQezpgzHHoeHacE  
anQ6oEjl2ibZjtnw6iD0MBBdAzGLW4DQanwCIX7uTw2MZwy3Ruvvtj/366YsW  
3zS+L/ouxFvKzk6JQO4EXyu/byXy8uWeKXpg6dnLJkkDQkSCGQJO2fW45eUR  
JB7sgZMV5Nw218Lz45kx2wHtLrinPqlygTx3UCTuw5hlhqKLtilLzdNCW3z  
Ci7iGthw6op0CNqAwJFozvlxBTWOTZKjwzlwB9Rxy5HJQrxSMu2LpPCGSDoO  
KhQLiQDPYDqx+0bofy/Dy/1OcZS0lMeata+FuHQJM6ZQjwWTIRFBzJMkUyCi  
Zk8KARyVDVNgCi1tHOqAFWRpRr7EUHK2jXsnkoBA78oOhapSO6lMeEkalgKD  
dNBjlx6Bvm3wvxDo9p3Dh+iceowjJEju6Tgyz4/N0wjoNQ+h+DDbiP9ck5c  
ZAMD2R0J2AjvuJdvQye0DVe1unOErDo8zYC5SGrqXM6sACBIPDmxaU9pNMHX  
IEPMwQ/mPTLyF2jjjA2O7nIG5pIMzw5F0o1qz3dgglbmaizELmNBHENZvoQ  
eDFrJ9CCB0R4bZi0WABKak0gmka1bJx21FsMKZxhTY0SUNB//9P54F9XoJ0K  
fGxyt9LoZVKnDOI PocZeileXEbD0xckNQ0GQHSqQARSlojRe1oEElumjJzJQ  
N4lokOlnSDNgNAVIPOZsmTQamVsEsgraATq5yGjalAz6eVA3wHolqHI6cXK  
UTw9ZFMepRy8yPTxzbieSXkzdBKHGr6uECMpR9t/8p6CAxg+YjCcDYto9Rkx  
1Y0L9B6QmNUxwR7gFkwXU8CXUZTVdn2vu9PhEPe3DpoRIMRVOWFMbbED7O6J  
D6GqRI00HnZsXqSIEDWkYMQlAgx1enD/ADDKfYnyvQAA6kkHDHoi15tT4vXi  
wxwioh2SKZJYAA0AhF3wwFjhkjwaCCgQB4pPgkaol792FAAmkgqNUQbpUFB9  
p0aCz4oGgczmgNCQ5x6nHfxBQDfIFeHDEMm8dr/wujABPu4TaOUAd0jxQdFH  
lOQCK58VXjsmkAjRpnQtIAEaJ9qaW0AqQeZ+IYK84fGOT0sgr4ZP1OWAyx2n  
gvzfV4TCwQfk9KuTDR6GDK9dvjdLnsC+eC+pGW4MaKjQyDB5tB5ZtzBQlZKm  
bJmGwQJLjMuhlbnLUugTJgctzZjymQ0gQC5dQdHQcuHUFoMchL3wePpw98lo  
G0WqRwlgJWIKoBtlLKUCkEs2top//9T5aHIL39NKph4iHXDKpAuWbR9Z05sP  
bEPm9H0wH0YmnCKzYaJJc9yDJENTLRjdWjnuZtA0IJgyZJZ5QLM2d7BNMbqR  
YNiWdzG60WwsGltDVxBbBQg0tNsW2C0hjDTLXiHtLxT0yxPi9wY9SrQ5MoMK  
yDt8TpA79QbBdTQGrGcUsUjKGo/gYU6QLSBTjDPE6SuJ8JO1gsAaSwJAi+zn  
LqMcNJFA2PDy5ZmZ9OHf4j/hQZZMukfKD9ou2LCMfHzLQVjgIARHAbAVbYAG  
+y38inlBslBtKAooMAQp5SNGTFApBIHvccmTZEK3o+aOqnlInE/6VEiYPWq9  
VunnHUAjCOC8vUdbUSI8tBt6yMLiNS8GTqJzNRs+94hnE5CgTXMXsPiklka  
nV7qsl5tkiMpclE8JGoOpbGSJ0BSWEOfbkhrEvTh/EsmM1k1ZMSA8/UASHtZ  
Emkz3sXVRyi46n+F3D8IDLPMGB1BfqcGT1YCTztWDScmifegC0hyUeEA3yg  
gktba5ZJSgrlSplVGu7nkzxhzz4NccvD1PTSkTkxy18JJA7MeYZRpoXg/EcG

+PqR+INdFm3i+JDn/wB+PaQJR9hd6YoyfKQHpkHiN7Tr8L62GeIPn9bhjjJ  
ladpJ6bqN0Rfl5ejxRk9ORcpSQZ2yPM4NAMmbdPKAzp3dAFqBZUKNYxZRAZO  
WAaLpl+luRFgsYKBebOXojlPLm5aDXpho90A8mAUHsigaJLKEAoQpKA2m2bS  
gFVQwH//1fmUxNFFUyTq5NH0n4fO4h9kPzf4bk0p+lxaxBcG2GigutOZDTJD  
JaLBQEIgyUs2wolhJkwZsNopLkZsGbDokdFgNCQeQySJoJR2g26ReGOanrxS  
3NRh1gGfQxl4F7Im3k6iNwL04zuiD7EzKLOvKeWTIAgHu1uclJIAT0Oocj08  
DxY/pd1LZBzfskO9n5luGCGM6B1MgA8HV9eMUfLrIrUh1ZM8MPxB4sv4tGP  
wRv+p8aeU5Jbp2WN2tvTiZ5Hpn8YyA/CKLvJ/GATUon+qL4xo0mNAG0uKHJn  
08MscgEoF2Gj83iyxT3RL7+HKM0BMOGoNjyb+0vPm6iOM0Tq2YvkZ8UsHmJ  
sW4UFPaiW+Xz+kzXUCeeH0AWxBJJIEPKdZAYpepEV4vsSL5nXzAjq1IHky6o  
g12OrmZXZLx5p3LThrDqJO4J2Hd08hiG8c93plOrzHTSoh49tQB8WMmYzAB4  
D1Tg5xJmJG7dv2iUeCxGUe4euA6XbZMhL3eVGjLJ12TIACeHlnMz1LtkML0c  
SQwDiFzF+L9P0P8Abv2l+XGp0fqOirF08STTzvMYGkdZNKJbuOzIDKJmg2ZC  
l+54myxLV5uo6mQlsA1HxS+y7WgmxXZqwlzHBnN1LiXwyesG+Hxr9KZwy+E/  
B+//AJSfQw9QJR8x8w0k6a3RJ2Ok+1iU4cXr4PDkzSyyMADoH/OeaAiYy3ch  
vEklZbwZxKAsT+KLSOs9MGOHhgPM+aJTnkMbu9L/AMD62GHT9HG8uprT+Jsb  
FUas4uoA6qB0qQ1D5eGJhM6Gz/yYx/8AKj7f7b6k9ogRGxZk8XXYJYpkR+0N  
C1dDLNYahSTwHDp5keWfxDST1EJhAAQYtghOjCmNOuAeZkuuAa2gYZPiLI0C  
ZHVI+FAMqeSepeuXDxnWTSHZiFb6oPPjD0xaQocqgFF6MKAqQi9UEoBSOWQd  
WhqUAqhlQP/W+clpykO709QBAvMTbk0zu/Dp7Z0/WdNK40/E9NPZkbfukno  
5eppaHpBiQajK2ZohiWC3JzKBBLFtSczow0gEuRk3luJTNoNskotEi5OiY3q  
m2BKzQ1aCgsosHSnq6Ym3EY71erCBHIGLOTfKLgU9MbgEk2CEdNpGva16HJH  
QEhUhyUWZGg05ZzBQgcfVdRtFDI8OeTcSZavT1MyZW8hG429K6mbaCLloQna  
jXkaJ2nbu7cOzADfAXdegX2HIQNdUBBI78Pr/heYndDt8T5mPHKZ04fS6DGM  
WQjxDLaFWp63Zxz4xkBB4LU80YfEXkz9VGcSI808oNnP08JiwdAD8f8AS9h6  
mUPE/J5emJyeaWkRw9WXqIRiPTBJ4O5alrVvQwz9Vln/AIQXzesMwREmw9c8  
kj8QefqckdpI0NaO0ZcpweN1B3T0dcOkDTymZkfa9eH+XA+JLoknZl0xgeLz  
d9HfLMyjG+HA8uileEIVAoAnR2h02SXZelklyuXg9JnHvly9jUiNs45QOoDh  
kPv4+nIPHCQkQYj4fsyfDJ35D2fpcXlJef4Q8rm0c+ORJBHI0L2Agixw8Uv5  
GSz8Mv8Ap/8AxR3idpochVv1KGjNZ5I4xZNBxHUxkREGz7HhzYc0iTi7h2Ad  
OnmMUfOKbAkPUzhKXm+zy6Y4ZMw08sf+k8WSUTI3/ZP/AEn0en6gg7uAGpCf  
+cc+TDGA5JPtXFKYG4Cw3mzxlewWXGM54j5db+w3DYotljY4epzSxZPVEf6n  
bpYxzn18x3E/DG285OY18JDz9FKpnHMjTX/Sxhdp7IILJpAUajqMRy4zCXxf  
ZdMOWMo3l1Ht/iebP1GCJqzuHtcJ4lbWyPFB9Gdm7J8w/wDfj6eM7w5finTV  
WSI+LI5+hzfZJ1D01Rg65eTVNOxiJhREDRyUzELd8Y2g+5RGkyNQkinFbY1i  
427R1ATBExUXkGsnty6RePGLkgd2N3HDhB24DoyEHRBXsySigvVklFotELDc  
S5gtx4TBTXAZBWRqJLkp/9fx+qwEPARXL7vV47FxFnxHyYiNS5RoxBrV+p6  
Ce6lfIS+9+FZLiPYyxUfR46ApqQ0Ywu0hbkpzkORD0EORDQc8nKT0SDkRtCm  
J9jniOpDjiOzSmFLI26ga1T0YsAkblHCWJpS3COXDhnM6ae17I9PHGNdS9Mi  
MYoPNkno8LXb0PVXLSUsmVHh55ZCDXZrfQcrs2kMDsw5zew93q6bQyD5N0QQ  
+pi+N3Vyz5lUngdgVF6+xNtOYUGYXF2ruyYiqad5vqBUi8+7Snb8UmYT2xe  
XHrHV0IBI4movsoEjoO7ftkE7Tq9mOgaAekmDkj085c6PTHBGA11TvN3d+x0  
EtwtAgzrQOkJmM/LyRjX3AHyu+Mfzln2sZUTf2idRyGL3ESk9PUwG8Clr2rH  
BLcd2orRgOXIDioA+Qnl6BmPw4hZ/iccWlyxzhLi/K1gmYxEMYuR7uWb5woN  
jimDumRp4vN1UoGJ4e848IA9Qk5PtavB1Qwk1EVbUYxZ85PSRkBo9EL9Me0u  
ecAEgOkL9OPzdg7clGTGYnkahwrVmBMU20CqqgBYyxJ85oPRA4wbjEk+1npc  
YIGUjqRwHQT9Chpfd0R6mcf5uQk8v0kRpXg/OdON+S/a+7k6mGM69njbE2is  
+MZIGPf/AMk8+GW+Oukg5dV1lxvGaNsxuUhlHEvi/qYgzo6mZGPdF5ceMTkC

DZ5L2xiOD8JeOQ2ZnMpytRCZ4Yxnt+yXIRIGXpE+W7D0DAZCRmNRw8cpTAEh  
yNEy1cPA9XDAE7Yiz7HLqMWU66ABGLOOliDHWX/knHPHP1JEjKgfMAHKTDfU  
iUt17+XD9InkO+HHf/F/5TeqUJYJGJ81jlrFjy5BXwguyGeacpkaERA1H9L0  
4MEMso5KG0+z7T04clxw2nX3uXSg4py6ftl3D9//AEG5T2DR1dTjGTGY82/M  
54Sw5DKI4Ov9L9ZGe4WXyvxHp7844PXPJYsEdPm3Ad7emQt8Xpsnoz9OXyfZ  
xz3BMiCJUxmlWMTj3cOriWMe9iKcZL14hYfPE9X0sPDpkRHUCovHh+J7eq0  
i8WDuWlP2w4dXKPDZdEKPDntE8OcyiAtDEpIE2kNhw6DgPPuddzGU1ayC40  
5xNtZyNupclP/9C5C4Eh8XqYmQ9r70YSJLbeheXqcQifLy4RtnzphTgofQ/C  
51lxY6mBGpo34OfRERy6cNehFqfY9Obp6+Q8HSGw+IFwaMdrllPUY25mLSHJ  
KDjKL3Sg4ZllpwyXb3dZRpwM+wYU1AEWhOnEStbfPe0s9uVl8Viaym82WejR  
LhPVwtTrbQncaaDMBZdCKds5rQrFDfMAe99EAiQR0eEQx+pLmXH9LrPxe1VC  
PJmWmxqAfFpESck6MMg1v2IkUgsnRA8P8Wwbh6keQ+V05Mol+ozQ3xlL85s9  
OcovRMwHDpkBe+B8zwQoSBe+PNI0QHc3/wAlrHqCjdqdLdl1WiBIKYjpEO+M  
+aJ9sXkM/Nxf/SdzKhaB6fUYoy0k8UZ5CCIfCHQTmQNvm9rOXGenO8HQn4XO  
hTE4tkRM3uJ7pw45YSSBdtTyyyVEinrwREBtuyfFMHDEkGshrcfNXllL/wAy  
OHV4fSAFaeP/ALrfQ6/CZwuPMTuaMR1XTb6sx+L+lqZGj5TNR18OHoMfJerm  
xxjlu4x7qj7GiDI4SGsuM4zRYDoFoaplA6cEAQZSNAPRWOEhpdI9XiGQiO3t  
yyCSWylO3pBeUe99KcJY5mdWC+f0khCQkfF9bPA5IEPJ6llODFIGtWn0IRgc  
Y7vLhw+oOSJOscAxyvJKyGA26b+bAwPXRlGbdGQ3E0QiUhjyDJH4ZeWT0zln  
r2LSHn+rk2/4eLawY8UBvyEwV/Y52Yx+G3qxdFCPOqkpl6WBBIEkaOHSHdKW  
A8jWD6lCPHDwdTA45xzx5ifN/T/8ScpliTpgb1HduMBeopZgCQkPhl5/9X++  
dBqx4FQD4PPnhsAy8GJemnm6wSlilLlJcp0SzQyTuPEvN/r/wB4uSlnExpB  
f06f1JGI2kUfMS+mHT1lfM9VgnDISksfCS9XS5d4v6Xt6/BvjvjqQ+HHNKGt  
zEUXosUZZ7128HWWID3vRiygh4/xCVRiPeVvYhs88T1fdwDyB+bjLzP03Tjy  
j3Kxey9bpF4+n4en8RIUXDph5QxGmdY7BJ5SBqmrkHRCJHX3PPkm7y5JeOZ1  
aiETmgSPLIOVIG4Xo0htGfmAenfq8lPmeiMtWMp24jZeuOMZORYeHAdX0sHw  
282aR//R6DI9SQ2h0zYPUGvLrigl8O223jJ1g+fz9EPiL54j6chWIF+n6jFu  
D4WfFR1dSRHtdFK6p9nHw/Pfh0rAfocYNMRWWQyYupGi0C0yc8ho82R7pQ0e  
PJFjKcGUvHb3Zo+x4JmjTi2h0y/ixKtbYBQS8lPfduczFDnk6PXjxjHrLLUp  
KDNrJlzx4pAWdApMQdXXJlnUvKTZ1dLE87szuj1RiKGodJ9ZAQ15eK9Hfo8Y  
yZKkLFNpZzBi1VEnX0c/UxiT0mXimhHyjQMF6nlSdGBoyb8UD3tKCRBfC6wb  
M9keUvu1XHd4uqhCVx22O8moyzjz7Le+OpeSWGUfaOz1xFmoi3UkKkN3HCY  
ihX3O0emnMVI7fc9OHpYYTY1J5kfiZlg5oYJHgU9WLpxj83J8XSeWMBciA88  
us3aYoklMLLA9VEgxlG9C3nXnNjScjV58xyHQ6EtlKw1uohsEI9HLIIJ0p6  
8XSiB3E2XpgbFtU5bLBmY2Hmxf8AgU5RlrcYlo9sdC+Z18juG0E7Qb/1MUhn  
gZT5yR4vVE3LaPCnlMSCTIVZe3ENsjLn2PSupHoZZbyYrPxR8peQB9OdGM5D  
ggf8p8wvRmUaSOg1YT2Qw0FMWWosB3dMQDr7n1emyHWEu3H9L5nT4zKNGXWr  
1wO6PqDkOGNyuoJlEwMegLR6SgZSuRemBJFyNu8XMIPOw9PLaYy0BejpyckT  
i+2OHpkHmnE4pjKpMuQaNYHcAe/d015DhCYOQgGt3mAegaFy9SoTwhRFakN  
BicN8TG6thTix5T6Q3HQavdE6a93kx9FHcCSdPsvamAhkwRKW0WLPuQCTRCK  
GN92kcPLn6mOE666Jlh0yoin5vrcPoy9/D6X7XkNyAFDkNZ4x6rHuHg9FgZZ  
53SZTla88J/ENa9gcpX9Gpj5xDp1c98NwjLh2jB40Cd9e1+vwioj3PyHTgnN  
H2l+xxDRzYqPN/FJcBPTxoBw/FJXMRD24I8JGmbRGqYi5EumMcrEVuLCHLMV  
El8/J8T6WUVB8ycbJpqByyNIETq2fBmMS6IVj1NvTDVxxgxt2ixg7MD2R6nH  
Dyk6vJhinpoxySNGnLkff/S9QHTR0iTTy9LGW3zd3rEXyrU7iYiXxPk9X05  
Fnl9iTinxCUaeiMnj/h5lNe1+pgbiH5jHH08teL9J0x3QCWoehvSjRoEBTG+  
XZgk+xwIEF1Mq4DEebloxIOHqAlh8PLLzP0vVHHt9r8h1mQCe3uWNFq4Ztvt  
gyrV1E17eHjgfVzV9mLwSWP+6e12aWP+R6WGNDCeS7XbmGnk2ZGchTzDnRyk

aJHd0ga1L0ShHNuWbVT6P4XjvdP5PI79z2dH1HpAxloD3ZXB4ItisD1JcsS1  
4DIP2rsug15e5xMjjsAEtbBTYWmAzlp4MsSjBcaB+0+kXm6jEJx9oaiMkYoR  
FRDYhGPGj58OsOMbSLLvHHPOLkaHg2OpC8nVQxjxPseXN1k+l6PbDpoQ9rzT  
gMeYSkND3/haoblghHP8VmXtfThjERQ0URhHV1jISF4Y2Dk6zCZQuPI4eGO  
OeeO6cqp9kjTV4z0AJNk0ewamIB0Oc5AYy+z3fQBtxxYY4xtiNHWlpyyhcp8  
GnW2Dqwp871sKkSjDVCRRer8QiLA7lwjHQjtEO66mbaHJPNtiYDgnn/C8yZmj  
SAHrJmDXHV66IIV6OZLcT2QBSQ0McpCB0jgMZDf3YU9bolVCz3dcEPTzDHL4  
Z+X/AJT044x2Rrwr1GISju4l1eU4IlgGMbJGB12I6lgh5MeTz75m7Gr22Dw5b  
KgFy6rXEQAb0PlidibQwp5OHJPLJlQCn1Mdml3c1qkRHZsBAICgVwlToGgkjp  
AF6pQIGmqfa0yTTACQ0fL6iMsc94G4F9VxyxJjQdIM8jFMAy3d+wejp8kYR2  
1WrzjFzdiQZIIY3HR6GA9Vg2ZnW76s9R5g+iYjPCo8h87NEx54ajLPO6eN5h  
736bF8L4HTx/n2+/HTHfsZYqPB6qXqdSB7X18QfDgfU6p+hwhj0LubQjotVA  
l2EaiiUfIB4lyU4c44D58o6EvqdQNXgmGg5NiYx26u5AQTpSIY0SSURDpwGK  
LQd3TeY0x1OP0pboGi448hhxygkyLYJJ/9P1ojW+zuK0YiARq1Ednznc15qk  
zFpJPB5aZPL6vFtkJh9PopeV5upgZQNcufR9ZGHLd5G0HsEkaolmETqOzwZ  
fxCMtMfmPhBzMs2Qdo32j58jswdWTro4wSaHvfNI1uXqpAYQTem4+TG9GL8L  
E5bpX/r8z3TwQwRBAs+1PSSnksHUZpGM5af4PLF87rPw44ZiR1lfrsU7hdU  
8XVwGUMIQMUz5rJKovJ0pG4vp9T00gONHgh0pidwLyjBnod04O7c5nOBbmTK  
l1eejMkvFUk07QbHICSa1c5GU2ximTQGpfQx/h9ak/J6qsHN2R5/qbRq6wzb  
tHq6jpsQjq8uPp55fLijZCdEyK/U9boz6kaHZ7gBVM9B+HzwxrJofY+iMUyc  
O1VwYdIOBxGBA4Zit9CUdwp4SNujWoInJFHu8/VRMoEB6L15ZnESFMRo8bDI  
x4xxcn08JEo3VX2eLJD0Mm4CwXbHPLM2BQdMyjpxz4fVFB2AvQtaAOZKef6  
WafkkQA9uKHpgRHZN20E2AkUoSRYQNGFFd8l1XcA8nUdUIS2d2ag66rVmThh  
yk3E/J2JbBDxesN5Xmu4SN09HWaZD4vJjkLMTwQ9KEscdlbltuAFvQyc5Grc  
dHSUADogRooHoHNjl0v+lxnEjJHf5RpX9LqM9GsUAD/ynHOZ7gZ8lr0Mo9/o  
jeMe93nESiQeKfP6DOD/AC+/xPpEAinztYnVHBHoZR+39z2QjtiBd0u6vic8  
nURjEkG2ag33OGXql4+S8Z6rJW+tHAZCZGRjduulK9bHMTFxOjqHyelmcc6l  
9rs+qOGNQJL4RYPCF4YUoFHsW0E6oAFoo2fBrnVfegCvBFdmgvCB53WQoWB3  
cYdPuIN3F9OcBMUeHzZAxyenDQO0zLDjkMOQ2aijq8YyRE48Oc8ezTI7cEPU  
xUezoyeNgFZbPg+rlyCOM+583JhOPJuGniEZupgccrJBrhoOT8OG/qSfAP0+  
KFB+c/A47pzk/U4xoA5sVGpGiyjrENkLL4vk5Ked1HJeGYt7eoB+95iGkOaU  
WDF3yEAOGOW+R9jUCoxJaoAV3SNTQU6aO4MmcgB70xincAwZE8IH/9T2ISDp  
73mkdhBLvCW4W+c7mgstcs3YpYmtCiFSiKovky/DTkzg15H1h7Why2Sqa4ul  
jAUAAP8AC6RglmgNFjQoh1D1WJglZNFJoaoX7WkARTzTj4vYaeXqASDXLzs  
jSZ5fUzjRfGhkMpG+Bw+vPp5yjtEdfa+ZLpfSIV6lw9IN11KGP1pbHow9NDE  
aPHa3mwGcc+wDs+zHosnUVvFBZdYRb2lnNL05ioHUcNHHnykDGKH2iX1cP4f  
ixa1Z8S9YAD14nKTzYfhcCd2TU+D6EMUCyqlACZSrQKLPLqIU885yEqA0bM  
thot86sYJETzz54V5np4cM2UCJDI9oOOWgsoFka8JBtF6vM6kmlJopqlCnyo  
DdcuUpXw0CJNSKICh2YAR8LbAs25Ysgma9jqgG0BJLILQEInLLiGSJBHLrbB  
mBygcEJmJ2nkPbGW4PBlqc9wPHd22Ei4jVsmYObR8RveOz4s5WT4vvROUS25  
BcTo+L+JdIYT3QLuoZhbcD8XqzgakHeOUS45dmTaMvMkVuHhbmISLTDGe6l  
FO2Walnuge22IacseHJmklkPX0/TmfAoPqYcEcQ05Y7ESPOIAdPngR3GrvLr  
ZXWON05daN+aERyuH/wfKYy4k4NG0ozzESOG7h5vJjnVGnsI1IMtkdS4yx5c  
txkAGohPUyFCI7pjIzAhj0ocu37LE1fldgIYx4UyQckemmZCUy996vNLq4A0  
8855MpOu2IWpTvy544xZYh1YJAOI8PBA7z/N1rhrJLdmjegHdQJPVfk+xPZw  
j1EfFzOeUjoNPa5gsnVym3mhmvykau0ZW5xKXuvTupvsgUoLQOpGry5eIGQ7  
gaL1qApByY+iiD5tXtEQBQSGnUmYPO63BY3Ds+P1ELxSfpZx3Cjw+D1mL0yY  
9i7qyNGX4DCoSPtfpsYfC/Cl+njrxJfYGeMTy5eoR1ckllyS4jqRucMnX443

ZpFMs/LyyNC3nzdTuPkBkXHHDJ1PllLaG7EMOq6uMTVpwZqiJeLtL8KAN8sj  
HsHuSB0RHclJ3F5YdTrtk9IAAnq7M6Ezge5UDTV6BCw80wbQP/9k=

---=\_linux46186f4a--

---

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sun, 08 Apr 2007 04:59:37 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Gotcha, we'll see what happens when I stick the new rectumfier in there.  
Maybe I'll get lucky :-)

Thanks,  
Rich

"Neil" <IOUOIU@OIU.om> wrote in message news:4617eff2\$1@linux...

>  
> Yes, it could've just gone kablooeey, affecting no other  
> components, but what a bridge rectifier does is to turn the  
> various cycles of AC current into steady & polarized DC. If  
> that thing went kablooeey and created an open circuit in the  
> process, than it's possible no other components were affected;  
> if it kablooeed into a short, then whatever components that are  
> next in line after it got a nice dose of AC, which may have  
> caused a subsequent kablooeation of those parts as well.  
>  
> Just 'cause they don't "look" bad, doesn't mean they ain't.  
>  
> Neil  
>  
>  
> "Rich Lamanna" <richard.lamanna@verizon.net> wrote:  
> >  
> >  
> >Neil, Edna, couldn't the rectifier just have gone Kablooeey? As you say =  
> >it could be symptomatic of another problem but if you read my last post,  
> =  
> >I may have been overloading the thing. Looking at the circuit board =  
> >carefully, I see no other browned or burned resistors, etc. Maybe I'll =  
> >send it in, but I might try to fix it myself as it will be only a couple  
> =  
> >of bucks if it doesn't work. The unit was bought used from another owner  
> =  
> >a few years ago, on ebay, and I'm not sure if it is still under =  
> >warrantee. I'll have to look into this. I probably know just enough to =  
> >get this wrong, but wish me luck. I know..... I'll soon be hearing, =



> > "I told you so"! :-)  
> >  
> > Thanks,  
> > Rich  
> >  
> > "Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
> > news:46178cc2\$1@linux...  
> > Hello, Easter greetings by the way. Hey the other day I smelled smoke  
> =  
> > and heard a crinkling sound in the back of my preamp rack and later =  
> > discovered the cause was my Presonus M80's power supply which is now =  
> > deep fried. Well I took the supply apart and found that this dark grey =  
> > thing on the cuircuit board, I think it's a diode ->I, melted right off =  
> > of the board. Any one know what this is? I can't get a picture just yet  
> =  
> > up on the net but I'll try and describe it.  
> >  
> > It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which  
> =  
> > solder to the cuicut board, dark grey colored and is coded:  
> >  
> > -->| RS\*202L  
> > RU A 90=20  
> > + AC -  
> >  
> > Anyone of you electronics wizards know where the heck I can find one =  
> > of these?  
> >  
> > You guys are great,  
> > Thanks  
> > Rich  
> >  
> > PS. By the way I broke down and got a Myspace site now. Check it out.  
> > =  
>  
> > http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofile&friend=  
> > id=3D172230696  
> >  
> >  
> >  
> >  
> ><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">  
> ><HTML><HEAD>  
> ><META http-equiv=3DContent-Type content=3D"text/html; =  
> > charset=3Diso-8859-1">  
> ><META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>  
> ><STYLE></STYLE>  
> ></HEAD>

```
> ><BODY bgColor=3D#ffffff>
> ><DIV>
> ><DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have gone =
> >Kablooey? As=20
> >you say it could be symptomatic of another problem but if you read my =
> >last post,=20
> >I may have been overloading the thing. Looking at the circuit board=20
> >carefully, I see no other browned or burned resistors, etc. Maybe =
> >I'll send=20
> >it in, but I might try to fix it myself as it will be only a couple =
> >of=20
> >bucks if it doesn't work. The unit was bought used from another owner a
> =
> >few=20
> >years ago, on ebay, and I'm not sure if it is still under warrantee. =
> >I'll have=20
> >to look into this. I probably know just enough to get this wrong, but =
> >wish me=20
> >luck. I know..... I'll soon be hearing, "I told you so"! =
> >:-)</FONT></DIV>
> ><DIV><FONT size=3D2></FONT> </DIV>
> ><DIV><FONT size=3D2>Thanks,</FONT></DIV>
> ><DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>
> ><BLOCKQUOTE dir=3Dltr=20
> >style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
> >BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
> > <DIV>"Rich Lamanna" <<A=20
> > =
> >
> >href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=
> >A>>=20
> > wrote in message <A=20
> > href=3D"news:46178cc2$1@linux">news:46178cc2$1@linux</A>...</DIV>
> > <DIV><FONT size=3D2>Hello, Easter greetings by the way. Hey the =
> >other day I=20
> > smelled smoke and heard a crinkling sound in the back of my =
> >preamp=20
> > rack and later discovered the cause was my Presonus M80's power supply
> =
> >which=20
> > is now deep fried. Well I took the supply apart and found that this =
> >dark grey=20
> > thing on the cuircuit board, I think it's a diode ->I, melted right =
> >off of=20
> > the board. Any one know what this is? I can't get a picture just yet =
> >up on the=20
> > net but I'll try and describe it.</FONT></DIV>
> > <DIV><FONT size=3D2></FONT> </DIV>
```

> > <DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins  
> =  
> >on the=20  
> > bottom which solder to the cuicut board, dark grey colored and is =  
> >  
> > coded:</FONT></DIV>  
> > <DIV><FONT size=3D2></FONT> </DIV>  
> > <DIV><FONT size=3D2>-->| RS\*202L</FONT></DIV>  
> > <DIV><FONT size=3D2>RU A 90 </FONT></DIV>  
> > <DIV><FONT size=3D2>+ AC -</FONT></DIV>  
> > <DIV><FONT size=3D2></FONT> </DIV>  
> > <DIV><FONT size=3D2>Anyone of you electronics wizards know where =  
> >the heck l=20  
> > can find one of these?</FONT></DIV>  
> > <DIV><FONT size=3D2></FONT> </DIV>  
> > <DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
> > <DIV><FONT size=3D2>Thanks</FONT></DIV>  
> > <DIV><FONT size=3D2>Rich</FONT></DIV>  
> > <DIV><FONT size=3D2></FONT> </DIV>  
> > <DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace site  
> =  
> >now.=20  
> > Check it out.</FONT></DIV>  
> > <DIV><FONT size=3D2><A=20  
> > =  
>  
>href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
> >e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
> >on=3Duser.viewprofile&friendid=3D172230696</A></FONT> </DIV>  
> > <DIV><BR><FONT size=3D2><BR></DIV></BLOCKQUOTE></FONT></BODY></HTML>  
> >  
> >  
>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Sun, 08 Apr 2007 05:00:36 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_0021\_01C77970.EF64B0C0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Edna, yes the power supply can run on its own, doesn't need to be =  
plugged in for it to function. I have it disconnected at the moment. Why =

do you ask?

Rich

"Edna" <edna@texomaonline.com> wrote in message news:4617f977@linux...  
Its possible, but not likely, especially if its not a new unit, which =  
would be more likely to have a defective component. Something caused a =  
current overload through it to burn it up. But apparently not a direct =  
short which would have blown the fuse as well. I've seen many leaky =  
filter caps do this - these are the large caps that filter the ripple =  
voltage or small ac component off the DC. A blown voltage regulator is =  
another likely suspect, as far as the PS itself. Can the PS run by =  
itself w/o being connected to the M80? =20

ich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooeey? As you =  
say it could be symptomatic of another problem but if you read my last =  
post, I may have been overloading the thing. Looking at the circuit =  
board carefully, I see no other browned or burned resistors, etc. Maybe =  
I'll send it in, but I might try to fix it myself as it will be only a =  
couple of bucks if it doesn't work. The unit was bought used from =  
another owner a few years ago, on ebay, and I'm not sure if it is still =  
under warrantee. I'll have to look into this. I probably know just =  
enough to get this wrong, but wish me luck. I know..... I'll soon be =  
hearing, "I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I smelled =  
smoke and heard a crinkling sound in the back of my preamp rack and =  
later discovered the cause was my Presonus M80's power supply which is =  
now deep fried. Well I took the supply apart and found that this dark =  
grey thing on the cuircuit board, I think it's a diode ->I, melted right =  
off of the board. Any one know what this is? I can't get a picture just =  
yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom =  
which solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can find =



well. I've seen many leaky filter caps do this - these are the caps that filter the ripple voltage or small ac component off the DC. A blown voltage regulator is another likely suspect, as far as the PS itself. Can the PS run by itself w/o being connected to the M80?

Richard Lamanna <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)>

wrote in message <[news:4617ee9b\\$1@linux](news:4617ee9b$1@linux)>...>

Neil, Edna, couldn't the rectifier just have gone Kablooney? As you say it could be symptomatic of another problem but if you read my last post, I may have been overloading the thing. Looking at the circuit board carefully, I see no other browned or burned resistors, etc. Maybe I'll send it in, but I might try to fix it myself as it will be only a couple of bucks if it doesn't work. The unit was bought used from another owner a few years ago, on ebay, and I'm not sure if it is still under warrantee. I'll have to look into this. I probably know just enough to get this wrong, but wish me luck. I know..... I'll soon be hearing, "I told you so"! :-)

Thanks,

Rich

Rich Lamanna <[richard.lamanna@verizon.net](mailto:richard.lamanna@verizon.net)>

wrote in message <A=20  
href=3D"news:46178cc2\$1@linux">news:46178cc2\$1@linux</A>...</DIV>  
<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. Hey =  
the other=20  
day I smelled smoke and heard&nbsp;a crinkling sound&nbsp;in the =  
back of=20  
my preamp rack and later discovered the cause was my Presonus =  
M80's power=20  
supply which is now deep fried. Well I took the supply apart and =  
found=20  
that this dark grey thing on the cuircuit board, I think it's a =  
diode=20  
&gt;l, melted right off of the board. Any one know what this is? =  
I can't=20  
get a picture just yet up on the net but I'll try and describe=20  
it.</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 =  
pins on the=20  
bottom which&nbsp;solder to the cuircuit board, dark grey colored =  
and is=20  
coded:</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>--&gt;l RS\*202L</FONT></DIV>  
<DIV><FONT size=3D2>RU&nbsp; A 90 </FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics wizards&nbsp;know =  
where the=20  
heck I can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a Myspace =  
site now.=20  
Check it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
=  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT=20  
size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE  
></FONT></BODY><=  
</HTML>

-----=\_NextPart\_000\_0021\_01C77970.EF64B0C0--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?

Posted by [Edna Sloan](#) on Sun, 08 Apr 2007 17:03:16 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_0020\_01C779D5.E490D380

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

Because you could mess with the PS w/o affecting the M80. I assume you = have experience with soldering and component removal on PCBs, and I am = assuming the circuit board is only single or double sided. If not, in = either case, I would let a tech do it. Its easy to damage a PCB, and if = its multilayered you cant do much anyway.

Having said that, If you replace just the rectifier, the only load on = it would be from the PS components. I would suggest also replacing the = filter cap(s) on that supply line, since it is the prime suspect in the = PS. (You may need a schematic here). If after this, the rectifier = starts getting too hot again the problem is likely a VR(s) on that line. =

<richard.lamanna@verizon.net> wrote in message news:46186a35@linux...

Edna, yes the power supply can run on its own, doesn't need to be = plugged in for it to function. I have it disconnected at the moment. Why = do you ask?

Rich

"Edna" <edna@texomaonline.com> wrote in message = news:4617f977@linux...

Its possible, but not likely, especially if its not a new unit, = which would be more likely to have a defective component. Something = caused a current overload through it to burn it up. But apparently not = a direct short which would have blown the fuse as well. I've seen many = leaky filter caps do this - these are the large caps that filter the = ripple voltage or small ac component off the DC. A blown voltage = regulator is another likely suspect, as far as the PS itself. Can the = PS run by itself w/o being connected to the M80? =20

ich Lamanna" <richard.lamanna@verizon.net> wrote in message = news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooey? As you =



say it could be symptomatic of another problem but if you read my last =  
post, I may have been overloading the thing. Looking at the circuit =  
board carefully, I see no other browned or burned resistors, etc. Maybe =  
I'll send it in, but I might try to fix it myself as it will be only a =  
couple of bucks if it doesn't work. The unit was bought used from =  
another owner a few years ago, on ebay, and I'm not sure if it is still =  
under warrantee. I'll have to look into this. I probably know just =  
enough to get this wrong, but wish me luck. I know..... I'll soon be =  
hearing, "I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I smelled =  
smoke and heard a crinkling sound in the back of my preamp rack and =  
later discovered the cause was my Presonus M80's power supply which is =  
now deep fried. Well I took the supply apart and found that this dark =  
grey thing on the cuircuit board, I think it's a diode ->I, melted right =  
off of the board. Any one know what this is? I can't get a picture just =  
yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom =  
which solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can find =  
one of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check it =  
out.

=

[http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp\\_rofile&friend=  
id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp_rofile&friend=id=3D172230696)

-----=\_NextPart\_000\_0020\_01C779D5.E490D380  
Content-Type: text/html;  
charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD>
<META http-equiv=3DContent-Type content=3D"text/html; =
charset=3Diso-8859-1">
<META content=3D"MSHTML 6.00.2900.2180" name=3DGENERATOR>
<STYLE></STYLE>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman" =
size=3D3>Because you=20
could mess with the PS w/o affecting the M80.&nbsp; I assume you have =
experience=20
with soldering and component removal on PCBs,&nbsp;and I&nbsp;am =
assuming the=20
circuit board is only single or double sided.&nbsp; If not, in either=20
case,&nbsp;I would let a tech do it.&nbsp; Its easy&nbsp;to damage a =
PCB, and if=20
its multilayered you cant do much anyway.</FONT></FONT></DIV>
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman"=20
size=3D3></FONT></FONT>&nbsp;</DIV>
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman" =
size=3D3>Having said=20
that, &nbsp;<FONT face=3DArial size=3D2>I</FONT></FONT>f you replace =
just the=20
rectifier<FONT face=3D"Times New Roman" size=3D3>, the only load on it =
would be from=20
the PS components.&nbsp; I would suggest also replacing the filter =
cap(s) on=20
that supply line, since it is the prime suspect in the PS.&nbsp; (You =
may need a=20
schematic here).&nbsp; If after this, &nbsp;the rectifier starts=20
getting&nbsp;too hot again the problem is likely a VR(s) on that=20
line.&nbsp;</FONT></FONT></DIV>
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman"=20
size=3D3></FONT></FONT>&nbsp;</DIV>
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman" =
size=3D3>&nbsp;&nbsp;=20
</FONT></FONT>&lt;<A=20
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=
A>&gt;=20
wrote in message <A =
href=3D"news:46186a35@linux">news:46186a35@linux</A>...</DIV>
<BLOCKQUOTE dir=3Dltr=20
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
<DIV><FONT size=3D2>Edna, yes the power supply can run on its own, =
```



resistors,=20

etc. Maybe I'll send it in, but I might try to fix it myself as it =  
will=20

be&nbsp;only a couple of bucks if it doesn't work. The unit was =  
bought=20

used from another owner a few years ago, on ebay, and I'm not sure =  
if it=20

is still under warrantee. I'll have to look into this. I probably =  
know=20

just enough to get this wrong, but wish me luck. I know..... =  
I'll soon=20

be hearing, "I told you so"! :-)</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>Thanks,</FONT></DIV>

<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>

<BLOCKQUOTE dir=3Dltr=20

style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">

<DIV>"Rich Lamanna" &lt;<A=20

=

href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20

wrote in message <A=20

=

href=3D"news:46178cc2\$1 @linux">news:46178cc2\$1 @linux</A>...</DIV>

<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. Hey =  
the other=20

day I smelled smoke and heard&nbsp;a crinkling sound&nbsp;in the =  
back of=20

my preamp rack and later discovered the cause was my Presonus =  
M80's=20

power supply which is now deep fried. Well I took the supply =  
apart and=20

found that this dark grey thing on the cuircuit board, I think =  
it's a=20

diode -&gt;l, melted right off of the board. Any one know what =  
this is?=20

I can't get a picture just yet up on the net but I'll try and =  
describe=20

it.</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has 4 =  
pins on=20

the bottom which&nbsp;solder to the cuircuit board, dark grey =  
colored and=20

is coded:</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>--&gt;l RS\*202L</FONT></DIV>

<DIV><FONT size=3D2>RU&nbsp; A 90 </FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics wizards&nbsp;know =  
where the=20  
heck I can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a =  
Myspace site=20  
now. Check it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
=  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT=20  
size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE  
></BLOCKQUOTE></=  
FONT></BODY></HTML>

-----=\_NextPart\_000\_0020\_01C779D5.E490D380--

---

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Mon, 09 Apr 2007 11:50:15 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_002D\_01C77A73.54283F60  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Thanks Edna for the help. Will keep you all posted. Anyone know where I =  
can order this rectifier online? It might just be easier for me to order =  
it as I may not be able to get to the parts place until this weekend.

Rich

"Edna" <edna@texomaonline.com> wrote in message news:46192160@linux...  
Because you could mess with the PS w/o affecting the M80. I assume =  
you have experience with soldering and component removal on PCBs, and I =  
am assuming the circuit board is only single or double sided. If not, =

in either case, I would let a tech do it. Its easy to damage a PCB, and = if its multilayered you cant do much anyway.

Having said that, If you replace just the rectifier, the only load on = it would be from the PS components. I would suggest also replacing the = filter cap(s) on that supply line, since it is the prime suspect in the = PS. (You may need a schematic here). If after this, the rectifier = starts getting too hot again the problem is likely a VR(s) =

<richard.lamanna@verizon.net> wrote in message = news:46186a35@linux...

Edna, yes the power supply can run on its own, doesn't need to be = plugged in for it to function. I have it disconnected at the moment. Why = do you ask?

Rich

"Edna" <edna@texomaonline.com> wrote in message = news:4617f977@linux...

Its possible, but not likely, especially if its not a new unit, = which would be more likely to have a defective component. Something = caused a current overload through it to burn it up. But apparently not = a direct short which would have blown the fuse as well. I've seen many = leaky filter caps do this - these are the large caps that filter the = ripple voltage or small ac component off the DC. A blown voltage = regulator is another likely suspect, as far as the PS itself. Can the = PS run by itself w/o being connected to the M80? =20

ich Lamanna" <richard.lamanna@verizon.net> wrote in message = news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooeey? As = you say it could be symptomatic of another problem but if you read my = last post, I may have been overloading the thing. Looking at the circuit = board carefully, I see no other browned or burned resistors, etc. Maybe = I'll send it in, but I might try to fix it myself as it will be only a = couple of bucks if it doesn't work. The unit was bought used from = another owner a few years ago, on ebay, and I'm not sure if it is still = under warrantee. I'll have to look into this. I probably know just = enough to get this wrong, but wish me luck. I know..... I'll soon be = hearing, "I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message = news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I =

smelled smoke and heard a crinkling sound in the back of my preamp rack = and later discovered the cause was my Presonus M80's power supply which = is now deep fried. Well I took the supply apart and found that this dark = grey thing on the cuircuit board, I think it's a diode ->l, melted right = off of the board. Any one know what this is? I can't get a picture just = yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the = bottom which solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can = find one of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check = it out.

=

[http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp\\_rofile&friend=id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp_rofile&friend=id=3D172230696)

-----=\_NextPart\_000\_002D\_01C77A73.54283F60

Content-Type: text/html;

charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<HTML><HEAD>

<META http-equiv=3DContent-Type content=3D"text/html; =

charset=3Diso-8859-1">

<META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>

<STYLE></STYLE>

</HEAD>

<BODY bgColor=3D#ffffff>

<DIV><FONT size=3D2>Thanks Edna for the help. Will keep you all posted. =

Anyone=20

know where I can order this rectifier online? It might just be easier =

for me to=20

order it as I may not be able to get to the parts place until this=20

weekend.</FONT></DIV>





<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; = BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV><FONT size=3D2>Edna, yes the power supply can run on its own, = doesn't=20 need to be plugged in for it to function. I have it disconnected at = the=20 moment. Why do you ask?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Rich</FONT><BR></DIV>  
<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; = BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Edna" &lt;<A=20 = href=3D"mailto:edna@texomaonline.com">edna@texomaonline.com</A>&gt; = wrote in=20 message <A = href=3D"news:4617f977@linux">news:4617f977@linux</A>...</DIV>  
<DIV><FONT face=3DArial size=3D2>Its possible, but not likely, = especially if=20 its not a new unit, which would be more likely to have a defective = component.&nbsp; Something caused a current overload through it to = burn it=20 up.&nbsp; But apparently not a direct short which would have blown = the=20 fuse as well.&nbsp; I've seen many leaky filter caps do this - = these are=20 the large caps that filter the ripple voltage or small ac = component off=20 the DC.&nbsp; A blown voltage regulator is another likely suspect, = as far=20 as the PS itself.&nbsp; Can the PS run by itself w/o being = connected to=20 the M80?&nbsp; &nbsp;</FONT></DIV>  
<DIV>&nbsp;</DIV>  
<DIV>ich Lamanna" &lt;<A=20 = href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</ = A>&gt;=20 wrote in message <A=20 href=3D"news:4617ee9b\$1@linux">news:4617ee9b\$1@linux</A>...</DIV>  
<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; = BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>  
<DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just have =

gone=20

Kablooey? As you say it could be symptomatic of another problem =  
but if=20

you read my last post, I may have been overloading the thing. =  
Looking at=20

the circuit board carefully,&nbsp;I see no other browned or =  
burned=20

resistors, etc. Maybe I'll send it in, but I might try to fix it =  
myself=20

as it will be&nbsp;only a couple of bucks if it doesn't work. =  
The unit=20

was bought used from another owner a few years ago, on ebay, and =  
I'm not=20

sure if it is still under warrantee. I'll have to look into =  
this. I=20

probably know just enough to get this wrong, but wish me luck. I =

know..... I'll soon be hearing, "I told you so"! =  
:-)</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>Thanks,</FONT></DIV>

<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>

<BLOCKQUOTE dir=3Dltr=20

style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: =  
5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">

<DIV>"Rich Lamanna" &lt;<A=20

=

href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20

wrote in message <A=20

=

href=3D"news:46178cc2\$1 @linux">news:46178cc2\$1 @linux</A>...</DIV>

<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. =

Hey the=20

other day I smelled smoke and heard&nbsp;a crinkling =  
sound&nbsp;in the=20

back of my preamp rack and later discovered the cause was my =  
Presonus=20

M80's power supply which is now deep fried. Well I took the =  
supply=20

apart and found that this dark grey thing on the cuircuit =  
board, I=20

think it's a diode -&gt;I, melted right off of the board. Any =  
one know=20

what this is? I can't get a picture just yet up on the net but =  
I'll=20

try and describe it.</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, has =  
4 pins on=20  
the bottom which&nbsp;solder to the cuicut board, dark grey =  
colored=20

and is coded:</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>--&gt;| RS\*202L</FONT></DIV>

<DIV><FONT size=3D2>RU&nbsp;solder; A 90 </FONT></DIV>

<DIV><FONT size=3D2>+ AC -</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>Anyone of you electronics =  
wizards&nbsp;know where=20

the heck I can find one of these?</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>You guys are great,</FONT></DIV>

<DIV><FONT size=3D2>Thanks</FONT></DIV>

<DIV><FONT size=3D2>Rich</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>PS. By the way I broke down and got a =  
Myspace site=20

now. Check it out.</FONT></DIV>

<DIV><FONT size=3D2><A=20

=

href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>

<DIV><BR><FONT=20

=

size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE  
></BLOCKQUOTE></=

BLOCKQUOTE></FONT></BODY></HTML>

-----=\_NextPart\_000\_002D\_01C77A73.54283F60--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Aaron Allen](#) on Mon, 09 Apr 2007 13:48:48 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_0028\_01C77A83.E3E77610

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

[www.partsexpress.com](http://www.partsexpress.com)=20

[www.mcmelectronics.com](http://www.mcmelectronics.com)=20

www.digikey.com=20  
www.radioshack.com

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:461a1baf@linux...

Thanks Edna for the help. Will keep you all posted. Anyone know where =  
I can order this rectifier online? It might just be easier for me to =  
order it as I may not be able to get to the parts place until this =  
weekend.

Rich

"Edna" <edna@texomaonline.com> wrote in message =  
news:46192160@linux...

Because you could mess with the PS w/o affecting the M80. I assume =  
you have experience with soldering and component removal on PCBs, and I =  
am assuming the circuit board is only single or double sided. If not, =  
in either case, I would let a tech do it. Its easy to damage a PCB, and =  
if its multilayered you cant do much anyway.

Having said that, If you replace just the rectifier, the only load =  
on it would be from the PS components. I would suggest also replacing =  
the filter cap(s) on that supply line, since it is the prime suspect in =  
the PS. (You may need a schematic here). If after this, the rectifier =  
starts getting too hot again the problem is likely a VR(s) on that line. =

<richard.lamanna@verizon.net> wrote in message =  
news:46186a35@linux...

Edna, yes the power supply can run on its own, doesn't need to be =  
plugged in for it to function. I have it disconnected at the moment. Why =  
do you ask?

Rich

"Edna" <edna@texomaonline.com> wrote in message =  
news:4617f977@linux...

Its possible, but not likely, especially if its not a new unit, =  
which would be more likely to have a defective component. Something =  
caused a current overload through it to burn it up. But apparently not =  
a direct short which would have blown the fuse as well. I've seen many =  
leaky filter caps do this - these are the large caps that filter the =  
ripple voltage or small ac component off the DC. A blown voltage =  
regulator is another likely suspect, as far as the PS itself. Can the =  
PS run by itself w/o being connected to the M80? =20

ich Lamanna" <richard.lamanna@verizon.net> wrote in message =

news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooey? As you say it could be symptomatic of another problem but if you read my last post, I may have been overloading the thing. Looking at the circuit board carefully, I see no other browned or burned resistors, etc. Maybe I'll send it in, but I might try to fix it myself as it will be only a couple of bucks if it doesn't work. The unit was bought used from another owner a few years ago, on ebay, and I'm not sure if it is still under warrantee. I'll have to look into this. I probably know just enough to get this wrong, but wish me luck. I know..... I'll soon be hearing, "I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I smelled smoke and heard a crinkling sound in the back of my preamp rack and later discovered the cause was my Presonus M80's power supply which is now deep fried. Well I took the supply apart and found that this dark grey thing on the cuircuit board, I think it's a diode ->|, melted right off of the board. Any one know what this is? I can't get a picture just yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom which solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I can find one of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. Check it out.

=

[http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp\\_rofile&friend=id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp_rofile&friend=id=3D172230696)

-----=\_NextPart\_000\_0028\_01C77A83.E3E77610

Content-Type: text/html;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD>
<META http-equiv=3DContent-Type content=3D"text/html; =
charset=3Diso-8859-1">
<META content=3D"MSHTML 6.00.6000.16414" name=3DGENERATOR>
<STYLE></STYLE>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV><FONT face=3DArial size=3D2><A=20
href=3D"http://www.partsexpress.com">www.partsexpress.com</A>&nbsp;</FONT=
></DIV>
<DIV><FONT face=3DArial size=3D2>&nbsp;<A=20
href=3D"http://www.mcmelectronics.com">www.mcmelectronics.com</A>&nbsp;</=
FONT></DIV>
<DIV><FONT face=3DArial size=3D2>&nbsp;<A=20
href=3D"http://www.digikey.com">www.digikey.com</A> </FONT></DIV>
<DIV><A href=3D"http://www.radioshack.com">www.radioshack.com</A></DIV>
<DIV>&nbsp;</DIV>
<DIV>&nbsp;</DIV>
<BLOCKQUOTE dir=3Dltr=20
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
  <DIV>"Rich Lamanna" &lt;<A=20
  =
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=
A>&gt;=20
  wrote in message <A=20
href=3D"news:461a1baf@linux">news:461a1baf@linux</A>...</DIV>
  <DIV><FONT size=3D2>Thanks Edna for the help. Will keep you all =
posted. Anyone=20
  know where I can order this rectifier online? It might just be easier =
for me=20
  to order it as I may not be able to get to the parts place until this=20
weekend.</FONT></DIV>
  <DIV><FONT size=3D2></FONT>&nbsp;</DIV>
  <DIV><FONT size=3D2>Rich</FONT></DIV>
  <DIV>&nbsp;</DIV>
  <BLOCKQUOTE dir=3Dltr=20
  style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
    <DIV>"Edna" &lt;<A=20
    href=3D"mailto:edna@texomaonline.com">edna@texomaonline.com</A>&gt; =
wrote in=20
    message <A =
```

<news:46192160@linux>...</DIV>  
<DIV><FONT face="Arial" size="2"><FONT face="Times New Roman" size="3">Because you could mess with the PS w/o affecting the M80. I assume you have experience with soldering and component removal on PCBs, and I assume the circuit board is only single or double sided. If not, in either case, I would let a tech do it. Its easy to damage a PCB, and if its multilayered you cant do much anyway.</FONT></FONT></DIV>  
<DIV><FONT face="Arial" size="2"><FONT face="Times New Roman" size="3"></FONT></FONT>&nbsp;</DIV>  
<DIV><FONT face="Arial" size="2"><FONT face="Times New Roman" size="3">Having said that, I if you replace just the rectifier, the only load on it would be from the PS components. I would suggest also replacing the filter cap(s) on that supply line, since it is the prime suspect in the PS. (You may need a schematic here). If after this, the rectifier starts getting too hot again the problem is likely a VR(s) on that line.</FONT></FONT></DIV>  
<DIV><FONT face="Arial" size="2"><FONT face="Times New Roman" size="3"></FONT></FONT>&nbsp;</DIV>  
<DIV><FONT face="Arial" size="2"><FONT face="Times New Roman" size="3">&nbsp;&nbsp;</FONT></FONT>&lt;<A href="mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</A>&gt;</DIV>  
wrote in message <A href="news:46186a35@linux">news:46186a35@linux...</DIV>  
<BLOCKQUOTE dir="ltr" style="padding-right: 0px; padding-left: 5px; margin-left: 5px; border-left: 2px solid #000000; margin-right: 0px">  
<DIV><FONT size="2">Edna, yes the power supply can run on its own, doesn't need to be plugged in for it to function. I have it disconnected at the moment. Why do you ask?</FONT></DIV>  
<DIV><FONT size="2"></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>Rich</FONT><BR></DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Edna" &lt;<A=20  
=  
href=3D"mailto:edna@texomaonline.com">edna@texomaonline.com</A>&gt; =  
wrote=20  
in message <A=20  
href=3D"news:4617f977@linux">news:4617f977@linux</A>...</DIV>  
<DIV><FONT face=3DArial size=3D2>Its possible, but not likely, =  
especially if=20  
its not a new unit, which would be more likely to have a =  
defective=20  
component.&nbsp; Something caused a current overload through it =  
to burn=20  
it up.&nbsp; But apparently not a direct short which would have =  
blown=20  
the fuse as well.&nbsp; I've seen many leaky filter caps do this =  
- these=20  
are the large caps that filter the ripple voltage or small ac =  
component=20  
off the DC.&nbsp; A blown voltage regulator is another likely =  
suspect,=20  
as far as the PS itself.&nbsp; Can the PS run by itself w/o =  
being=20  
connected to the M80?&nbsp;&nbsp;</FONT></DIV>  
<DIV>&nbsp;</DIV>  
<DIV>ich Lamanna" &lt;<A=20  
=  
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20  
wrote in message <A=20  
=  
href=3D"news:4617ee9b\$1@linux">news:4617ee9b\$1@linux</A>...</DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: =  
5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>  
<DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just =  
have gone=20  
Kablooey? As you say it could be symptomatic of another =  
problem but if=20  
you read my last post, I may have been overloading the thing. =  
Looking=20  
at the circuit board carefully,&nbsp;I see no other browned or =  
burned=20  
resistors, etc. Maybe I'll send it in, but I might try to fix =



it=20

myself as it will be&nbsp;only a couple of bucks if it doesn't =  
work.=20

The unit was bought used from another owner a few years ago, =  
on ebay,=20

and I'm not sure if it is still under warrantee. I'll have to =  
look=20

into this. I probably know just enough to get this wrong, but =  
wish me=20

luck. I know..... I'll soon be hearing, "I told you so"!=20  
:-)/FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>Thanks,</FONT></DIV>

<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>

<BLOCKQUOTE dir=3Dltr=20

style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: =  
5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">

<DIV>"Rich Lamanna" &lt;<A=20

=

href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20

wrote in message <A=20

=

href=3D"news:46178cc2\$1 @linux">news:46178cc2\$1 @linux</A>...</DIV>

<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the way. =

Hey the=20

other day I smelled smoke and heard&nbsp;a crinkling =  
sound&nbsp;in=20

the back of my preamp rack and later discovered the cause =  
was my=20

Presonus M80's power supply which is now deep fried. Well I =  
took the=20

supply apart and found that this dark grey thing on the =  
cuircuit=20

board, I think it's a diode -&gt;l, melted right off of the =  
board.=20

Any one know what this is? I can't get a picture just yet up =  
on the=20

net but I'll try and describe it.</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, =  
has 4 pins=20

on the bottom which&nbsp;solder to the cuicut board, dark =  
grey=20

colored and is coded:</FONT></DIV>

<DIV><FONT size=3D2></FONT>&nbsp;</DIV>

<DIV><FONT size=3D2>--&gt;l RS\*202L</FONT></DIV>

<DIV><FONT size=3D2>RU&nbsp; A 90 </FONT></DIV>

<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics =  
wizards&nbsp;<FONT size=20>the heck I can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a =  
Myspace site=20  
now. Check it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
=  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT=20  
=  
size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE  
></BLOCKQUOTE></=  
BLOCKQUOTE></BLOCKQUOTE></FONT></BODY></HTML>

-----=\_NextPart\_000\_0028\_01C77A83.E3E77610--

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [EK Sound](#) on Mon, 09 Apr 2007 16:16:22 GMT  
[View Forum Message](#) <> [Reply to Message](#)

I replace them frequently on different pieces of gear. Usually, the diodes short out and take out the fuse. You can simply replace the unit with the same type/rating. If you are concerned about heat (which is generally what kills these in the first place) you could epoxy an aluminum heat sink to the tops of the bridges to help dissipate the heat.

I have replaced literally hundreds of these things and have never seen any collateral damage from them blowing... but I definitely haven't "seen it all"..

David.

Rich Lamanna wrote:

> Neil, Edna, couldn't the rectifier just have gone Kablooeey? As you say  
> it could be symptomatic of another problem but if you read my last post,  
> I may have been overloading the thing. Looking at the circuit board

> carefully, I see no other browned or burned resistors, etc. Maybe I'll  
> send it in, but I might try to fix it myself as it will be only a couple  
> of bucks if it doesn't work. The unit was bought used from another owner  
> a few years ago, on ebay, and I'm not sure if it is still under  
> warrantee. I'll have to look into this. I probably know just enough to  
> get this wrong, but wish me luck. I know..... I'll soon be hearing,  
> "I told you so"! :-)  
>  
> Thanks,  
> Rich  
>  
> "Rich Lamanna" <richard.lamanna@verizon.net  
> <mailto:richard.lamanna@verizon.net>> wrote in message  
> news:46178cc2\$1@linux...  
> Hello, Easter greetings by the way. Hey the other day I smelled  
> smoke and heard a crinkling sound in the back of my preamp rack and  
> later discovered the cause was my Presonus M80's power supply which  
> is now deep fried. Well I took the supply apart and found that this  
> dark grey thing on the cuircuit board, I think it's a diode ->I,  
> melted right off of the board. Any one know what this is? I can't  
> get a picture just yet up on the net but I'll try and describe it.  
>  
> It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom  
> which solder to the cuicut board, dark grey colored and is coded:  
>  
> -->| RS\*202L  
> RU A 90  
> + AC -  
>  
> Anyone of you electronics wizards know where the heck I can find one  
> of these?  
>  
> You guys are great,  
> Thanks  
> Rich  
>  
> PS. By the way I broke down and got a Myspace site now. Check it out.  
> [http://profile.myspace.com/index.cfm?fuseaction=user.viewpro\\_file&friendid=172230696](http://profile.myspace.com/index.cfm?fuseaction=user.viewpro_file&friendid=172230696)  
> < [http://profile.myspace.com/index.cfm?fuseaction=user.viewpro\\_file&friendid=172230696](http://profile.myspace.com/index.cfm?fuseaction=user.viewpro_file&friendid=172230696)>  
>  
>

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Thu, 12 Apr 2007 00:34:06 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Thanks, Dave, have nothing to loose here. I had to order the rectifier, they

didn't have it in stock. Will keep you all posted.

Rich

"EK Sound" <askme@nospam.com> wrote in message news:461a679f@linux...

> I replace them frequently on different pieces of gear. Usually, the  
> diodes short out and take out the fuse. You can simply replace the  
> unit with the same type/rating. If you are concerned about heat  
> (which is generally what kills these in the first place) you could  
> epoxy an aluminum heat sink to the tops of the bridges to help  
> dissipate the heat.

>  
> I have replaced literally hundreds of these things and have never seen  
> any collateral damage from them blowing... but I definitely haven't  
> "seen it all"..

>  
> David.

>  
> Rich Lamanna wrote:

> > Neil, Edna, couldn't the rectifier just have gone Kablooey? As you say  
> > it could be symptomatic of another problem but if you read my last post,  
> > I may have been overloading the thing. Looking at the circuit board  
> > carefully, I see no other browned or burned resistors, etc. Maybe I'll  
> > send it in, but I might try to fix it myself as it will be only a couple  
> > of bucks if it doesn't work. The unit was bought used from another owner  
> > a few years ago, on ebay, and I'm not sure if it is still under  
> > warrantee. I'll have to look into this. I probably know just enough to  
> > get this wrong, but wish me luck. I know..... I'll soon be hearing,  
> > "I told you so"! :-)

> >  
> > Thanks,  
> > Rich

> >  
> > "Rich Lamanna" <richard.lamanna@verizon.net  
> > <mailto:richard.lamanna@verizon.net>> wrote in message  
> > news:46178cc2\$1@linux...  
> > Hello, Easter greetings by the way. Hey the other day I smelled  
> > smoke and heard a crinkling sound in the back of my preamp rack and  
> > later discovered the cause was my Presonus M80's power supply which  
> > is now deep fried. Well I took the supply apart and found that this  
> > dark grey thing on the cuircuit board, I think it's a diode ->I,  
> > melted right off of the board. Any one know what this is? I can't  
> > get a picture just yet up on the net but I'll try and describe it.

> >  
> > It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the bottom  
> > which solder to the cuicut board, dark grey colored and is coded:

> >  
> > -->| RS\*202L

>> RU A 90  
>> + AC -  
>>  
>> Anyone of you electronics wizards know where the heck I can find one  
>> of these?  
>>  
>> You guys are great,  
>> Thanks  
>> Rich  
>>  
>> PS. By the way I broke down and got a Myspace site now. Check it  
out.  
>>  
http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendid=172230696  
>>  
< http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendid=1  
72230696>  
>>  
>>

---

---

Subject: Re: What's this thing that smoldered in my Presonus M80 power supply?  
Posted by [Rich Lamanna](#) on Thu, 12 Apr 2007 00:34:51 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is a multi-part message in MIME format.

-----=\_NextPart\_000\_0016\_01C77C70.795BF700  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Thanks Aaron, the rectifier should be here next week.

Rich

"Aaron Allen" <know-spam@not\_here.dude> wrote in message =  
news:461a4585@linux...  
www.partsexpress.com=20  
www.mcmelectronics.com=20  
www.digikey.com=20  
www.radioshack.com

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in message =  
news:461a1baf@linux...

Thanks Edna for the help. Will keep you all posted. Anyone know =  
where I can order this rectifier online? It might just be easier for me =

to order it as I may not be able to get to the parts place until this = weekend.

Rich

"Edna" <edna@texomaonline.com> wrote in message = news:46192160@linux...

Because you could mess with the PS w/o affecting the M80. I = assume you have experience with soldering and component removal on PCBs, = and I am assuming the circuit board is only single or double sided. If = not, in either case, I would let a tech do it. Its easy to damage a = PCB, and if its multilayered you cant do much anyway.

Having said that, If you replace just the rectifier, the only = load on it would be from the PS components. I would suggest also = replacing the filter cap(s) on that supply line, since it is the prime = suspect in the PS. (You may need a schematic here). If after this, = the rectifier starts getting too hot again the problem is likely a VR(s) = on that line.=20

<richard.lamanna@verizon.net> wrote in message = news:46186a35@linux...

Edna, yes the power supply can run on its own, doesn't need to = be plugged in for it to function. I have it disconnected at the moment. = Why do you ask?

Rich

"Edna" <edna@texomaonline.com> wrote in message = news:4617f977@linux...

Its possible, but not likely, especially if its not a new = unit, which would be more likely to have a defective component. = Something caused a current overload through it to burn it up. But = apparently not a direct short which would have blown the fuse as well. = I've seen many leaky filter caps do this - these are the large caps that = filter the ripple voltage or small ac component off the DC. A blown = voltage regulator is another likely suspect, as far as the PS itself. = Can the PS run by itself w/o being connected to the M80? =20

ich Lamanna" <richard.lamanna@verizon.net> wrote in message = news:4617ee9b\$1@linux...

Neil, Edna, couldn't the rectifier just have gone Kablooeey? = As you say it could be symptomatic of another problem but if you read my = last post, I may have been overloading the thing. Looking at the circuit = board carefully, I see no other browned or burned resistors, etc. Maybe = I'll send it in, but I might try to fix it myself as it will be only a = couple of bucks if it doesn't work. The unit was bought used from = another owner a few years ago, on ebay, and I'm not sure if it is still =

under warrantee. I'll have to look into this. I probably know just =  
enough to get this wrong, but wish me luck. I know..... I'll soon be =  
hearing, "I told you so"! :-)

Thanks,  
Rich

"Rich Lamanna" <richard.lamanna@verizon.net> wrote in =  
message news:46178cc2\$1@linux...

Hello, Easter greetings by the way. Hey the other day I =  
smelled smoke and heard a crinkling sound in the back of my preamp rack =  
and later discovered the cause was my Presonus M80's power supply which =  
is now deep fried. Well I took the supply apart and found that this dark =  
grey thing on the cuircuit board, I think it's a diode ->|, melted right =  
off of the board. Any one know what this is? I can't get a picture just =  
yet up on the net but I'll try and describe it.

It's appx. 3/4" by 1/2" by 1/4" thick, has 4 pins on the =  
bottom which solder to the cuicut board, dark grey colored and is coded:

-->| RS\*202L  
RU A 90=20  
+ AC -

Anyone of you electronics wizards know where the heck I =  
can find one of these?

You guys are great,  
Thanks  
Rich

PS. By the way I broke down and got a Myspace site now. =  
Check it out.

=  
[http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp\\_rofile&friend=  
id=3D172230696](http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp_rofile&friend=id=3D172230696)

-----=\_NextPart\_000\_0016\_01C77C70.795BF700

Content-Type: text/html;  
charset="iso-8859-1"

Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<HTML><HEAD>

<META http-equiv=3DContent-Type content=3D"text/html"; =  
charset=3Diso-8859-1">

```
<META content=3D"MSHTML 6.00.2800.1555" name=3DGENERATOR>
<STYLE></STYLE>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV><FONT size=3D2>Thanks Aaron, the rectifier should be here next=20
week.</FONT></DIV>
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>
<DIV><FONT size=3D2>Rich</FONT><BR></DIV>
<BLOCKQUOTE dir=3Dltr=20
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
  <DIV>"Aaron Allen" &lt;<A=20
  =
href=3D"mailto:know-spam@not_here.dude">know-spam@not_here.dude</A>&gt; =
wrote in=20
  message <A =
href=3D"news:461a4585@linux">news:461a4585@linux</A>...</DIV>
  <DIV><FONT face=3DArial size=3D2><A=20
  =
href=3D"http://www.partsexpress.com">www.partsexpress.com</A>&nbsp;</FONT=
></DIV>
  <DIV><FONT face=3DArial size=3D2>&nbsp;<A=20
  =
href=3D"http://www.mcmelectronics.com">www.mcmelectronics.com</A>&nbsp;</=
FONT></DIV>
  <DIV><FONT face=3DArial size=3D2>&nbsp;<A=20
  href=3D"http://www.digikey.com">www.digikey.com</A> </FONT></DIV>
  <DIV><A =
href=3D"http://www.radioshack.com">www.radioshack.com</A></DIV>
  <DIV>&nbsp;</DIV>
  <DIV>&nbsp;</DIV>
  <BLOCKQUOTE dir=3Dltr=20
  style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">
    <DIV>"Rich Lamanna" &lt;<A=20
    =
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=
A>&gt;=20
    wrote in message <A=20
    href=3D"news:461a1baf@linux">news:461a1baf@linux</A>...</DIV>
    <DIV><FONT size=3D2>Thanks Edna for the help. Will keep you all =
posted. Anyone=20
    know where I can order this rectifier online? It might just be =
easier for me=20
    to order it as I may not be able to get to the parts place until =
this=20
    weekend.</FONT></DIV>
    <DIV><FONT size=3D2></FONT>&nbsp;</DIV>
```



<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV>&nbsp;</DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; =  
BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Edna" &lt;<A=20  
=  
href=3D"mailto:edna@texomaonline.com">edna@texomaonline.com</A>&gt; =  
wrote in=20  
message <A =  
href=3D"news:46192160@linux">news:46192160@linux</A>...</DIV>  
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman" =  
size=3D3>Because=20  
you could mess with the PS w/o affecting the M80.&nbsp;   I assume =  
you have=20  
experience with soldering and component removal on PCBs,&nbsp;  and=20  
I&nbsp;  am assuming the circuit board is only single or double =  
sided.&nbsp;  =20  
If not, in either case,&nbsp;  I would let a tech do it.&nbsp;   Its=20  
easy&nbsp;  to damage a PCB, and if its multilayered you cant do =  
much=20  
anyway.</FONT></FONT></DIV>  
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman"=20  
size=3D3></FONT></FONT>&nbsp;  </DIV>  
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman" =  
size=3D3>Having=20  
said that, &nbsp;  <FONT face=3DArial size=3D2>I</FONT></FONT>f you =  
replace just=20  
the rectifier<FONT face=3D"Times New Roman" size=3D3>, the only =  
load on it=20  
would be from the PS components.&nbsp;   I would suggest also =  
replacing the=20  
filter cap(s) on that supply line, since it is the prime suspect =  
in the=20  
PS.&nbsp;  (You may need a schematic here).&nbsp;  If after this, =  
&nbsp;  the=20  
rectifier starts getting&nbsp;  too hot again the problem is likely =  
a VR(s)=20  
on that line.&nbsp;  </FONT></FONT></DIV>  
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman"=20  
size=3D3></FONT></FONT>&nbsp;  </DIV>  
<DIV><FONT face=3DArial size=3D2><FONT face=3D"Times New Roman"=20  
size=3D3>&nbsp;  &nbsp;  </FONT></FONT>&lt;<A=20  
=  
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20  
wrote in message <A=20  
href=3D"news:46186a35@linux">news:46186a35@linux</A>...</DIV>

<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV><FONT size=3D2>Edna, yes the power supply can run on its own, doesn't=20 need to be plugged in for it to function. I have it disconnected = at the=20 moment. Why do you ask?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Rich</FONT><BR></DIV>  
<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: = 5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Edna" &lt;<A=20 = href=3D"mailto:edna@texomaonline.com">edna@texomaonline.com</A>&gt;=20 wrote in message <A=20 href=3D"news:4617f977@linux">news:4617f977@linux</A>...</DIV>  
<DIV><FONT face=3DArial size=3D2>Its possible, but not likely, = especially=20 if its not a new unit, which would be more likely to have a = defective=20 component.&nbsp; Something caused a current overload through = it to=20 burn it up.&nbsp; But apparently not a direct short which = would have=20 blown the fuse as well.&nbsp; I've seen many leaky filter caps = do this=20 - these are the large caps that filter the ripple voltage or = small ac=20 component off the DC.&nbsp; A blown voltage regulator is = another=20 likely suspect, as far as the PS itself.&nbsp; Can the PS run = by=20 itself w/o being connected to the = M80?&nbsp;&nbsp;&nbsp;</FONT></DIV>  
<DIV>&nbsp;</DIV>  
<DIV>ich Lamanna" &lt;<A=20 = href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</A>&gt;=20 wrote in message <A=20 = href=3D"news:4617ee9b\$1@linux">news:4617ee9b\$1@linux</A>...</DIV>  
<BLOCKQUOTE dir=3Dltr=20 style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: = 5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>

<DIV><FONT size=3D2>Neil, Edna, couldn't the rectifier just =  
have gone=20  
Kablooey? As you say it could be symptomatic of another =  
problem but=20  
if you read my last post, I may have been overloading the =  
thing.=20  
Looking at the circuit board carefully,&nbsp;I see no other =  
browned=20  
or burned resistors, etc. Maybe I'll send it in, but I might =  
try to=20  
fix it myself as it will be&nbsp;only a couple of bucks if =  
it=20  
doesn't work. The unit was bought used from another owner a =  
few=20  
years ago, on ebay, and I'm not sure if it is still under =  
warranty.=20  
I'll have to look into this. I probably know just enough to =  
get this=20  
wrong, but wish me luck. I know..... I'll soon be =  
hearing, "I=20  
told you so"! :-)</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Thanks,</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT><BR></DIV></DIV>  
<BLOCKQUOTE dir=3Dltr=20  
style=3D"PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: =  
5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">  
<DIV>"Rich Lamanna" &lt;<A=20  
=  
href=3D"mailto:richard.lamanna@verizon.net">richard.lamanna@verizon.net</=  
A>&gt;=20  
wrote in message <A=20  
=  
href=3D"news:46178cc2\$1@linux">news:46178cc2\$1@linux</A>...</DIV>  
<DIV><FONT size=3D2>Hello, Easter&nbsp;greetings by the =  
way. Hey the=20  
other day I smelled smoke and heard&nbsp;a crinkling =  
sound&nbsp;in=20  
the back of my preamp rack and later discovered the cause =  
was my=20  
Presonus M80's power supply which is now deep fried. Well =  
I took=20  
the supply apart and found that this dark grey thing on =  
the=20  
circuit board, I think it's a diode -&gt;, melted right =  
off of=20  
the board. Any one know what this is? I can't get a =  
picture just=20

yet up on the net but I'll try and describe =  
it.</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>It's appx. 3/4" by 1/2" by 1/4" thick, =  
has 4=20  
pins on the bottom which&nbsp;solder to the cuicut board, =  
dark=20  
grey colored and is coded:</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>--&gt;| RS\*202L</FONT></DIV>  
<DIV><FONT size=3D2>RU&nbsp; A 90 </FONT></DIV>  
<DIV><FONT size=3D2>+ AC -</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>Anyone of you electronics =  
wizards&nbsp;know=20  
where the heck I can find one of these?</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>You guys are great,</FONT></DIV>  
<DIV><FONT size=3D2>Thanks</FONT></DIV>  
<DIV><FONT size=3D2>Rich</FONT></DIV>  
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>  
<DIV><FONT size=3D2>PS. By the way I broke down and got a =  
Myspace=20  
site now. Check it out.</FONT></DIV>  
<DIV><FONT size=3D2><A=20  
=  
href=3D" http://profile.myspace.com/index.cfm?fuseaction=3Duser.viewp rofil=  
e&amp;friendid=3D172230696">http://profile.myspace.com/index.cfm?fuseacti=  
on=3Duser.viewprofile&amp;friendid=3D172230696</A></FONT ></DIV>  
<DIV><BR><FONT=20  
=  
size=3D2><BR></DIV></BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE  
></BLOCKQUOTE></=  
BLOCKQUOTE></BLOCKQUOTE></BLOCKQUOTE></FONT></BODY></HTML >  
  
-----=\_NextPart\_000\_0016\_01C77C70.795BF700--

---