

## Re: Equipment, and the Useless Eco- legislation ...

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.repair/2007-09/msg00807.html>

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- *From:* "Arfa Daily" <[arfa.daily@xxxxxxxxxxxx](mailto:arfa.daily@xxxxxxxxxxxx)>
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"Jeff Liebermann" <[jeffl@xxxxxxxxxx](mailto:jeffl@xxxxxxxxxx)> wrote in message  
<news:a3d2f311qat9e8bij4248fbts86m9ho1c8@xxxxxxxxxx>

"Arfa Daily" <[arfa.daily@xxxxxxxxxxxx](mailto:arfa.daily@xxxxxxxxxxxx)> hath wroth:

Oh dear, I'm losing the will to live here ...

I don't think it's necessary to commit suicide in order to prove a point on usenet.

I'm really not proposing  
trying to make manufacturers hold mountains of spares at their governments'  
behest. That said, I do think that they should have to hold spares that  
are  
of a specialist nature in their kit, such as lasers, for a reasonable  
time.

Think of the wording for such a law. What constitutes spares? If the product is outsourced, who's responsible for the spare parts? If there are no spare parts left over after a production run, is the manufacturer responsible for obtaining such spares? How long is "reasonable". At what price structure? I would have extreme difficulty producing such a law that would not involve some level of mandatory parts inventory stocking levels.

There is absolutely no reason at all why every new design that they produce,  
should have a new type of laser fitted.

Got it. Once a manufacturer is committed to a particular design, they are required to continue to use that design for some "reasonable"

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amount of time. Perhaps a government inspector should be invited to design review meetings to insure compliance with what appears to be the required use of obsolete parts?

The Bureau of Obsolescence Department of the Ministry of E-Waste perhaps?

A DVD laser is a DVD laser is a DVD laser.

Not so. Progress in design has also been through small incremental improvements in manufacturing. In the rush to deliver product, many designs contain fundamental inefficiencies that are only cost effective to replace as production volume increases. The result is a continuous series of somewhat compatible but different parts. Design changes in other areas of the DVD player may precipitate a mechanical change in the DVD laser, such as the ribbon cable, thus producing yet another DVD head mutation.

Up until recently, most of the main manufacturers had a small array of their favourite types, that appeared in all of their products. In the last couple of years, that seems to have gone out of the window, which contributes to the scrap equipment situation.

Sure. As long as the manufacturer supplied the parts to the outsourced vendor in China, it was highly beneficial to use common parts and sub-assemblies. However, once the design has been optimized, it gets sent out to clone houses, that bid on producing a "compatible" device, using the basic design owned by the manufacturer. When switching to the new outsourced vendor, they will have their own collection of favorite parts. In the case of the CD/DVD laser assembly, it will probably be similar, but not identical. Slight re-design for a change of vendor to accommodate parts handling variations is fairly common.

As far as the \$40 DVD goes, of course it's not worth repairing, but the reality is that it shouldn't be \$40 in the first place.

Got it. Just tax the hell out of consumer electronics, so that the price will be sufficiently high to convert the current throw away into a major investment worth keeping. Surely you jest.

However, let's pretend that the eco-mania continues and such a law is proposed. Of course, it wouldn't be a direct taxation on the consumer as there would be rioting in the streets. You can easily increase

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costs to the producers through mandatory inventory stocking levels and the associated documentation and storage costs. The math is easy enough. Break down the parts list for a \$40 CD/DVD player and add up the total. Typical is about 20 times the cost of the finished unit. So, if you built the \$40 CD/DVD player from components inventory, it would easily be made to cost \$800. If you demand that parts inventory stocking levels be 10% of the production run, that would add about \$80 to the cost of the \$40 player, which should be sufficient for your purpose.

Of course that doesn't include handling, which can be substantial. An exercise I did for my (former) customers was to calculate the cost of shipping an empty box. That's a product that costs zero to produce and with zero components and labor costs (including production test). However, it still has all the necessary overhead, such as QA, packaging, documentation, support, parts, handling, warranty handling, etc. I refer to it as the "cost of shipping an empty box". It varies radically with manufacturer, but a manufacturer that has their own production facilities runs about \$150 to \$300. One's that are heavily outsourced and use fulfillment houses, is much less.

So, what's the cost of receiving your CD/DVD laser, if the manufacturer decides to give you the part for free? Probably about \$100 in stocking and handling costs.

This is just a reflection of Chinese expansionism forcing itself on the global market, and not caring about the piles of junk going to landfill, that it is leaving behind because of the price.

Really? Much of the world's e–Waste is going to China and India as scrap. They \*WANT\* the scrap because in those countries, it's still economical to re–use the parts. Officially, both countries have banned the importation of such hazardous waste, but unofficially, they welcome it.

<[http://seattletimes.nwsourc.com/html/nationworld/2002920133\\_ewaste09.html](http://seattletimes.nwsourc.com/html/nationworld/2002920133_ewaste09.html)>

<[http://news.bbc.co.uk/2/hi/south\\_asia/3307815.stm](http://news.bbc.co.uk/2/hi/south_asia/3307815.stm)>

(lots more...)

If world governments want to see landfill from scrapped equipment reduced, then they need to legislate against this nonsense of giving away DVD's at the supermarket checkout.

We have a start on your proposed solution. In California, we are charged a tax on CRT and LCD monitors at the time of purchase to support the inevitable disposal of the devices, due to their lead

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content. Never mind that most comply with RoHS and have very little lead in them. Never mind that LCD's have almost no lead. Never mind that glass encapsulation is what's used for nuclear waste disposal to insure that it doesn't leak into the environment. Never mind that the tax is not in any way related to the lead content. Is this the type of thoughtless law that you want? It's probably what you're going to get.

And don't say  
that it can't be done, it can. Governments have imposed import levies on foreign goods many times to protect indiginous industries. I seem to recall  
that fairly recently, your government did it to mine over steel imports  
...  
The only thing that's stopping them is the fear that if they are seen to be  
making \$40 DVDs \$100 by imposing a \$60 recycling tax on them, the great unwashed will see them as money-grabbing killjoys, and they will lose their  
elevated pig-at-the-trough politician status. They can't have it both ways.  
Either they just shut up and ignore the environmental impact of allowing checkout DVDs, or they do something proper about it.

That's a very real fear. Whenever you generate an added expense through legislation, someone has to pay the price. It's invariably the consumer that pays. Governments don't produce anything. All that they can do is inefficiently take money from one group, and give it to another. If you want to give money to the scrap metal recyclers, to subsidize their worthy cause, the money has to come from some other group. I can also supply lots of examples of taxing unrelated groups to (inefficiently) support worthy causes.

So what's wrong with passing on the cost of stocking spare parts to the consumer ?

Lousy value received for cost incurred.

It makes the item a more realistic price in the first place, and will encourage owners to "mend and make do", instead of "toss and buy new"

"Realistic" and "over taxed" seems to be indistinguishable here. I still remember the days of \$1,000 CD drives. I vaguely recall paying \$400 for one that used a "cd caddy". Wanna bring back those days? I can afford a \$40 player. I can't afford a \$400 player.

Your argument about expensive kit being 100% repaired is self-defeating in the case of Denon, for instance. People buy Denon instead of Ying Tong because it is expensive, and they expect to have repair inventory available for it for a realistic time, because of that.

A bit of topic drift. Actually, extended warranty sales peak in the mid range products. Nobody buys an extended warranty for throw away products because a replacement is expected to less than the cost of the warranty. For very expensive hardware, the warranty is usually included in the price, where the consumer has no choice and is generally expected to protect their investment. However, the mid range products (i.e. big LCD and Plasma displays) are where the extended warranty pays. These go for about 15% of the purchase price per year and are pure profit for the dealer, who does nothing other than sell the warranty, and then outsource the repairs. These people expect to have their expensive displays for much longer than the throw away \$40 CD/DVD player. So, they invest in insurance.

So, how about a compromise? Instead of raising the initial cost of consumer electronics, just offer government backed electronics warranties. The money would go to the starving repairmen to subsidize their losses because nobody wants \$40 CD/DVD players repaired. It would delay the dumping of the \$40 player because the consumer would now get a "free" repair job instead of being force to purchase a replacement. A simple coupon labeled "good for one government sponsored out of warranty repair" in the box should work. If a free repair isn't sufficient incentive, the government might consider subsidizing the re-manufacture and rebuilding businesses and give the consumer rebuilt exchange. Since such an operation will require stocking parts, you just might get your spare parts.

But aside from all that, the point that everyone is missing is that where spares \*are\* available, they are unrealistically priced by the manufacturers, and that leads to totally unnecessary scrapping to landfill.

Unrealistically or unprofitably? Try my exercise of "shipping an empty box". What it would cost for \*YOU\* to ship an empty box to a customer? You can get a clue by the handling costs charged by some eBay vendors. Most start out with fairly reasonable handling charges and rapidly escalate to much higher charges based upon losing money on small items. Anyway, your cost of shipping an empty box is the minimum charge for anything you sell and ship.

What most manufacturers do is unload their parts inventory to distributors and vendors that can handle the low volume and low

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per-shipment charges. Once that is done, there's no incentive to re-use those parts in future products.

I don't care how big your warehouse is or where it's located, or how many times you have to ship an item around the world before it comes to rest, or how many bags you have to put it in or what your admin costs are or what your postage costs are or any of the other 'justifications' that get trotted out, NO manufacturer can justify marking up a laser that cost him \$1 to buy to \$150 as a suppliable spare part.

I see. So \$1 for the hardware cost is deemed reasonable, but \$150 for the massive overhead required to stock, inventory, package, document, ship, warranty, and transact the part is not reasonable. Well, the charges are based on the same formula used to price the original \$40 CD/DVD player. Figure on a minimum of about 5 times cost to sales for products, and about 20 times for anything that has to sit in inventory waiting for someone to purchase. Your laser was probably sitting in their warehouse for several years before you needed it. That's really lousy stock turnover compared to the CD/DVD player, that probably was delivered just in time and never saw a warehouse. The electricity, staffing, rent, paperwork, etc for the warehouse can just can't be ignored. At \$150, you're probably correct that it's overpriced. However, much of that \$150 are real expenses.

If it really cost that to supply, then he must have some serious issues with his business model. If he really can't supply said part for a realistic \$15 - \$20, then the retail cost of every player needs to go up by 50c to cover the cost of spares inventory.

I see. You want the consumer to pay for the inevitable repair in advance. Well, that can be done by time of purchase taxation, where the revenue would go to subsidizing the expenses of the parts warehouse. I doubt that a "save the parts jobber" campaign would have much of an effect in Congress, but it's worth trying.

As for the business model, just put \$20 in an envelope and let it sit for a few years. Disburse your expenses for storing the envelope over those years. Don't forget the cost of the envelope, guard service, verifying its contents (inspection), determining that it's still there (inventory control), finding it after someone moved it, and a proper percentage of your office rent. Also, shrinkage (theft), inventory taxes, depreciation, obsolescence, and inflation. You also have to make a profit to justify the exercise. Now, after a few years,

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someone wants to purchase your \$20 envelope. What's it worth then?

The consumers can't bleat about ecology and landfill over their Sunday paper, and then refuse to pay for it.

Oh yes they can and do so quite effectively. The trend is that as long as someone else pays, it's just fine. Let the government pay, or let the evil manufacturers pay, or pass the cost back to the manufacturers. It really doesn't matter who gets to pay as long as it's not the consumer.

Locally, a group wanted to install a light rail rapid transit system. Are the expected light rail commuters suppose to pay for their own transit? Nope. The evil automobile drivers were expected to pay for it.

And the only way that will come about, is if governments do something to legislate for it, which they easily could.

I think of government as more of a problem than a solution.

Now do you see what I'm saying ?

Sure. You're suggesting that every problem has a government solution. If you look to government for solutions to all your problems, soon all you will have left is government. If that's insufficient, please consider that of all the possible solutions to problems, the LEAST efficient is to have the government do it. The only reason we even have a government is that some problems (i.e. war) can only be solved by huge organizations, of which the government is the largest. When a huge organization tries to solve small problems, they usually fail miserably.

Arfa

I give in. I just lost the will to live totally. Click. BANG

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