



Brand Recording Best Practices for Electronics Recycling Programs

Introduction

Under certain emerging electronics recycling systems in the United States and abroad, financial responsibility is determined on the basis of each manufacturer's share of returned equipment. This share is normally referred to as "return share" or "equivalent share." In order to determine each manufacturer's share, these systems often require a tally of the brands of equipment accepted for reuse and recycling.

As states like Maine and Washington move forward with programs that require data on brands of electronic products delivered to collection locations, these data and their quality are becoming more critical. This Best Management Practices document developed by the National Center for Electronics Recycling outlines common challenges and gives practical tips for achieving a reliable brand count. The goal of this effort is to develop or reduce or eliminate common data collection and entry errors and to provide a comprehensive guide for collectors and recyclers who need or choose to perform brand counts.

1. Know Your Units of Measure and Counting Methodology

The first step in performing a brand count is to know how your results will be used. Do you need to count all brands coming back, or only a subset? Is the program for which the brand tally is being performed interested in a unit count of the brands, or is weight the unit of measure? Can average weights be used or does the program/sponsor need an actual weight of each brand collected? If average weights can be used, Table 1 shows typical weights for common products returned in electronics recycling systems (note: these weights are reflective of average of used products returned today, and in many cases do not reflect the weight of products currently on the market). If actual weights are needed, make sure your facility has the proper scales and decide whether groups of products with the same brand will be measured simultaneously or individually.

Table 1: Average Returned Product Weight

Product Category	Average Weight
Laptop/Notebook Computer	8 lbs
Desktop Computer	26 lbs
Computer Monitor	38 lbs
Television	49 lbs

2. Know Your Product Scope

A wide range of electronic products can be returned at residential collection events and programs. While it is possible to record the brands for all of the product categories, it is in many cases not necessary. In some cases, a brand tally may not need to identify the product categories at all. Before recording brands, make sure you know the sponsor's or program's requirements for the scope of covered products. For the purposes of this document, it is assumed that a brand recorder would be counting the units of brands returned by desktop computers, laptop computers, computer monitors, and televisions.

For most brand recorders, these four categories will be easily identifiable from observing the product. However, there are a few "gray area" products where the recorder will need to look more closely at the characteristics of the product in order to accurately designate the correct product category.

Table 2: Tips for "Gray" Area Product Categories

Gray Area	Possible Distinguishing Feature
Television or Computer Monitor? (Example: 19" CRT)	<ul style="list-style-type: none"> • If an "F-Connector" (for connecting coaxial cable) or Antenna Connector is present on the back, the product should be recorded as a <i>television</i> (see example pictures below) • If the product has a VGA cable attached, it can be recorded as a <i>computer monitor</i> (see picture below)
Computer Monitor or Desktop Computer? (Example: combined desktop and CRT monitor computer)	Product category distinction depends on program requirements. In Maine, a combined desktop and monitor would be recorded as a <i>monitor</i> .

Figure 1: Common Television Connections



F-Connector



*Antenna connectors:
found on older TVs*

Figure 2: Computer Monitor Distinguishing Features



VGA Cord commonly found on computer monitors

Figure 3: Example Combined Desktop/Monitor



Recorded as monitor in Maine program, check for other programs

3. Finding the Brand Label

Once the units of measure and product scope have been determined, the first step in performing a brand count is to find the label or marking that is the product's brand. For most products, this will be on the front or top. Common areas for the different product types include:

- Desktop Computers: On the lower half of the tower
- TV: On lower part of the plastic housing (front)
- Computer Monitors : On lower part of the plastic housing
- Laptops: On top of closed laptop, or below LCD screen when open

If the brand cannot be found at one of these common locations, there are other possibilities to search before designating the product as "unknown."

- o Cathode Ray Tube Monitors/TVs: Due a federal Food and Drug Administration (FDA) labeling requirement for radiation-emitting devices¹, CRTs are labeled, usually on the back of the product, with the product manufacturer’s name. This name may be used in cases where there is no brand label visible on the front of the product.

4. Common Errors

In some cases, there are multiple markings, stickers, or other words and symbols on a product, only one of which is the product’s official brand. Some of these markings may be for a particularly technology, such as a “VGA” monitor, used in the product, or a specific characteristic, such as an energy efficiency “Energy Star” product. Other markings in the below chart are misspellings of true brands. However, spelling is extremely important in brand recording as one letter make the difference between which manufacturer is responsible (i.e. Proton vs. Protron). These designations should NOT be recorded as its brand.

Table 4: Markings Commonly Misidentified as “Brands” of Computer Monitors and Televisions

13sr	Clone	Guide Plus+	MONOCHROME	Teko
3M	Compal	Honeywell	MULTITECH	Telebright
A & L Dist	Compton Consumer Electronics	Idea	OCI	Trinitron
ADC	Contel	Intel	Powering Computing	TV
ADS	CRT	Interva	Rayeo	UL
Allset	Directed Electronics	Jean	Samsonic	Ultra VGA
Alps/Alpspi	Electronics Industry	John Sylvester	SC-Electronic	Vextrel
AOL	Energy	Kamcor	SM	Victoria
AOL Spectrum	Energy (EPA)	Lexmark	Solid State	Vision
APC	Felco	Liberty	Standard	Vistamax
ATARI	Fortune Power	Linitron	Standard Tech	VLMF
Betis	Futural	Lite-on Tech	Studio	VT2000
Chanchong	Gatetek Electronics	Lodgenet	Super VGA	Worldwide Appliance
Classic	Gemstar	Low Radiation	SuperCircuit	XGA
Claybrook	General	Mason Camera	SVGA	
Clearmax	Gorman	MicroLab		

Comment [HS1]: I deleted “unknown” in this table.

¹ See: <http://www.fda.gov/cdrh/devadvice/335.html>

If one of these markings is present, it should NOT be recorded as the brand. If no other brand or manufacturer label is present, the product should be categorized as “Unknown.”

- *Common error for desktop computers:* CD/DVD drives and other components on desktop computers are often labeled with a brand. However, these should not be mistaken for the product’s brand or recorded as such. These brands will always be on the drive or component itself, and not on the computer’s outer housing.

Figure 4: Common Desktop Error



“Creative” and “Personal Computer” not the brand; “CCI” should be recorded

5. Performing Your Brand Count

To summarize, the following preparatory steps are helpful to before recording the brands of your collected products:

- Identify Product Scope
- Identify Units of Measure
- Familiarize yourself with common misidentified brands and spellings of true brands
 - A good resource for reviewing common brand names and their spellings is the NCER's Brand Data Management System, available at:
<http://www.electronicsrecycling.org/bdms/>
- Decide recording method: will you be using paper forms, or does the sponsor or your company have an electronic method to enter your brand data?

Recording brand data many times requires you to be mobile, so unless you can operate your laptop while walking around you will probably record the brands on paper before entering it into a spreadsheet, database or other table. Paper forms should list brands in alphabetical order either across all product types, or alphabetical within a product type, that allows for quick recordation (e.g., hash marks). The list of identified brands is long and may cover 10 or more pages so use of a clip chart or flat notebook for easy movement of pages is recommended. Regardless of how complete the pre-printed brand list you will probably encounter new brands to be added not yet listed.

As mentioned about, you will need to be careful about brand spelling for brand not on any pre-printed list. Working from an existing list of brands will minimize spelling errors, but there are numerous brands with similar names from different manufacturers (the "View..." series for monitors, a "Compu..." for desktops, etc., Proton vs. Protron).

Some brands are not easily identified. Prior to a brand count, make a determination about that maximum amount of time you will spend determining the brand of any one unit (e.g., 5 seconds). This length of time will vary depending on where you are doing the counting and some count locations may not allow for much time (e.g., a busy drive-up collection event). Alternatively, a good rule of thumb is to record a product as "unknown" if you don't see the brand label on the front or the back.

6. Entering Your Data, Calculating Return Share

The final step is to take your recorded brand data from the paper forms and enter them into an excel file or similar database. If you entered your data directly into an electronic program, it is good idea to review the final report from your data set to detect potential errors.

Once the raw data have been entered, you may need to calculate return share percentages for each brand. Your program or sponsor for whom the count is being performed will decide how these percentages should be calculated. For instance, in some cases return share percentages are calculated within each product category, but in others, product category distinctions do not matter. Other programs exclude “unknown” brands from return share calculations, or even exclude brands determined by that program to be orphans for which no responsible manufacturer is known to exist. Be sure to understand how the program using your data calculates return share and manage the data appropriately.

7. Maine Program Quirks

As part of the implementation of the Maine E-Waste law, the Department of Environmental Protection has developed a list of “quirks” that all brand recorders should be aware of when participating in that system. These quirks specify whether the certain product categories are billed differently for the same brand, and many times require a physical inspection of the back of the product to determine the manufacturer. This list of quirks is updated regularly, and the latest list should be obtained from the DEP prior to performing a brand count under this program. Here is an example of the type of information included for each brand in the Maine DEP quirk list:

Table 5: Example Maine Quirk

Brand	Manufacturer	Quirk
Sampo (monitors)	Sampo Technology Inc. (STI)	This Sampo is monitors only. Televisions are Regent USA
Sampo (TVs)	Regent USA	This Sampo is TVs only. Monitors are Sampo Technology.

This chart shows all brands for which DEP has an associated quirk as of mid-October 2006.

Table 6: All Brands with an Associated Quirk in Maine

13sr	Claybrook	Energy	Hyundai ImageQuest	Mason Camera	Rayeo	Studio Works	Vextrel
3M	Clearmax	Equium	IDEA	MegaView	RCA	Super VGA	Victoria
A & L Dist	Clone	ESA	Intel	MicroLab	Sampo	SuperCircuit	Viewmate (Likom or Viewmate Inc.)
ABS	Color Track	Everex	Interva	Mitsubishi	Sampo Professional	Supergirl	ViewMate (Viewsonic)
Accusync	COMPAL	Evervision	JC Penney	Monochrome	Samsonic	Superman	Vision
ADC	Compton Comsumer Electronics	Felco	Jean	Multisync	Samsung	SVGA	Vision Graphics
Allset	Comrex	Fortune Power	John Sylvester	Multitech	Samtron	Syncmaster	Vistamax
Alps/Alpspi	Contel	Fujitsu	Kamcor	NEC	SC- Electronic	Teknika	Vivitron
AOL	Corner Stone	Fujitsu- Siemens	KLH	NEC Mitsubishi	Siemens	Teko	Vivitron Gateway 2000
AOL Spectrum	Craig	Futural	Lexmark	Newtech	SM	Telebright	VLMF
APC	CRT	Gatetek Electronics	Liberty	OCI	Solid State	Toshiba	VT2000
AT&T	Daytek	GE	Liberty Gateway 2000	Optoma	SpectraView	Totevision	Westinghouse Digital
Atari	Diamond Plus	Gemstar	Linitron	Powering Computing	Spiderman	Trinitron	Worldwide Appliance
ATT	Diamond Pro	General	LITE-ON TECH	PrecisePoint	Standard	Tristar	XGA
Batman	Diamond Scan	Gorman	Little Tikes	Proscan (ON)	Standard Tech	TV	
Betis	Directed Electronics	Hitachi	Lodgenet	Proscan (Thomson)	Starlight	UL	
Chanchong	Durabrand	Honeywell	Low Radiation	Quasar	Starlite	Ultimate	
Classic	Electronics Industry	Hyundai	Magnavox	Quasar by Motorola	Studio	Ultra VGA	