

The Ghetto Bastard: A Portable Noise Instrument

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Abstract

Due to the accelerating development of ‘rapidly to become redundant’ technologies, there is a growing mountain of perfectly serviceable discarded electronic devices hiding quietly at the bottom of almost every domestic rubbish pile or at the back of nearly every second hand shop. If you add in to this scenario the accelerating nature of our society where people don’t have time or the motivation in their lives to sell or auction their redundant electronics, one can discover a plethora of discarded materials available for salvage.

Using this as a starting point, I have produced a portable noise instrument from recycled materials, that is primarily an artistic led venture, built specifically for live performance.

1. Introduction

The Ghetto Bastard has been loosely developed from a found Portable Radio Cassette (PRC) in line with pre-conditions that are in continuous development. For the moment, they are: (1) The majority of the instrument needs to be constructed from reclaimed and second hand electronic parts; (2) Appropriation of devices that were not originally musical instruments are encouraged; (3) Aesthetic discourse.

2. Original Features

The functions of the PRC are typical of a unit from the early 1990’s. It consists of two cassette players with a high speed dubbing function, an internal microphone and a receiver capable of receiving Amplitude Modulation (AM), Frequency Modulation (FM), Medium Wave (MW) and Long Wave (LW). The internal amplifier is rated at thirty watts and the whole unit requires twelve volts direct current for operation. Placing the unit in ‘tape’ mode and

ceasing all tape activity will turn off the PRC. All other configurations place the unit in the ‘on’ mode.

3. Modifications

3.1 Acoustic Feedback Generator

The first modification made to the PRC player was to transform the native speakers, amplifier and microphone in to this feedback device and mount it in the unit. The record function that activated the microphone was by-passed so that the microphone became live as soon as the unit received power. The intensity of the feedback can now be governed by the volume potentiometer of the PRC. There is also a piezoelectric disc attached to the tape motor. The volume of this piezoelectric disc is also governed by the volume potentiometer of the PRC.

3.2 The Laying of Hands

The internal AM receiver has been hacked to create squeaks and squeals by the *laying of hands* [1]. The contact points, or *sweet points* [1], have been relocated to external points on the case and connected to two large bolts, one at each end of the device, that also work as grip handles and strap hooks.

During the process of hacking the unit, the radio receiver ceased to function and I was unable to repair it. Damaging circuits beyond repair like this is considered a normal part of the circuit bending and hardware hacking process [2]. As a result, the native receiver has been replaced with a functioning, re-cycled non-native receiver¹. The independent tuning, volume and ON/OFF controls of the replacement receiver are located on one end of the unit.

3.3 DJ Cross-Fader

The dual position switch that selects the tape and radio functions has been replaced with a cross-fader from a KAM Disc Jockey (DJ) mixer and placed centrally on the unit. The tuning potentiometer has been replaced with the main ON/OFF switch.

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¹ This substitution was a difficult decision to make but it does fit with the recycled and self built aesthetic that I have been working towards.

3.4 Tape transport

The tape transport mechanism on the top of the Ghetto Bastard has been reversed so that the controls face the rear of the unit. The top half of a *Barbie*-style doll has been placed on to a platter fashioned from the foot of a Hi-Fi amplifier. This in turn is placed on a spindle, which rotates slowly when the play button is depressed. A small piece of flexible plastic cable tie has been laid against the rotating doll. This acts as a sound generator by rubbing against the tin foil clothing like a ratchet. The piezoelectric disc that is attached to the tape motor can pick up this sound.

4. Design and Performance

4.1 Design

The Ghetto Bastard has externalised components. One can see much of how the device works and how it is played in furtherance to source bonding. I have added a mutilated *Barbie*-style doll because as an artistic statement and an appreciation of the Modified Toy Orchestra created by Brian Duffy [3]. The illuminated mirror ball that has been placed in the empty speaker compartment has the same subversive intention as the mutilated Barbie-like doll. The positioning of the antennae like bolts and the visibility of the speakers are inspired by works of Nam June Paik [4] and Mary Shelley [5].

4.2 Performance and Gesture

I often argue that good ergonomics are the polar opposite of forced gesture in relation to this project. I have proposed that poor ergonomics force the musician in to developing new playing techniques, new postures and ultimately a unique performance. Unusual playing technique is forced by the positioning of the bolts and their use as grips, the shoulder strap that is adjusted for playing while standing up, and the non-ergonomic positions of the cross-fader, volume and graphic equaliser. It is also possible to use the sound and space to great effect, for instance the way in which the acoustic feedback is shaped by the acoustics of the performance space when the performer moves around with the instrument. The freedom of movement that is encouraged by the Ghetto Bastard affects the devised performance by creating an audio space in the composition that matches the physical space of the performance area. The open nature of the Ghetto Bastard with its emphasis on source bonding can be enhanced by using Brechtian performance methods [5]. I have also studied artists such as Laetitia Sonami with her *Lady's Glove* [7], and gestural theorists such as Adam Kendon [8] and David McNeill [9] in order to gain a clearer picture of how to use gesture in the context of this paper.

4.3 Composing for the Ghetto Bastard

There are multiple sound sources within the device and their relationships to one another are brought together by devised performance and composition. This funnelling of a number of ethereal sound generators controlled by the

performer to a single focus creates enough complexity and entropy for the instrument to be rewarding for creative composition. Composing doesn't 'appear' busy. However, this issue can be attended by changing ones mindset and considering that one is composing while building the instrument [10]. Although the outcome of the devised composition is non-tangible, the instrument and composition are to be presented as a single inseparable tangible creation.

The sound the instrument creates can be, in many quarters, regarded as noise. This noise is a familiar element that we encounter in our everyday lives, such as radio interference, terrestrial radio transmissions, and mechanical sounds. These manifest themselves as white and pink noise, motor-boating, squeals, chirps, buzzing tone oscillations, rattles and electromagnetic interference. These are manipulated to affect human audition in regards to music, noise and organized sound [11].

5. User Studies

Reaction and comment from performances will be noted. The study of performances outside the usual sphere of the arts will be used as a guide, although results will be flawed and should not be considered definitive or scientifically sound.

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