

EMC Technologies (NZ) Ltd

Test Report No 40855.2

Report date: 5th October 2004

5. DESCRIPTION OF TEST SAMPLE

Brand Name	Cabco
Model Number	Kid Kart
Product	Shopping Trolley Transmitter
Manufacturer	Cabco Group Ltd
Country of Origin	New Zealand
Serial Number	501
Ancillary Equipment	Nil

The device tested is a transmitter that is located in a shopping trolley.

This transmitter is used in conjunction with a control transmitter which is normally located at the entry to the supermarket shopping centre near the shopping trollies.

The transmitter in the shopping trolley is normally inactive.

When a shopping trolley is hired the controller will poll all available trollies and releases the brake of the the nearest available trolley.

At this time the transmitter in the trolley transmits a briefly to the control station indicating that the trolley has been hired and the brakes are released

Once the brakes are release an MP3 player is activated that plays music.

The trolley transmitter then remains inactive until the brakes are reapplied which occurs approximately 5 minutes after it passes through the check out at which point the trolley detects an optical input.

When the brakes are reapplied the trolley transmits to the control station indicating that it is now available for hire.

General Operation

General

Karts are hired for \$1 by customers and can be used for as long as they need before customers take them through the checkout. Once through the checkout the brakes will automatically apply ready for the next customer.

Hire

Customers put \$1 in notes into the Kart Pay Station then use the arrow buttons to select the number of the Kart they wish to use. The Kart will automatically release the brakes and music and stories will start playing for the children inside the Kart.

Finish

The brakes will apply five minutes after the Kart clears the checkout. The brake can be released by store staff by pushing the *brake release button* and holding it for 4 seconds. The Kart cannot be taken outside the store.

Kart Manager – Responsibilities

Introduction

Karts require servicing either weekly or twice-weekly and this is a *critical* component of the Kart program.

This service is not only checking and cleaning the Kart, but it's *contact* with store staff who handle our customers directly. Ensuring that shop staff are happy is a critical part of this job!

Summary

Cleaning	Karts need daily cleaning! Shop staff should clear debris daily, but you need to clean Karts thoroughly on every visit. Pay particular attention to the children's seating area, including dashboard and steering wheel. Cleaning should take only 5 minutes per Kart.
Cash Clearance	Clear cash on a weekly basis. Please complete the Cash Clearance Form and reconcile to actual cash. Please do not hold onto cash for more than a few hours. Bank into our account asap, then fax or email form to Cabco once per week.
Battery	Kart batteries need to be changed every 3 to 4 days. Therefore this needs to be done twice per week. Changing is either by swapping batteries with the recharged batteries in the station.
Store Float	Please call at checkout/service centre on each trip to ensure that there are no problems with the Karts and whether their store float needs reimbursement. Use notes cleared from the Pay Station to top up the store's float where necessary. Please note consistent errors and if necessary follow up complaints an Kart issues.

Problems

Hire Problems

(i) Coin / Note Jam

- unlock holder
- unit will split at the top and show the note track
- extract debris or jammed notes, then put a note through the system to check the slide is clear, then reinstate

(ii) Pay Station rejects coins / notes

- check path of notes is clear at back
- test on alternate notes
- reset system by turning power off for 5 seconds
- check dipswitch

(iii) Pay Station won't accept coins / notes

- check power is on by looking at screen ... is it on?
- check all connections are in place and "power" light is on
- turn system off at wall, wait 5 seconds, then turn back on to reset the system
- review LCD screen to check for errors

(iv) Pay Station rejects Kart selection and asks for another, when it appears to be available

- problem is likely to be linked to the radio system
there are two scenarios:

scenario 1 - Kart does not turn on (and music does not start)

- check that rear Kart light is on
- Ensure Kart is turned “on”, then reset Kart by disconnecting power at Kart for 5 seconds, then reconnect.
- Check fuse in slot container off the battery connection – 10 amp.
- Problem is likely to be radio, reset Kart, then reset Pay Station

scenario 2 – Kart turns on but does not send return signal

- Check aerial in Pay Station

(v) Kart selected does not activate (i.e. no music/ no lights)

- check that right Kart is selected
- check that Kart has no warning lights on – if no lights on, check fuses then connections

(vi) Kart selected, music starts but brakes won’t release

- brakes are locked on due to pressure
- release pressure on Kart and rock Kart gently – brakes should release

Problems at end of hire

(i) Brake release does not work

- check that release is not jammed on
- turn Kart off for 10 seconds, then on and retest

(ii) Brake does not apply

- check that alarm light is lit on both sides
- retest with side light

(iii) Music doesn't cut off

- reset power

Problems in the store

(i) Brakes apply in the store

- check that rapid green flash is not going – if it is, customer hasn't paid and has got the Kart going by using the brake release button and pressed it 3 times.
- check that slow green flash is not going – if it is, customer has not paid and taken Kart before the brake has had time to apply from the previous customer
- if lights are solid green or off - ask customer if brake sequence counted down, in which case alarm has been tripped by another Kart passing in the aisle, or by an unusually reflective surface
- if alarm has gone on abruptly, could be power failure in Kart due to static electricity or system failure

(ii) Music stops

- check connections on MP3
- restart and test computer and music

Other non-standard Problems

- (i) Kart is damaged**
- (ii) Kart is stolen**
- (iii) Kart Pay Station is broken into**
- (iv) Batteries do not charge sufficiently**
- (v) Customer has an injury**

With all non-standard problems, the key issue is ...

- as quickly as possible report the situation to Kart Service and if needed to the store management and to authorities
- record all pertinent facts and take names and contact numbers from relevant staff

Functions of Rear Boot LEDs

Warning light and Green light

Errors do not prevent acceptance of tokens and cab hire.

RED LIGHT

OFF	If green light is on then battery is OK. If green light is out then battery is totally flat.
Rapid flash	Battery voltage is low. Coins will be rejected, . If notes were inserted before the rapid flashing started then these stories will continue to be played.
Steady	Battery is nearly flat. The computer has shut down.
Single slow flash	Error 1 - Sound was not detected from the mp3 player.
Two flashes	Error 2 - Token reader obstructed
Three flashes	Error 3 - Brake error.
Four flashes	Error 4 - Error writing to Eprom chip

GREEN LIGHT (MONEY)

OFF	Battery totally flat
Steady	Kab is ready to go and can accept money
Slow flash	Has had its side sensor triggered within the last hour.
Rapid flash	For 10 minutes after brake release button pressed.