

# TICKETING & CARD EQUIPMENT

service support

## TECHNICAL & SERVICE DETAILS

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### **SERVICE SUPPORT**

The Abberfield Group have produced Transportation Ticketing, Car Parking Equipment and Access Control Equipment over the past twenty years. This literature gives technical support hints that will maximise the usability of our customers' equipment. In some cases possible upgrades are suggested.

#### **CLEANING OF ROLLERS**

Dirt and grease accumulate on rollers and slippage results. With ticket dispensers and magnetic card readers this will lead to substantially diminished performance. The rollers most critical to clean are the eccentric roller on a ticket dispenser, or the centre roller on a magnetic card reader. Cleaning cards are not designed to clean rollers, they clean stationery surfaces such as magnetic reading heads.

Rollers need to be manually cleaned. This can be done with methylated spirits - but poor performance results.

Concentrated isopropyl alcohol, obtained from a chemist shop will give reasonable results.

But serious cleaning comes by using a solvent designed to strip rubber, neoprene and similar material clean.

One option is Buffer Solution, designed for cleaning car tires and tubes before making repairs. The use of buffer solution will provide remarkable results, ensuring maximum grip

on any card or ticket. Any serious service procedure must use this, or a simular solution, frequently.

Note also that buffer or any similar solution will dry out any plastic parts. Therefore try to limit contact of the solution to the rollers being cleaned.

Supplies of buffer solution can be obtained from Abberfield Industries, or ask your local tire supplier if they have some spare.

**Caution:** Buffer solution may cause headaches if the fumes are inhaled. Store in glass or metal containers as the solution will evaporate through a sealed plastic container.

# CLEANING MAGNETIC READ / WRITE HEADS

Cleaning is at two levels; regular operator cleaning and periodical technician cleaning.

#### **OPERATOR CLEANING**

The site operator can use cleaning cards by inserting these into a card reader as if it were a Pass Card. The Cleaning card contains isopropyl alcohol and is drawn in across the reading head. After passing back and forth the card is rejected and the contact part of the head will now be clean. Contact cards can be obtained from Abberfield Industries in boxes of 50.

#### **TECHNICIAN CLEANING**

With a card reader the magnetic head is sprung loaded, so that the head can follow the movement of the card. The head is guided in a frame and over time dirt collects between the head and guide, restricting head movement. Then the card cannot be tracked properly and reading errors result.

Periodically the top head box should be removed, (2 x M4

screws), and the magnetic reading heads flood washed with isopropyl alcohol. Use a small brush and gently flood the alcohol down into the head guide box and dirt will then be flushed out. Note that there are two heads; one on the main deck and one in the top head box. The main deck head is usually the most important. This form of cleaning should be done each three to six months, depending on machine usage.

#### **ELECTRICAL**

#### **CONTACT CLEANING**

The Abberfield modules plug in using large self-aligning plugs with gold plated contacts.

#### DOUBLE-SIDED CLEANING CARD FOR MAGNETIC CARD READERS

CONTAINS 99.9% isopropyl alcohol:

Cleaning cards eliminate read errors by safely and effectively removing contamination from magnetic stripe card readers. Recommended for all Abberfield magnetic card systems.

#### USAGE

Once per week for low use readers. I wice per week for high usage readers. Once per day in high contamination environments.

#### DIRECTIONS

Remove card from pouch.

Insert card into reader.

Remove card from reader and dispose of property.

Caution: Flammable

Made in U.S.A. especially for



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Cleaning card sachet

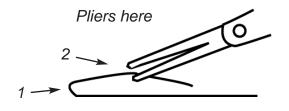
Periodically these contacts should be washed with isopropyl alcohol and then lightly smeared with contact grease. This grease prevents oxidisation of the contact and maximises the "wetted" area of the electrical contact. If contact grease is not available, use petroleum jelly.

#### **CONTACT ALIGNMENT**

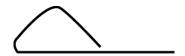
Over time, the contacts may become stressed and slightly flattened. This can lead to poor data transfer problems, such as machine automatic resetting. With great care and a pair of fine pointed pliers the contacts may be re-bent.







Bend both angle 1 and 2



Reformed contact

## STAND-BY BATTERY REPLACEMENT

Most power supplies include a stand-by battery, to run the machine in case of a power failure. This is a rechargeable gell cell battery with an operating life of approximately three years.

As the batteries age they may pull more current from the power supply to keep them charged. When this happens the power available to run the machine will be diminished and this may result in diminished

performance. One manifestation may be occasional resetting of the equipment when under full load, particularly if the mains is low. Therefore, replacement of batteries each three years is strongly recommended. Refer to the service manual or Abberifeld's Technical Department for the replacement procedure if necessary.

**Note:** Battery contacts should be coated with anti-corrosion grease or if unavailable at least petroleum jelly.

#### **MEMORY BATTERIES**

Many machines include cash box lid or on-board memory batteries. These have a very long, but variable life, which could be fifteen years, but above average usage may reduce the life something less than ten years, (from date of manufacture). Memory battery failure will usually result in a machine shut down and replacement should be considered after five to seven years of machine use. Refer Abberfield's Technical Department for assistance.

#### **GENERAL MAINTENANCE**

Refer to the Maintenance Manual of your equipment for details. Alternatively, contact Abberfield to arrange back-to-factory module refurbishment or on-site maintenance.

One advantage of back-to-factory maintenance is that older equipment can be upgraded to include more current technology. Sometimes increased functionality or improved performance is possible.



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