

GATE-A-MATION'S

BEST PRACTICE MULTI-USER DESIGN GUIDE.

30th July 09

A multi-user system is one that more than two families would use. Also an access point to a business premises or light commercial property.

This brief guide is recommended to give assistance when considering the performance and suitability of a Multi-User Automatic entrance system. If more detail is required please contact our service department for site specific advice.

All systems designed, installed & maintained correctly will offer years of cost effective and virtually trouble free service with complete user satisfaction.

Users requirement	The performance of the system should fulfil the needs of the user.
Location	The system will need to work effectively against all the potential hazards the local environment will throw at it. Coastal weather, local football ground, potential flooding, highway layout & safe access, local community, etc.
Weather-proofing	All aspects of the installation need adequate weather proofing to suit all condition throughout the life expectancy of the system.
Components	All the components of the system build should be suitable for long term reliability & safety against reasonable levels of abuse. We recommend that they be widely sourced offering the user alternative service provision (not single source supplier).
Pedestrians	Pedestrian access through a vehicular route should always be avoided/discouraged. A separate gate or path is recommended where possible.
Failure status	The failure status is a critical feature in respect to the long-term reliability of the system and its vulnerability to abuse. It determines whether the system fails "Secure" or "Release" during a power down state.

Fail Secure	Fail Secure means that the system is held locked, usually closed, during a power down/cut. Access is gained by use of a release key or device. This usually means that the operators are direct locking or non-reversible and is common in “Domestic” installations. However any undue force placed upon the gates will be directed to the operators and subsequent damage is highly likely.
Fail Release	During a power down state, the system automatically reverts to manual operation. This format is ideal in “Multi-user” installations, where access is more important. Undue force is far less likely to cause damage to the operators. Also Emergency services can gain access more easily and as a result, the life of the system is enhanced.
Power supply	It is important that each system is run from an adequate and independent source with local isolation & protection to part “P” standards.
Battery back-up	Battery back-up is used in a number of ways, sometimes providing a limited supply for the whole system but, more often, by giving a temporary supply to a component e.g. Supplementary locking or an Audio link facility. It is important to remember that the battery will run down so that the failure status should be considered without battery assistance (often a supply fault can be hidden until the battery runs flat).
Ground levels	In EVERY case the “ground levels” have a direct effect upon system performance.
Cable runs	All cable runs should be installed using externally rated cables of adequate core dimension and spare cores where possible. All ducting should be “Anti-crush” flexible duct with sweep bends, no elbows and adequate access pits for servicing.
Support structures	The support structure, whether it be a gate post or barrier stand, is one of the most important parts. Its stability directly affects the performance & reliability of the system.
Noise transfer	Noise from any system can be transferred directly to a neighbouring property. Every site has its own characteristics

and as such, there is almost no guarantee against total noise transfer. However, basic steps can be taken.

Customer use	Systems have found themselves problematic due to a change of use from the one it was designed for. It is recommended that any potential change of use be discussed.
Gate build	Gates should be constructed to suit the opening size and method of control. With timber gates there is always a compromise between cosmetic looks and system reliability. Rectangular hollow section steel, outer frame of 40mm+ square is recommended, together with medium/thick wall hollow section elsewhere. Close-board Infills, Sheeting or Cladding should be avoided. Palisade gates and similar shaped in-fills, create high levels of drag resulting in significant problems in windy conditions. The hinges should be of a high use type, suitable for the proposed method of control and adequately maintainable.
Gate operators	There are a number of types of operator on the market today and choosing the right one is important.
Jacks v Rams	Undergate Jack operators usually control the gate by moving the pivot point of each gate leaf. This makes the unit ideal cosmetically and also allows for up to 180 degrees of leaf swing. However located below ground their drainage requirements are high, often resulting in manufactures refusal with warranty claims. Low/below ground “Manual release” makes for high level maintenance with problematic use. We recommend they are only suitable for “Domestic” systems in a low risk of abuse environment. Ram units are simpler to maintain, they are visible to otherwise ignorant abuse and as they fix approx. 1m along each gate leaf, they have a major mechanical advantage over Jacks. Therefore they are far more suitable on Multi-user systems.
Locking	Operator locking is not recommended in Multi-user installations and as so, Hydraulic Rams are more often preferable to Mechanical.
Command	Command controls are the items that give systems a signal to open. There are numerous types available and it is recommended more than one be installed.

Safety devices	<p>Safety devices are the items that stop the system from closing while they detect an obstruction. There are about half a dozen ways of providing system safety.</p> <p>Very few systems use safety devices for stopping the system from opening, but it is possible.</p> <p>The main objective of good safety cover for any system is to prevent impact from occurring. It is the moving vehicle that causes most damage, not the moving gate or barrier and most accidents happen because the vehicle is driven into a closing system.</p> <p>Therefore devices should be chosen and located to give the best Safety cover for each individual site.</p> <p>The most common safety item is a pair of photoswitches S1 used in most domestic installations. However, as the detection area is only a thin beam, larger coverage devices are better such as induction loops S2. A combination of safety devices is good practise.</p> <p>All systems should have adequate safety cover and the higher the usage of the system the more likely the chance of accidents.</p>
Miscellaneous	<p>Miscellaneous items are the other essential components of a system that make it complete. These items are often overlooked and do not seem important until the installation is all but finished.</p>
Roller shutters	<p>Most roller shutters are designed to work about 10 times a day and with regular maintenance will offer approx. 25 years service (100,000 operations). As the number of operations a day increases the life expectancy reduces accordingly. A shutter serving 50 car park spaces may well be subject to 125+ operations a day and could only be expected to last 2.5 years?</p>

Please Call Gate-a-mation sales or service department

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