

GateLock



1. Enter code provided on the sign and open the gate
 2. Cross quickly
 3. Use release handle to open the gate and exit the crossing
 4. If there are more people to cross, the person should remain at the entrance until the far gate is open and then cross
 5. The last person to enter the crossing must ensure that the gates are closed behind them
- Maximum penalty for not closing gates is £1000

The Challenge

Every year in the United Kingdom, there are incidents and near misses at User Worked Crossings (UWC's) through users not contacting the signaller at the controlling signalling centre and following verbal instructions, due to unfamiliarity, laziness and poor discipline.

In terms of the classic six step risk model (ERIC PD: Eliminate, Reduce, Isolate, Control, PPE, Discipline) under ALARP (as low as reasonably practicable), the UK railway industry cannot currently afford to eliminate the amount of UWC's that exist.

The Solution

Park Signalling Ltd are developing the GateLock product, which is a manufactured gate and post solution of various types, fitted with an electronic gate locking system.

The GateLock product contributes to greater control and increased discipline at UWC's and has the potential to provide affordable risk mitigation against the stated instances and issues.

Downsides have been recognised:

- GateLock can be beaten by determined abusive users
- GateLock could introduce extra steps for the user
- GateLock could increase signaller workload (talking process through with users and looking up code)
- GateLock may need an alternative telephone number for out of hours use

Upgrades being considered:

- GateLock can incorporate communications and interface with GSM (Public and Railway)
- With communication equipment added, GateLock could automatically report open gates and could have an electronic release without the requirement for a release code
- A future development is to use the GSM-R/Future Railway Mobile Communications Systems (FRMCS) Network in the UK as a concept. This network is intelligent enough to locate the current position of all trains. The GateLock product is proposed to interface to a lineside GSM-R/FRMCS telephone/s and/or a direct interface
- The GateLock product is proposed to secure and release UWC gates controlled via the GSM-R/FRMCS as trains approach and pass the UWC's, further development is required for the capability
- The additional development would add to the equipment complexity, installation and maintenance pushing the COST UP and limiting wide roll-out potential

The Result

GateLock:

- Fits the Network Rail strategy and challenges to improve rail safety
- Reduces risk at crossings
- Encourages correct user behaviour at crossings
- Provides basic maintenance diagnostic information
- Provides vital crossing usage data
- Improves confidence in the safety assessment of crossings

Park Signalling envisages that a purchase and fit pricing model would allow for cost effective risk reduction at a large number of UWC's. We are continuing to work with Network Rail to provide a safe transparent solution.

This current innovative development minimises the change to how the user operates a crossing and supports the signaller in its operation.



Delivering value through:



**Product
Innovation**



**Optimised
Cost**



**Increased
Safety**



**Reduced
Risk**