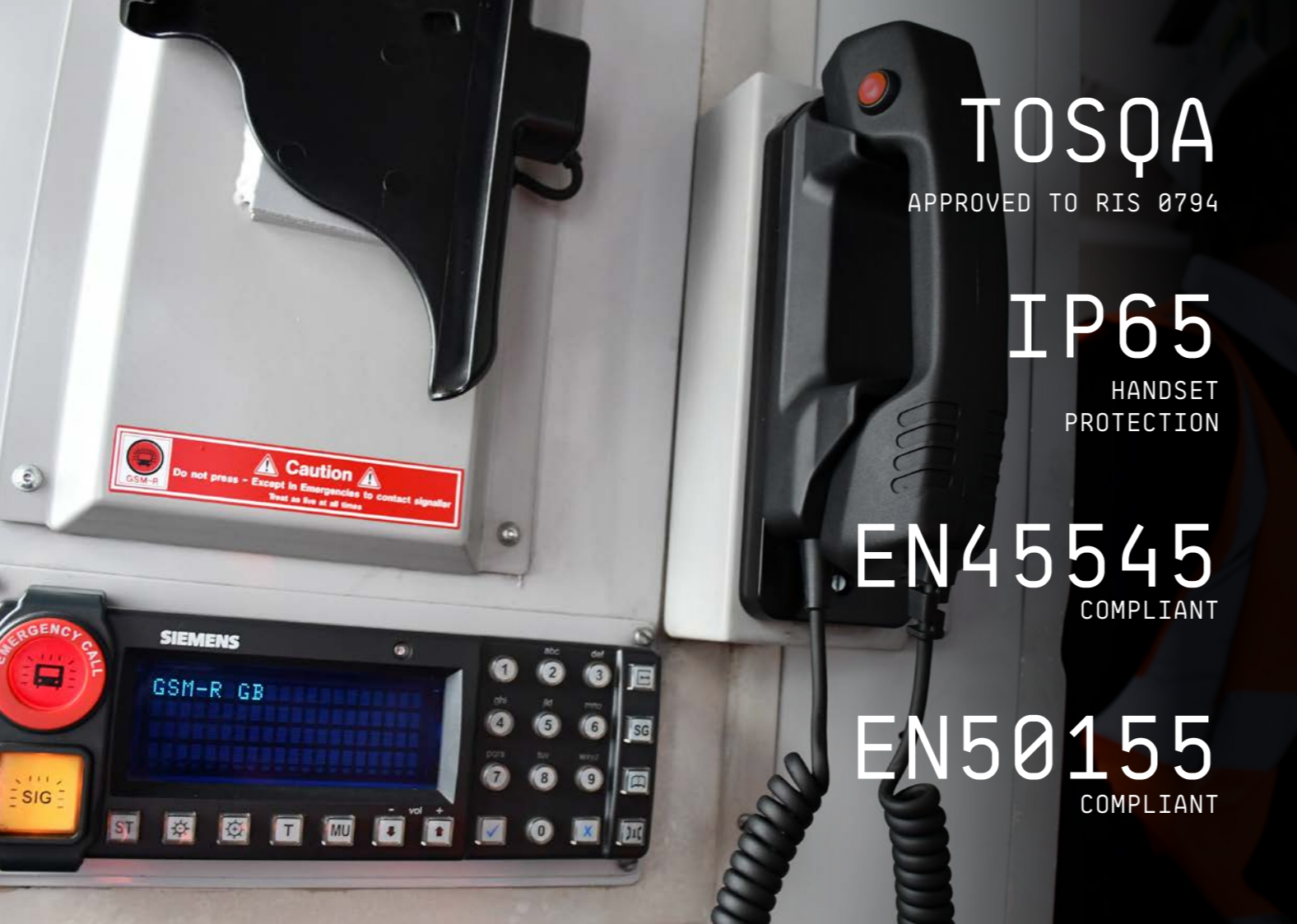




# GSM-R TUFF<sup>®</sup>

The most reliable traincab  
handset we've ever developed.

WHEN COMMUNICATION IS CRITICAL



TOSQA

APPROVED TO RIS 0794

IP65

HANDSET PROTECTION

EN45545  
COMPLIANT

EN50155  
COMPLIANT

TECHNICAL COMPLIANCE

- ✓ POWER CONSUMPTION
- ✓ FIRE RESISTANCE TO EN45545
- ✓ TOSQA ACOUSTIC COMPLIANCE TO RIS-0794
- ✓ EMC CERTIFICATION
- ✓ SIEMENS & NETWORK RAIL ACCEPTANCE
- ✓ IP65

EN50155 COMPLIANCE

- ✓ VIBRATION SHOCK & BUMP
- ✓ EMC & SURGES, ESD AND TRANSIENTS
- ✓ DRY HEAT & LOW TEMP
- ✓ AUDIBILITY TEST - STIPA REPORT
- ✓ OPERATION OVER VOLTAGE RANGE

APPLICATIONS

- Siemens GSM-R Train Radio
- Funkwerk GSM-R Train Radio
- GSM-R Train Radio – Other

DEFINITIONS

- **GSM-R**: Global System for Mobile – Railway

THERMOPLASTIC POLYURETHANE  
EN 45545-2. Oxygen Index 32%.

SINGLE PUSH-TO-TALK  
Dual model also available

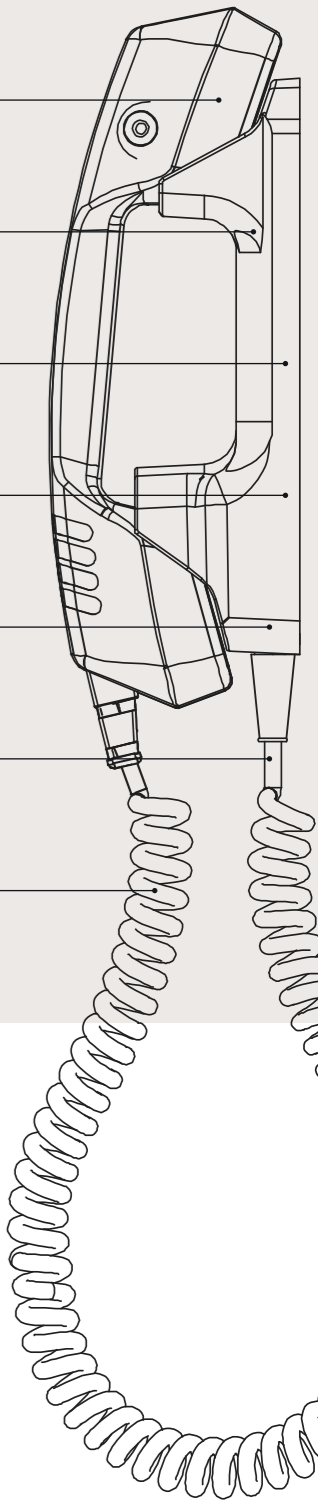
EMC TESTED  
to EN50121

BLACK OR RED  
● ●

MULTIPLE CONNECTORS  
to suit any connection requirements

ARMOURED CORD  
Available in custom lengths

CURLY CORD  
Available in custom lengths



## CUSTOMISABLE CONNECTIVITY FOR ANY TRAIN CAB

Moulded in a robust fire-resistant polyurethane material, our **TUFF® Handset** provides excellent durability and resistance to wear, up to **1,000,000 hours MTBF\***

Handset failure's lead to train delays, or at worst, trains out of service – all of which incurs significant costs to train operators & manufacturers. That's why we've meticulously designed our TUFF handset to withstand the harshest of environments – so you can depend on reliable communications when it matters most.

Our GSM-R TUFF® handset is a safety critical train component compatible with any class of vehicle, with customisable connectivity for any train cab application.

A VITAL COMPONENT ON TRAINS FROM

SIEMENS ALSTOM CAF HITACHI

GWR South Western Railway GTR West Midlands Railway EMR AVANTI WEST COAST

\*Handset achieved 1,030,396 hours MTBF across ~ 500 RETB Train Cab installations from March 2014 to Aug 2022

## HANDSET INTEGRATION & ENGINEERING APPROVAL

We recognise the importance of thorough and accurate technical data when gaining engineering approvals for train upgrades. Therefore, to aid Fleet Engineers with product approvals, we have compiled a comprehensive GSM-R TUFF® handset technical pack, detailing the required standards and specifications.

"Since the DAC GSMR handset was introduced in 2022, we've seen a major reliability boost, from an average of 80 failures a year using the legacy handset, to less than 1 a year using DAC's TUFF handset; that's a 99% improvement. This has cut maintenance and delay costs significantly and greatly improved GSMR system availability".

Simon Day, GWR Electrical & Electronic Systems Engineer

Try our **TUFF Handset return on investment calculator** for free, visit [daclimited.co.uk/TUFFcalculator](https://daclimited.co.uk/TUFFcalculator)

### CORD LENGTH TABLE\*

Curly Cord	Compressed Length (mm)	Safe Stretch Length (mm)
30 – Coil	190	880
40 – Coil	250	1120
50 – Coil	320	1400
60 – Coil	380	1640
80 – Coil	500	2120

# WHEN COMMUNICATION IS CRITICAL

**DAC design and manufacture ruggedised communication equipment  
focused on providing unwavering reliability when it matters most.**

Our range of products prioritise safety by ensuring critical communications remain clear and dependable, protecting lives and maintaining operations in all arduous and critical environments.

PROUD TO PARTNER



SIEMENS



ALSTOM

BAE SYSTEMS

## OTHER EQUIPMENT IN OUR RANGE



### PIS-PA TUFF HANDSET

Handset for Passenger Information Systems (PIS) and Passenger Announcement (PA), with customisable connectivity for any train cab.

- ✓ Train cabs
- ✓ Compatible with all vehicle classes
- ✓ Passenger Information

- ✓ Passenger Announcement
- ✓ Guard Operator Panel



### RA708 RUGGEDISED TELEPHONE

Fully-contained telephone within a corrosion-resistant weatherproof case. Can be installed without direct access to a power source or network. Available as VoIP, GSM or Analogue.

- ✓ Track Side
- ✓ Road Side
- ✓ Military & Defence
- ✓ Public Services

- ✓ Oil & Gas
- ✓ Energy Generation
- ✓ VoIP, GSM, Analogue



### RA711 HANDSFREE RUGGEDISED TELEPHONE

Handsfree rugged telephone for use where customers experience loss through vandalism. Available as VoIP, GSM or Analogue.

- ✓ Train Station
- ✓ Airports
- ✓ Help Points

- ✓ Prisons
- ✓ Public Services
- ✓ VoIP, GSM, Analogue



### INDUSTRIAL HEADSET

EN352-approved hearing defence with comms and market leading passive attenuation. Interface to any PMR radio with clear and dependable communications.

- ✓ Construction
- ✓ Motorsport
- ✓ Energy Generation
- ✓ Military & Defence

- ✓ Cameraman / TV
- ✓ Warehouse
- ✓ Airport



### EMERGENCY ROADSIDE TELEPHONE

A diverse range of solutions including GSM upgrades to existing mechanical hardware.

- ✓ Special Projects
- ✓ National Highways Type 354
- ✓ UK

- ✓ Europe
- ✓ GSM
- ✓ VoIP



### ASSET MANAGEMENT SOFTWARE (AMS)

Cloud based Asset Management Software for use on PC, tablet or mobile. Compatible with all DAC GSM and VoIP products – keeping a close eye on asset performance and availability.

- ✓ Periodic Reporting
- ✓ Data Collation
- ✓ Remote Maintenance

- ✓ Preventative Maintenance
- ✓ Cloud Based
- ✓ PC, Mobile, Tablet



DESIGNED & MANUFACTURED IN THE UK. **INSTALLED ACROSS THE WORLD.**

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