

OLIVIR G Plus Frequently Asked Questions

What is OLIVIR G Plus?

OLIVIR G Plus is an OHE spark recording system for current collection tests. It's camera and light is mounted on the side door handle of a loco. Camera looks at the Pantograph-Contact wire taking 30 pictures per second. During the current collection run when a spark occurs, it records a picture of the spark along with the location of spark using GPS. The location reporting is the actual Track features like OHE Mast number, type of mast and latitude/longitude of the spark location. The actual vehicle speed is also recorded via GPS.

How OLIVIR G Plus works?

OLIVIR G Plus uses OLIVIR Mate RT software which is a state of the art Real Time Digital Video Processing to detect sparks from the camera pictures. It detects sparks in the picture using sophisticated objects (sparks) detection algorithms.

The other part of the OLIVIR G Plus is GPS Receiver, which gives a navigation update every second. These updates include latitude, longitude, altitude, speed and heading.

What is GPS?

GPS, which stands for Global Positioning System, is the only system today able to know the exact position on the Earth anytime, in any weather, anywhere. GPS satellites, 24 in all, orbit at 11,000 nautical miles above the Earth. They are continuously monitored by ground stations located worldwide. The satellites transmit signals that can be detected by anyone with a GPS receiver. Using the GPS receiver location can be determined with great precision.

Can I do current collection test in day?

No. The OLIVIR Mate RT software detects spark based on the light difference in different parts of camera image. In daylight, the sparks are not visible as most of them are below the ambient lighting.

What are the power supply requirements?

The GPS and camera is powered by the 'Display & Processing unit'. The Display and Processing unit runs on both 110 Volt AC/DC and 220 volt AC. It also has built in battery which can run it for more than 2.5 hours without any external power supply. Power requirements are around 60 watts peak.

Focus light runs on 110 Volt DC/AC power supply which is available in loco. Power requirement is dependent on the focus light bulb used, usually 20-30 watts.

How it gets the Track features/OHE Mast numbers?

A 'Track Feature File' is required before conducting the current collection test. Track features file contains all the masts' location and other useful track data. OLIVIR Mate RT software uses these track feature files to correlate the sparks location from GPS and gives the actual location of sparks like :

Description

1st Mast: 813/25 Distance: 24M 2B Section: MDDP-ITY

2nd Mast: 813/27 Distance: 37M 2B ATDGJ Section: MDDP-ITY

How do I make a Track Feature File?

Track feature files are made using G1030 GPS data-logger from Total Solutions. It's a portable unit having a storage capacity of 30,000 track features. A survey is made of the section using this unit and track features are collected. This data is then uploaded to OLIVIR G Plus's Display and Processing unit as track feature file.

Can I use Track Feature File for mapping?

Yes. With the help of third party mapping software which imports text files. One such software is Global Mapper.

How accurate is GPS?

We use a high accuracy NAVMAN GPS. Its accuracy is 2.8 meters CEP.

Will GPS work in tunnels?

GPS requires a unobstructed view of sky to get the satellite signals. It doesn't work in tunnels or where the satellite signals are not available. GPS can tolerate a signal outage of 15 seconds. If there is a spark location in tunnel, you will get a report showing the location of spark in tunnel. But the actual distance of spark from tunnel ends will not be accurate.

Will I need to pay rent/license fees for GPS services?

No. GPS will be free as stated in the US Presidential Decision Document (29 March 1996) and by Congress in the 1998 Public Law (105-85). Both state that the U.S. "will continue to provide the GPS Standard Positioning Service for peaceful civil, commercial and scientific use on a continuous, worldwide basis, free of direct user fees.

What kind of Reports it generates?

OLIVIR G Plus generates 3 types of output:

1. Text based reports with intensity of spark and location.
2. Graphical reports with pictures of sparks, intensity and location
3. Continuous Movie Recording (CMR) movies.

What use is of CMR?

CMR is used to watch the general condition of OHE. It can also help to determine the cause of a spark. As the movie is recorded, it can be viewed after the recording with pause and replays.

Can I make a VCD of CMR movie?

Yes, the CD writing program that comes with OLIVIR G Plus bundle can record VCD of CMR Movies.

What comes with OLIVIR G Plus?

OLIVIR G Plus bundle consist of:

1. Display and processing unit.
2. USB Camera.
3. Focus Light.
4. Mounting stand/enclosure for the camera and light.
5. OLIVIR G Plus GPS unit with magnetic mount active antenna.
6. Carrying Case.
7. Power adapters/Cables.
8. OLIVIR Mate RT Software.
9. Report Generation/Printing software.
10. Various other software/drivers.
11. User Manual.

What are the after sales support options?

OLIVIR G Plus comes with one year warranty against any manufacturing defects. Maintenance contracts can be signed for after warranty support.

How much time it takes to install OLIVIR G Plus in a loco?

Less than 10 minutes.

How much time it takes to train my staff to use OLIVIR G Plus?

Less than a day.

2. Software :

Real-time Track/OHE Feature Matching & Display

Real-time Video Display

Real-time Spark Detection & BMP Save

Real-time Report Generation with Spark Classification & location.

Continuous Movie Recording Mode

Why your specifications are subject to change?

We continuously upgrade our software so the specification of system will improve with time. The hardware specifications are dependent of availability of the third party components.

I want modification in OLIVIR Mate RT software/hardware.

Minor modifications can be done on request if technically feasible.