



# novatron

Remote operated MineCat 140 KE



## NOVATRON NRC-1

Remote control system for MineCat demining machines

NRC-1 is a two way remote control system specially designed for use on the MineCat 140 KE and MineCat 230 KE demining machines. NRC-1 gives the operator full control of all functions on the machine as well as gives the operator full access to all necessary information about the status of the machine. All at a maximum distance of well above 1 km line of sight, far more than what is necessary for safe control of the vehicle under real operating conditions.

**The NRC-1 can easily be converted for remote control of a variety of other equipment. Please contact the supplier for more information on optional use.**

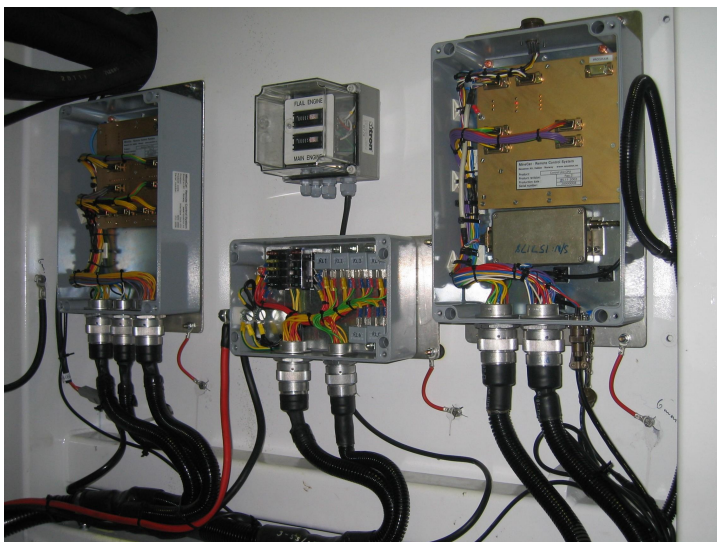
### Supplier:

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## SPECIAL FEATURES:

- Operational radio range well above 1 km, line of sight.
- Rechargeable batteries giving more than 10 hours continuous operation.
- Integrated alarm handling system with high intensity audible alarm.
- Dual level ALARM/WARNING to differentiate critical and non critical situations.
- Menu system giving the operator remote access to all available vehicle data including system parameters, temperatures, pressures and flailing control setup.
- Control system will automatically shut down engines and sub-functions in case of an alarm situation to prevent the situation from leading to more serious damage.
- Speed stabilizer ensures correct flailing speed under varying soil conditions.
- Coded communication prevents interfering signals from taking control of the vehicle.
- Automatic stop on all forward movement within 1 second in case of communication loss (interference, jamming or radio failure).
- Automatic shut down of all vehicle functions after 20 seconds loss of communication.
- Emergency stop button gives instant stop of all engines and movement.
- Double watchdog functionality in vehicle mounted equipment ensure that any single processor failure will bring the vehicle to an instant stop to avoid uncontrolled behaviour.
- Operating frequency can easily be changed within the 440-450 MHz band only by connecting the operating panel to the vehicle by the umbilical cable and changing frequency from the menu system. (Radio modules with other frequency bands may be delivered on request)
- All electronics, especially the vehicle mounted units, are designed to operate under harsh environments with respect to vibration and heat. System will operate from -20°C and up to in excess of +70°C.
- “Deadman button” functionality on operator panel for increased safety.
- 2 x16 character information display on operator panel equipped with backlight for use under varying ambient light conditions.
- Optional, differential RTK, GPS/GLONASS, tracking and control system which enables the vehicle to operate automatically and in straight line under poor visibility.
- Software written in “C” for simple software maintenance.



Vehicle mounted equipment in **MineCat 230 KE** shown with protective covers removed:

Control Unit (CTU) on the right, Power Distribution Unit (PDU), Interface Unit (IFU) on the left.