Control Master® CONTROL & AUTOMATION SYSTEMS

# SECTION CM 1



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## Control Master<sup>®</sup> Control & Automation

SYSTEMS

**INDEX SECTION** 



## ITEM

### No.

Remote control systems overview	P 1-2
Handheld remotes Series 1000	P 3
Portable line of sight remote control kits	P 4
Remote control trailer cabin	P 4
Remote control transmitters and receivers	P 5-6
Cameras and brackets	P 6-7
Electricalinterfaces	P 8
Logicpackages	P 9-10
Remote start lockouts	P 11
Batteries and chargers	P 11-12
GuidanceParts	P 12-13
MachineParts	P 14-17
Service and Test Kits	P 18
Teleremote / remote parts and equipment	P 19-20
Teleremote communications fitting equipment	P 20-22
Tools and Accessories	P 23
Guidance System	P 24
Modular Teleremote assembly (MTA)	P 24-25
Potable recovery Teleremote system	P 25
Teleremote cabin	P 26
Teleremote platforms to suit personnel carrier	P 26-27
Aerials and antennas	P 27-28
Barrier Systems	P 28-30
Laser guard machine containment system	P 30-31

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Remote Control Technologies Pty Ltd (RCT) has been servicing the mining industry since 1972. RCT is the industry market leader in Australasia for remote mining products, pioneering many Remote Control/Teleremote solutions for dozers, excavators, loaders and most types of mobile equipment.

RCT has a worldwide service agent and distributor network to support all its products locally and overseas. All RCT Remote Control/Teleremote packages are manufactured to comply with strict Australian standards AS/NZS 4240 and we continue to invest in the development of future technology such as Guidance to keep the mining industry at the forefront of safety and productivity.

More than just a manufacturer, RCT provides the customer with a complete solution from start to finish. Our qualified staff with decades of industry experience help our customer through each stage of the remote control solutions process from site audits, equipment inspections, machine commissioning, skills training, parts supply, technical supports and ongoing after sales support to ensure the customer maximises their equipment investment.

82% of the mining industry in Australia (AMM, 2009) chooses RCT as their preferred remote solutions manufacturer over others for many important reasons. We manufacturer, install, commission, service and support all our products in operation, whether they be a decade old or freshly fitted to the latest OEM machines.

RCT designs and manufactures **Control Master®** radio remote and Teleremote systems to suit:

#### LOADERS -

CATERPILLAR: IT14B, 950B, 980C, 980F, 980G, 980H, 988G, 988F, 994, IT14B, TH63, R1300, R1300G, R1500, R1600, R1600G, R1700, R1700G, R2800, R2900, R2900G, R2900G EXTRA

TORO: 006, 0010, 0011, 1400, T150D, T151, T151D, T301, T350, T400, T500CD, T500DL, T501, T650, T650DL, LH514, LH517, LH621, T150D

PAGE

СМ

WAGNER: ST2, ST2-D, ST3.5, ST6C, ST6C-11, ST7.5, ST8B, ST710, ST1030, ST1520, ST1800

EIMCO: 913

JCI: JCI100

KOMATSU: WA470-1, WA470-2, WA470-5

MIM UGL: UGL

#### **DOZERS** –

CATERPILLAR: D5H, D8T, D9H, D10, D10N, D10R, D10T, D11N, D11R, D11T

KOMATSU: D275-5, D575A

JCI: 125M, JCI100

## DRILLS -

GARDNER DENVER: MK10 TAMROCK: MONOMATIC LLSBR ATLAS COPCO: SIMBA CUBEX TEREX: SKSS16 SANDVIK: COMMANDO 300DC



## **EXCAVATORS** –

CATERPILLAR: 320, 325, 345, TRAC 360 KOMATSU: PC120, PC150, PC170, PC400, PC450 HITACHI: EX1200

**ROCK BREAKERS -**

TRANSMINN

TELEDYNE

#### **TRUCKS** –

CATERPILLAR: 793C, AD30 SKID STEER LOADERS TOYOTA: SDK5, 4SDK8 ASV SKID STEER: RC30, RC50 TEREX: PT70, PT80

## **OTHER MACHINES –**

MIM ROAD OILER ADT FURNACE STOKING CAR CONCRETE PUMP ROBOSHOT CAUSTIC SCROLL MUDMASTER

CATERPILLAR TELE-HANDLER







If you require any further information or machine suitability please contact your nearest Remote Control Technologies branch.





The **Control Master®** Handheld Remote Series 1000 is purpose built for mining and industrial applications that require wireless operation.

Simple to set up, licence free, easy to use and universal in application, makes the handheld remote ideal for controlling virtually any electrical function on most mining and industrial machines, including forklifts, water cannons, tow trucks, pumps, boomgates, doorways and heavy duty equipment.



Part No: 10436

Description: CM1000 TX HAND HELD TRANSMITTER 6 FUNCTION



Part No: 10143

Description: CM1000 TX HAND HELD TRANSMITTER 12 FUNCTION



Part No: 0682

Description: CM1000 TX HAND HELD TRANSMITTER UNIVERSAL



Part No: 9319

Description: CM1000 TRANSCEIVER 12/24V



Part No: 9429

Description: CM1000 EXPANSION MODULE



Part No: 2340
Description: CHARGER TO SUIT 0682



Part No: 10142

Description: CHARGER TO SUIT 10436 AND 10143



#### Part No: 9637

**Description:** ANTENNA BASE TO SUIT 9319



#### Part No: 7764

Description: ANTENNA TO SUIT 9319





The **Control Master®** Portable Line of Sight Remote Control packages are ideal for industrial, surface mining and underground mining applications.

The portable systems are ergonomically designed to provide maximum posture support. This allows the operator to move around freely and work comfortably for long periods.

#### Part No: 5324

Description: KIT CM2000D RX/TX TELEREMOTE

#### Part No: 4018

Description: KIT PORTABLE PACKAGE TX/RX-02 (AUTODIG)

#### Part No: 10135

Description: KIT CM2000 RX/TX EUROPEAN SPEC

Part No: 10150

Description: KIT CM2200 RX/TX GUIDANCE

## Line of Sight Remote Control Sollutions

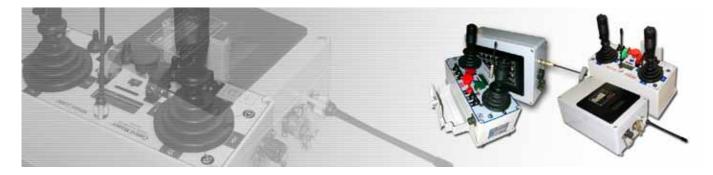
## Remote control trailer cabin



The **Control Master®** Remote Control Trailer Cabin (RCTC) is a custom engineered solution designed to provide remote control operators with an ergonomic, safe and productive portable working station.

The RCTC provides a semi panoramic view of the remote controlled machine, improved noise suppression and climate controlled work environment.

The RCTC is manufactured to a high build quality standard and is easy to maintain and service.



RCT manufactures a broad range of **Control Master®** Remote Controls suitable for surface and underground mining applications.

RCT has designed customised remotes for application on machines such as loaders, drills, dozers, excavators, rock breakers, cherry pickers, skid steers, water cannons and much more. **Control Master®** Remote Control systems comply with Australian standards AS4240.

#### Part No: 0025

Description: TRANSMITTER RS232 ROCK BREAKER

#### Part No: 0203

Description: TRANSMITTER WITH TELE PLUG

#### Part No: 0666

Description: TRANSMITTER TO SUIT AD30 TRUCK

#### Part No: 1352

Description: RECEIVER CM2000 ROBOSHOT

#### Part No: 2452

Description: TRANSMITTER CM2000D R/BREAKER

#### Part No: 5324

Description: KIT CM2000D RX/TX TELEREMOTE

#### Part No: 4191

Description: RECEIVER CM2000 D11R/ D10R CAN

#### Part No: 0111

Description: RECEIVER CM2000 SKID STEER

#### Part No: 0376

Description: RECEIVER CM2000 CAT DOZER NO CAN LINK

#### Part No: 0667

Description: RECEIVER TO SUIT AD30 TRUCK

#### Part No: 1992

Description: TRANSMITTER TO SUIT KOMATSU PC120

#### Part No: 3650

Description: TRANSMITTER CM2000 D575 / D275

#### Part No: 4018

**Description:** KIT PORTABLE PACKAGE RX/TX-02

#### Part No: 4715

Description: RECEIVER TO SUIT 973C CAT TRUCK

#### Part No: 0119

Description: TRANSMITTER CM2000 SKID STEER

#### Part No: 0377

Description: TRANSMITTER CM2000 CAT DOZER NO CAN LINK

#### Part No: 1351

Description: TRANSMITTER CM2000 ROBOSHOT

#### Part No: 2451

Description: RECEIVER CM2000D R/ BREAKER

#### Part No: 3989

Description: RECEIVER CM2000 CAMERA PAN/TILT

#### Part No: 4187

Description: TRANSMITTER CM2000 D11R/D10R CAN

#### Part No: 4716

Description: TRANSMITTER TO SUIT 793C CAT TRUCK



Description: RECEIVER RS232 ROCK BREAKER

#### Part No: 7729

Description: TRANSMITTER CM2000 AS4240 AUTODIG

#### Part No: 7976

Description: TRANSMITTER AS4240 DEADMAN

#### Part No: 8095

Description: TRANSMITTER CM2000 CUBEX

#### Part No: 8903

Description: RECEIVER CM2000D BUCKET EJECT

#### Part No: 7297

Description: RECEIVER CM2200 GUIDANCE

#### Part No: 4921

Description: RECEIVER CM2000 RC 30 LOADER

#### Part No: 7730

Description: RECEIVER CM2000 AS4240 AUTODIG

#### Part No: 8004

Description: RECEIVER CM2000 MUDMASTER

#### Part No: 8101

Description: RECEIVER CM2000 CUBEX

#### Part No: 10135

Description: KIT CM2000 RX/TX EUROPEAN SPEC

#### Part No: 7294

Description: TRANSMITTER CM2200 GUIDANCE

#### Part No: 6354

Description: RECEIVER CM2000 D575 / D275

#### Part No: 7847

Description: RECEIVER CM2000 AS4240

#### Part No: 8005

Description: TRANSMITTER CM2000 MUDMASTER

#### Part No: 8902

**Description:** TRANSMITTER CM2000D BUCKET EJECT

#### Part No: 10150

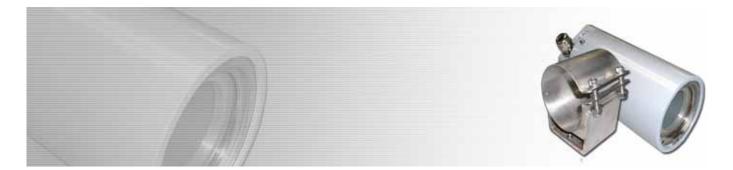
Description: KIT CM2200 RX/TX GUIDANCE

#### Part No: 10075

Description: TX CM2200 IMPL J/S ALT LAYOUT

#### **Machine Components**

#### **Cameras and brackets**



Purpose built to operate in the harsh conditions associated with mobile mining equipment, the 5555 camera features a solid state compact CCD colour camera housed in a marine grade IP66 alloy enclosure. This incorporates a 10mm diagnostic LED and a 3 pin Deutsch connector. Various angle lenses can be retro fitted at any time. The enclosure is lightweight and made to deliver high quality video images under extreme conditions both underground and on the surface.

- 12 volt only
- Current draw of 110mA
- Sealed to IP66
- Reverse polarity and short circuit protected
- Optimised lens angle for underground mining
- Utilises PAL technology





Description: CAMERA FULLY HOUSED SERIES 2



Part No: 8772

Description: MOUNT BRACKET FOOTPRINT TO SUIT 5555



Part No: 0979

Description: MOUNT TO SUIT 5555 NO POLE



Part No: 5588

Description: MOUNT POLE TO SUIT 5555 FOOTPRINT



#### Part No: 0705

Description: CAMERA BRACKET TO SUIT TELE FIT R/VIEW



Part No: 7284

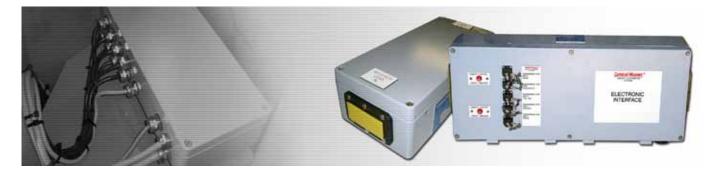
Description: LOOM CAMERA 6M TO SUIT 5555 & 2310



Part No: 3770

Description: LOOM CAMERA 12M TO SUIT 5555 & 2310

## **Electrical interfaces**



Interfaces are manufactured to integrate **Control Master®** Remote and Teleremote systems into Original Equipment Manufacturer (OEM) machines. For further technical information please refer to your nearest RCT branch.

- Robust alloy enclosure
- Military style connectors
- Internal circuit breakers
- Purpose built for each machine model
- Available in 12 or 24 volt

Electrical interfaces are customised to suit each machine make.

#### Part No: 8025

Description: INTERFACE CM2000 TO SUIT R2900G PROPORTIONAL

#### Part No: 3714

Description: INTERFACE CM2000 TO SUIT R2900 DAS

#### Part No: 10115

Description: INTERFACE CM2200 TO SUIT ATLAS ST1520

#### Part No: 3495

Description: INTERFACE CM2200 TO SUIT TORO LOADER

#### Part No: 1776

Description: INTERFACE CM2000 TO SUIT R2900 PROPORTIONAL

#### Part No: 7531

Description: INTERFACE CM2000 TO SUIT R1700G PROPORTIONAL

#### Part No: 5754

Description: INTERFACE CM2000 TO SUIT ST1520/1030/710 LOADERS

#### Part No: 3359

Description: INTERFACE CM2000 TO SUIT R1300/R1600 PROPORTIONAL

#### Part No: 8924

**Description:** INTERFACE CM2000 TO SUIT R1700 SERIES 2 PROPORTIONAL

#### Part No: 1083

Description: INTERFACE CM2000 TO SUIT TORO 1400





**Control Master®** Logic Packages are designed to suit all machines. Each kit is customised for a particular machine and is made to meet Original Equipment Manufacturer (OEM) specifications, mining and Australian Standard regulations.

#### LOADERS -

**CATERPILLAR:** IT14B, 950B, 980C, 980F, 980G, 980H, 988G, 988F, 994, IT14B, TH63, R1300, R1300G, R1500, R1600, R1600G, R1700, R1700G, R2800, R2900, R2900G, R2900G EXTRA

**TORO:** 006, 0010, 0011, 1400, T150D, T151, T151D, T301, T350, T400, T500CD, T500DL, T501, T650, T650DL, LH514, LH517, LH621, T150D

WAGNER: ST2, ST2-D, ST3.5, ST6C, ST6C-11, ST7.5, ST8B, ST710, ST1030, ST1520, ST1800

EIMCO: 913

JCI: JCI100

KOMATSU: WA470-1, WA470-2, WA470-5

MIM UGL: UGL

#### **DOZERS** –

CATERPILLAR: D5H, D8T, D9H, D10, D10N, D10R, D10T, D11N, D11R, D11T

KOMATSU: D275-5, D575A

JCI: 125M, JCI100

#### DRILLS -

GARDNER DENVER: MK10

TAMROCK: MONOMATIC LLSBR

ATLAS COPCO: SIMBA

CUBEX

TEREX: SKSS16

SANDVIK: COMMANDO 300DC





#### **EXCAVATORS** –

CATERPILLAR: 320, 325, 345, TRAC 360 KOMATSU: PC120, PC150, PC170, PC400, PC450 HITACHI: EX1200

#### **ROCK BREAKERS -**

TRANSMINN

TELEDYNE

#### **TRUCKS** –

CATERPILLAR: 793C, AD30

#### **SKID STEER LOADERS**

TOYOTA: SDK5, 4SDK8 ASV SKID STEER: RC30, RC50 TEREX: PT70, PT80

OTHER MACHINES – MIM ROAD OILER ADT FURNACE STOKING CAR CONCRETE PUMP ROBOSHOT CAUSTIC SCROLL MUDMASTER CATERPILLAR TELE-HANDLER











The **Control Master®** Remote Start lockout unit is designed to inhibit the selection of remote control until the machine park brake has been applied and neutral gear has been selected.

This product is suitable for earlier Elphinstone model machines that were not manufactured with this feature from the factory.



Part No: 0141 Description: CONTROL REMOTE
START LOCKOUT



Part No: 0472

Description: CONTROL REMOTE START LOCKOUT NEGATIVE SWITCHING

**Remote Control Accessories** 

## **Batteries and charges**



Fully sealed batteries and a purpose built charger, developed to sustain **Control Master®** products with a constant voltage for extended periods of time.



Description: BATTERY PACK 12V 6.9AH L/ION



Part No: 6085

Description: CHARGER BATTERY LITHIUM ION



#### Part No: 7277

Description: CHARGER BATTERY LEAD ACID



Part No: 8511

Description: BATTERY 12V 7AH LEAD ACID

**Remote Control Accessories** 

**Guidance Parts** 



For **Control Master®** Remote Control systems it is recommended that only approved Guidance parts be used.



Part No: 8498

Description: COMPLETE KIT MOUNT TO SUIT TELEREMOTE GUIDANCE LASER



Part No: 10041

**Description:** COVER PROTECTOR TO SUIT LASER



Part No: 8185

Description: END ROD 1/4 UNF (ROSE JOINT)

PAGE

12



Description: GUIDANCE CONTROL UNIT



Part No: 6060

**Description:** GUIDANCE SENSOR STEERING



Part No: 8262

Description: ISOLATORS SHOCK AND VIBRATION SM3 SERIES



Part No: 7082

**Description:** KIT LASER AND MOUNT TO SUIT GUIDANCE LASER LMS151



Part No: 9677

**Description:** ISOLATOR SHOCK AND VIBRATION SM3 3.8MM SHORTER



Part No: 9249

Description: LOOM TO SUIT ENGINE SPEED R2900G GUIDANCE SPEED SENSOR



Part No: 8122

Description: LOOM TO SUIT GUIDANCE CONTROL UNIT



Part No: 7083

Description: MOUNT TO SUIT GUIDANCE LASER LMS151



Part No: 7806

Description: LOOM TO SUIT GUIDANCE LASER



Part No: 6377

Description: ROD THREADED 1/4 UNF



Part No: 9003

Description: LOOM TO SUIT VEHICLE SPEED MONITOR R2900G GUIDANCE SPEED SENSOR



Part No: 9841

Description: UPS TO SUIT CM2200RX/ GUIDANCE





For **Control Master®** Remote Control systems it is recommended that only approved machine parts be used.



Part No: 1772

Description: 10 AMP CIRCUIT BREAKER



Part No: 7284

Description: 6M CAMERA LOOM TO SUIT 3249 TELEREMOTE TRANSMITTER



Part No: 8412

Description: ADAPTOR LEAD LOOM TO CONNECT OLD CAMERA LEADS TO NEW TELEREMOTE TX



Part No: 3770

Description: 12M CAMERA LOOM TO SUIT 3249 TELEREMOTE TRANSMITTER



Part No: 7169

Description: 6M CAMERA LOOM TO SUIT 7026 TELEREMOTE TRANSMITTER



#### Part No: 8913

**Description:** AERIAL TO SUIT DATA ANTENNA



Part No: 4931

Description: 3M CAMERA LOOM TO SUIT 3249 TELEREMOTE TRANSMITTER



Part No: 10248

Description: ADAPTOR LEAD LOOM TO CONNECT NEW CAMERA LEADS TO OLD TELEREMOTE TX



#### Part No: 5613

**Description:** AERIAL TO SUIT VIDEO ANTENNA

PAGE

14



**Description:** BATTERY ISOLATOR DUAL POLE WITH INDEX PIN



Part No: 8772
Description: CAMERA MOUNT



Part No: 5656

Description: BRACKET TO SUIT VL NYLON LAMPS



Part No: 5588

Description: CAMERA STAND



Part No: 4480

Description: CAMERA DISTRIBUTION



Part No: 7869

Description: COVER TO SUIT RECEIVER



Part No: 5648

Description: DASH SWITCH



Part No: 6762

Description: EMS LOOM



Part No: 3381

Description: DATA ANTENNA AND MAGNETIC BASE



Part No: 8499

Description: HALOGEN FLOOD LAMP 24 VOLT 100 X 100MM



Part No: 7026

Description: DUAL TELEREMOTE TRANSMITTER WITH TEXT ON VIDEO



Part No: 10177

Description: LOOM TO SUIT 5555 CAMERA 12M 4 SOCKET TO 3 SOCKET DEUTSCH





Description: MOUNT TO SUIT 8772 (REAR VIEW)



Part No: 0993

Description: MOUNT TO SUIT TELEREMOTE TRANSMITTER (CAT R2900G ONLY)



Part No: 1504

Description: MOUNT TO SUIT CAMERA DISTRIBUTION UNIT



Part No: 3333

**Description:** MOUNT TO SUIT TELEREMOTE TRANSMITTER



Part No: 4391

Description: RECEIVER MOUNTING FOOT SOCKET



Part No: 5560

Description: RECEIVER TO INTERFACE LOOM CM2000D SETUP



**Description:** RECEIVER MOUNTING

Part No: 8806

Part No: 4392

FOOT PLUNGER

Description: RECEIVER TO INTERFACE LOOM CM2200D SETUP



Part No: 1677

**Description:** REMOTE HOURMETER



Part No: 6779

**Description:** REMOTE HOURMETER LABEL



Part No: 3249

Description: DUAL CHANNEL TELEREMOTE TRANSMITTER (OLD VERSION)



Part No: 4300

**Description:** RIGHT ANGLE MOUNT TO SUIT 1700





Description: SERIES III CAMERA



#### Part No: 4076

Description: SHALLOW AMBER NYLON VL LAMP CLEARANCE/DIRECTIONAL INDICATOR 12/24 VOLT



#### Part No: 2746

Description: SHALLOW BLUE NYLON VL LAMP FLASHING/CONSTANT 12/24 VOLT



#### Part No: 3083

Description: STATER ISOLATOR LABEL



#### Part No: 8273

Description: TELEREMOTE DASH LOOM (CAT ONLY)



Part No: 5218

Description: TELEREMOTE GUIDANCE BREAKER LABEL



Part No: 3863

Description: TWO CAMERA DISTRIBUTION UNIT WITH TEXT ON VIDEO



Part No: 8531

**Description:** VIDEO ANTENNA AND MAGNETIC BASE



Part No: 3794

Description: YELLOW HEAVY DUTY LOCKOUT BRACKET TO SUIT 1700





RCT manufactures purpose built service & test kits for its remote control systems. The service and test kits allow on site personnel to quickly and effectively test remote equipment for faults, perform operating diagnostics and replace worn components with minimal downtime.

RCT manufactures service kits for both standard and customised remote control systems.



Part No: 2060
Description: TEST KIT TO SUIT CM2000



Part No: 2143
Description: KIT TX FIELD SERVICE



Part No: 2181
Description: KIT RX FIELD SERVICE



Part No: 0053

Description: CM2000D TX / RX TEST UNIT



Part No: 9908
Description: CM2200 TX/RX TEST KIT



Part No: 7273

Description: CM2200D REMOTE CONTROL TEST UNIT



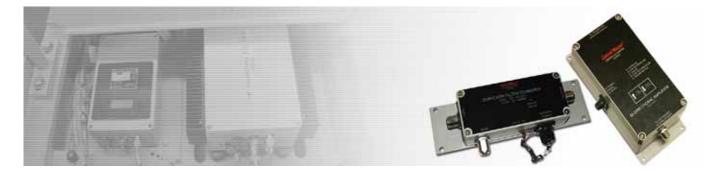
Part No: 3934

Description: COMMUNICATIONS TEST UNIT



Part No: 3145

**Description:** TELEREMOTE TEST KIT



For **Control Master®** Remote Control systems it is recommended that only approved telecommunications parts be used.

These telecommunications parts have been carefully selected to ensure the best transfer of data and video signals.



Part No: 8840
Description: BI-DIRECTIONAL

AMPLIFIER



Part No: 1127

Description: CABLE NON RADIATING 10MM RG8 COXIAL



Part No: 3292 Description: CABLE SET 4M RG58 N, MALE BNC PLUG

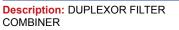


Part No: 5945

Description: CABLE SET 70M INCLUDES N TYPE CONNECTORS



Part No: 7203





Part No: 6037

Description: DC BLOCK N TYPE CONNECTOR



Part No: 4717
Description: LEAD TO SUIT 4150
ANTENNA



Part No: 2564

Description: DUMMY LOAD 15 WATT



Part No: 3209
Description: MOUNT YAGI SERIAL



Part No: 0450
Description: PHASING HARNESS



Part No: 4305
Description: RF SWITCH 2 WAY



Part No: 2444
Description: SPLIT SET MOUNT



Part No: 4617
Description: STAND OFF WALL MOUNT



Part No: 3913

Description: UNIVERSAL VIDEO LINE AMPLIFIER

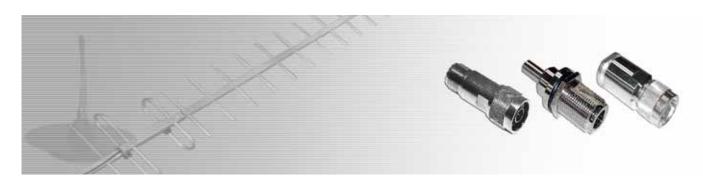


Description: YAGI ANTENNA AND BRACKET

Part No: 4150

**Remote Control Accessories** 

**Teleremote communications fitting equipment** 



For **Control Master®** Remote Control systems it is recommended that only approved fittings be used to connect the communications systems to ensure fault free operations.

The fittings used have been carefully selected to ensure the best transfer of data and video signals



Part No: 4618
Description: ADAPTOR 90° N MALE/N

FEMALE



Part No: 0220

Description: ADAPTOR BNC JACK/UHF MALE



Part No: 0222

Description: ADAPTOR BNC PLUG/UHF FEMALE

СМ

20



**Description:** ADAPTOR N FEMALE/N FEMALE



#### Part No: 9663

Description: ADAPTOR N MALE/BNC JACK



#### Part No: 0941

Description: ADAPTOR N MALE/N MALE





Description: ADAPTOR N MALE/UHF FEMALE



Part No: 0258

Description: BULKHEAD BNC JACK/ BNC JACK



Part No: 0013

Description: BULKHEAD BNC JACK/ RG174 (CABLE 0261)



Part No: 0264

Description: BULKHEAD BNC JACK/ RG58 CRIMP (CABLE 7293)



Part No: 1056

Description: CABLE PLUG BNC JACK/ RG58 CRIMP (CABLE 7293)



Part No: 5730

Description: BULKHEAD N FEMALE/N FEMALE



Part No: 8259

Description: BULKHEAD N FEMALE/ RG58 CRIMP (CABLE 7293)



Part No: 0259

Description: CABLE PLUG BNC PLUG/90° RG316 CLAMP (CABLE 0684)



Part No: 1055

Description: CABLE PLUG BNC PLUG/ RG213 CLAMP





Description: CABLE PLUG BNC PLUG/ RG58 CLAMP (CABLE 7293)



Part No: 7540

Description: CABLE PLUG CABLE PLUG TV MALE/RG59 CLAMP (CABLE 4498)



#### Part No: 7434

Description: CABLE PLUG BNC PLUG/ RG58 CRIMP (CABLE 7293)



#### Part No: 4499

Description: CABLE PLUG FEMALE/ COAX CLAMP (CABLE 4498)



#### Part No: 7426

Description: CABLE PLUG CABLE PLUG BNC PLUG/90° RG58 CLAMP (CABLE 7293)



#### Part No: 5036

Description: CABLE PLUG N FEMALE/1/2" HELIAX (CABLE 8905)



Part No: 9268

Description: CABLE PLUG N FEMALE/ RG213 CLAMP



Part No: 9177

Description: CABLE PLUG N FEMALE/ RG58 CRIMP (CABLE 7293)



#### Part No: 0940

Description: CABLE PLUG N MALE/1/2" HELIAX (CABLE 8905)



#### Part No: 5035

Description: CABLE PLUG N MALE/1/2" HELIAX (CABLE 8905)



Part No: 4616

Description: CABLE PLUG N MALE/ RG58 CRIMP (CABLE 7293)



Part No: 9194

Description: CABLE PLUG N MALE/ RG213 CLAMP



#### Part No: 1128

Description: CABLE PLUG N MALE/RG8 CRIMP (CABLE 1127)



Part No: 1061

Description: CABLE PLUG N MALE/ RG213 CRIMP



#### Part No: 1067

Description: CABLE PLUG TNC PLUG/ RG58 CRIMP (CABLE 7293)





For **Control Master®** Remote Control systems it is recommended that only approved tools and accessories be used.



Part No: 2353

**Description:** AMALGAMATING TAPE 25MM



Part No: 5411

Description: COAX TERMINATION CRIMP TOOL KIT



Part No: 10278

Description: COMMUNICATION PARTS FIELD SERVICE KIT



Part No: 8892

**Description:** DEUTSCH CRIMP TOOL TO SUIT #16 CONTACTS



Part No: 2800

Description: GREASE



Part No: 9659

Description: O-RING GREASE 100G



Part No: 8138

Description: TRIMMING TOOL TO SUIT 8905 ½" HELIAX CABLE



The **Control Master®** Guidance system has been designed to reduce impact damage to the machine while increasing the general tramming speed of the machine to overall improve operational efficiency. The operator directs the machine forward or backwards. Timely input left or right directs the machine into a drive junction.

The steering, braking and speed of the machine is automatically controlled through the joystick position, minimum width of the drive and the look ahead distance. The system can be switched on or off from the joystick control unit and the digital display will tell the operator whether they are in guidance operation or not. Guidance will allow second or higher gears to be selected to improve the speed of tramming cycles depending on the tramming length, minimum width of the drive and the look ahead distance.

**Control Master®** Guidance will assist in avoiding the walls and major obstacles whilst keeping the loader in the optimal tramming path.

The system requires minimal upgrade for existing **Control Master**® Teleremote customers and with no additional communications setup costs, the system is a cost effective semi automated solution for underground mining customers.

#### Part No: 10150

Description: KIT CM2200 RX/TX GUIDANCE

## Teleremote Control Solutions Modular Teleremote assembly (MTA)



The Control Master® Modular Teleremote Assembly (MTA) is an extension of the portable Teleremote system.

A dual channel TV monitoring package and stand replaces the smaller LCD display allowing the operator to have clearer and more precise vision of the machines operations.

The MTA is designed for use in semi permanent mining production tasks whereby the operator needs to be positioned or seated comfortably to operate the machine for long periods.

PAGE 24

**Description:** KIT EXTERNAL JOYSTICK ADAPTOR

#### Part No: 3208

**Description:** RECEIVER TELE TRI CHANNEL MTA3

#### Part No: 4017

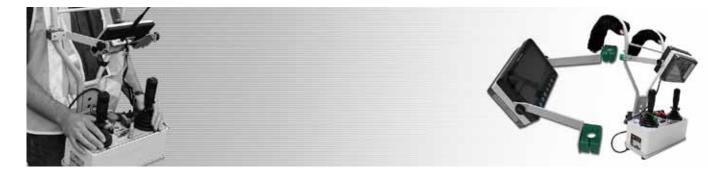
Description: KIT MODULAR TELEREMOTE ASSEMBLY

#### Part No: 8252

Description: RECEIVER TELE DUAL CHANNEL MTA 2

#### **Teleremote Control Solutions**

## Potable recovery Teleremote system



The **Control Master®** Portable Recovery Teleremote system works by using cameras on board the machine to provide the operator with vision of the machine's movements.

The camera images are relayed to a colour LCD screen which is positioned on the carry frame. The operator controls the machine via the vision from the LCD unit. The camera views can be manually switched at the LCD monitor.



Part No: 4015

**Description:** KIT PORTABLE TELE DUAL CHANNEL





Remote Control Technologies Pty Ltd (RCT) has a prefabricated **Control Master®** Teleremote cabin available that is specifically designed for long term Teleremote mining applications.

The Teleremote cabin is lightweight in design and has a strong steel shell which can stand up to the harshest of mining conditions (although it is not recommended for installation at close range to the blast face).

#### Part No: 6887

Description: TELECABIN STANDARD 2TV

#### Part No: 6883

**Description:** TELECABIN STANDARD 2TV CAT ATTACHMENT

#### Part No: 6880

Description: TELECABIN STANDARD 2TV VOLVO ATTACHMENT

#### Part No: 10127

Description: TELECABIN STD 2TV CM2200

**Teleremote Control Solutions** 

## Teleremote platforms to suit personnel carrier



The **Control Master®** Teleremote Personnel Carrier (TPC) is a mobile Teleremote Cabin, which allows it to be used for multiple applications for surface and underground mining.

The TPC has all the features of a Teleremote Cabin and does not require the use of any other machine to transport it.

#### Part No: 9242

Part No: 7848

**Description:** CONTROL PLATFORM TO SUIT GUIDANCE

## **Description:** PLATFORM MODULAR TELEREMOTE

PAGE 26

## Aerials and antennas



A selection of aerials and antennas designed and built to suit our range of **Control Master®** products.



Part No: 1822

Description: ANTENNA TUNED CM2000TX



Part No: 1823

Description: ANTENNA TUNED CM2000RX



Part No: 1826

Description: ANTENNA TUNED CM-TELE-RX1



Part No: 3209

Description: MOUNT YAGI AERIAL



Part No: 3258

**Description:** CABLE ANTENNA BASE & M45T



Part No: 3292

Description: LEAD TO SUIT CM-ANT-YAGI



Part No: 3381

**Description:** AERIAL UNITY MAG BASE DATA



Part No: 4150

Description: ANTENNA DUAL FREQUENCY



Part No: 4717

Description: LEAD TO SUIT 4150 ANTENNA

PAGE

27



Description: ANTENNA TUNED WHIP SUIT VIDEO



Part No: 8531

Description: AERIAL UNITY MAG BASE VIDEO



#### Part No: 8913

Description: ANTENNA TUNED WHIP SUIT DATA

Work Area Components

## **Barrier Systems**



**Control Master®** Barrier systems are designed to prevent personnel and machines from entering and exiting the Teleremote zone whilst it is in remote control operation.

In the event a laser barrier guarding the Teleremote zone is broken, the barrier system will shutdown and apply the service and park brake to remote controlled machines in the Teleremote area.

More importantly, the barrier system will ensure the Teleremote operation's zone remains safe.



Part No: 1251

Description: BARRIER EYE RESET M/ VOLTAGE



Part No: 3564

Description: KIT EXTRA LASER TO SUIT 4720 & 6346



Part No: 4720

Description: KIT INTEGRATED BARRIER 12V

PAGE

28



Description: KIT UMBILICAL INTEGRATED 240V



Part No: 9414

Description: POWER SUPPLY



Part No: 7579

**Description:** SINGLE BEAM LASER BARRIER SYSTEM



#### Part No: 8017

Description: BRACKET TO SUIT 1251 RESET UNIT



Part No: 8043

Description: RESET UNIT TO SUIT 7579



Part No: 9244

Description: LASER TO SUIT BARRIER SYSTEM WITH PLUG



**Description:** TRANSMITTER UMBILICAL

Part No: 9239

Part No: 5642

12V 4 BEAM

**Description:** REFLECTOR ROUND 75MM TO SUIT LASER 9244



Part No: 4097

Description: REFLECTOR POLARISED 100MM X 100MM



Part No: 9265

**Description:** MOUNT LASER TO SUIT 9244



#### Part No: 0137

Description: LOOM 5M TO SUIT 1251 RESET UNIT



Part No: 5657

Description: LOOM 25M TO SUIT 1251 RESET UNIT





The **Control Master**® Laser Guard Machine Containment system has been designed for underground Remote/ Teleremote mining applications where multiple entries to a remote mining area need to be guarded from the remote machine exiting the area, as well as personnel entering the area. The master unit can receive signals from up to four (4) control laser unit kits. Each control unit kit consists of two (2) lasers spaced 800 mm apart which gives double redundant operation. This prevents personnel being able to duck under or step over the laser beams without triggering the laser guard.

#### HOW THE SYSTEM WORKS

If a laser beam is tripped, power is removed from the remote control transmitter causing the machine to neutralise, brakes to apply and the engine to shutdown. The laser unit that has been tripped will be indicated at the laser guard master unit by the corresponding LED changing state from solid green to flashing red. Operations can only be resumed when the tripped laser beam has been inspected, trip cause corrected and both the control and master units have been reset.



Part No: 9673 Description: KIT LASERGUARD 12V 1

CONTROL



Part No: 10042

Description: KIT LASER GUARD CONTROL UNIT



Part No: 10148

Description: KIT LASER GUARD SINGLE CM2000 MACHINE CONTAINMENT SYSTEM SINGLE ACCESS



Part No: 10170

Description: KIT LASER GUARD SINGLE CM2200 MACHINE CONTAINMENT SYSTEM SINGLE ACCESS



Part No: 9675

Description: LASER TO SUIT LASER GUARD W/PLUG WITH 4 PIN DEUTSCH PLUG



Part No: 9674

Description: PLUG BYPASS TO SUIT LASER GUARD





Description: BYPASS PLUG TO SUIT 10144 CM2000



Part No: 9562

Description: DUAL REFLECTOR ASSEMBLY LASER GUARD



#### Part No: 10138

**Description:** PLUG BYPASS TO SUIT LASER GUARD 3 PIN DEUTSCH



#### Part No: 9564

Description: DUAL LASER ASSEMBLY LASER GUARD



#### Part No: 9514

**Description:** UNIT LASER GUARD MASTER



#### Part No: 9525

Description: CONTROL UNIT TO SUIT LASER GUARD



Part No: 9638

Description: LOOM TO SUIT 9525 LASER GUARD CONTROL UNIT



Part No: 10144

Description: LOOM TO SUIT 9525 DUAL LASER

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