

INVACARE'S ELECTRONIC HISTORY

This Book is a **Reference Guide ONLY**.
DO NOT Use When Ordering Service Parts.
When Ordering Service Parts,
Refer To The Power Wheelchair
Service Parts Books.



Yes, you can:

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Arrow Controllers and Joysticks

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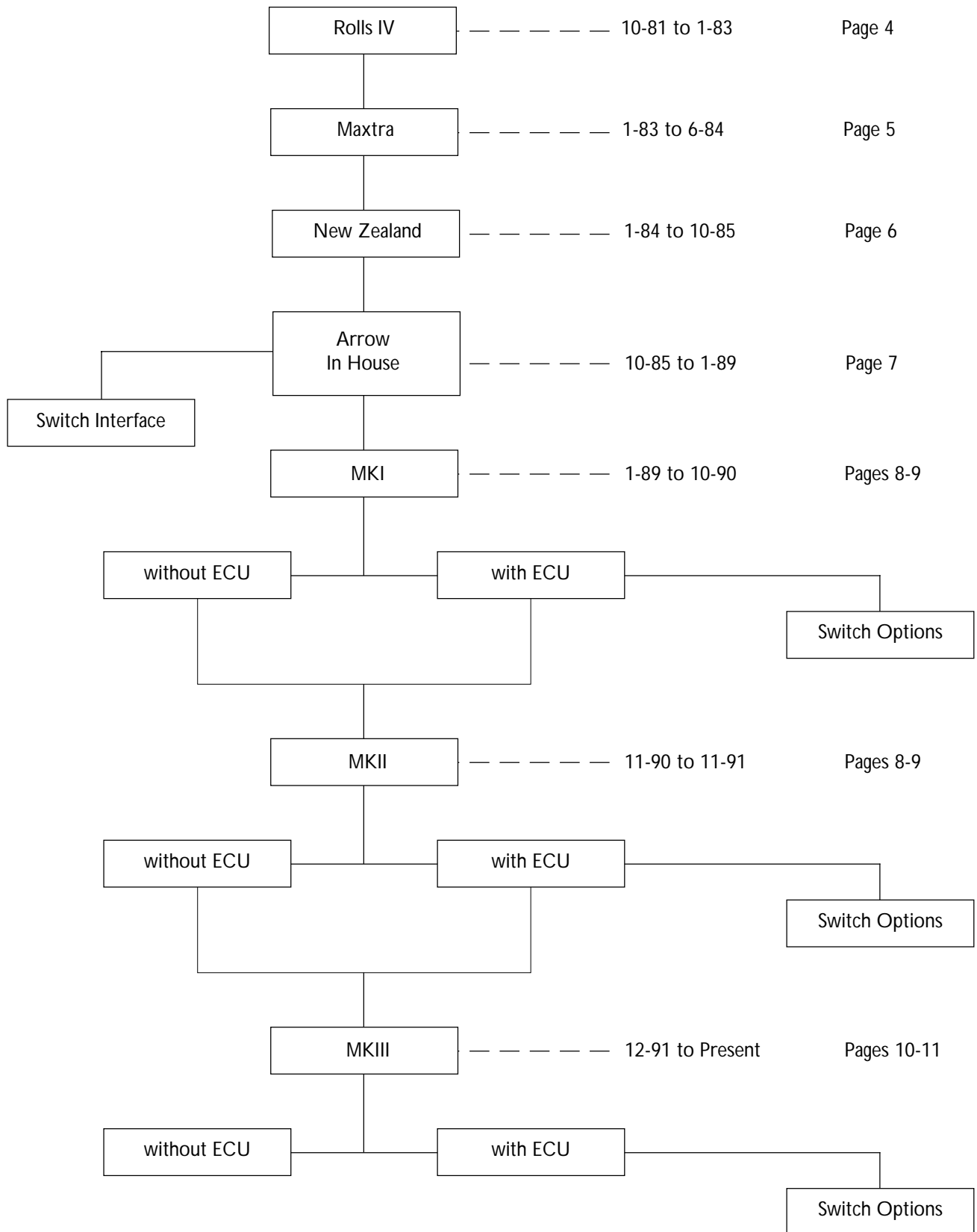
Ranger X Controllers and Joysticks

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Ranger II Controller/Joysticks

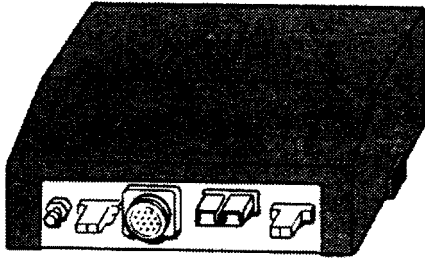
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Arrow Electronics Flow Chart

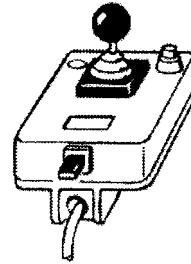


ROLLS IV CONTROLLER and JOYSTICK

Manufactured 10-81 to 1-83



05501X005
Controller NLA



1007741
Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Brown Control Box with Plugs Attached

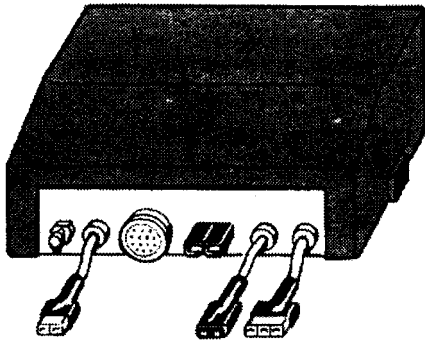
On Switch at the Rear of Silver Joystick

OPTIONS

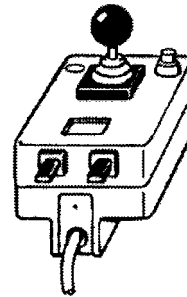
Rolls IV electronics are NLA and should be upgraded.

MAXTRA CONTROLLER and JOYSTICK

Manufactured 1-83 to 6-84



05501X040
Controller NLA



1007747
Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Brown Control Box with Battery and Motor Connections on Pigtails

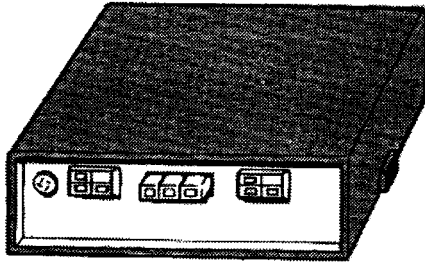
Two Switches at the Rear of Silver Joystick

OPTIONS

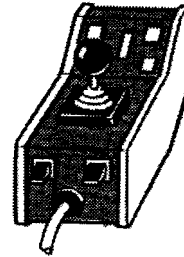
Maxtra electronics are NLA and should be upgraded.

ARROW NEW ZEALAND CONTROLLER and JOYSTICK

Manufactured 1-84 to 10-85



05501X060
Controller NLA



05501X061
Joystick NLA

IDENTIFIABLE CHARACTERISTICS

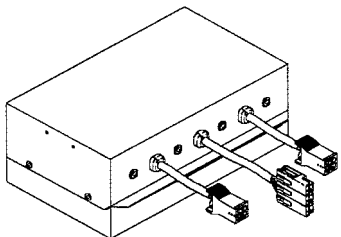
Black Control Box with Yellow Stripe;
Mounted Sockets for Motor and Battery Harness
Joystick has Grey Metal Sides
Red Power Button
Yellow Horn Button

OPTIONS

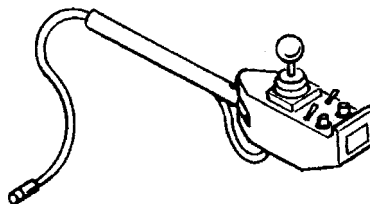
Arrow New Zealand Electronics are repairable
BUT
It is recommended that they are upgraded.

ARROW IN-HOUSE CONTROLLER and JOYSTICK

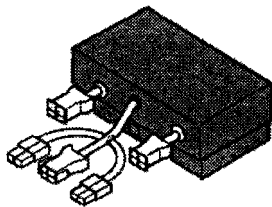
Manufactured 1-85 to 1-89



1010405 with clips
1015954 Controller only
Controller NLA



1010404
Joystick NLA



1013506
XT Controller NLA

IDENTIFIABLE CHARACTERISTICS

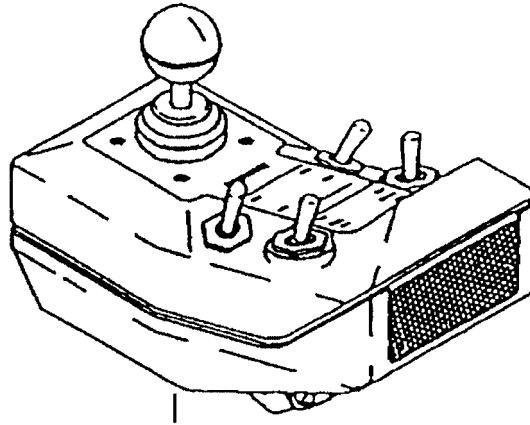
Battery and Motor Connections on Pigtails
Five External Adjustments on Controller
Black Plastic Swingaway Joystick
Push Button Power and Horn
3 Pin Metal Cable

OPTIONS

In-House Arrow Electronics are repairable
BUT
It is recommended that they are upgraded

ARROW MCC - MKI and MKII STANDARD JOYSTICK

MKI Manufactured 1-89 to 10-90 (Chair S/N 89A - 90J)
and MKII Manufactured 11-90 to 11-91 (Chair S/N 90J - 91K)



1017772 - MKI
1024154 - MKII
Joystick NLA

NOTE: MKI, MKII
and MKIII Joysticks
are interchangeable
between MKI, MKII
and MKIII controllers.

IDENTIFIABLE CHARACTERISTICS

Black Housing
Red LED Battery Level Indicator
4 Toggle Switches
1ea - On/Off
1ea - Hi/Lo
1ea - Horn
✦ MKI - 1ea - Indoor/Outdoor
✦ MKII - 1ea - Drive A/Drive B

✦ *Indoor/Outdoor and Drive A/Drive B switch is the only difference between MKI and MKII.*

OPTIONS

Joysticks are Repairable
OR
Rebuilt Joysticks are Available
Or
Joysticks can be upgraded

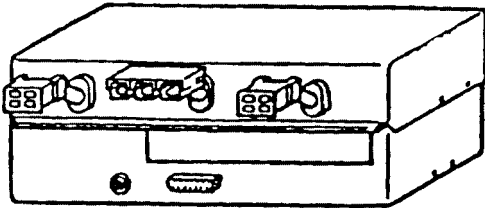
ARROW MCC - CONTROLLER

MKI with or without ECU

Manufactured 1-89 to 10-90 (Chair S/N 89A - 90J)

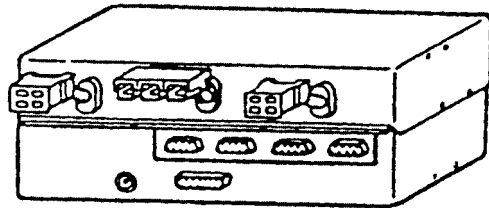
MKII with ECU or without ECU

Manufactured 11-90 to 11-91 (Chair S/N 90J - 91K)



**MKI and MKII
Controller without ECU**

- ✦ 7880007 NLA - Sectional Black/Manual Recliner
- ✦ 7880008 NLA - Power Black Recliner/Jaguar XC
 - ✦ 7880009 NLA - Multi-Function Frame
 - ✦ 7880010 NLA - Arrow XT



**MKI and MKII
Controller with ECU**

- ✦ 7880003 NLA - Sectional Black/Manual Recliner
- ✦ 7880004 NLA - Power Black Recliner/Jaguar XC
 - ✦ 7880005 NLA - Multi-Function Frame
 - ✦ 7880006 NLA - Arrow XT

✦ *Attaching Hardware is the only difference between chair styles.*

IDENTIFIABLE CHARACTERISTICS

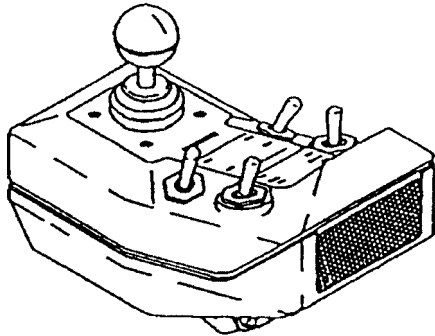
Black Housing
Key Pad Programmer
Battery and Motor Connections on Pigtails
Only Difference Between MKI and MKII is
Drive A/B on MKII that gives more programmability
E.C.U. Controllers have four additional ports:
Driver Control
Attendant
ECU One and ECU Two

OPTIONS

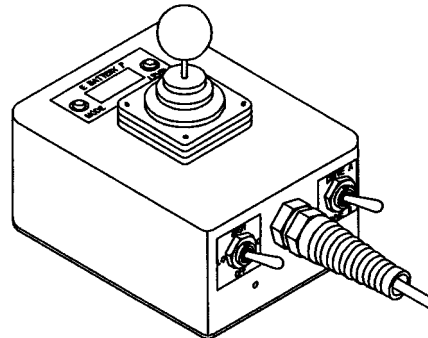
Controllers are Repairable
OR
Rebuilt Controllers are Available
Or
Controllers can be upgraded

ARROW MCC - MKIII STANDARD JOYSTICK

Manufactured 12-91 to Present (Chair S/N 91L - Present)



Joystick - Before 11/93
†028750, Grey Housing - NLA
†035609, Black Housing - NLA



Joystick - After 10/93
1031039, Black Metal Box

IDENTIFIABLE CHARACTERISTICS BEFORE 11/93

Grey Housing
Black Housing with Action Logo
Red LED Battery Level Indicator
4 Toggle Switches:
1ea - On/Off
1ea - Hi/Lo
1ea Horn
1ea Drive A/Drive B

IDENTIFIABLE CHARACTERISTICS AFTER 10/93

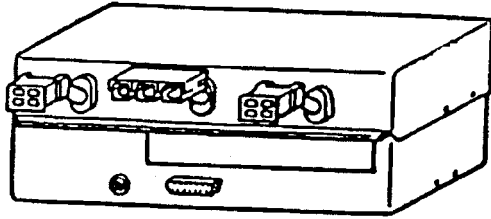
Black Metal Box
Red LED Battery Level Indicator
2 Toggle Switches:
1ea - Hi/Lo/Off
1ea Drive A/Drive B

OPTIONS

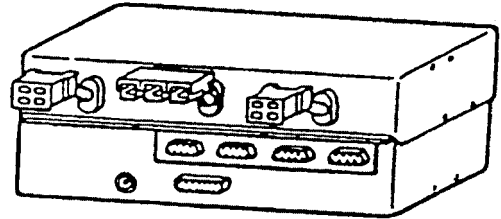
Joysticks are Repairable
OR
Rebuilt Joysticks are Available

ARROW MCC MKIII - CONTROLLER

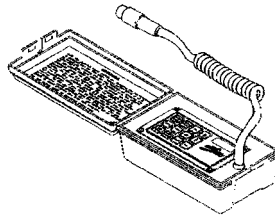
Manufactured 12-91 to Present (Chair S/N 91L - Present)



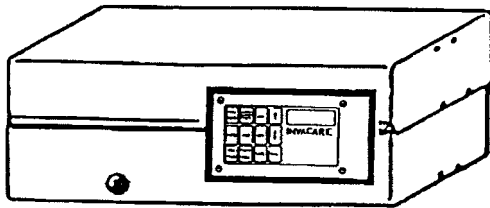
**MKIII Controller
Without ECU**
⊕ 1032681 - Without Key Pad
1027378 - With Key Pad



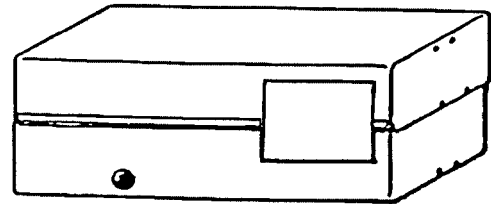
**MKIII Controller
With ECU**
⊕ 1032682, Without Key Pad
1027419, With Key Pad



Remote Key Pad
1026634



**MKIII Controller
With Key Pad**
1027378, Without ECU
1027419, With ECU



**MKIII Controller
Without Key Pad**
⊕ 1032681, Without ECU
⊕ 1032682, With ECU

IDENTIFIABLE CHARACTERISTICS

Black Housing
Key Pad Programmer/or Remote Key Pad
Battery and Motor Connections on Pigtails
E.C.U. Controllers have four additional ports:
Driver Control
Attendant
ECU One and ECU Two

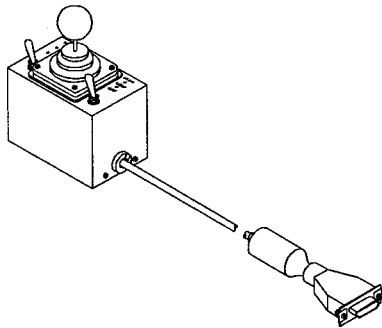
OPTIONS

Controllers are Repairable
OR
Rebuilt Controllers are Available

JOYSTICK OPTIONS

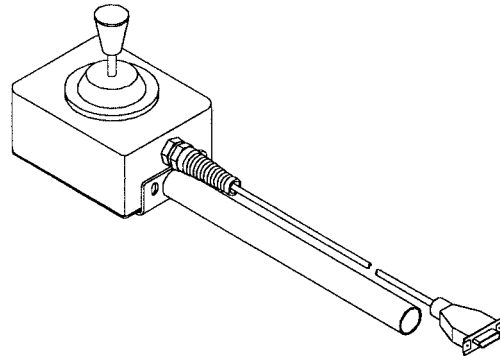
(Interchangeable Between MKI, MKII and MKIII)

REMOTE JOYSTICK



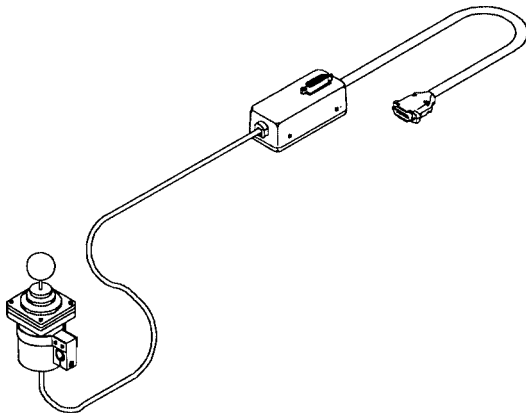
ON CHAIR: 1555M/ECU1555M
NEW OFF CHAIR: ✱ 1024067
REBUILT OFF CHAIR: ✱ 1024067E
(used with Remote Display 1030109)

HEAVY DUTY JOYSTICK



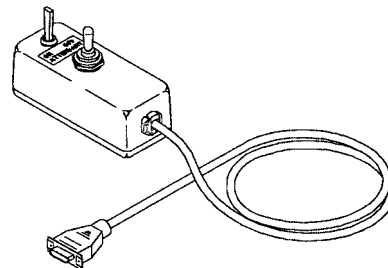
ON CHAIR: ✱ 1556
OFF CHAIR: ✱ 1041544
NO REBUILT AVAILABLE
(used with Non-Proportional Display 1030110)
(Works with In House Switch Interface)

DUAL JOYSTICK



ON CHAIR: 1812
OFF CHAIR: ✱ 1026559
NO REBUILT AVAILABLE

ATTENDANT CONTROL JOYSTICK



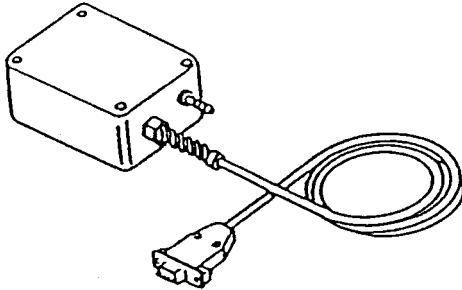
ON/OFF CHAIR: ✱ 1552M
NO REBUILT AVAILABLE

✱ Ribbon Reset Switch (1020818) may be required.

SWITCH OPTIONS

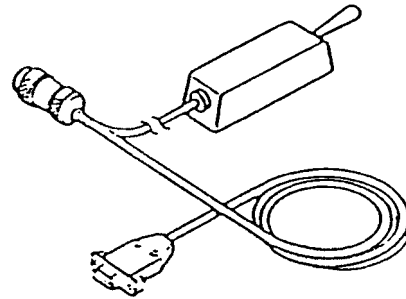
(Interchangeable Between MKI, MKII and MKIII)

PNEUMATIC SWITCH CONTROL
(Sip-N-Puff)



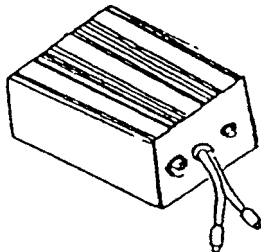
ON/OFF CHAIR: ✪ 1554
(used with Non-Proportional Display 1030110)

RECLINER INTERFACE CABLE



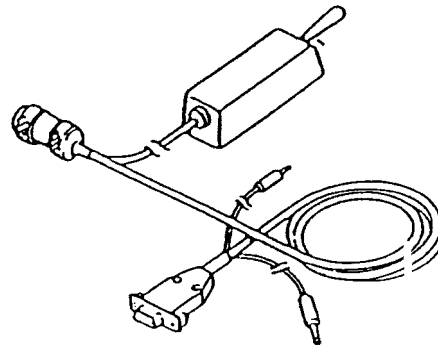
ON CHAIR: ✪ 1553
OFF CHAIR: ✪ 1010636
WITHOUT E.C.U. ✪ 1005151

RECLINE/ACTUATOR
CONTROL BOX



ON CHAIR: 1815
OFF CHAIR: ✪ 1026251

RECLINER INTERFACE CABLE
(Dual E.C.U. / Phone Plugs)



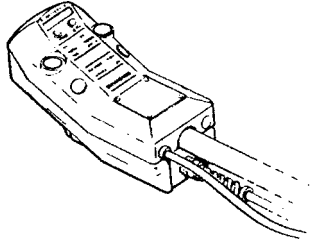
ON/OFF CHAIR: 1595
OFF CHAIR: ✪ 1031038

✪ Ribbon Reset Switch (1020818) may be required.

DISPLAYS

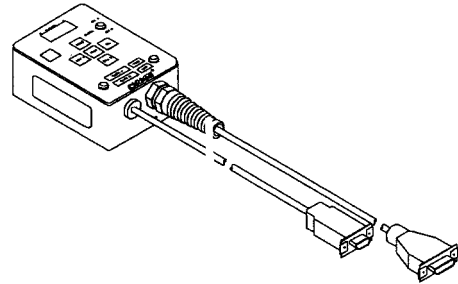
(Interchangeable Between MKI, MKII and MKIII)

MKI AND MKII REMOTE DISPLAY



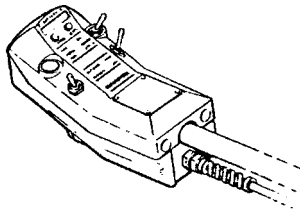
1020385 NLA
(used with Remote Joystick 1024067)

MKIII REMOTE DISPLAY



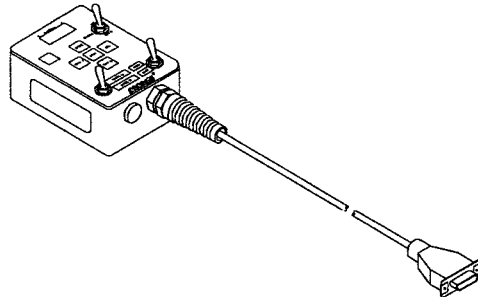
1030109
(used with Remote Joystick 1024067)

MKI and MKII NON-PROPORTIONAL DISPLAY



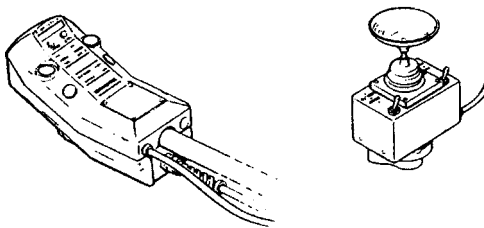
1018413 NLA
(used with Pneumatic Switch 1031031 or
Heavy Duty Joystick 1011033)

MKII NON-PROPORTIONAL DISPLAY



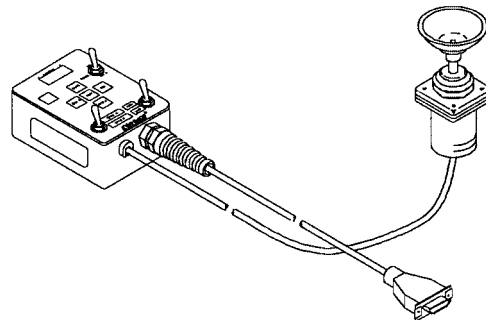
1027316
(used with Pneumatic Switch 1031031 or
Heavy Duty Joystick 1011033)

MKI and MKII COMPACT JOYSTICK with DISPLAY



1020058 NLA

MKII COMPACT JOYSTICK with DISPLAY



1027315

RANGER X ELECTRONICS FLOW CHART

Ranger X
1-85 to 9-87
Page 16

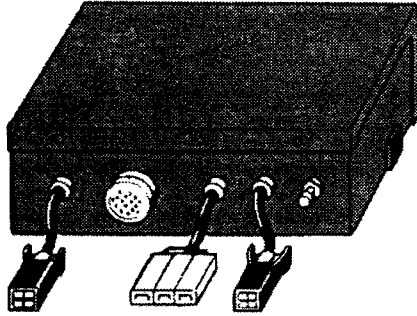
Ranger XB
9-87 to 10-91
Page 17

Ranger MCCX
9-91 to 9-92
Page 18

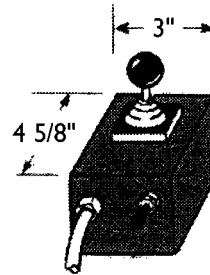
Ranger MCCXA
10-92 to Present
Page 18

RANGER X CONTROLLER and JOYSTICK

Manufactured 1-85 to 9-87



1006072
Controller NLA



1014024
Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Black Controller with Battery and Motor Connections on Pigtails
Joystick Connection is Near the Center of the Controller
Hi/Lo/Off Toggle Switch at the Rear of Black Joystick
Red Indicator Light on Joystick

OPTIONS

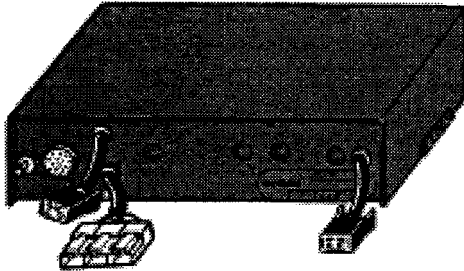
Ranger X Electronics are Repairable
BUT
✦ It is recommended that they are upgraded
to MCCXA. See MCCC-XA, Page 18

✦ When upgrading electronics before 6/91 to MCC-XA, 2ea 1040734 Motors need to be ordered as well.

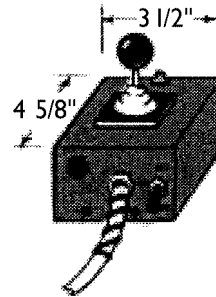
NOTE: Motor Locks were not standard on motors until 6/91 and that is why motor update is needed when upgrading to MCC-XA electronics.

RANGER XB CONTROLLER and JOYSTICK

Manufactured 9-87 to 10-91



1013268
Controller NLA



1013283
Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Black Controller with Battery and Motor Connections on Pigtails
Joystick Connection is Near the Edge of the Controller
Hi/Lo/Off Toggle Switch at the Rear of Black Joystick
Green Indicator Light on Joystick

OPTIONS

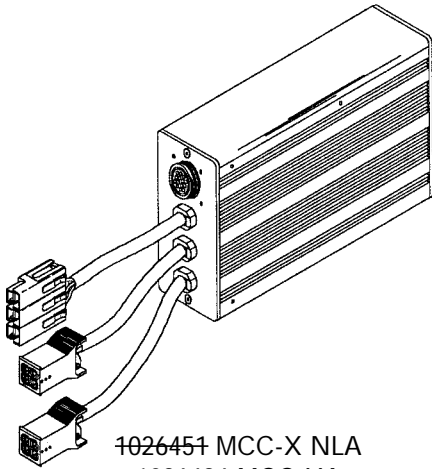
Ranger XB Electronics are Repairable
BUT
✪ It is recommended that they are upgraded
to MCCXA.
See MCCC-XA Electronics, Page 18

✪ When upgrading electronics before 6/91 to MCC-XA, 2ea 1040734 Motors need to be ordered as well.

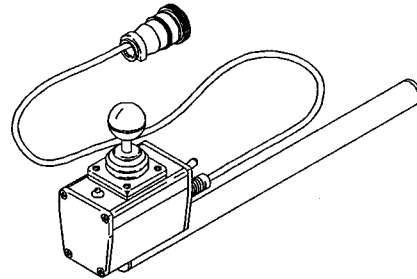
NOTE: Motor Locks were not standard on motors until 6/91 and that is why motor update is needed when upgrading to MCC-XA electronics.

RANGER X CONTROLLER and JOYSTICK

MCC-X Manufactured 9-91 to 10-92
and MCC-XA Manufactured 10-92 to Present



1026451 MCC-X NLA
1036494 MCC-XA
Controller



★ 1027409
Joystick

★ MCC-X IDENTIFIABLE CHARACTERISTICS

Black Controller Box with Ridges on Sides
Battery and Motor Connections on Pigtails
High/Low/Off Switch on Back of Joystick
Tri-Color LED on Joystick

★ MCC-XA IDENTIFIABLE CHARACTERISTICS

Black Controller Box with Ridges on Sides
Battery and Motor Connections on Pigtails
Programmable Input/Printer Port on
Side of Controller
Reset Switch on Side of Controller
Drive A/B
⊕ Switch Options Available with Display
A/B/Off Switch on Back of Joystick
Tri-Color LED on Joystick

★ MCC-X and MCC-XA use the same Joystick.

⊕ For Display, See page 19.

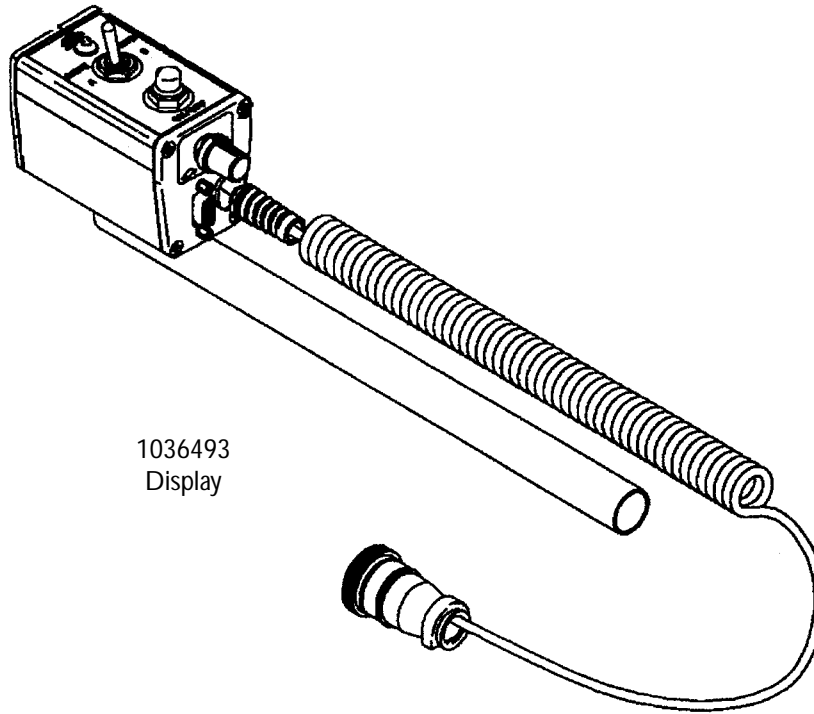
OPTIONS

Controllers and Joysticks are repairable
Or
Rebuilt Controllers and Joysticks are Available, See Chart
OR
Controllers, Joysticks can be purchased as new
Check on availability.

REBUILT UNITS

Controller MCC-X	Controller MCC-XA	Joystick
1026451E	1036494E	1027409E

★ RANGER X SWITCH OPTION INTERFACE Manufactured 10-92 to Present



★ *MCC-XA Switch Option Interface allows Ranger X to work with; Sip-n-Puff (1554), Heavy-Duty Joystick (1556) and TASH Switches.*

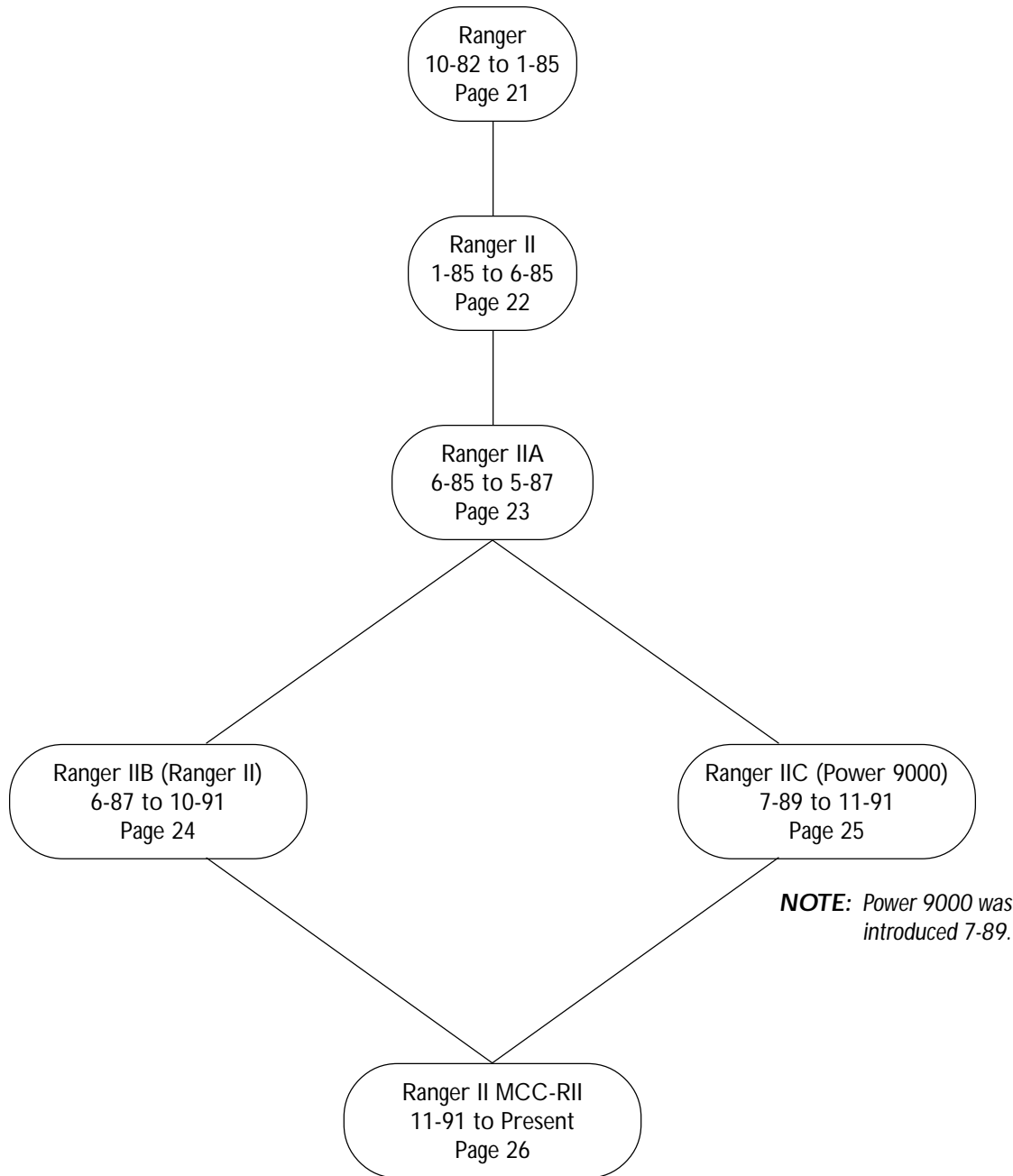
IDENTIFIABLE CHARACTERISTICS

Push Button Power and Drive A/B Toggle Switch
on Top of Display
Tri-Color LED on top of Display
Input Connector and Speed Selector Pot on Back of Display

OPTIONS

MCC-XA Display is Repairable
OR
A New Display can be purchased

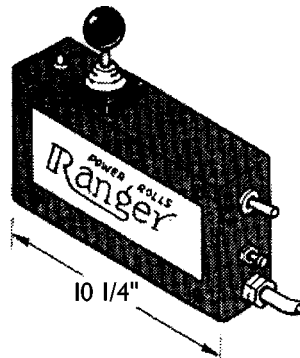
RANGER II ELECTRONICS FLOW CHART



RANGER 1

CONTROLLER/JOYSTICK

Manufactured 10-82 to 1-85



05501X024
Controller/Joystick

IDENTIFIABLE CHARACTERISTICS

Brown Control Box
High/Off/Low Switch on Rear of Box
Two Speeds

OPTIONS

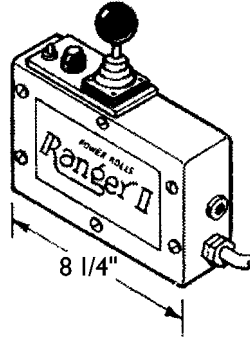
Ranger Electronics are Repairable
BUT
✦ It is recommended that they are upgraded to
MCC-RII Electronics.
See MCC-RII Electronics, Page 26

✦ When upgrading electronics to MCC-RII 2ea 1040734 Motors, 1ea 1035414 Control Bracket Guide and 1ea 1037177 Controller Attaching Hardware need to be ordered as well.

NOTE: Motor Locks were not standard on motors until 10/91 and that is why motor update is needed when upgrading to MCC-RII electronics.

RANGER II CONTROLLER/JOYSTICK

Manufactured 1-85 to 6-85



1004192
Controller/Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Smooth Finish with Off-White Color
On/Off Switch and LED on Top
One Speed

OPTIONS

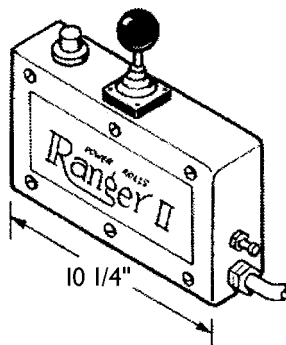
Ranger II Electronics are Repairable
BUT
✦ It is recommended that they are upgraded
to MCC-RII. See MCC-RII Electronics, Page 26

✦ When upgrading electronics to MCC-RII 2ea 1040734 Motors, 1ea 1035414 Control Bracket Guide and 1ea 1037177 Controller Attaching Hardware need to be ordered as well.

NOTE: Motor Locks were not standard on motors until 10/91 and that is why motor update is needed when upgrading to MCC-RII electronics.

RANGER IIA CONTROLLER/JOYSTICK

Manufactured 6-85 to 5-87



1010406
Controller/Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Textured Finish with Beige Color
Large Lighted On/Off Switch on
Top of Controller

OPTIONS

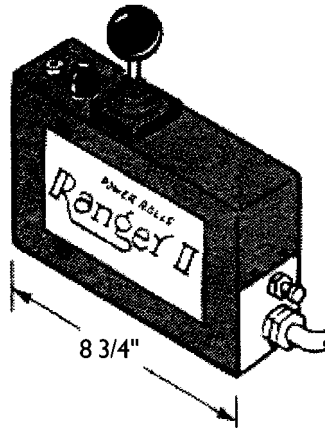
Ranger II A Electronics are Repairable
BUT
✦ It is recommended that they are upgraded
to MCC-RII. See MCC-RII Electronics, Page 26

✦ When upgrading electronics to MCC-RII 2ea 1040734 Motors, 1ea 1035414 Control Bracket Guide and 1ea 1037177 Controller Attaching Hardware need to be ordered as well.

NOTE: Motor Locks were not standard on motors until 10/91 and that is why motor update is needed when upgrading to MCC-RII electronics.

RANGER IIB CONTROLLER/JOYSTICK

Manufactured 6-87 to 10-91



1011740 Controller Only
1015941 with Clips
Controller/Joystick NLA

IDENTIFIABLE CHARACTERISTICS

Black Control Box
On/Off Switch and
Tri-Colored LED on Top

OPTIONS

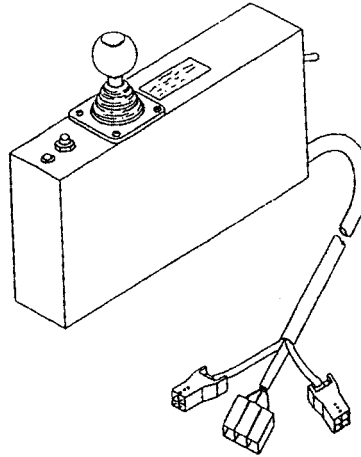
Ranger IIB Electronics are Repairable
BUT
✦ They can be upgraded to MCC-RII.
See MCC-RII Electronics, Page 26.

✦ When upgrading electronics to MCC-RII 2ea 1040734 Motors, 1ea 1035414 Control Bracket Guide and 1ea 1037177 Controller Attaching Hardware need to be ordered as well.

NOTE: Motor Locks were not standard on motors until 10/91 and that is why motor update is needed when upgrading to MCC-RII electronics.

RANGER IIC CONTROLLER/JOYSTICK

For Power 9000
Manufactured 7/89 to 11-91



1023004
Controller/Joystick NLA

IDENTIFIABLE CHARACTERISTICS

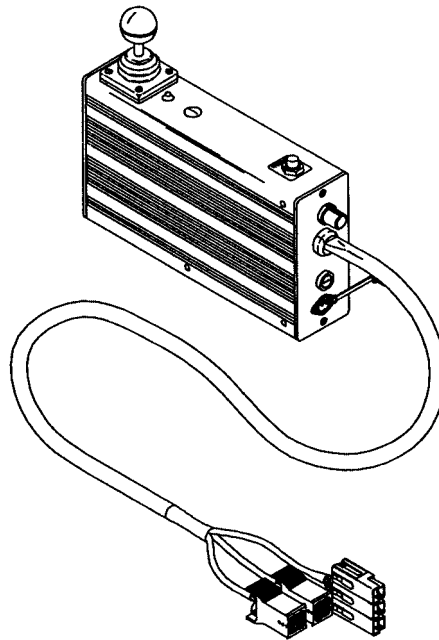
Black Control Box
On/Off Switch and
Tri-Colored LED on Top

OPTIONS

Ranger IIC Electronics are Repairable
BUT
They can be upgraded to MCC-RII.
See MCC-RII Electronics, Page 26.

RANGER II - MCC-R II CONTROLLER/JOYSTICK

Manufactured 11/91 to Present



1027390
Controller/Joystick

IDENTIFIABLE CHARACTERISTICS

Black Control Box with Ridged Sides
Push Button On/Off Switch and
Tri-Colored LED on Top
Programmer Input/Printer Port and
Maximum Speed Selector
on Back of Controller

OPTIONS

Ranger MCC-RII Electronics are Repairable
OR
Rebuilt Units are Available
OR
They can be purchased as new.

Invacare Corporation www.invacare.com



Yes, you can.™

USA
One Invacare Way
Elyria, OH USA
44036-2125
800-333-6900

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