

Use RoBoard to Set KONDO Servo Parameters

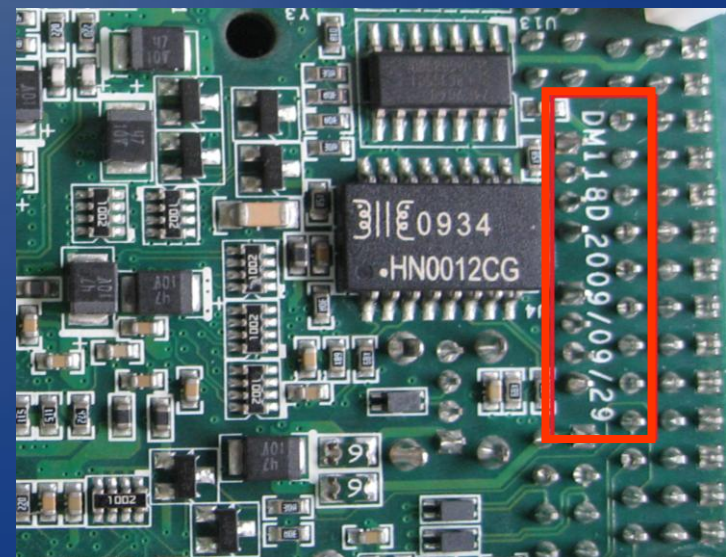
DMP Electronics Inc.
Robotic Division
March 2011

Introduction

- KONDO KRS-786/788/4024/4014 servos have two working modes: **PWM mode** and **ICS mode**
 - In PWM mode (boot KONDO servo with PWM signal line = LOW), you control the servos with PWM signal.
 - In ICS mode (boot KONDO servo with PWM signal line = HIGH), you can set the internal parameters of the servos.
- This note mentions how to change the servo parameters using RoBoard.

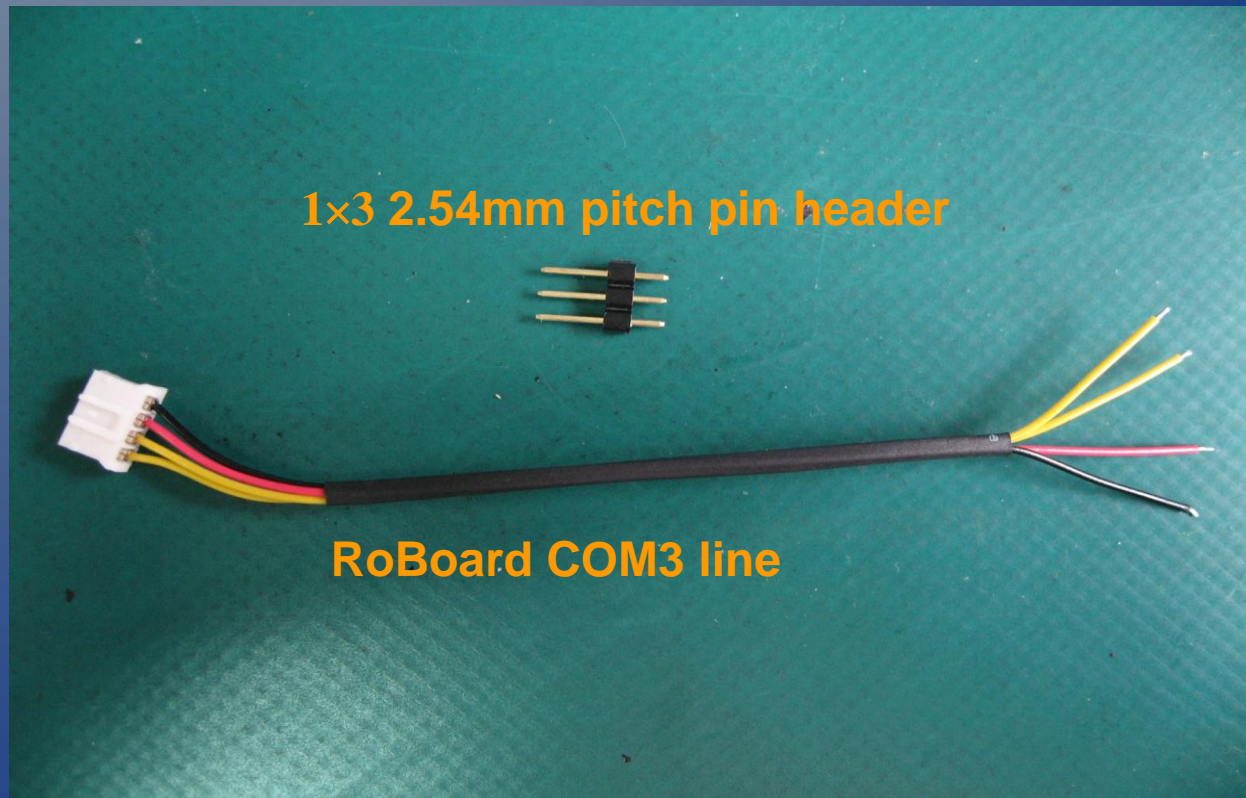
Introduction

- In the following, we will use COM3 of RB-100/RB-110 to connect KONDO servos.
- You can also use COM4 of both RB-110 and RB-100 “DM118D” model to do this.
- COM4 of RB-100 “DM118A/B/C” models don’t work in the following example.



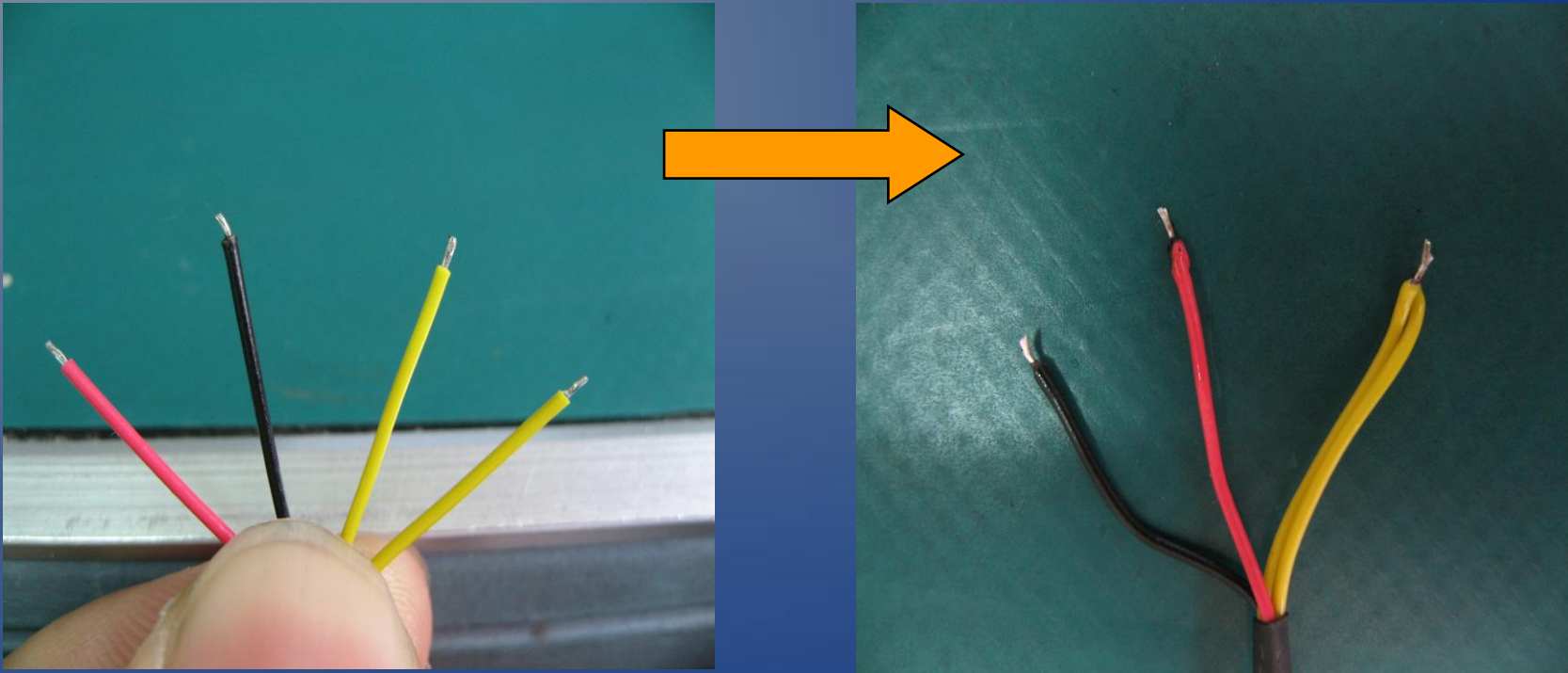
Preparing Connection Line

- First, you need to prepare a (half-duplex) line for connecting KONDO servos.



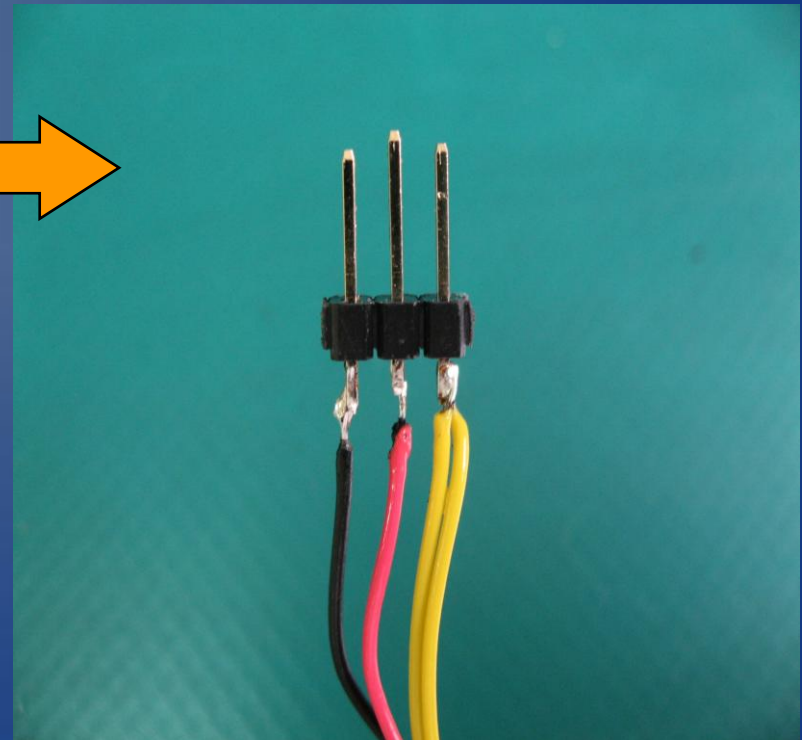
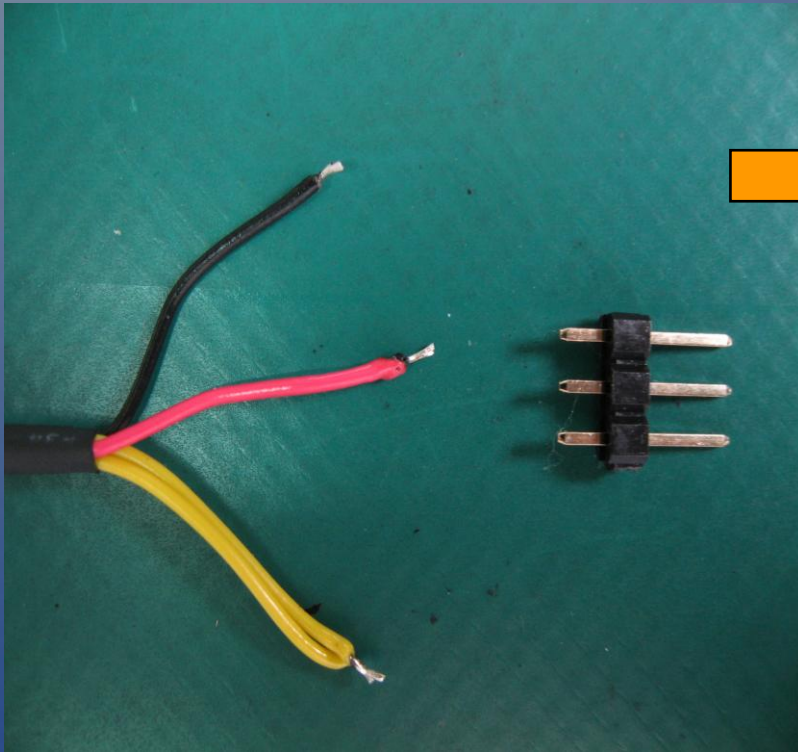
Preparing Connection Line

- Short the TXD/RXD pins (yellow lines)



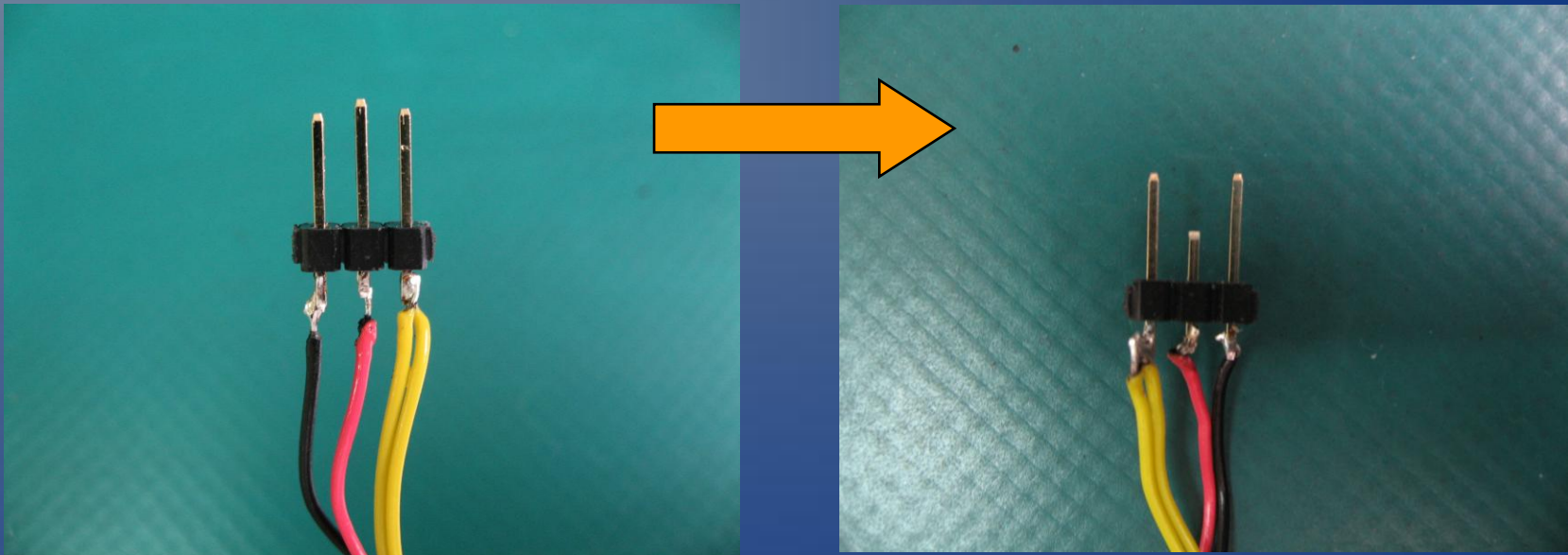
Preparing Connection Line

- Solder the COM3 line and the 2.54mm pin header.



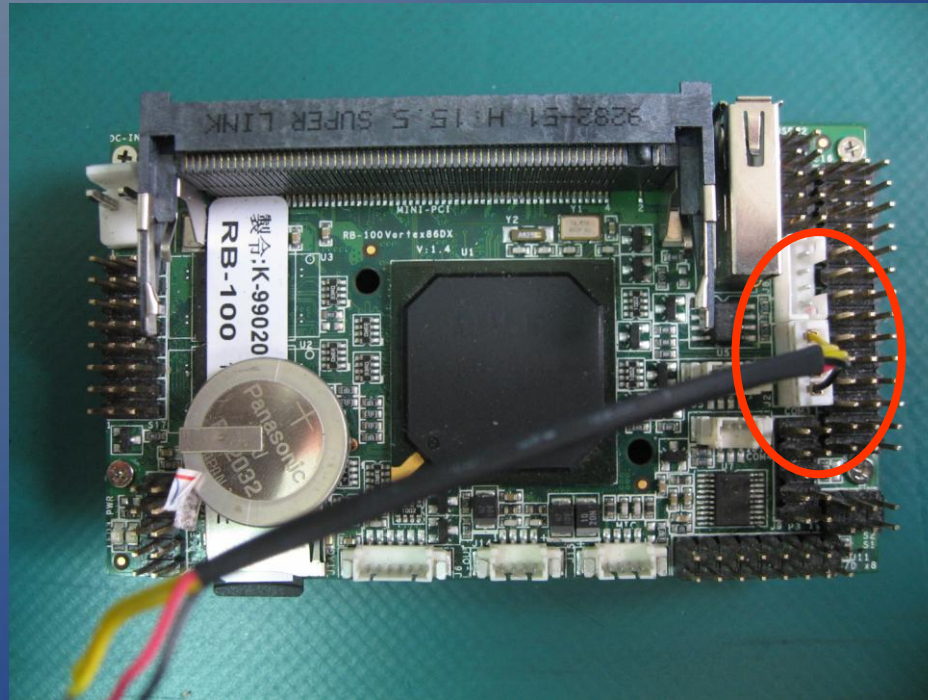
Preparing Connection Line

- Shorten the Vxx pin (useful for hot-plugging KONDO servos).



Preparing Connection Line

- Plug the connection line to RoBoard's COM3.



Change the KODNO KRS-4014 Parameters

Download KONDO's servo manager

“**SerialManagerV1R2.zip**” from :

<http://kondo-robot.com/sys/archives/360>

■ICS2.0シリアルマネージャー Ver1.2

ICS2.0シリアルマネージャー Ver1.2 2009年5月21日公開

ISC2.0用のシリアルマネージャー最新版です。

使用するには、インターフェースとして [ICS-USBアダプター](#)が必要です。

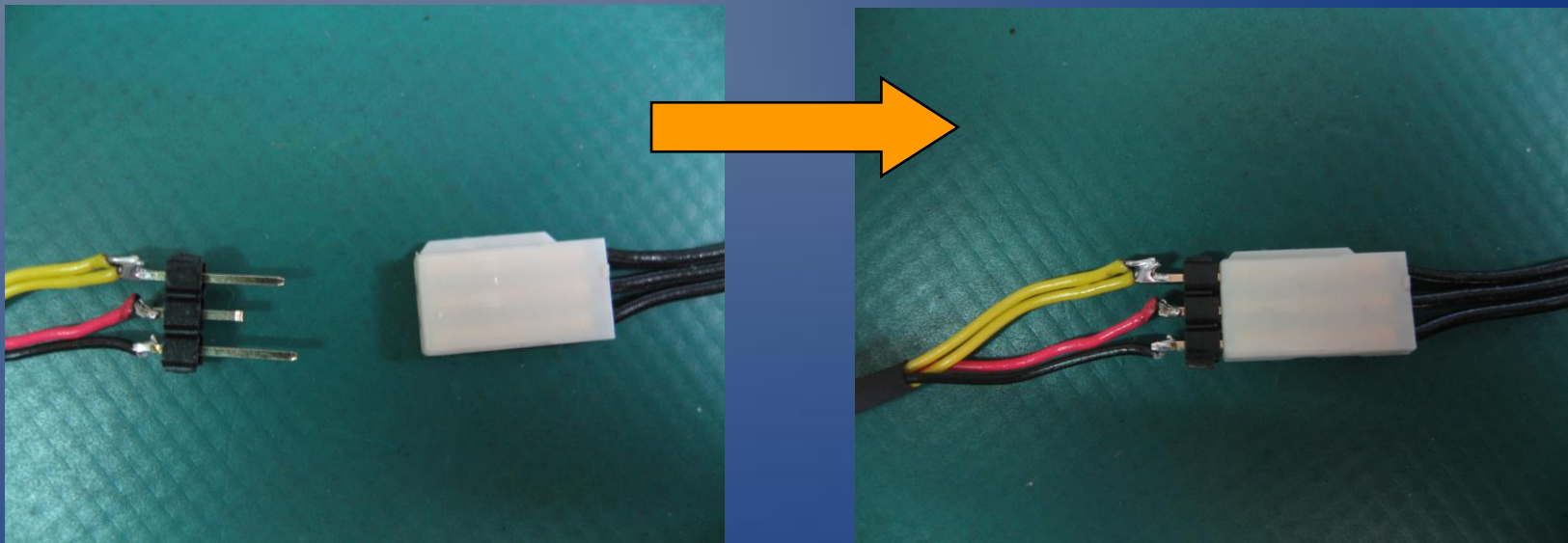
ファイルは圧縮ファイルで提供されており、シリアルマネージャーのソフトウェアとマニュアルが含まれます。

■[ホーム](#)に戻ります。

- Unzip the “**SerialManagerV1R2.zip**” to RoBoard.
- Then double click the “**SerialManagerV1R2.exe**” to run the KODNO servo manager on RoBoard.



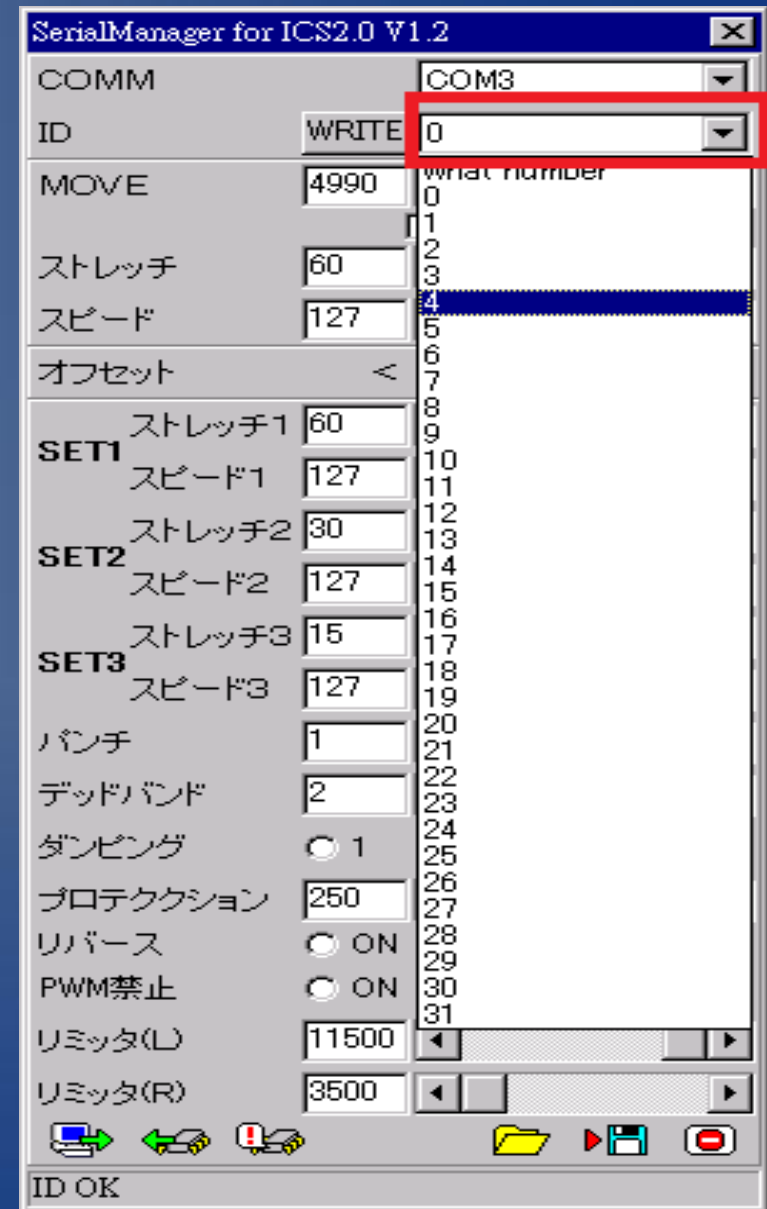
- Connect the KRS-4014 with the connection line (that you make in the previous steps)



- In the servo manager, set COMM option to COM3.
- You shall see “COM3 OK” at the bottom.



- Select the ID of your servo.
- In general, the default Id of KRS-4014 is 0.



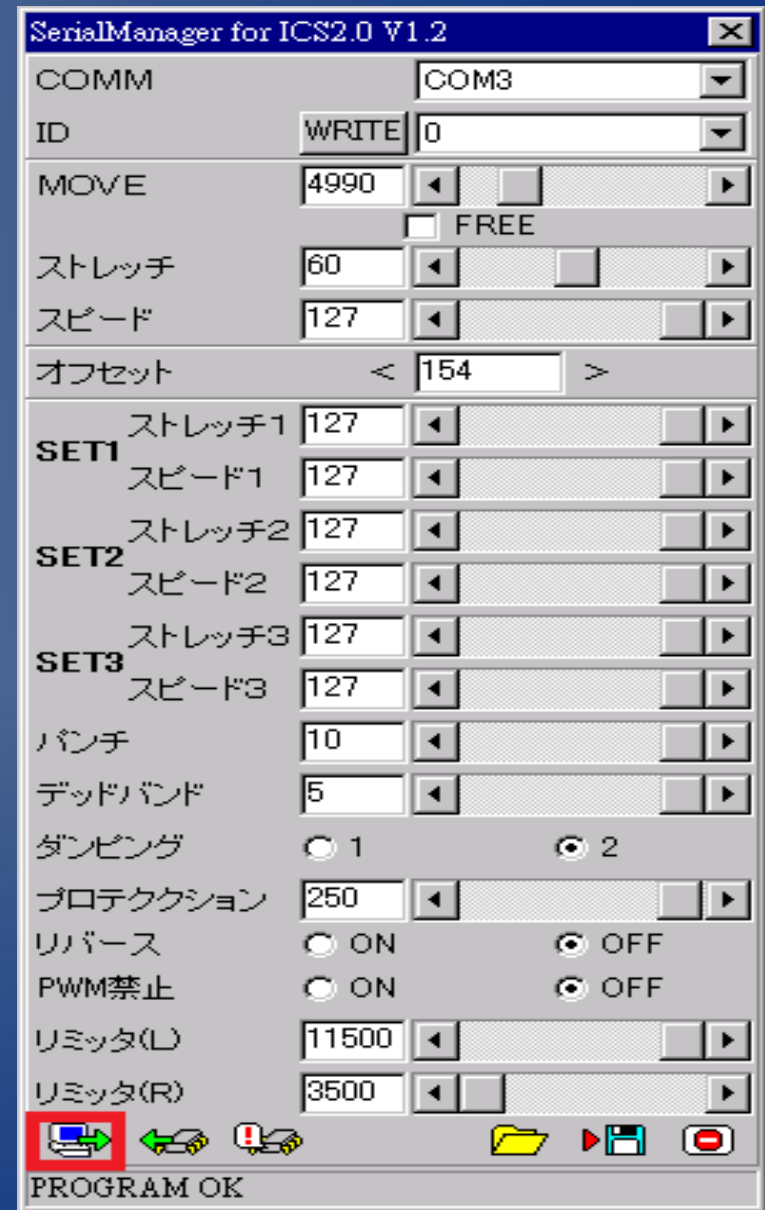
- You shall see "ID OK" at the bottom
- If showing "ID NG", it means you select wrong ID.
- You may press the "WRITE" button to force to set your ID.



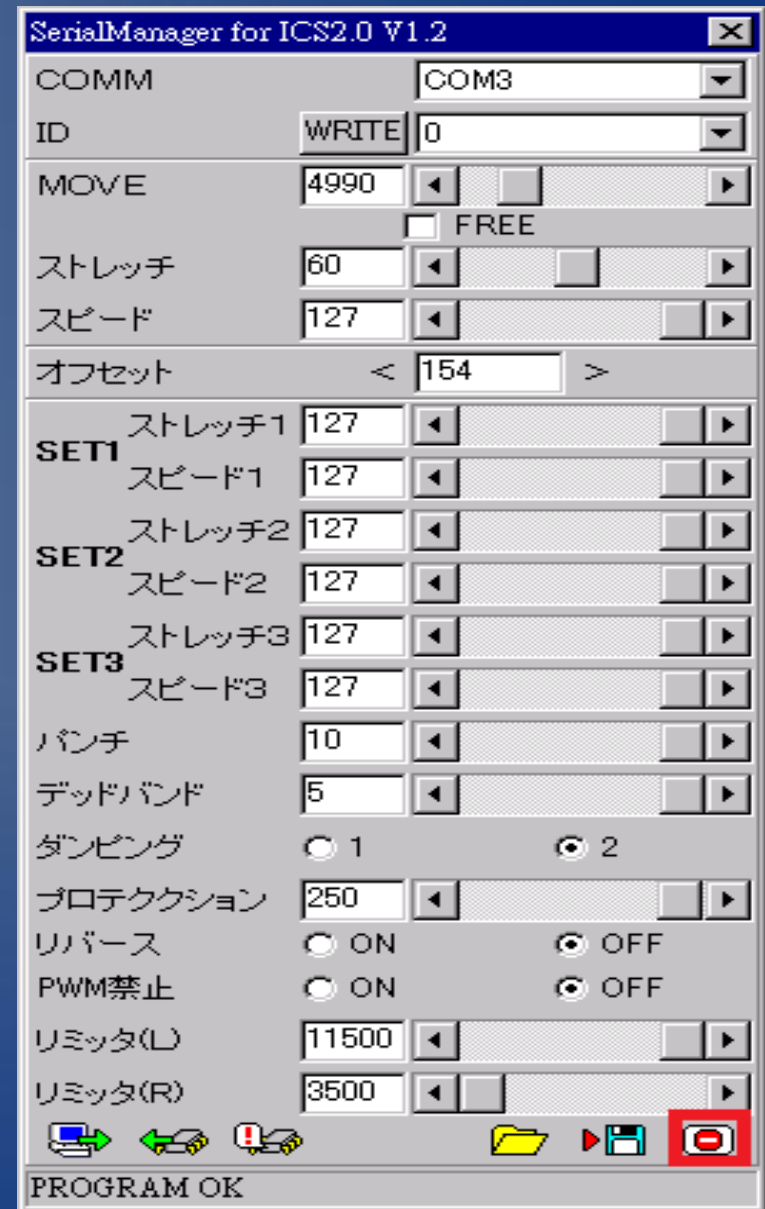
- Press "**READ**" button to read KRS-4014 servo parameters.
- You shall see "READ OK" at the bottom for successful connection.



- Change the servo parameters as you want.
- When you done, press "**PROGRAM**" to write the parameters back to KRS-4014.
- You shall see "PROGRAM OK" at the bottom.



- Press "**QUIT**" button to exit.



**Change the
KODNO KRS-786/788/4024
Parameters**

Download KONDO KRS-78X/4024 servo manager

“**SVM2346R.EXE**” from :

<http://kondo-robot.com/sys/archives/148>

■ サーボマネージャーfor2346REDVersion

KRS-784ICS,786ICS,788HV,2350HVもこちらのソフトウェアをご使用ください。

REDVersion専用版です。KRS-2346RED、KRS-2350REDをはじめとするレッドバージョンの機種には、こちらのソフトウェアをご使用ください。

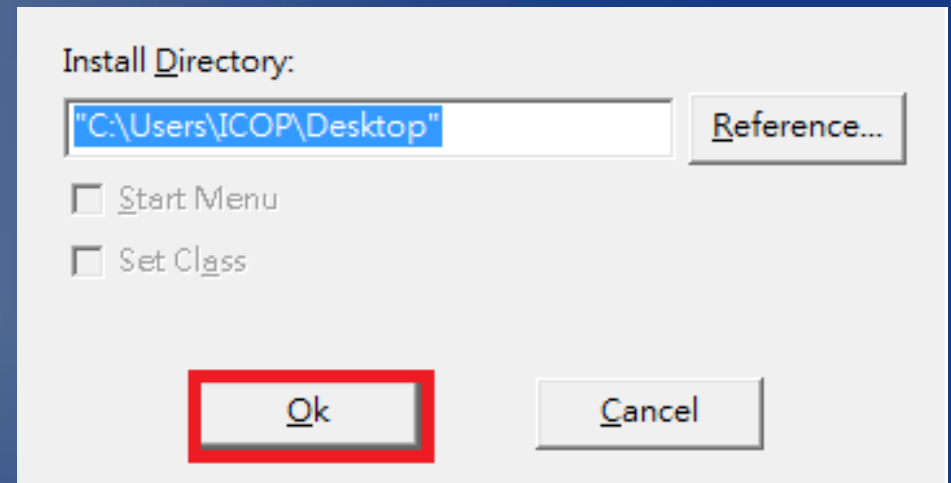
RED Version以外では、ご使用いただけません。

接続するために、KOPROPO製品のNo.01106「ICS-USBアダプター」が別途必要です。

[マニュアル\(PDF\)](#)

■ [ホーム](#)に戻ります。

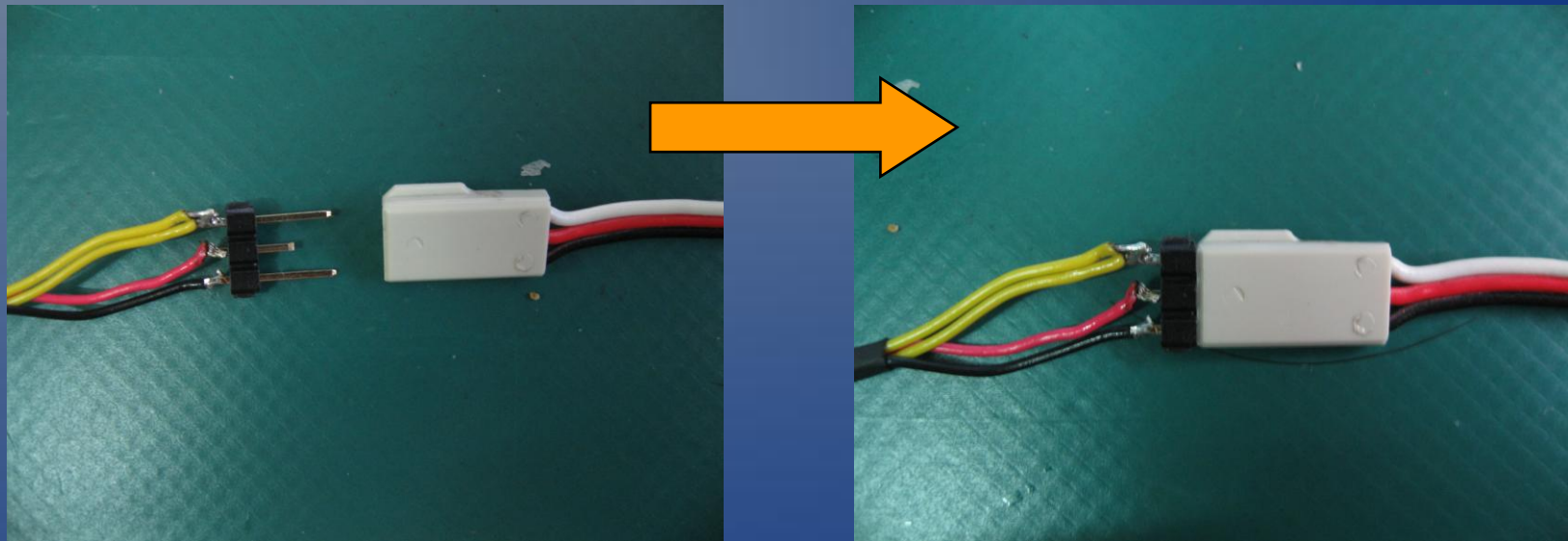
- Double click the EXE to Install the servo manager on RoBoard.



- Launch the servo manager.



- Connect the KRS-78X (or KRS-4024) with the connection line (that you make in the previous steps)



- Set PortNumber as COM3

ServoManagerR Ver1.3

Parameter

[SET1] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET2] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET3] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

Punch

DeadBandWidth ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

Damping ☐ 1 ☒ 2

Reverse ☐ ON ☒ OFF

PulseOperationTimer ☒ 1 ☐ 2 ☐ 3

ProtectionTimer

LeftLimit

RightLimit

Explanation

KO PROPO
DIGITAL PROPORTIONAL SYSTEM

ServoManager

【Language】
Set Language

Property

PortNumber

Language ☐ Japanese ☒ English

Tracking ☒ OFF ☐ ON

Setting

File

- Press "Read" button.

ServoManagerR Ver1.3

Parameter

[SET1] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET2] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET3] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

Punch

DeadBandWidth ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

Damping ☐ 1 ☒ 2

Reverse ☐ ON ☒ OFF


PulseOperationTimer ☒ 1 ☐ 2 ☐ 3

ProtectionTimer

LeftLimit

RightLimit

Explanation



【Read】
Read Data from Target

Property


PortNumber

Language ☐ Japanese ☒ English

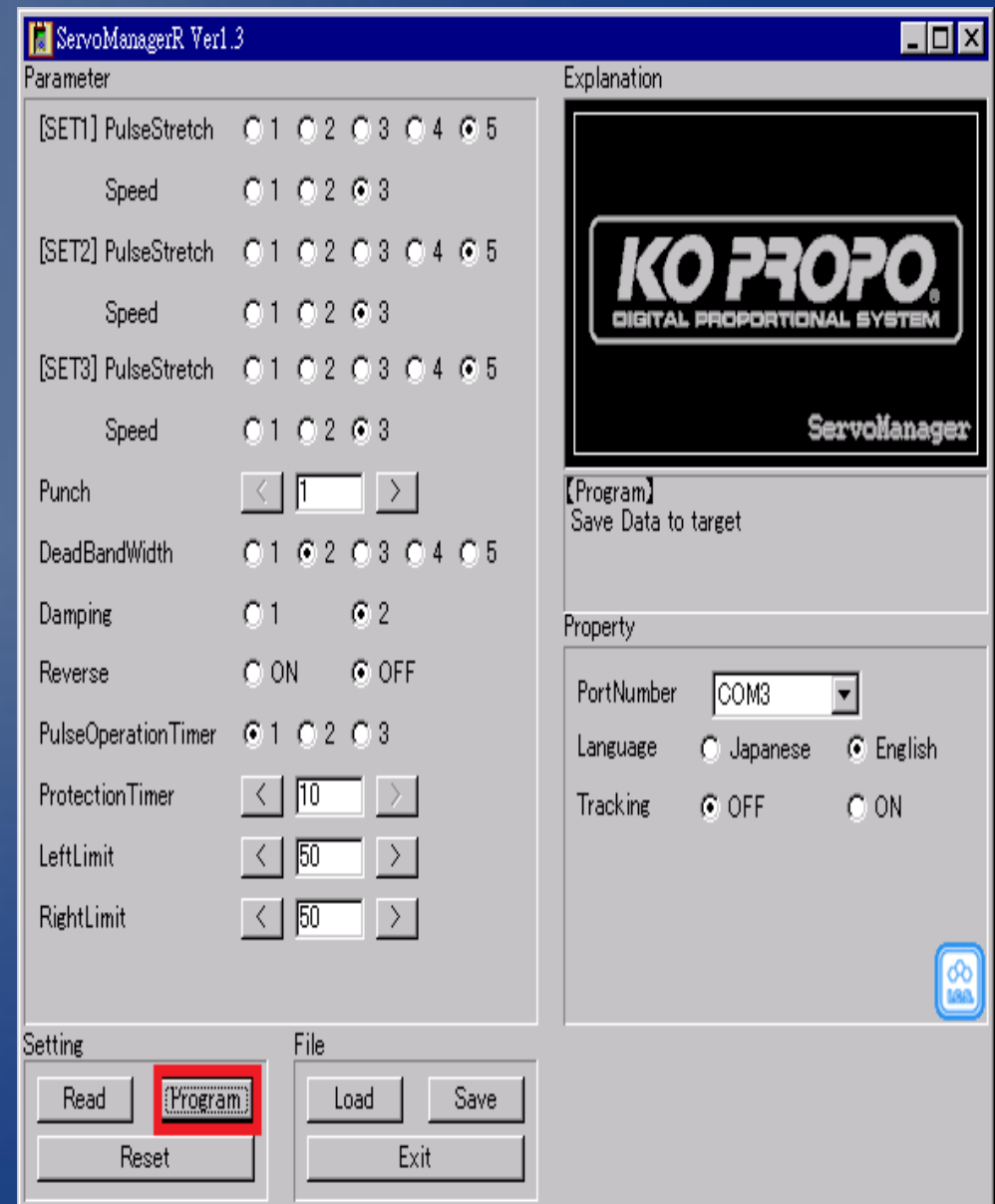
Tracking ☒ OFF ☐ ON

Setting

File



- Change the servo parameters as you want.
- When you done, press "**PROGRAM**" to write the parameters back to KONDO servo.



- Press “Exit” to quit.

ServoManagerR Ver1.3

Parameter

[SET1] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET2] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

[SET3] PulseStretch ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5
Speed ☐ 1 ☐ 2 ☒ 3

Punch

DeadBandWidth ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

Damping ☐ 1 ☒ 2

Reverse ☐ ON ☒ OFF

PulseOperationTimer ☒ 1 ☐ 2 ☐ 3

ProtectionTimer

LeftLimit

RightLimit

Explanation

KO PROPO
DIGITAL PROPORTIONAL SYSTEM

ServoManager

【Program】
Save Data to target

Property

PortNumber

Language ☐ Japanese ☒ English

Tracking ☒ OFF ☐ ON

Setting

File

Thank You

tech@roboard.com