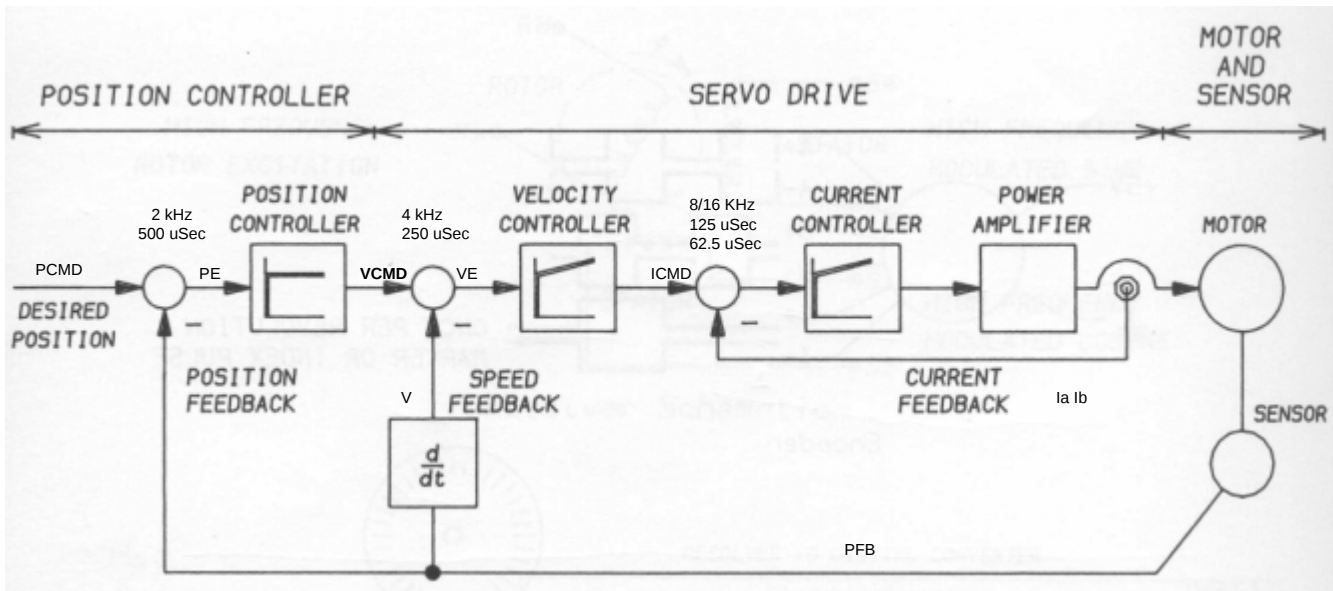


Basic tuning CD Series 5 DEMO

Always tune

1. Current loop
2. Velocity loop
3. Position loop

Avoid short route



Position Loop

Derived from mechanical of the application

record
V VCMD ICMD and
move incremental one rev
find GP
(GP = 10 x BW)
record
V VCMD PE
GPFR, GPFR1
eliminate the PE

Velocity Loop

Derived from mechanical of the application

We Select Pole placement low freq up to 200Hz

create step and record
V VCMD ICMD
SET TF 100 LMJR zero find BW ~40 Find LMJR,
then see if you can increase BW

For position loop recommended over shoot of
5-10%

BW 100
LMJR 70
TF 150

Current Loop

Derived only from Motor and drive characters

- Motor DATA
- Compensation calculator
- XLS file
- SSV File from SEP
- Class 0

Testing
Find best MPHAS using parabola
method

Acc/Dec test TBD

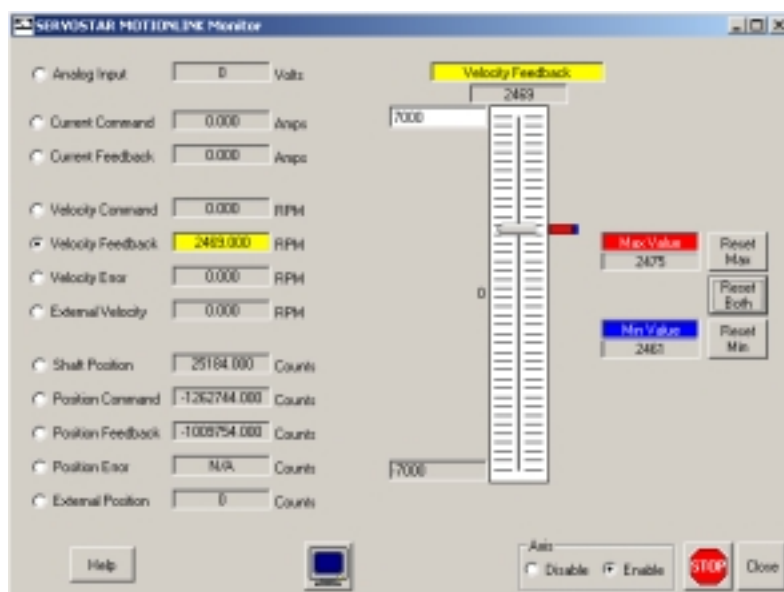


CE03550
DIPEAK=90
DICON=30
MOTOR="AKM21C
MENCRES=2048
MENCTYPE=0

Operation Mode
Serial Torque

Best MPHASE using parabola methode

Repeat the TEST for CW (T 40) and CCW (T -40)



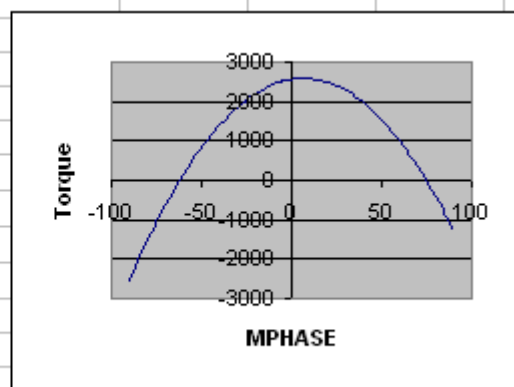
Make sure you have the right SSV file

OPMODE	2	(Serial T)
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enable the drive and fill the table below

	X	Y
	MPHASE	Velocity
1	-10	2435
2	0	2560
3	20	2480

$$aX^2 + bX + c = y$$

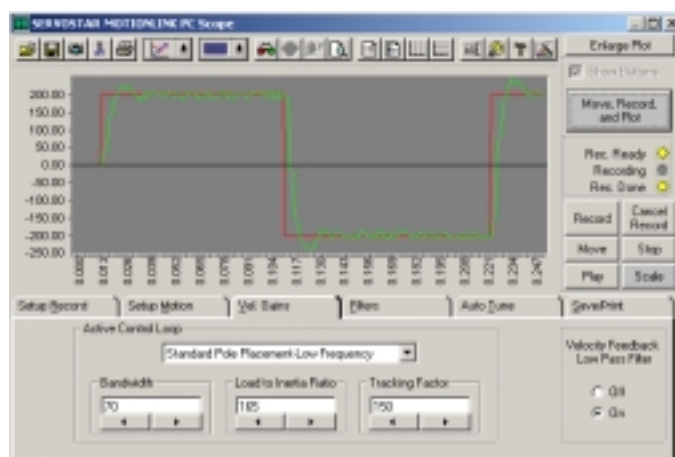
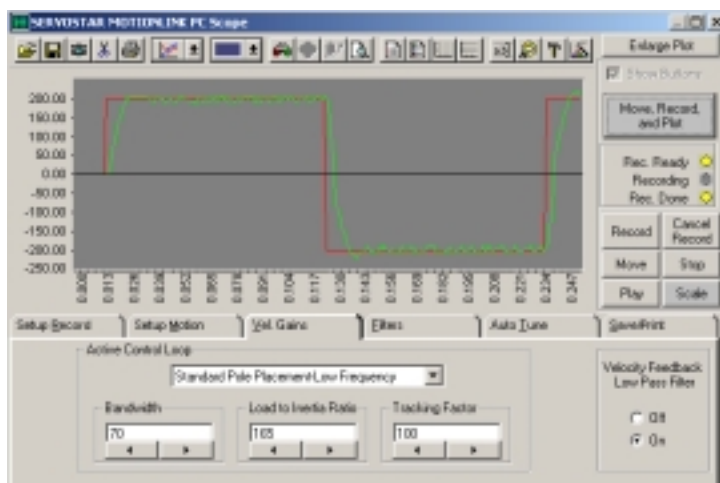
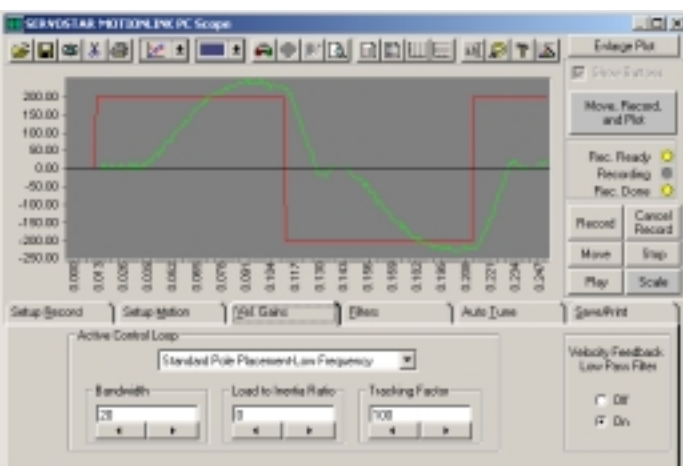
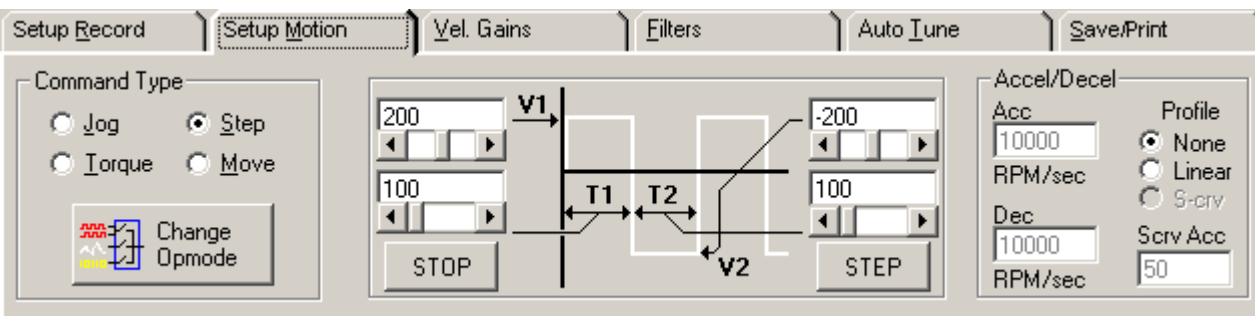
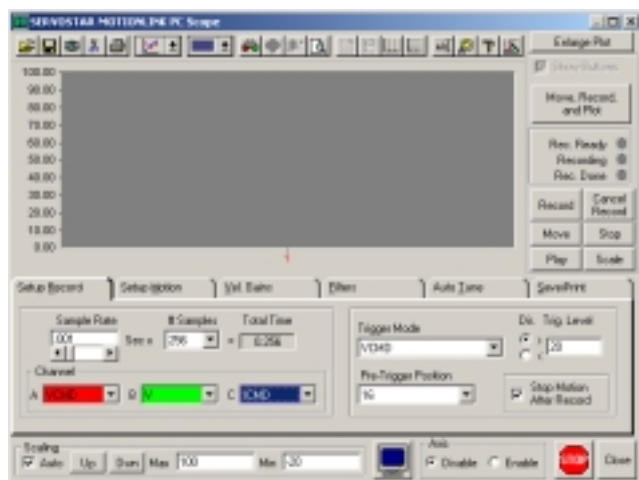


Max CW	MPHASE	6	[electrical degree]
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Acc/Dec test TBD

Operation Mode

Serial Velocity



Operation Mode

Serial Position

Setup Record | Setup Motion | Vel. Gains | Posn. Gains | Filters | Auto Tune | Save/Print

Command Type

☐ Jog ☐ Step

☐ Torque ☒ Move

Change Opmode

Move Type

☐ Absolute ☒ Incremental

Distance (counts)

8192

Velocity (RPM)

500

Move Incremental | Toggle Direction

Accel/Decel

Acc 10000 RPM/sec

Dec 10000 RPM/sec

Profile

☐ None ☒ Linear ☐ S-crv

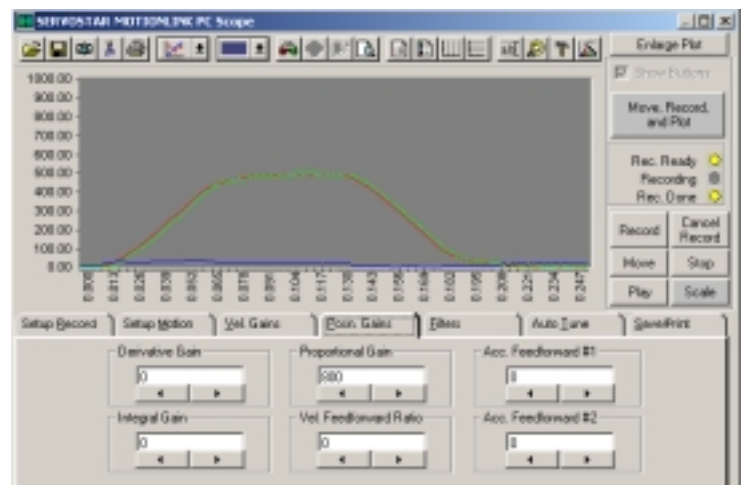
Scrv Acc 50

Setup Record | Setup Motion | Vel. Gains | Posn. Gains

Sample Rate .001 Sec x # Samples 256 = Total Time 0.256

Channel

A VCMD B V C ICMD



Setup Record | Setup Motion | Vel. Gains | Posn. Gains

Sample Rate .001 Sec x # Samples 256 = Total Time 0.256

Channel

A VCMD B V C PE

