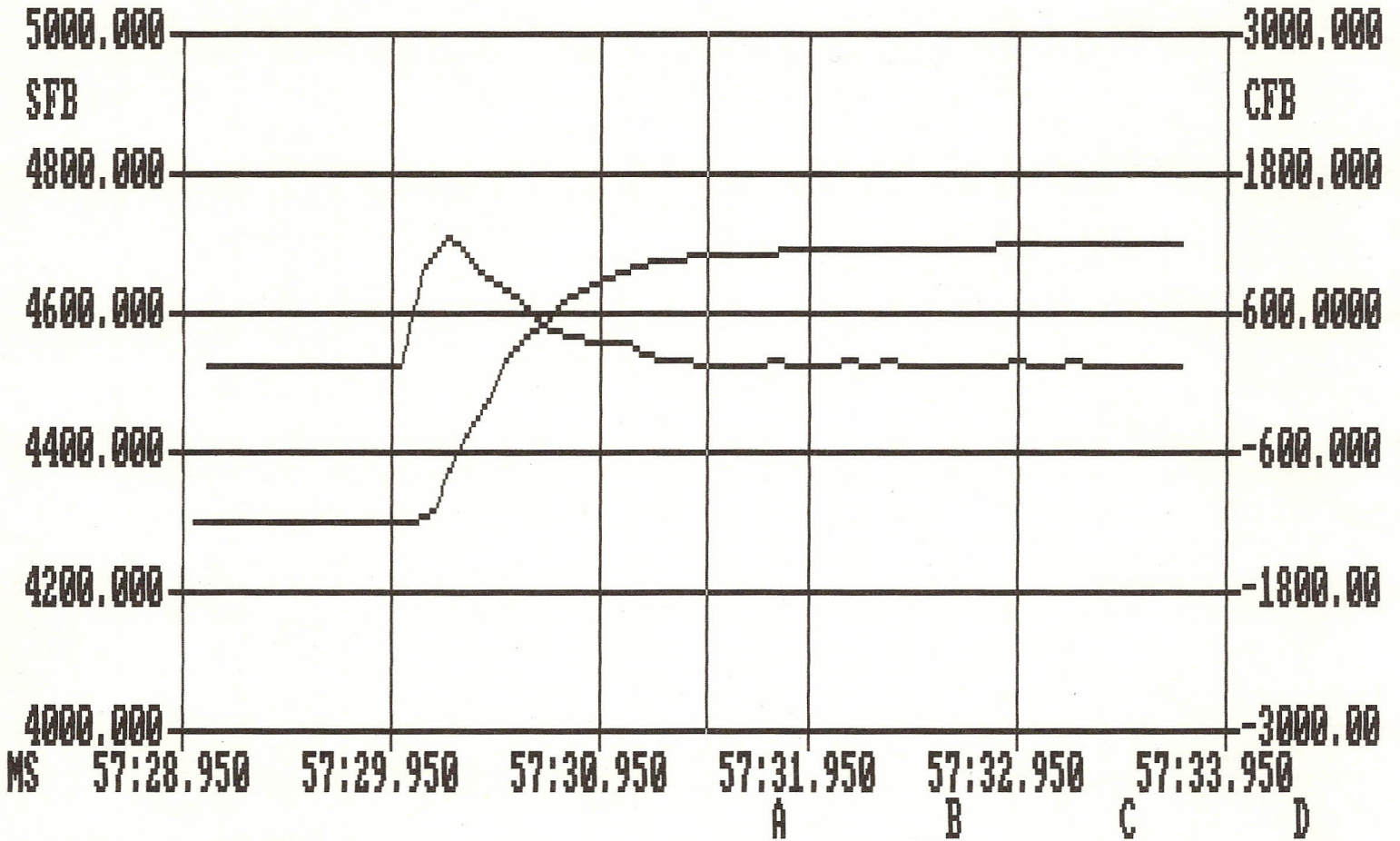


Ramalyzer High Resolution Online Trend

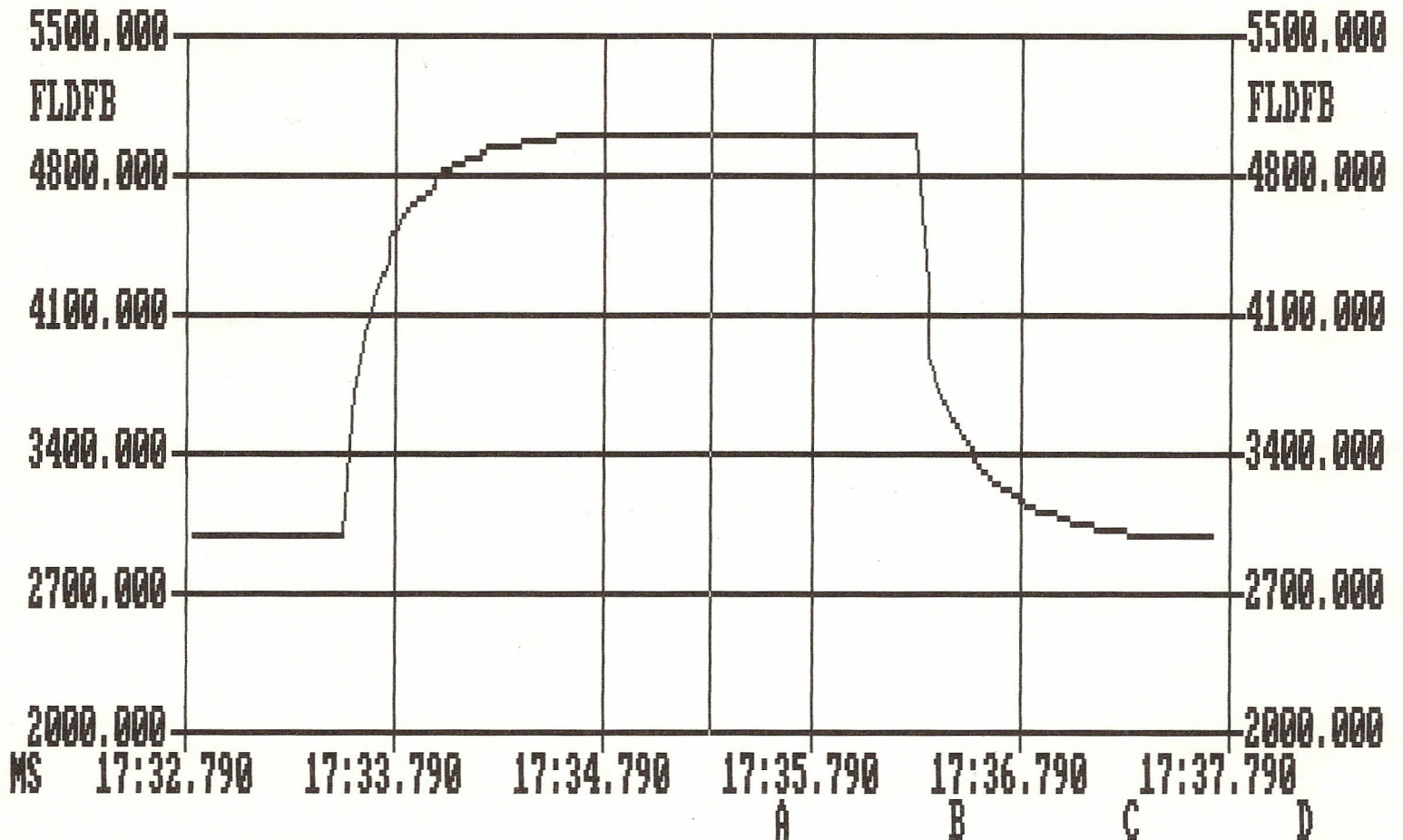


Period: 5.000000 S	Address: SFB	CFB
Comport: 1	Scale Factor: 1.000000	1.000000
Baud: 9600	High Limit: 5000.000	3000.000
Protocol: N	Low Limit: 4000.000	-3000.000
STATUS: OFFLINE	Value: 4683.000	174.0000

PRINT	PRINT	FORM	04/23/97	HELP			
LARGE	SMALL	FEED	14:57:31.461				

SPEED REG (2 RAD - Slow) RESPONSE, Below BASE SPEED

Ramalyzer High Resolution Online Trend

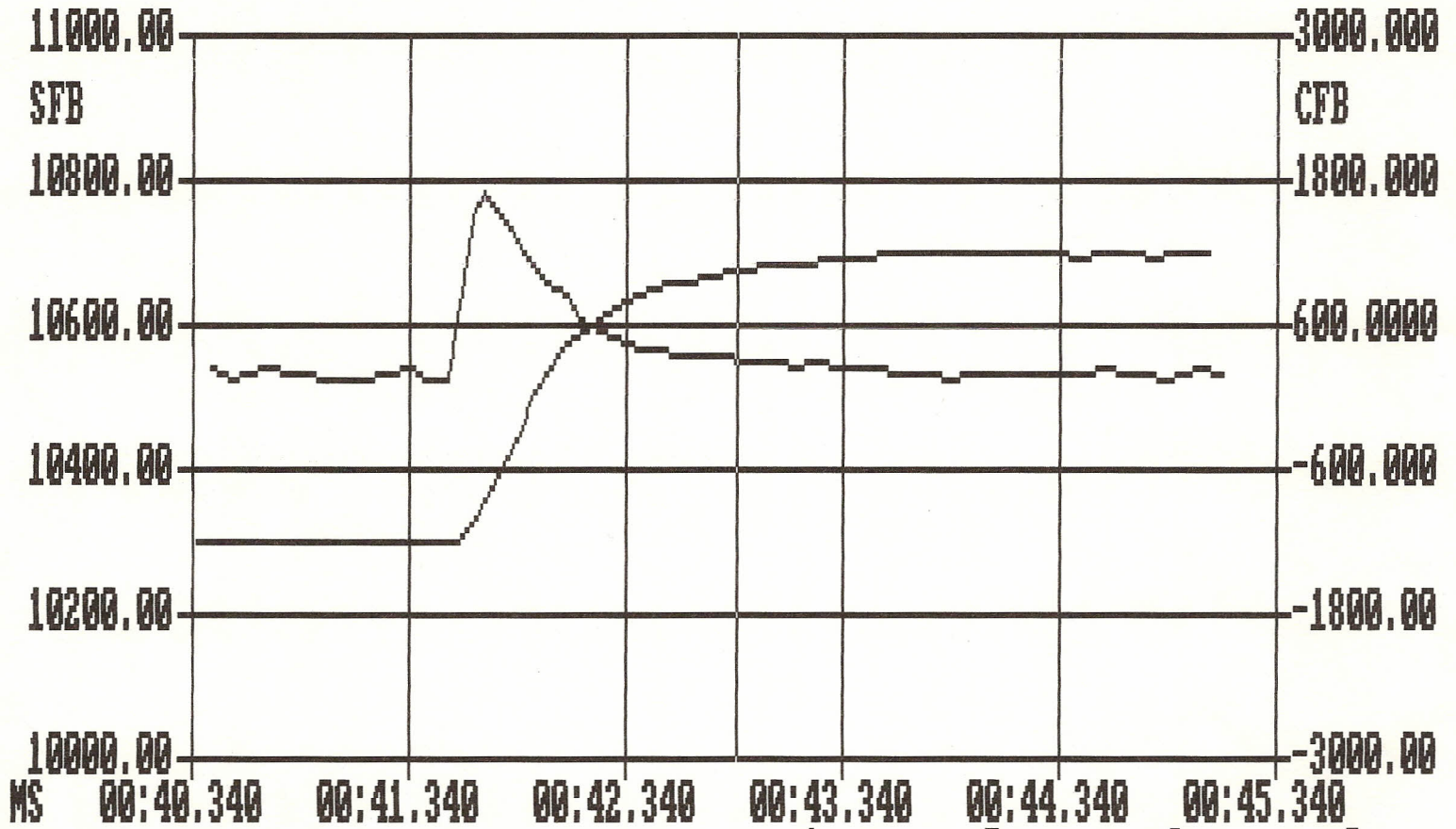


Period: 5.000000 S Address: FLDFB
 Comport: 1 Scale Factor: 1.000000
 Baud: 9600 High Limit: 5500.000
 Protocol: N Low Limit: 2000.000
 STATUS: OFFLINE Value: 5008.000*

PRINT PRINT NON 04/23/97 HELP
 LARGE SMALL FEED 08:17:35.300

FIELD REG. RESPONSE.

Ramalyzer High Resolution Online Trend



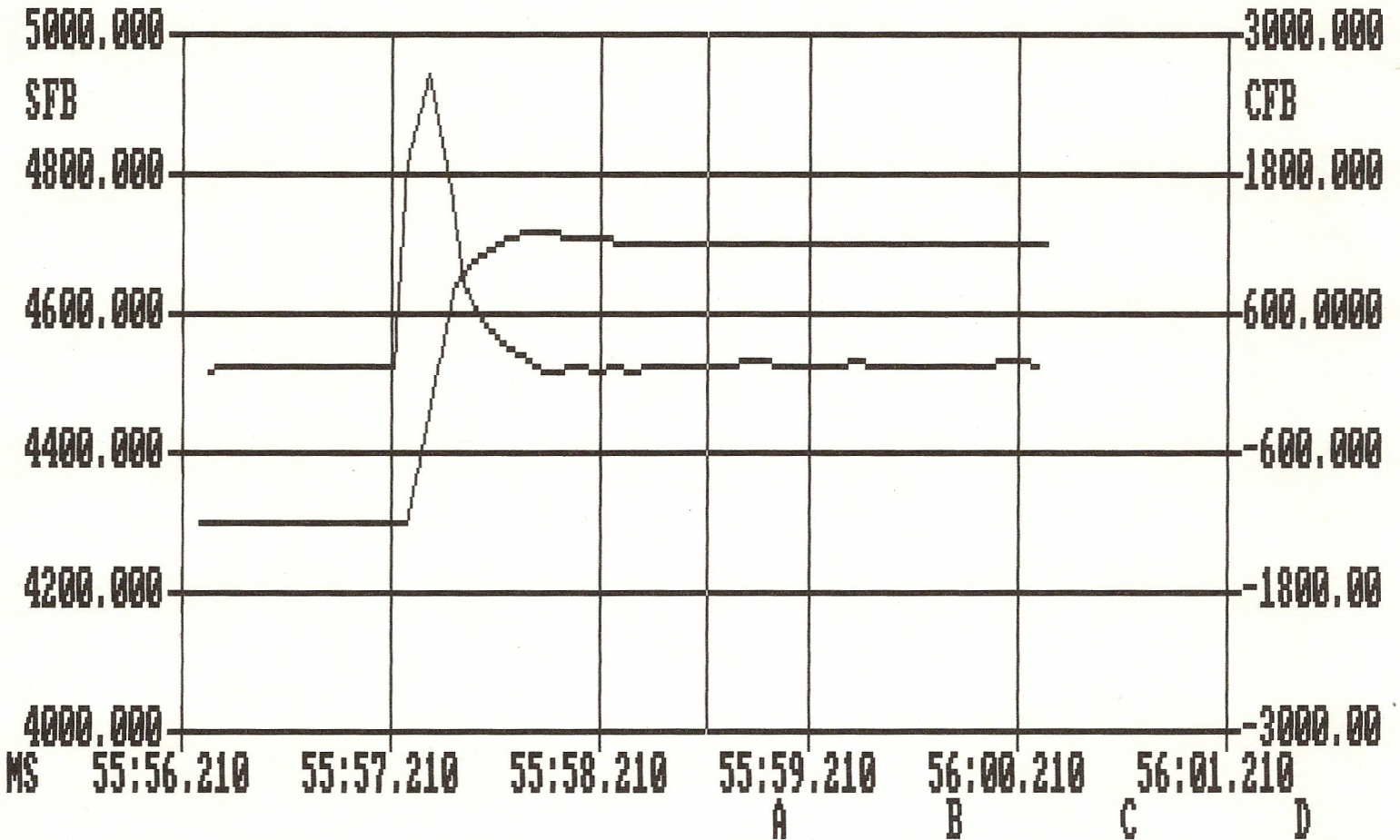
Period: 5.000000 S
 Comport: 1
 Baud: 9600
 Protocol: N
 STATUS: OFFLINE

Address: SFB CFB
 Scale Factor: 1.000000 1.000000
 High Limit: 11000.00 3000.000
 Low Limit: 10000.00 -3000.00
 Value: 10675.40 321.0000

PRINT ~~PRINT~~ ~~STOP~~ 04/23/97 ~~HELP~~
 LARGE SMALL FEED 15:00:42.851

SPEED REG RESPONSE (2 RAD - SLOW) ABOVE BASE SPEED.

Ramalyzer High Resolution Online Trend

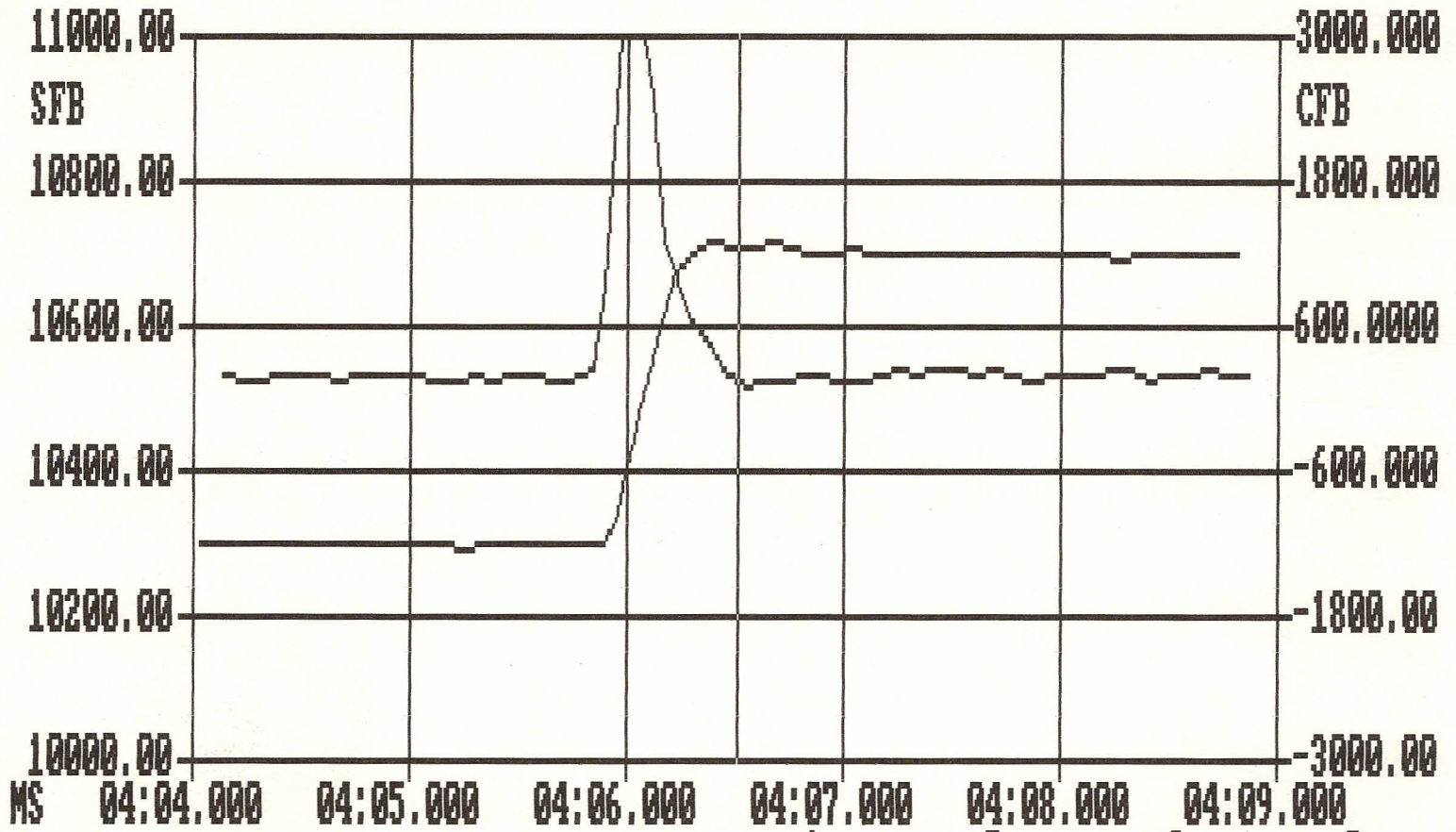


Period: 5.000000 S	Address: SFB	CFB
Comport: 1	Scale Factor: 1.000000	1.000000
Baud: 9600	High Limit: 5000.000	3000.000
Protocol: N	Low Limit: 4000.000	-3000.000
STATUS: OFFLINE	Value: 4699.000	174.0000

04/23/97 14:55:58.720

SPEED REG. RESPONSE (GRAD-FAST) BELOW BASE SPEED.

Ramalyzer High Resolution Online Trend



MS 04:04.000 04:05.000 04:06.000 04:07.000 04:08.000 04:09.000
 A B C D

Period: 5.000000 S Address: SFB CFB
 Comport: 1 Scale Factor: 1.000000 1.000000
 Baud: 9600 High Limit: 11000.00 3000.000
 Protocol: N Low Limit: 10000.00 -3000.00
 STATUS: OFFLINE Value: 10711.00 150.6364

PRINT PRINT HOME 04/23/97 HOME
 LARGE SMALL FEED 15:04:06.510

SPEED REG RESPONSE (GRAD-FAST) ABOVE BASE SPEED.

Name	Addr	Bit	Length	Entered By	Value	Units / Description
DGNJPR	2	8	1	FIELD VAL-SEK	1	Modify RAM enable
MAPDLY	39	0	16	FIELD VAL-MDL	50	Centiseconds
RFZADJ	48	0	16	FIELD VAL-SEK	-170	
V3ZADJ	50	0	16	FIELD VAL-SEK	-48	
DAC1@I	100	0	16	FIELD VAL-SEK	100	VAR Address - SFB
DAC1MX	101	0	16	FIELD VAL-SEK	25500	DAC1 max input value
DAC2@I	102	0	16	FIELD VAL-SEK	110	VAR Address - HPCALC
DAC2MX	103	0	16	FIELD VAL-SEK	5200	DAC2 max input value
MET1@I	104	0	16	FIELD VAL-SEK	104	VAR Address - CFB
MET1MX	105	0	16	FIELD VAL-SEK	13500	MET1 max input value
MET2@I	106	0	16	FIELD VAL-SEK	103	VAR Address - VFB
MET2MX	107	0	16	FIELD VAL-SEK	25500	MET2 max input value
DIAG1	110	0	16	FIELD VAL-MDL	100	VAR Address - SFB
DIAG2	111	0	16	FIELD VAL-MDL	103	VAR Address - VFB
DIAG3	112	0	16	FIELD VAL-MDL	104	VAR Address - CFB
DIAG4	113	0	16	FIELD VAL-MDL	105	VAR Address - FLDFB
SIM@ES	146	0	16	FIELD VAL-MDL	0	VAR Address - ZEROREG
SLD1JP	150	0	1	FIELD VAL-MDL	1	SLD1 enable
SLD1JP	150	2	1	FIELD VAL-MDL	1	SLD1 8 bit mode
SL3SEN	170	0	16	FIELD VAL-MDL	400	SLD3 sensitivity
RO2@IN	218	0	16	FIELD VAL-SEK	636	VAR Address - LDRVIN06
RO3@IN	220	0	16	FIELD VAL-MDL	638	VAR Address - LDRVIN08
RO5@IN	224	0	16	FIELD VAL-SEK	634	VAR Address - LDRVIN04
AUTO@I	258	0	16	FIELD VAL-MDL	10	VAR Address - TRUEREGL
CURF@I	285	0	16	FIELD VAL-MDL	0	VAR Address - ZEROREG
DRWR@I	287	0	16	FIELD VAL-MDL	919	VAR Address - AUXFB09
V3SCLE	484	0	16	FIELD VAL-SEK	10150	10000 = "nominal"
V4SCLE	488	0	16	FIELD VAL-MDL	10000	10000 = "nominal"
LCPO@1	751	0	16	FIELD VAL-MDL	633	VAR Address - LDRVIN03
LCPO@2	752	0	16	FIELD VAL-SEK	674	VAR Address - POLCMD
LCPO@3	753	0	16	FIELD VAL-MDL	10	VAR Address - TRUEREGL
LCPO@4	754	0	16	FIELD VAL-SEK	606	VAR Address - CI6CMD
LCPO@5	755	0	16	FIELD VAL-SEK	606	VAR Address - CI6CMD
LCPO@6	756	0	16	FIELD VAL-SEK	606	VAR Address - CI6CMD
AOINVJ	779	9	1	FIELD VAL-MDL	1	AUXFB09 bit invert
AO9@IN	789	0	16	FIELD VAL-MDL	633	VAR Address - LDRVIN03
RVSCL0	1281	0	16	FIELD VAL-MDL	2400	10000 = "nominal"
FVSCL0	1386	0	16	FIELD VAL-SEK	4188	10000 = "nominal"
SFBMX0	1392	0	16	FIELD VAL-SEK	1332	Input variable units
SRJ0_0	1408	0	16	DRIVE VAL-SEK	285	64 = 1 sec
SRWI_0	1410	0	16	DRIVE VAL-SEK	271	91 = 1 radian/sec
SRLMP0	1412	0	16	FIELD VAL-MDL	5500	5000 = 1pu Torque
SRLMN0	1413	0	16	FIELD VAL-MDL	5500	5000 = 1pu Torque
SRBW10	1428	0	16	FIELD VAL-SEK	600	100 = 1 radian/sec
FLDMX0	1485	0	16	FIELD VAL-SEK	4500	5000 = Rated Field
FVSCL1	1786	0	16	FIELD VAL-MDL	4400	10000 = "nominal"
SRJ0_1	1808	0	16	DRIVE VAL-SEK	385	64 = 1 sec
SRWI_1	1810	0	16	DRIVE VAL-SEK	90	91 = 1 radian/sec
FLDMX1	1885	0	16	FIELD VAL-SEK	4500	5000 = Rated Field
AXF1@I	3594	0	16	FIELD VAL-MDL	638	VAR Address - LDRVIN08
AXFJP1	3602	0	3	FIELD VAL-MDL	4	AUXFLT 1 Behavior
AXFJP1	3602	3	1	FIELD VAL-MDL	1	Input Sense Select
AXFJP1	3602	4	3	FIELD VAL-MDL	4	AUXFLT 2 Behavior
AXFJP1	3602	7	1	FIELD VAL-MDL	1	Input Sense Select
FLTJP1	3612	12	3	FIELD VAL-MDL	4	LPROTMON Behavior

Name	Addr	Bit	Length	Entered By	Value	Units / Description
CL3LGC	5712	3	1	FIELD VAL-MDL	1	Gate B - Inp1 Invert
CL3LGC	5712	6	1	FIELD VAL-MDL	1	Xpnd Input Invert
KPDJP1	690	0	1	FIELD VAL-SEK	1	LCC_KEYS
VARMOF	569	0	16	DRIVE VAL-SEK	-123	20000 = lpu
MCNFIG	570	1	1	FIELD VAL-MDL	1	Inhibit -sequence
MFLTJP	571	8	1	FIELD VAL-MDL	0	Inhibit FLT.210
VFBOFS	574	0	16	DRIVE VAL-SEK	-143	20000 = lpu
DIMTRC	588	0	16	FIELD VAL-MDL	10	400 = lpu
LILIM0	1508	0	16	FIELD VAL-MDL	8500	5000 = lpu
IRLRT0	1512	0	16	DRIVE VAL-SEK	98	1000 = 1 second
TCLS20	1531	0	16	FIELD VAL-MDL	14167	20000 = lpu
TCLS30	1532	0	16	FIELD VAL-MDL	14167	20000 = lpu
TCLSE0	1533	0	16	FIELD VAL-MDL	20000	20000 = lpu
IRGKC0	1540	0	16	DRIVE VAL-SEK	6417	Proportional FF gain
IRGKF0	1541	0	16	DRIVE VAL-SEK	6417	Proportional FB gain
IRWIC0	1542	0	16	DRIVE VAL-SEK	1337	Cont. Integral gain
IRWID0	1543	0	16	DRIVE VAL-SEK	2006	Disc. Integral gain
FLDPG0	1550	0	16	FIELD VAL-SEK	500	Field propor. gain
FLDIG0	1551	0	16	FIELD VAL-SEK	18	Field integral gain
FLPCM0	1555	0	16	DRIVE VAL-SEK	480	Enh. field fdfwd gain
FLPFB0	1556	0	16	DRIVE VAL-SEK	480	Enh. field fdbk gain
FLDEC0	1560	0	16	FIELD VAL-SEK	25	Percent
FTOCG0	1563	0	16	FIELD VAL-MDL	200	Field TOC Gain
CTSTV0	1577	0	16	FIELD VAL-SEK	5500	16384 = full advance
ILIMC0	1581	0	16	DRIVE VAL-SEK	4494	Volts/count
ICNTC0	1583	0	16	DRIVE VAL-SEK	259	Degrees/Volt
HIRKC0	1589	0	16	DRIVE VAL-SEK	2396	Volts/Amp
HIRKF0	1590	0	16	DRIVE VAL-SEK	2396	Volts/Amp
HIRWI0	1591	0	16	DRIVE VAL-SEK	2175	Volts/(Amp-Sec)
HIRCP0	1594	0	16	DRIVE VAL-SEK	167	IR comp

Name	Motor	Entered By	Value	Units / Description
ADJ_ILIM	0	FIELD VAL-MDL	2	SWITCHABLE L/A (M/G WITH FULL
CMF_LP_RSP	0	FIELD VAL-MDL	3	RADIANS
CORE_TBS	0	FIELD VAL-SEK	4	3TB + LTB
FLD_LP_RSP	0	FIELD VAL-MDL	5	RADIANS
I_MAX_FLD	0	FIELD VAL-SEK	5.5	AMPS
LTB_LI2	0	FIELD VAL-MDL	0	UNASSIGNED
LTB_LI3	0	FIELD VAL-MDL	28	"TQR" TORQUE MODE REQUEST (D
LTB_LI4	0	FIELD VAL-MDL	30	"ASR" ALTERNATE SPEED REGULA
LTB_LI5	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED INPUT, USED
LTB_LO1	0	FIELD VAL-MDL	20	"TQRM" TORQUE MODE OUTPUT
LTB_LO2	0	FIELD VAL-MDL	0	UNASSIGNED
LTB_LO3	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED OUTPUT, DRI
LTB_LO4	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED OUTPUT, DRI
LTB_LO5	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED OUTPUT, DRI
LTB_LO6	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED OUTPUT, DRI
MOTORAMPS	0	FIELD VAL-SEK	412	AMPS
MOTORAMPS	1	FIELD VAL-SEK	412	AMPS
MOTORAPVDC	0	FIELD VAL-MDL	250	VOLTS
MTRAJ_ENAB	0	FIELD VAL-MDL	1	ENABLED
MTRTACHTYP	0	FIELD VAL-SEK	7	LKSH2 2 OUTPUT (LO OH
MTTACH_PPR	1	FIELD VAL-SEK	600	PPR
MULTIM_MAX	0	FIELD VAL-MDL	1	
NTB_CI3	0	FIELD VAL-MDL	36	"LPP" LINE PROTECTION PANEL
NTB_CI6	0	FIELD VAL-MDL	999	MANUALLY ASSIGNED INPUT, USED
NTB_CI7	0	FIELD VAL-MDL	0	UNASSIGNED
NTB_CI8	0	FIELD VAL-MDL	37	"SRST" HARDWIRED SOFT RESET
NTB_RLY5	0	FIELD VAL-MDL	0	UNASSIGNED
PROLOP_DS	0	FIELD VAL-MDL	10	
PROLOP_MV	0	FIELD VAL-MDL	10	VOLTS OR MA
PRO_LP_RSP	0	FIELD VAL-SEK	5	RADIANS
RATED_VDC	0	FIELD VAL-MDL	250	VOLTS
SIMLAB_BIT	0	FIELD VAL-SEK	0	LAB SETUP SIMULATION OFF
SPD_LP_RSP	1	FIELD VAL-SEK	2	RADIANS
XFMR_IMP_P	0	FIELD VAL-SEK	8	%

CUSTOM HARDWARE SUMMARY

=====
CONFIGURATOR

Revision :CALC {09/11/96 2:40 PM Ver: v20.01.C} Run by: SEK
Application :MP_LP_HW\DP\SELECT

=====
DRIVE SOFTWARE/HARDWARE COMPONENTS

Component	Group	Description	Revision
DP	03	SDCC Drive Ctrl MP-DS200SDCCF1	1000
LP	03	SLCC D/ARC LAN MP--DS200SLCCF1	1100
MP	03	SDCC Motor Ctrl MP-DS200SDCCF1	1000
LTB	01	LAN Terminal Board Card	AJ
NTB	01	Main Terminal Board Card	AN
CDBA	01	Fast Contactor Driver Card	BBB
DCFB	01	DC2000/EX2000 Fdbk/PwrSup Card	BKC
LPPA	01	Line Protection Card	AAA
PCCA	01	4Q PwrCon AC&DC Snub DCFB G,C	ACB
SDCC	01	Enhanced Drive Control Card	AFD
SLCC	02	Enhanced LCC (less arcnet)	ADC

=====

HARDWARE COMPONENT TABLE

Berg Jumpers (JP) : X.Y = From Point X Connected to Point Y.
 Potentiometers (POT) : 700 = Full Counter Clockwise, 1700 = Full Clockwise.
 DIP Switches (SW) : X-Y = Switch Bank X at Switch Y and Position Sequence.
 Source (Prioritized) : Programmer (p), Field Tool (f), Rule (r),
 Side File (s), BobCat (b), Default (d), Other (*).

Card: [NTB] Group: [01] Desc: [Main Terminal Board Card] Rev: [AN]

JP	SRC	POS	DESCRIPTION
1	d	1.20	Not installed
2	d	1.20	Not installed
4	d	1.20	DCE mode for PC/term interface. Drive xmits on pin 3.
5	d	3.40	DCE mode for PC/term interface. Drive xmits on pin 3.
6	d	3.70	DCE mode forced true handshaking.
7	d	1.50	DCE or DTE forced true handshaking.
8	d	1.20	DSR and DTR both tied to +15 vdc (forced true).
9	d	3.40	DSR and DTR both tied to +15 vdc (forced true).
10	d	1.20	RF24 = -24V (negative logic).
11	d	3.40	RF24 = -24V (negative logic).
12	r	1.20	E0V1 = +15 vdc
13	d	1.20	E1V1 = E0V1 per JP12
14	r	2.30	10.0 V Nom (with JP15 2.3); or 20.6 V Nom (JP15 1.2)
15	r	2.30	10.0 V Nom (with JP14 2.3); or 13.8 V Nom (JP14 1.2)
17	r	1.20	15 vdc
18	r	1.20	15 vdc
19	r	1.20	15 vdc
20	d	1.20	120 volts
21	d	1.20	COMPL-25 is open.
22	f	2.30	10.0 V Nom (with JP23 2.3); or 20.6 V Nom (JP22 1.2)
23	f	2.30	10.0 V Nom (with JP22 2.3); or 13.8 V Nom (JP22 1.2)
24	r	1.20	Voltage input mode, scaled via SW1-5
3A	d	0.00	(Replaced by JP10). RF24 polarity for digital control inputs.
3B	d	0.00	(Replaced by JP11). RF24 polarity for digital control inputs.

POT	SRC	POS	DESCRIPTION
1	d	700	Provides scaling of analog input P1 from 8 volts to 50 volts ma
2	d	700	Provides scaling of analog input P2 from 8 volts to 50 volts ma
3	f	1200	Provides scaling of analog input P3 from 8 volts to 50 volts ma
4	f	1300	Provides scaling of analog input P4 from 8 volts to 50 volts ma

BANK	SRC	DESCRIPTION
SW 1-5	f	(1 on) 32- 42 Volts Max, 25.1 Volts Nom { 5.3/ 4.2}
SW 6-7	r	(All Off) 12.5- 16.9 Volts Max, 10.0 Volts Nominal

+-----+

Card: [CDBA] Group: [01] Desc: [Fast Contactor Driver Card] Rev: [BBB]

JP	SRC	POS	DESCRIPTION
1	d	1.20	Normal operation
2	d	1.20	Normal non-coordinated CDBA operation

POT	SRC	POS	DESCRIPTION
1	r	1100	Coil Current Reference Pot

+---+---+---+---+---+---+---+---+---+

Card: [DCFB] Group: [01] Desc: [DC2000/EX2000 Fdbk/PwrSup Card] Rev: [BKC]
JP SRC POS DESCRIPTION
1 d 1.20 Generated by DCFB using line voltage 2-3 (DC2000 applications)
2 d 1.20 Normal operation, gives about 100 ms delay
3 r 1.20 Direct input of shunt or external VCO signal
4 r 1.20 Direct input of shunt or external VCO signal
5 r 1.20 Local VCO circuit selected
6 r 1.20 Local VCO circuit selected
7 r 1.20 Local VCO circuit enabled
8 r 1.20 Direct input of shunt or external VCO signal
9 r 1.20 Direct input of shunt or external VCO signal
10 r 1.20 Local VCO circuit selected
11 r 1.20 Local VCO circuit selected
12 r 1.20 Local VCO circuit enabled
13 d 1.20 Scaling set for a field supply's shunt
14 d 1.20 Deleted jumper

BANK	SRC	DESCRIPTION
SW 1-4	r	(All Off) 308 max nominal vac (762 vac using SHVI atten.)
SW 2-5	r	(All Off) 308 max nominal vac (762 vac using SHVI atten.)
SW 3-6	r	(All Off) 308 max nominal vac (762 vac using SHVI atten.)
SW 4-7	r	(All Off) 308vac, 341vdc (762vac, 843vdc w/ SHVI/M atten)
SW 5-8	r	(All Off) 308vac, 341vdc (762vac, 843vdc w/ SHVI/M atten)
SW 6-9	r	(2 on) 308vac, 341vdc (766vac, 849vdc w/ SHVI/M att)
SW 7-10	r	(4 on) 61.8 <= Ict, mA < 88.7

+---+---+---+---+---+---+---+---+---+

Card: [LPPA] Group: [01] Desc: [Line Protection Card] Rev: [AAA]
JP SRC POS DESCRIPTION
1 f 1.20 393V to 575V AC RMS Volts
2 f 1.20 393V to 575V AC RMS Volts
3 f 1.20 393V to 575V AC RMS Volts
4 r 1.20 AC side ground current sensing.
5 r 1.20 (See Help for pick for LPPA & LPPB module application)
6 r 1.20 Filter out. Voltage source is AC line voltage.
7 r 1.20 AC side ground current sensing.

+---+---+---+---+---+---+---+---+---+

Card: [PCCA] Group: [01] Desc: [4Q PwrCon AC&DC Snub DCFB G,C] Rev: [ACB]
JP SRC POS DESCRIPTION
1 f 3.80 240 Vdc; Also connect JUMPER2 P6-P9
2 f 6.90 240 Vdc; Also connect JUMPER1 P3-P8
3 r 0.00 Jumper OUT - Separate snubbers & VFBK
4 r 0.00 Jumper OUT - Separate snubbers & VFBK

+---+---+---+---+---+---+---+---+---+

Card: [SDCC] Group: [01] Desc: [Enhanced Drive Control Card] Rev: [AFD]
JP SRC POS DESCRIPTION

