

4.6 M88200 Monitor Programming

This section describes the programming steps of the M88200 monitor. All the controls to configure the M88200 monitor are on the front panel. The steps are described below -

Program Operations	Display Output	Comments
Apply 90-270V AC mains 50/60 Hz, 1Ø input to L, N. The 'E' Earthing must be connected to proper Instrumentation Earth.	Mechanalysis M88200	Power ON self check time-delay of 4-5 seconds.
After the initial Power ON time-delay it automatically switches over to Bargraph Display Mode .	A:00.00 g Pk B:000.0 mm/s Pk	Top row for channel A
<ul style="list-style-type: none"> Press and hold PROG key for 2-3 seconds. <p>Enter correct password -</p> <ul style="list-style-type: none"> Press SHIFT key, the cursor will blink below the left most digit. Use ▲ key to increment and select the required number. Likewise use SHIFT and ▲ keys to enter correct four digit Password. Press PROG key and go to the next step - Change Password option. 	PROGRAM MODE Password:0000	<p>The default four digit password at the time of despatch is '0000'. Changing to your own password is recommended for security.</p> <p>An incorrect password entry will cause Program Mode exit.</p>
<ul style="list-style-type: none"> Use ▲ key to select Yes / No No - To reject Password changing. Yes - To Change the Password Press PROG key - - 'No' takes you to the next step Module Address select. - 'Yes' allows to Enter New Password. 	Change Password No	An option to change the password if so desired. At this stage too you can escape to the next step by pressing PROG key.
<ul style="list-style-type: none"> Press PROG key to retain existing Password and escape to the next step. <p>To enter new password -</p> <ul style="list-style-type: none"> Press SHIFT key, the cursor will blink below the left most digit. Use ▲ key to increment and select the desired number. Press SHIFT to select the next digit Likewise use SHIFT and ▲ keys and enter correct four digit Password. Press PROG key and go to the next step. 	New Password xxxx	<p>At this stage too you can escape to the next step by pressing PROG key.</p> <p>You can enter new four digit Password of your choice. However, there is no option to re-enter and correct. Contact Mechanalysis if the Password is lost.</p>
<ul style="list-style-type: none"> Press PROG key if the required Module Address exists and escape to the next step. <p>To enter new Module Address -</p> <ul style="list-style-type: none"> Press SHIFT key, the cursor will blink below the left most digit. Use ▲ key to increment and select the required number. Likewise use 'SHIFT' and ▲ keys and enter correct three digit Module Address. Press PROG key and go to the next step. 	Module Address 001	<p>Module Address must be unique, else the RS485 Communication won't be through.</p> <p>Module address from 1-255 only can be entered.</p>
<ul style="list-style-type: none"> Use ▲ key to select 4800 / 9600 / 19200 / 38400. Press PROG key and go to the next step. 	Baud Rate 9600	

<ul style="list-style-type: none"> Use ▲ key to select Even / Odd / None. Press PROG key and go to the next step. 	Choose Parity Even	Even' is recommended.
<ul style="list-style-type: none"> Use ▲ key to select 1 / 2 Number of Channels. Press PROG key and go to the next step. 	No. of Channels 2	The option allows to select either one or two channels only. For choosing '1', Channel A is selected by default. There is no option not to choose both the channels.
<ul style="list-style-type: none"> Use ▲ key to select Yes / No No - To avoid 'Trip Bypass'. Yes - To select 'Trip Bypass'. Press PROG key and go to the next step. 	Trip Bypass No	CAUTION - If 'Yes' is selected, the Trip will never occur, actually the machine being monitored will be in unsafe condition.
<ul style="list-style-type: none"> Use ▲ key to select from - Alarm Set / Trip Set / FS Range. Press PROG key and go to the next step. 	Bar Graph % of FS Range Set	Alarm Set' option if selected across the MIL8800 system, operator can at a glance see how far each channel is away from the safe limit irrespective of the unit of measurement and range of each channel.
<p>To select to program Channel A -</p> <ul style="list-style-type: none"> Use ▲ key to select Yes / No Yes - To choose Channel A programming. No - To escape to Channel B programming. Press PROG key and 'Yes' - takes to 'A - Sns Units?' select. 'No' - takes to 'Channel B Prog'. 	Channel A Prog Yes	<u>IMPORTANT NOTICE -</u> For any change in the Sensor or the Measurement Unit - 1) Alarm / Trip settings may change. 2) All program settings must be checked for its correctness.
<p>To select sensor - Chl A</p> <ul style="list-style-type: none"> Use ▲ key to select from - mV/g / mV/m/s/s / mV/mm/s / mV/i/s Press PROG key and go to the next step. 	A Sns Units ? mV/g	A - depicts Channel A Sns - depicts Sensor mV/m/s/s - depicts mV/m/s ² Option is to choose from 2-Wire Constant Current Velocity or Acceleration output sensors.
<p>To enter correct sensitivity - Chl A</p> <ul style="list-style-type: none"> Press SHIFT key, the cursor will blink below the left most digit. Use ▲ key to increment and select the desired number. Likewise use SHIFT and ▲ keys and enter correct sensitivity. Press PROG key and go to the next step. 	A Sns - 100.0 mV/g	CAUTION - The module M88200 is designed for 100mV/g sensitivity sensor and the sensitivity setting is limited to its +/-20% variation. Sensitivity beyond 120mV/g may affect linearity at upper end of the specified full scale range. Next version will have better options.
<p>To select measurement unit - Chl A</p> <ul style="list-style-type: none"> Use ▲ key to select from - Chl A gPk / gRMS / m/s/s Pk / m/s/s RMS / mm/s Pk / mm/s RMS / i/s Pk / i/s RMS OR mm/s Pk / mm/s RMS / i/s Pk / i/s RMS / micron P-P / micron Pk / mil P-P / mil Pk f Press PROG key and go to the next step. 	A Unit gPk	gPk appears for mV/g sensor selected at 'A Sns Units ?' above. mm/s appears for mV/mm/s sensor selected at 'A Sns Units ?' above. Note - The module is designed to provide only one stage integration, so, for acceleration sensor acceleration and velocity while for velocity sensor velocity and displacement measurements are possible.
<p>To set the Full Scale Range - Chl A</p> <ul style="list-style-type: none"> Press SHIFT key, the cursor will blink below the left most digit. Use ▲ key to increment and select the desired number. Likewise use SHIFT and ▲ keys and enter desired Full Scale Range value. Press PROG key and go to the next step. 	A-FS gPk 10.00	A - depicts Channel A FS - depicts Full Scale Range m/s/s - depicts m/s ² Maximum Full Scale Range settings - 10.00 gPk, 7.00 gRMS, 100.0 m/s/s , 70.0 m/s/s, 150.0 mm/s Pk, 100.0 mm/s RMS, 6.000 i/s Pk, 4.000 i/s RMS

<p>To set the Floor Noise as percentage of Full Scale Range selected above - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to increment and select the desired percentage level. ● Press PROG key and go to the next step. 	<p>A Floor Noise % 01</p>	<p>Floor Noise % is set as % of Full Scale Range selected and can be set upto 10%, lower the better.</p> <p>If Floor Noise is set at 2%, the true signal or the noise or background vibration signal upto 2% is ignored, no digital or bargraph display. However, above 2%, actual vibration level is shown (for example 2.1% signal input is measured and displayed as 2.1%).</p>
<p>To set the TX Fail HI - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter correct value. ● Press PROG key and go to the next step. 	<p>A - TX Fail HI 30.0V</p>	<p>2.0V above and 2V below the actual sensor bias voltage is recommended for TX Fail HI and TX Fail LO settings.</p> <p>TX Fail event checks for the bias voltage of the sensor.</p> <p>However, as a thumb rule the MIL supplied sensors perform healthy if it maintains bias voltage between 8-14 V DC.</p>
<p>To set the TX Fail LO - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter correct value. ● Press PROG key and go to the next step. 	<p>A - TX Fail LO 30.0V</p>	<p>2.0V above and 2V below the actual sensor bias voltage is recommended for TX Fail HI and TX Fail LO settings.</p> <p>TX Fail event checks for the bias voltage of the sensor.</p> <p>However, as a thumb rule the MIL supplied sensors perform healthy if it maintains bias voltage between 8-14 V DC.</p>
<p>To select Filter Out mode - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select from In / Out. Out - To select Filter-Out / Overall measurement ● In - To select Filter-In LP / HP filters ● Press PROG key and - Out - takes to Start-up Protection select. In - takes to LP Filter select option. 	<p>A - Filter Out</p>	<p>The frequency response in Filter Out mode is +/-10% of the reading +/- 2LC.</p>
<p>To select Low Pass Filter - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select from - 1 KHz / 5 KHz / 10 KHz upper cut-off Low Pass filter ● Press PROG key and go to the next step. 	<p>A - Filter LP 10 KHz</p>	<p>LP - depicts Low Pass</p> <p>Low Pass Filter has upper cut-off frequency and M88200 allows to choose from 1K, 5K or 10K Hz.</p> <p>The Accuracy is +/- 10% and cut-off is at 3dB (20%)</p>
<p>To select High Pass Filter - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select from - 5 Hz / 10 Hz / 20 Hz lower cut-off High Pass filter ● Press PROG key and go to the next step. 	<p>A - Filter HP 10 Hz</p>	<p>HP - depicts High Pass</p> <p>High Pass Filter has lower cut-off frequency and M88200 allows to choose from 5 Hz, 10 Hz or 20 Hz.</p> <p>The Accuracy is +/- 10% and cut-off is at 3dB (20%)</p>
<p>To select Start-up Protection option - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select Disable / Enable. ● Enable - To enable Start-Up Protection option. ● Disable - To disable Start-Up Protection option. ● Press PROG key and go to the next step. ● Disable - takes to Ch A - 4mA Adj. ● Enable - takes to Start-up Delay select. 	<p>A - Start up Disable</p>	<p>Start-up Protection ensures Alarm and Trip are deactivated and the 4-20mA is <4mA for the set start-up time delay.</p>

<p>To set the Start-up time delay - Chl A</p> <ul style="list-style-type: none"> ● Press SHIFT key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use SHIFT and ▲ keys and enter required time delay. ● Press PROG key and go to the next step. 	<p>A - Start up Delay : 001 Min</p>	<p>Start-up time delay is settable upto 120 Minutes in multiples of one minute.</p>
<p>To set 4mA isolated out put - Chl A</p> <ul style="list-style-type: none"> ● Short the input pins to ensure 0mV input. ● Connect DMM between output terminals on the Back Plane. ● Use ▲key to increment (4mA output) and SHIFT key to decrement (4mA output). ● Press PROG key and go to the next step. 	<p>A - Adj 4mA 26</p>	<p>Can set up to 60 counts. The 4mA is set around 30 counts. The total settable range is +/- 0.15mA approx.</p> <p>This is the only parameter settable on-line. It means as the counts are incremented or decremented the 4-20mA output changes immediately.</p>
<p>To set the Trip level - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Trip level. ● Press PROG key and go to the next step. 	<p>A Trip Set 01.99</p>	<p>Max Trip Level is 1 least count less than the Full Scale Range selected. If Full Scale Range is 5.00 gPk, the Trip Level can be set to 4.99 gPk max.</p>
<p>To set Trip Hysterisis level - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Hysterisis for Trip. ● Press PROG key and go to the next step. 	<p>A Tr Hysterisis 02</p>	<p>Max 30 counts can be set. 5 Counts that equates 5 LC's are recommended. Hysterisis is an important setting as it avoids relay hunting.</p>
<p>To set Trip Relay in Fail Safe / Non Fail Safe mode - Chl A</p> <ul style="list-style-type: none"> ● Use ▲key to select Non Fail Safe / Fail Safe. Non Fail Safe - Normally de-energised Relay energises when the input signal exceeds pre-set Trip level. Fail Safe - Normally energised Relay de-energises when the input signal exceeds the pre-set Trip level ● Press PROG key and go to the next step. 	<p>A Tr FS/NFS Non Fail Safe</p>	<p>NFS - Non-Fail-Safe is the standard mode where the relay is de-energised in healthy condition and gets energised on alarm / trip occurrence.</p> <p>FS - Fail-Safe is that where relay is held energised in healthy condition while it is de-energised on occurrence of alarm / trip. However, the relay by virtue that it is in energised condition is considered to be safe.</p>
<p>To select Trip Relay Latching option - Chl A</p> <ul style="list-style-type: none"> ● Use ▲key to select 'Disabled / Enabled'. Disabled - Relay energises and de-energises as Trip activates and de-activates. Enabled - Relay energises as Trip activates but de-energises iff acknowledged and the trip de-activates. ● Press PROG key and go to the next step. 	<p>A Tr Latching Disabled</p>	
<p>To set Trip Time Delay - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter required time delay. ● Press PROG key and go to the next step. 	<p>A Tr Delay Time 05Sec</p>	<p>Max Time Delay - 0-60 Seconds settable. Recommended time delay of 5 seconds. Time delay must be incorporated to avoid spurious occurrence of alarm / trip.</p>

<p>To set the Alarm level - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Trip level. ● Press PROG key and go to the next step. 	<p>A Alarm Set 01.99</p>	<p>Max Alarm Level is 1 least count less than the Trip Level selected. If the Trip Level is 5.00 gPk, the Alarm Level can be set to 4.99 gPk max.</p>
<p>To set Alarm Hysterisis level - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Hysterisis for Trip. ● Press PROG key and go to the next step. 	<p>A AI Hysterisis 02</p>	<p>Max 30 counts can be set. 5 Counts that equates 5 LC's are recommended. Hysterisis is an important setting as it avoids relay hunting.</p>
<p>To set Alarm Relay in Fail Safe / Non Fail Safe mode - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select Non Fail Safe / Fail Safe. Non Fail Safe - Normally de-energised Relay energises when the input signal exceeds pre-set Trip level. Fail Safe - Normally energised Relay de-energises when the input signal exceeds the pre-set Trip level ● Press PROG key and go to the next step. 	<p>A AI FS/NFS Non Fail Safe</p>	<p>NFS - Non-Fail-Safe is the standard mode where the relay is de-energised in healthy condition and gets energised on alarm / trip occurrence. FS - Fail-Safe is that where relay is held energised in healthy condition while it is de-energised on occurrence of alarm / trip. However, the relay by virtue that it is in energised condition is considered to be safe.</p>
<p>To select Alarm Relay Latching option - Chl A</p> <ul style="list-style-type: none"> ● Use ▲ key to select 'Disabled / Enabled'. Disabled - Relay energises and de-energises as Trip activates and de-activates. Enabled - Relay energises as Trip activates but de-energises iff acknowledged and the trip de-activates. ● Press PROG key and go to the next step. 	<p>A AI Latching Disabled</p>	
<p>To set Alarm Time Delay - Chl A</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter required time delay. ● Press PROG key and go to the next step. 	<p>A AI Delay Time 05Sec</p>	<p>Max Time Delay - 0-60 Seconds settable. Recommended time delay of 5 seconds. Time delay must be incorporated to avoid spurious occurrence of alarm / trip.</p>
<p>At this point the option is to select Channel B programming or jump back to Chl A program or Exit programming -</p> <ul style="list-style-type: none"> ● Use ▲ key to select from - Yes / Exit To Bargraph / Jump To A Prog Yes - To choose Channel B programming. Exit To Bargraph - To exit programming. Jump to A Prog - Back to Ch A Program. ● Press PROG key - Yes - takes to Channel B programming. Exit To Bargraph - exits programming. If 'Jump To A Prog' - Will take you back to Ch A Program. 	<p>Channel B Prog Yes</p>	

<p>Here you have an option to copy Channel A program settings to Channel B program settings • Use ▲ key to select Yes / No Yes - Will copy the program settings and exit to Bargraph display No - Will take you through all the settings for Channel B as in Channel A programming</p>	<p>Copy Ch A Setup No</p>	
<p>To select sensor - Chl B • Use ▲ key to select from - mV/g / mV/m/s/s / mV/mm/s / mV/i/s • Press PROG key and go to the next step.</p>	<p>B Sns Units ? mV/g</p>	<p>B - depicts Channel B Sns - depicts Sensor mV/m/s/s - depicts mV/m/s² Option is to choose from 2-Wire Constant Current Velocity or Acceleration output sensors.</p>
<p>To enter correct sensitivity - Chl B • Press 'SHIFT' key, the cursor will blink below the left most digit. • Use ▲ key to increment and select the desired number. • Likewise use 'SHIFT' and ▲ keys and enter correct sensitivity. • Press PROG key and go to the next step.</p>	<p>B Sns - 100.0 mV/g</p>	<p>CAUTION - The module M88200 is designed for 100mV/g sensitivity sensor and the sensitivity setting is limited to its +/-20% variation. Sensitivity beyond 120mV/g may affect linearity at upper end of the specified full scale range. Next version will have better options.</p>
<p>To select measurement unit - Chl B • Use ▲ key to select from - Chl A gPk / gRMS / m/s/s Pk / m/s/s RMS / mm/s Pk / mm/s RMS / i/s Pk / i/s RMS OR mm/s Pk / mm/s RMS / i/s Pk / i/s RMS / micron P-P / micron Pk / mil P-P / mil Pk f • Press PROG key and go to the next step.</p>	<p>B Unit gPk</p>	<p>gPk appears for mV/g sensor selected at 'B Sns Units ?' above. mm/s appears for mV/mm/s sensor selected at 'B Sns Units ?' above. Note - The module is designed to provide only one stage integration, so, for acceleration sensor acceleration and velocity while for velocity sensor velocity and displacement measurements are possible.</p>
<p>To set the Full Scale Range - Chl B • Press SHIFT key, the cursor will blink below the left most digit. • Use ▲ key to increment and select the desired number. • Likewise use 'SHIFT' and ▲ keys and enter dsired Full Scale Range value. • Press PROG key and go to the next step.</p>	<p>B-FS gPk 10.00</p>	<p>B - depicts Channel B FS - depicts Full Scale Range m/s/s - depicts m/s² Maximum Full Scale Range settings - 10.00 gPk, 7.00 gRMS, 100.0 m/s/s , 70.0 m/s/s, 150.0 mm/s Pk, 100.0 mm/s RMS, 6.000 i/s Pk, 4.000 i/s RMS</p>
<p>To set the Floor Noise as percentage of Full Scale Range selected above - Chl B • Use ▲ key to increment and select the desired percentage level. • Press PROG key and go to the next step.</p>	<p>B Floor Noise % 01</p>	<p>Floor Noise % is set as % of Full Scale Range selected and can be set upto 10%, lower the better. If Floor Noise is set at 2%, the true signal or the noise or background vibration signal upto 2% is ignored, no digital or bargraph display. However, above 2%, actual vibration level is shown (for example 2.1% signal input is measured and displayed as 2.1%).</p>
<p>To set the TX Fail HI - Chl B • Press 'SHIFT' key, the cursor will blink below the left most digit. • Use ▲ key to increment and select the desired number. • Likewise use 'SHIFT' and ▲ keys and enter correct value. • Press PROG key and go to the next step.</p>	<p>B - TX Fail HI 30.0V</p>	<p>2.0V above and 2V below the actual sensor bias voltage is recommended for TX Fail HI and TX Fail LO settings. TX Fail event checks for the bias voltage of the sensor. However, as a thumb rule the MIL supplied sensors perform healthy if it maintains bias voltage between 8-14 V DC.</p>

<p>To set the TX Fail LO - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter correct value. ● Press PROG key and go to the next step. 	<p>B - TX Fail LO 30.0V</p>	<p>2.0V above and 2V below the actual sensor bias voltage is recommended for TX Fail HI and TX Fail LO settings. TX Fail event checks for the bias voltage of the sensor. However, as a thumb rule the MIL supplied sensors perform healthy if it maintains bias voltage between 8-14 V DC.</p>
<p>To select Filter Out mode - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select from In / Out. Out - To select Filter-Out / Overall measurement In - To select Filter-In LP / HP filters ● Press PROG key and - Out - takes to Start-up Protection select. In - takes to LP Filter select option. 	<p>B - Filter Out</p>	<p>The frequency response in Filter Out mode is +/-10% of the reading +/- 2LC.</p>
<p>To select Low Pass Filter - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select from - 1 KHz / 5 KHz / 10 KHz upper cut-off Low Pass filter ● Press PROG key and go to the next step. 	<p>B - Filter LP 10 KHz</p>	<p>LP - depicts Low Pass Low Pass Filter has upper cut-off frequency and M88200 allows to choose from 1K, 5K or 10K Hz. The Accuracy is +/- 10% and cut-off is at 3dB (20%)</p>
<p>To select High Pass Filter - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select from - 5 Hz / 10 Hz / 20 Hz lower cut-off High Pass filter ● Press PROG key and go to the next step. 	<p>B - Filter HP 10 Hz</p>	<p>HP - depicts High Pass High Pass Filter has lower cut-off frequency and M88200 allows to choose from 5 Hz, 10 Hz or 20 Hz. The Accuracy is +/- 10% and cut-off is at 3dB (20%)</p>
<p>To select Start-up Protection option - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select Disable / Enable. Enable - To enable Start-Up Protection option. Disable - To disable Start-Up Protection option. ● Press PROG key and go to the next step. Disable - takes to Ch A - 4mA Adj. Enable - takes to Start-up Delay select. 	<p>B - Start up Disable</p>	<p>Start-up Protection ensures Alarm and Trip are deactivated and the 4-20mA is <4mA for the set start-up time delay.</p>
<p>To set the Start-up time delay - Chl B</p> <ul style="list-style-type: none"> ● Press SHIFT key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use SHIFT and ▲ keys and enter required time delay. ● Press PROG key and go to the next step. 	<p>B - Start up Delay : 001 Min</p>	<p>Start-up time delay is settable upto 120 Minutes in multiples of one minute.</p>
<p>To set 4mA isolated out put - Chl B</p> <ul style="list-style-type: none"> ● Short the input pins to ensure 0mV input. ● Connect DMM between output terminals on the Back Plane. ● Use ▲ key to increment (4mA output) and SHIFT key to decrement (4mA output). ● Press PROG key and go to the next step. 	<p>B - Adj 4mA 26</p>	<p>Can set up to 60 counts. The 4mA is set around 30 counts. The total settable range is +/- 0.15mA approx. This is the only parameter settable on-line. It means as the counts are incremented or decremented the 4-20mA output changes immediately.</p>
<p>To set the Trip level - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Trip level. ● Press PROG key and go to the next step. 	<p>B Trip Set 01.99</p>	<p>Max Trip Level is 1 least count less than the Full Scale Range selected. If Full Scale Range is 5.00 gPk, the Trip Level can be set to 4.99 gPk max.</p>

<p>To set Trip Hysterisis level - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Hysterisis for Trip. ● Press PROG key and go to the next step. 	<p>B Tr Hysterisis 02</p>	<p>Max 30 counts can be set. 5 Counts that equates 5 LC's are recommended. Hysterisis is an important setting as it avoids relay hunting.</p>
<p>To set Trip Relay in Fail Safe / Non Fail Safe mode - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select Non Fail Safe / Fail Safe. Non Fail Safe - Normally de-energised Relay energises when the input signal exceeds pre-set Trip level. Fail Safe - Normally energised Relay de-energises when the input signal exceeds the pre-set Trip level ● Press PROG key and go to the next step. 	<p>B Tr FS/NFS Non Fail Safe</p>	<p>NFS - Non-Fail-Safe is the standard mode where the relay is de-energised in healthy condition and gets energised on alarm / trip occurrence. FS - Fail-Safe is that where relay is held energised in healthy condition while it is de-energised on occurrence of alarm / trip. However, the relay by virtue that it is in energised condition is considered to be safe.</p>
<p>To select Trip Relay Latching option - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select 'Disabled / Enabled'. Disabled - Relay energises and de-energises as Trip activates and de-activates. Enabled - Relay energises as Trip activates but de-energises iff acknowledged and the trip de-activates. ● Press PROG key and go to the next step. 	<p>B Tr Latching Disabled</p>	
<p>To set Trip Time Delay - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter required time delay. ● Press PROG key and go to the next step. 	<p>B Tr Delay Time 05Sec</p>	<p>Max Time Delay - 0-60 Seconds settable. Recommended time delay of 5 seconds. Time delay must be incorporated to avoid spurious occurrence of alarm / trip.</p>
<p>To set the Alarm level - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Trip level. ● Press PROG key and go to the next step. 	<p>B Alarm Set 01.99</p>	<p>Max Alarm Level is 1 least count less than the Trip Level selected. If the Trip Level is 5.00 gPk, the Alarm Level can be set to 4.99 gPk max.</p>
<p>To set Alarm Hysterisis level - Chl B</p> <ul style="list-style-type: none"> ● Press 'SHIFT' key, the cursor will blink below the left most digit. ● Use ▲ key to increment and select the desired number. ● Likewise use 'SHIFT' and ▲ keys and enter desired Hysterisis for Trip. ● Press PROG key and go to the next step. 	<p>B AI Hysterisis 02</p>	<p>Max 30 counts can be set. 5 Counts that equates 5 LC's are recommended. Hysterisis is an important setting as it avoids relay hunting.</p>
<p>To set Alarm Relay in Fail Safe / Non Fail Safe mode - Chl B</p> <ul style="list-style-type: none"> ● Use ▲ key to select Non Fail Safe / Fail Safe. Non Fail Safe - Normally de-energised Relay energises when the input signal exceeds pre-set Trip level. Fail Safe - Normally energised Relay de-energises when the input signal exceeds the pre-set Trip level ● Press PROG key and go to the next step. 	<p>B AI FS/NFS Non Fail Safe</p>	<p>NFS - Non-Fail-Safe is the standard mode where the relay is de-energised in healthy condition and gets energised on alarm / trip occurrence. FS - Fail-Safe is that where relay is held energised in healthy condition while it is de-energised on occurrence of alarm / trip. However, the relay by virtue that it is in energised condition is considered to be safe.</p>

<p>To select Alarm Relay Latching option - Chl B</p> <ul style="list-style-type: none"> Use ▲ key to select 'Disabled / Enabled'. Disabled - Relay energises and de-energises as Trip activates and de-activates. Enabled - Relay energises as Trip activates but de-energises iff acknowledged and the trip de-activates. Press PROG key and go to the next step. 	<p>B AI Latching Disabled</p>	
<p>To set Alarm Time Delay - Chl B</p> <ul style="list-style-type: none"> Press 'SHIFT' key, the cursor will blink below the left most digit. Use ▲ key to increment and select the desired number. Likewise use 'SHIFT' and ▲ keys and enter required time delay. Press PROG key and go to the next step. 	<p>B AI Delay Time 05Sec</p>	<p>Max Time Delay - 0-60 Seconds settable. Recommended time delay of 5 seconds. Time delay must be incorporated to avoid spurious occurrence of alarm / trip.</p>
<p>To exit to Bargraph or to go back to Chl A programming -</p> <ul style="list-style-type: none"> Use ▲ key to select 'Bargraph / To A Program' Bargraph - Enables exit program mode. To A Program - Takes back to Chl A programming option. 	<p>Exit to?</p>	