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# CONDITIONS OF CONTRACT

1. Any goods (at your request) not collected/dispatched, shall be stored at your expense and risk. Such goods may be sold or disposed of 30 days after the invoice date to cover the price and cost incurred thereby.
2. Delivery / completion shall be effected by agreement or any reasonable extension thereof, and no claim(s) shall lie against NicomUSA, Inc. for any reason save for negligence by NicomUSA, Inc.
3. Each and every installment delivery shall be considered as a separate contract and shall be subject to full payment prior to any further delivery(ies).
4. Delivery shall be F.O.B. National City, California. Shipment to consignee's chosen address and all carriage insurance shall be at consignee's expense.
5. Any price increases affecting the quoted price prior to delivery shall be increased accordingly.
6. All quoted prices at NicomUSA, Inc's. sole discretion are subject to change/variation by virtue of any condition beyond their control. The price shall not include packing costs for shipping purposes or any taxes, duties, or transportation costs.
7. **Any damage to the goods must be reported to the carrier in writing on the shipping receipt. Any discrepancy/damage discovered subsequent to delivery shall be reported to NicomUSA, Inc. within 5 days of its receipt.**
8. NicomUSA, Inc. extends to the original end user purchaser all original manufacturers' warranties which are not transferable and all claims are to be made through your dealer or distributor as per indicated procedures.
9. All manufacturers' warranties will be supported by NicomUSA, Inc. to ensure precise and speedy service when possible.
10. NicomUSA, Inc. shall not be liable for damages of whatsoever nature arising out in connection with the product or its use thereof.
11. **NicomUSA's warranty shall not include:**
    a) Cost of reshipment of the unit to NicomUSA, Inc. for repair purposes.
    b) Any unauthorized repairs/modifications.
    c) Repair of unit whose seal has been broken without Nicom's authorization.
    d) Incidental/consequential damages as a result of any defect.
    e) Nominal non–incidental defects.
    f) Free replacement of parts like vacuum tubes, amplifier tubes and cooling fans.
    g) Free replacement of semiconductors ( transistors, mosfets and IC's) which are not covered under any warranty.
    h) Shipment costs or insurance of the unit or replacement units/parts from customer to NicomUsa and back from NicomUsa back to customer.
12. Warranty shall commence as of the invoice/shipment date and for the period of the manufacturer's warranty.
13. To claim your rights under this warranty:

A. Contact the dealer or distributor from whom this product was purchased. Describe the problem and ask if they have an easy solution. Dealers and distributors are supplied with information on problems which may occur and usually can repair the unit more quickly than by going directly to the factory. It is also often true that errors in installation or use will be discovered by your dealer.

B. If your dealer cannot help, they will contact Nicom and explain the problem. If it is determined that the unit needs to be returned to the factory, they will obtain from Nicom a return authorization and shipping instructions for you.

C. When you receive the return authorization, you can return the unit. Pack the unit(s) carefully for shipment. If possible, use the original packing materials and assume the shipping carton will be dropped several times during the transportation process. We recommend the use of UPS or similar freight services and would discourage the use of the postal system. If equipment is received inadequately packed, there will be a charge for re-packing the equipment for re-shipment. The risk of loss is assumed by you (NicomUSA, Inc. is not responsible for damage or loss) until the package is received at NicomUSA, Inc.. We advise you to take out insurance for the full replacement value of the unit. Ship the unit **PREPAID** to the address specified by NicomUSA, Inc. service manager on the return authorization. DO NOT RETURN UNITS WITHOUT A RETURN AUTHORIZATION, AS THEY WILL NOT BE ACCEPTED. **Be sure to enclose a written descriptive statement of the problem experienced and a copy of your original invoice establishing the starting date of the warranty.**

Please note in warranty returns where no fault is found, there will be a $100 service fee plus return freight.
No work on repairs can be started until full payment is received. Any units submitted for repair and not paid for 30 days after submission will become the property of NicomUsa, Inc.

14. Terms shown on the front of invoice are from date of invoice and not contingent upon delivery. In the event buyer fails to fulfill the terms of payment hereunder, buyer promises to pay all costs and expenses of collection and reasonable attorney's fees incurred by NicomUSA, Inc. on account of collection, whether or not suit is filed thereon. NicomUSA, Inc. reserves the right to charge interest on all bills not paid at maturity.
15. As a condition of purchaser conducting business with NicomUSA, Inc., the parties agree that should any dispute arise under such transaction for any reason, that venue and jurisdiction, therefore, shall be San Diego Superior Court, Central Court District or Municipal Court of the County of San Diego, San Diego Judicial District.
16. Interest shall accrue at the rate of 2% per month on all balances incurred for whatever reason remaining unpaid thirty (30) days from the date of invoice.
17. If buyer has consigned goods to NicomUSA, Inc. for repair within or outside of warranty period, buyer may lease/rent replacement goods AS IS from NicomUSA, Inc., if available. Buyer agrees that any and all of its goods in possession of NicomUSA, Inc. for whatever purpose, shall constitute retained security for the timely return of said rental goods as well as timely payment for repair services performed by NicomUSA, Inc. who at its option, may require a deposit paid for any rental goods leased to buyer. Said deposit may be used by NicomUSA, Inc. as satisfaction of any amounts owed to it by buyer in the event of buyer's failure to make any payment required in a timely fashion.

# First Aid

The personnel employed in the installation, use and maintenance of the device, shall be familiar with theory and practice of first aid.

## 1. Treatment of electrical shocks

### 1.2 If victim is not responsive

follow the A-B-C's of basic life support

- Place victim flat on his backon a hard surface.
- Open airway: lift up neck, push forehead back
- clear out mouth if necessary and observe for breathing
- if not breathing, begin artificial breathing (Figure 2): tilt head, pinch nostrils, make airtight seal, four quick full breaths. Remember mouth to mouth resuscitation must be commenced as soon as possible

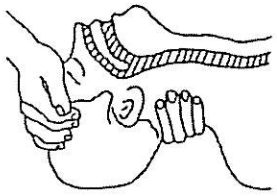

Figure 1

Figure 2

- Check carotid pulse (**Figure 3**); if pulse is absent, begin artificial circulation (**Figure 4**) depressing sternum 1 1/2" TO 2" (**Figure 5**).

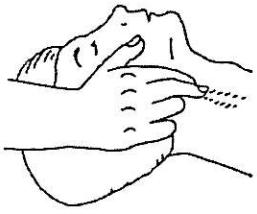

Figure 3

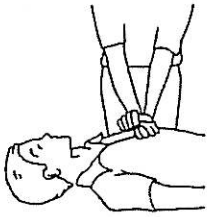

Figure 4

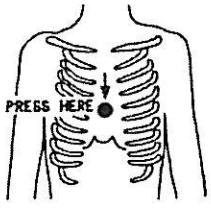


Figure 5

- APPROX. 80 SEC. : ONE RESCUER, 15 COMPRESSIONS
- APPROX. 60 SEC.: TWO RESCUERS, 5 COMPRESSIONS, 1 BREATH
- DO NOT INTERRUPT RHYTHM OF COMPRESSIONS WHEN SECOND PERSON IS GIVING BREATH
- Call for medical assistance as soon as possible.

### 2.1 If victim is responsive

- Keep them warm
- Keep them as quiet as possible
- Loosen their clothing (a reclining position is recommended)
- Call for medical help as soon as possible

## 2.2 Treatment of electrical Burns

### 2.2.1 Extensive burned and broken skin

- Cover area with clean sheet or cloth (Cleansed available cloth article).
- Do not break blisters, remove tissue, remove adhered particles of clothing, or apply any salve or ointment.
- Treat victim for shock as required.
- Arrange transportation to a hospital as quickly as possible.
- If arms or legs are affected keep them elevated

If medical help will not be available within an hour and the victim is conscious and not vomiting, give him a weak solution of salt and soda: 1 level teaspoonful of salt and 1/2 level teaspoonful of baking soda to each quart of water (neither hot or cold). Allow victim to sip slowly about 4 ounces (half a glass) over a period of 15 minutes. Discontinue fluid if vomiting occurs

Do not give alcohol

### 2.2.2 Less severe burns (1st and 2nd degree)

- Apply cool (not ice cold) compresses using the cleansed available cloth article.
- Do not break blisters, remove tissue, remove adhered particles of clothing, or apply salve or ointment.
- Apply clean dry dressing if necessary.
- Treat victim for shock as required.
- Arrange transportation to a hospital as quickly as possible
- If arms or legs are affected keep them elevated.

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CHAPTER 1



CHAPTER 2



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# CHAPTER 1
# GENERAL DESCRIPTION
## NT 1000 Transmitter Exciter

### INTRODUCTION

The NT 1000 LCD Exciter is the latest in state of the art products available from Nicom. This Transmitter is designed with high reliability components and is intended to give many years of trouble free continuous service. This unit incorporates many features including a switching power supply and a PLL frequency synthesizer.
The latest SMD technology has allowed to make a more compact unit (only 3 rack spaces) and at the same time a very light unit (only 45 lbs).
The same technology has developed a new Mosfet (SD2942) capable of more than 350W output;
the use of three of them delivers a 1100 W output that is more than enough to allow a continuous 1000W output.

### INSTALLATION

After unpacking the unit, check for any mechanical damage or loose parts inside .If there is any transportation damage, inform immediately the supplier and do not put the module into operation.

The applicable voltage is 220-240 V only.
Ensure that the station's ground system connections have a ground resistance of less than 5 ohms. The equipment's cabinet must be effectively grounded.

Check that the transmitter's main switch is off.

Connect the power cord to the AC plug.

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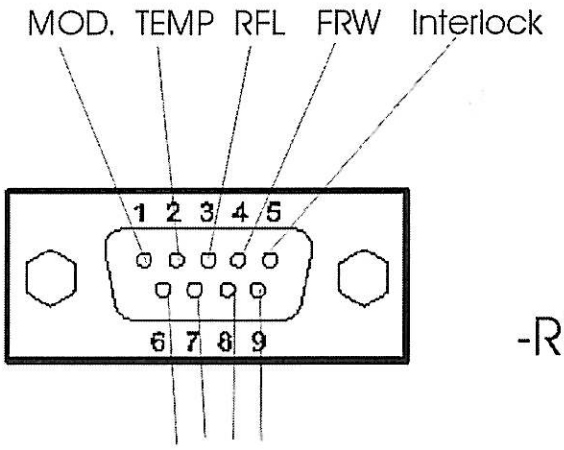
# NT-1000 LCD Series Transmitters

# DB-9 TELEMETRY CONNECTION




-REAR VIEW-

| Pin # | Description |
|---|---|
| 1 | Modulation |
| 2 | Temperature (celsius) |
| 3 | Reflected Power |
| 4 | Forward Power |
| 5 | Interlock ( to ground ) |
| 6-9 | GROUND |

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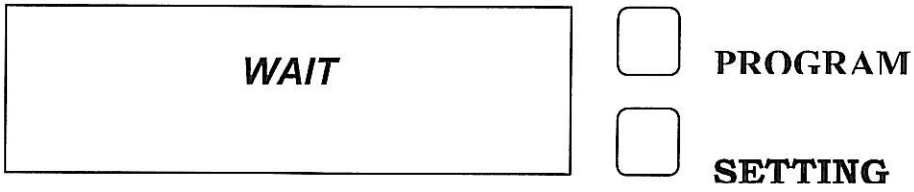
# NT 1000 PROGRAMMING

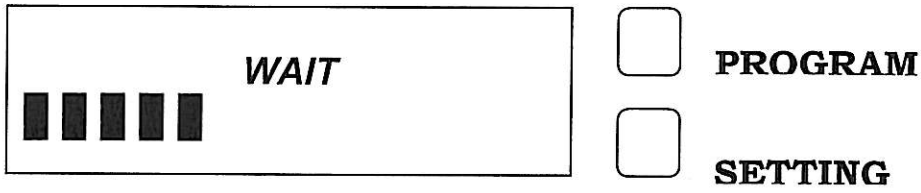
*Connect a 50 ohm load or 50 ohm antenna to the RF output, connect the equipment into a mains supply (240 VAC). The equipment is factory pre-set to 50 W.*

*Switch ON the power and the yellow V POWER LED will light.*

*The Display will show:*

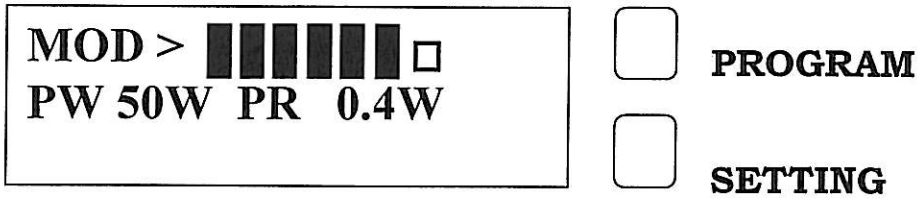



*After 3 seconds the green PLL LOCK led will light and the Display will show an increasing bar. After a further 5 seconds the green ENABLE will light and there will be output power.*




*At this point the Display will show the next parameter:*

- *Level Modulation (MOD >* ▮▮▮▮▮▮□▮▮▮
- *Forward Power (FRW 50.0W);*
- *Reflected Power (RFL 0.4W).*




*The default frequency is 98.000 MHz.*

*To display the frequency push the SETTING key.*
*In order to display the parameter push the SELECT key.*

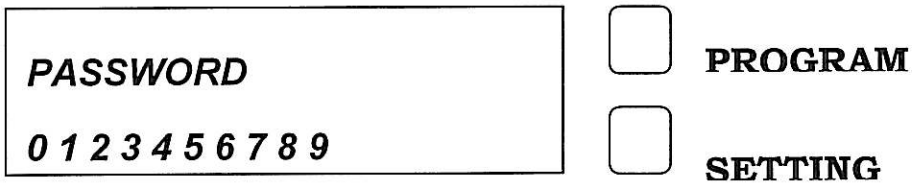
***Display Password***

*The Password mode is factory set to enable, and is not possible change this setting.*

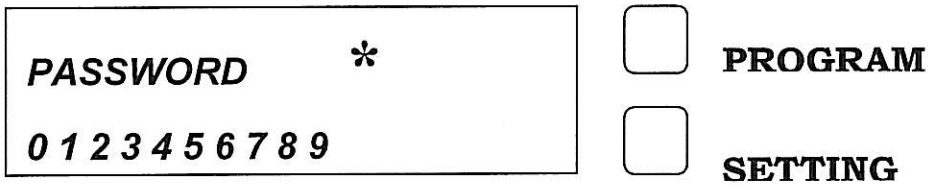
*The default password is **1 2 3**.*

*The way for changing the password is the following:*

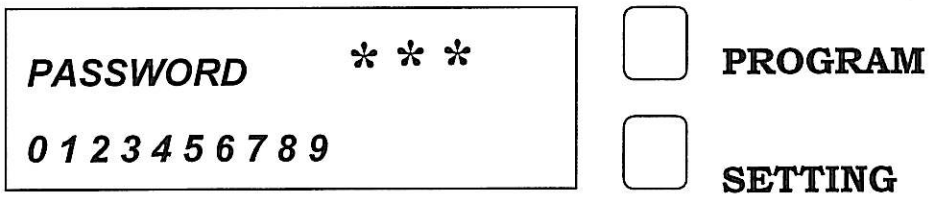
- *Press the PROGRAM key for 3 seconds;*



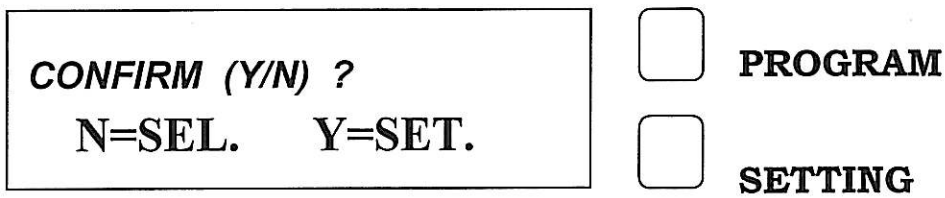

- *Press the PROGRAM key to move the underscore character position at the required digit, and press the SETTING key to confirm the digit.*



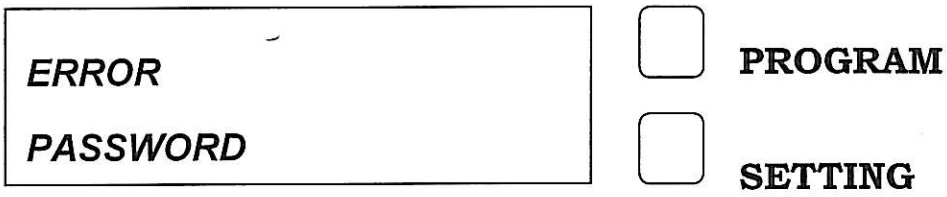

*Repeat the same for the two remaining digits.*




- *If the password is correct press the SETTING key to confirm, otherwise press the PROGRAM key to select again.*

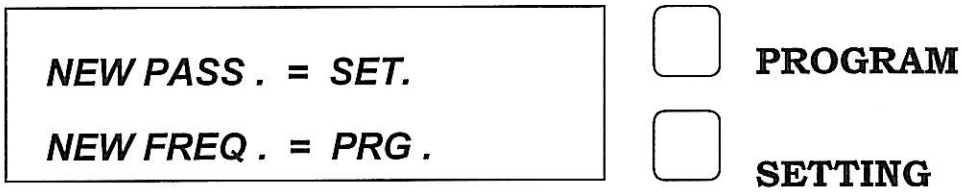


*If the password is not correct an error is displayed:*



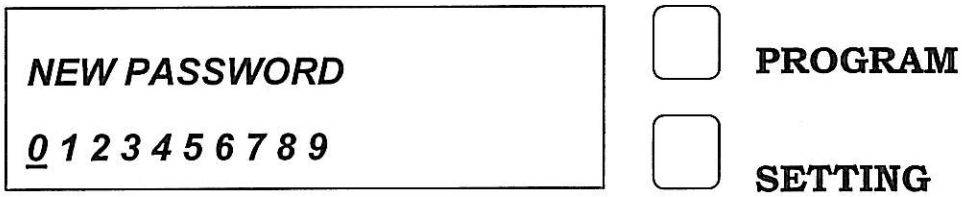

*After a few seconds the display will show the parameters again.*

- *When the password is correct, the display will show:*

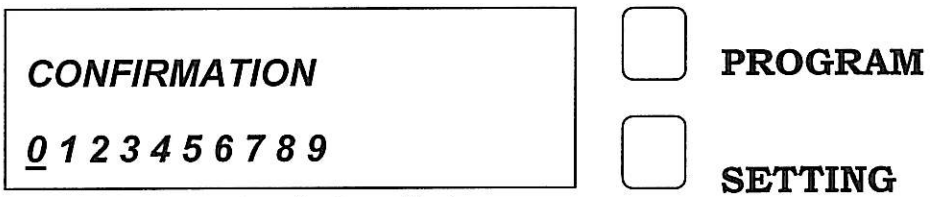



*To change the password press the SETTING key.*
*To change the frequency press the PROGRAM key.*

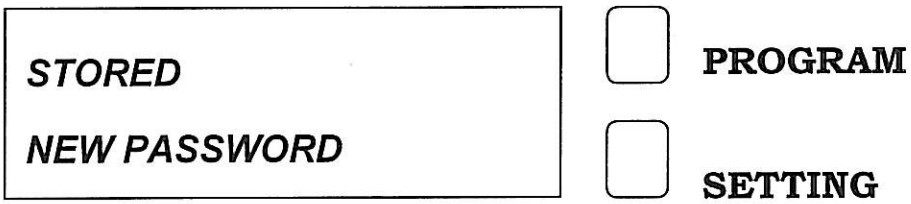
- *For changing the password proceed with the same method for the required password:*



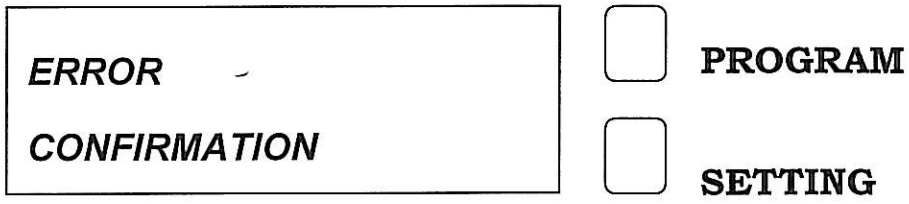

*The confirmation password will be required.*




*If the password is correct the display will show:*



*If the confirmation password is wrong the display will show:*



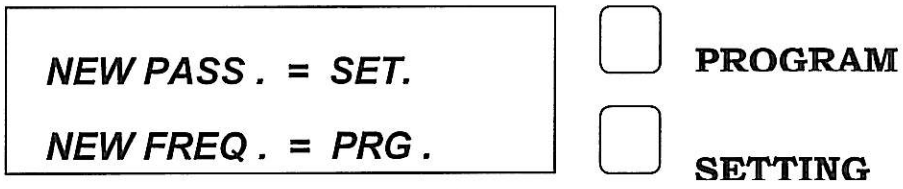

***IMPORTANT NOTE***

## *! BE CAREFUL !*

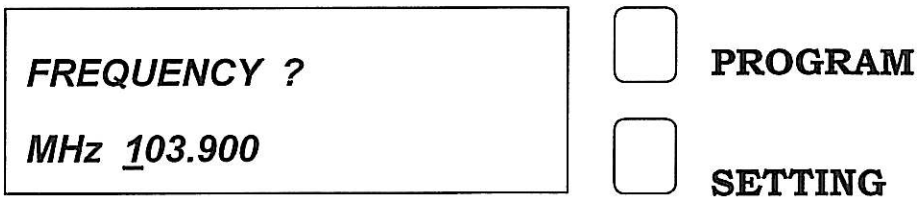
***Once the password is set, it must be remembered, otherwise neither the frequency nor the password can be reset and the unit will have to be returned to Nicom for resetting.***

***Display Change of Frequency.***

- *Press the PROGRAM key for 3 seconds and enter the correct password. At this point press again the SELECT key:*



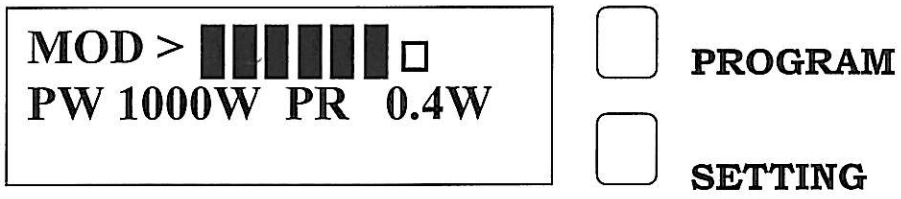

- *Press the PROGRAM key to change the desired digit and press the SETTING key to confirm it.*



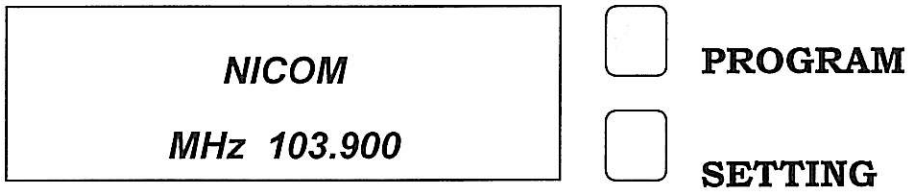

*The underscore character indicates which digit can be change.*
*To move the underscore character hit the PROGRAM key.*

*When the new frequency is chosen, then press the SETTING key confirm it.*

*After a "WAIT CYCLE", the display will show the parameters:*




*After 7 minutes the display light will switch off and the display will show:*



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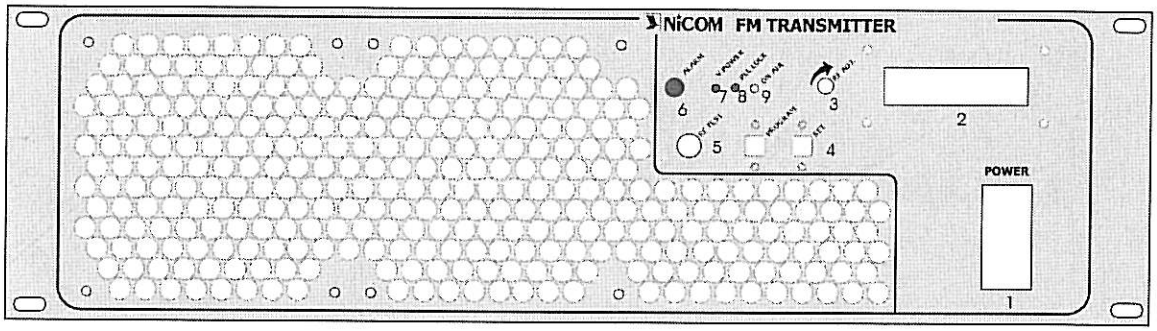
# NT-SERIES TRANSMITTERS FRONT PANEL




1- Main Power Switch
2- Multifunction LCD Display
3- Output Power adjustment
4- Programming push buttons
5- R.F Output monitor
6- Alarm Indicator ( See Description)
7- Power Supply Voltage Indicator
8- PLL lock indicator
9- ON-AIR Indicator

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## TECHNICAL FEATURES

### FRONT PANEL COMMANDS AND SIGNALING

The front control panel carries the power on switch, the control meter, some alarm warning LED's and a RF monitor connector. On the bottom, a panel grid for ventilation.

**1)** This is the main AC power switch; the unit will shut down completely with this switch.

Always keep it off before connecting the antenna.

**2)** This multifunction LCD display allows the reading of the Forward power, reflected power and modulation level.

After few minutes it shut off and to resume it you must push one of the two square programming buttons.

**3)** This is the trim pot to adjust the forward power of the transmitter. Rotate gently clockwise to increase the power. If you exceed the nominal power the protection will shut down the power itself

**4)** These two push buttons are used to program the frequency of the transmitter and to set a password. (see programming)

**5)** At the RF monitor output, (BNC type), a sample of the output power is available which is typically attenuated 50 dB .This is useful for a direct reading with a Spectrum analyzer to verify the spectrum purity, harmonic emissions etc.

**6)** This Red Alarm Indicator inhibits the unit when something is wrong. There could be 3 different

causes for the LED to lit; **a)** when too much driving power is given from the exciter (overdrive)

**b)** when the temperature of the heat sink goes over 60 degrees Celsius

**c)** when more than 10% reflected power is detected by the VSWR circuit sensor.

In any of these circumstances the unit goes off the air and for reset it the only way is to turn off the main AC switch and turn on again after few seconds. If the problem has been removed the Red LED should stay off otherwise you should refer to one of our technicians.

**7)** This LED indicates that all the power supplies are working properly.

**8)** This LED indicates that the unit is locked at the desired frequency.

**9)** This LED indicates that the transmitter is ON-AIR.

## STARTING PROCEDURE

Connect the antenna cable to the '7/16 DIN' connector on the back of the unit. The antenna system must be set up to operate at the transmitter's working frequency.

### ATTENTION

Antenna matching is **extremely crucial** for FM transmitters. Operate this unit only after verifying good matching. Mismatching will decrease the communication distance and unduly stress the semiconductors.
Turn on the transmitter. You should see the "WAIT" message appear on the LCD Display.
After few seconds the green LED "PLL LOCK" should turn on. This indicates that the frequency is locked on the programmed value. In the display will appear a sequence of squares.
After few more seconds the "RF ENABLE" green LED will come on. This indicates that RF power is being delivered to the output connector on the back.
You can now increase the output power through the small trim pot located in the front panel and identified with " RF ADJ."
Increase slowly till you reach the power you need; keep always an eye at the Reflected power reading to verify that the antenna is well operating. The indication of the reflected power is on the right side of the display "RFL".
Once you have reached the desired power level, you should wait till the unit warms up (30 minutes)

Now you can input modulation. For MONO operation connect your signal to the XLR connector or BNC, Depending on the model. Following the connecting instructions printed on the back of the transmitter and then regulate the input level with the apposite trimmer. For stereo input, use the BNC connector labeled "MPX".
Regulate the audio with the apposite trimmer.

**Note**: Be sure that the modulation level is close to but not more than 75KHz. 75KHz is 100% modulation. Lower modulation level will decrease the S/N value while over-modulation (>100%) will cause distortion at the receiver and it is against current regulations.

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# CHAPTER 2

# ELECTRICAL SPECIFICATIONS

***NT 1000 TECHNICAL DATA***

| | |
|---|---|
| *Power output:* | *5 to 1000 Watts continuously variable* |
| *Frequency of operation:* | *Synthesized with TXCO crystal reference* |
| *RF output connector/ Impedance:* | *7/16 DIN / 50 Ohms* |
| *Frequency Stability:* | *Better than 5ppm (± 500 Hz) , 0 to 50° C.* |
| *Frequency Range:* | *87.5 - 108 Mhz* |
| *Frequency programming:* | *Digitally in 10 Khz increments.* |
| *Modulation type:* | *Direct FM at the carrier frequency* |
| *S/N Ratio (ref. to 50 Khz / 1000 Hz):* | *Mono > 70dB - Stereo > 65 dB.* |
| *Distortion, THD:* | *< 0.1 %, Typ. 0.05 %* |
| *Asyncronous AM S/N ratio:* | *65 dB below reference carrier with 100% AM (no FM modulation, 75 usec de-emphasis modulation present).* |
| *Syncronous AM S/N ratio:* | *60 dB below reference carrier with 100% AM (FM modulation ±75 Khz).* |
| *DC input power:* | *48 V VDC 40 A* |
| *AC input power:* | *Single phase 220-240 V* |
| *Ambient Temperature Range:* | *0° to 50° C (+32° to +122° F)* |
| *Spurious and Harmonic or Subharmonic Emissions:* | *< -80 dB or better* |
| *Stereo Separation* | *55 dB @ 1 Khz* |

***COMPOSITE OPERATION***

| | |
|---|---|
| *Composite inputs* | *four total, 1 for MPX and 3 for SCA* |
| *MPX input* | *1 unbalanced bnc connector* |
| *MPX input impedance* | *2 K ohms* |

| | |
|---|---|
| *MPX input level* | *3,5 V p-p (1,237 Vrms/3.64 dBm)* |
| *Composite FM unweighed S/N ratio* | *> 78 dB below ±75 Khz deviation at 400 Hz* |
| | *measured in a 30 Hz - 100Khz bandwidth with* |
| | *75 usec de-emphasis (RMS)* |
| *Composite Total Harmonic Distortion* | *0.05 % typical* |
| *Composite Intermodulation Distortion* | *0.05 %, measured with a 1 Khz and a 1.3 Khz* |
| | *tone, 1:1 ratio, at 100% modulation* |
| *Baseband* | *30 Hz - 60 Khz within 0.15 dB* |
| *Crosstalk* | *main to stereo subchannel and stereo subchannel* |
| | *to main > 55 dB ( 60 dB typical)* |
| *SCA Inputs* | *3 unbalanced BNC connectors* |
| *SCA Input Impedance* | *10 K Ohms* |
| *SCA Input Levels* | *0 dBm (775 mV rms/ 2.2 V p-p) nominal for* |
| | *±75 Khz deviation, adjustable* |
| *SCA Amplitude Response* | *± 0.8 dB, 40 Khz to 100 Khz* |
| *Crosstalk* | *67 Khz SCA to main or to stereo subchannel >65dB* |
| | *92 Khz SCA to main or to stereo subchannel >70 dB* |

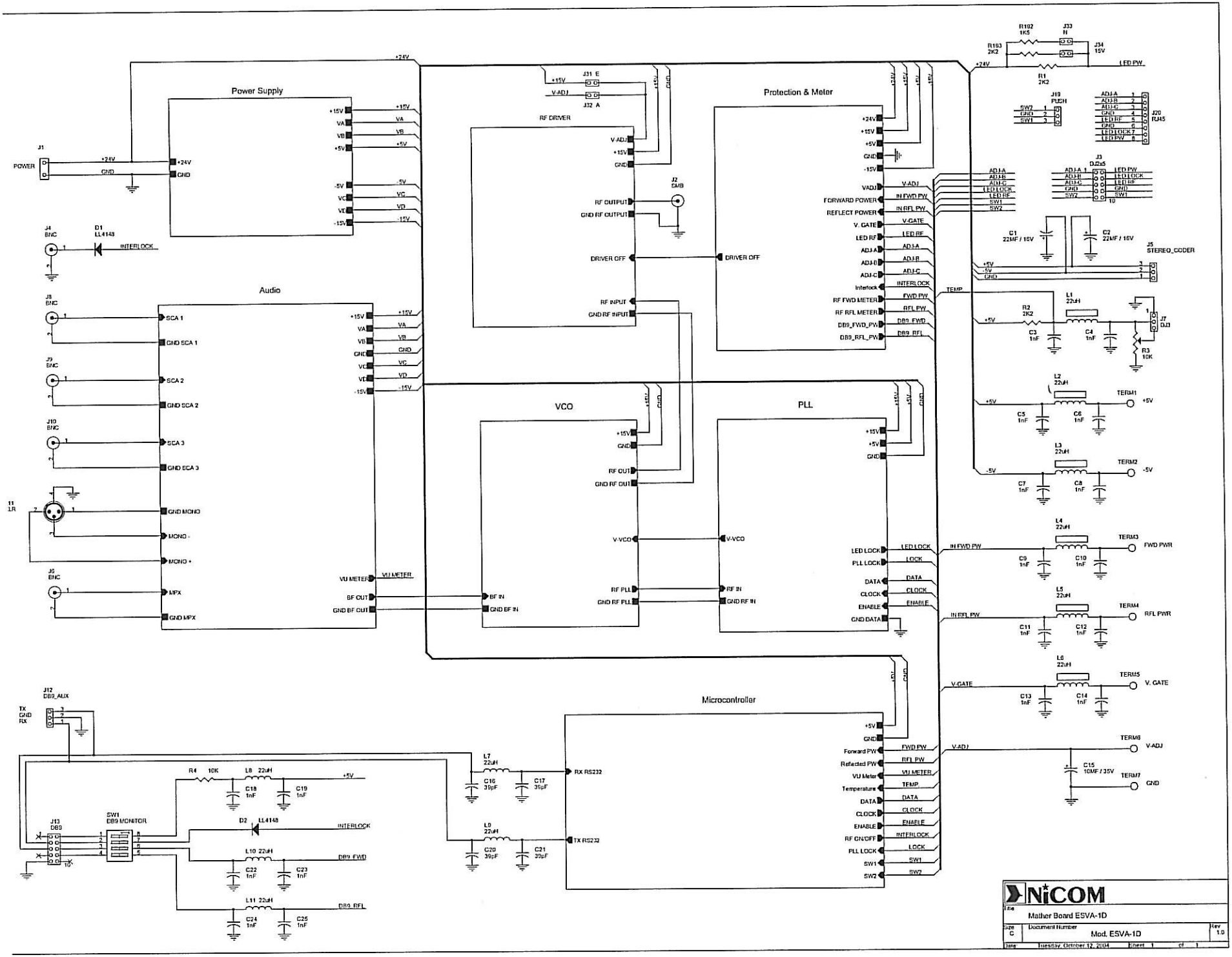
***MONOAURAL OPERATION***

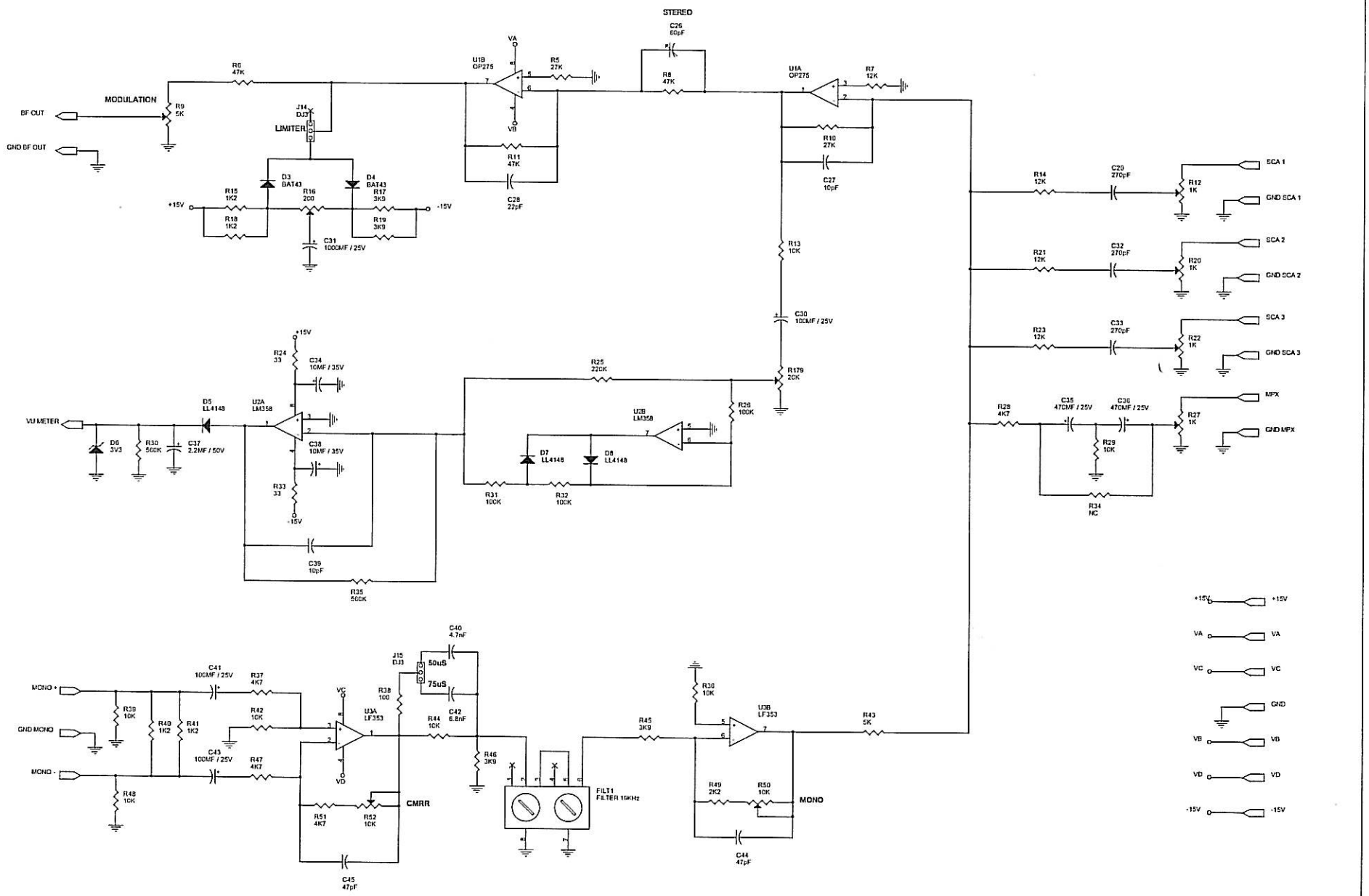
| | |
|---|---|
| *Audio Input Impedance* | *600 Ohms balanced or unbalanced; 50 dB common mode suppression* |
| *Audio Input Level* | *0 dBm (775 mV rms/ 2.2 V p-p) nominal for* |
| | *±75 Khz deviation, adjustable* |
| *FM S/N Ratio* | *> 70 dB below ±75 Khz deviation at 400 Hz* |
| | *measured in a 30 Hz - 20Khz bandwidth with* |
| | *75 usec de-emphasis (RMS)* |
| *Audio Frequency Response* | *± 0.8 dB, 30 Hz to 15 Khz* |
| *Intermodulation Distortion* | *0.05 %, measured with a 1 Khz and a 1.3 Khz* |
| | *tone, 1:1 ratio, at 100% modulation* |

# MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Chassis Dimensions: | 132 mm (5.1") H<br>540 mm (21")D<br>483 mm (19) W |
| Front panel dimensions: | 483 mm (19") W<br>132 mm (5.1") H |
| Ambient operating temperature: | from 0 to + 50 C (+32 to +122 F) |
| Humidity: | 90% maximum, non condensing. |
| Weight: | 45 Lbs ( 20Kg) |
| Shipping Dimensions: | 30" x 23" x 8" |

REF1
LCD1
J19
J7
J20
J3
D6
C96
C97
C15
R82
C93
J34
J33
R87
R88
C98
R1
Q16
J36
J35
R187
R197
C168
R201
R155
Q1
R53
C50
C53
R54
R58
R62
R61
R57
R56
R59
R60
R55
R63
C52
R65
R64
R70
J17
U5
R71
R72
D9
U6
J16
U4
C51
C46
R67
R66
R68
R69
C47
U19
U12
J30
J29
D19
R100
R102
Q2
R89
R90
C94
C11
C9
L5
C12
L4
C13
L6
C14
C10
TERM3
TERM4
TERM2
TERM5
TERM1
C7
L3
C8
C5
L2
C6
R183
R180
R198
R83
D18
R95
R94
C95
C92
R81
R86
C91
R85
R184
R195
R196
R194
R101
C160
R182
R181
C159
R185
R193
R192
R204
R205
R84
D17
R92
R93
R91
Q3
Q4
Q5
Q7
R96
R97
R98
R99
C5
L2
C7
L3
C8
L6
C14
C10
C12
L4
C13
C9
C11
L5
C1
C2
J5
D10
R73
D11
R74
D14
R77
D15
R80
C49
C48
Y1
C57
C56
C58
C59
C54
C55
R104
R106
R110
C101
R105
U7
U13
R112
R114
R117
R113
C105
C103
C100
C102
R107
R115
C80
C79
C84
C83
C81
C82
U11
L15
C140
C136
R158
R156
R159
R160
R150
R154
C128
R137
R145
R142
U18
C139
R153
R147
C124
C126
R136
R146
R139
C135
C137
C131
C166
J21
J22
J23
J24
C125
R148
R143
R190
R140
J18
R151
R152
Q10
C127
TCXO1
U17
C129
C132
C133
C138
R149
J25
R103
J26
R141
C134
J28
R144
R191
J27
C130
D28
R135
R138
C121
R133
R9
C118
COAX1
L17
R128
R130
C119
C117
U16
C122
C123
R134
L18
R132
R131
L19
D20
D21
D22
D23
D24
D25
D27
D26
Q9
Q8
C116
C113
C112
R124
R125
R123
R121
C110
C115
R126
R127
C120
R129
L16
C114
C106
C109
C111
U15
C108
C107
R120
R122
J32
J31
R164
R163
R168
C141
C147
R169
R172
R174
R176
L21
C148
L22
C149
C150
J2
L20
C142
Q12
D32
R162
R143
R167
C145
R173
C152
C157
C156
R175
L24
L23
R166
C155
C154
C151
R178
R170
R171
Q13
C144
C146
R177
C153
C158
C165
U10
D34
D33
D13
D12
Q15
Q14
C76
C164
C162
C163
C161
U20
C77
L14
C63
R189
C78
C67
C62
C64
L13
L12
U8
C66
J38
C61
J37
C68
C69
U9
C65
J1
C60
C16
C17
L7
J12
L9
C20
C21
J13
SW1
D2
R4
C19
L8
C18
C23
L10
C22
C24
L11
D1
R109
R108
C25
C104
R119
R116
R118
U14
R111
R24
R33
C37
C38
C34
U2
R26
D8
R32
D7
R31
R25
D6
R30
R39
R35
D5
R15
R18
D3
D4
R17
R19
J14
R16
R179
C31
R13
C30
C26
U1
C72
C28
R8
C71
R75
R5
R11
R6
C70
C86
C85
R78
C87
R7
R10
C27
R49
R43
C40
R38
C42
J15
R52
FILT1
C74
R76
R45
R36
C44
R46
C75
R44
C73
C89
C88
R79
C90
R42
R37
R47
C45
R51
R41
R40
R39
R48
C43
C41
U3
J11
C35
C36
R28
R29
R34
R12
R20
R22
R50
R27
J4
J8
J9
J10
J6
C29
R14
C32
R21
C33
R23
REF2


Power Supply
Audio
RF DRIVER
Protection & Meter
VCO
PLL
Microcontroller
J1 POWER
J4 BNC
D1 LL4148
INTERLOCK
J8 BNC
J9 BNC
J10 BNC
J11 LR
J6 BNC
J2 SMB
J31 E
J32 A
V-ADJ
RF OUTPUT
GND RF OUTPUT
DRIVER OFF
RF INPUT
GND RF INPUT
SCA 1
GND SCA 1
SCA 2
GND SCA 2
SCA 3
GND SCA 3
GND MONO
MONO -
MONO +
MPX
GND MPX
VU METER
BF OUT
GND BF OUT
BF IN
GND BF IN
RF OUT
GND RF OUT
V-VCO
RF PLL
GND RF PLL
RF IN
GND RF IN
LED LOCK
PLL LOCK
DATA
CLOCK
ENABLE
GND DATA
R102 1K5
R103 2K2
J33 N
J34 15V
LED PW
R1 2K2
J19 PUSH
J20 RJ45
J3 DJ2x5
J10
ADJ-A
ADJ-B
ADJ-C
GND
LED RF
LED LOCK
LED PW
SW1
SW2
+24V
+15V
+5V
-5V
-15V
VA
VB
VC
VD
VE
VADJ
FORWARD POWER
REFLECT POWER
V-GATE
LED RF
ADJ-A
ADJ-B
ADJ-C
Interlock
RF FWD METER
RF RFL METER
DB9_FWD_PW
DB9_RFL_PW
DB9_FWD
DB9_RFL
DRIVER OFF
C1 22MF / 16V
C2 22MF / 16V
J5 STEREO_CODER
TEMP
L1 22uH
R2 2K2
C3 1nF
C4 1nF
R3 10K
J7 DJ3
L2 22uH
C5 1nF
C6 1nF
TERM1
L3 22uH
C7 1nF
C8 1nF
TERM2
L4 22uH
C9 1nF
C10 1nF
TERM3
FWD PWR
IN FWD PW
L5 22uH
C11 1nF
C12 1nF
TERM4
RFL PWR
IN RFL PW
L6 22uH
C13 1nF
C14 1nF
TERM5
V. GATE
TERM6
V-ADJ
C15 10MF / 35V
TERM7
GND
J12 DB9_AUX
TX
GND
RX
R4 10K
L8 22uH
C18 1nF
C19 1nF
SW1 DB9 MONITOR
J13 DB9
D2 LL4148
L10 22uH
C22 1nF
C23 1nF
L11 22uH
C24 1nF
C25 1nF
L7 22uH
C16 39pF
C17 39pF
L9 22uH
C20 39pF
C21 39pF
RX RS232
TX RS232
Forward PW
Refected PW
VU Meter
Temperature
RF ON/OFF
NiCOM
Mather Board ESVA-1D
Mod. ESVA-1D
Rev 1.0
Tuesday, October 12, 2004




NiCOM

Title: Audio Output

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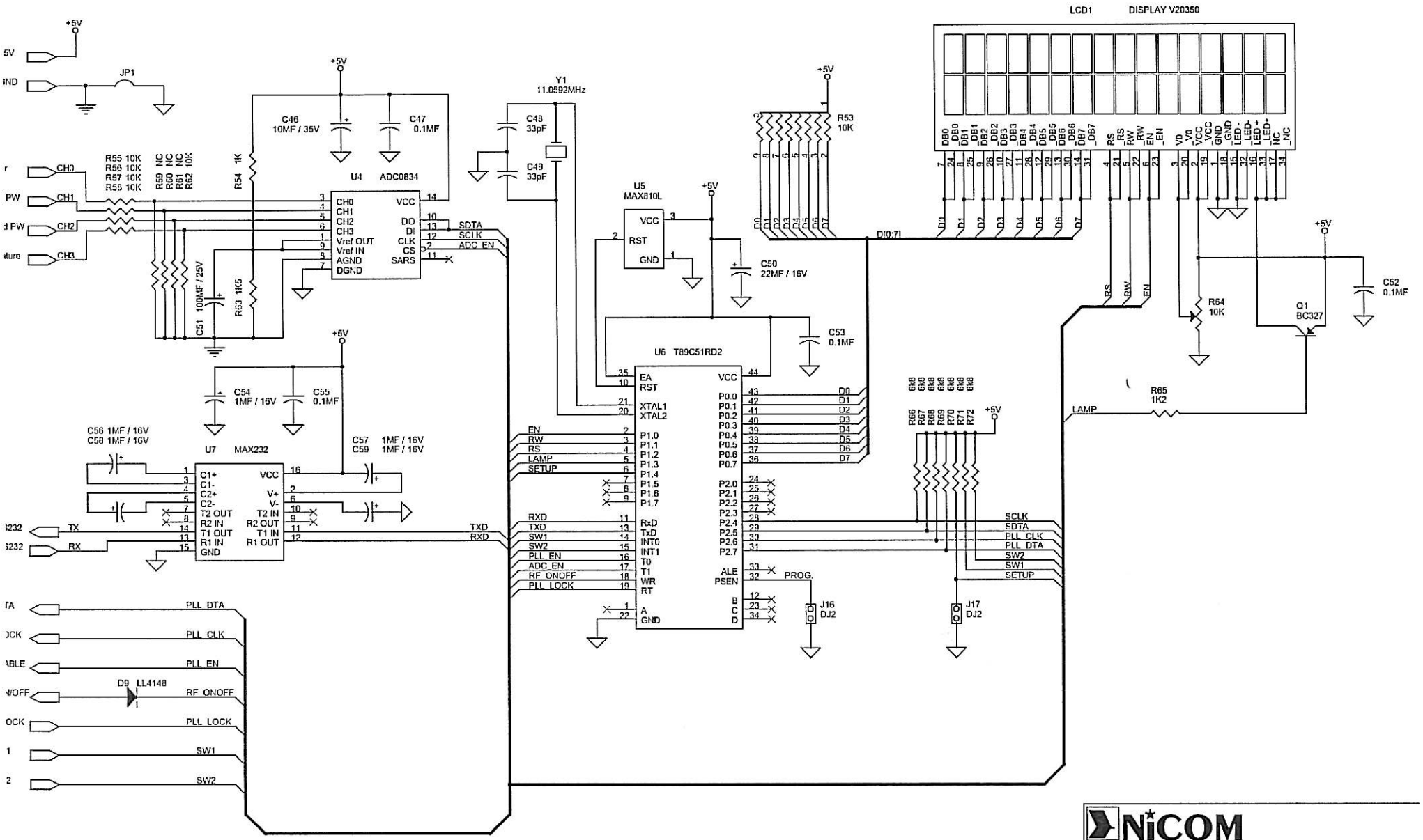
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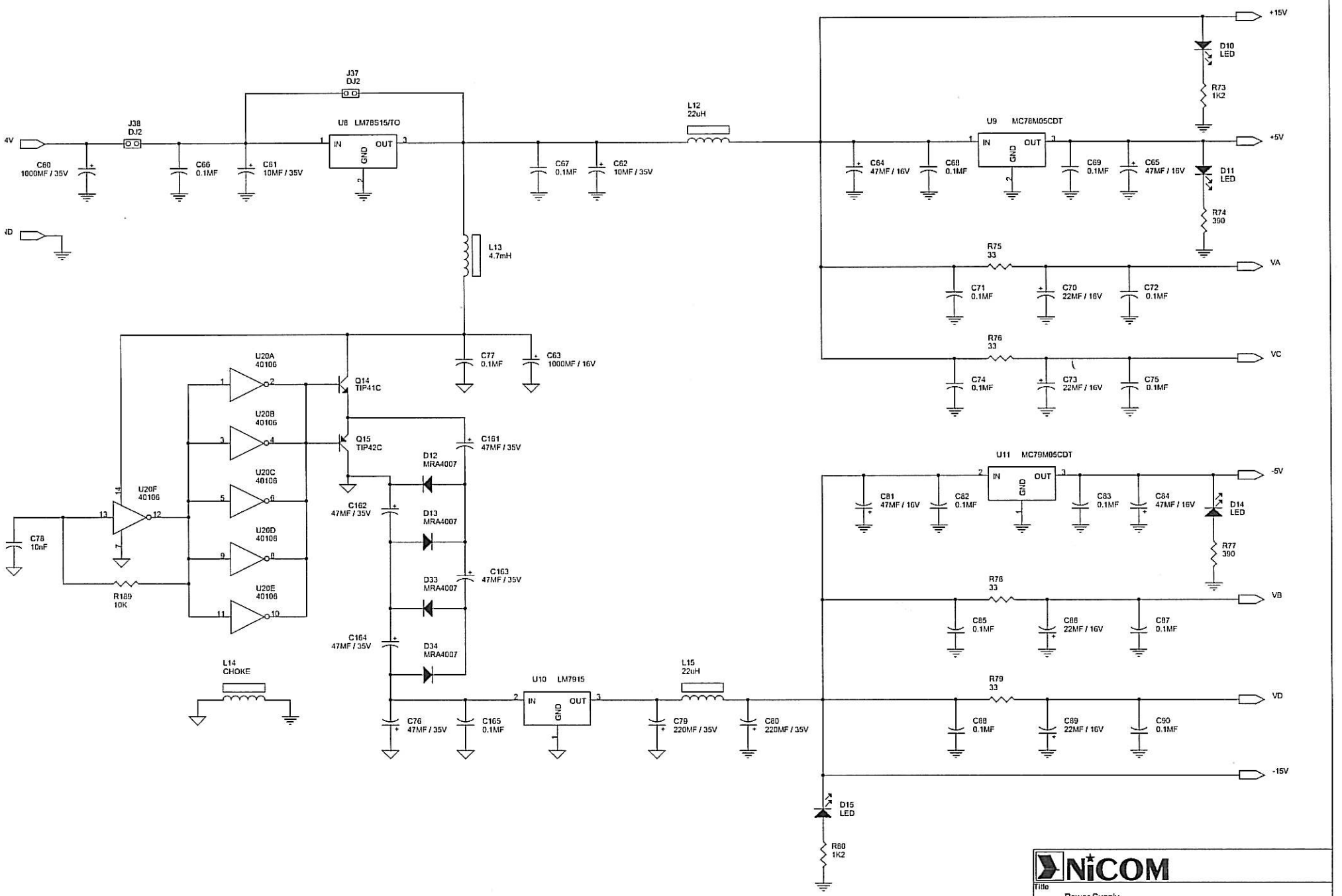
U4 ADC0834
U5 MAX810L
U6 T89C51RD2
U7 MAX232
Y1 11.0592MHz
JP1
Q1 BC327
D9 LL4148
J16 DJ2
J17 DJ2
PROG.
LAMP
SDTA
SCLK
ADC_EN
PLL_DTA
PLL_CLK
PLL_EN
RF_ONOFF
PLL_LOCK
SW1
SW2
TXD
RXD
D[0:7]
NiCOM
Microcontroller
Mod. ESVA-1D
Tuesday, October 12, 2004

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| | | |
|---|---|---|
| Title: Power Supply | | |
| Size: A3 | Document Number: Mod. ESVA-1D | Rev: 1.0 |
| Date: Tuesday, October 12, 2004 | Sheet 1 of 1 | |