

CPI GEN IV 速调管功放 操作培训

**非凡朗天
2005-4**

内容

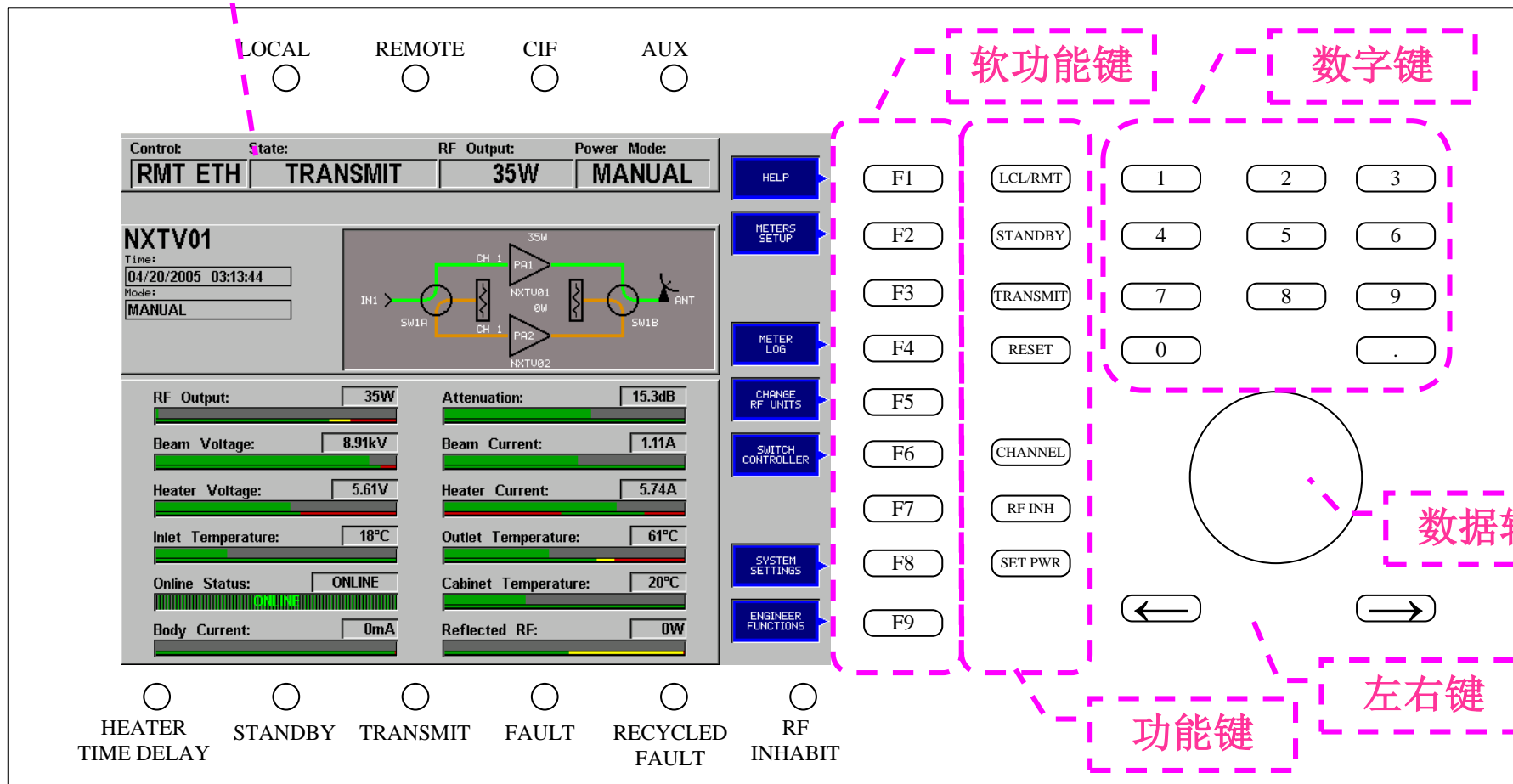
- 日常操作
- 菜单解释
- 维护事项

高功放外观

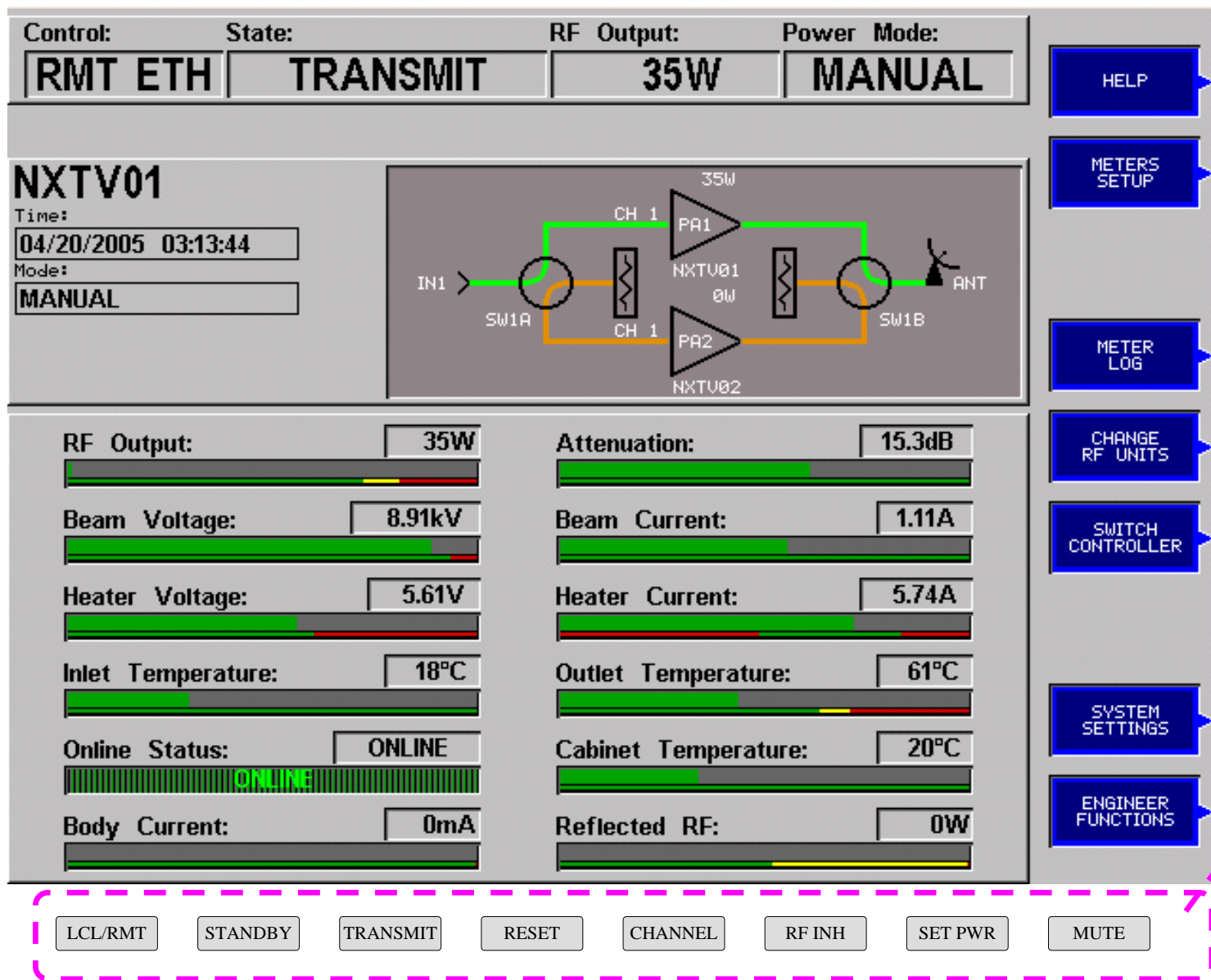


本地操作界面

主界面



远控界面



功能键

- **LCL/RMT**
 - 设置本控或远控
- **STANDBY**
 - 关高压
- **TRANSMIT**
 - 速调管加高压，工作状态
- **SET PWR**
 - 功率调整

功能键

- **RESET**
 - 告警消除
- **CHANNEL**
 - 设置速调管工作频道，须有DFTS选项
- **RF INH**
 - 射频抑制。建议不要使用，特别是处于1KW XMIT状态时，禁止使用该键
- **MUTE**
 - 目前没用，预留

控制键功能

- 数据轮 （远控：键盘 ↑ ↓ ）
 - 激活、选择数据
- 左右键 （远控：键盘 ← → ）
 - 选择不同的页面
- 数字键 （远控：数字键 ）
 - 输入数字
- 软功能键 （鼠标）
 - 选择不同的菜单功能项

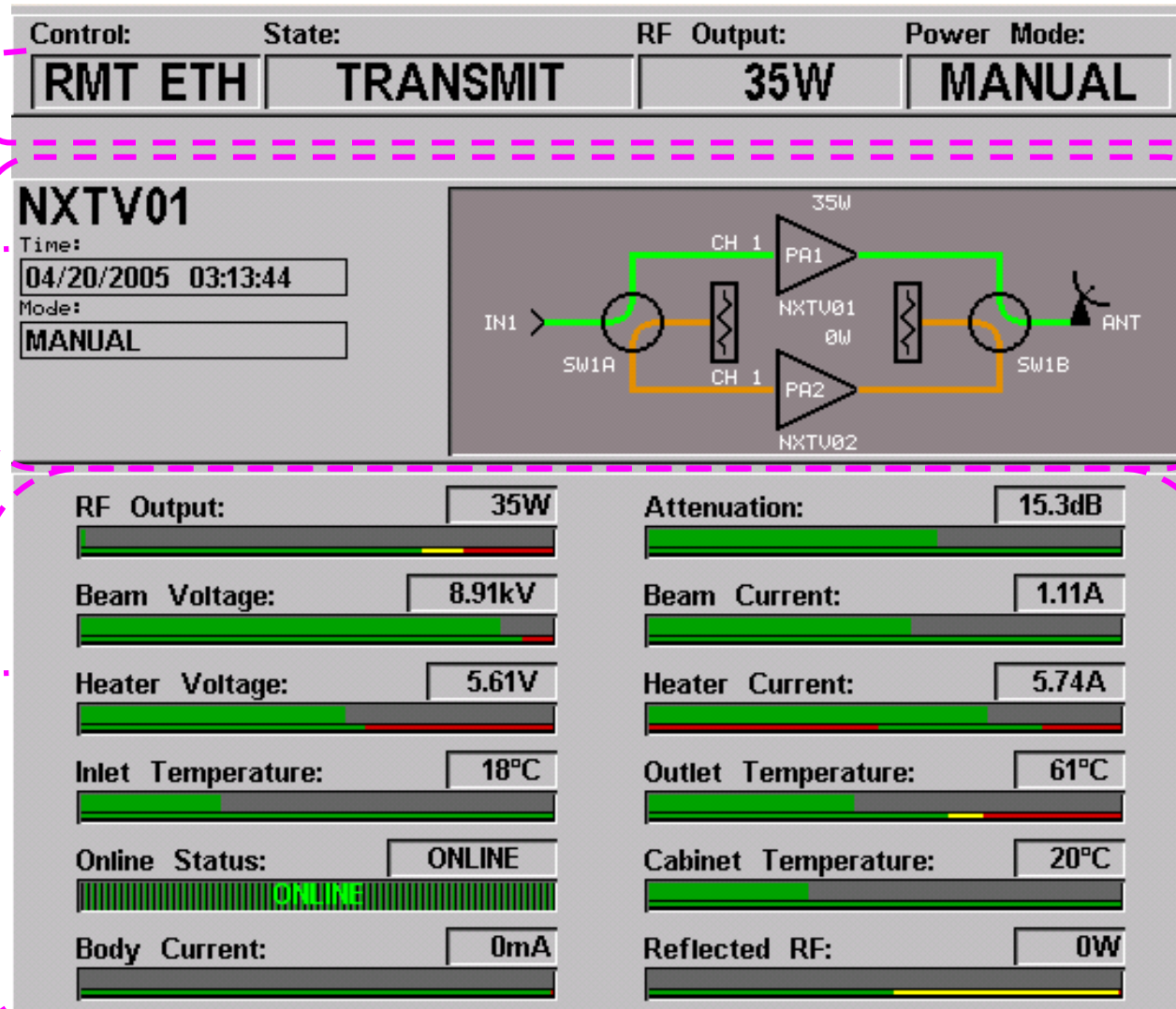
主界面介绍

菜单栏

功放
状态栏

切换
状态栏

功放
参数栏



HELP

METERS
SETUP

METER
LOG

CHANGE
RF UNITS

SWITCH
CONTROLLER

SYSTEM
SETTINGS

ENGINEER
FUNCTIONS

主界面介绍 —— 状态栏

Control:	State:	RF Output:	Power Mode:
RMT ETH	TRANSMIT	35W	MANUAL

显示功放的工作状态

- 包括以下状态
 - LOCAL 本地控制
 - RMT ETH 以太网控制
 - RMT SER 串口控制
 - CIF ETH 串口与以太网共同控制,
 - AUX 辅助控制
 - REMOTE 远控面板控制
- 通过功能键**LCL/RMT**实现切换

主界面介绍——状态栏

Control:	State:	RF Output:	Power Mode:
RMT ETH	TRANSMIT	35W	MANUAL

显示功放的工作状态

- 包括以下状态

- INIT 功放开机时，系统初始化状态
- HDT 初始化后，灯丝加热延迟
- STANDBY HDT后自动进入该状态，在该状态下速调管只加有灯丝电压，而没有加高压。**建议不要长期处于该状态。**
- TRANSMIT 功放正常工作状态
- 1KV XMIT 功放热备份状态
- FAULT 设备出现故障时显示的状态

- 通过**功能键**中的**STANDBY**、**TRANSMIT**等键切换

主界面介绍 —— 状态栏

Control:	State:	RF Output:	Power Mode:
RMT ETH	TRANSMIT	35W	MANUAL

功放的输出功率控制方式

- 包括以下状态

- **MANUAL** 手动控制
- **ALC** 自动电平控制
- **MAN P/S** 手动节电模式
- **MAN P/T** 手动功率跟随
- **ALC P/S** 手动节电模式
- **ALC P/T** 手动功率跟随

- 在功率设置界面进行设置

功率调整

功率调整步骤

- 调整前确认
 - 正确的功放控制方式（本地或原地）
 - 功放的输出功率、衰减器的值
 - 功率控制方式
- 调整步骤
 - 选择功能键**SET PWR**，进入功率调整界面
 - 上下键（数据轮）激活功率设置栏（ALC RF SET 或 MANUAL RF SET）
 - 输入目标值（**注意：增加功率时，一次不要太多**）
 - 回车（选择**ENTER**）

功率调整界面

Control:	State:	RF Output:	Power Mode:
LCL	STANDBY	0W	MANUAL

功率调整
及控制

能源使用
模式

Set Power

UPC

UPC Setup

ALC RF Set:	0W
Manual RF Set:	0W
Attenuation Set:	20.0dB
ALC:	OFF
Power Saver:	OFF
Power Saver Set:	7.50kV
Power Tracker:	OFF
Power Backoff:	0.0dB
Power Control Threshold:	10W

Klystron Temperature:	100°C	Beam Current:	0.00A
Amplifier Name:	1	Beam Voltage:	0.00kV
Beacon:	-62.0dBm	Attenuation:	20.0dB

HELP

SCROLL DATA

1kV TRANSMIT

SETUP

METERS

EXIT

功率控制模式

- **MANUAL**

- 满高压工作，功放对输出功率不进行控制（射频输出随输入的变化而变化）。**可以使用的方式**

- **ALC**

- 满高压工作，功放保持输出功率为目标值（射频输入的变化时，功放调整衰减器以保证输出不变）。**可以使用的方式**

- **Power Saver**

- 通过Power Saver Set设置速调管高压
- 高压范围：5.0KV ~ 速调管满高压
- 高压越低，速调管最大输出功率越低，幅频响应越差。
- **不能使用该方式。**

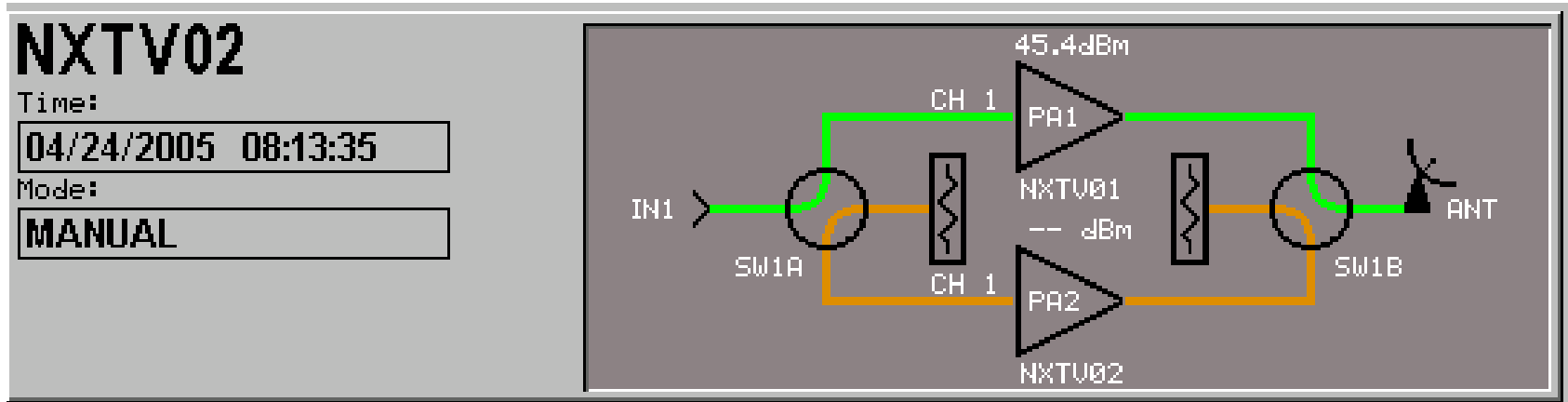
- **Power Tracker**

- 根据功放输出值和POWER BACKOFF定义的回退值，设置速调管高压以及衰减器的值
- 输出功率 + Backoff = 速调管的最大输出@当前的高压
- **可以使用的方式：ALC P/T（注意：在该方式下，需要的输入电平较大，通常在-10~-13dBm）**
- **不能使用 MAN P/T**

主备切换

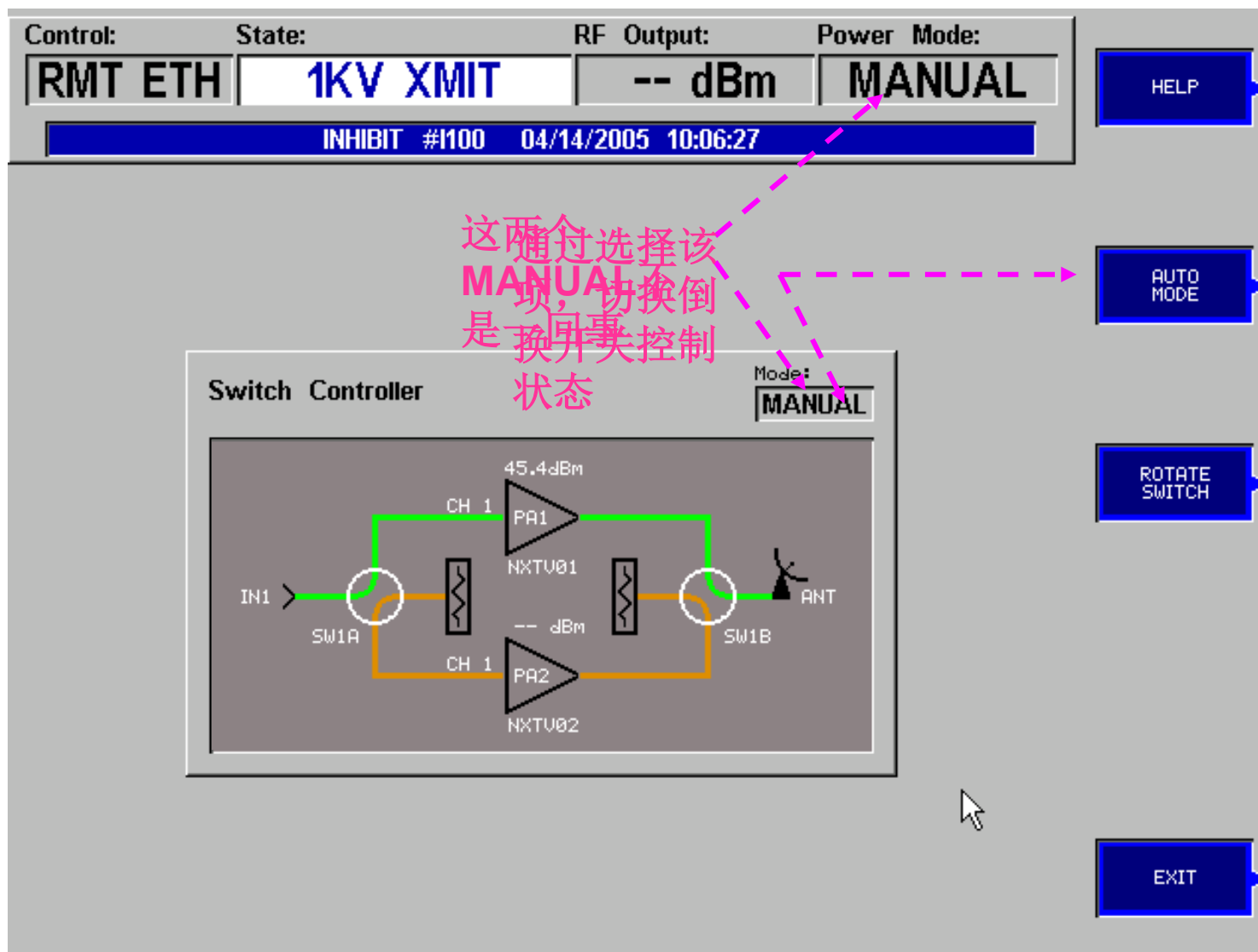
主备切换

- 倒换开关状态在主界面上有显示



- 自动方式不需要操作，当主用设备出现故障时，自动切换到备机（离线的机器）
- 自动方式下，备机为1KV XMIT模式，将自动转换为TRANSMIT
- 1：1方式中没有特定的主备
- 手动切换，在主界面上选择SWITCH CONTROLLER，进入切换控制界面

主备切换控制界面



手动切换

- 切换前确认：
 - 正确的功放控制方式（本地或原地）
 - 切换控制开关设置在MANUAL
 - 离线功放的工作状态（发射状态、功率控制方式、衰减器的值）
 - 切换控制必须在离线功放上进行
- 切换步骤
 - 用上下键（数据轮）激活切换开关（开关显示为白色）
 - 选择**ROTATE SWITCH**，完成切换。

日常操作注意事项

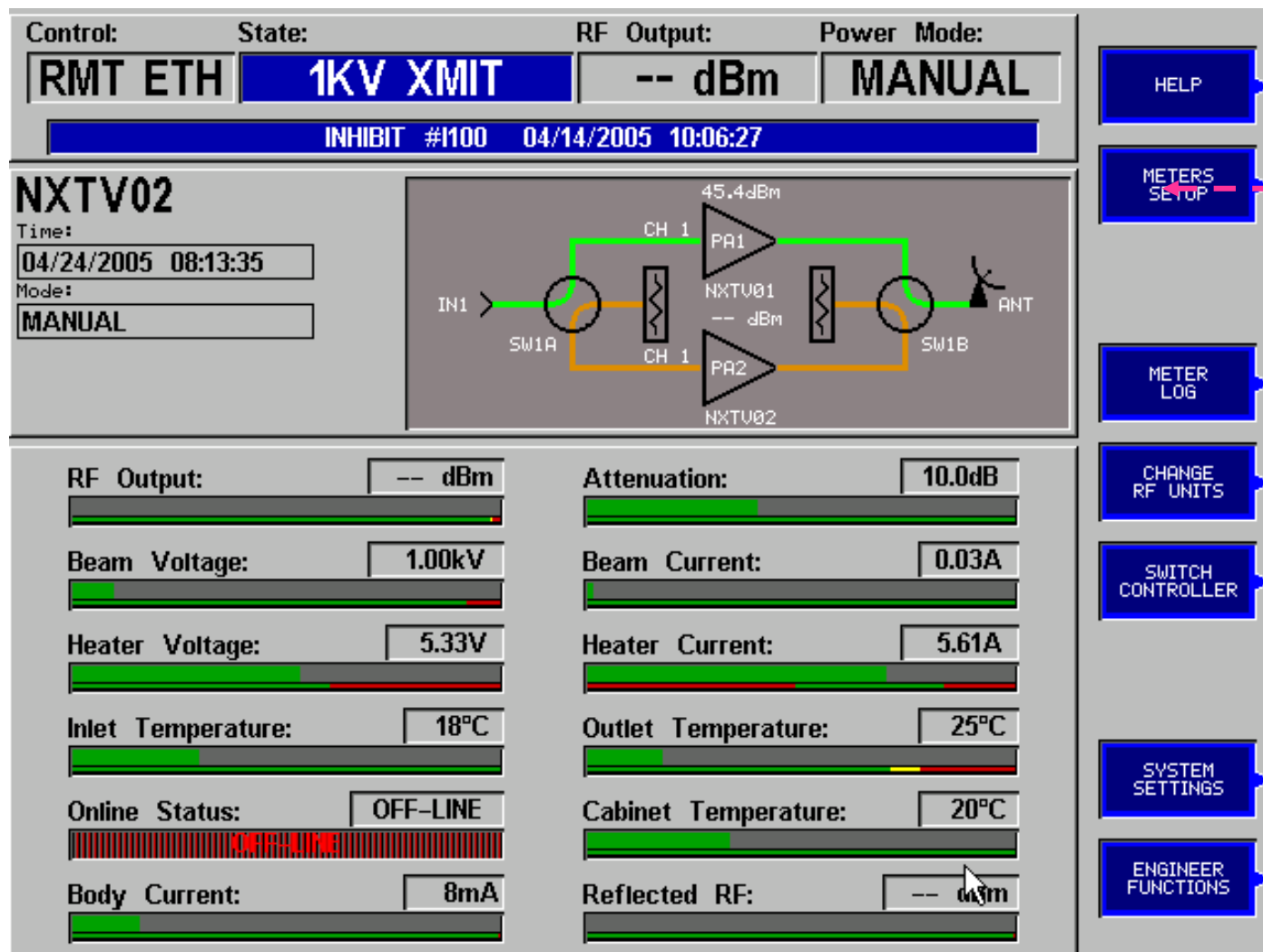
- 不要按**RF INH**，特别是处于1KW XMIT状态时，**禁止**使用该键
- **不要**长时间处于**STANDBY**状态
- 调整输出功率时，一次的调整量不要太大
- 手动切换主备功放时，备机必须放置于**TRANSMIT**方式
- 从其它功放（如固态）切换到**Gen IV**时，最好确认功放**衰减器的值**（对于Manual方式必须确认）

- 日常操作
- 菜单解释
- 维护事项

主要菜单项说明

- **Meters Setup**
 - 用于显示设备的各种状态及读数
- **Meter Log**
 - 历史状态信息记录
- **Switch Controller**
 - 切换主备用功放、设置切换模式
- **System Settings**
 - 对设备的时间、偏好以及告警门限的设置
- **Engineering Functions**
 - 设备参数设置、校准等

主菜单



表头显示设置

表头设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

Readings	Format
Bar Graph 1:	RF OUTPUT
Bar Graph 2:	ATTENUATION
Bar Graph 3:	BEAM VOLTAGE
Bar Graph 4:	BEAM CURRENT
Bar Graph 5:	HEATER VOLTAGE
Bar Graph 6:	HEATER CURRENT
Bar Graph 7:	INLET TEMPERATURE
Bar Graph 8:	OUTLET TEMPERATURE
Bar Graph 9:	ONLINE STATUS
Bar Graph 10:	CABINET TEMPERATURE
Bar Graph 11:	BODY CURRENT
Bar Graph 12:	REFLECTED RF
Bar Graph 13:	BEACON 1 LEVEL
Bar Graph 14:	ONLINE STATUS
Bar Graph 15:	ONLINE STATUS
Bar Graph 16:	ONLINE STATUS

HELP

SCROLL DATA

DEFAULT METERS

METERS

EXIT

表头设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

Readings

Format

Maximum Bar Graphs:

16

Bar Graph Type:

SMALL

Display Hash Marks:

NO

Display Switch Diagram:

YES

HELP

SCROLL DATA

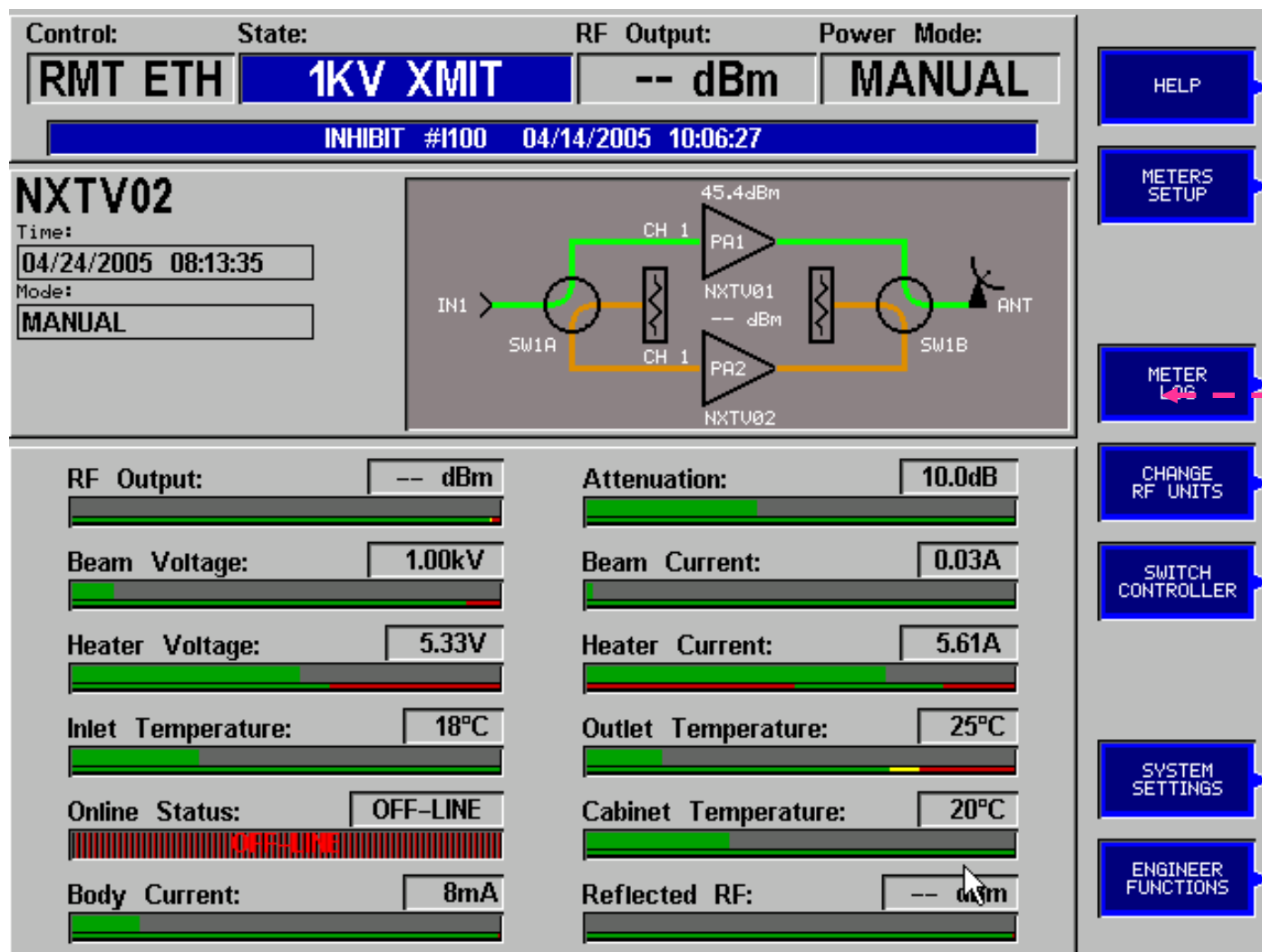
DEFAULT METERS

METERS

EXIT

在任何子菜单下，选择
METERS回到主菜单
选择EXIT回到上级菜单

主菜单



参数记录

参数记录

视图类型（NORMAL、SUMMARY、CAPTURE），通过CHANE VIEW切换

SUMMARY，CAPTURE类型

选择SETUP定义

视图

特殊事件描述

INHIBIT #1100 04/14/2005 10:06:27

View: **NORMAL** Hold: **OFF** Summary Event: **FAULT** Capture Event: **FAULT** Trigger: **CAPTURED**

Amplifier Name: **NXTV02** Unit On Time: **0001:12:59:18** Beam On Time: **0001:00:04:25**

Time	Event	Atten dB	RF dBm	Ref1 dBm	Beam kV	Beam A	Body mA	Htr V	Htr A
04/14/2005 10:07:02		10.0	---	---	1.00	0.04	8	5.33	5.62
04/14/2005 10:06:31		10.0	---	---	1.00	0.03	8	5.33	5.59
04/14/2005 10:06:30		10.0	---	---	1.00	0.04	8	5.48	5.73
04/14/2005 10:06:29	1kV XMIT	10.0	---	---	1.10	0.04	8	5.60	5.83
04/14/2005 10:06:28		10.0	---	---	5.41	0.97	0	5.60	5.84
04/14/2005 10:06:19	TRANSMIT	10.0	---	---	8.76	1.07	0	5.59	5.88
04/14/2005 10:06:17	BONS	10.0	---	---	1.00	0.05	8	5.33	5.63
04/14/2005 10:06:01	INHIBIT	10.0	---	---	1.00	0.04	8	5.33	5.62
04/14/2005 10:05:51	WARNING	10.0	---	---	1.00	0.04	8	5.32	5.62
04/14/2005 10:05:21		10.0	---	---	1.00	0.04	8	5.33	5.62
04/14/2005 10:04:51		10.0	---	---	1.00	0.04	8	5.32	5.62
04/14/2005 10:04:24		10.0	---	---	1.00	0.04	8	5.32	5.62
04/14/2005 10:03:44	1kV XMIT	10.0	---	---	1.05	0.04	8	5.60	5.83
04/14/2005 10:03:42		10.0	---	---	8.80	1.08	0	5.60	5.87
04/14/2005 10:03:31	TRANSMIT	10.0	---	---	8.76	1.07	0	5.60	5.87
04/14/2005 10:03:29	BONS	10.0	---	---	1.97	0.04	8	5.33	5.62
04/14/2005 10:03:25	INHIBIT	10.0	---	---	1.00	0.04	8	5.33	5.62
04/14/2005 10:03:16		10.0	---	---	1.00	0.04	8	5.33	5.62
04/14/2005 10:03:07		10.0	---	---	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:58		10.0	---	---	1.00	0.04	8	5.32	5.61
04/14/2005 10:02:49		10.0	---	---	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:41		10.0	---	---	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:33		10.0	---	---	1.00	0.04	8	5.32	5.60
04/14/2005 10:02:26		10.0	---	---	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:18		10.0	---	---	1.00	0.04	8	5.33	5.60

Entry: **0004** Event Detail: **1kV XMIT**

SETUP
HOLD ON
CHANGE VIEW
RESET TRIGGER
SCOPE SCREEN
METERS
EXIT

参数记录设置

Control: RMT ETH State: 1KV XMIT RF Output: -- dBm Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

Log Setup Log Deltas Log Text Entry

Column 1:	ATTENUATION
Column 2:	RF OUT
Column 3:	REFLECTED RF
Column 4:	BEAM VOLTAGE
Column 5:	BEAM CURRENT
Column 6:	BODY CURRENT
Column 7:	HEATER VOLTAGE
Column 8:	HEATER CURRENT
Capture Event:	FAULT
Summary Event:	FAULT

CAPTURE、SUMMARY类型设置

HELP

SCROLL DATA

METERS

EXIT

试图显示项设置

参数记录设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

Log Setup	Log Deltas	Log Text Entry
Attenuation Delta: 0.2dB		
Beam Current Delta: 0.02A		
Beam Voltage Delta: 0.02kV		
Body Current Delta: 2mA		
Cabinet Temperature Delta: 2°C		
Heater Current Delta: 0.03A		
Heater Voltage Delta: 0.02V		
Inlet Temperature Delta: 2°C		
Outlet Temperature Delta: 2°C		
Reflected RF Delta: 0.1dB		
RF Drive Delta: 5mW		
RF Output Delta: 0.2dB		
RF Units: dB		

HELP

SCROLL DATA

METERS

EXIT

参数记录

INHIBIT #1100 04/14/2005 10:06:27

Meter Log

View: **NORMAL** | Hold: **OFF** | Summary Event: **FAULT** | Capture Event: **FAULT** | Trigger: **CAPTURED**

Amplifier Name: **NXTV02** | Unit On Time: **0001:12:59:18** | Beam On Time: **0001:00:04:25**

Time	Event	Atten dB	RF dBm	Ref1 dBm	Beam kV	Beam A	Body mA	Htr V	Htr A
04/14/2005 10:07:02		10.0	--	--	1.00	0.04	8	5.33	5.62
04/14/2005 10:06:31		10.0	--	--	1.00	0.03	8	5.33	5.59
04/14/2005 10:06:30		10.0	--	--	1.00	0.04	8	5.48	5.73
04/14/2005 10:06:29	1kV XMIT	10.0	--	--	1.10	0.04	8	5.60	5.83
04/14/2005 10:06:28		10.0	--	--	5.41	0.97	0	5.60	5.84
04/14/2005 10:06:19	TRANSMIT	10.0	--	--	8.76	1.07	0	5.59	5.88
04/14/2005 10:06:17	BONS	10.0	--	--	1.00	0.05	8	5.33	5.63
04/14/2005 10:06:01	INHIBIT	10.0	--	--	1.00	0.04	8	5.33	5.62
04/14/2005 10:05:51	WARNING	10.0	--	--	1.00	0.04	8	5.32	5.62
04/14/2005 10:05:21		10.0	--	--	1.00	0.04	8	5.33	5.62
04/14/2005 10:04:51		10.0	--	--	1.00	0.04	8	5.32	5.62
04/14/2005 10:04:24		10.0	--	--	1.00	0.04	8	5.32	5.62
04/14/2005 10:03:44	1kV XMIT	10.0	--	--	1.05	0.04	8	5.60	5.83
04/14/2005 10:03:42		10.0	--	--	8.80	1.08	0	5.60	5.87
04/14/2005 10:03:31	TRANSMIT	10.0	--	--	8.76	1.07	0	5.60	5.87
04/14/2005 10:03:29	BONS	10.0	--	--	1.97	0.04	8	5.33	5.62
04/14/2005 10:03:25	INHIBIT	10.0	--	--	1.00	0.04	8	5.33	5.62
04/14/2005 10:03:16		10.0	--	--	1.00	0.04	8	5.33	5.62
04/14/2005 10:03:07		10.0	--	--	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:58		10.0	--	--	1.00	0.04	8	5.32	5.61
04/14/2005 10:02:49		10.0	--	--	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:41		10.0	--	--	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:33		10.0	--	--	1.00	0.04	8	5.32	5.60
04/14/2005 10:02:26		10.0	--	--	1.00	0.04	8	5.33	5.61
04/14/2005 10:02:18		10.0	--	--	1.00	0.04	8	5.33	5.60

Entry: **0004**

Event Detail: **1kV XMIT**

SETUP

HOLD ON

CHANGE VIEW

RESET TRIGGER

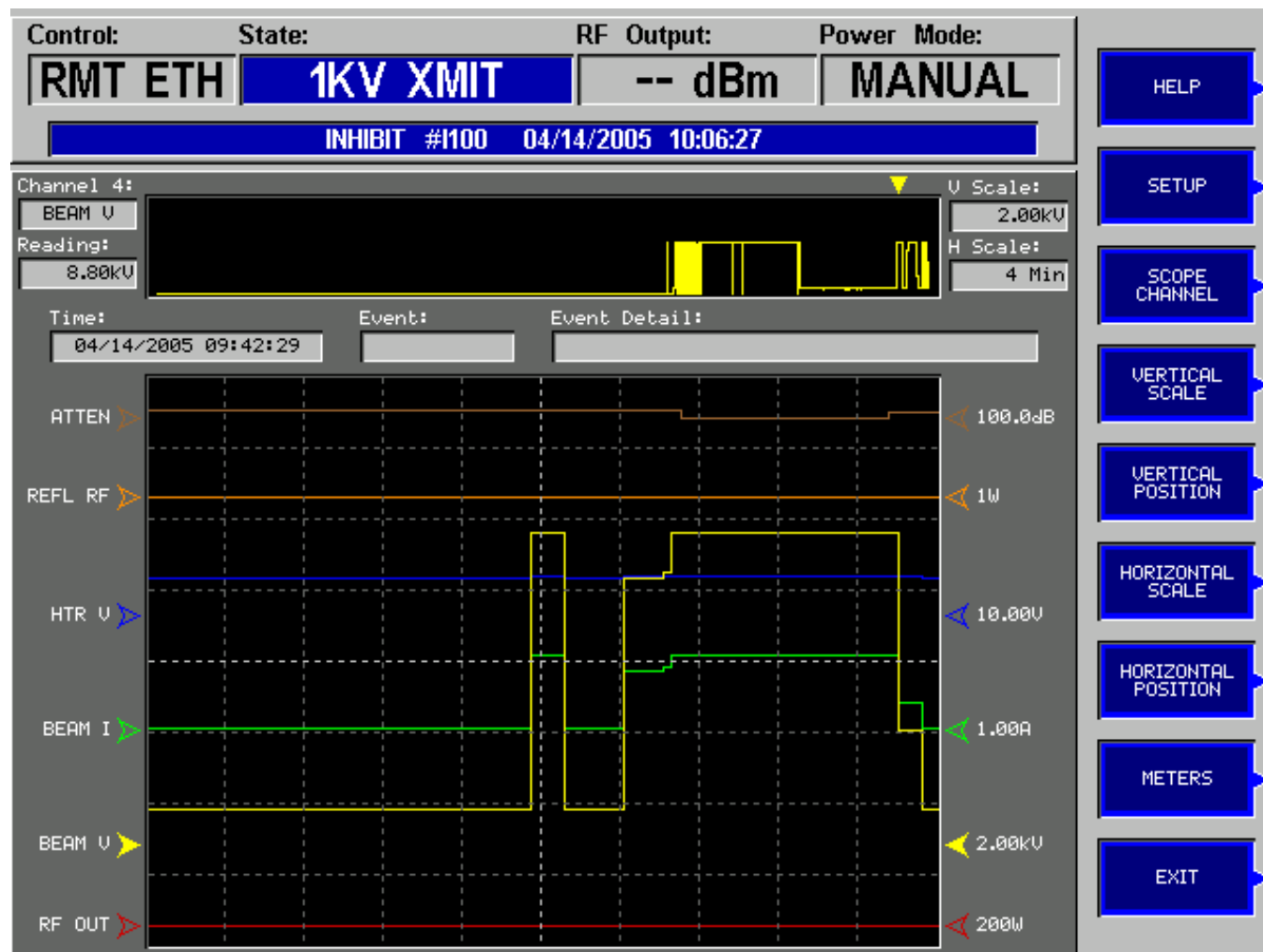
SCOPE SCREEN

METERS

EXIT

图形显示

记录图形显示



显示参数选择

选择需要调整显示
格式的参数的

垂直方向比例

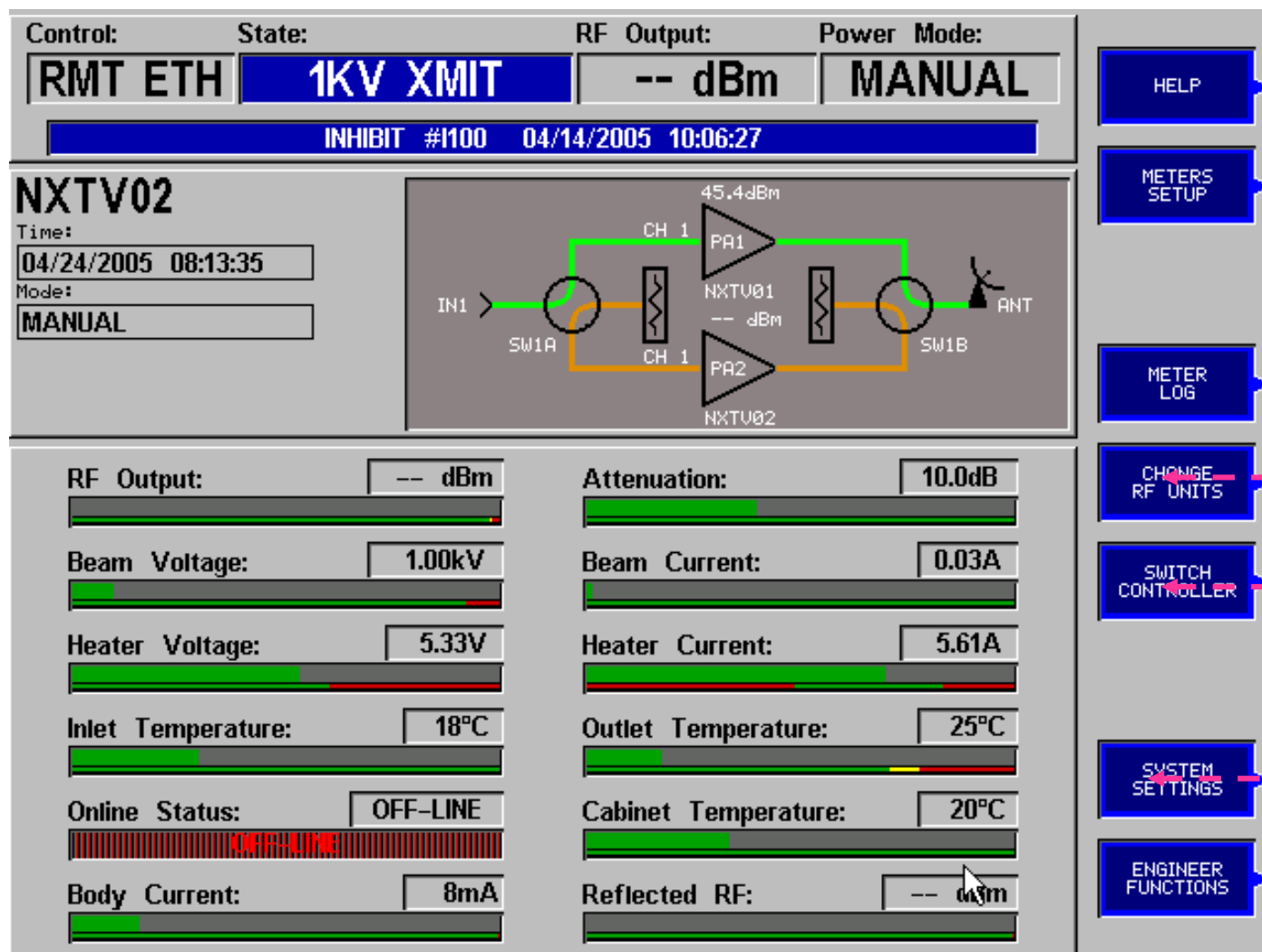
垂直方向位置

显示时间比例

显示时间位置

注意：在以太网远控软件中没有该项功能

主菜单



单位切换

倒换控制

系统设置

系统设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

RF Control	Power Supply	General	Time
High RF Output Fault:		64.8dBm	
Low RF Output Fault:		-- dBm	
High Reflected RF Fault:		54.6dBm	
High RF Output Alarm:		64.6dBm	
Low RF Output Alarm:		-- dBm	
High Reflected RF Alarm:		55.3dBm	
RF Units:		dBm	
Peak Detect:		NO	
Relay 1:		SUM FAULT	
Relay 2:		SUM FAULT	
Relay 3:		SUM FAULT	

射频频门限设置

状态继电器设置，
1: 1系统中使用的是Relay 3

HELP

SCROLL DATA

METERS

EXIT

系统设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

RF Control	Power Supply	General	Time
Beam Voltage Standby Fault:	4.00kV		
Beam Under Voltage Alarm:	0.50kV		
Beam Over Voltage Fault:	0.50kV		
Body Over Current Fault:	50mA		
Heater Under Voltage Fault:	0.50V		
Heater Over Voltage Fault:	0.50V		
Heater Under Current Fault:	3.92A		
Heater Over Current Fault:	6.72A		

HELP

SCROLL DATA

METERS

EXIT

系统设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

RF Control	Power Supply	General	Time
Keyboard Sound:			ON
Alarm Sound:			OFF
Fault Sound:			OFF
LCD Brightness:			HIGH
LCD Lamp Saver:			30 MIN
LCD Screen Saver:			OFF
Menu Timeout:			OFF
Power Setting Access:			UNLOCKED
PS Setting Access:			UNLOCKED
RF Setting Access:			UNLOCKED
WG Switch Access:			UNLOCKED
View Engineering Access:			UNLOCKED
Engineering Access:			UNLOCKED
Test Status:			----
Test Type:			NONE

HELP

SCROLL DATA

START TEST

METERS

EXIT

系统设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

RF Control	Power Supply	General	Time
Time: 04/24/2005 08:13:35			
Hour:	10		
Minute:	07		
Second:	15		
Month:	04		
Day:	14		
Year:	2005		
Time Zone:	0HR		
Time Format:	24HR		
User Time Delay:	00		
Unit On Time:	0001:12:59:18		
Beam On Time:	0001:00:04:25		

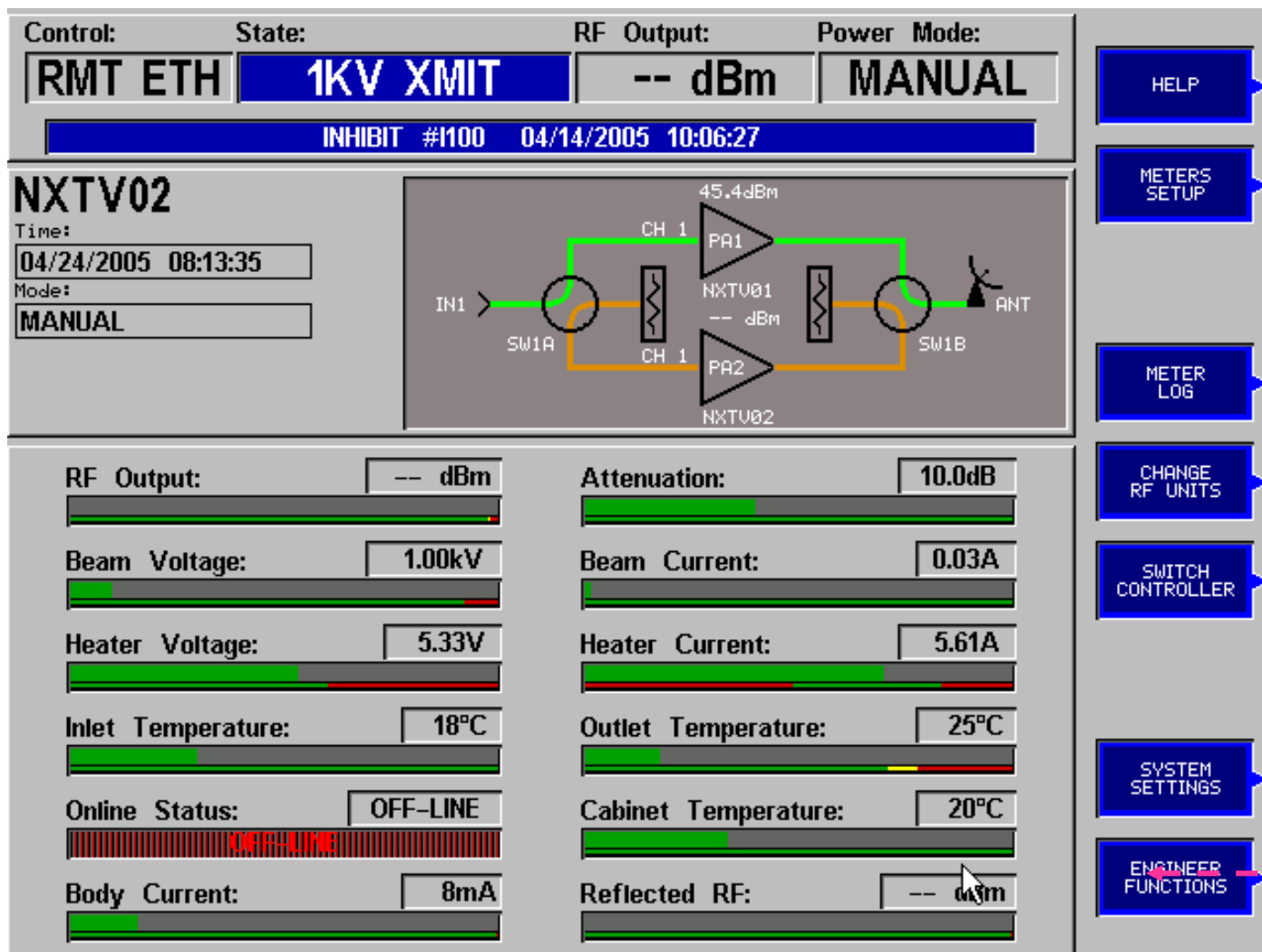
HELP

SCROLL DATA

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主菜单



维护功能设置

维护功能设置

Control: RMT ETH State: 1KV XMIT RF Output: -- dBm Power Mode: MANUAL

INHIBIT #1100 04/14/2005 10:06:27

Engineering

Title	Data	Title	Data
Local Boot	03.00.13	Amplifier Type	GEN IV
Local Main	03.01.28		
PS Boot	03.00.03		
PS Main	03.01.10		
RF Boot	03.00.03		
RF Main	03.01.17		
ETH Boot	01.00.12		
ETH Main	01.01.18		
EXT Boot	03.00.03		
EXT Main	03.01.22		
CAN Level Key	03.01.05		
DFTS			

Snapshot File Progress: 0%

File Status: CREATING FILE

CALIBRATION
SYSTEM CONFIG
DEFAULT SETTINGS
CAN MONITOR
COLOR TEST
COMM SETTINGS
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校准

软件版本显示

快照文件
创建进度条

灯丝电压校准

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

PS Heater | PS Beam | RF | Ext |

Calibration:	OFF
Heater Control DAC:	0%
Heater V Full Scale:	9.61V
Heater Voltage:	5.33V
Heater V Scalar:	0.80128
Heater V Offset:	-0.00030
Heater Current:	5.61A
Heater I Scalar:	0.93028
Heater I Offset:	0.00000

HELP

SCROLL DATA

START CALIBRATION

CALCULATE FULL SCALE

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高压校准

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

PS Heater | PS Beam | RF | Ext

Calibration:	OFF
Beam Control DAC:	0%
Beam V Full Scale:	10.48kV
Beam Voltage:	1.00kV
Beam V Scalar:	1.18028
Beam V Offset:	0.00000
Beam Current:	0.03A
Beam I Scalar:	0.37228
Beam I Offset:	-0.00001
Body Current:	8mA
Body I Scalar:	8.00000
Body I Offset:	0.00000

HELP

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START CALIBRATION

CALCULATE FULL SCALE

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射频校准

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

PS Heater	PS Beam	RF	Ext
Attenuation: 10.0dB			
Attenuation Scalar:		0.66538	
Attenuation Offset:		0.00000	
Reflected RF:		-- dBm	
Reflected RF Curve Scalar:		2.50000	
Reflected RF Scalar:		0.47428	
Reflected RF Offset:		0.00001	
RF Drive:		2mW	
RF Drive Scalar:		0.46600	
RF Drive Offset:		-0.00006	
RF Output:		-- dBm	
RF Out Curve Scalar:		0.70300	
RF Out Scalar:		0.17695	
RF Out Offset:		-0.00013	

HELP

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温度校准

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

PS Heater	PS Beam	RF	Ext
Inlet Temperature: 18°C			
Differential Temperature: 7°C			
Outlet Temperature: 25°C			
Outlet Temp Offset: -0.00026			

HELP

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维护功能设置

Control: RMT ETH

State: 1KV XMIT

RF Output: -- dBm

Power Mode: MANUAL

INHIBIT #1100 04/14/2005 10:06:27

Engineering

Title	Data	Title	Data
Local Boot	03.00.13	Amplifier Type	GEN IV
Local Main	03.01.28		
PS Boot	03.00.03		
PS Main	03.01.10		
RF Boot	03.00.03		
RF Main	03.01.17		
ETH Boot	01.00.12		
ETH Main	01.01.18		
EXT Boot	03.00.03		
EXT Main	03.01.22		
CAN Level Key	03.01.05		
DFTS			

Snapshot File Progress: 0%

File Status: CREATING FILE

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系统
配置

名牌设置

Control: RMT ETH State: 1KV XMIT RF Output: -- dBm Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

Nameplate RF Temperature General

Beam Voltage:	1.00kV
Nameplate Beam Voltage:	8.80kV
Beam Current:	0.03A
Nameplate Beam Current:	1.10A
Heater Voltage:	5.33V
Nameplate Heater Voltage:	5.60V
Heater Current:	5.61A
Nameplate Heater Current:	5.60A
Heater Reduce Set Point:	5.32V

HELP

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进入1kV XMIT 模式或STANDBY状态5分钟后，灯丝电压降低到该值，以延长寿命

- 在更换速调管时，根据管子的值设置该电压、电流值
- 功放控制器会根据此处的值给速调管加电
- 当速调管进入老化期后，可以提高高压保证额定输出功率

名牌设置

Control: RMT ETH State: 1KV XMIT RF Output: -- dBm Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

NAMEPLATE RF Temperature General

Klystron Rated Power:	3350
Klystron Band:	C-Band
Low Frequency Endpoint:	5.850GHz
High Frequency Endpoint:	6.425GHz
System RF Out Offset:	0.0dB
Klystron Channel:	1
Channel Frequency:	5.956GHz
Attenuator Range:	25.0dB

HELP

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衰减器范围，可设范围为0~35dB。
对于目前的GEN IV，物理范围为
25dB

•根据功放的实际状态设置该值

温度门限设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #1100 04/14/2005 10:06:27

Nameplate	RF	Temperature	General
High Outlet Temp Alarm:		100°C	
High Outlet Temp Fault:		110°C	
High Temp Differential Alarm:		55°C	

HELP

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通用设置

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

NAMEPLATE | RF | Temperature | General

HTD Bypass:	NO
Channel Changer Installed:	NO
Linearizer Installed:	NO
RF Drive Installed:	YES
UPC Installed:	NO
Up Converter Installed:	NO
Up Converter Location:	INTERNAL
Up Converter Unlock:	FAULT
Switch Controller:	1:1B
Switch Interface Type:	MULTIPLEXED
Amplifier Identifier:	2
Amplifier Name:	NXTV02
1:1 Power Copy:	YES
Amp Serial # 1-8:	SF3747A5
Amp Serial # 9-16:	
Tube Serial:	75194

HELP

SCROLL DATA

选项

切换开关方式

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维护功能设置

Control: RMT ETH

State: 1KV XMIT

RF Output: -- dBm

Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

Engineering

Title	Data	Title	Data
Local Boot	03.00.13	Amplifier Type	GEN IV
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ETH Main	01.01.18		
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EXT Main	03.01.22		
CAN Level Key	03.01.05		
DFTS			

Snapshot File Progress: 0%

File Status: CREATING FILE

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控制局域
网监视

通信口设
置

通信口设置——串口

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

CIF	Remote	Aux	Ethernet
Port Type: GENIV			
Baud Rate: 9600			
Parity: NONE			
Word Length: 8-Bit			
Interface: RS-232			
RX Termination: OFF			
TX Termination: OFF			
Amplifier Address: 49			
Switch Address: 48			
Protocol: ASCII			
Checksum Type: SUM			
Bad CB Ok: NO			
CR Enable: OFF			
LF Enable: OFF			

HELP

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通信口设置——远控板

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

CIF	Remote	Aux	Ethernet
Port Type: REMOTE			
Baud Rate: 9600			
Parity: NONE			
Word Length: 8-Bit			
RX Termination: OFF			
TX Termination: OFF			
Amplifier Address: 48			
Protocol: STX/ETX			
Checksum Type: SUM			
Bad CB Ok: NO			
CR Enable: OFF			
LF Enable: OFF			

HELP

SCROLL DATA

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通信口设置——辅助口

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

CIF	Remote	Aux	Ethernet
Port Type: ATE			
Baud Rate: 9600			
Parity: NONE			
Word Length: 8-Bit			
RX Termination: OFF			
TX Termination: OFF			

HELP

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通信口设置——以太网口

Control:	State:	RF Output:	Power Mode:
RMT ETH	1KV XMIT	-- dBm	MANUAL

INHIBIT #100 04/14/2005 10:06:27

CIF	Remote	Aux	Ethernet
IP Address: 192.168.001.002			
IP Mask: 255.255.255.000			
IP Gateway: 000.000.000.000			
SMTP IP Address: 000.000.000.000			
Time Server Address: 000.000.000.000			
Time Server Installed: NO			

HELP

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维护功能设置

Control: RMT ETH

State: 1KV XMIT

RF Output: -- dBm

Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

Engineering

Title	Data	Title	Data
Local Boot	03.00.13	Amplifier Type	GEN IV
Local Main	03.01.28		
PS Boot	03.00.03		
PS Main	03.01.10		
RF Boot	03.00.03		
RF Main	03.01.17		
ETH Boot	01.00.12		
ETH Main	01.01.18		
EXT Boot	03.00.03		
EXT Main	03.01.22		
CAN Level Key	03.01.05		
DFTS			

Snapshot File Progress: 0%

File Status: CREATING FILE

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进入下一
页

维护功能设置

Control: RMT ETH State: 1KV XMIT RF Output: -- dBm Power Mode: MANUAL

INHIBIT #100 04/14/2005 10:06:27

Engineering

Title	Data	Title	Data
Local Boot	03.00.13	Amplifier Type	GEN IV
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RF Main	03.01.17		
ETH Boot	01.00.12		
ETH Main	01.01.18		
EXT Boot	03.00.03		
EXT Main	03.01.22		
CAN Level Key	03.01.05		
DFTS			

Snapshot File Progress: 0%

File Status: CREATING FILE

TAKE A SNAPSHOT

E-MAIL CONFIG

MORE

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生成快照
文件

当进度完成后，使用IE用FTP访问功放，就可以见到该文件

例：ftp://192.168.0.1

- 日常操作
- 菜单解释
- 维护事项

速调管信道选择

- 关掉电源或置于**STANDBY**（保证beam voltage为**off**）
- 打开**RF**单元的前面板门，按照**Unlock**方向旋转速调管的**Lock/Unlock**旋钮到头
- 通过速调管调谐钮（**Tune knob**）选择到希望的信道上。（在调谐钮旁的标签上标有出厂时设置的每个信道对应的中心频率）
- 按照**Lock**方向旋转速调管的**Lock/Unlock**旋钮到头（信道选择完毕）
- 关好**RF**单元的前面板门，并加电或开高压

关机

- 如果在一个小时内没有传输业务，AC电源应当关闭以节约用电，并延长设备寿命。关机应该按照以下步骤进行：
- an “STANDBY” 键， KHPA 进入 Standby
- 在STANDBY状态等候5分钟保证速调管收集及冷却。
- 关掉电源单元前面板的电源开关。
(紧急情况下可直接关电源开关)

日常维护

编号	任务	每日	半 个月	3 个月	6 个月
1	检查表头的告警、故障记录	X			
3	空气滤尘网清洁		X		
2	外观检查			X	
4	灯测试			X	
5	波导弧光测试			X	
6	外部清洁				X

基本构成

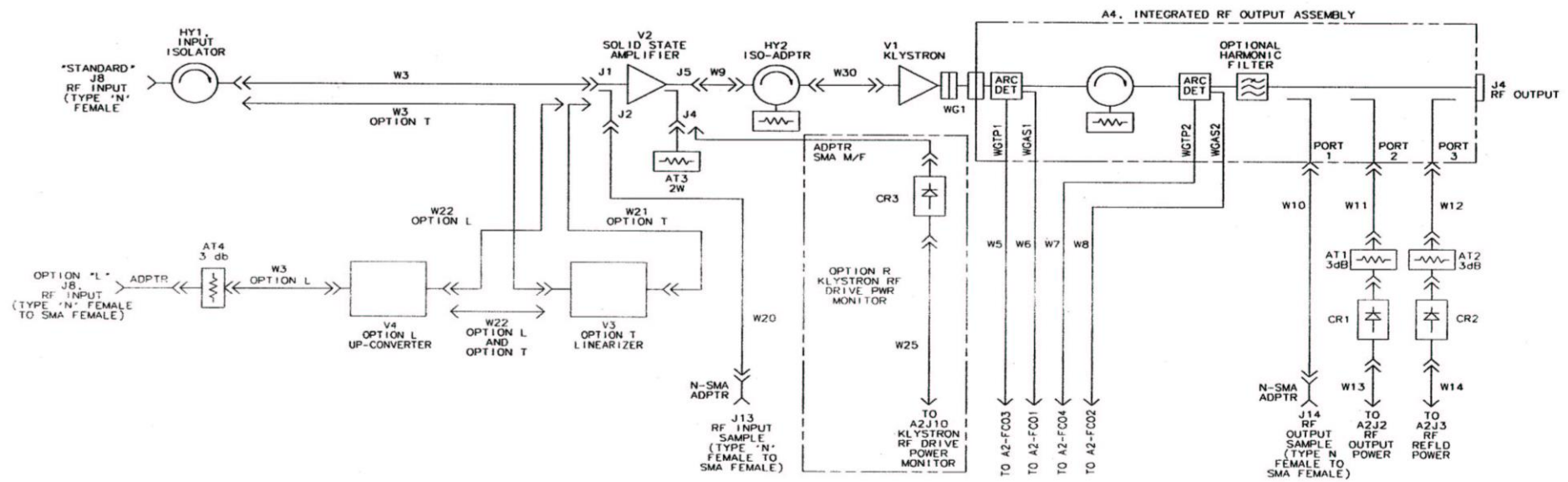
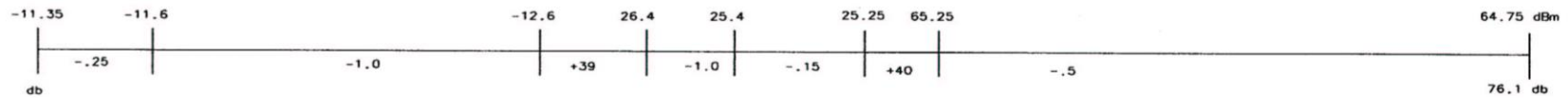
- 设备组成
 - 射频
 - 电源
 - 分布式控制器
 - 制冷

射频

- 输入部分
 - 同轴隔离器和固态终合放大器
 - 典型增益：40dB，有一25dB可调衰减器
- 高功率放大部分
 - 速调管放大器
 - 典型增益：45dB
- 输出部分
 - 主要由波导器件组成，包括2个弧光监测器、1个隔离器、1个谐波滤波器和3个耦合器

电平框图

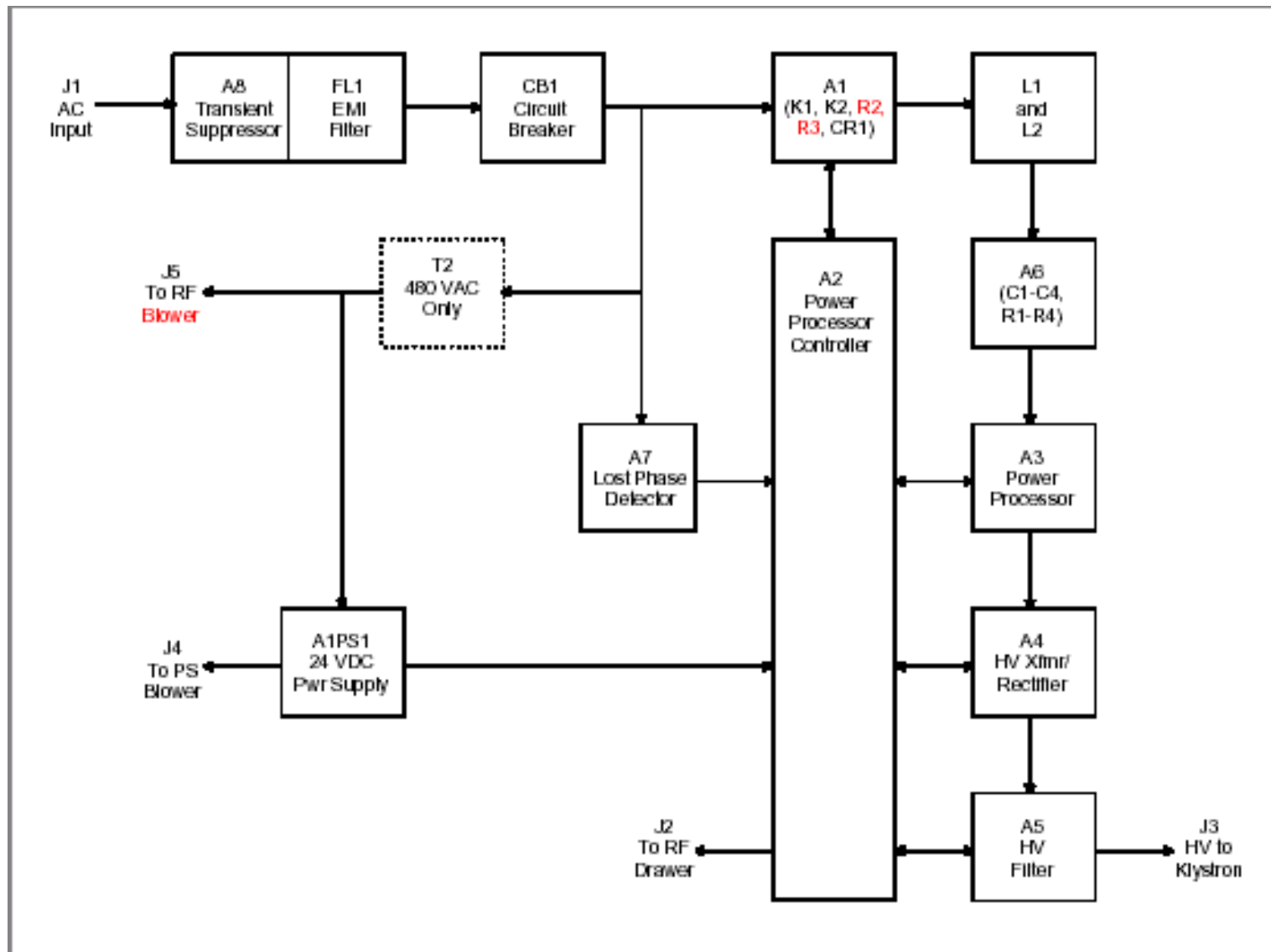
TYPICAL LEVEL DIAGRAM



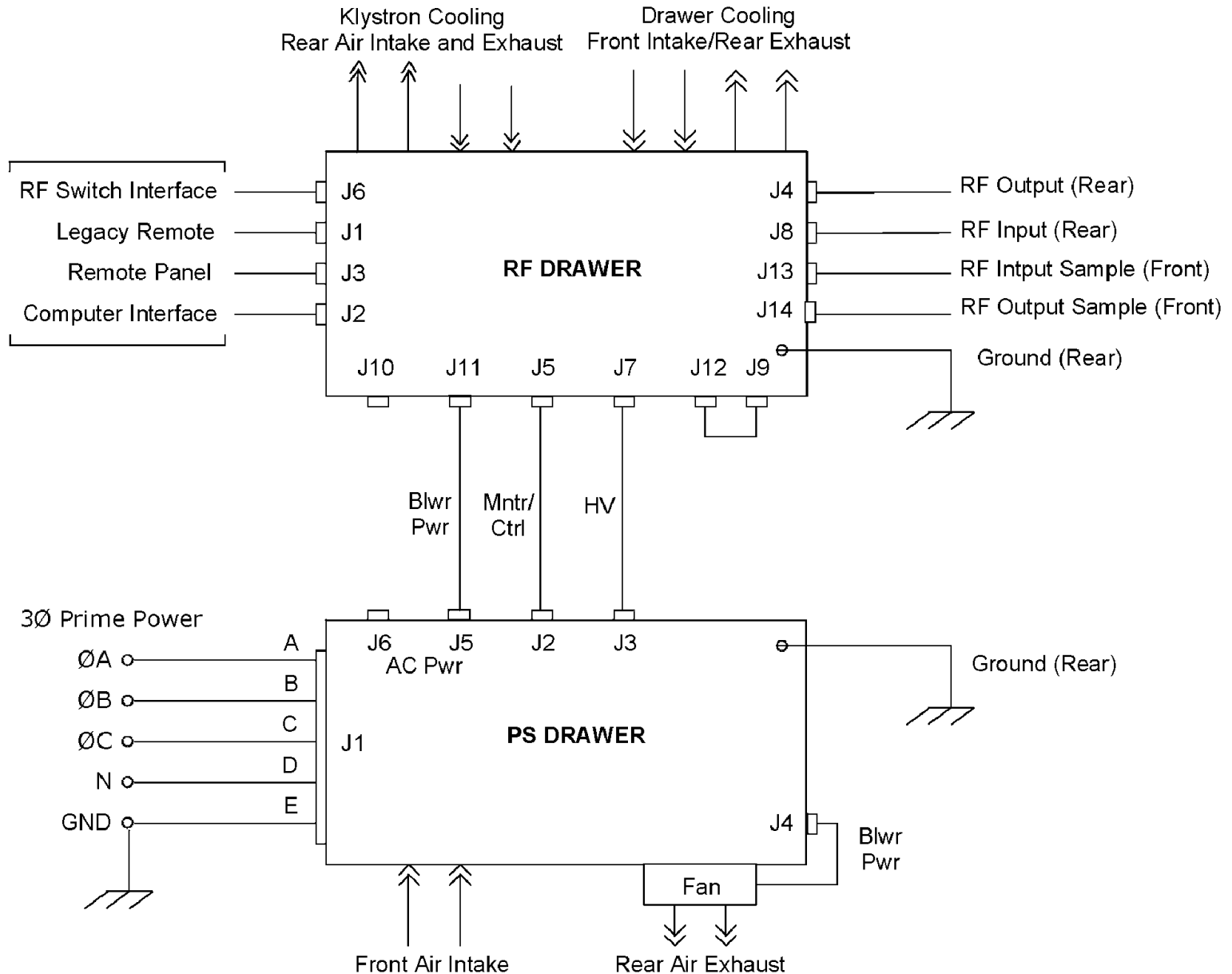
STANDARD CONFIGURATION

WIDEBAND: SEE SHT 2

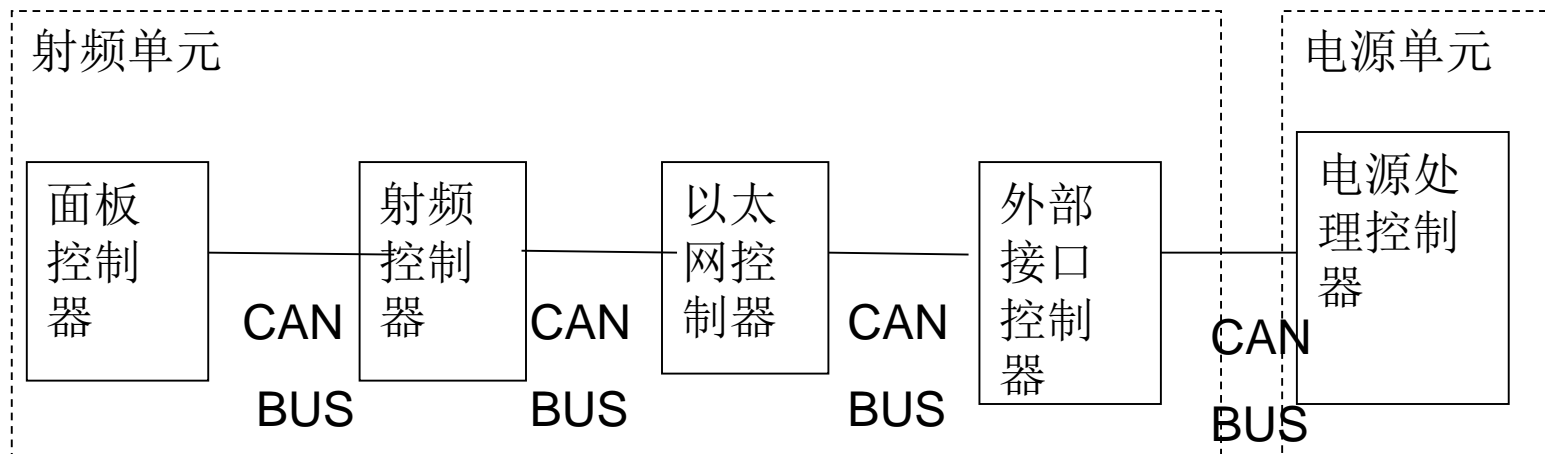
电源框图



设备接线示意图



分布式控制器



谢谢！