DTXPRO-100VHR
DIGITAL TRANSPOSER

DIGITAL MODULATOR, REPROCESSOR, AND REMOTE CONTROL

Proud to be
an American Company

INTRODUCTION

The DTXPRO-100VHR transmitter integrates a DIGITAL MODULATOR, 8vsb (ATSC COMPLIANT) all channel RECEIVER, LDMOS HPA DRVPRO100-U AMPLIFIER, and remote control via ETHERNET. The receiver output is an ASI transport stream that can be feed into the modulator for reprocessing or to external equipment to be multiplexed with other ASI streams to build a virtual channel inventory to be transmitted over the air with a single transmitter. The transmitter HPA uses LDMOS device technology for state-of-the-art performance. The Modulator has a built in WEB PAGE GUI which can be accessed via an Ethernet connection. The auto or manual LINEAR AND NON LINEAR ADAPTIVE CORRECTION can be adjusted via Ethernet. With the remote monitoring and alarms features the station service engineer can be notified of selected faults in the system via email. A GPS receiver is included for high stability operation which may be required by the FCC in some applications. To activate this feature a GPS antenna is required.

The transmitter comes packaged in a 13 RU 19 inch rack. This rack includes Modulator, PA section, Mask filter, couplers, circulator + termination, and LP Harmonic filter. The output antenna connection is type N Female.

Pineapple Technology, Inc. warrants the DTXPRO LINE of transmitter products for 2 years from ship date. Extended warranty is available for an additional 5 years. Contact PTI sales for details.

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TRANSMITTER GENERAL SPECIFICATIONS

FCC COMPLIANT ..... APPLICABLE SERVICE REQUIREMENTS

STANDARDS ..... ATSC (8vsb), A/53, ASI

MODULATION ..... 8 LEVEL VSB TRELLIS ATSC COMPLIANT

ADAPTIVE CORRECTION. LINEAR & NON LINEAR CORRECTION

TS OPTIONS: ..... ASI OR SMPTE-310M

CLOCK STABILITY ..... <2ppm (GPS LOCK AVAILABLE)

CONTROL ..... ETHERNET WITH WEB PAGE GUI

ACCESS PROTECTION ..... THREE-LEVEL PASSWORD PROTECTION

KEY PERFORMACE TEST .. SHOULDER LEVELS -62 dB TYPICAL
MER/SNR -35 dB TYPICAL

FREQUENCY RANGE ..... *174-220 MHz

RF OUTPUT POWER ..... 25-100 WATTS

MASK FILTER ..... 6 POLE STRINGENT FCC MASK

LOW PASS FILTER ..... ADDITIONAL HARMONIC SUPPRESSION FOR GPS BAND

PRIMARY POWER ..... 110 VAC 50/60 CYCLE

48 VDC (42-50 V RANGE) 20 AMPS MINIMUM (NOT SUPPLIED AS PART OF THIS PACKAGE.

REMOTE CONTROL ..... 12 STATUS AND 12 ALARM OPTIONS

ASSEMBLIED RACK ..... 19 INCH 13 RU RACK
WIDTH ..... 21 INCHES (534 mm)
HEIGHT ..... 25 INCHES (635 mm)
DEPTH ..... 24.5 INCHES (623 mm)
WEIGHT ..... < 100 LBS (45.4 Kg)

**Frequency range limited by external equipment i.e. filters and isolators. This can be modified and or returned if it becomes necessary to change channels.*

RECEIVER SPECIFICATIONS

TUNABLE RANGE ..... CHANNEL 2 THRU 69

OUTPUT ..... ASI TRANSPORT STREAM

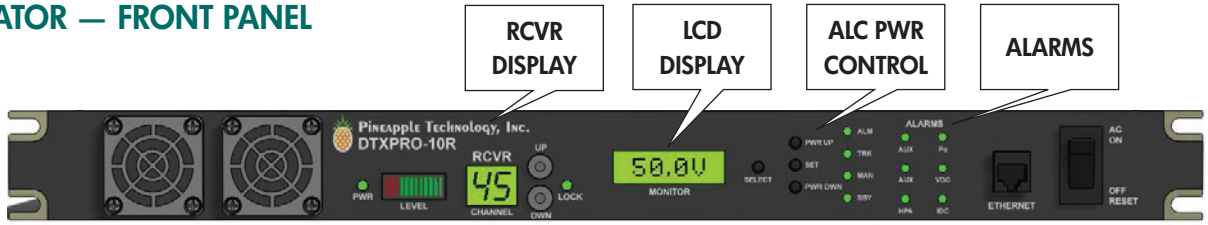
STANDARD RECEIVER ..... WITH EQUALIZER AS USED IN PROFESSIONAL 8vsb RECEIVERS

CONTROL VIA FRONT PANEL .... CHANNEL SELECTION WITH LCD DISPLAY

SIGNAL STRIENGTH METER WITH LCD DISPLAY

SIGNAL LOCK LED

MODULATOR — FRONT PANEL



LCD DISPLAY: The LCD DISPLAY provides selected transmitter test data by depressing the SELECT switch located on the right side. Some of the options include the following;

1. RF POWER OUTPUT LEVEL
2. REFLECTED POWER LEVEL
3. DC SUPPLY VOLTAGE
4. DC CURRENT

ALC CONTROL PANEL: The ALC section serves two important functions.

1. Provides a means for raising or lowering transmitter power level.
2. Once the desired power level is reached, the set switch places the ALC circuit in the TRACK MODE. In the TRACK MODE THE OUTPUT LEVEL IS CONSTANT.

ALARM PANEL: The alarm LEDs indicates status of key alarms. Key alarms include the following;

1. LOW OUTPUT POWER ..... NORMAL (GREEN) FAULT (RED)
2. HIGH REFLECTED POWER ..... NORMAL (GREEN) FAULT (RED)
3. 48 VDC SUPPLY NORMAL (GREEN) FAULT (RED)
4. AC MAIN POWER *NORMAL (GREEN) FAULT (RED)

**48 VDC backup power required*

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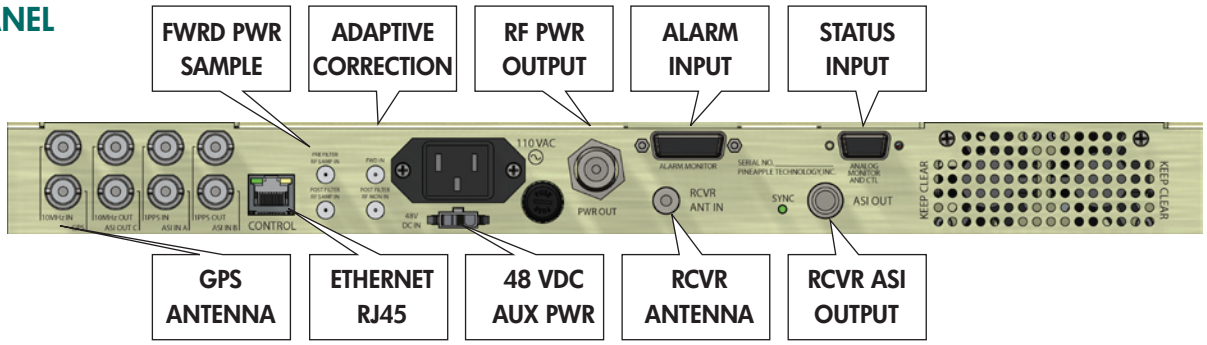
REAR PANEL



Mating Connectors

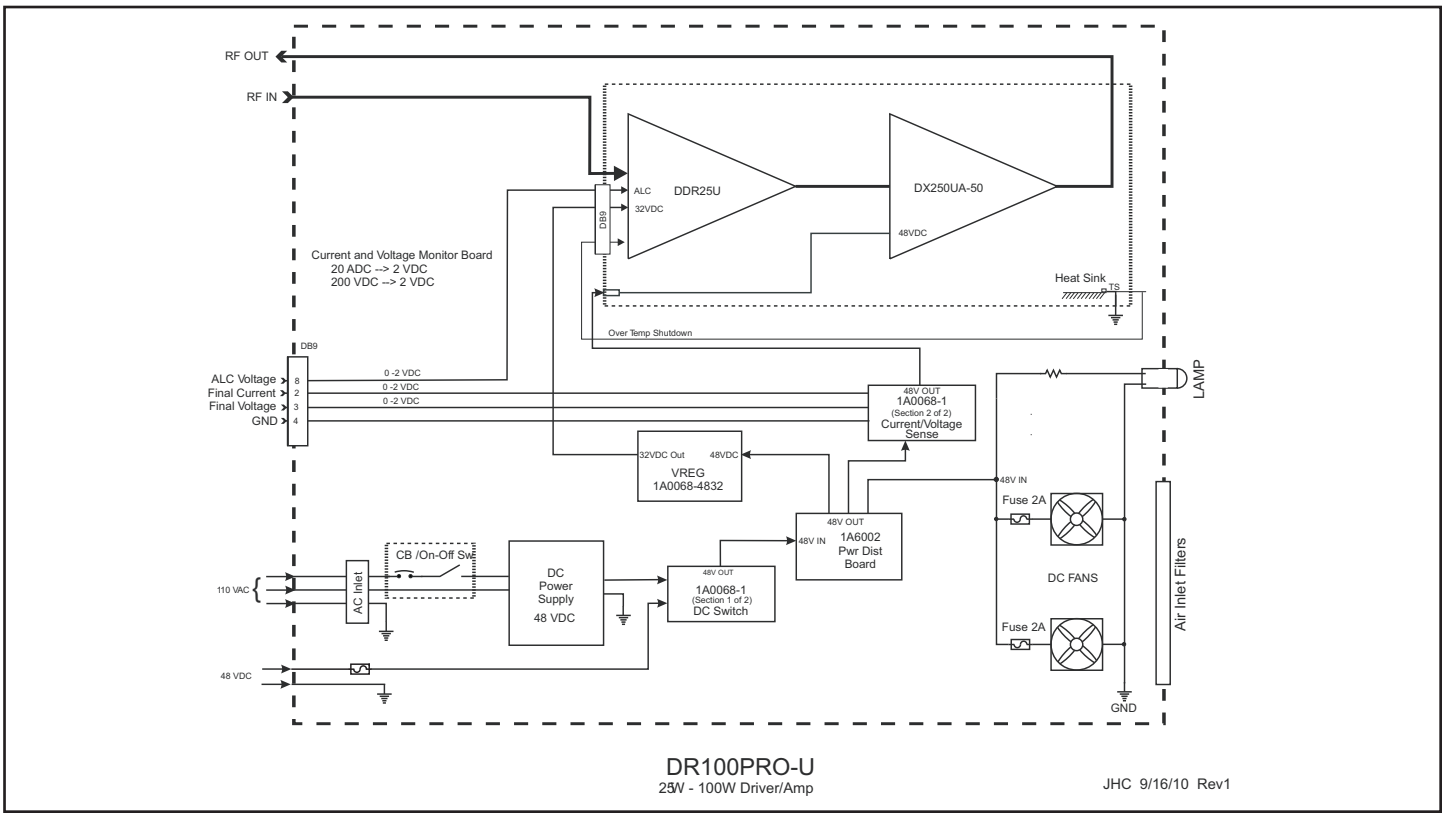
BNC JACK 75 OHMS ..... GPS, ASI IN, SMPTE-310
ETHERNET RJ-45
RF MONITORING ..... SMA JACK
ADAPTIVE SIGNAL ..... SMA JACK
RF OUTPUT ..... TYPE N JACK

RECEIVER ANTENNA ..... TYPE F JACK
ALARM INPUTS ..... DB 15 JACK
ANALOG STATUS ..... DB 9 JACK
48 VDC INPUT ..... MOLEX 3P

DR100PRO-U FINAL AMPLIFIER

The final amplifier Mainframe includes the following items:

1. UDD25 HIGH GAIN DRIVER WITH ALC CONTROL
2. DX250 LDMOS FINAL AMPLIFIER STAGE
3. 50 VDC POWER SUPPLY



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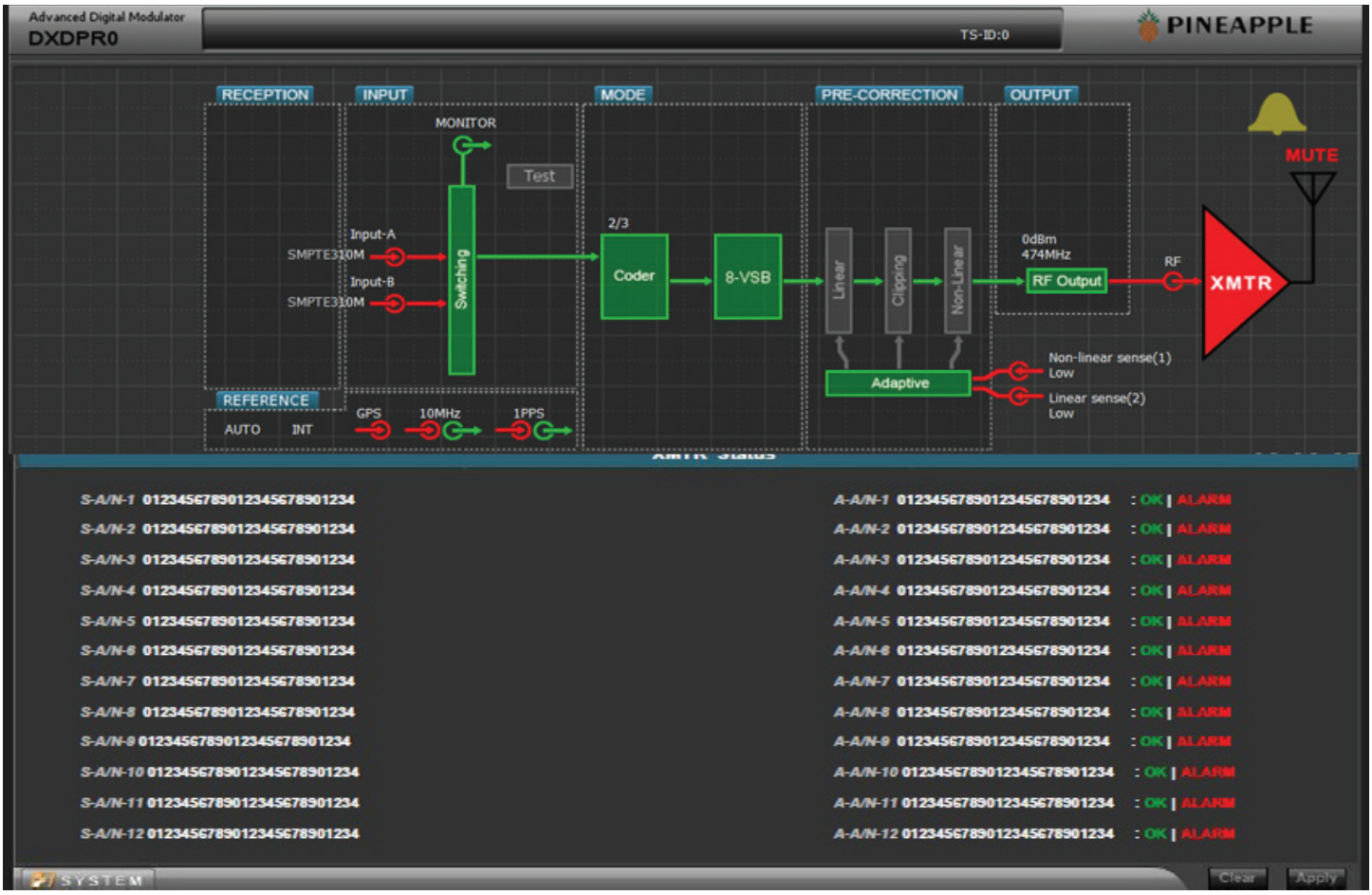
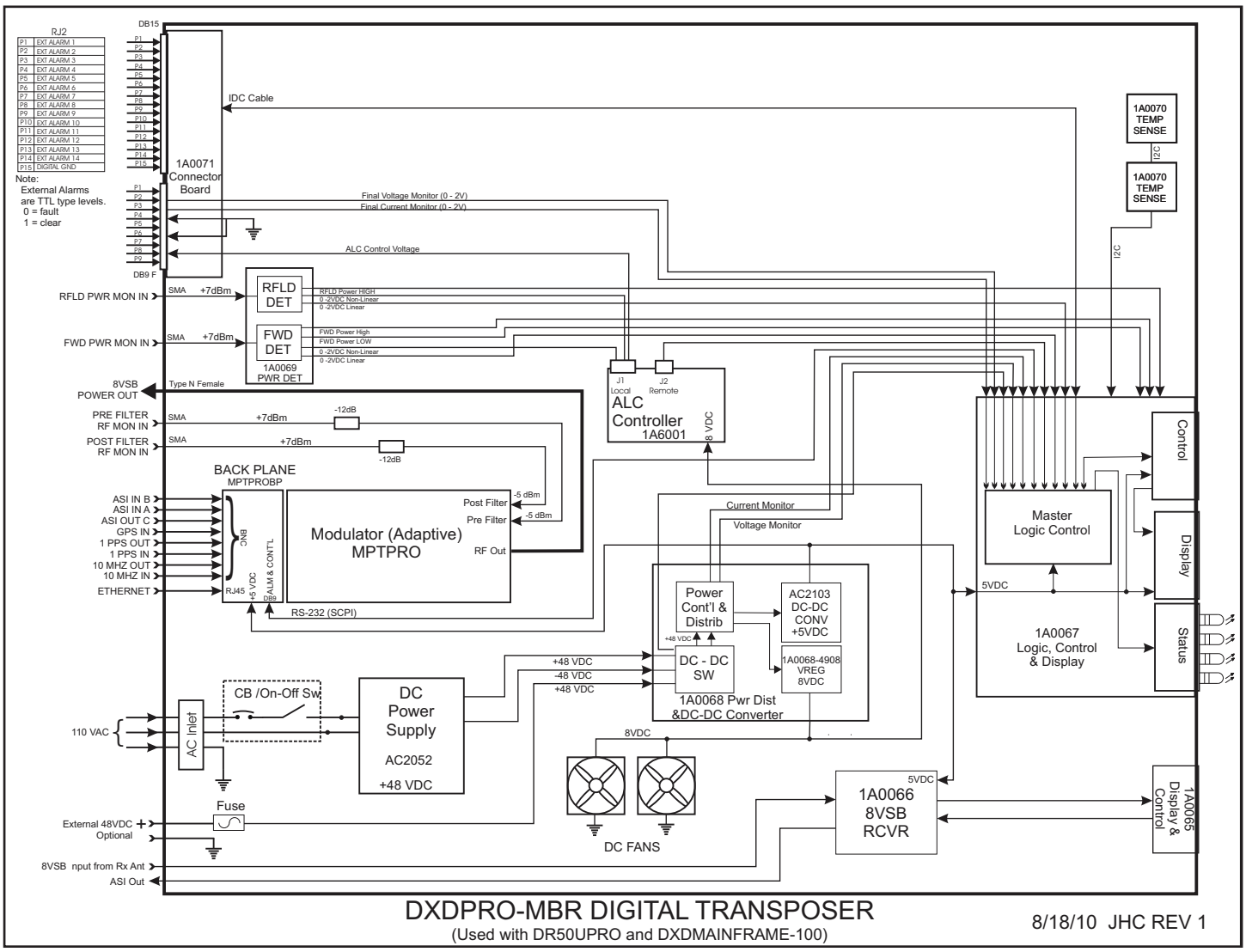
WEB PAGE GUI

Web Page Commands

- Click and drag (XMTR ICON) to lower 1/2 page to see status and alarms
- Click and drag (LINEAR ICON) to lower 1/2 page to control linear correction
- Click and drag (NONLINEAR ICON) to lower 1/2 page to control nonlinear functions
- Click and drag (MUTE ICON) to lower 1/2 of page to mute and un mute xmtr
- Click and drag (RF OUTPUT) to change the output level from modulator
- Click and drag (BELL ICON) to view modulator alarms
- Click and drag (GPS ICON) to setup GPS receiver
- Click and drag (SWITCHING ICON) to select input port for ASI or SMPTE-310



BLOCK DIAGRAM DXDPRO-MBR



DXDPRO-MBR DIGITAL TRANSPOSER

(Used with DR50UPRO and DXDMAINFRAME-100)

8/18/10 JHC REV 1

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