

DTXPRO-10U DIGITAL TRANSMITTER

DIGITAL MODULATOR,
TRANSMITTER, AND
REMOTE CONTROL



INTRODUCTION

The DTXPRO-10U transmitter integrates a DIGITAL MODULATOR, LOW POWER LDMOS HPA AMPLIFIER, and remote control via ETHERNET. The transmitter's 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 connection. 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 up to an additional 5 years. Contact PTI sales for details.



PINEAPPLE TECHNOLOGY, INC.

www.ptibroadcast.com

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GENERAL SPECIFICATIONS — MODULATOR

STANDARDS.....ATSC (8vsb), A/53, AS
 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)
 CONTROLETHERNET WITH WEB PAGE GUI
 ACCESS PROTECTION.....THREE-LEVEL PASSWORK PROTECTION

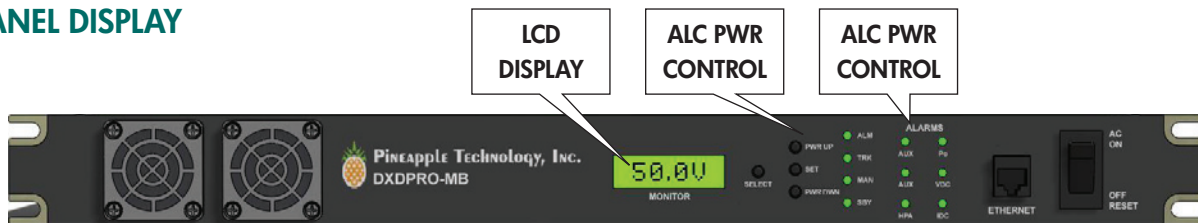
GENERAL SPECIFICATIONS — TRANSMITTER

FCC COMPLIANTAPPLICABLE SERVICE REQUIREMENTS
 KEY PERFORMANCE TEST .. SHOULDER LEVELS -62 dB TYPICAL
 MER/SNR -35 dB TYPICAL
 FREQUENCY RANGE..... *470-810 MHz

RF OUTPUT POWER 10 WATTS
 MASK FILTER..... 6 POLE STRINGENT FCC MASK
 LOW PASS FILTER ADDITIONAL HARMONIC SUPPRESSION FOR GPS BAND
 PRIMARY POWER..... 110-220 VAC 50/60 CYCLE
 48 VDC (42-50 V RANGE) <12 AMPS
 REMOTE CONTROL 12 STATUS AND 12 ALARM OPTIONS
 ASSEMBLED RACK 19 INCH 13 RU RACK
 WIDTH..... 21 INCHES (534 mm)
 HEIGHT..... 25 INCHES (635 mm)
 DEPTH..... 24.5 INCHES (623 mm)
 WEIGHT..... < 80 LBS (36.3 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.*

FRONT PANEL DISPLAY



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.

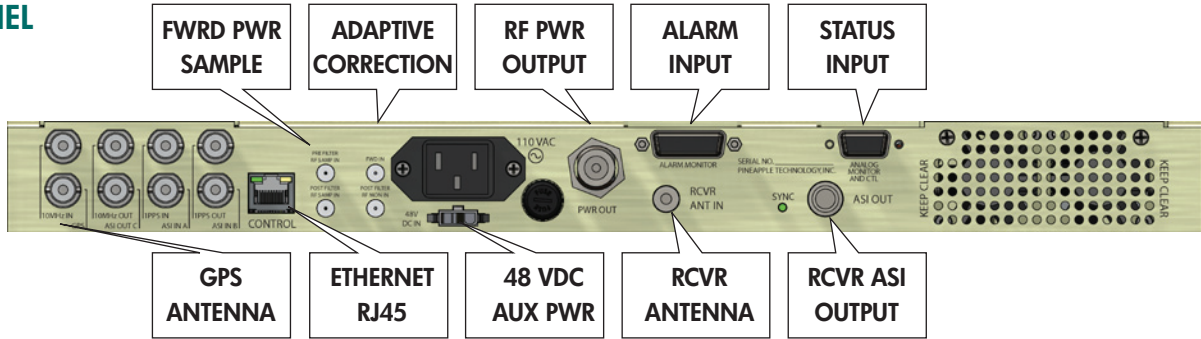
ALARM PANEL: The alarm LEDs indicates status of key alarms. Key alarms include the following;

- a. LOW OUTPUT POWER.....NORMAL (GREEN) FAULT (RED)
- b. HIGH REFLECTED POWER.....NORMAL (GREEN) FAULT (RED)
- c. 48 VDC SUPPLYNORMAL (GREEN) FAULT (RED)
- d. AC MAIN POWER*NORMAL (GREEN) FAULT (RED)

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REAR PANEL



*48 VDC BACKUP POWER REQUIRED

Mating Connectors

BNC JACK 75 OHMSGPS, ASI IN, SMPTE-310
 ETHERNETRJ-45
 RF MONITORINGSMA JACK
 ADAPTIVE SIGNAL.....SMA JACK
 RF OUTPUT.....N JACK

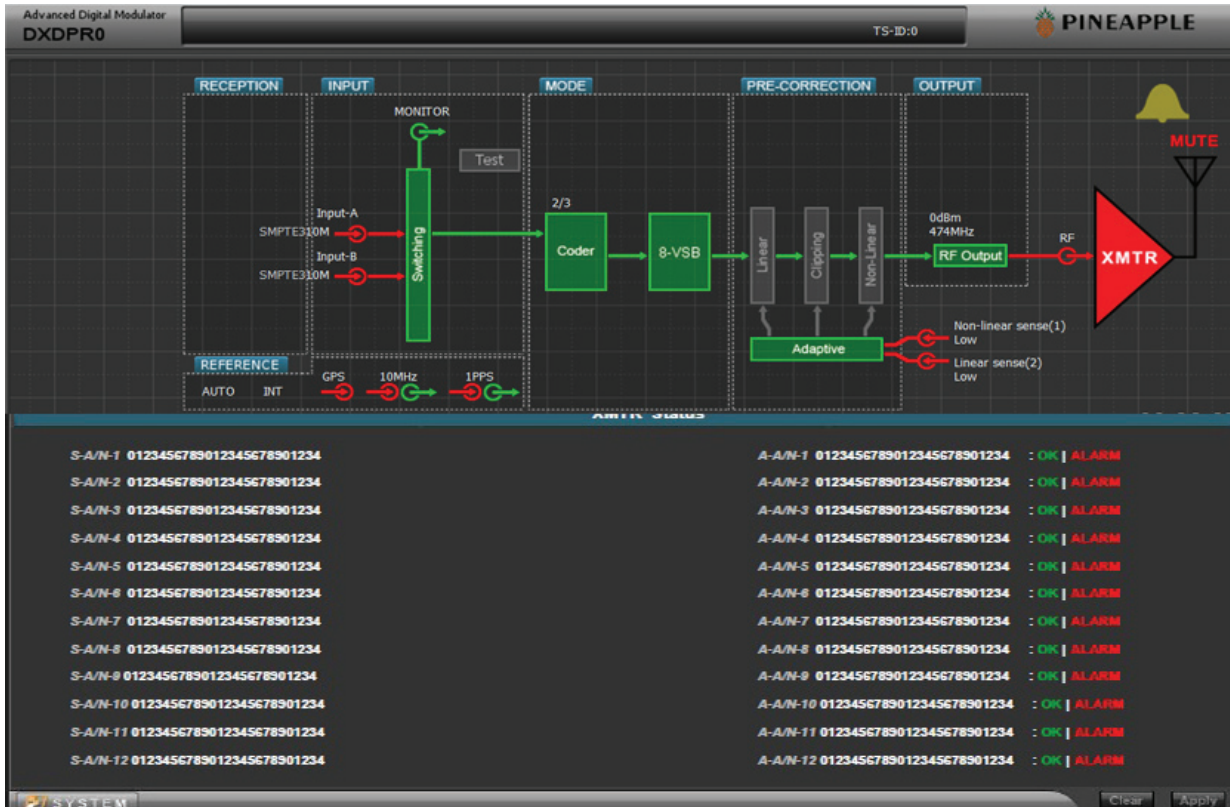
RECEIVER ANTENNA.....TYPE F JACK
 ALARM INPUTS.....DB 15 JACK
 ANALOG STATUSDB 9 JACK
 48 VDC INPUT.....MOLEX 3P

WEB PAGE GUI

Web Page Commands

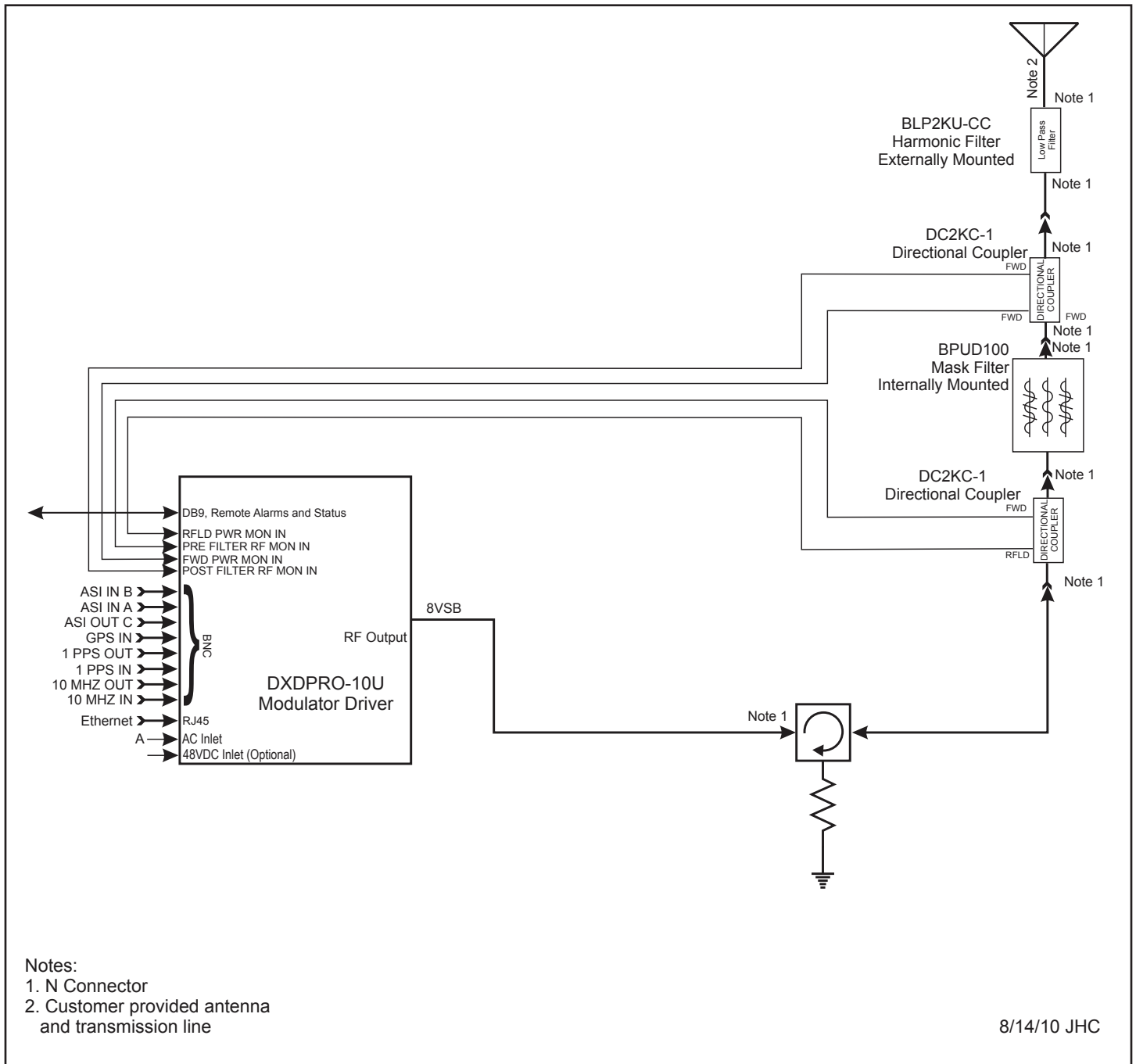
Click and drag (XMTR ICON) to lower 1/2 page to see status and alarms
 Click and drag (LINEAR ICON) to lower 1/2 page to control linear correction
 Click and drag (NONLINEAR ICON) to lower 1/2 page to control nonlinear functions

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



DTXPRO-10U DIGITAL TRANSMITTER BLOCK DIAGRAM

Digital Modulator, Transmitter, and Remote Control



PINEAPPLE TECHNOLOGY, INC.

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