DTXPRO-400UR DIGITAL TRANSPOSER

DIGITAL MODULATOR, REPROCESSOR, AND REMOTE CONTROL

Proud to be an American Company

INTRODUCTION

The DTXPRO-400UR transmitter is an integrated transmission system. Included in a 24 RU rack is a modulator, power amplifier, mask filter, and standard accessories. The DTXPRO-400UR is tested to FCC specifications.

The modulator used in this assembly is the DXDPRO-10UR. The DXDPRO-10UR is a UHF 8vsb BROADBAND MODULATOR with adaptive linear and nonlinear correction controllable via an Ethernet IP connection. The modulator has a built in all channel commercial 8vsb receiver. Many additional features are included in this basic modulator such as TRANSMITTER REMOTE CONTROL and STATUS MONITORING, GPS RECEIVER, ASI or SMPTE 310M, and FAULT NOTIFICATION VIA EMAIL. This unit will operate with 110 VAC or any 48 VDC TELECOM back up system in case AC Mains fail. Back up DC supply is not supplied in this package.

The MFA1PAU provides power amplification to achieve the desired power output level to comply with FCC license requirements. LDMOS 50 VOLT DEVICE TECHNOLOGY is used throughout the HPA section for state-of-the-art performance. This unit is wired to operate off 220V AC

An FCC Compliant STRINGENT MASK FILTER is supplied and is built into the rack. Additional components are included to sample forward and reflected power as well as samples for the adaptive linear and nonlinear corrector. The system transmitter is protected from antenna or filter faults by an ISOLATOR built into the HPA. Any faults in the filters or antenna will be detected by the onboard protection circuits. This transmitter includes a LOW PASS FILTER for additional harmonic suppression in the GPS Bands.

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 ..... *470-810 MHz

RF OUTPUT POWER ..... 200-400 WATTS

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

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

PRIMARY POWER ..... 110 VAC 50/60 CYCLE The DXDPRO-10U
WILL ALSO OPERATE OFF 48 VDC IF
AVAILABLE.

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

ASSEMBLIED RACK ..... 19 INCH 24 RU RACK
WIDHT ..... 22 INCHES (559 mm)
HEIGHT ..... 48 INCHES (1219 mm)
DEPTH ..... 32 INCHES (813 mm)
WEIGHT ..... < 155 LBS (70.3 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.*

RECEIVER SPECIFICATIONS

TUNABLE RANGE ..... CHANNEL 2 THRU 69

OUTPUT ..... ASI TRANSPORT STREAM

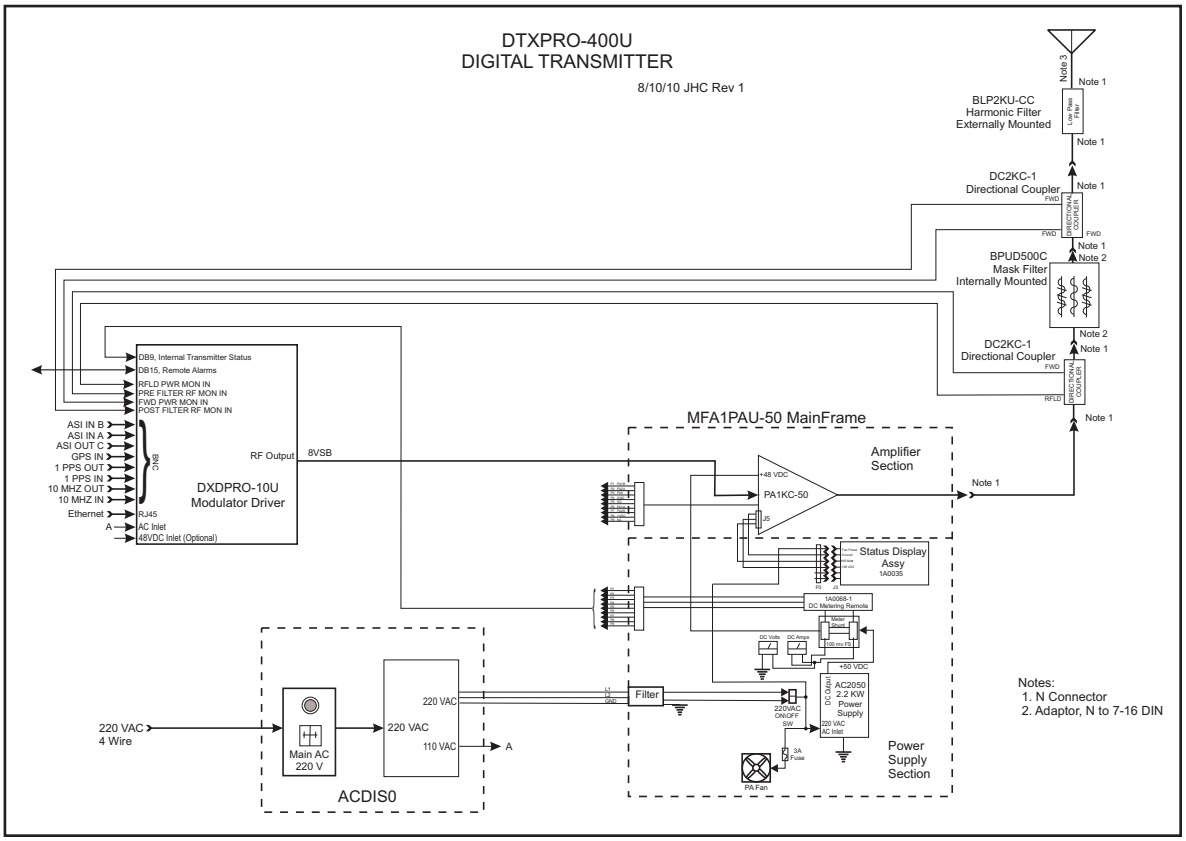
STANDARD RECEIVER ..... WITH EQUALIZER AS USED IN
PROFESSIONAL 8vsb RECEIVERS

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

SIGNAL STRIENGTH METER WITH
LCD DISPLAY

SIGNAL LOCK LED

DTXPRO-400U BLOCK DIAGRAM



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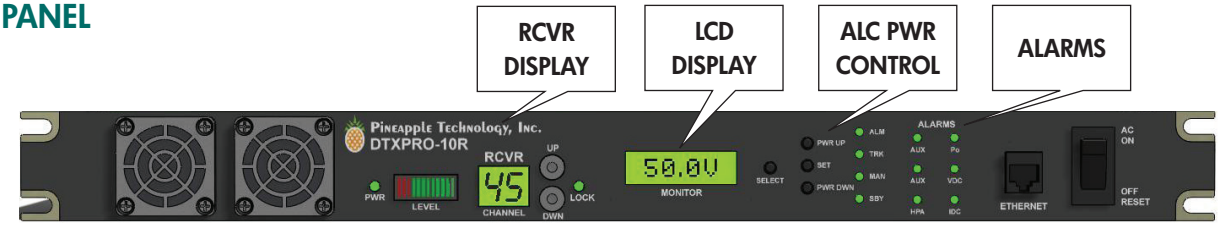
MODULATOR DXDPRO-10UR

NOTE: Additional information available in the DXDPRO-10U dtatsheet.

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.

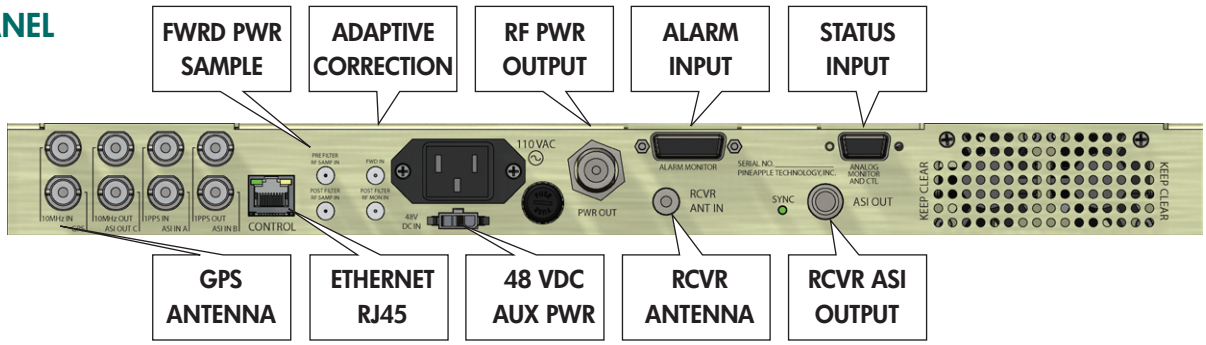
1. Provides a means for raising or lowering transmitter power level.
2. Once the desired power level is reached, the set switch places the ALC circuit in the TRACK MODE. In the TRACK MODE THE OUTPUT LEVEL IS CONSTANT.

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

1. Low Output Power.....NORMAL (GREEN) FAULT (RED) <85 %
2. High Reflected Power.....NORMAL (GREEN) FAULT (RED) >20 %
3. 48 VDC Supply.....NORMAL (GREEN) FAULT (RED) <42 v
4. AC Main Voltage.....*NORMAL (GREEN) FAULT (RED) <50 %
5. Ambient Temperature.....NORMAL (GREEN) FAULT (RED) >40 c
6. Heat Sink Temperature.....NORMAL (GREEN) FAULT (RED) >62 c

**48 VDC backup power required*

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

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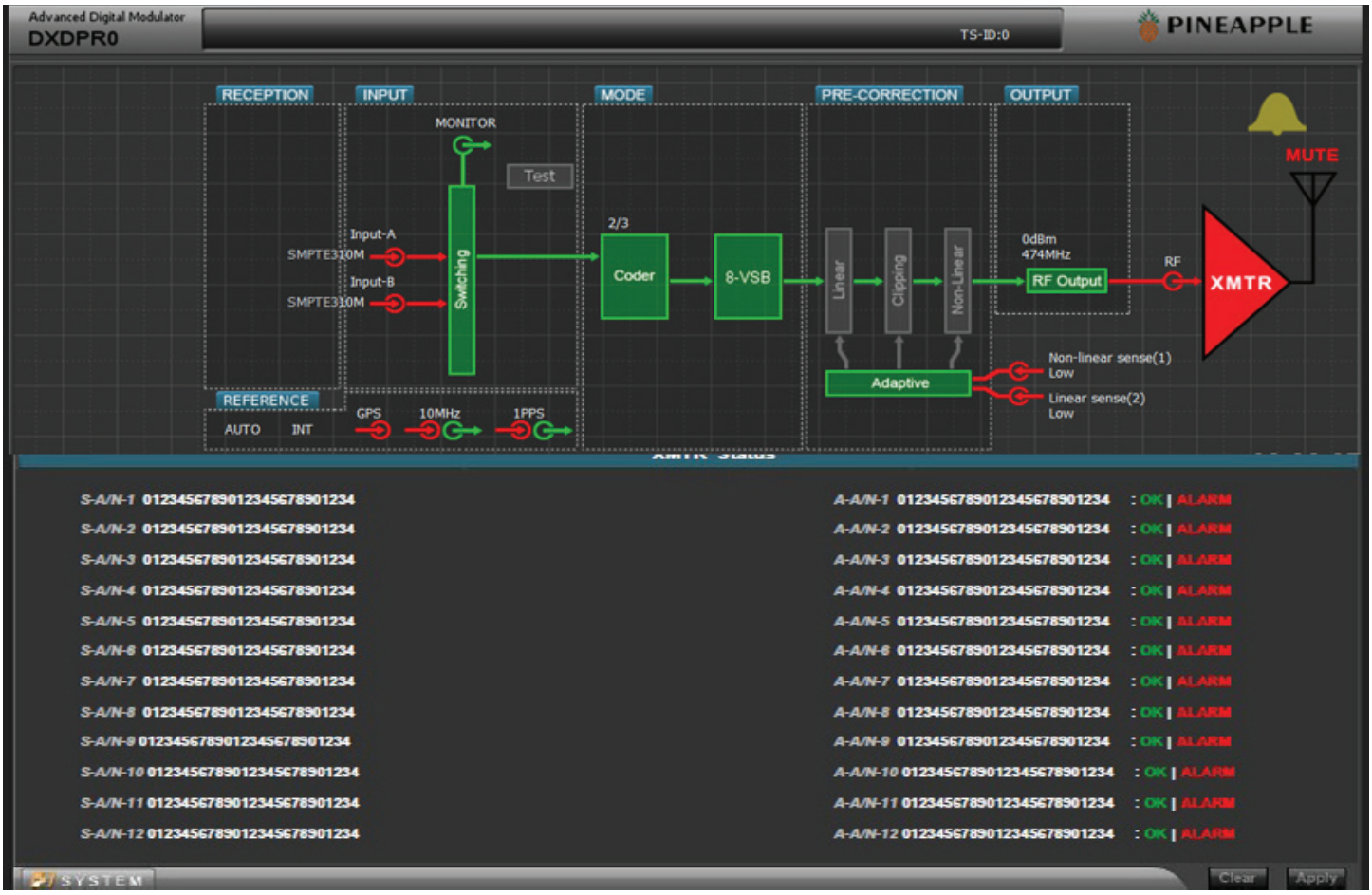
WEB PAGE GUI

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



MFA1PAU FINAL AMPLIFIER

The final amplifier Mainframe includes the following items;

1. DX500U HIGH GAIN DRIVER
2. 48 VDC POWER SUPPLY
3. PA STATUS PANEL
4. COOLING FANS AND HEAT SINK

PINEAPPLE TECHNOLOGY, INC.

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