

# MAXIMIZING NAUTEL FEATURES AND AUI

A CASE STUDY WBLT-  
LP RICE UNIVERSITY,  
HOUSTON

ROB MEUSER

**HOUSTON WE HAVE A PROBLEM!**

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**NO STL ANTENNA ALLOWED**

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**NO STL ANTENNA ALLOWED**

**LIMITED TRANSMITTER ACCESS**

**HOUSTON WE HAVE A PROBLEM!**

**NO STL ANTENNA ALLOWED**

**LIMITED TRANSMITTER ACCESS**

**QUASI PUBLIC EXPOSURE**

**HOUSTON WE HAVE A PROBLEM!**

**NO STL ANTENNA ALLOWED**

**LIMITED TRANSMITTER ACCESS**

**QUASI PUBLIC EXPOSURE**

**ESTHETIC CONCERNS**



**NO STL ANTENNA ALLOWED**

**SOLUTION: FIBER AVAILABLE**



**NO STL ANTENNA ALLOWED**

**SOLUTION: FIBER AVAILABLE**

**LIMITED TRANSMITTER ACCESS**

**SOLUTION: HIGHLY**

**RELIABLE WALK AWAY**

**DESIGN**

NO STL ANTENNA ALLOWED

**SOLUTION: FIBER AVAILABLE**

LIMITED TRANSMITTER ACCESS

**SOLUTION: HIGHLY**

**RELIABLE WALK AWAY**

**DESIGN**

QUASI PUBLIC EXPOSURE

**SOLUTION: SECURE ENCLOSURE**

**MINIMUM ACCESSABLE**

**CONTROLS CONTROLS**

# 2<sup>nd</sup> ADJACENCY TO TWO FULL POWER CLASS C COMMERCIAL STATIONS

**SOLUTION:**



**OMNIA 7**

**ALL OMNIA FEATURE OPTIONS INSTALLED**

ADDITIONAL COMPLICATION  
WAS KEEPING CAMPUS IT HAPPY  
**SOLUTION:**



APT IP CODEC TO CONVERT STREAM TO  
CONVENTIONAL IP- DIGITAL MPX OPTION

# TRANSMITTER SELECTION PROCESS

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## DIRECT DIGITAL MODULATION

**TRANSMITTER SELECTION PROCESS**

**DIRECT DIGITAL MODULATION**

**WEBSTREAM AS BACKUP**

**TRANSMITTER SELECTION PROCESS**

**DIRECT DIGITAL MODULATION**

**WEBSTREAM AS BACKUP**

**SILENCE SENSE/AUTOSWITCH  
TO BACKUP**



**TRANSMITTER SELECTION PROCESS**

**DIRECT DIGITAL MODULATION**

**WEBSTREAM AS BACKUP**

**SILENCE SENSE/AUTOSWITCH  
TO BACKUP**

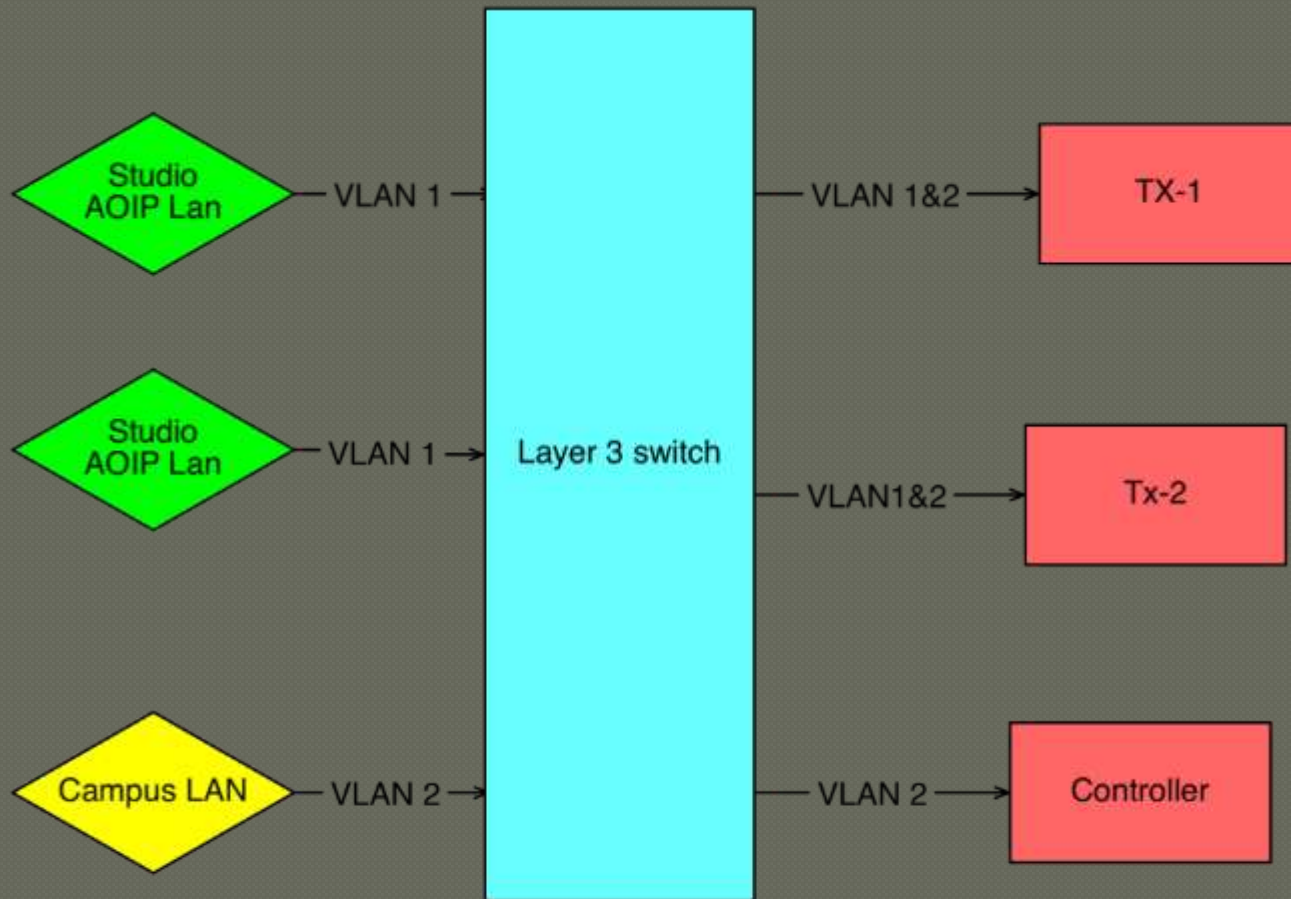
**REMOTE FACTORY SUPPORT/MONITOR**

# EXAMPLE OF TRANSMITTER SELECTION PROCESS

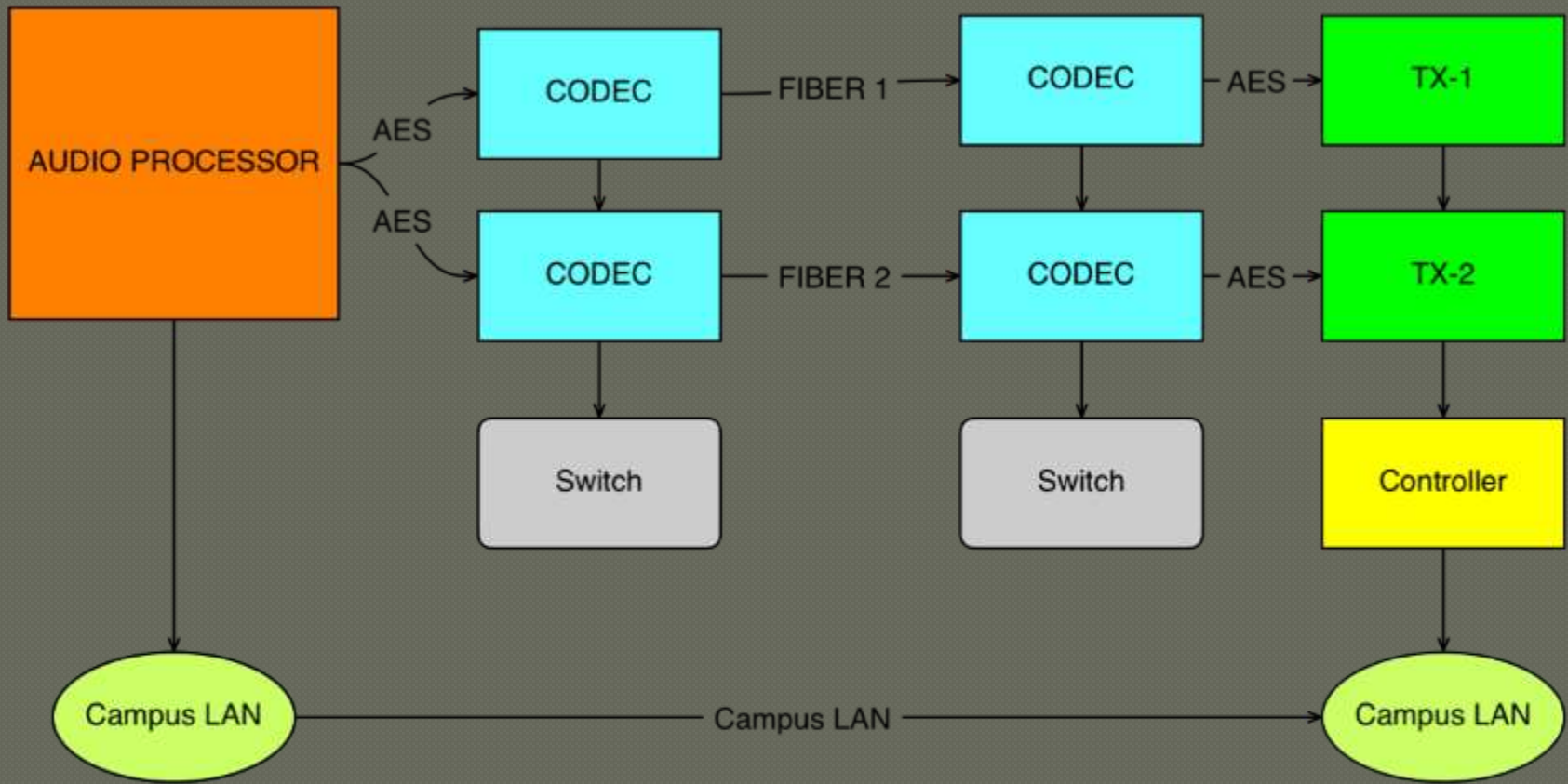
<b>Nautel Solution</b>				<b>BRAND X</b>			
Vs300	5300	2	10600	OTHER TX	6350	2	12700
Orban inside	1200	2	2400	Orban 8500	8590	1	8590
				Innovonics 610 webstream	990	1	990
<b>Subtotal</b>			<b>\$13000.00</b>	<b>Subtotal</b>			<b>\$22280.00</b>

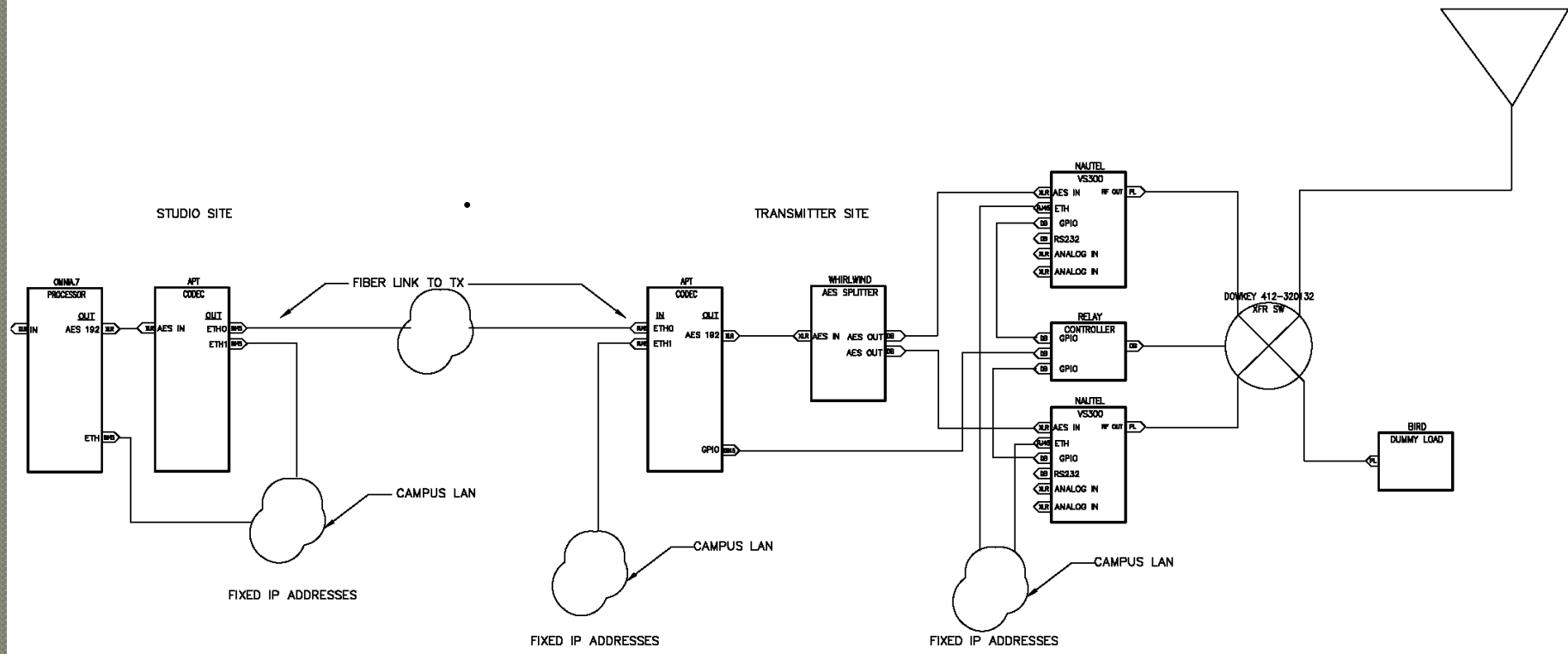
# VS SERIES TRANSMITTERS TO PROVIDE RELIABLE WALK AWAY





PROPOSED STL IP NETWORK

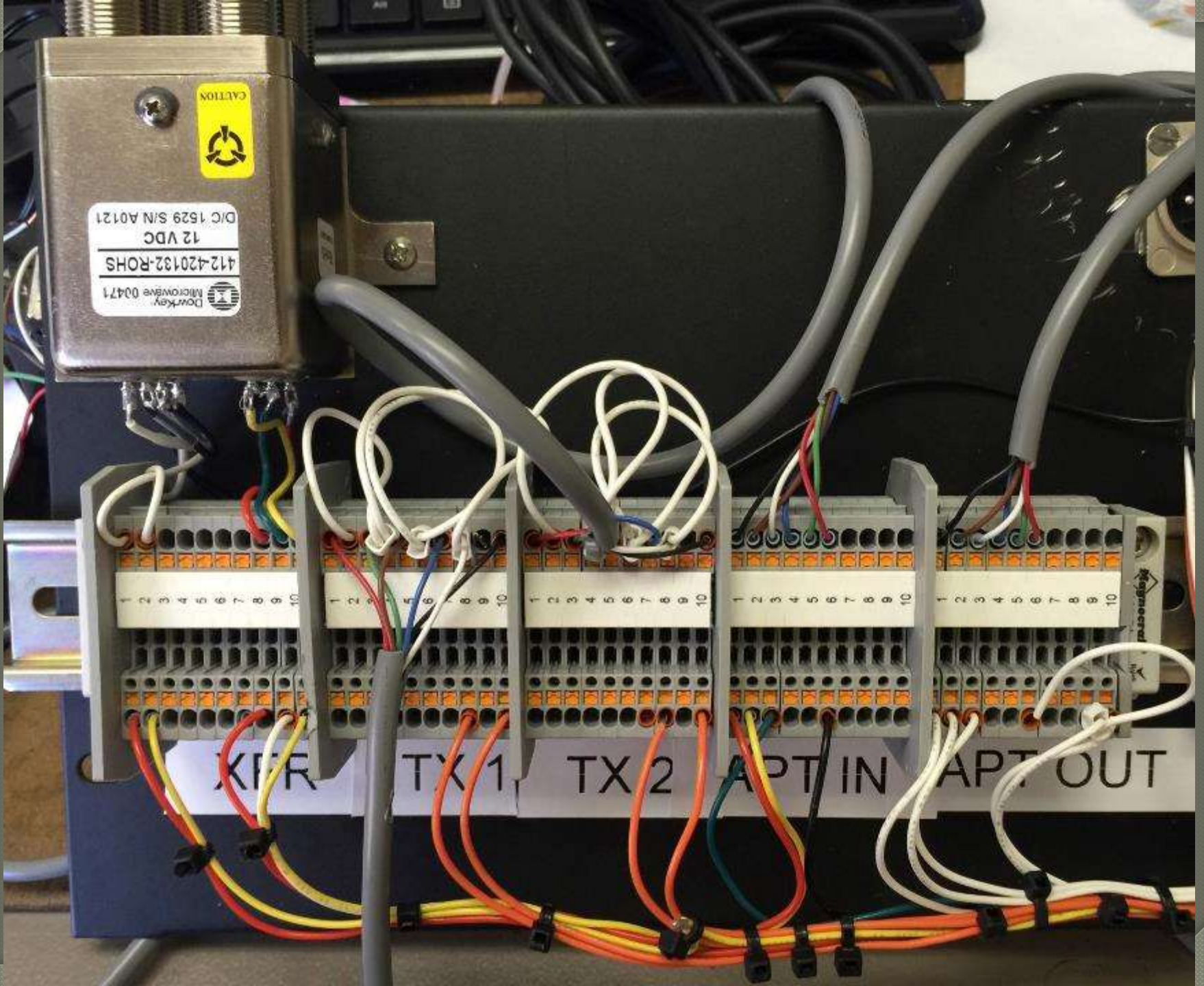






DowKey Microwave 00471  
412-420132-ROHS  
12 VDC  
D/C 1529 S/N A0121

CAUTION



CAUTION  
Dorkay Microwave 00471  
412-420132-ROHS  
12 VDC  
D/C 1529 S/N A0121

XPR TX 1 TX 2 APT IN APT OUT





+ -  
Output DC  
12V 30W

PHENIX CONTACT

● DC OK

UNO POWER

Input AC  
100V-240V  
L N

Schneider Electric

Schneider Electric

Schneider Electric  
12 VDC

Schneider Electric  
12 VDC

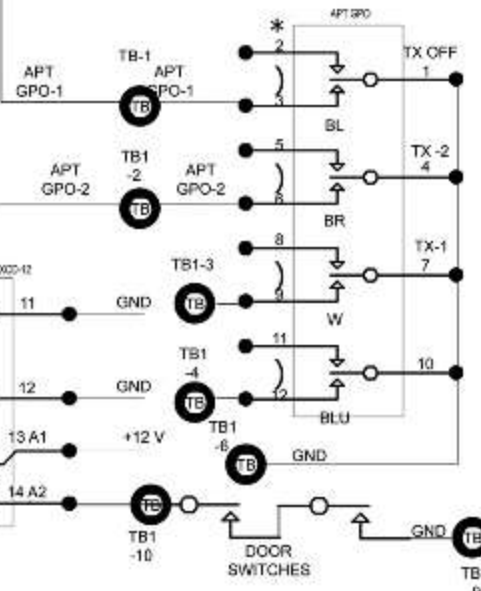
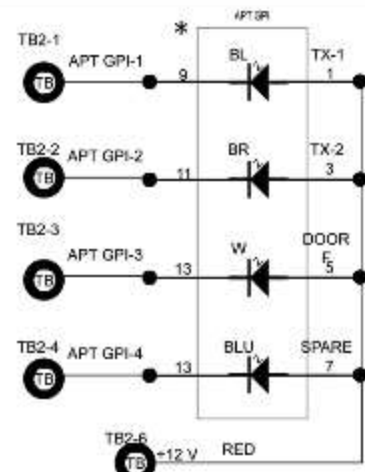
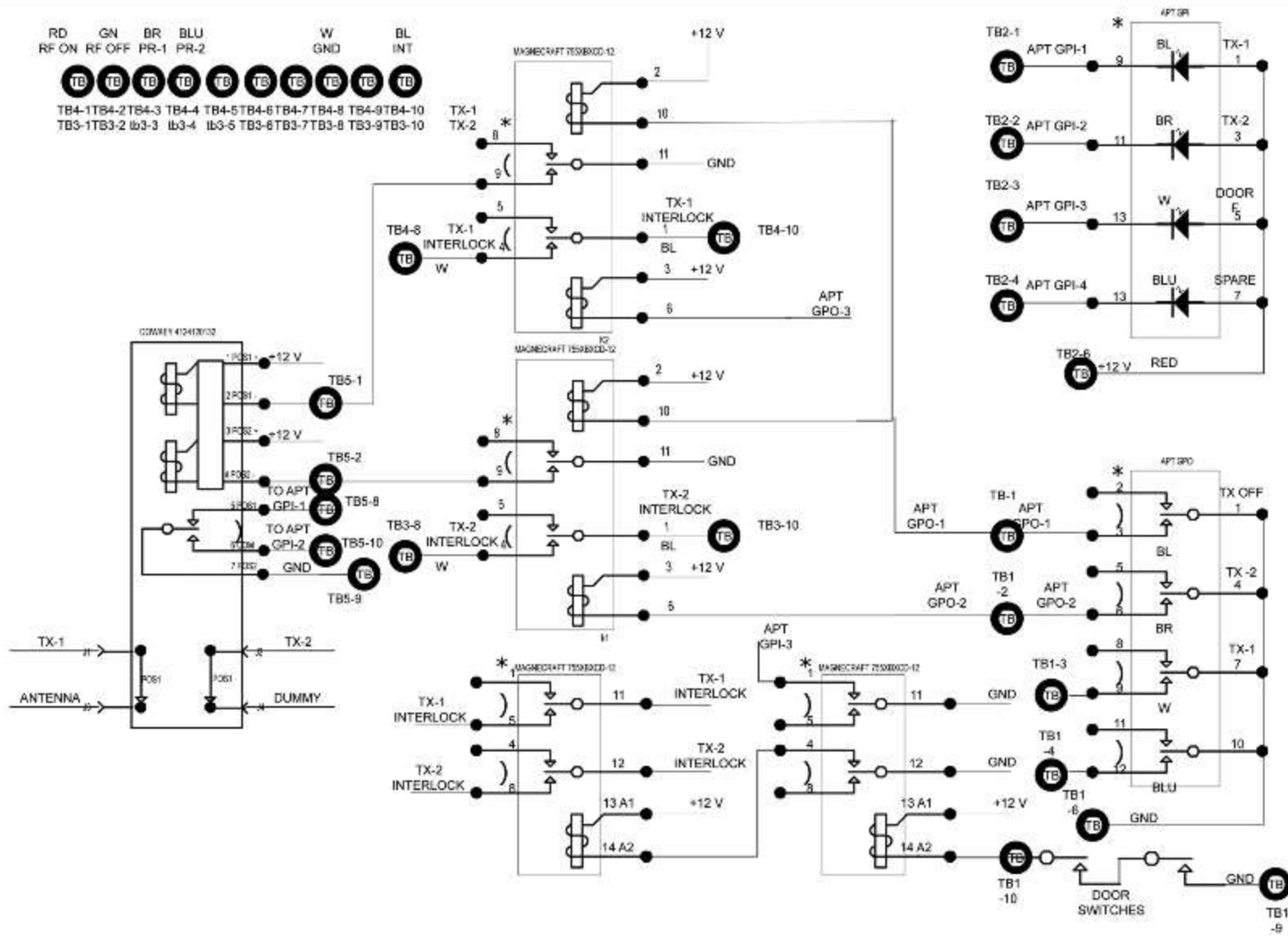
PTO

RD GN BR BLU  
RF ON RF OFF PR-1 PR-2

W BL  
GND INT



TB4-1TB4-2TB4-3 TB4-4 TB4-5TB4-6TB4-7TB4-8 TB4-9TB4-10  
TB3-1TB3-2 TB3-3 TB3-4 TB3-5 TB3-6TB3-7TB3-8 TB3-9TB3-10



REVISED:

REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY
REVISIONS	DATE	BY

**ENGINEAUX  
INC**

APPROVED FOR CONSTRUCTION:

DESIGNED BY:	RAM	DATE:	12/16/15
DRAWN BY:	RAM	DATE:	02/18/16
CHECKED BY:	RAM	DATE:	07/16/16
APPROVED BY:	RAM	DATE:	07/16/16

**RICE U**

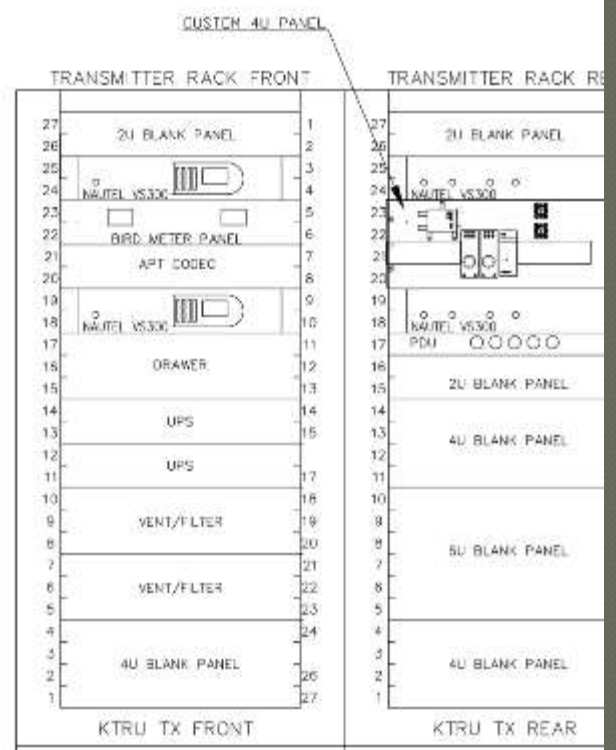
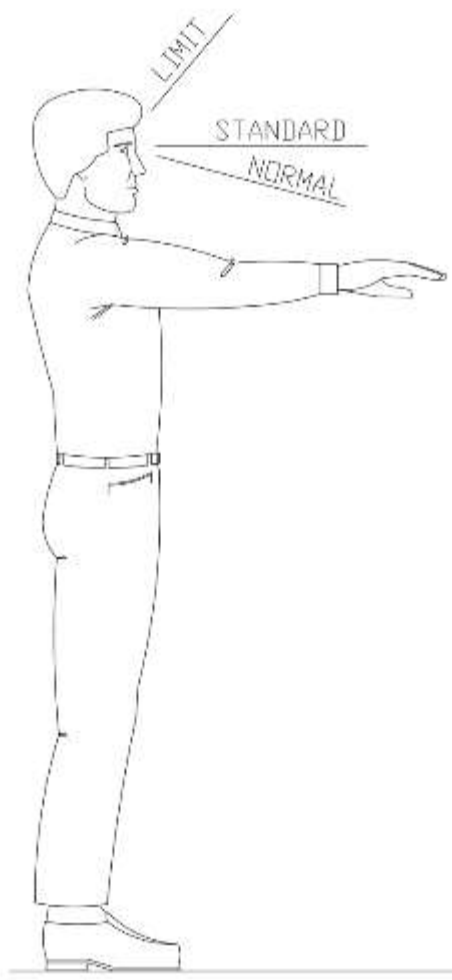
**KTRU LP  
TX CONTROLLER**

REV. NO.:	1	DATE:	10/11
REV. NO.:	2	DATE:	10/11
REV. NO.:	3	DATE:	10/11
REV. NO.:	4	DATE:	10/11
REV. NO.:	5	DATE:	10/11
REV. NO.:	6	DATE:	10/11
REV. NO.:	7	DATE:	10/11
REV. NO.:	8	DATE:	10/11
REV. NO.:	9	DATE:	10/11
REV. NO.:	10	DATE:	10/11

**CTROO1**







KTRU TX FRONT

KTRU TX REAR



48

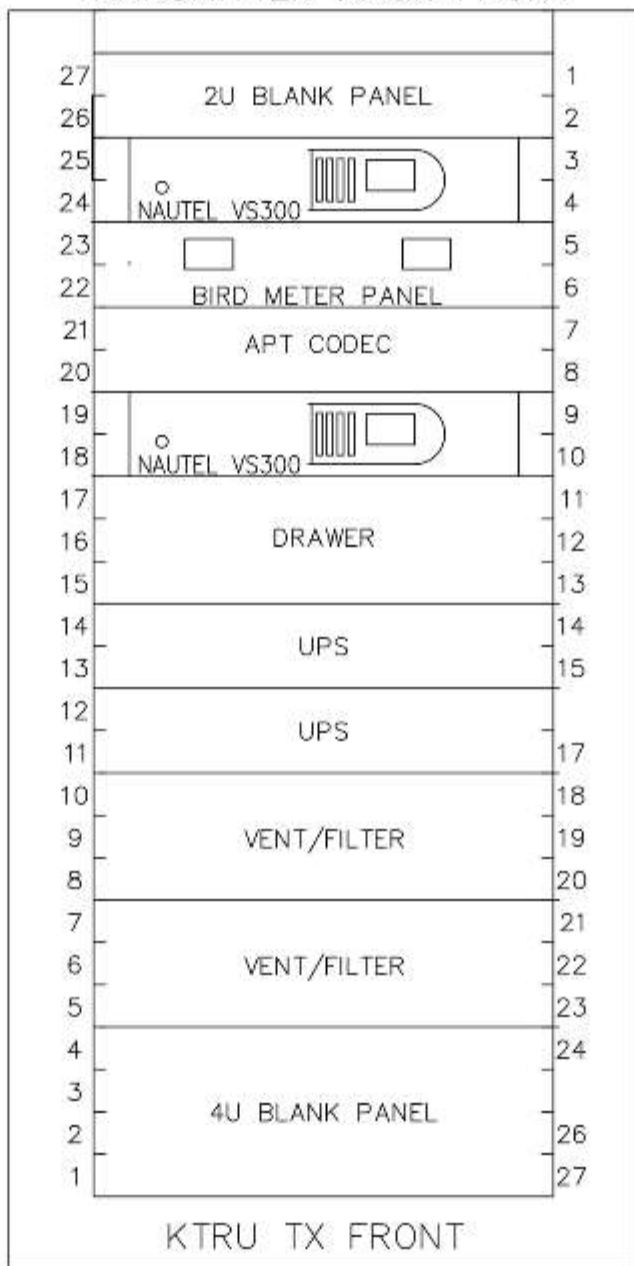
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12

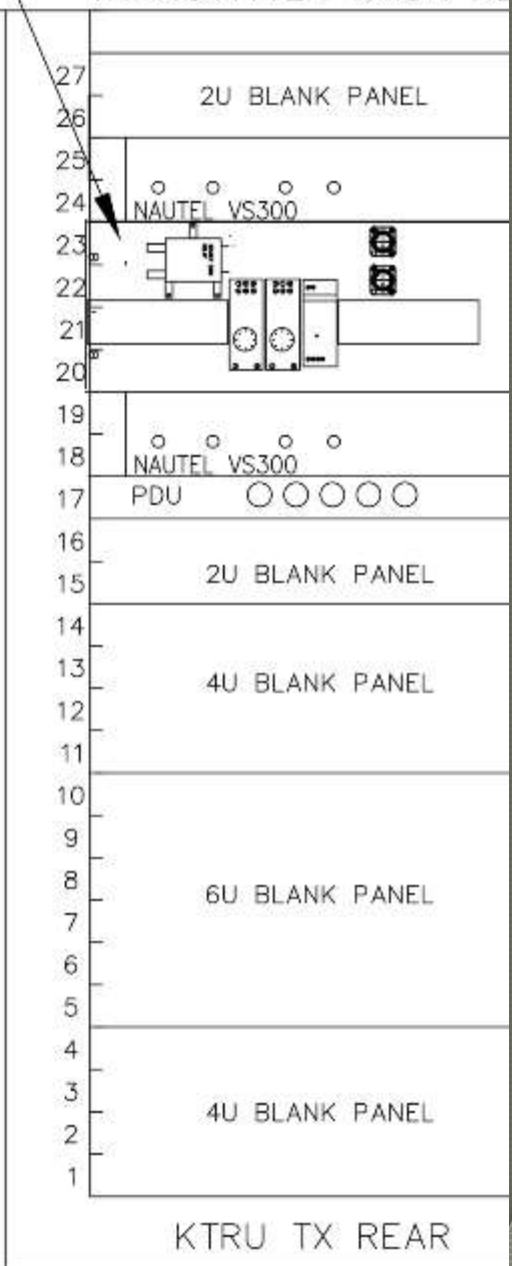
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### TRANSMITTER RACK FRONT

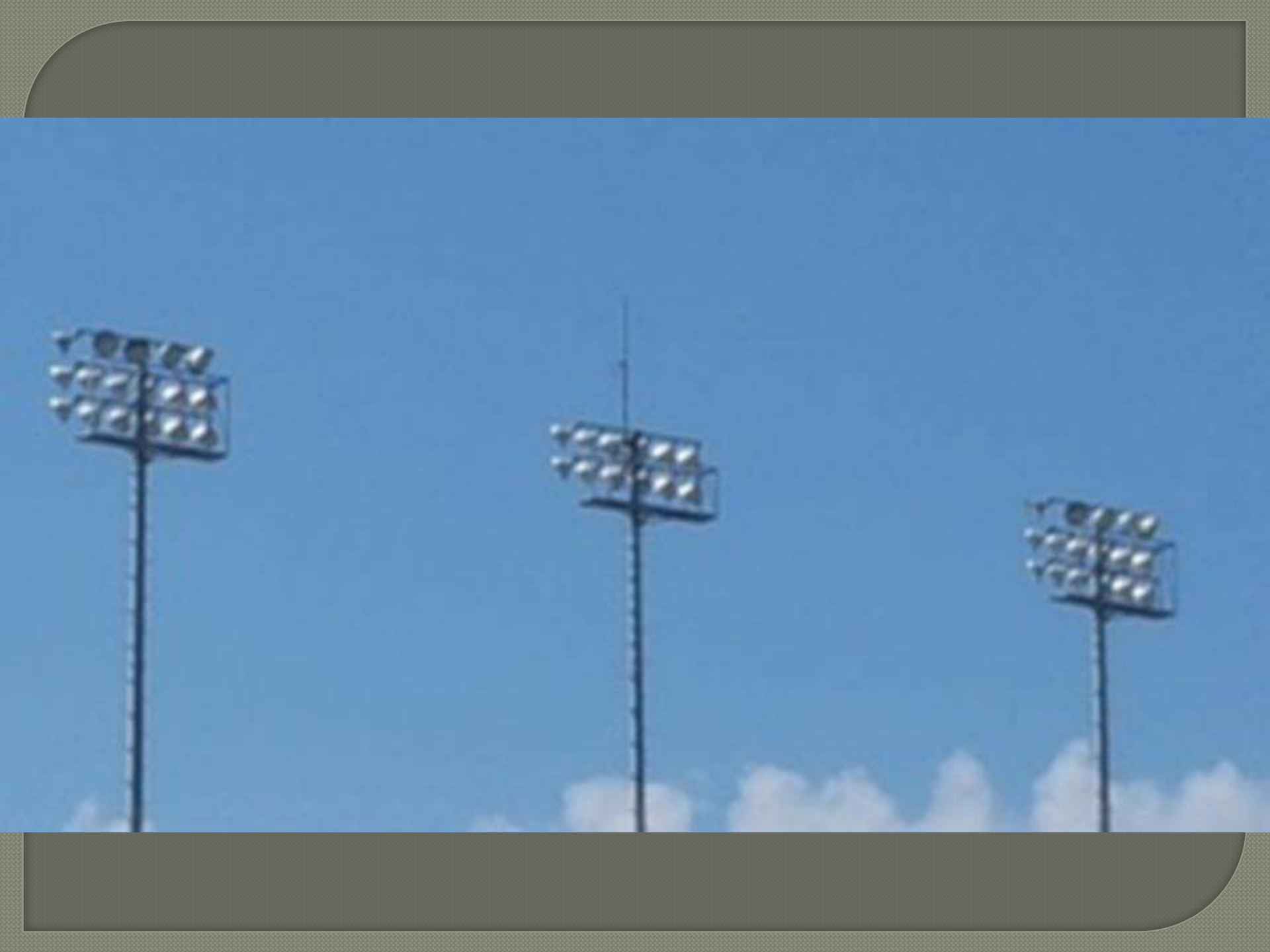


KTRU TX FRONT

### TRANSMITTER RACK REAR



KTRU TX REAR







**THANK YOU!**