

WRSU-FM MARATHON SYSTEM

GENERAL DESCRIPTION: The Wrsu Marathon systems was designed and built by the Wrsu Technical Department in 1982 for the Live coverage of the ZBT Dance Marathon at the College Avenue Gym (the Barn). The two pieces were built by Daniel Schleck(Producer Console) and Vince Anderson(Engineer console). The Systems contains two main pieces of equipment that is connected to several other mixers and amplifiers to allow it to work.

Producer Console; The producer console has 6 Audio Amplifiers to allow 6 different head phone to be feed. The Amplifier is capable of drive headphones has low as 8 ohms, but it should be noted that the output jack are not wired in the standard headphone configuration(Stereo or Mono), but a high bred.

Engineer Console: The producer has 4 audio amplifiers and tracking dual LED and selector switches for the six amplifiers in the producer console, and 8 passive Microphone switches for directing the Mike signal to either on the AIR or CUE audio mixers. The Headphone Jacks are standard 2 conductor Mono Jacks.

Audio Input:

AIR- GREEN LED : The Air signal input is the air signal for listening what is actually on the air at the time. This signal is usually taken from a radio headphone jack.

CUE or Q: RED LED : The Off the air signal for talking between the Engineer, Producer and Up to 5 Members of the Air Staff. This signal is usually taken from one or two strapped together mixer that mix the off the air or CUE conversation. The system is designed that the CUE audio cannot be placed on the air.

AUX: General purpose passive link between the Engineers and Producers Console.

The system takes two different audio inputs that are referred to as *AIR* and *CUE* or *Q*. These are to be about line level (0 Dbm) and are input balanced to eliminate ground problems. The input impedance is about 5 K ohms. There is a master gain control for each of these input inside the unit(Bottom must be removed to reach these controls on the Producers Console and is located in the back of the Engineers Console). The audio is place in the unit via terminal strip in the back of the unit. The Audio is also send to the other console via the 10 Conductor AUDIO cable. The Feed along the AUDIO

Cable is completely passive (read no amplifiers), which means that audio can be placed into the system at either the Engineer or Producers console, and will travel to the other console as long as the AUDIO Cable is in place. The AUXiliary input is not connected to any electronics at all. Its use is to send an Audio signal from one console to the other. The usual use is to send the composite ZBT Board feed (Live Band Audio and announcements) near the Producers console to the Engineering Console Upstairs where it is relatively quiet, to be mixed on the air to place the bands on the air. Translation: Two Shielded Wires running between the Producer and the Engineer for general use. It is highly recommended that the level be in the range of usual line level to avoid cross-talk problems (0 dBm).

PRODUCER CONSOLE

The description will be from the front moving to the back (with side trips when needed).

1. FRONT ROW: The Front 'row' consists of one (1) button on the left hand side. This is the Producer Microphone cut off. The Producer plugs his mike in to the Left side of the unit, the Mike level audio (-65 Dbm) is sent to this switch which is either open or closed. If the Switch is closed then the Mike is shorted and NO AUDIO is heard. If the Switch is open then the audio is allowed to pass out the signal two conductor cable to the Cannon plug to be fed via the Mike snake to the Engineers Control Point. Please note that there is NO OVER RIDE for this switch. If the mike is cut off via this switch, it cannot be turned on!!!

2. SECOND ROW:

2.1 Producer Audio Selector: 3 position switch.

Down/Forward: CUE - Producer is listening to CUE conversation.

Center: AIR - Producer is listening to AIR Signal

Up/Back: AUTO - Automatic Selection: usual position

In AUTO Producer will listen to AIR when all Talent positions are in Air. When Any Talent Position is placed in cue by any method, the Producer will AUTOMATICALLY drop into CUE. This way if any of Talent or Engineers want to talk to the Producer, The CUE will force him to listen, and allow the Producer to keep track of what is happening.

2.2 ALL CUE: Places all Producer and Talent Headphones into CUE.

This is a On-Off type switch, which means :

Hit First Time: All in CUE

Hit Second Time: All in Air(or individual selection)

2.3 Talent(Host) #1 Headphone Selector:3rd Switch from the left.
(Labeled #2 for 2nd amplifier (Producer is #1 amplifier)).

Momentary Contact Switch: Not Pushed-AIR,
Pushed-CUE.

2.4 Talent(Host) #2 Headphone Selector:4th Switch from the left.
(Labeled #3 for 3rd Amplifier)

Momentary Contact Switch: Not Pushed-AIR,
Pushed-CUE.

2.5 Floor #1 Headphone Selector:5th Switch from the left.
(Labeled #4 for 4th Amplifier)

2.6 Floor #2 Headphone Selector:6th Switch
(Labeled #5 for 5th Amplifier)

2.7 Extra Headphone Selector:7th Switch
(Labeled #6 for 6th Amplifier)

General purpose, can be used for Host or Floor reporter.

3rd ROW - Dual Color LED - Green/Red

The dual color Led tell the producer what STAFF(Talent or Floor) is listen to at the present moment.

GREEN	AIR
RED	CUE

3.1 LED: Producer (Notice that this LED is be green when all the Talent LEDs are green and Selector is in AUTO. If Any of the Talent LEDs go into CUE, the producer will follow(turn red), if the producer is in AUTO. If the Producer is set in AIR or CUE, it will stay in that state.

3.2 Producer CALL Button: See Row FOUR(4) for function.

3.3 LED: Talent(Host) #1 -Amplifier #2

3.4 LED: Talent(Host) #2 -Amplifier #3

3.5 LED: FLOOR #12 -Amplifier #4

3.6 LED: FLOOR #2 -Amplifier #5

3.7 LED: General Purpose Amplifier #6

FOURTH (4) ROW

"CALL" LEDS - YELLOW

The Yellow CALL Leds are designed so that the Air Staff can indicate to the producer and engineer that he/she want to talk to the producer. The Air each has a separate button when pushed causes the Yellow CALL led to flash, and thus draw attention to himself. The Producer/Engineer then would answer by pushing the proper Audio selector button in order to talk to them, thus placing them into CUE (red led).

The Producer has a Call button to call attention to him self so he may alert the engineer that he is wanted. The Engineer has a common call lamp on the engineers console which tell him that Call is being used, but he cannot tell which person is calling.

FIFTH (5) ROW

CALL-CUE INTERFACE

The call-cue interface is a switch that allows the system to work in a more automatic way, thus allowing the producer and engineer to do other things.

When the CALL-CUE INTERFACE is ON, when ever the Air staff member pushes his CALL button, it proforms two(2) functions:

- 1.Lights the CALL Led
- 2.Places that person into Audio CUE.

This way the air staff is all ready in CUE and the producer does not have to place him into cue(also this way the Air Staff can listen to what is happening in CUE with out bothering anyone else.

When the CALL-CUE INTERFACE is off, the Yellow LED Flashes, the systems does not drop into CUE.

Sixth Row

The black knobs are the Amplifier Volume controls for each of the 6 amplifiers. The Cue and Air levels must be relatively matched because there is only one control per amplifier. Adjust the control for the proper volume for the different headphones. Each headphone will be different due to the design of the headphone(Note the system can drive down to 8 ohms and as high as you want.

Turn the un-used amplifiers to minimum value.

BACK PANEL

The back panel of units consists of:

1. Six Headphone jacks.
2. Six position Terminal Strip
3. Two 12 pin "Jones" Plugs

1.0 The six headphone jacks match with the 6 amplifiers (surprise). The jacks themselves are stereo type jacks but they are wired differently.

1.1 The TIP of the jack is the + audio of the Amplifier, just as usual from the normal plugs.

1.2 The RING is part of the CALL system. When the +5 Volts (obtained via a Pull UP resistor) on this ring is shorted to ground, it lights the CALL LEDS on the front panel. This is the reason when a regular MONO headphone is Plugged into the jack the Call Led will go on. The missing ring connector is shorted to ground so the led stays on all the time.

1.3 The Shell is the Ground and return for both the Audio and the call switch. Just as usual for a headphone.

1.4 It should be noted that the Output for Amplifier #1 (Producer) comes up Three places:

1.4.1 The Back of the Board in position #1. This is a Stereo Jack wired for call and audio as mentioned above.

1.4.2 The Audio comes up on the left side of the board for the Producer Sports Head Phones can be plugged in (next to the Producer Micro-phone Jack. This is a standard two conductor MONO Jack.

1.4.3 There is another extra MONO jack on the side for another person to listen to the producer channel. **DO NOT** try to use both the side producer jacks and the back jack #1. There is a cut off built in so not to allow this operation.

2.0 TERMINAL STRIP: This is where the CUE, AIR audio signals can enter the system. Audio is only to be connected to the Systems at ONE end of the system: The Producer Console OR the Engineer Console but not both. The Auxiliary Channel is also connected to the system at this point. Remember that AUX is simply a Pair of Audio Wires running from One console to the other. There are no electronics.

3.0 The 12 Conductor Jones Plugs:

3.1 The Audio Cable: This cable is used to transfer the 3 audio channels between the consoles (CUE, AIR, AUX), it also is part of ground systems and has some backup logic traveling through it.

USED THE SHIELD CABLE TO PREVENT CROSS TALK. DO NOT USE THE

UN-SHIELD CABLE FOR THIS PURPOSE.

3.2 The Telemetry Cable: This cable has the +26 Volt power to the Engineer Console, all the logic levels for the Air-Cue States, and the Call logic levels(all TTL 5 volt logic via Pull up Resistors).

Use the Unshield Wire for this purpose.

WARNING-WARNING:DO NOT REVERSE THE
AUDIO AND TELEMTRY CABLES OR SERIOUS DAMAGE
WILL BE DONE TO THE SYSTEM !!!!

4.0 AC POWER PLUG: Used to supply power to the unit. Plug into any 120 Volt AC Supply. (Read Wall Socket)..

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:56:37 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:56:37 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

*** L P T S P L R u n L o g ***

19:56:32 LPDAT LPTSPL version 104(107650) Blue DEC-20, Rutgers CCIS, TOPS-20 Monit
19:56:32 LPDAT Job MARATH sequence #329 on Printer 0 [LOCAL] at 14-Apr-86 19:56:32
19:57:10 LPMSG File: BLUES:<WRSU-FM>MARATHON.X9700.2 Started: 19:56:38 Finished: 19:57:10
19:57:10 LPEND Summary: 7 Pages of Output per copy, MVS will make 1 copies
19:57:10 LPEND 9 Disk Pages Read
19:57:10 LPEND 2.142 Seconds CPU Time Used

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**

END Job MARATH Req #1583 for SCHLECK Bin H03A 14-Apr-86 19:57:10 Monitor: Blue DEC-20, Rutgers CCIS, TOPS-20 Mo **END**