



R-BUS Equipment Connection and Setting Guide 2

R-BUS

In this booklet, connections and parameter settings for R-BUS equipment and other digital audio systems are introduced. Please refer to the application example which is similar to the system you wish to construct, and also the "Basic Conditions for Digital Audio Connection" at the end of this booklet.

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- * R-BUS (RMDB2) is not compatible with the older RMDB.

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Important Note Concerning R-BUS Cables

NOTE

The RBC-5 (5-meters R-BUS cable/discontinued) does not support the use of 64 kHz or higher sampling frequencies. When using sampling frequencies of 64 kHz or higher, please use the RBC-1(1-meter R-BUS cable) or the RBC-3(3-meters R-BUS cable).

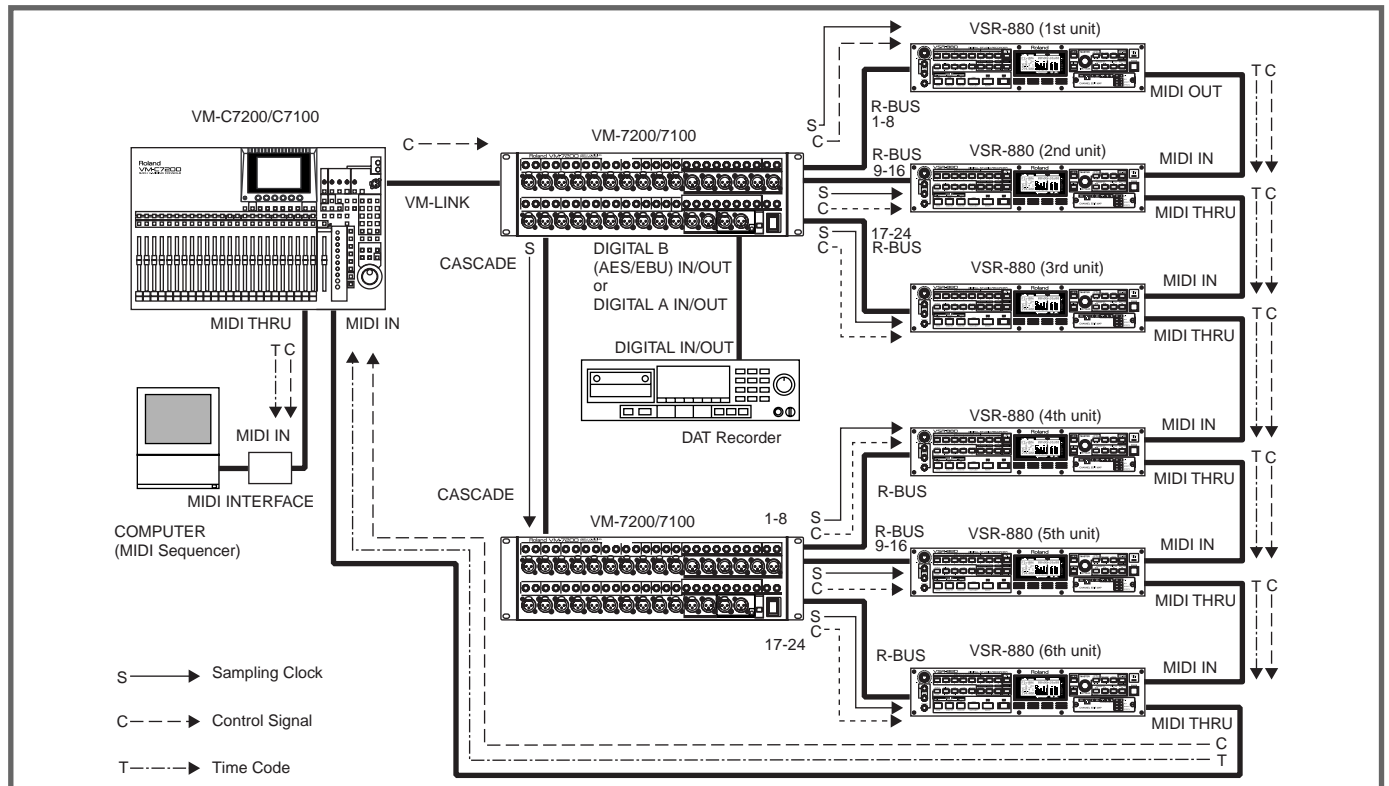
NOTE

Operation may be unstable when using the RBC-5 with the DIF-AT or AE-7000. Use the RBC-1 or the RBC-3 when using these devices.

(1) Connecting and synchronizing multiple (six) VSR-880s with the VM-7200/7100

- Transferring audio via digital connection between multiple VSR-880s and the VM-7200/7100.
- VSR-880 can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 (1st and 2nd units) [equipped with the VM-24E and VM-24C sold separately], VM-C7200/C7100, VSR-880 [internal IDE hard disk installed], RBC-1/5 R-BUS cables, MIDI cables

* DAT recorder, MIDI sequencer (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

VSR-880 (1st to 6th units) → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** INTERNAL
- **INTERNAL SAMPLING RATE:** in accordance with the VSR-880 song

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MTC
- **FRAME TYPE:** 30 (in accordance with Syn:MTC Type on the VSR-880)
- **MMC MASTER:** INT
- **MACHINE TYPE:** HD

SYS MIDI page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](MIDI)

- **MIDI THRU CONSOLE:** THRU

Press [LEVEL METER] to go back to the basic page.

VSR-880

[SHIFT]+[SYSTEM(▶)] → “SYS System PRM ?” → [ENT/YES] → (PARAMETER[◀◀] [▶▶])

- **SYS MasterClk=:** R-BUS → [ENT/YES]

[SHIFT]+[SYSTEM(▶)] → “SYS MIDI PRM ?” → [ENT/YES] → (PARAMETER[◀◀] [▶▶])

- **SYS MID:Thru=:** 1st VSR-880 Out
2nd VSR-880 and all others Thru
- **SYS MID:SysEx.Rx=:** 2nd VSR-880 and all others On
- **SYS MID:SysEx.Tx=:** 1st VSR-880 On
- **SYS MID:MMC=:** 1st VSR-880 MASTER
2nd VSR-880 and all others SLAVE

[SHIFT]+[SYSTEM(▶)] → “SYS Sync/Tempo ?” → [ENT/YES] → (PARAMETER[◀◀] [▶▶])

- **SYS Syn:SOURCE=:** 1st VSR-880 INT
2nd VSR-880 and all others EXT
- **SYS Syn:InSel=:** 2nd VSR-880 and all others MIDI
- **SYS Syn:Gen.=:** 1st VSR-880 MTC
2nd VSR-880 and all others OFF
- **SYS Syn:MTC TYPE=:** 30 (in accordance with FRAME TYPE on the VM-C7200/C7100.)

[LEVEL/BALANCE] → (PARAMETER[◀◀] [▶▶])

- **MST Direct OUT=:** On

[SHIFT]+[IN MIX(LEVEL/BALANCE)] → (PARAMETER[◀◀] [▶▶]) → “Input=” → [SHIFT]+STATUS[1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS

Press [PLAY(DISPLAY)] to go back to the basic page.



To set the parameters on the SLAVE (2nd unit) of the VM-7200/7100 processor in cascade with the VM-C7200/C7100, save the current project or create a new project on the memory card. The [2nd UNIT] button on a VM-C7200/C7100 works only on a project saved with a cascaded system.

- **PROJECT page** [PROJECT] → (CURSOR) → [F1](STORE) or [F2](NEW)



If you wish to control the track status of the VSR-880 with the VM-C7200/C7100, set CH STATUS MODE[AUDIO] and SECTION[MULTI OUT 1-24] on the VM-C7200/C7100 to On.



If the sample rate is set to 48.0kHz, the maximum number of simultaneous recordable tracks on the VSR-880 is six tracks per unit.



The following function is implemented with the VM-C7200/C7100 Ver.1.1 or later.

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2/3)

- **Song Select**
- **Song Store**
- **Shut Down**

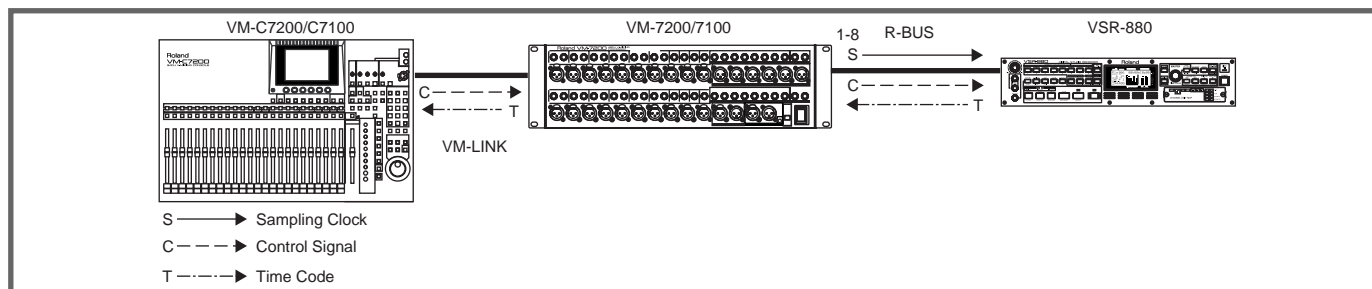
Basic page [SHIFT]+[PLAY]

- **Scrub Playback / stop with [F6](EXIT)**

(2) Connecting one VSR-880 to the VM-7200/7100

- Transferring audio via digital connection between the VSR-880 and the VM-7200/7100.
- A VSR-880 can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, VSR-880 [internal IDE hard disk installed], RBC-1/5 R-BUS cables (sold separately)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

VSR-880 → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** INTERNAL
- **INTERNAL SAMPLING RATE:** in accordance with the VSR-880 song

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MULTI 1-8
- **FRAME TYPE:** 30(in accordance with Syn:MTC Type on the VSR-880)
- **MMC MASTER:** INT
- **MACHINE TYPE:** HD

Press [LEVEL METER] to go back to the basic page.

VSR-880

[SHIFT]+[SYSTEM(▶)] → "SYS System PRM?" → [ENT/YES] → (PARAMETER[◀◀][▶▶])

- **SYS MasterClk=:** R-BUS → [ENT/YES]

[SHIFT]+[SYSTEM(▶)] → "SYS MIDI PRM?" → [ENT/YES] → (PARAMETER[◀◀][▶▶])

- **SYS MID:MMC=:** Off/R-BUS or MASTER

[SHIFT]+[SYSTEM(▶)] → "SYS Sync/Tempo?" → [ENT/YES] → (PARAMETER[◀◀][▶▶])

- **SYS Syn:SOURCE=:** INT
- **SYS Syn:Gen.=:** R-BUS
- **SYS Syn:MTC TYPE=:** 30 (in accordance with FRAME TYPE on the VM-C7200/C7100.)

[LEVEL/BALANCE] → (PARAMETER[◀◀][▶▶])

- **MST Direct OUT=:** On

[SHIFT]+[IN MIX(LEVEL/BALANCE)] → (PARAMETER[◀◀][▶▶]) → "Input=" → [SHIFT]+STATUS[1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS

Press [PLAY(DISPLAY)] to go back to the basic page.

MEMO

- If you wish to control the track status of the VSR-880 with the VM-C7200/C7100, set CH STATUS MODE[AUDIO] and SECTION[MULTI OUT 1-24] on the VM-C7200/C7100 to On.

* If the sample rate is set to 48.0kHz, the maximum number of simultaneous recordable tracks of the VSR-880 is six tracks per unit.

- The following function is implemented with the VM-C7200/C7100 Ver.1.1 or later.

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG)
→ [PAGE DOWN](R-BUS 1/2/3)

- **Song Select** • **Song Store** • **Shut Down**

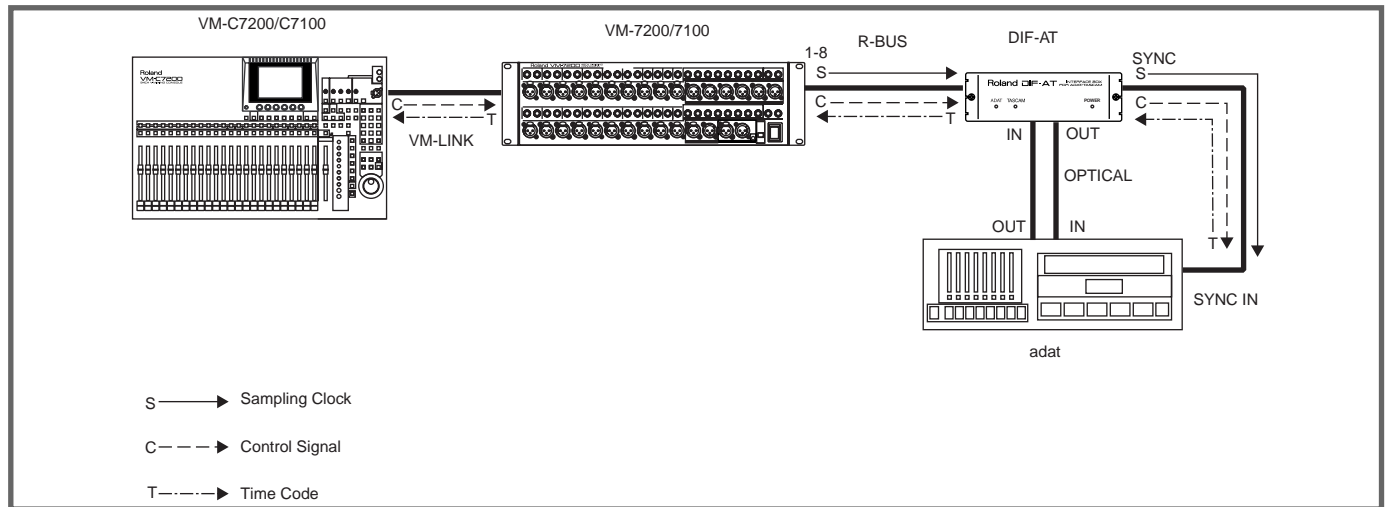
Basic page [SHIFT]+[PLAY]

- **Scrub Playback / stop with [F6](EXIT)**

(3) Connecting an ADAT to a VM-7200/7100 and controlling the system with the VM-C7200/C7100

- Transferring audio via digital connection between the ADAT and the VM-7200/7100.
- ADAT can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, ADAT, ADAT Optical cables, ADAT Sync cable

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADAT → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1)

- **DIF-AT CONTROL TARGET: ADAT**

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE: INTERNAL**

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER: EXT, MULTI 1-8**
- **MMC MASTER: INT**
- **MACHINE TYPE: TAPE**

ADAT

- **INPUT: DIGITAL**

MEMO

If audio only is transferred without an ADAT SYNC cable connection, sample clock is supplied to the ADAT via ADAT Optical cable. In this case, please set CLOCK SELECT on the ADAT to DIG.

NOTE

When an ADAT SYNC cable is connected as shown in the above picture, the ADAT automatically receives the sample clock via the SYNC cable, and displays "CLOCK : EXT" (ADAT XT/LX20). If this is not displayed, check the connection and reboot all the equipment again.

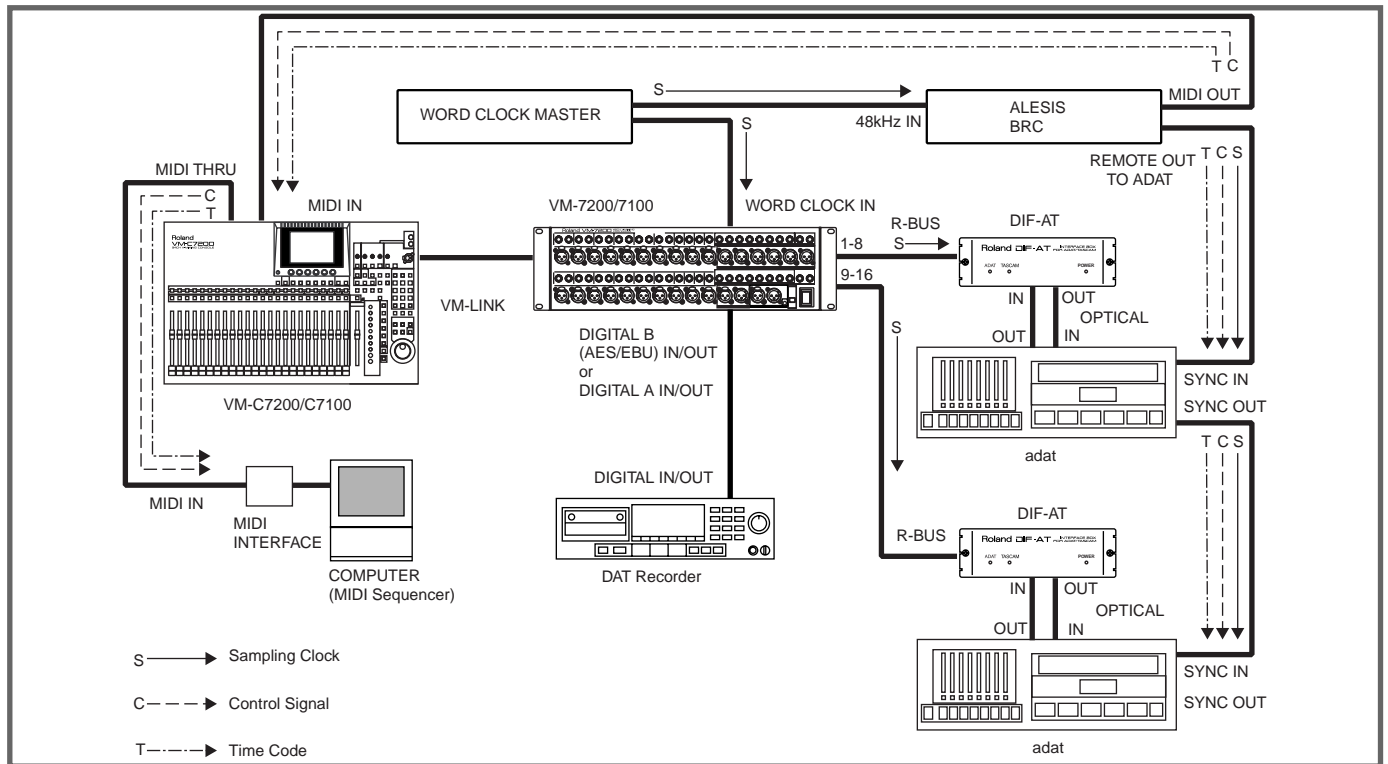
NOTE

When you format the ADAT tape, disconnect the SYNC cable. After the formatting is done, connect the sync cable and reboot the ADAT.

(4) Connecting and synchronizing multiple (two) ADATs with the VM-7200/7100 with word clock

- Transferring audio via digital connection between multiple ADATs and the VM-7200/7100.
- The ADATs can be controlled with the BRC's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, ADATs, ALESIS BRC, Word Clock Master device, ADAT Optical cables, ADAT Sync cable * DAT recorder, MIDI sequencer (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

BRC → ADATs (1st and 2nd units) → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2)

- **DIF-AT CONTROL TARGET:** ADAT

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** WORD CLOCK IN

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MTC
- **MMC MASTER:** MIDI

SYS MIDI page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](MIDI)

- **MIDI THRU CONSOLE:** THRU

BRC

- **Clock Source:** 48kHz Input
- **Locate Reference:** Internal
- **EXT SYNC:** On
- **Generate Sync:** MTC
- **GEN SYNC:** On



• A BRC transmits MMC Pause when [STOP] is pressed once, and then MMC Stop when [STOP] is pressed again. To set the VM-C7200/C7100 to "stop" status, press the BRC's [STOP] button twice.

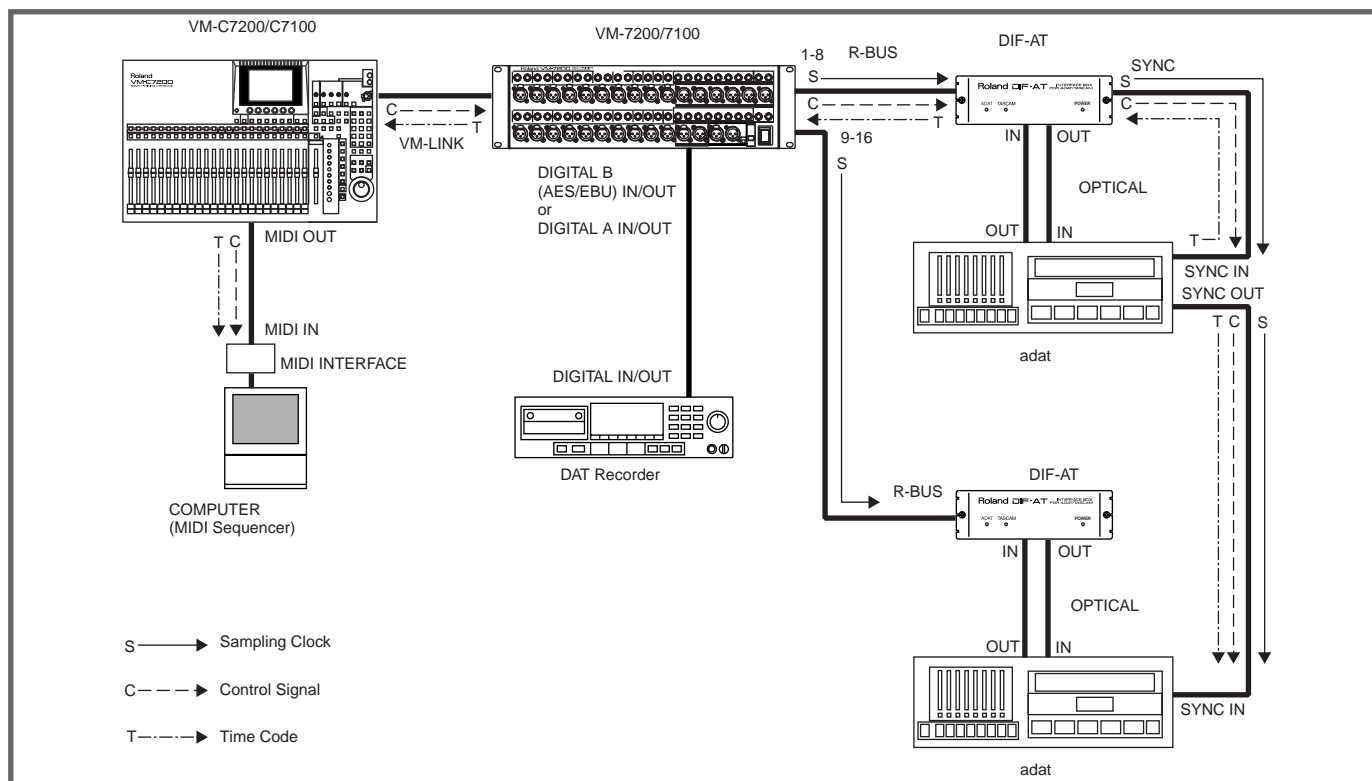
• WORD CLOCK OUT on the VM-7200/7100 can be used as the word clock master. In this case, the setting on the VM-C7200/C7100 is as follows.

- **WORD CLOCK SOURCE:** INTERNAL

(5) Connecting and synchronizing multiple (two) ADATs with the VM-7200/7100

- Transferring audio via digital connection between multiple ADATs and the VM-7200/7100.
- An ADAT can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/7100, DIF-AT, ADATs, ADAT Optical cables, ADAT Sync cable * DAT recorder, MIDI sequencer (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADATs (1st and 2nd units) → VM-7200/7100 Processors → VM-C7200/7100 Console

■ Settings

VM-C7200/7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2)

- **DIF-AT CONTROL TARGET:** ADAT

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** INTERNAL

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MULTI 1-8
- **MIDI SYNC Tx SW:** MTC
- **MMC CONTROL:** ON
- **MMC MASTER:** INT
- **MACHINE TYPE:** TAPE

SYS MIDI page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](MIDI)

- **MIDI THRU CONSOLE:** OUT

ADAT

- **INPUT:** DIGITAL



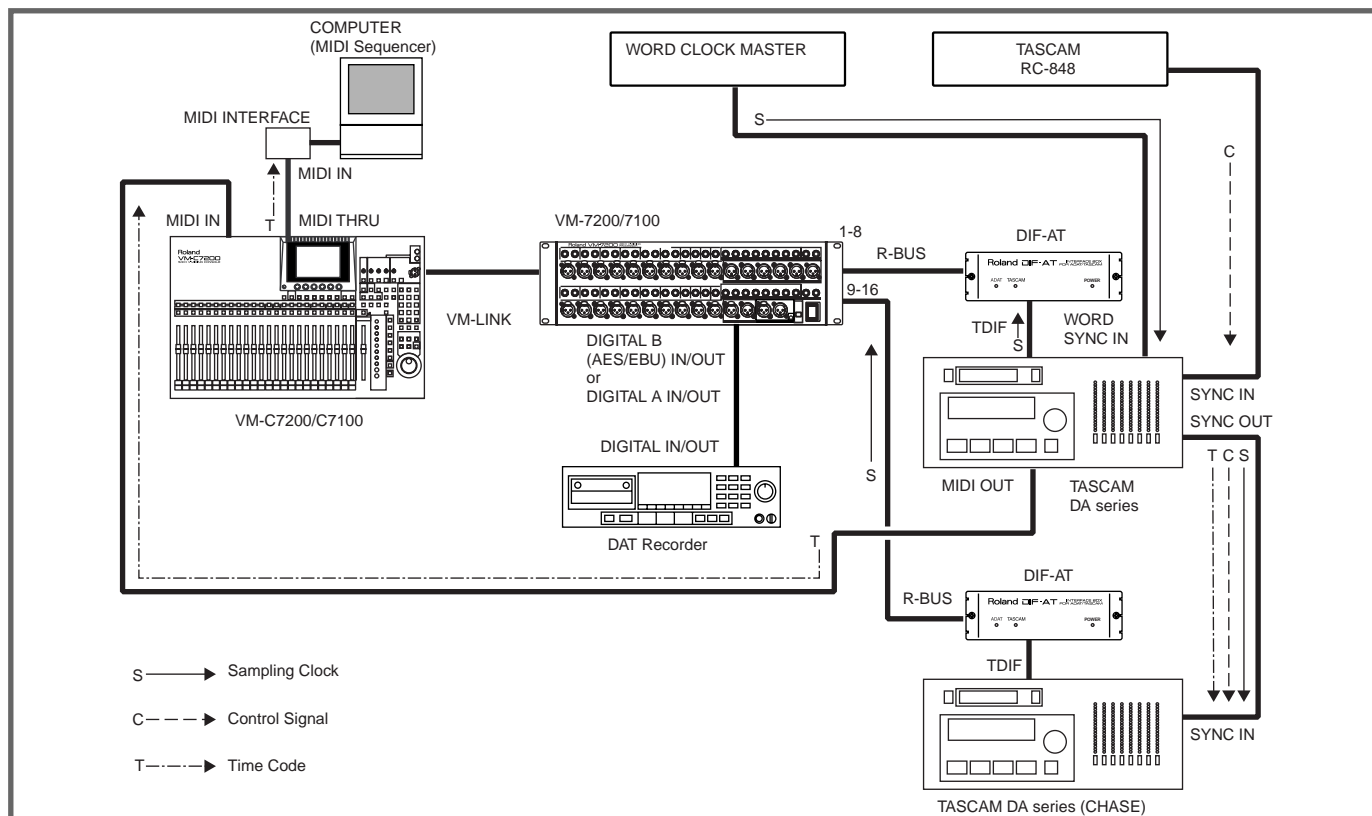
When an ADAT SYNC cable is connected as shown in the above picture, ADAT automatically receives the sample clock via the SYNC cable, and displays "CLOCK : EXT" (ADAT XT/LX20). If this is not displayed, check the connection and reboot all the equipment again.

(6) Connecting and synchronizing multiple (two) TASCAM DA series recorders with the VM-7200/7100 with word clock

- Transferring audio via digital connection between the TASCAM DA series and the VM-7200/7100.
- TASCAM DA series can be controlled with TASCAM RC-848.

* TASCAM DA series: DA-98/88

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, TASCAM DA-98/88*, TDIF cables (PW-88D), SYNC cables (PW-88S), RC-848, RC-848 Remote cable, MIDI cable

* SY-88 Synchronizer Board is required to use MIDI with the DA-88

* DAT recorder, MIDI sequencer (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

DA-98/88 (1st and 2nd units) → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2)

- **DIF-AT CONTROL TARGET:** DA-88 (1st and 2nd units)

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** MULTI 9-16

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MTC
- **FRAME TYPE:** in accordance with the DA-98/88

Default setting on the DA-98 is 29.97DF (29D).

SYS MIDI page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](MIDI)

- **MIDI THRU CONSOLE:** THRU

Press [PLAY] and wait for the time code coming in.

TASCAM DA-98/88

1st unit

- **MACHINE ID:** DA-98: 1, DA-88: 0
- **CLOCK:** WORD
- **DIGITAL IN:** ON

2nd unit (chase)

- **MACHINE ID:** DA-98: 2, DA-88: 1
- **CHASE:** ON
- **DIGITAL IN:** ON



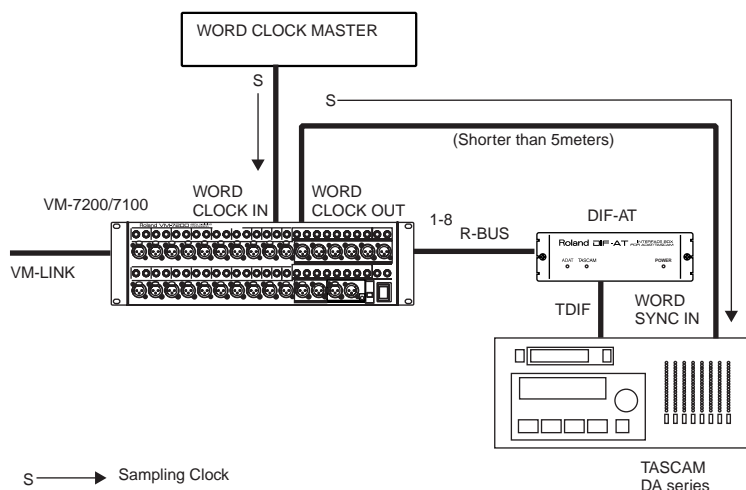
VM-C7200/C7100 cannot be controlled with the [PLAY] and [STOP] buttons on the RC-848. To play in synchronization, press [PLAY] button on the VM-C7200/C7100 to wait for the time code, then press [PLAY] button on the RC-848.

■ To connect the DA-98 and the VM-7200/7100 with the word clock

To synchronize the sampling clock of the TASCAM DA series and the VM-7200/7100 using an external WORD CLOCK MASTER device, the following connection is possible. But in this case, the routings of the digital audio data (via R-BUS and TDIF) and the sampling clock (via word clock cable) are different. If the delay of the signals is significant in either routing, they may be out of sync and cause noises.



- For multiple DA series connection with word clock synchronization, the example in p.10 is recommended.
- To connect WORD CLOCK OUT on the VM-7200/7100 and WORD SYNC IN on the DA-98, please use a word clock cable shorter than 5 meters.



In this case, the clock source setting on the VM-7200/7100 is as follows.

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](DIGITAL I/O)

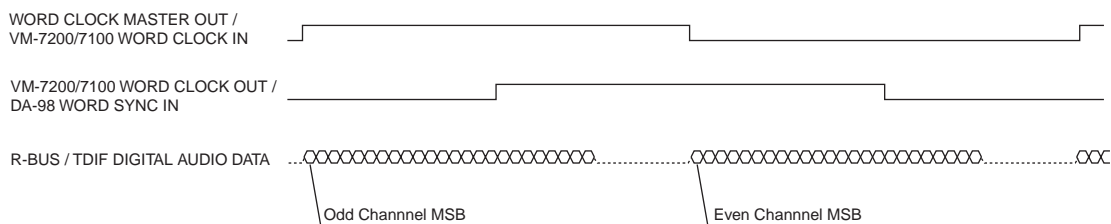
- **WORD CLOCK SOURCE:** WORD CLOCK IN

Other settings are the same as mentioned above.



If the word clock signal from the WORD CLOCK MASTER is input directly to the DA-98, the phase is different from the digital audio data and it cannot be synchronized. Please route it from WORD CLOCK OUT on the VM-7200/7100 to WORD SYNC IN on the DA-98.

Phases of WORD CLOCK IN/OUT on the VM-7200/7100 and the digital audio data of R-BUS/TDIF are as shown below.



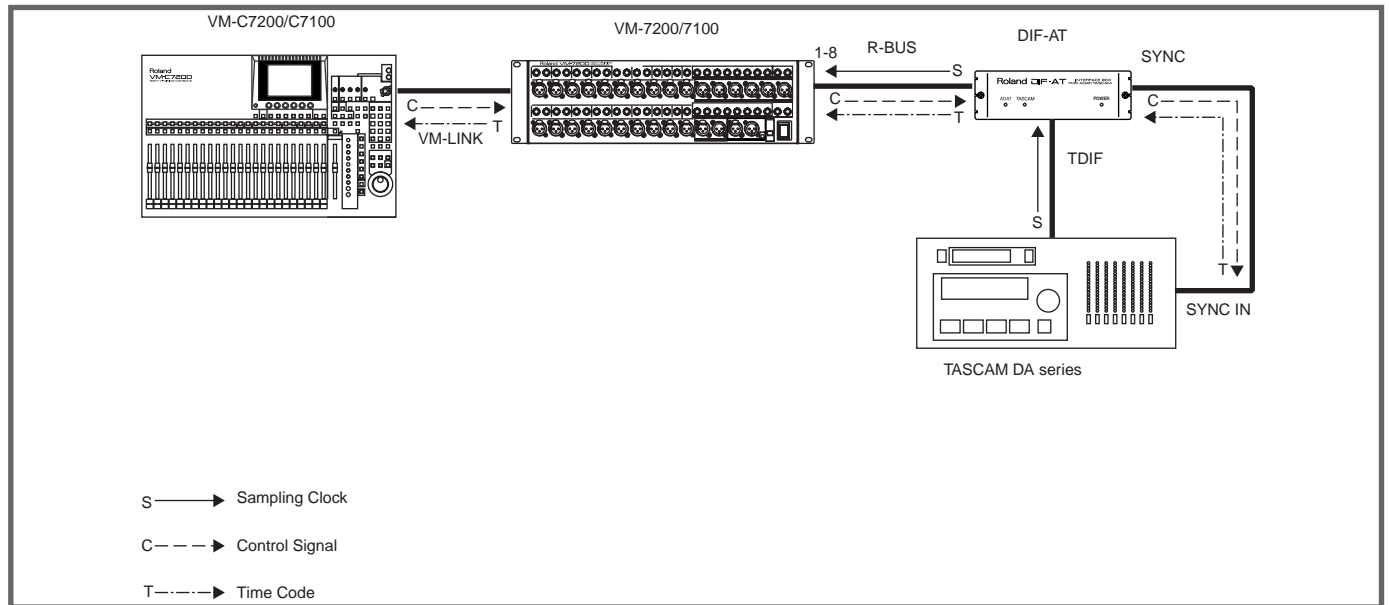
If an external word clock device is not used, connect WORD CLOCK OUT on the VM-7200/7100 and WORD SYNC IN on the DA-98, and set **WORD CLOCK SOURCE** on the VM-7200/7100 to **INTERNAL**.

(7) Connecting a TASCAM DA series recorder to the VM-7200/7100 and controlling the system with the VM-C7200/C7100

- Transferring audio via digital connection between TASCAM DA series and the VM-7200/7100.
- The TASCAM DA series can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

* TASCAM DA series: DA-98/88

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, TASCAM DA-98/88, TDIF cable (PW-88D), SYNC cable (PW-88S)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

DA-98/88 → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG)
→ [PAGE DOWN](R-BUS 1)

- **DIF-AT CONTROL TARGET** DA-88

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** MULTI 1-8

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MULTI 1-8
- **MMC MASTER:** INT
- **MACHINE TYPE:** TAPE

TASCAM DA-98/88

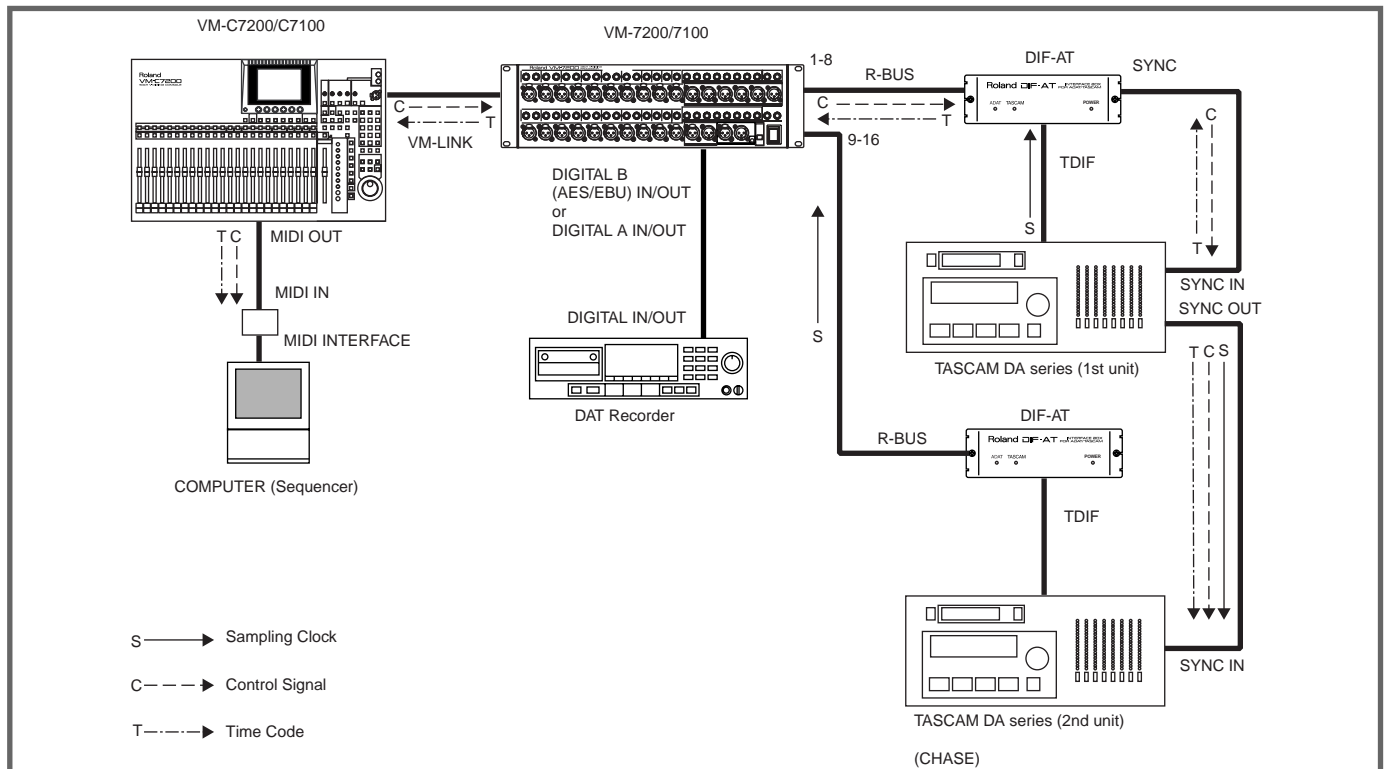
- **MACHINE ID:** DA-98: 1, DA-88: 0
- **CLOCK:** INT
- **DIGITAL IN:** ON

(8) Connecting and synchronizing multiple (two) TASCAM DA series recorders with the VM-7200/7100

- Transferring audio via digital connection between the TASCAM DA series and the VM-7200/7100.
- The TASCAM DA series can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

* TASCAM DA series: DA-98/88

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, TASCAM DA-98/88, TDIF cables (PW-88D), SYNC cables (PW-88S) * DAT recorder, MIDI sequencer (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

DA-98/88 (1st and 2nd units) → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2)

- **DIF-AT CONTROL TARGET:** DA-88 (1st and 2nd units)

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** MULTI 9-16

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** EXT, MULTI 1-8
- **MIDI SYNC Tx SW:** MTC
- **MMC CONTROL:** ON
- **MMC MASTER:** INT
- **MACHINE TYPE:** TAPE

SYS MIDI page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F4](MIDI)

- **MIDI THRU CONSOLE:** OUT

TASCAM DA-98/88

1st unit

- **MACHINE ID:** DA-98: 1, DA-88: 0

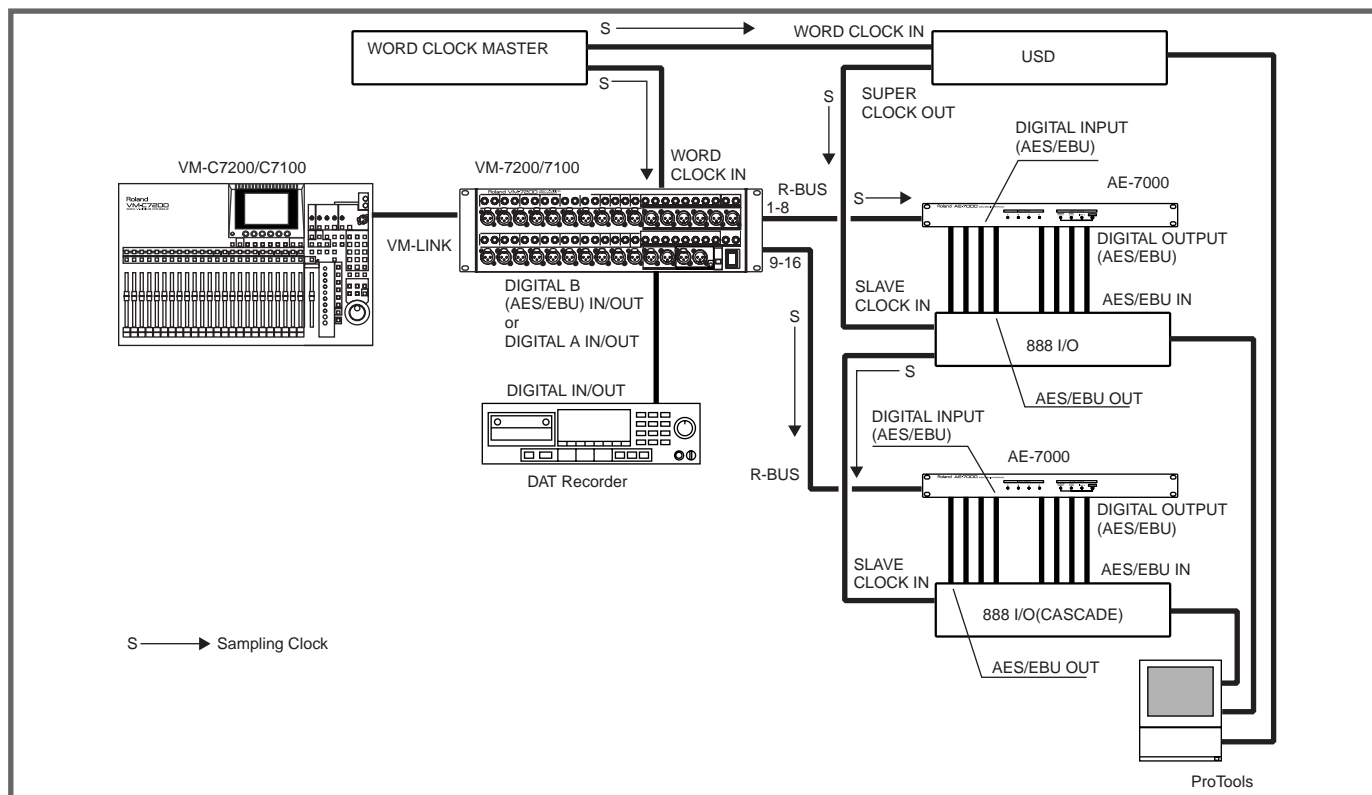
2nd unit (chase)

- **MACHINE ID:** DA-98: 2, DA-88: 1
- **CHASE:** ON

(9) Connecting ProTools and two 888 I/Os to the VM-7200/7100 via AES/EBU

- Transferring audio via digital connection between 888 I/O and the VM-7200/7100.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, AE-7000, 888 I/O (+ ProTools system), USD, WORD CLOCK MASTER device

- * MIDI Interface, MIDI cable, DAT recorder (if necessary)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ProTools → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE:** WORD CLOCK

* AE-7000 can be set on the display of the VM-C7200/C7100 Ver.1.10 or later.

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1/2)

- **CLOCK SOURCE:** R-BUS

AE-7000

- **CLOCK SOURCE:** R-BUS

ProTools, USD

Set the clock reference of the USD to word clock.

- **Clock Ref:** Digital (Word Clock)



If the external word clock device is not used, connect WORD CLOCK OUT on the VM-7200/7100 to the USD, and set **WORD CLOCK SOURCE** on the VM-7200/7100 to **INTERNAL**.

■ Settings for Time Code (MTC) synchronization

Connect MIDI OUT on the ProTools and MIDI IN on the VM-C7200/C7100 with a MIDI cable.

VM-C7200/C7100

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- **SYNC MASTER:** **EXT, MTC**

Press [PLAY] and wait for the time code coming in.

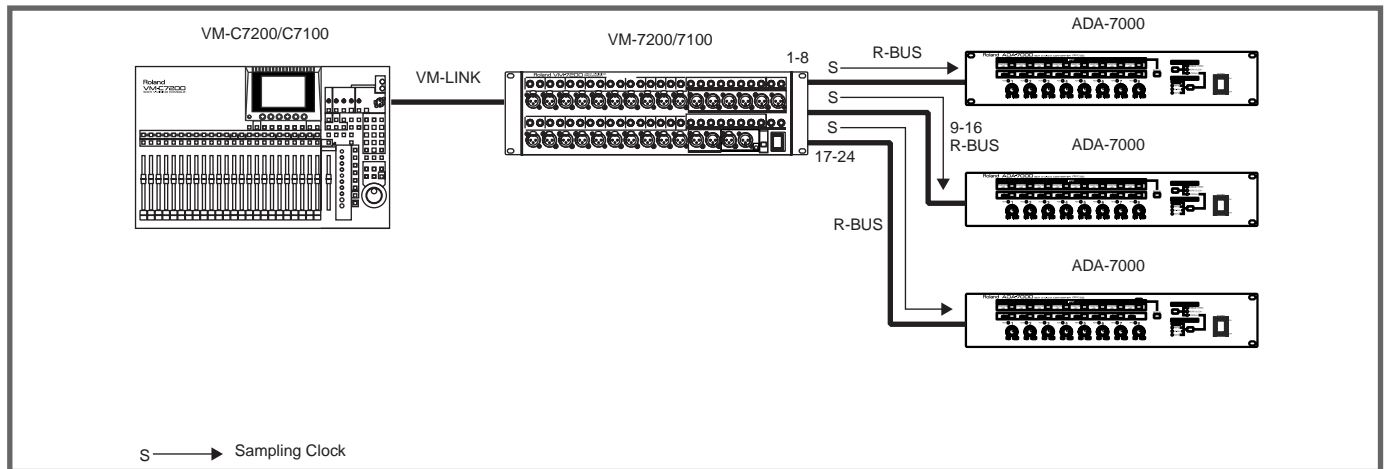
ProTools

- **Set the MTC (MIDI TIME CODE) to be transmitted.**

(10) Connecting an ADA-7000 to the VM-7200/7100

- Connecting an ADA-7000 to the VM-7200/7100 and add analog inputs and outputs.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, ADA-7000

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADA-7000 → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- **WORD CLOCK SOURCE: INTERNAL**

* ADA-7000 can be set on the display of the VM-C7200/C7100 Ver.1.10 or later.

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG)
→ [PAGE DOWN](R-BUS 1/2/3)

- **CLOCK SOURCE: R-BUS**

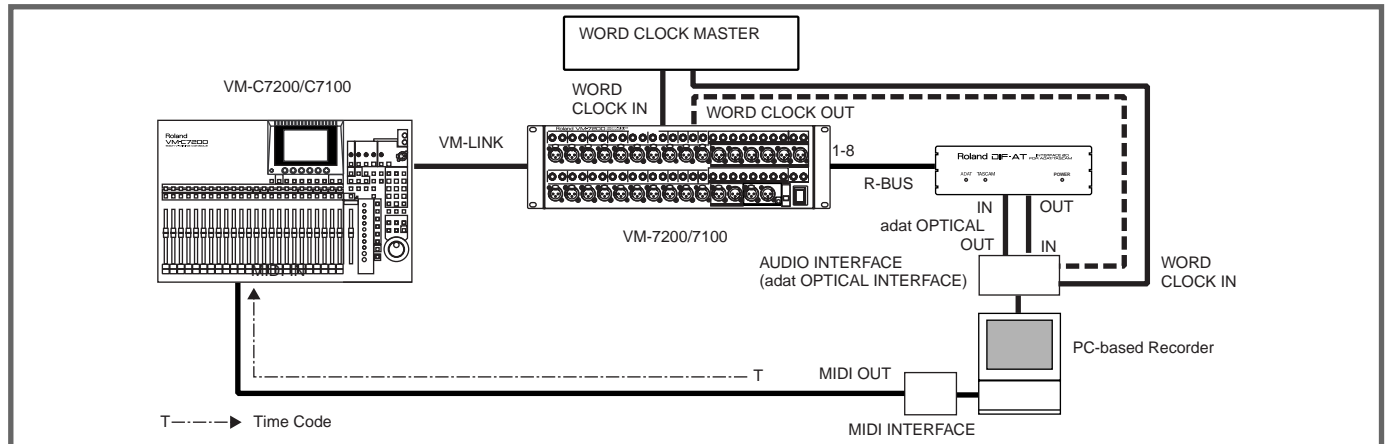
ADA-7000

CLOCK SOURCE:R-BUS

(11) Connecting a computer-based recording system to the VM-7200/7100 via ADAT interface

- Transferring audio via digital connection between a computer-based recording system with an ADAT interface and the VM-7200/7100.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, DIF-AT, computer-based recording system, ADAT interface*, WORD CLOCK MASTER device, MIDI interface, MIDI cable, etc.

* ADAT interface: Digidesign ADAT Bridge I/O, Mark of the Unicorn 2408 AUDIO INTERFACE, etc.

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

Computer-based recording system → VM-7200/7100 Processors → VM-C7200/C7100 Console

■ Settings

VM-C7200/C7100

R-BUS CONFIG page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](SYSTEM CONFIG) → [PAGE DOWN](R-BUS 1)

- DIF-AT CONTROL TARGET ADAT

○ Sampling clock master: External word clock

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- WORD CLOCK SOURCE: WORD CLOCK IN

Computer-based recording system

Set the sampling clock source to WORD CLOCK IN or OPTICAL IN.

○ Sampling clock master: VM-7200/7100

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- WORD CLOCK SOURCE: INTERNAL

Computer-based recording system

Set the sampling clock source to OPTICAL IN.

If the word clock is connected as shown by the dotted line in the above drawing, set the sampling clock source to WORD CLOCK IN.

○ Sampling clock master: Computer-based recording system

VM-C7200/C7100

SYS DIGITAL page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F1](DIGITAL I/O)

- WORD CLOCK SOURCE: MULTI 1-8

Computer-based recording system

Set the sampling clock source to INTERNAL.

● Receiving the MTC (MIDI Time Code) from the recording system

VM-C7200/C7100

SYS SYNC/MMC page [SHIFT]+[SYSTEM(PROJECT)] → (CURSOR) → [F3](SYNC CLOCK)

- SYNC MASTER: EXT, MTC Press [PLAY] and wait for the time code coming in.

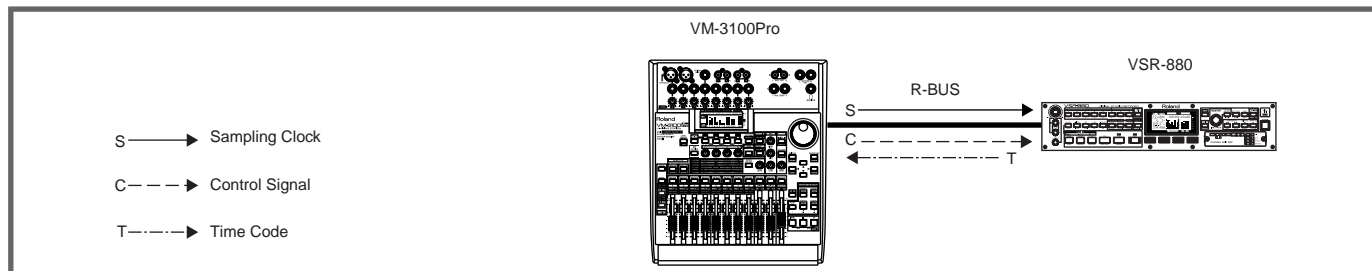
Computer-based recording system

Set the MTC (MIDI Time Code) to be transmitted.

(12) Connecting a VSR-880 to the VM-3100Pro

- Transferring audio via digital connection between the VSR-880 and the VM-3100Pro.
- The VSR-880 can be controlled with the VM-3100Pro's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-3100Pro, VSR-880 [internal IDE hard disk installed]

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

VSR-880 → VM-3100Pro

■ Settings

VM-3100Pro

SYSTEM PREF page [SYSTEM]

- **MasterClk:** INTERNAL
- **LocatorType:** TIMECODE
- **RecorderType:** HD

SYSTEM MIDI page [SYSTEM] → [F1-F4 ON/OFF] → [F2](MIDI)

- **DeviceID:** 17 (in accordance with MID:DeviceID on the VSR-880)
- **TimingMon:** TIMECODE
- **TC Fmt:** 30ND (in accordance with Syn:MTC Type on the VSR-880)
- **Transport:** RECORDER

EZR OUT page [EZ ROUTING] → [F1-F4 ON/OFF] → [F2](OUT) → (CURSOR ▶)

Transmitting the output from channels 1-8 directly to R-BUS 1-8

- **Tr1/2=:** CH01/02
- **Tr3/4=:** CH03/04
- **Tr5/6=:** CH05/06
- **Tr7/8=:** CH07/08

VSR-880

[SHIFT]+[SYSTEM (▶)] → "SYS System PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **SYS: MasterClk:** R-BUS

[SHIFT]+[SYSTEM (▶)] → "SYS MIDI PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **MID:DeviceID:** 17 (in accordance with MID:DeviceID on the VSR-880)
- **MID:MMC:** Off/RBUS

[SHIFT]+[SYSTEM (▶)] → "SYS Sync/Tempo PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **Syn:Source:** INT
- **Syn:Gen.:** R-BUS
- **Syn:MTC Type:** 30 (in accordance with TC Fmt on the VM-3100Pro)

[LEVEL/BALANCE] → (PARAMETER [◀◀][▶▶])

- **MST Direct Out:** On

[SHIFT]+[IN MIX (LEVEL BALANCE)] → (PARAMETER [◀◀][▶▶]) → "Input=" → [SHIFT]+STATUS [1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS



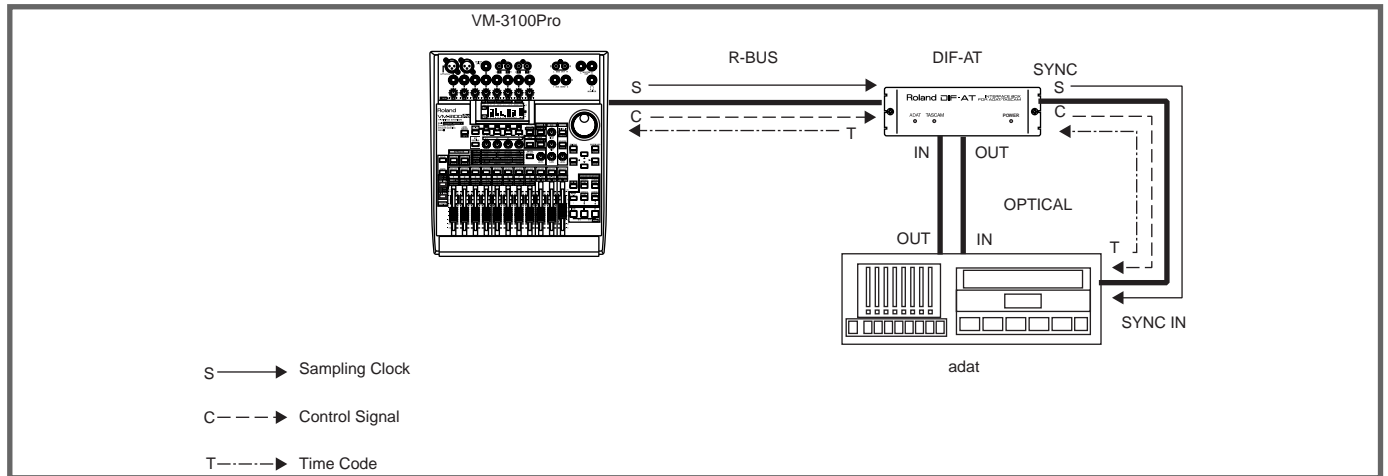
In addition to Play and Stop, the following control of the VSR-880 is possible with the VM-3100Pro. For the details, please refer to "VSR-880 Connecting the VM-3100Pro" attached to the VSR-880 owner's manual.

- **Playback Time** [SHIFT]+[LEVEL METER (BIG TC)] → Value dial
- **Scrub** [SHIFT]+[LEVEL METER (BIG TC)] → Hold [■] → Switch tracks with [SELECT] 1-8
- **Song Select *Operate with all the faders down to the lowest position.**
[LEVEL METER] → [F1-F4 ON/OFF] → [F3] (MTR) → [F1-F4 ON/OFF] → [F4] (SONG) →
Select a song with the value dial → [ENTER/YES]
- **Song Store** [SHIFT]+[◀◀] → [ENTER/YES]

(13) Connecting an ADAT to the VM-3100Pro

- Transferring audio via digital connection between the ADAT and the VM-3100Pro.
- The ADAT can be controlled with the VM-3100Pro's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-3100Pro, DIF-AT, ADAT

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADAT → VM-3100Pro

■ Settings

VM-3100Pro

SYSTEM PREF page [SYSTEM]

- **MasterClk:** INTERNAL
- **LocatorType:** TIMECODE
- **RecorderType:** TAPE



After you turn on the VM-3100Pro, even if MasterClk is set to INTERNAL, move the value dial to select another setting, then set it again to INTERNAL to make the setting active.

SYSTEM MIDI page [SYSTEM] → [F1-F4 ON/OFF] → [F2](MIDI)

- **TimingMon:** TIMECODE
- **Transport:** RECORDER

DIF-AT PREF [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [F1-F4 ON/OFF] → [F4](PREF)

- **ClockSel:** RMDB-2
- **AudioSel:** adat
- **TC Master:** adat



To transfer the time code from the DIF-AT to the VM-3100Pro, and output it as MTC (MIDI time code) from the MIDI OUT on the VM-3100Pro

- **ThruToMTC:** ON



The track status on the ADAT can be changed with the VM-3100Pro.

REC TRACK SEL page [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [SELECT] 1-8

EZR OUT page [EZ ROUTING] → [F1-F4 ON/OFF] → [F2](OUT) → (CURSOR ▶)

Transmitting the output from channels 1-8 directly to R-BUS 1-8

- **Tr1/2=:** CH01/02
- **Tr3/4=:** CH03/04
- **Tr5/6=:** CH05/06
- **Tr7/8=:** CH07/08

ADAT

- **INPUT:** DIGITAL



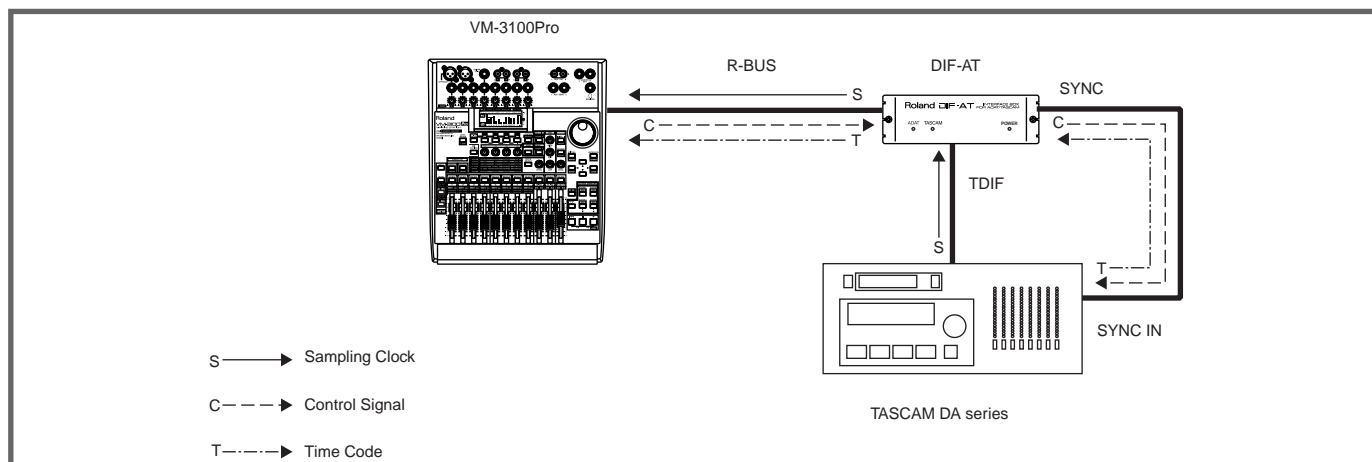
The VM-3100Pro works with only a 44.1kHz sampling rate, and there are some limitations upon connecting the ADAT digitally via the DIF-AT. For the details, please refer to the VM-3100Pro owner's manual p. 64.

(14) Connecting a TASCAM DA series recorder to the VM-3100Pro

- Transferring audio via digital connection between TASCAM DA series and the VM-3100Pro.
- The TASCAM DA series can be controlled with the VM-3100Pro's transport buttons such as play and stop.

* TASCAM DA series: DA-98/88

■ Connection



■ Equipment required

VM-3100Pro, DIF-AT, TASCAM DA-98/88, TDIF Cable (PW-88D), SYNC Cable (PW-88S)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

TASCAM DA series → VM-3100Pro

■ Settings

VM-3100Pro

DIF-AT PREF [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [F1-F4 ON/OFF] → [F4](PREF)

- **ClockSel:** DA-88
- **AudioSel:** DA-88
- **TC Master:** DA-88



To transfer the time code from the DIF-AT to the VM-3100Pro, and output as MTC (MIDI time code) from MIDI OUT on the VM-3100Pro

- **ThruToMTC:** ON

SYSTEM PREF page [SYSTEM]

- **MasterClk:** RMDB-2
- **LocatorType:** TIMECODE
- **RecorderType:** TAPE

SYSTEM MIDI page [SYSTEM] → [F1-F4 ON/OFF] → [F2](MIDI)

- **TimingMon:** TIMECODE
- **Transport:** RECORDER

EZR OUT page [EZ ROUTING] → [F1-F4 ON/OFF] → [F2](OUT) → (CURSOR ►)

Transmitting the output from channels 1-8 directly to R-BUS 1-8

- **Tr1/2=:** CH01/02
- **Tr3/4=:** CH03/04
- **Tr5/6=:** CH05/06
- **Tr7/8=:** CH07/08



The track status on the TASCAM DA series can be changed with the VM-3100Pro.

REC TRACK SEL page [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [SELECT] 1-8

TASCAM DA-98/88

- **CLOCK:** INT
- **DIGITAL IN:** ON

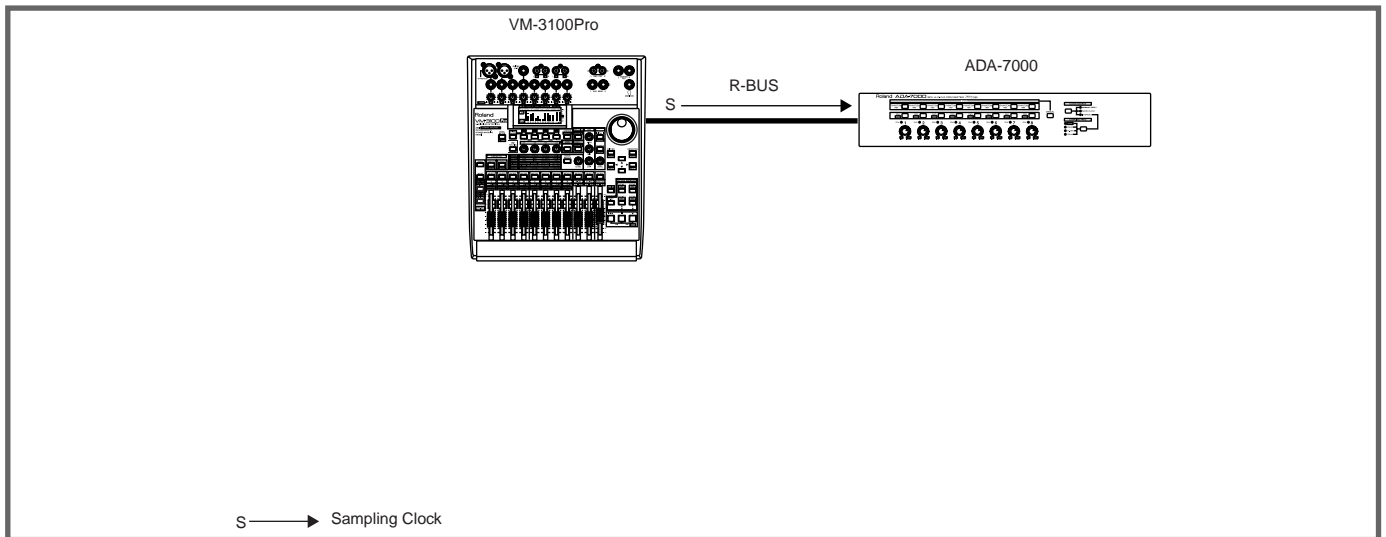


The VM-3100Pro works with only a 44.1kHz sampling rate. So the tape for TASCAM DA series should be formatted for 44.1kHz.

(15) Connecting an ADA-7000 to the VM-3100Pro

- Connecting the ADA-7000 to the VM-3100Pro to add analog inputs and outputs.

■ Connection



■ Equipment required

VM-3100Pro, ADA-7000

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADA-7000 → VM-3100Pro

■ Settings

VM-3100Pro

SYSTEM PREF page[SYSTEM]

- MasterClk: INTERNAL

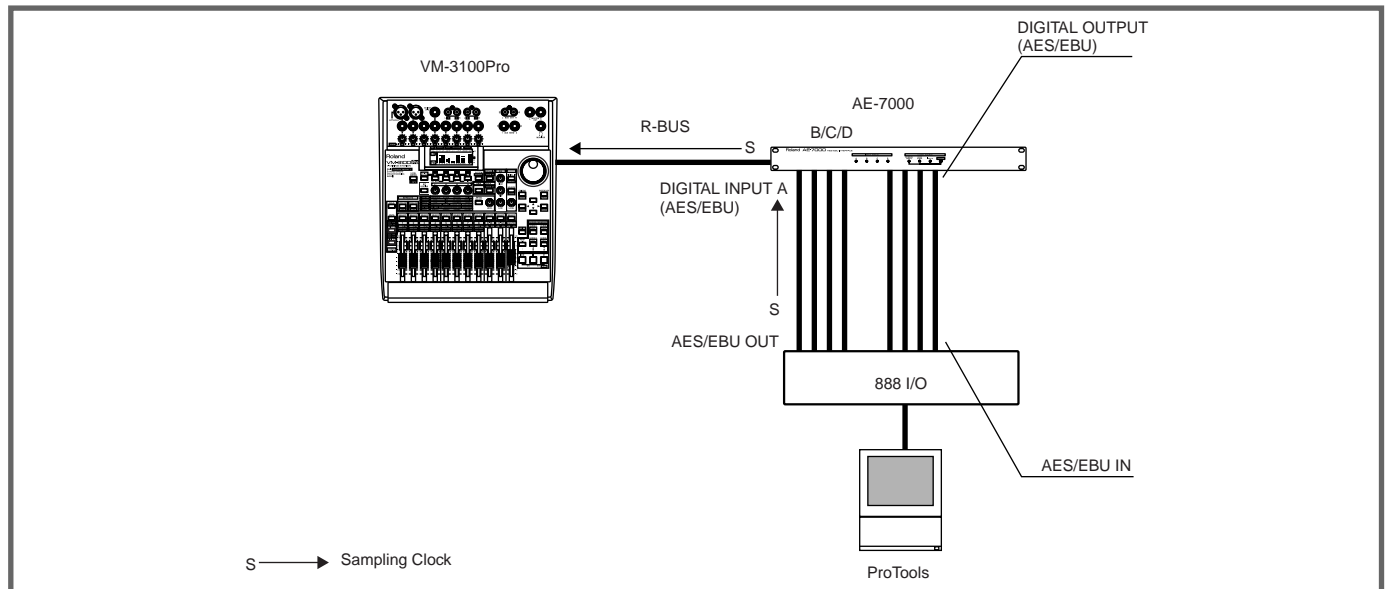
ADA-7000

CLOCK SOURCE:R-BUS

(16) Connecting ProTools and the 888 I/O to the VM-3100Pro with AES/EBU

- Transferring audio via digital connection between 888 I/O (ProTools) and the VM-3100Pro.

■ Connection



■ Equipment required

VM-3100Pro, AE-7000, 888 I/O (ProTools system)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ProTools → VM-3100Pro

■ Settings

VM-3100Pro

SYSTEM PREF page [SYSTEM]
• MasterClk: RMDB-2

AE-7000

• CLOCK SOURCE: INPUT-A

888 I/O (ProTools)

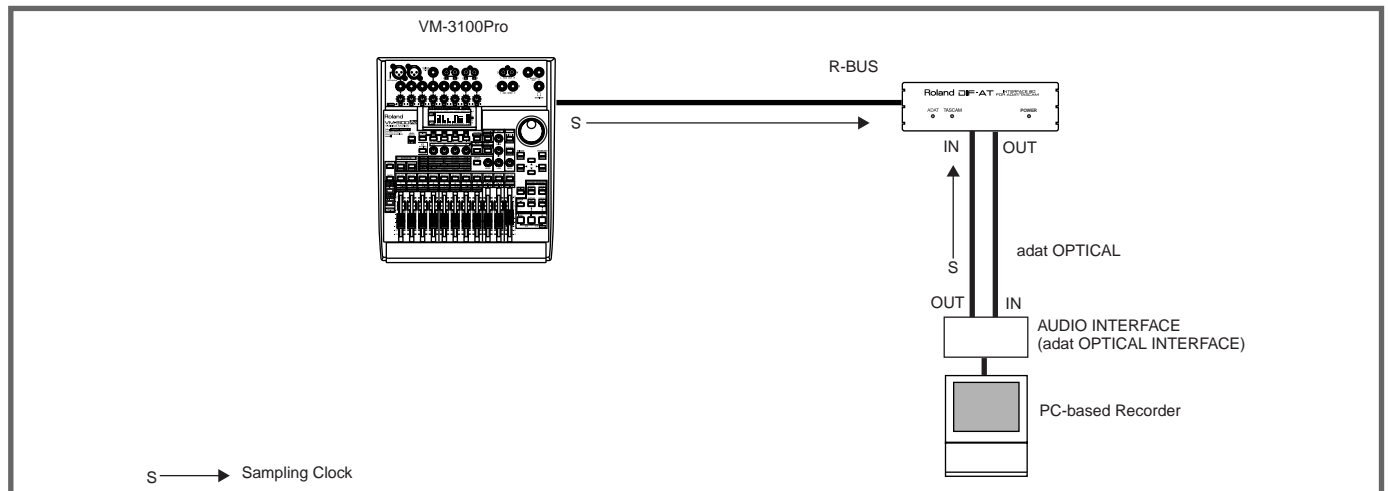
Set the sampling clock source to **Internal**.

VM-3100Pro works with only a 44.1kHz sampling rate. Connected equipment also should be operated at 44.1kHz.

(17) Connecting a computer-based recording system to the VM-3100Pro via an ADAT interface

- Transferring audio via digital connection between a computer-based recording system equipped with an ADAT interface and the VM-3100Pro.

■ Connection



■ Equipment required

VM-3100Pro, DIF-AT, computer-based recording system (equipped with an ADAT interface), MIDI interface, MIDI cable

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

Computer-based recording system → VM-3100Pro

■ Settings

VM-3100Pro

DIF-AT PREF [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [F1-F4 ON/OFF] → [F4](PREF)

- **ClockSel:** RMDB-2
- **AudioSel:** ADAT

SYSTEM PREF page [SYSTEM]

- **MasterClk:** INTERNAL

EZR OUT page [EZ ROUTING] → [F1-F4 ON/OFF] → [F2](OUT) → (CURSOR ▶)

Transmitting the output from channels 1-8 directly to R-BUS 1-8

- **Tr1/2=:** CH01/02
- **Tr3/4=:** CH03/04
- **Tr5/6=:** CH05/06
- **Tr7/8=:** CH07/08

Computer-based recording system

- Set the sampling clock source to ADAT OPTICAL.

NOTE

The VM-3100Pro works only with a 44.1kHz sampling rate. Connected equipment also should be operated at 44.1kHz.

○ Sampling clock master: Computer-based recording system

VM-3100Pro

DIF-AT PREF [LEVEL METER] → [F1-F4 ON/OFF] → [F3](MTR) → [F1-F4 ON/OFF] → [F4](PREF)

- **ClockSel:** ADAT
- **AudioSel:** ADAT

SYSTEM PREF page [SYSTEM]

- **MasterClk:** RMDB-2

Computer-based recording system

- Set the sampling clock source to Internal.

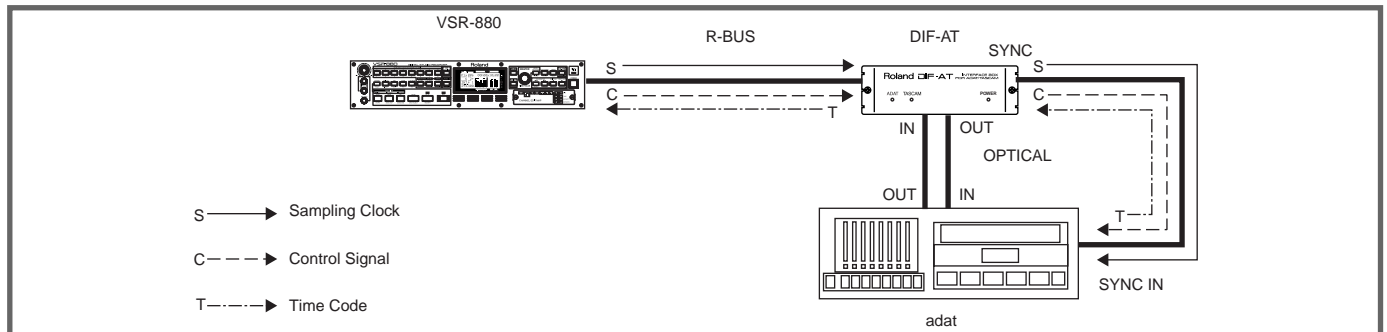
NOTE

The VM-3100Pro works only with a 44.1kHz sampling rate. Connected equipment also should be operated at 44.1kHz.

(18) Connecting an ADAT to the VSR-880

- Transferring audio via digital connection between the ADAT and the VSR-880.
- The ADAT can be controlled with the VSR-880's transport buttons such as play and stop.

■ Connection



■ Equipment required

VSR-880 [internal IDE hard disk installed], DIF-AT, ADAT

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

ADAT → VSR-880

■ Settings

VSR-880

[SHIFT]+[SYSTEM (▶)] → “SYS System PRM?” → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **SYS: MasterClk:** INT → [ENT/YES]

[SHIFT]+[SYSTEM (▶)] → “SYS MIDI PRM?” → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **MID:MMC:** MASTER

[SHIFT]+[SYSTEM (▶)] → “SYS Sync/Tempo PRM?” → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **Syn:Source:** EXT
- **Syn:InSel:** R-BUS

[LEVEL/BALANCE] → (PARAMETER [◀◀][▶▶])

- **MST Direct Out:** On

[SHIFT]+[IN MIX (LEVEL BALANCE)] → (PARAMETER [◀◀][▶▶]) → “Input=” → [SHIFT]+STATUS [1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS

ADAT

- **INPUT:** DIGITAL

* Make the sampling rates of the ADAT and the VSR-880 the same.

○ To record from the VSR-880 to the ADAT

1. Set the track status of the VSR-880 to PLAY.
2. Set the track status of the ADAT to REC.
3. Play back the VSR-880.
4. When the ADAT locks and the [PLAY] light stop flashing and turns solid, press [RECORD] while holding [PLAY] on the ADAT.
5. To stop recording, press [STOP] on the VSR-880.

○ To record from the ADAT to the VSR-880

1. Set the track status of the VSR-880 to REC.
2. Set the status of all tracks on the ADAT to PLAY. * If any is set to REC, ADAT starts recording.
3. Set the input channels of the recording tracks to ON.
[SHIFT]+[TR MIX (EXT SYNC)] → (PARAMETER [◀◀][▶▶]) → “Assign”
Switch tracks with [SHIFT]+STATUS [1] to [8]. TR1 Assign IN1=On, TR2 Assign IN1=On, ...
4. Press [REC] and [PLAY] on the VSR-880.
5. To stop recording, press [STOP] on the VSR-880.



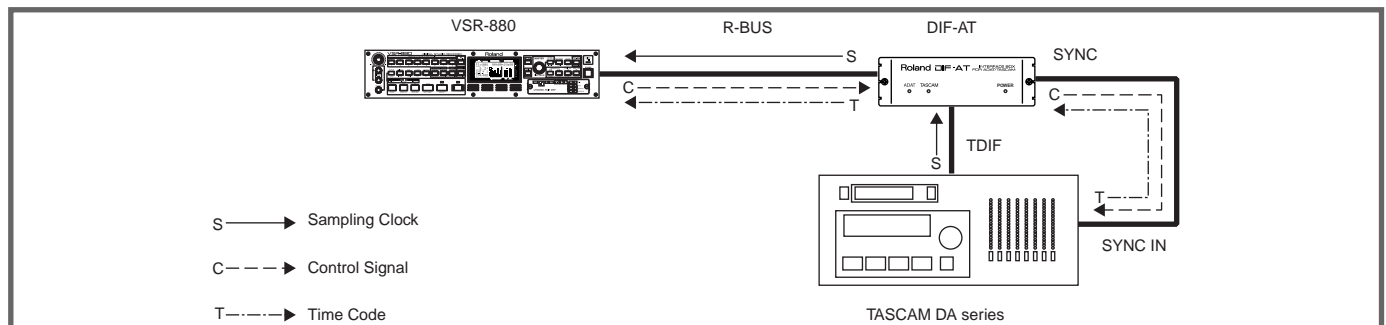
It takes about 10 seconds after the VSR-880 starts playing until the ADAT locks and recording and playback in synchronization are possible. Start the VSR-880 song at least 15 seconds earlier than the actual point you want to start recording/playback.

(19) Connecting a TASCAM DA series recorder to the VSR-880

- Transferring audio via digital connection between TASCAM DA series and the VSR-880.
- The TASCAM DA series can be controlled with the VSR-880's transport buttons such as play and stop.

* TASCAM DA series: DA-98/88

■ Connection



■ Equipment required

VSR-880 [internal IDE hard disk installed], DIF-AT, DA-98/88

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

TASCAM DA series → VSR-880

■ Settings

VSR-880

[SHIFT]+[SYSTEM (▶)] → "SYS System PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **SYS: MasterClk:** R-BUS → [ENT/YES]

[SHIFT]+[SYSTEM (▶)] → "SYS MIDI PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **MID:MMC:** MASTER

[SHIFT]+[SYSTEM (▶)] → "SYS Sync/Tempo PRM?" → [ENT/YES] → (PARAMETER [◀◀][▶▶])

- **Syn:Source:** EXT
- **Syn:InSel:** R-BUS

[LEVEL/BALANCE] → (PARAMETER [◀◀][▶▶])

- **MST Direct Out:** On

[SHIFT]+[IN MIX (LEVEL BALANCE)] → (PARAMETER [◀◀][▶▶]) → "Input=" → [SHIFT]+STATUS [1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS

DA-98/88

- **CLOCK:** INT
- **DIGITAL IN:** ON

* Make the sampling rates of the DA-98/88 tape format and the VSR-880 the same.

○ To record from the VSR-880 to the DA-98/88

1. Set the track status of the VSR-880 to PLAY.
2. Set the track status of the DA-98/88 to REC.
3. Play back the VSR-880.
4. When the DA-98/88 locks and [PLAY] light stop flashing and turns solid, press [RECORD] on the DA-98/88.
5. To stop recording, press [STOP] on the VSR-880.

○ To record from the DA-98/88 to the VSR-880

1. Set the track status of the VSR-880 to REC.
2. Set the track status of the DA-98/88 to PLAY.
3. Set the input channels of the recording tracks to ON.
[SHIFT]+[TR MIX (EXT SYNC)] → (PARAMETER [◀◀][▶▶]) → "Assign"
Switch tracks with [SHIFT]+STATUS [1] to [8]. **TR1 Assign IN1=On, TR2 Assign IN2=On, ...**
4. Press [REC] and [PLAY] on the VSR-880.
5. To stop recording, press [STOP] on the VSR-880.

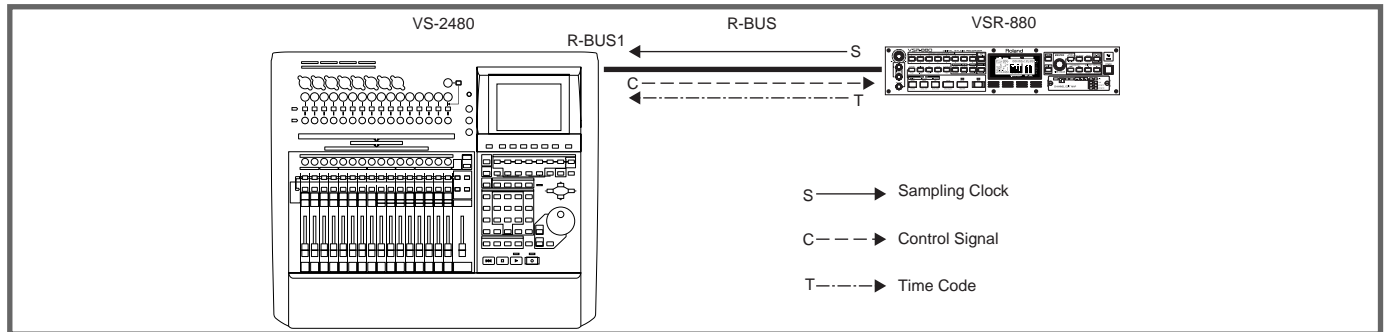


It takes about one second after the VSR-880 starts playing until the DA-98/88 locks and recording and playback in synchronization are possible. Start the VSR-880 song a few seconds earlier than the actual point you want to start recording/playback.

(20) Connecting a VSR-880 to the VS-2480

- Transferring audio via digital connection between the VSR-880 and the VS-2480.
- The VSR-880 can be controlled with the VS-2480.

■ Connection



■ Equipment required

VS-2480 [internal IDE hard disk installed], VSR-880 [internal IDE hard disk installed]

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

VSR-880 → VS-2480

■ Settings

VS-2480

Projects setting screen [UTILITY] → (Page1) [F3(Proj)] → ([▲] [▼] [◀] [▶])

- **Master Clock:** R-BUS1

MIDI Parameter setting screen [UTILITY] → (Page1) [F5(MIDI)] → ([▲] [▼] [◀] [▶])

- **MMC Mode:** MASTER

Sync/Tempo screen [UTILITY] → (Page1) [F6(SYNC)] → ([▲] [▼] [◀] [▶])

- **Sync Mode:** EXT
- **EXT Sync SOURCE** R-BUS1

VSR-880

[SHIFT]+[SYSTEM (▶)] → "SYS System PRM?" → [ENT/YES] → (PARAMETER [◀◀] [▶▶])

- **SYS MasterClk:** INT → [ENT/YES]

[SHIFT]+[SYSTEM (▶)] → "SYS MIDI PRM?" → [ENT/YES] → (PARAMETER [◀◀] [▶▶])

- **SYS MID:MMC:** Off/RBUS

[SHIFT]+[SYSTEM (▶)] → "SYS Sync/Tempo?" → [ENT/YES] → (PARAMETER [◀◀] [▶▶])

- **SYS Syn:Source:** INT
- **SYS Syn:Gen:** R-BUS

[LEVEL/BALANCE] → (PARAMETER [◀◀] [▶▶])

- **MST Direct Out:** On

[SHIFT]+[IN MIX (LEVEL BALANCE)] → (PARAMETER [◀◀] [▶▶]) → "Input=" → [SHIFT]+STATUS [1] to [8]

- **IN1 (2, 3, ... 8) Input=:** R-BUS

* Make the sampling rates of the VSR-880 and the VS-2480 the same.

O To record from the VS-2480 to the VSR-880

1. Set the track status of the VS-2480 to PLAY.
2. Set the input channels of the recording tracks of the VSR-880 to ON.
[SHIFT]+[TR MIX (EXT SYNC)] → (PARAMETER [◀◀] [▶▶]) → "Assign"
Switch tracks with [SHIFT]+STATUS [1] to [8]. **TR1 Assign IN1=On, TR2 Assign IN2=On, ...**
3. Press [RECORD] on the VSR-880.
4. Press [PLAY] on the VS-2480.
5. To stop recording, press [STOP] on the VS-2480.

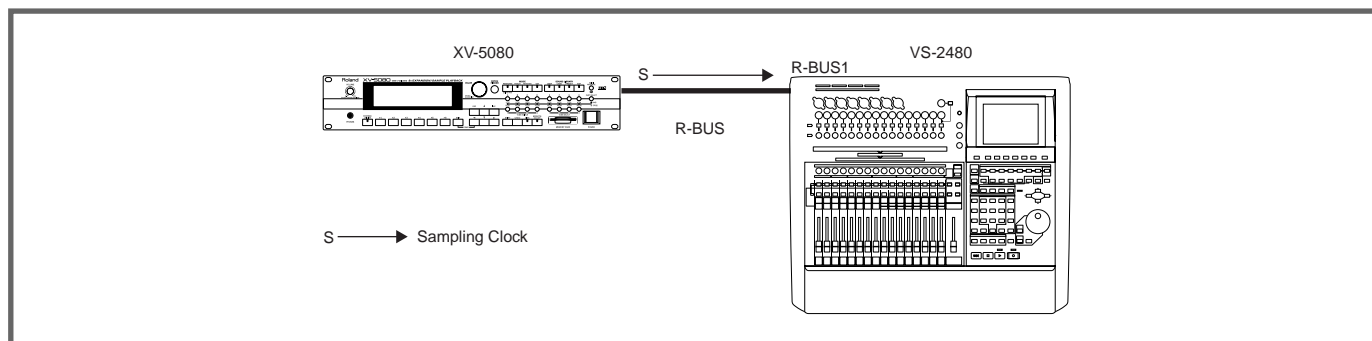
O To record from the VSR-880 to the VS-2480

1. Set the track status of the VS-2480 to REC.
2. Set the track status of the VSR-880 to PLAY.
3. Press [REC], and press [PLAY] on the VS-2480.
4. To stop recording, press [STOP] on the VS-2480.

(21) Connecting a XV-5080 to the VS-2480

- Transferring audio via digital connection between the VS-2480 and the XV-5080.

■ Connection



■ Equipment required

XV-5080, VS-2480 [internal IDE hard disk installed], RBC-1/5 R-BUS cables (sold separately)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

XV-5080 → VS-2480

■ Settings

XV-5080

SYSTEM Output page [SYSTEM] → [F1 (Outp&EQ)]

- **Master Clock:** INTERNAL
- **Master Freq:** In accordance with sampling frequencies (48.0, 44.1kHz) Projects of the VS-2480.

Press [EXIT] to return the play page.

VS-2480

Projects setting screen [UTILITY] → (Page1) [F3(Proj)] → ([▲] [▼] [◀] [▶])

- **Master Clock:** R-BUS1

Routing setting screen [EZ ROUTING] → ([▲] [▼] [◀] [▶])

- **INPUT MIXER** Connect 1-8 of R-BUS1 to any of 1-24.

Press [HOME (DISPLAY)] to return the Home Condition screen.

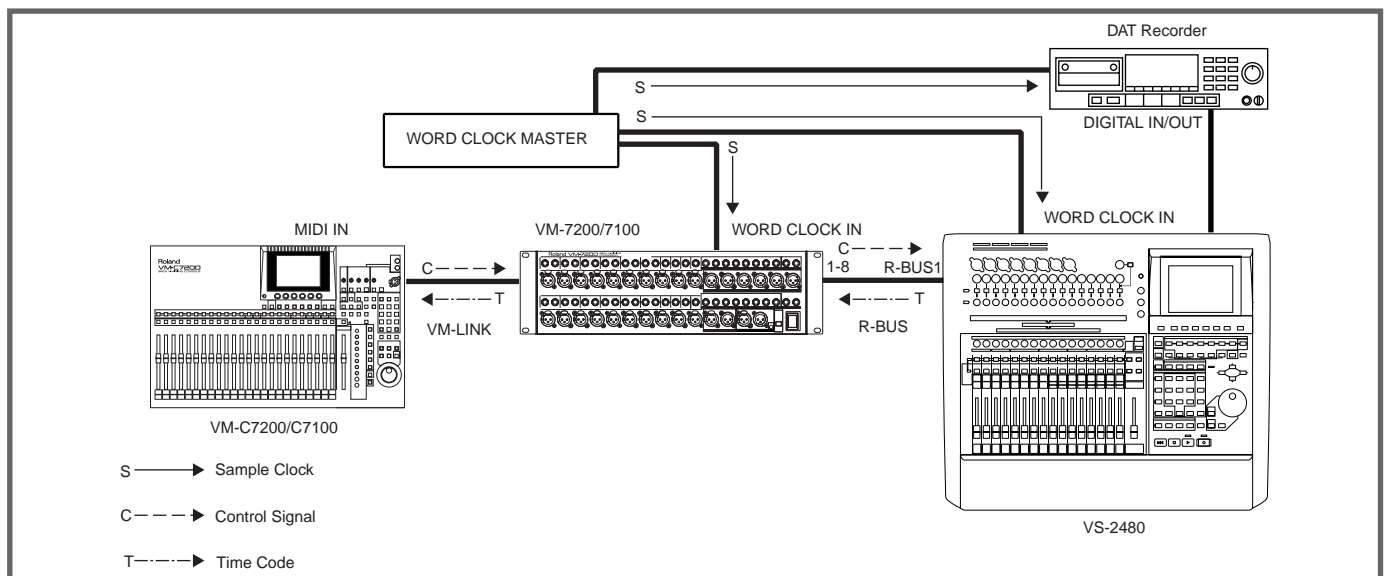
NOTE

Prepare a sample for a VS-2480 Project, using material sampled at a sampling frequency of 44.1 kHz or 48.0 kHz. Digital connection with the XV-5080 cannot be made with Projects using other sampling frequencies.

(22) Connecting a VM-7200/7100 to the VS-2480 with word clock

- Transferring audio via digital connection between the VS-2480 and the VM-7200/7100.
- VS-2480 can be controlled with the VM-C7200/7100's transport buttons such as play and stop.

■ Connection



■ Equipment required

VM-7200/7100 [equipped with the VM-24E sold separately], VM-C7200/C7100, VS-2480 [internal IDE hard disk installed], RBC-1/5 R-BUS cables (sold separately)

■ Turning on the system

Connect the equipment and then turn the power on in the following order.

VS-2480 → VM-7200/7100 → VM-C7200/C7100

■ Settings

VS-2480

Projects setting screen [UTILITY] → (Page1) [F3(Proj)] → ([▲] [▼] [◀] [▶])

- **Master Clock:** WORD CLOCK

MIDI Parameter setting screen [UTILITY] → (Page1) [F5(MIDI)] → ([▲] [▼] [◀] [▶])

- **MMC Mode:** SLAVE
- **MMC SOURCE:** R-BUS1

Sync/Tempo screen [UTILITY] → (Page1) [F6(SYNC)] → ([▲] [▼] [◀] [▶])

- **Sync Mode:** INT

Routing setting screen [EZ ROUTING] → ([▲] [▼] [◀] [▶])

- **INPUT MIXER** Connect 1-8 of R-BUS1 to any of 1-24.

Press [HOME (DISPLAY)] to return the Home Condition screen.

VM-C7200/C7100

SYS DIGITAL page [SHITFT] + [SYSTEM (PROJECT)] → ([▲] [▼] [◀] [▶]) → [F1 (DIGITAL I/O)]

- **WORD CLOCK SOURCE:** WORD CLOCK IN

SYS SYNC/MMC page [SHIFT] + [SYSTEM (PROJECT)] → ([▲] [▼] [◀] [▶]) → [F3 (SYNC CLOCK)]

- **SYNC MASTER:** EXT, MULTI 1-8
- **MMC MASTER:** INT
- **MACHINE TYPE:** HD

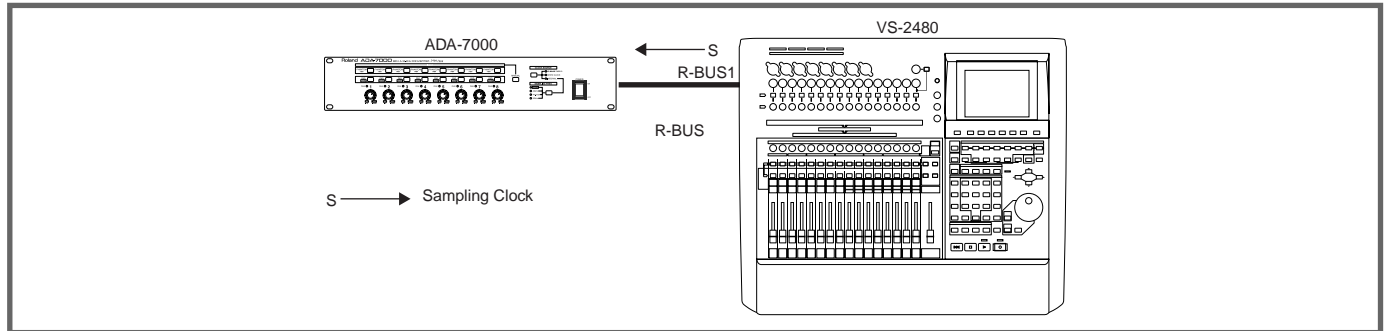


Synchronizing the VS-2480 to an external word clock (MASTER CLOCK: WORD CLOCK IN) requires that any other connected digital device also be synchronized to the word clock. In addition, the VS-2480's termination is always on. When chaining with a T-junction, turn off the terminator on other devices.

(23) Connecting a ADA-7000 to the VS-2480

- Transferring audio via digital connection between the VS-2480 and the ADA-7000.

■ Connection



■ Equipment required

ADA-7000, VS-2480 [internal IDE hard disk installed]

■ Turning on the system

Connect the equipment and then turn the power on “ADA-7000 → VS-2480.”

■ Settings

VS-2480

- Projects setting screen [UTILITY] → (Page1) [F3(Proj)] → ([▲] [▼] [◀] [▶])
- **Master Clock:** INT
- Routing setting screen [EZ ROUTING] → ([▲] [▼] [◀] [▶])
- **INPUT MIXER** Connect 1-8 of R-BUS1 to any of 1-24.

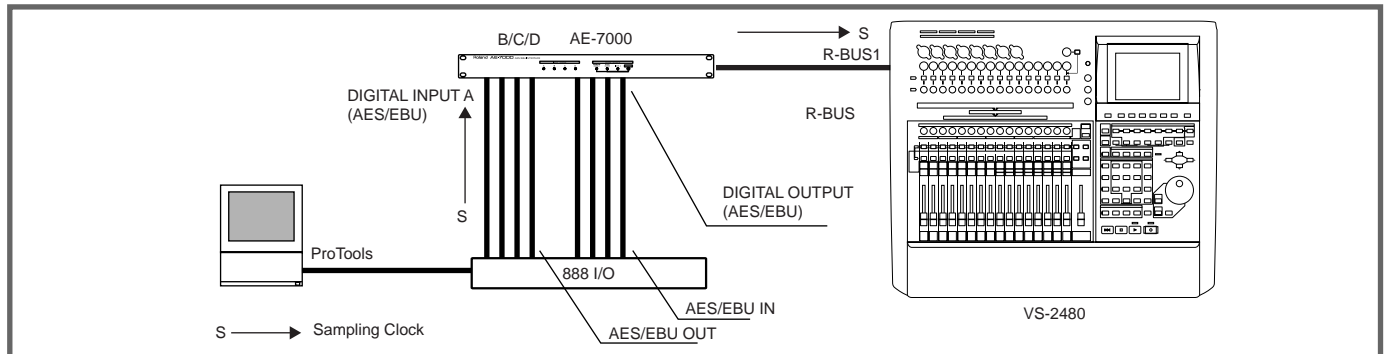
ADA-7000

- **CLOCK SOURCE:** R-BUS

(24) Connecting a AE-7000 to the VS-2480

- Transferring audio via digital connection between the VS-2480 and the AE-7000.

■ Connection



■ Equipment required

AE-7000, VS-2480 [internal IDE hard disk installed]

■ Turning on the system

Connect the equipment and then turn the power on “ProTools → VS-2480.”

■ Settings

VS-2480

- Projects setting screen [UTILITY] → (Page1) [F3(Proj)] → ([▲] [▼] [◀] [▶])
- **Master Clock:** R-BUS1
- Routing setting screen [EZ ROUTING] → ([▲] [▼] [◀] [▶])
- **INPUT MIXER** Connect 1-8 of R-BUS1 to any of 1-24.

AE-7000

- **CLOCK SOURCE:** INPUT-A

888 I/O (ProTools)

Set the sampling clock source to **Internal**.

Basic conditions for Digital Audio Connection

In this setting guide, the typical parameter settings for each respective equipment combination are introduced. There may be other possible connections and parameter settings which work.

To transfer audio via digital connection between two devices, the following two conditions should basically be accomplished:

Condition #1: Consistent sampling frequency

The sampling frequency should be the same between the two devices so that the same sampling clock can be shared.

Condition #2: Consistent phases

The phase of the sampling clock should be the same between the two devices.

To achieve these two conditions, the two devices should be in synchronization with the sampling clock which is transferred with the digital audio signal. With word clock synchronization, only condition #1 (sampling frequency) is achieved.

Depending on the hardware structure of the device's digital input, both condition #1 and #2 (phase), or only condition #1, or none of them need to be achieved.

- **Case 1: Both Conditions #1 and #2 need to be achieved.**

When using a digital input including **R-BUS, TDIF or AES/EBU on the DAT**

- **Case 2: Condition #1 needs to be achieved.**

If a buffer to absorb the phase inconsistency is provided in the digital input, the system will work with only condition #1, i.e. word clock synchronization.

The AES/EBU input on the AE-7000 and the OPTICAL IN on the ADAT are equipped with this type of buffer.

- **Case 3: None of the conditions #1 or #2 need to be achieved.**

If a sampling rate converter is included in the digital input, digital audio can be transferred without achieving condition #1 or #2. **DIGITAL IN A and B on the VM-7200/7100** are equipped with sampling rate converters.

Even in this case, if the condition #1 (word clock synchronization) is achieved, the result is better due to precise synchronization and minimum sampling rate conversion.

MEMO

DIGITAL IN A and B on the VM-7200/7100 are equipped with sampling rate converters. So you do not have to change the sampling clock of the VM-7200/7100 and the connected system even if the digital input source such as a DAT has a different clock.

■ Terminology: Sampling Clock

In this setting guide, "sampling clock" is defined to be the clock for sampling and transferring the digital audio data, i.e. the clock of one sample cycle. This is sometime called "word clock," but in this guide, we define "word clock" only as the signal which is transferred via "word clock I/O" and "word sync I/O."

■ Other notes

- **If a DIF-AT and an AE-7000 are connected to each other via R-BUS, they do not work. They are designed to work independently with a VM mixer.**
- **If a DIF-AT and an ADA-7000 are connected to each other via R-BUS, they do not work. They are designed to work independently with a VM mixer.**

...MEMO...

