



CLEAR CHANNEL
Satellite Services



PRO4 RECEIVER

QUICK START GUIDE

PRO4 & PRO4-SG Software

Your receiver will NOT receive CCSS programming until you connect your XDS receiver to the internet and Activate it per the instructions in this document. Your XDS receiver MUST always be connected to the internet 24/7/365.

REVIEW THIS GUIDE IN ITS ENTIRETY BEFORE INSTALLING YOUR XDS RECEIVER. ALSO, FOLLOW THESE INSTRUCTIONS BEFORE CALLING SUPPORT.

- **Make all satellite RF, data (LAN/WAN) and audio connections prior to applying AC power to the XDS receiver.**
- **CCSS urges stations to use an Uninterruptible Power Supply (UPS) for the XDS receiver for equipment protection from power spikes or brownouts. Also consider lightning protection if you are located in an area susceptible to frequent lightning storms. Surge suppressors do not provide sufficient protection.**

NOTE: Appendix A contains a front panel menu map that can help you navigate through the XDS receiver settings and configuration.

1. MAKING THE CONNECTIONS

1.1 SATELLITE RF CONNECTION

Your XDS receiver is pre-tuned to CCSS's carrier on AMC-8. Once the satellite RF is properly connected and you apply AC power, the XDS receiver should automatically tune and lock to the CCSS carrier.

A. Connect the satellite RF to your downlink

Your new XDS receiver is delivered with a parts kit that includes two 6-foot RG-6 cables and an L-band splitter that allows DC power to pass through one port.

B. Verify the XDS receiver is tuned and locked to the CCSS carrier

Once the satellite RF is properly connected, apply AC power to the receiver and verify as follows:

- If the **SIGNAL LED** is **green** then the receiver is locked to the CCSS carrier and the LCD screen will display:
(Network logo)
EB ##.# AG ### (# = numerical value)
EB should be above 7 and AG should be between about 40 and 60 for proper operation.
- If the XDS receiver does not acquire the CCSS carrier, the **red FAULT LED** will illuminate steadily and the LCD screen will display:
(Network logo)
EB __. _ AG ### (# = numerical value)
Verify proper RF connections and the XDS receiver should automatically lock to the carrier.

To manually tune the XDS receiver to CCSS carrier on AMC-8:

NOTE: The Pro4-SG model only is capable of receiving the XDS DVB-S programming or the Starguide MX3 programming. This requires the selection of the framing to accommodate the DVB or the MX3 carrier

X-Digital Mux (DVB)

- At the main screen with the logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Tuner**. Press SET.
- Press the left or right arrow keys to reach **Framing**. Press SET. (Only available on PRO4-SG)
- Press the left or right arrow keys to reach **DVB**. Press SET. (Only available on PRO4-SG)
- Press the left or right arrow keys to reach **Frequency**. Press SET.
- Use the four arrow keys and the SET key to set the frequency to:
 - **1033600 kHz**
- Press the left or right arrow keys to reach **Symbol Rate**. Press SET. Use the four arrow keys and the SET key to set the symbol rate to:
 - **1446808 sps**

Starguide Mux (MX3) Only available on PRO4-SG receivers

- At the main screen with the logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Tuner**. Press SET.
- Press the left or right arrow keys to reach **Framing**. Press SET.
- Press the left or right arrow keys to reach **MX3**. Press SET.
- Press the left or right arrow keys to reach **Frequency**. Press SET.
- Use the four arrow keys and the SET key to set the frequency to:
 - **1022750 kHz**
- Press the left or right arrow keys to reach **Symbol Rate**. Press SET. Use the four arrow keys and the SET key to set the symbol rate to:
 - **10053818 sps**

The XDSPRO-4SG receiver should lock. (**Green SIGNAL** LED will illuminate steadily).

If this XDS receiver is designated to supply DC power to the LNB at your dish, you can turn on the LNB voltage on the XDS receiver front panel menu as follows:

- Make sure your downlink LNB is connected to the XDS receiver
- Apply AC power to the receiver
 - From the main screen with the Logo, press the SET key, then press the left or right arrows to reach **Setup**. Press SET.
 - Press the left or right arrows to reach **Tuner**. Press SET.
 - Press the left or right arrows to reach **LNBBV**, Press SET and turn the LNB Voltage on(default = off).

If the front panel of your XDS receiver displays flashing red lights, this indicates all Activation and Installation steps have not been completed and/or your XDS receiver is not connected to the internet. All Activation and Installation steps, including your internet connection, must be completed or you will NOT receive Networks programming. Your XDS receiver must ALWAYS be connected to the internet 24/7/365.

1.2 INTERNET CONNECTION - REQUIRED

Web Interface Login Information: User Name: tech Password: radio

This new XDS receiver requires connection to an always-on internet pathway. The internet pathway is used by CCSS to troubleshoot remotely, send audio or text content to your receiver's storage, send commercial playback schedules, retrieve as-played logs of commercials inserted by the receiver, and more.

Your XDS receiver is delivered with a 20-foot Category 5 data patch cord wired "straight through" (not crossover) for connection to your networks hub or switch.

A. Connect the XDS Receiver to your network

If you elect to place your XDS receiver in your local network "inside" your firewall, connect your network cable to one of the receiver's **LAN** ports. The receiver is set by default to obtain a dynamic IP address, also called a "DHCP address", from your network's DHCP server. If there is no DHCP server or you elect to assign a static IP address, you can do it as follows:

Assigning a Static IP address to a LAN Port:

- At the main screen with the Logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Network**. Press SET.
- The default settings for DHCP is ON. Use the SET and arrow keys to change DHCP from ON to OFF.
- Press the left or right arrow keys to go to the LAN Address menu. Press SET.
- Use the up and down arrow keys and the SET key to set the desired IP address.
- Press the left or right arrow keys to go to the LAN Subnet menu. Press SET.
- Use the up and down arrow keys and the SET key to set the desired subnet address.
- Press the left and right arrows to go to the Gateway menu and press SET.
- Use the up and down arrow keys and the SET key to set the desired gateway address.

Assigning a Static IP address to the WAN Port:

If you elect to connect your receiver in a firewall zone called a “DMZ” (demilitarized zone) or “Outside” the firewall where it can see the internet directly, connect your network cable to the receiver’s **WAN** port. You must assign a static IP **WAN Address**, **WAN Subnet**, and **Gateway**. Follow the “Assigning a Static IP address to a LAN Port” instructions above to go to the appropriate WAN menus and change settings as desired.

NOTE: If your network requires the use of a proxy server, please refer to the online user’s guide located at your affiliate’s website. Refer to Section 2 on page 7 for instructions on how to login to your website.

B. Test connection to the CCSS NOC

- At the main screen with the Logo, press the SET key, then the left or right arrow keys to reach **Setup**. Press SET.
- Press the left or right arrow keys to reach **Network**. Press SET.
- Press the left or right arrow keys to **TEST NOC**. Press SET.
- Press the **NOC** soft key to perform the test.

The test will take a minute or two. You will get a **SUCCESSFULLY CONNECTED TO NOC** message if your IP settings are correct. Otherwise you will get a **CANNOT CONNECT TO NOC** message and you will need to adjust your IP settings (on the receiver, or in your network’s switches, routers or firewall) until the receiver can connect to the NOC.

To troubleshoot, you can use the **PING** soft key to verify your receiver can locally connect to your network gateway.

1.3 AUDIO OUTPUT CONNECTIONS

Once the XDS receiver is locked to the CCSS carrier you can verify audio functionality as follows:

A. Verify audio reception

Initially the XDS receiver headphone output and all the audio ports are programmed to receive the **Test Channel**.

Connect a set of headphones and verify you can hear the **Test Channel**.

NOTE: IN MXS (Starguide) receive mode monitoring is for ports A and B only

To manually program the XDS receiver headphone to output the **Test Channel**:

- At the main screen with the Logo, press the SET key, then the left or right arrows to reach **Audio Ports**. Press SET.
- Press the left or right arrows to reach **Headphones**. Press SET.
- Press the left or right arrows to reach **Program**. Press SET.
- Use the up and down arrows to find **Test Channel**. Press SET.

The Test Channel is intended to check receiver operation. It does NOT prove that you can receive programming. To receive program audio, you must complete all installation and Activation steps, including a fulltime internet connection. Your XDS receiver must ALWAYS be connected to the internet 24/7/365.

B. Verify audio ports

The Pro4-SG when placed in MX3 framing for Starguide receive has two audio ports A and B with C as a copy feed of A and D as a copy feed of B. In DVB mode the A, B, C and D are separate audio ports.

Your new XDS receiver is delivered with a parts kit including four mating DB-9 connectors with shells

The analog audio outputs for your services appear at the four DB-9 connectors on the rear panel. Wiring pin outs are the same as on the older Starguide receivers:

AUDIO OUTPUT - DB9M

| Pin | Signal | Signal | Pin |
|-----|--------|--------|-----|
| 1 | L+ | L- | 6 |
| 2 | GND | GND | 7 |
| 3 | - | - | 8 |
| 4 | GND | R- | 9 |
| 5 | R+ | | |

Rule: Each DB-9 connector carries one radio program stream, either mono or stereo. If the program is mono, the same audio appears on the left and right pin pairs. In most cases, the left and right sides of a stereo channel are no longer used by CCSS to carry unrelated mono programs. Other networks and distributors may use different rules.

Your receiver should be pre-configured to output the **Test Channel** on all ports. Verify you can hear the test program through all receiver ports.

To manually program the XDS receiver to output the **Test Channel** on a desired audio port:

- At the main screen with the Logo, press the SET key, then the left or right arrows to reach **Audio Ports**. Press SET.
- Press the left or right arrows to select the **Audio Port** (letter A, B, C or D). Press SET.
 - Pro4-SG models have only 2 audio ports with the same audio on dual outputs A/C and B/D
- Press the left or right arrows to select **Program**. Press SET.
- Use the up and down arrows to find **Test Channel**. Press SET.

1.4 NETCUE RELAY CLOSURES

There are two DB-37 connectors on the rear panel which together contain a total of 32 mappable relay (or contact) closures to drive your station automation. Relay closure are momentary Form "A", rated 500ma @24v.

Your XDS receiver is delivered with a parts kit including two mating DB-37 connectors with shells.

NOTE: Wiring pin out for the RELAY A port is the same as on the StarGuide receiver with Netcue Card.

The pin outs for the DB-37 connectors are:

RELAY A - DB37M

| Pin | Signal | Signal | Pin |
|-----|--------|--------|-----|
| 1 | RLY1A | RLY1B | 20 |
| 2 | RLY2A | RLY2B | 21 |
| 3 | RLY3A | RLY3B | 22 |
| 4 | RLY4A | RLY4B | 23 |
| 5 | GND | GND | 24 |
| 6 | RLY5A | RLY5B | 25 |
| 7 | RLY6A | RLY6B | 26 |
| 8 | RLY7A | RLY7B | 27 |
| 9 | RLY8A | RLY8B | 28 |
| 10 | GND | RLY9B | 29 |
| 11 | RLY9A | RLY10B | 30 |
| 12 | RLY10A | RLY11B | 31 |
| 13 | RLY11A | RLY12B | 32 |
| 14 | RLY12A | GND | 33 |
| 15 | NQ Txd | RLY13B | 34 |
| 16 | RLY13A | RLY14B | 35 |
| 17 | RLY14A | RLY15B | 36 |
| 18 | RLY15A | RLY16B | 37 |
| 19 | RLY16A | | |

RELAY B - DB37M

| Pin | Signal | Signal | Pin |
|-----|--------|--------|-----|
| 1 | RLY1A | RLY1B | 20 |
| 2 | RLY2A | RLY2B | 21 |
| 3 | RLY3A | RLY3B | 22 |
| 4 | RLY4A | RLY4B | 23 |
| 5 | GND | GND | 24 |
| 6 | RLY5A | RLY5B | 25 |
| 7 | RLY6A | RLY6B | 26 |
| 8 | RLY7A | RLY7B | 27 |
| 9 | RLY8A | RLY8B | 28 |
| 10 | GND | RLY9B | 29 |
| 11 | RLY9A | RLY10B | 30 |
| 12 | RLY10A | RLY11B | 31 |
| 13 | RLY11A | RLY12B | 32 |
| 14 | RLY12A | GND | 33 |
| 15 | NC | RLY13B | 34 |
| 16 | RLY13A | RLY14B | 35 |
| 17 | RLY14A | RLY15B | 36 |
| 18 | RLY15A | RLY16B | 37 |
| 19 | RLY16A | | |

NOTE: Pro4-SG placed in MX3 mode has 16 relays available per port (A Relay A connector, B Relay B connector). In DVB mode there is 8 relays per port (A&C Relay A connector, C&D Relay B connector)

If you or your automation vendor has developed a program that can read Netcues directly, you may get the Netcue serial stream from pins 15 and 10 on the **Relay A** port on your XDS receiver (see pin out above). The "NQ TxD" pin is RS-232 data with no flow control or handshaking. Baud rate is set by default to 9600 bps 8N1.

NOTE: The adaptor cable supplied with the PRO4-SG is wired for support of 4 relays simulating the Starguide audio card pin out

THREE CHARACTER NETCUES:

If you currently use a Netcue/Data card in your Starguide receiver, any 3-character Netcue that CCSS sends out can be mapped to any contact closure you wish. Contact our Technical Services department or contract Help Desk to help you map your existing Netcues to the same relay pins on one of the DB-37 connectors on your new XDS receiver.

2. VERIFY PROGRAMMING AND ACTIVATE

In the XDS system each program, not each channel, is permissioned and labeled for station use. Therefore, instead of tuning to a channel to find a program, you will schedule the programs to appear on each output port. You will need to review your schedule and activate your receiver with your stations programming.

Initially your receiver only outputs the **Test Channel** on all ports, the front panel LCD shows a "Please Activate" message and the **orange UPDATE** LED in flashing.

You must edit and activate the schedule of the programs that you want to appear on each audio output port of the XDS receiver through the CCSS Affiliate website at

<http://myXDSreceiver.xdigital.com>

To login you will use the XDS receiver's serial number as the username and a password (case sensitive) generated by the receiver. To find this password:

- At the main screen with the Logo, press the SET key, then the left or right arrows to reach **Setup**. Press SET.
- Press the left or right arrows to select **Serial Number**.
- Press the **PWD** soft key to display your password.

Once logged in, you may setup a friendly password to the site and also review and approve your receiver's setup (Time Zone, Schedule, Relay Mappings, etc).

Adjust Time Zone

Setup the appropriate time zone for your receiver

Review Schedule

You will see the default schedule for every station your receiver supports. Please modify and verify your schedule as desired.

RULE: Each call-letter radio station at your site that carries any CCSS programming or commercials from this XDS receiver must be assigned to an XDS receiver port and each port must be scheduled to output the programs you need.

NOTE: Your new XDS receiver contains about 32 hours of audio storage which you may use to "tape delay" network programs and schedule them to play later. You can schedule the same XDS receiver port to "play back" a mixed schedule of live and delayed program in DVB mode only.

Review Relay Mappings

You will see the default relay mapping configuration for your receiver. Please modify and verify your mappings as desired.

Approve Setup and Activate

Once you reviewed all your desired settings, press the **UPDATE** button, and the NOC will send the updated programming to your receiver.

It may take a couple of minutes for the XDS receiver to download the CCSS programming information. To verify your receiver is activated, the **UPDATE** LED will turn off and the front panel LCD will display the "XDSPRO" message instead of the "Please Activate" message

3. SUPPORT CONTACT INFORMATION

If you have any problems please call the CCSS Technical Services offices and they will help you set up and verify your receiver.

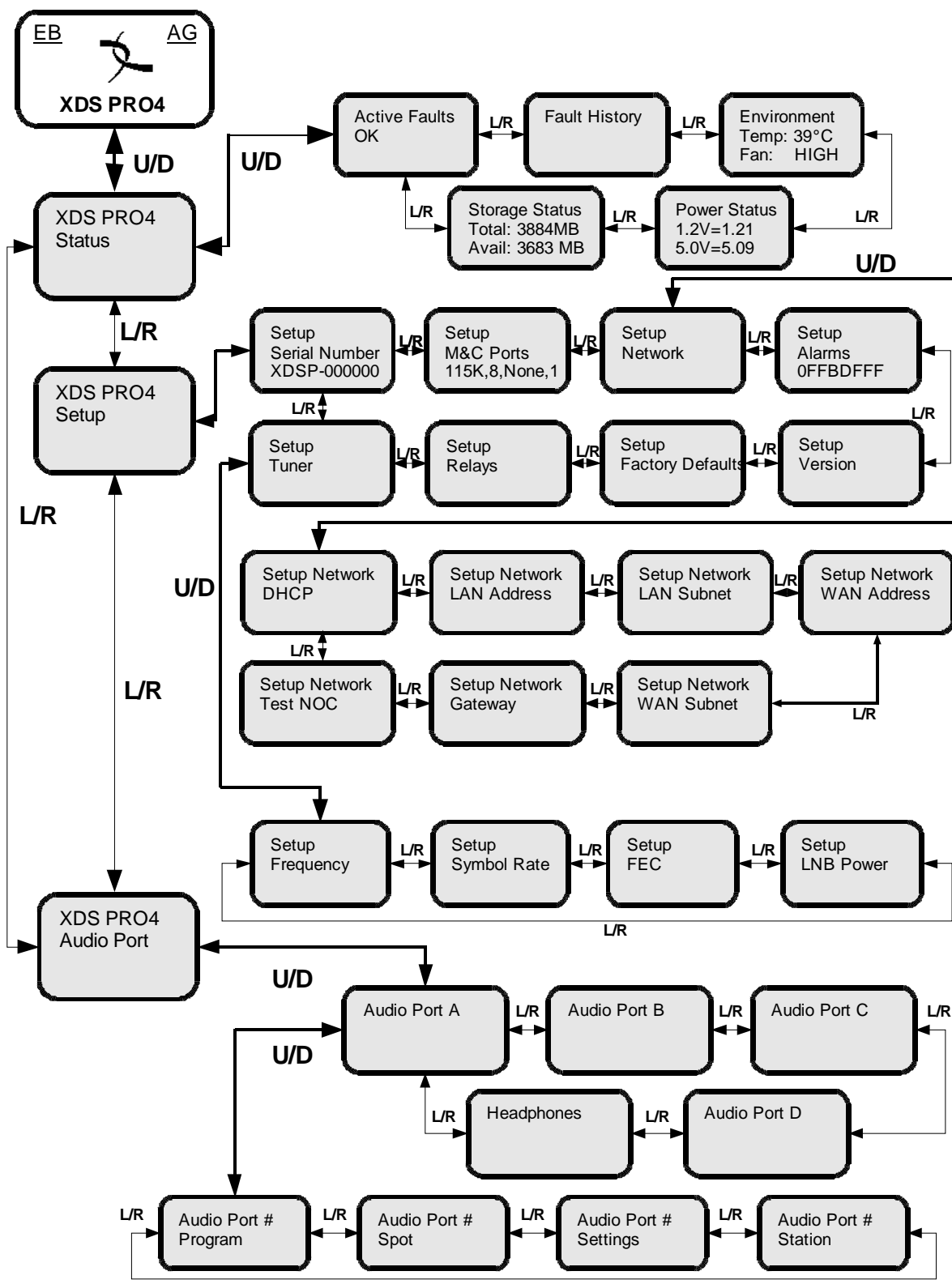
The CCSS Technical Services offices are staffed 24/7/365 for technical assistance.

Phone : (303) 925-1708

Fax : (303) 925-1714

E-MAIL: helpdesk@clearchannelsatellite.com

APPENDIX A - XDS RECEIVER MENU MAP



Important Notice

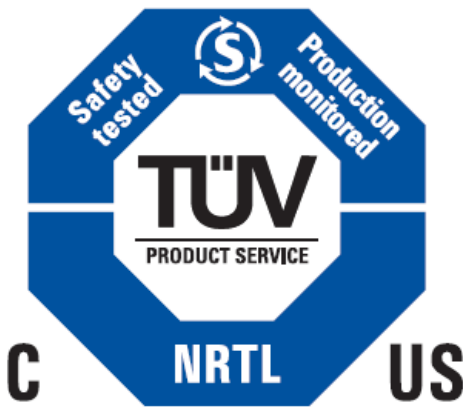
The XDS-PRO4 DVB Satellite Receiver Users Manual is available on-line. To access the Manual, please log-on to <http://myXDSreceiver.xdigital.com> with your Affiliate's web page access information, go to Help, and select: Users Manual. If you have any questions, please contact your Affiliate Station, or the Help Desk.

FCC Compliance

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION OF THIS DEVICE IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE; AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

UL and CSA Compliance

THE XDS-PRO4 DVB SATELLITE RECEIVER WAS TESTED ACCORDING TO UL 60950-1:2003 AND CSA C22.2 No. 60950-1:2003. THIS DEVICE MEETS THE SAFETY AND TEST REQUIREMENTS OF THE TEST SPECIFICATIONS, AND WAS FOUND TO BE IN COMPLIANCE WITH PROTECTION AIMS OF THE APPLICABLE EC-DIRECTIVES AND THE REQUIREMENTS OF THE STANDARDS. THE XDS-PRO4 DVB SATELLITE RECEIVER MAY BE MARKED WITH THE TUV MARK AS SHOWN BELOW; CERTIFICATE No. U8 07 01 62269 001



Warning! Approved external telecom power cross protection must be incorporated into the final installation in accordance with Annex NAC of UL/CSA standard 60950-1. Failure to comply may result in a fire or electric shock hazard and will void regulatory compliance certification.

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Patent Pending

X-Digital Systems, Inc., DVB Satellite Receiver – Patents Pending

Disclaimer

This document is intended to provide information about the “XDS-PRO4 DVB Satellite Receiver”. Every effort has been made to make this document as complete and accurate as possible, but no warranty or fitness is implied. The information is provided on an “as is” basis and X-Digital Systems shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this document.



Warning!

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