

User Instructions
Cyrus FM7

Congratulations on the purchase of your *Cyrus FM7 Tuner*. This piece of equipment is a precision manufactured state-of-art product, constructed to the highest standards and specifications. This manual contains installation and operating instructions to enable the user to connect up and operate the tuner correctly, thus ensuring the greatest satisfaction and long term use. This instruction manual is divided into seven sections:

- **Cautions**
- **Installation**
- **Operation**
- **Additional Information**
- **Trouble Shooting**
- **Specifications**
- **Guarantee**

To enable you to make full use of the comprehensive facilities of the tuner we suggest that you read these sections which will explain the fundamental operations of the unit.

CAUTION**POLARISED CONNECTOR (115V PRODUCTS ONLY)**

To prevent electrical shock, match wide blade of plug to wide slot and fully insert

Attention: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

Your *Cyrus FM7 Tuner* is factory set to operate from a fixed mains supply voltage, which is marked on a label at the rear of the unit. Before connecting, check that this voltage is the same as your mains supply, i.e.

230V Products	Voltage Range 220V-240V
115V Products	Voltage Range 110V-120V

UNPACKING

Always follow the instruction handbook and retain it in a safe place for future reference.

Before proceeding with installing the *Cyrus FM7*, ensure that the following items are included in the accessory box:

- Instruction Manual
- Power Cable
- Interconnect Lead
- Guarantee Card

After removing these items, please retain the packing for future use.

LOCATION

Install the tuner in a well ventilated location where it will not be exposed to high temperature or humidity.

Avoid installing the tuner in a location which is exposed to direct rays of the sun, or near to hot appliances or radiators. Placing and using the tuner for long periods on heat-generating sources will affect performance and may damage the cabinet. Installation in a damp or dusty environment may result in malfunction or accident.

RE-LOCATING

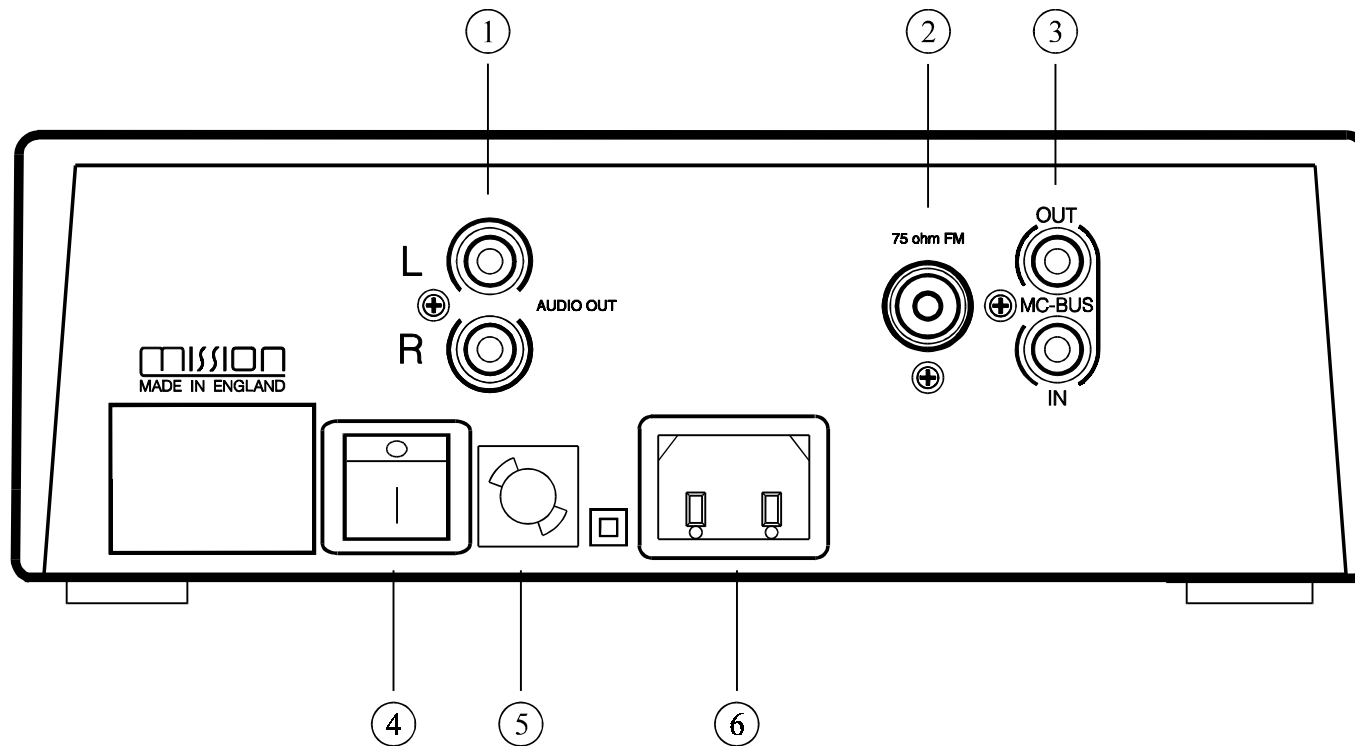
The *FM7* is supplied ready for use in your location. Care has been taken to ensure that the power supply requirements and de-emphasis response are correctly set. Consult your Mission distributor to arrange for conversion of your *FM7* should you move to another area.

PRECAUTIONS REGARDING INSTALLATION

It is important not to allow any liquid or foreign object fall into this unit. When routing the power cord avoid running it over or near sharp objects.

If the tuner is not to be used for a long period of time, unplug the unit from the mains power supply.

This unit contains no user serviceable parts, therefore **never** remove any panels from the unit or attempt to service the unit. In the unlikely event of failure, please refer to qualified service personnel.



- 1. Audio Output
- 2. Antenna Input
- 3. MC-BUS System Connection
- 4. Power Switch
- 5. Mains Fuse
- 6. Power Inlet

Fig.1 Tuner (rear view)

POSITIONING THE UNIT

The *Cyrus FM7* may be positioned as a free standing unit or alongside another piece of audio equipment. Never stand the unit on top of a power amplifier, which may generate heat. The *Cyrus FM7 Tuner* must always sit horizontally on a flat firm surface.

CONNECTING THE UNIT**The Mains Supply**

The moulded IEC connector of the mains lead supplied should be plugged in to the power inlet ⑥ on the rear of the unit.

The mains fuse ⑤ is located on the rear panel next to the power switch. It must only be replaced with the following types:

U.K. / Europe - 230V	T100mA/20mm
N. America / Far East - 115V	T200mA/20mm

In the U.K., the *FM7* comes with the mains plug fitted. In the unlikely event that the plug fuse should need replacing ensure that it is only replaced with a 3 Amp Fuse.

Connecting to an Amplifier

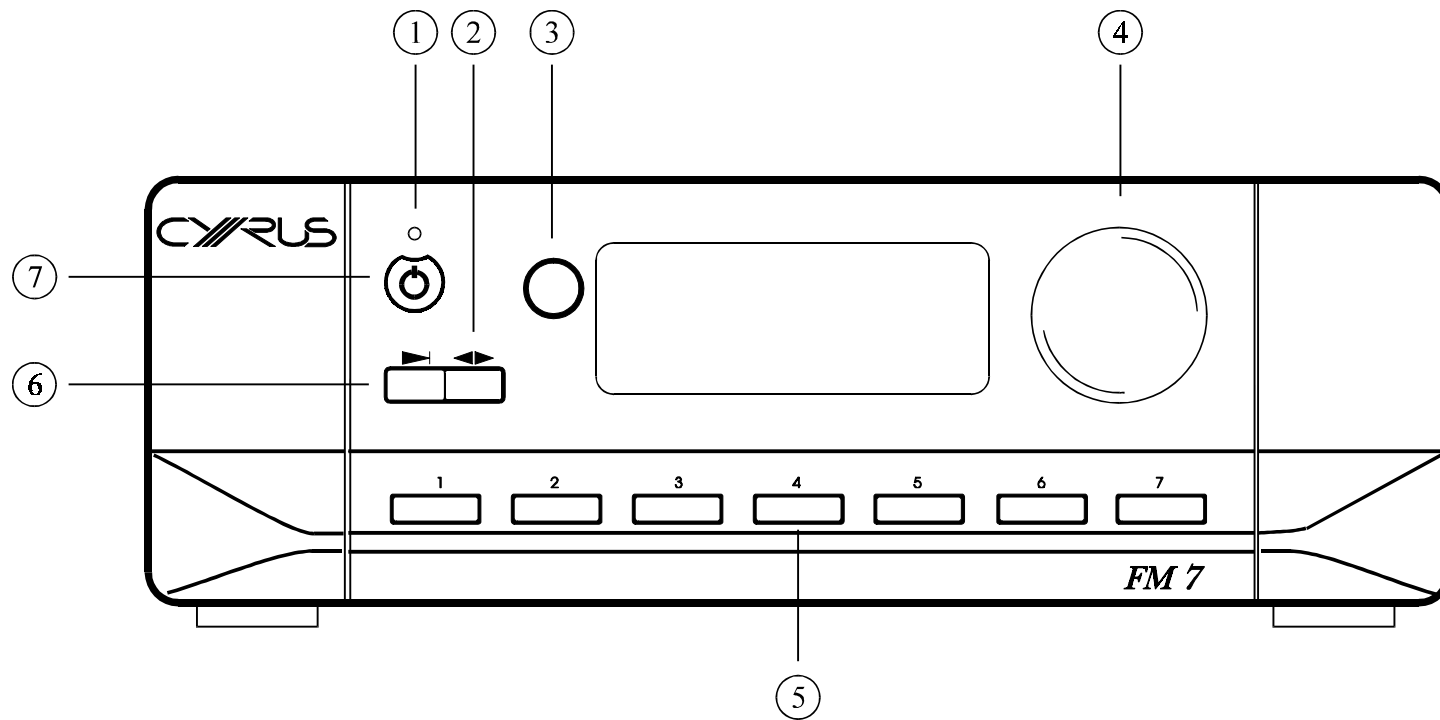
Using the interconnect lead provided connect one set of the phono plugs to their corresponding audio outputs on the rear of the tuner ①. The other end of the lead should then be connected to the tuner input of your amplifier. If there is no tuner input available any line level input may be suitable. Ensure that the left and right channel sense are correct between the tuner and the amplifier.

Connection of an External Aerial

This socket ② is for use with a 75Ω external FM aerial. The quality of the aerial you use will directly affect the performance of your tuner. We would therefore advise that you contact an aerial installation expert in your local area or consult your dealer. In areas where FM cable transmission is available the signal strength should be generally quite adequate.

MC-BUS System Connection

This is an optional connection ③ which enhances and expands the capability of specific Cyrus products, including your *FM7*. Through the MC-BUS and certain ancillary equipment a highly functional integrated system with full remote control ability may be set up.



- 1. Standby Light
- 2. Fine
- 3. Remote Eye
- 4. Manual Tune
- 5. Presets (1-7)
- 6. Seek
- 7. Standby Switch

Fig. 2 Tuner (front view)

POWER

The mains power switch ④ is located on the rear panel of the tuner (refer to figure 1, rear panel drawing on page 4). This switch should be left on for normal operation, except when left unattended for a long period. In this case the mains power should be switched off or the product disconnected from the AC supply.

Refer now to figure 2, front panel drawing on page 6.

When the tuner is in regular use and power is permanently applied, the STANDBY key ⑦ can be used to switch the unit on and off. The standby light will show red when the tuner is in standby and green when operating. The *FM7* will also switch on if a preset station is selected.

SELECTING A BROADCAST STATION**Auto Tuning**

Auto tuning will search automatically for stations with a usable signal strength. To begin searching, press the SEEK key ⑥ and the tuner will scan up the frequency range, locking to the next available station. Another press will continue station scan. The station frequency and signal strength can be read from the display. If the station detected is already stored as a tuner preset, the preset location will also be shown on the display.

To stop scanning press the SEEK key.

Manual Tuning

Manual tuning can be used to set to a known station frequency or to lock to a weak transmitter, not detected in auto tuning. Rotate the MANUAL tuning control ④ until the required frequency is shown on the frequency display. The frequency will change in steps of 0.1MHz, which is the standard broadcast channel spacing for FM transmission. When a station is correctly tuned to, the lock indicator will be displayed. The signal strength can then be read from the bargraph display (refer to page 9 for detail).

FINE TUNING A BROADCAST

Certain commercial radio stations and some cable broadcasts are prone to imprecision in their transmitted carrier frequency. This may cause distortion and will detract from ultimate sound quality. In such instances and for precise station alignment, fine station tuning is made available.

Fine Tuning

To fine tune a broadcast station, first locate your station using either AUTO or MANUAL tuning. Ensure that the lock indicator on the display is showing. Press the FINE key (2). Now the manual tuning control can fine tune the station in steps of just 10kHz. Whilst fine tuning, the bargraph display switches to show a "magic eye" tuning meter. For precise station tuning the black bars on each side of the display should be of equal length. Press the FINE key again to cancel fine tuning mode. Note that fine tuning will cancel automatically if no adjustment is made within a 5 second period. For more detail on fine tuning refer to page 10.

PRESET STATION STORAGE

Seven preset memories are readily available on the front panel which may be programmed with your favourite stations.

Storing a Preset Station

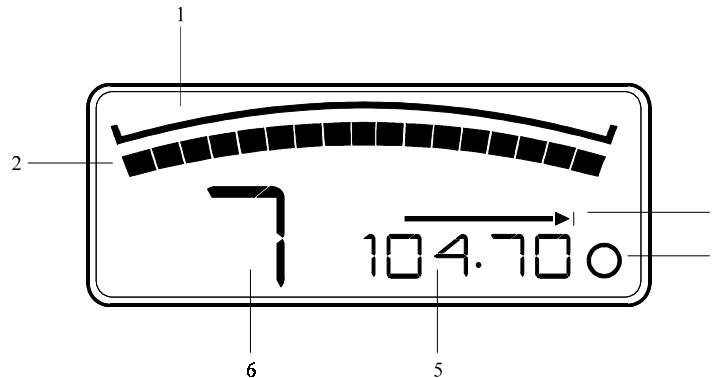
To store a preset station, first locate the station using either AUTO or MANUAL tuning methods as described before, followed by fine tuning if necessary. Press and hold a PRESET key for about two seconds until the display blinks. The station is now stored in this preset location. The memory of the *FM7* will retain preset stations indefinitely and requires no back up-batteries.

Note that the same station stored in two locations will always show the lowest preset number on the display indicating double storage of the same frequency. In this case one of the preset locations can be re-programmed.

Tuning to a Preset Station

To recall a station from the preset memory, press the desired PRESET key briefly. If no station is present, the frequency digits will read zero and the search arrows will flash briefly.

Front Panel Display




1. Lock Indicator 

This symbol indicates that the tuner has locked to a station.

2. The Bargraph

a. Signal Meter Mode..... 

This symbol indicates the received signal strength of a tuned station.

b. Magic Eye Mode..... 
(Fine tuning only)

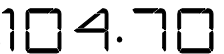
The magic eye indicates the accuracy with which the unit is tuned to the transmitted frequency. The display illustrated shows optimised tuning.

3. Search Indicator 

The arrow is displayed when the tuner is searching up for the next station.

4. Stereo 

This symbol indicates when a broadcast station is transmitting in stereo.

5. Frequency Display 

This shows the nominal broadcast frequency that the unit is currently tuned to. In fine mode, a further digit is displayed for 10kHz resolution.

6. Preset Number 

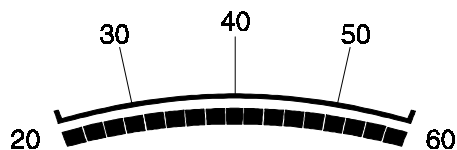
This digit shows the current preset number.

KNOW YOUR FM7

The Bargraph

The signal strength bargraph and "magic eye" tuning indicator of the *FM7* can be used for accurate assessment of signal quality at the antenna terminals. At Mission, our automated test procedure enables each segment of the display bargraph to be individually calibrated for signal strength and tuning deviation. The calibration data is then stored in a digital memory for recall each time power is applied to the tuner.

When reading signal strength, the bargraph reads from 20 dB μ V to 60dB μ V in 2dB μ V steps.



The Signal Meter Scale (dB μ V)

When set for fine tuning however, the bargraph will indicate station deviation in steps of 10kHz (two segments per step). The following illustrations show different examples of tuning alignment.



Optimised Fine Tuning



De-tuned + 30kHz



De-tuned - 40 kHz

The Frequency Display

The *FM7* frequency display will always read the published nominal station frequency. An exception to this is when fine tuning is selected when an extra digit displays 10kHz steps for ultra accurate tuning. This can now be stored.

When this station is selected the *FM7* will display the rounded frequency to match the advertised nominal frequency.

Other Features

The *FM7* is equipped with a high performance active pilot tone suppression circuit. This ensures superb rejection of subcarrier related spurious, whilst providing a direct path for audio signals.

Four power regulators supply the RF, PLL, Audio and Control circuit modules of the *FM7* independently.

CYRUS REMOTE COMMANDER

The *Cyrus Remote Commander* which is available as an optional extra, is a unified handset designed to complement the full range of Cyrus electronics including your *FM7*. The distinctive *Cyrus Commander* replaces individual product handsets where supplied, with a view to providing additional functionality and enhanced ergonomics.

TUNER MAINTENANCE

There are no serviceable parts in the *Cyrus FM7*, so there is no reason to remove any of the panels. After disconnecting the power supply, the cabinet may be cleaned using a chamois leather, slightly moistened with water. DO NOT use cleaning agents containing alcohol, spirits, ammonia or abrasives.

THE MISSION/CYRUS GROUP MANUFACTURE:

- Loudspeakers
- Loudspeaker Stands
- Loudspeaker Cables
- Compact Disc Players
- D-to-A Converters
- Amplifiers
- Tuners
- Regulated Audio Power Supplies
- Isoplat (Vibration Isolation Platform)

TROUBLE SHOOTING GUIDE

If you suspect that your *FM7* is not operating to specification, please read through this section before returning the tuner to your local dealer.

No Sound from either Speaker

- Check that the amplifier is on.
- Check the tuner input of your amplifier is selected.
- Check the interconnect cable is connected correctly, on both *FM7* and the amplifier.

No Lights or Display

- Check that the power switch on the rear panel is turned on.

No Display

- If you have a remote handset, then press the DISPLAY key to turn the display on again.

***FM7* will not Tune to Stations in SEEK Mode**

- Make sure that the antenna is connected to the 75Ohm socket on the rear panel and that stations can be tuned manually.

All Stations have High Background Noise

- Check the correct connection of your antenna. If the problem persists there may be a bad connection in the antenna connector.

Some Stations have High Background Noise

- These may be weaker or more distant stations and therefore may require adjustment to the antenna direction for optimum reception.
- Do bear in mind that there is a big difference in the sensitivity of FM antennae available on the market, and that your current antenna may need upgrading.
- Proximity to appliances with potential for high frequency radiation may cause interference with high quality reception in certain frequency bands. If you own CD players, computers and similar devices experiment by removing them from the mains and re-checking the noisy station.

No Stereo Indication

- Check other stations for stereo reception. the particular broadcast may be in mono. For example speech, commentary, etc.

AUDIO PERFORMANCE

Audio Output (95% mod. mono 1kHz)	775mV
Sensitivity (75 Ohm Input)	
Mono, 50dB S/N	12dB μ V
Stereo, 50dB S/N.....	30dB μ V
Selectivity.....	55dB
Capture Ratio	1.5dB
IF Suppression.....	90dB
Image Frequency Suppression.....	80dB
Pilot Tone Suppression	68dB
Stereo Separation	>50dB
S/N Ratio, mono/stereo (CCIR-ARM)	83/76dB
1kHz THD @ 50kHz DEV. (A-WTD)	
mono/stereo	0.05/0.08%
Aerial Input	75 Ohm coaxial

POWER SUPPLY

Voltage

See the plate attached to the rear of the unit

Power Consumption

Standby	4W
ON.....	7.6W
Safety Requirements.....	IEC 65

CABINET

Dimensions (WxHxD).....	215 x 73 x 360 mm
Weight.....	2.7Kg
Material.....	Magnesium alloy and Aluminium alloy

The company reserves the right to change this specification without prior notice.

This guarantee only becomes effective if the guarantee card enclosed is completed by the Dealer and the purchaser and returned to MISSION or Distributor within 8 days of purchase.

This guarantee excludes:

- i) All damage caused through accident, misuse, wear and tear, neglect or through incorrect installation, adjustment or repair by unauthorised personnel.
- ii) Liability for damage or loss occurring in transit to or from the purchaser.

Claims under this guarantee must, whenever possible, be made through the Dealer from whom the equipment was purchased or if that is not convenient, through another authorised MISSION/CYRUS dealer.

MISSION shall not be liable for any consequential damage, loss or injury whatsoever, arising from or in conjunction with this equipment.

The cost of carriage (to or from the Dealer) shall be borne by the purchaser.

This guarantee is personal to the original Purchaser and is not transferable.

If equipment is found on examination to comply with the published specification, MISSION reserves the right to make a charge for examination and for return carriage.

No Dealer or Distributor has any authority to vary the terms of this guarantee.

Any unauthorised servicing will result in loss of guarantee.

We strongly recommend that you retain the sales receipt for your *CYRUS* equipment in case of any warranty claim.

The above conditions do not affect your statutory rights as a consumer.

