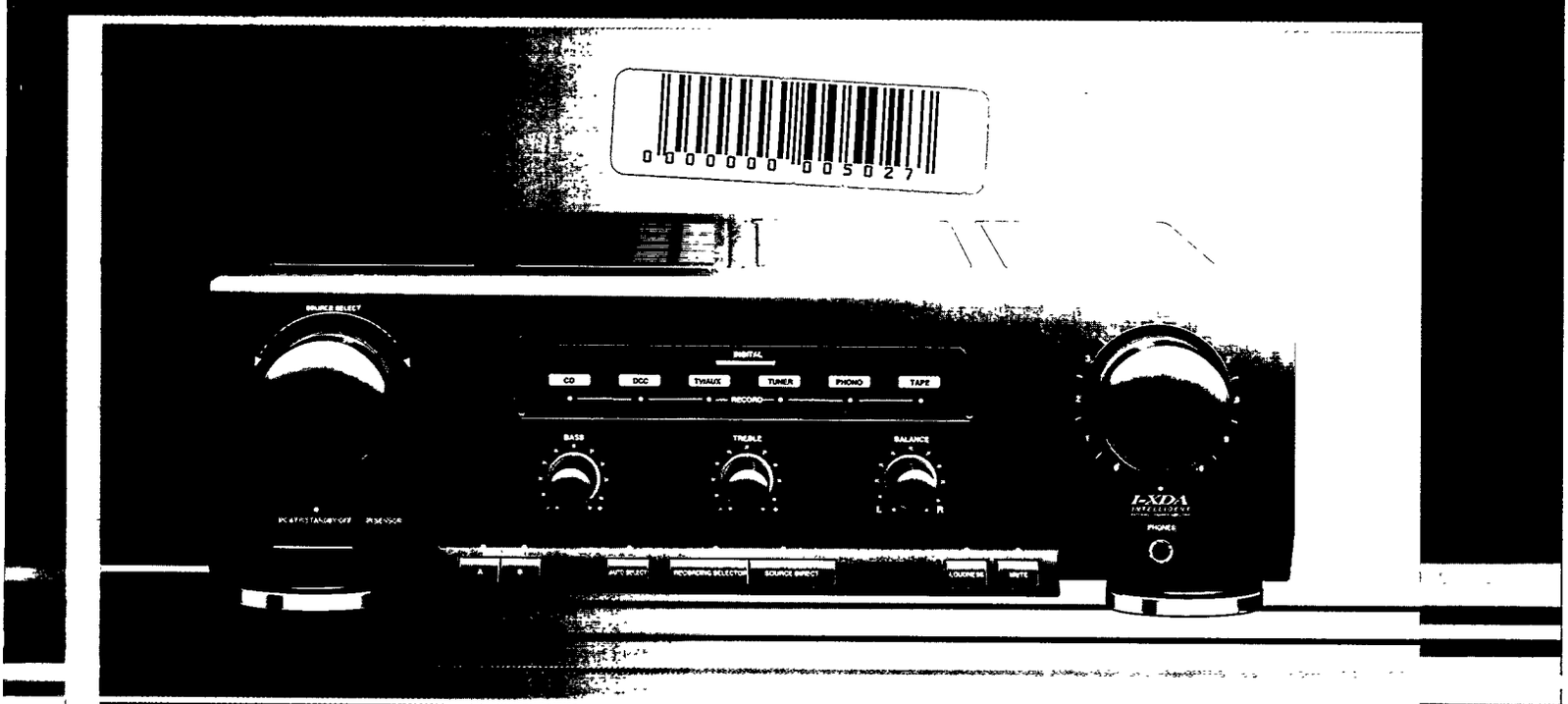
PHILIPS



FA 931

PHILIPS

PHILIPS

INDEX

(AUS) Australia

Guarantee and Service valid for Australia

The benefits given to the purchaser by this warranty are in addition to all other rights and remedies, which, under the Trade Practices Act or other Commonwealth or State law, the purchaser or owner has in respect of the product.

The Philips product carries the following warranties:
- C-series HiFi-systems 12 months.
- Compact Disc Players: 12 months.
- Home Audio Systems: 6 months.
- Clock radios, portable radios, cassette recorders, cassette players and radio recorders: 90 days.

Any defect in materials or workmanship occurring within the specified period from the date of delivery, will be rectified free of charge by the retailer from whom this product was purchased.

Note: Please retain your purchase docket to assist prompt service.

Conditions of this warranty
1. All claims for warranty service must be made to the retailer from whom this product was purchased. All transport charges incurred in connection with warranty service or replacement will be paid by the purchaser.
2. These warranties do not cover batteries and extend only to defects in materials or workmanship occurring under normal use of the product where operated in accordance with our instructions.

Philips Consumer Products Division
Technology Park
Figtree Drive, Australia Centre
Homebush 2140
New South Wales

(NZ) New Zealand

Guarantee and Service for New Zealand

Thank-you for purchasing this quality Philips product.
Philips New Zealand Ltd guarantees this product against defective components and faulty workmanship for a period of 12 months. Any defect in materials or workmanship occurring within 12 months from the date of purchase subject to the following conditions will be rectified free of charge by the retailer from whom this product was purchased.

Conditions
1. The product must have been purchased in New Zealand. As proof of purchase, retain the original sales docket indicating the date of purchase.
2. The guarantee applies only to faults caused by defective components, or faulty workmanship on the part of the manufacturer.
3. The guarantee does not cover failures caused by misuse, neglect, normal wear and tear, accidental breakage, use on the incorrect voltage, use contrary to operating instructions, or unauthorised modification to the product or repair by an unauthorised technician.
4. Reasonable evidence (in the form of a sales docket) must be supplied to indicate that the product was purchased no more than 12 months prior to the date of your claim
5. In the event of a failure, Philips shall be under no liability for any injury, or any loss or damage caused to property or products other than the product under guarantee

This guarantee does not prejudice your rights under common law and statute, and is in addition to the normal responsibilities of the retailer and Philips.

How to claim
Should your Philips product fail within the guarantee period, please return it to the retailer from whom it was purchased. In most cases the retailer will be able to satisfactorily repair or replace the product.
However, should the retailer not be able to conclude the matter satisfactorily, or if you have other difficulties claiming under this guarantee, please contact

The Guarantee Controller
Philips New Zealand Ltd.
✉ P.O. Box 41.021
Auckland
☎ (09) 84 94 160
fax ☎ (09) 84 97 858

(MEX) México ..... NOM

Es necessario que lea cuidadosamente su instructivo de manejo.

NOM

Thank you for selecting the Philips FA931 Integrated Stereo Control Amplifier.

An amplifier of the state-of-the-art Philips 900 series, the FA931 is engineered to fulfil the task of generating powerful sound with the highest achievable definition and minimum noise and distortion, supported by features such as:

– The Digital Selector Circuit, the direct digital input and output for signals from digital sources like a CD player, Digital Compact Cassette recorder, or Digital Satellite tuner unconditionally maintains the purity of the digital signals.

– A full-function remote control can handle your entire PHILIPS 900 series HiFi system as well as a TV set, a video recorder and a Laser Disc player.

– Extended Dynamics Circuitry (XDA), a special circuit in the power stages offering the ability to process peaks in the output signal (high dynamic headroom) and creating a clean undistorted sound.

– Intelligent XDA with Fuzzy Logic Power Control. In combination with the XDA, this fuzzy logic power controller regulates the power level of the amplifier in such a way that the optimal level of dynamic sound is reached without jeopardizing the safe operation of the amplifier-loudspeaker combination.

– Enhanced System Intelligence, offering increased ease of operation by extensive communication between the various components of your system.

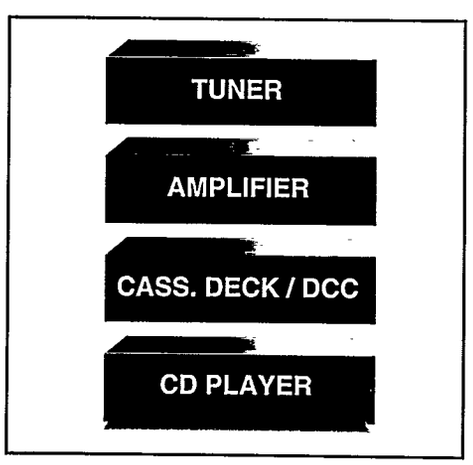
Please read this manual carefully ***before*** you attempt to connect or operate the amplifier.

This manual is divided into six sections:

- **Installation**: explains how to set up your system.
- **Operation**: explains how to use the major controls.
- Advanced Options: gives more detailed information on operation, including special features.
- **System Aspects**: explains the Enhanced System Intelligence feature and its benefits.
- **Remote Control**: gives detailed information on the operating functions of the system remote-control handset.
- **General Information**: includes maintenance information and technical data.

POSITIONING YOUR SYSTEM

The preferred order to stack the units of your system is shown in the diagram below.



WARNING

Do not connect the set to the mains until all other connections have been made and the mains voltage (indicated on the type plate) has been checked.
When positioning the unit, bear in mind that every amplifier produces heat which must be able to dissipate freely. For this reason do not cover any vents and make sure that there is sufficient ventilation around the unit.
An open space of at least 5 cm at the sides, the back and the top of the stack is required.

MAINS SUPPLY

- Check that the mains voltage as shown on the type plate corresponds to your local mains supply. If it does not, consult your dealer or service organisation.
- If your unit has a voltage selector, make sure ***only*** to change the voltage in the POWER OFF position.
- Insert the plug of the mains lead into the wall socket. The mains supply is now connected.

FITTING A MAINS PLUG (U.K. only)

This apparatus is fitted with an approved moulded 13 Amp plug. To change a fuse in this type of plug proceed as follows:
1 Remove fuse cover and fuse.
2 Fix new fuse which should be a BS1362 5 AMP, A.S.T.A. or BSI approved type.
3 Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5 A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 A.

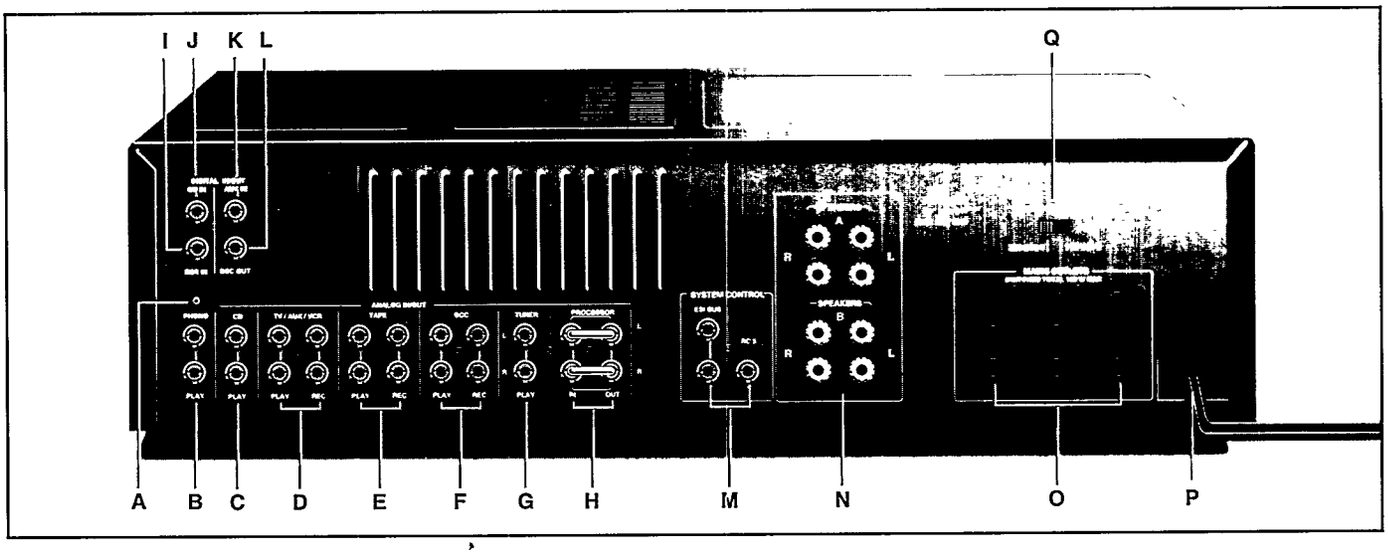
Note: The severed plug must be disposed off to avoid a possible shock hazard should it be inserted into a 13 A socket elsewhere.

How to connect a plug
The wires in the mains lead are coloured in accordance with the following code: blue = neutral (N), brown = live (L).
As these colours may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:
1 Connect the blue wire to the terminal marked N or coloured blue or black.
2 Connect the brown wire to the terminal marked L or coloured brown or red.
3 Do not connect either wire to the earth terminal in the plug, marked E or ⏚ or coloured green or green-and-yellow.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the two wires.

If in doubt, consult a qualified electrician.

The type plate is located on the back of the set.
This product complies with the radio interference requirements of the European Community.



You only have to install your system once.
Please make the following connections (whenever applicable).
Note: Switch off the amplifier before making any connections.

ANALOG CONNECTIONS

Important note for connecting equipment that does not have PLAY/REC markings on the input and output sockets:

	CONNECTIONS:	
FA 931		Device to be connected e.g. cassette deck
PLAY	->	PLAY or OUT
REC	->	REC or IN

A **PHONO GND** ⏚ – for connecting the earth wire of a record player

B **PHONO** – input (PLAY) sockets for connecting a record player

C **CD** – input (PLAY) sockets for connecting a CD player

D **TV/AUX/VCR** – input (PLAY) sockets for connecting the sound channel of a TV set ,video recorder or Laser Disc player and output (REC) sockets for extra sound recording equipment e.g. a cassette or tape deck or a HiFi stereo video recorder

E **TAPE** – input (PLAY) and output (REC) sockets for connecting a cassette deck

F **DCC** – input (PLAY) and output (REC) sockets for connecting a Digital Compact Cassette recorder

G **TUNER** – input (PLAY) sockets for connecting a tuner

H **PROCESSOR** – input and output sockets for connecting a sound processor, e.g. a graphic equalizer

- Remove the bridge connectors from the PROCESSOR sockets.
- Connect the PROCESSOR input sockets to the output sockets of the sound processor and the PROCESSOR output sockets to the input sockets of the sound processor.
- Set BASS and TREBLE control to the centre click position or press the SOURCE DIRECT button to bypass the tone controls.
- ***If the PROCESSOR sockets are not used, always insert the bridge connectors.***

DIGITAL CONNECTIONS

Note: The digital connections are used for digital recordings. For playback you should also connect the analog input and outputs.

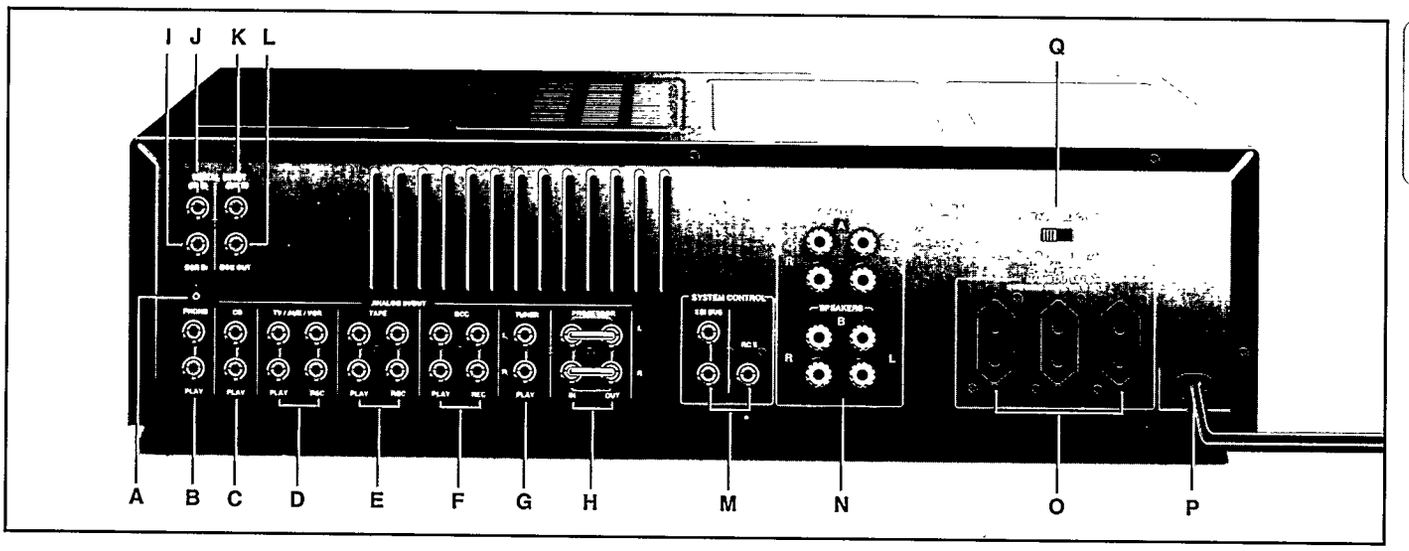
	CONNECTIONS:	
FA 931		Device to be connected
IN	->	OUT
OUT	->	IN

I **DSR IN** – input socket for connecting the digital output of a digital satellite tuner (DSR) using a coaxial cable

J **CD IN** – input socket for connecting the digital output of a CD player using a coaxial cable

K **AUX IN** – input socket for connecting another digital source using a coaxial cable

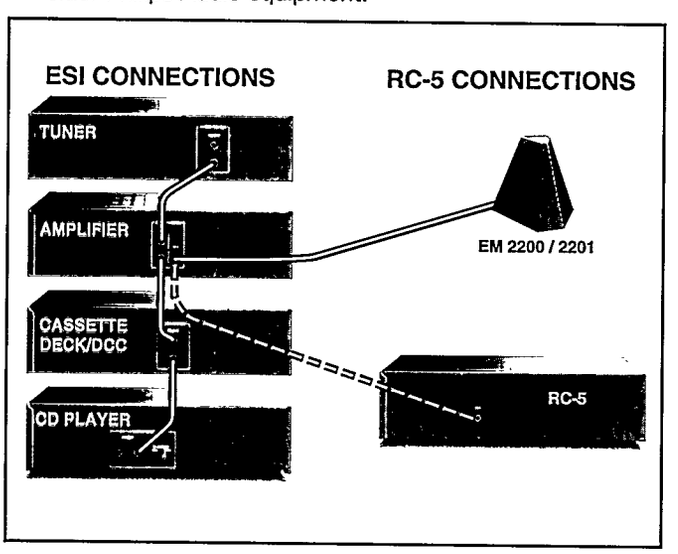
L **DCC OUT** – output socket for connecting a Digital Compact Cassette recorder using a coaxial cable



M SYSTEM CONTROL

- **ESI BUS** (Enhanced System Intelligence)(coloured green) Remote-control input/output sockets for connection to the corresponding ESI sockets of other components in your HiFi system (e.g. the Philips 900 series)
  Connect the ESI socket to the ESI socket of the external equipment that uses the ESI remote control system.
  In this way you can operate external sets by remote control through the sensor of the amplifier.
- **RC-5 BUS** (coloured orange) – remote-control input/output socket for connection to the corresponding RC-5 socket of e.g. a CD player or remote control receiver EM 2200/2201.
  Connect the RC-5 socket to the RC-5 socket of the external equipment that uses the RC-5 remote control system.

  This socket has been added to maintain compatibility with older Philips Audio equipment.



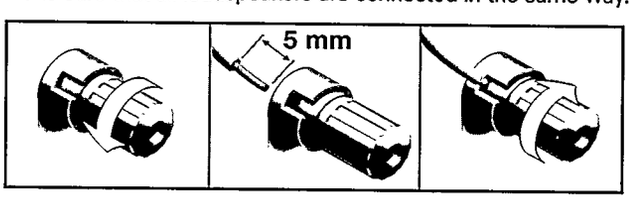
N SPEAKERS (L = left, R = right)

A – terminals for connecting a pair of speakers

B – terminals for connecting a second pair of speakers.

SPEAKERS A: min 6Ω
SPEAKERS B: min 6Ω
SPEAKERS A+B: min 12Ω

- One of the wires of a loudspeaker cable is marked, e.g. with a colour or rib. Connect the marked wire to the red terminal, the non-marked wire to the black one.
  Make sure that all loudspeakers are connected in the same way.



MAINS CONNECTION

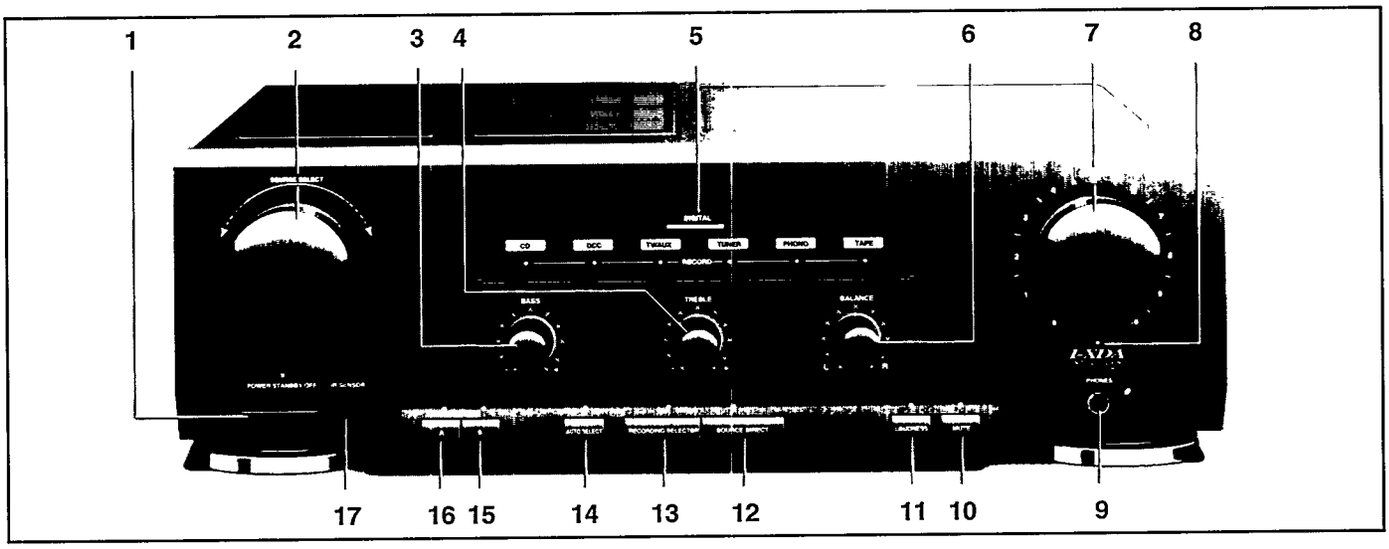
O MAINS OUTLETS – switched mains outputs for connecting mains plugs from various units such as tuner, cassette deck, CD player, etc. (maximum capacity is 100 W)

P Mains lead

Q Voltage selector 110/127 - 220/240 V – for selecting the mains voltage (not on all versions)

After having made all the necessary connections (some may not be applicable for your set-up), your system is ready for use. In the next chapter we will describe how to operate it.

English



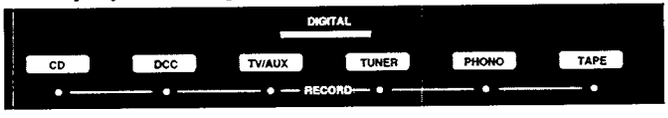
1 **POWER STANDBY/OFF** – for switching on in standby mode

2 **SOURCE SELECT** – for selecting the desired listening source

3 **BASS** – for adjusting the bass tones

4 **TREBLE** – for adjusting the high tones

5 **Display** – showing:



- the selected source: **CD, DCC, TV/AUX, TUNER, PHONO, TAPE.**
- the source you can make a recording from is indicated by the lighting up of a red LED under one of the source indicators.
- The **DIGITAL** indicator lights up when a source is selected which sends a digital signal to the amplifier (via a digital socket to the amplifier).

6 **BALANCE** – for adjusting the balance of the volume between the left and right speakers

7 **VOLUME** – for adjusting the volume

8 **FUZZY LOGIC POWER CONTROL (LED indicator)** – this indicator lights up when the fuzzy logic power control is active.

9 **PHONES** – socket for stereo headphones
- You may connect a pair of stereo headphones with 6.3 mm plug to this socket.
  Inserting the plug will ***not*** disconnect the speakers.

10 **MUTE** – for decreasing the volume by 20 dB (= factor 10)

11 **LOUDNESS** – for increasing the treble and bass response at low volume settings to match human perception

12 **SOURCE DIRECT** – for bypassing the tone control in order to obtain the shortest possible signal path

13 **RECORDING SELECTOR** – for selecting the recording source

14 **AUTO SELECT** – for switching on and off the Enhanced System Intelligence (ESI) system (See System Aspects)

15 **SPEAKERS B** – for switching on and off a pair of speakers connected to the SPEAKER B terminals

16 **SPEAKERS A** – for switching on and off a pair of speakers connected to the SPEAKER A terminals

17 **IR SENSOR** – infrared remote control eye

POWER STANDBY/OFF

- Press the POWER STANDBY/OFF key **1** to switch on the power.
  The amplifier will be activated and the source that was chosen before the power was switched off will be selected again.
  If the amplifier had been switched to standby before it was switched off, the standby mode will be selected when the power is switched back on. The indicator above the POWER STANDBY/OFF key will then light up.
  When the amplifier is switched to active mode (as described below in the chapters 'Wake-up from standby' and 'SOURCE SELECTION'), the respective indicators light up and the POWER STANDBY/OFF indicator is switched off.
  When a remote control command is received, the POWER STANDBY/OFF indicator flashes.
- To switch off the amplifier press the POWER STANDBY/-OFF key **1** again.

STANDBY

- Switching a set or your whole system to standby can only be done via the remote control.
- To switch a single source (e.g. TUNER) to standby:
- Select the source using the source keys on the remote control.
- The selected source will be switched to standby if the standby key is pressed briefly.
- If the standby key is kept pressed for more than approx. 1 second the whole system will be switched to standby.
  All light indicators will be switched off with the exception of the standby indicator on the amplifier.
  When AUTO SELECT is activated, the indicator of this key also lights up during standby.
  NOTE: If the whole system is switched to standby when a recording is active, the recording (or CD-dubbing) will be cancelled.

Wake-up from standby

There are several options to switch your system from standby back to operating mode:
- touching (magic touch) or turning the rotary SOURCE SELECT knob **2**;
- selecting a source with your remote control.
- When AUTOSELECT is activated, several keys on equipment connected via the ESI BUS sockets that activate a play function may also be used as wake-up keys (e.g. PLAY, SCAN, PRESET).

SOUND CONTROL

- Adjust the sound level with VOLUME **7**.
- Adjust the stereo balance between the left and the right channels with BALANCE **6**.
- Adjust the bass tones with BASS **3** and the high tones with TREBLE **4**.
- Press LOUDNESS **11** if you want to increase the bass & treble response at low volume settings.
- Press SPEAKERS A **16** if you want to switch on the pair of speakers connected to the SPEAKERS A terminals and/or SPEAKERS B **15** to switch on the second pair connected to the SPEAKERS B terminals .
  An indicator above the SPEAKERS A and/or B key lights up
- Press MUTE **10** if you want to decrease the volume by 20 dB.
- Press SOURCE DIRECT **12** if you want to bypass the tone control. Bass and treble will now be deactivated.

FUZZY LOGIC POWER CONTROL (Intelligent XDA)

The fuzzy logic power controller checks the output power level continuously.
When very high power is demanded by the speakers over a prolonged period of time, the Fuzzy Logic Power Controller is ready to come in action to regulate the power level of the amplifier in such a way that both parts of the XDA amplifier can be used to their maximum extend, and the speakers are driven to their highest sustainable power level, greatly reducing the risk of being damaged the Fuzzy Logic Power Control provides the optimal level of dynamic sound performance without jeopardizing the safe operation of the amplifier-loudspeaker combination. When active, the Fuzzy Logic Power Control led blinks.
After some time the controller will regulate the power level by adjusting the volume level step by step.
If necessary, this will be repeated several times until an acceptable power level is reached again.
If a very high power level is sustained for too long, the Fuzzy Logic Power Controller will activate a mute of 20 dB. In this situation you can not de-activate the mute manually during the next 30 minutes.
After these 30 minutes it is possible to de-activate the Controller manually. If the output power is still too high the Fuzzy Logic Power will react again and the volume level is adjusted step by step.

Under normal user conditions and loudspeaker impedances greater than or equal to 6Ω and volume level < position 8 the fuzzy logic power controller will not come into operation.
If loudspeakers with a lower impedance are connected to the FA931, the fuzzy logic power controller will be activated sooner because high power levels are reached more quickly.

SOURCE SELECTION

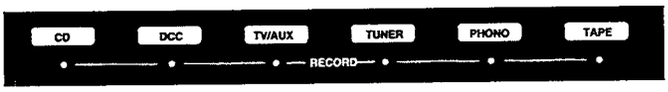
- When the amplifier is in standby mode, it will be switched directly to operating mode as soon as the SOURCE SELECT knob is touched.
- When this knob is released (and not turned), all other sets in the system (connected via the ESI sockets) will become active.
  The source which was selected last before the system was switched to standby will be selected again.
- When the SOURCE SELECT knob is turned, only the amplifier and the selected source (indicated on the display) will become active.
  NOTE: A selection is only made when the turning is stopped for more than one second (to prevent all sources becoming active while the knob is turning).
- By turning the SOURCE SELECT knob one step to the left, you select the source to the left of the current source.
- By turning the SOURCE SELECT knob one step to the right, you select the source to the right of the current source.
- When AUTO SELECT is activated, you can switch both the source and the amplifier to active mode by simply pressing 'PLAY' on CD or Deck or one of the tuner preset keys.

Source selection via the remote-control handset

- Press (***for more than 1 second***) the respective source key on the remote control.
  The selected source and the amplifier will become active.

English

RECORD SELECTION



The red LEDs under the source indicators on the display indicate the source that you can make a recording from (recording source). Normally, the recording source follows the selected listening source.

- A recording source can be fixed with the RECORDING SELECTOR **13**.
- When this key is pressed the selected source will remain the recording source when another listening source is selected with the SOURCE SELECT knob.
  (The red indicator on the display no longer follows the listening source).
  It is now possible to listen to a source other than the one your are recording from (e.g. recording from your tuner while listening to a CD).
- Each time the RECORDING SELECTOR is pressed again, the source to the right of the current source will become the new recording source.
- The recording selection can be cancelled by pressing the RECORDING SELECTOR until the recording source is the same as the listening source again.
  The recording selection will now be cancelled and the red indicator on the display will again follow the listening source.
  You can now make a recording from the source you are listening to.
- The record selection will also be cancelled when the amplifier is switched off or to standby mode.

Digital record selection
When a digital source is connected (via the digital sockets) you can make a direct digital recording. The DIGITAL indicator will then light up.
Note: Make sure that the source you want to record to (e.g. DCC is also connected to the amplifier via the digital sockets.

REPROGRAMMING OF TV AND LD SOURCE ALLOCATION

The TV and LD inputs are initially allocated to the TV/AUX source. When TV or LD is selected the TV/AUX indication on the display lights up.
If you wish, you can change the TV and LD source allocation as follows:

Changing the LD source allocation
- Press the SOURCE DIRECT key **12** while you switch on the power.
– The TV/AUX indication (or the source to which LD is currently allocated) starts blinking.
- You can now select another location by turning the SOURCE SELECT knob. The selected source indication lights up on the display.
  Note: you will notice that during turning the PHONO source is skipped. It is ***not possible*** to allocate the PHONO position to TV or LD.
- Store your selection by pressing the RECORDING SELECTOR key **13**.
- The amplifier returns to normal active mode.

Changing the TV source allocation
- Press the AUTO SELECT key **14** while you switch on the power.
– The TV/AUX indication (or the source to which TV is currently allocated) starts blinking.
- You can now select another location by turning the SOURCE SELECT knob. The selected source indication on the display lights up.
- Store your selection by pressing the RECORDING SELECTOR key **13**.
- The amplifier returns to normal active mode.

– If you select TV or LD after reallocating, the respective source indication which you have allocated to TV or LD will light up on the display.

Notes:
– During reprogramming of the TV and LD source allocation the audio signal will be muted.
– Any source indication except PHONO can be allocated to TV or LD.
– TV and LD can both be allocated to the source indication TV/AUX. The other source indications can be used to allocate only one of the two.
  e.g. If LD has been allocated to CD, the CD indication will not light up (will be skipped) during reallocation of the TV source.
– When TV and/or LD are allocated to another source, the original source cannot be selected by the remote control.
– Follow the above procedure if you want to re-allocate the TV and LD inputs to the TV/AUX source.

ENHANCED SYSTEM INTELLIGENCE

If you have connected equipment to your amplifier via the ESI sockets and when AUTO SELECT **14** is activated, there will be an additional internal communication between the different elements in your system.
The whole system can be operated by the system remote control through the sensor of the amplifier.
In addition, the functions AUTOMATIC SOURCE SELECTION and AUTOMATIC STOP as mentioned below are then accessible:

IMPORTANT:
Some products of the Philips 900 series which are equipped with their own remote control, also have an IR SENSOR ON/OFF switch on the back of the unit.
When these units are incorporated in your HiFi system with an ESI BUS connection, this IR SENSOR ON/OFF switch should always be in the **OFF** position.
The unit can then be operated with the remote control of your FA931 amplifier.
Make sure that the respective unit is ***switched off*** when switching the IR SENSOR on and off.

AUTOMATIC SOURCE SELECTION

Equipment connected via the ESI sockets to the amplifier is automatically selected as the source by pressing any button that activates the play function e.g. PLAY, SCAN, PRESET.

Example: If you press the PLAY key on your CD while listening to your tuner, the source CD will be selected.

AUTOMATIC STOP

When the selected source is in the play mode, it will always be stopped automatically as soon as another source is selected.

Example: If you select TUNER with the SOURCE SELECT knob while listening to your CD, the CD player will be stopped.

DUBBING

If CD SYNCHRO is pressed on your cassette deck, then the dubbing is carried out via the analog record selector. (The recording indicator on the display will remain fixed on CD.)

If CD SYNCHRO is pressed on the DCC, then the dubbing is carried out via the digital or analog selector, depending on the connections (analog/digital) that are made.

If cassette dubbing (normal or fast) is started up from system standby only the cassette deck will become active. The amplifier stays in standby mode untill a source is selected.

Dubbing will be cancelled by changing the recording source with the RECORDING SELECTOR.

Further information can be found in the instructions for use of your cassette deck or DCC.

TIMER

When making use of the timer function of your Philips 900 series tuner (e.g. FT930) the amplifier has to be in standby mode.
A timer request will be disregarded if the amplifier is activated.

The timer function can be used as e.g. an alarm clock or to make an unattended recording at a specific time.

Further information can be found in the instructions for use of your tuner.

PROCESSED/UNPROCESSED RECORDING OR LISTENING

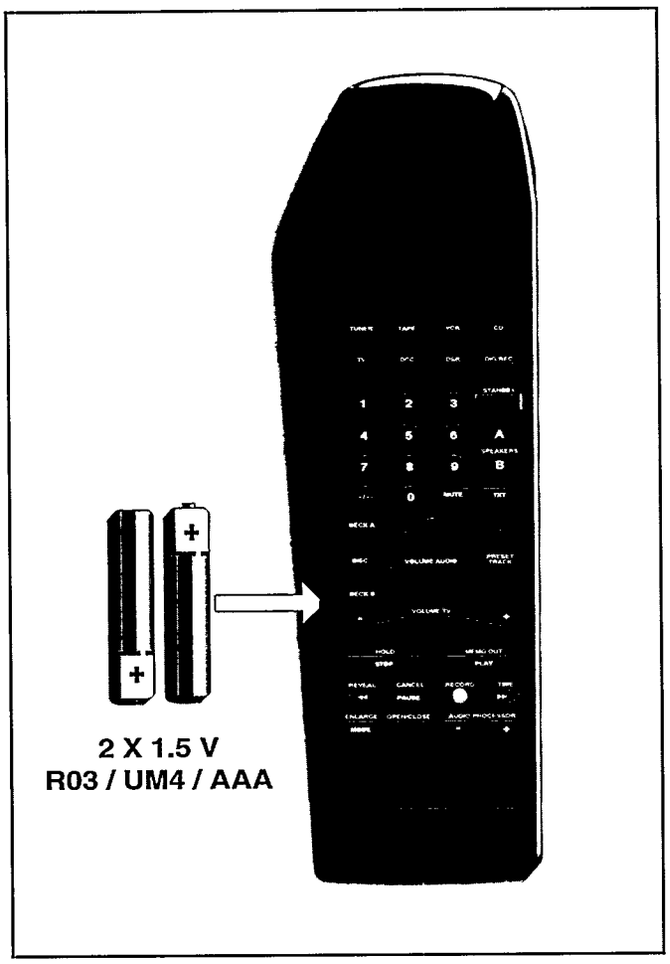
When an audio processor (e.g. the Philips FV 930 equalizer) is connected to the system via the ESI sockets, it is possible to make a processed or unprocessed recording or to listen processed or unprocessed.

Further information can be found in the instructions for use of your audio processor.

MULTI ROOM

By connecting an extra pair of speakers placed in another room (e.g. in the kitchen) and by placing the optional EM 2200/2201 'Pyramid' remote-control receiver in this room (connected to the RC-5 input on your amplifier), you can control your Philips 900 system from another room.

English



The remote control supplied can be used to operate all units in the system which are connected via the ESI sockets. In addition, it can be used to operate any other equipment that uses the RC-5 remote control system.

IMPORTANT:
Some products of the Philips 900 series which are equipped with their own remote control, also have an IR SENSOR ON/OFF switch on the back of the unit.
When these units are incorporated in your HiFi system with an ESI BUS connection, this IR SENSOR ON/OFF switch should always be in the **OFF** position.
The product can then be operated with the remote control of your FA931 amplifier.
When these units are not used in a HiFi system the switch should be in the **ON** position.
Make sure that the respective unit is ***switched off*** when switching the IR SENSOR on and off.

Remote control from another room
You can control the system from another room by placing a EM 2200/2201 'Pyramid' remote-control receiver in the room and connecting it to the RC-5 input on the amplifier. The 'Pyramid' will pass on signals from the remote-control handset to the amplifier.

BATTERIES

- Open the battery compartment and insert two batteries as indicated, type R03, UM-4 or AAA-cells .
- Remove the batteries when they have run down or if they will not be used again for a long period.

USING THE REMOTE CONTROL

- First select the source you wish to control by pressing one of the source select keys on the remote control (e.g. TAPE, CD).
- Then, select the desired function.

AMPLIFIER

- **VOLUME AUDIO** - for adjusting the volume
- **SPEAKERS A/B** - for speaker selection
- **Source selectors**
- **MUTE** - for decreasing the volume by 20 dB
- **STANDBY** - for switching the complete system to standby by pressing for longer than approx. 1 second
- **AUDIO PROCESSOR -/+** – for selecting the next or previous audio processor (e.g. equalizer) preset.

TUNER

- **0-9 digit buttons** - for selecting preset stations; entering data when programming timer or clock and when using the direct tuning function
- **PRESET/TRACK** - next ⏶ or previous ⏷ preset station
- ◀◀ - to search down
- **MODE** - for selecting text mode
- ▶▶ - to search up
- **STANDBY** - for selecting standby mode

CASSETTE DECK

- **PRESET/TRACK** - next ⏶ or previous ⏷ track
- **PLAY** - for starting play
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- **RECORD** - for starting recording
- ▶▶ - for winding the tape in the playing direction
- ◀◀ - for winding the tape in the opposite direction
- **DECK A/DECK B** - for selecting deck A or B
- **MODE** - for selecting side A or B
- **STANDBY** - for selecting standby mode

VCR

- **0-9 digit buttons** - for selecting stations
- **PRESET** - next ⏶ or previous ⏷ station
- **PLAY** - for starting playback
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- **RECORD** - for starting recording
- ▶▶ - for winding the tape
- ◀◀ - for rewinding the tape
- **MODE** - for scanning presets
- **STANDBY** - for selecting standby mode
- **-/--** - for selecting 1 or 2 digit programmes

CD

- **0-9 digit buttons** - for track selection
- **TRACK** - next ⏶ or previous ⏷ track
- ◀◀ - to search down
- ▶▶ - to search up
- **PLAY** - for starting play
- **STOP** - for stopping play
- **PAUSE** - for interrupting play
- **OPEN/CLOSE** - for opening/closing the CD compartment
- **MODE** - for playing in random order (SHUFFLE)
- **DISC** ⏶ ⏷ (CD changer only) - for disc selection
- **STANDBY** - for selecting standby mode

TV

- **VOLUME TV** - for adjusting the volume
- **0-9 digit buttons** - for selecting preset stations
- **PRESET** - for next ⌃ or previous ⌄ preset station
  - next ⌃ or previous ⌄ text page (when TXT is selected)
- **MODE** - for language selection
- **TXT** - for calling up Teletext or FLOF
  HOLD - to hold page
  MEMO OUT - for calling up pages from the memory
  REVEAL - to reveal concealed informations
  CANCEL - to cancel temporarily
  TIME - for time display
  ENLARGE - to enlarge
- **STANDBY** - for selecting standby mode
- **-/--** - for selecting 1 or 2 digit programmes

DCC (Digital Compact Cassette)

- **0-9 digit buttons** - for track selection
- **PRESET/TRACK** - next ⌃ or previous ⌄ track
- **PLAY** - for starting play
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording
- ▸▸ - for winding the tape
- ◂◂ - for rewinding the tape
- **MODE** - for selecting text mode
- **STANDBY** - for selecting standby mode
- **OPEN/CLOSE** - for opening/closing the DCC compartment
- **DECK A/DECK B** - for selecting deck A or B

DSR (Digital Satellite Tuner)

- **0-9 digit buttons** - for selecting preset stations; entering data when programming timer or clock and when using the direct tuning function
- **PRESET/TRACK** - next ⌃ or previous ⌄ preset station
- ◂◂ - to search down
- **MODE** - for scanning preset stations
- ▸▸ - to search up
- **DISC** – next ⌃ or previous ⌄ satellite preset
- **STANDBY** - for selecting standby mode

DIG. REC (Digital recorder e.g. CDR)

- **0-9 digit buttons** - for track selection
- **TRACK** - next ⌃ or previous ⌄ track
- ◂◂ - to search down
- ▸▸ - to search up
- **PLAY** - for starting play
- **STOP** - for stopping recording/play
- **PAUSE** - for interrupting recording/play
- **OPEN/CL**(lose) - for opening and closing the disc compartment
- **MODE** - for playing in random order (shuffle)
- **STAND BY** - for selecting stand by mode

English

MAINTENANCE

- Do not leave the unit for any length of time in direct sunlight or other places where high temperatures can occur, such as in the vicinity of heating apparatus.
- Do not expose the equipment to humidity or rain.
- A chamois leather slightly moistened with water is sufficient for cleaning the cabinet
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

TECHNICAL SPECIFICATIONS

(Subject to modification)

- Output power:.....DIN 1 kHz (D ⩽ 0.7%) 2x70 W (8 Ω)
  .....DIN 1 kHz (D ⩽ 0.7%) 2x80 W (6 Ω)
  .....IEC 581.6 (D ⩽ 0.7%) 2x65 W (8 Ω)
  .....IEC 268.3 (D ⩽ 0.7%) 2x75 W (6 Ω)
- Music Power (1 kHz, 8 Ω).....2x185 W
- Total harmonic distortion:....⩽ 0.009% at 85 W for 1 kHz
- Intermodulation distortion: .....⩽ 0.01% at 60 W
- Power bandwidth: .....5 - 60,000 Hz (at -3dB)
- Frequency response:
  linear inputs.....15 - 45,000 Hz, + 1 dB
  phono input MM .....20 - 20,000 Hz, + 1 dB
- Signal-to-Noise Ratio:
  linear.....≥ 102 dBA
  phono .....MM ≥ 83 dBA
- Stereo separation: .....75 dB
- Crosstalk.....65 dB
- Damping factor.....≥ 100 at 8 Ω
- Bass/Treble control.....± 10 dB at 80 Hz/10 kHz
- Loudness .....+ 6/ + 4 dB at 100 Hz/10 kHz

INPUT SENSITIVITY

Phono MM:.....2.5 mV at 47 kΩ (rated output)
Linear inputs:.....250 mV at 22 kΩ (rated output)
Digital inputs: .....fully acc. to IEC 958
Processor: .....250 mV / 22 kΩ

OUTPUTS

Recording:.....250 mV at 2.5 kΩ
Processor: .....250 mV at 2.5 kΩ
Digital: .....fully acc. to IEC 958
Headphones: .....8 - 1,000 Ω
Loudspeakers:.....8-16 Ω

REMOTE CONTROL SYSTEM

.....Enhanced System Intelligence (ESI) BUS
.....+ RC-5 BUS

POWER SUPPLY

Mains voltages: .....acc. to typeplate
Power consumption: .....20 - 350 W
Mains outlets:.....100 W max.

CABINET

Dimensions (w x h x d):.....435 x 140 x 300 mm approx.
Weight:.....7.2 kg approx.

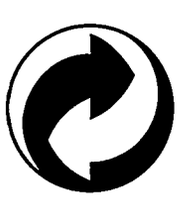
ACCESSORIES

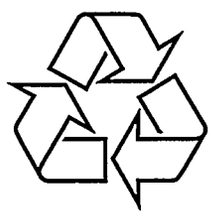
.....1 x Remote control,
..... 3 x ESI cable
.....2 x batteries for remote control

SYMPTOM	POSSIBLE CAUSE	REMEDY
– No sound from loudspeaker.	– Volume is turned down low. – MUTE is active. – Loudspeakers are not connected. – Loudspeaker cables are connected with the plastic isolation still on them.	• Turn up the volume. • Press MUTE again to deactivate • Connect loudspeakers correctly. • Strip off the plastic isolation (5 mm) before connecting the cables.
– Sound from only one loudspeaker.	– One of the loudspeaker cables is not connected or damaged. – Balance is not in middle position.	• Connect the cable or replace with one of good quality. • Turn balance to middle position.
– Remote control is not possible.	– The batteries have run down.	• Insert new batteries.
– In a system set-up the relevant source is not selected automatically when a function of that source is chosen.	– The AUTO SELECT function of the amplifier is not activated. – The IR-SENSOR of the CD/DCC player/changer has not been switched off.	• Press the AUTO SELECT button. • First switch off the CD (DCC) player/-changer. Then switch off the IR-SENSOR of the CD player/changer (DCC).
– The FUZZY LOGIC led below the VOLUME knob is flashing.	– The FUZZY LOGIC control system is dedecting a high output power condition.	• No action required. If this condition continues, the volume will be reduced by the FUZZY LOGIC control system.
– MUTE is active but cannot be turned off.	– Due to a continuous high power condition the MUTE function has become active to protect the amplifier. MUTE will be locked on for 30 minutes.	• Leave the amplifier in this situation or switch it off and allow it to cool down.
– Music from digital source (e.g. CD or DCC) is not audible.	– The digital-source output cable is connected to the digital input of the amplifier but the analogue output cable of the digital source is not connected to the amplifier. If only the digital signal is available, the digital source cannot be listened to.	• Connect the analogue output cable of the digital source to the analogue input of the amplifier.
– Hum audible when phono is selected.	– No proper grounding of turntable.	• Connect turntable ground to phono ground screw.
– The volume level is automatically set to a lower level.	– The output power level is too high.	• No action necessary; the Fuzzy Logic Power Controller has regulated the power level by adjusting the volume level step by step. *Please don't put the volume to a higher level.*

SYMPTOM	POSSIBLE CAUSE	REMEDY
– The other components in the 900 system do not react to remote control commands.	– ESI BUS cables are not connected properly. – AUTO SELECT is not active. – The RC-5 and ESI BUS connections are mixed up. – The IR-SENSOR switch at the back of the connected set is in the ON position.	• Connect ESI BUS cables according to description in these instructions for use. • Press the AUTO SELECT button. • The RC-5 BUS should only be connected to a RC-5 socket and the ESI BUS should only be connected to an ESI socket. • Switch off the set, then set the IR SENSOR switch to OFF.
– Tone control (bass/treble) has no effect.	– SOURCE DIRECT is active.	• Press the SOURCE DIRECT button.
– Remote control commands are not properly received.	– The distance between remote control and apparatus is larger than 10 metres. – The batteries are exhausted.	• Reduce the distance between remote control and apparatus. • Replace the batteries.

FA 931





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