



# TR-7 15 MESSAGES DIGITAL RECORDER.



The TR-7 module is digital recorder/player for voice, music or sounds with the possibility to store a maximum of 120sec. It allows sharing total time in different combinations on messages with different number and timing. It includes power stage, volume control, indicators Leds, and connection terminals.

### TECHNICAL CHARACTERISTICS.

Voltage	12 V. D.C.
Minimum consumption	110 mA.
Maximum consumption	360 mA.
Maximum record time	120 sec.
Muestreo frequency	8 Khz.
Output impedance	4 - 8 ?
Output power	5 W. (RMS at 4 ?).
Automatic gain control, (AGC)	Adjustable.
Protection against inversion/polarity, (P.I.P.)	Yes.
Sizes	125 x 90 x 30mm.

### POWER SUPPLY AND INSTALLATION.

**POWER SUPPLY.** The TR-7 circuit had to be supplied by a 12 VDC power supply correctly filtered. We recommend you to use the FE-4 power supply which has been developed to perfectly answer to the circuit needs. Install a fuse and a switch has it is indicated on the schedule. Both are necessary for the module's protection as well as for your own safety, as it is required by the "CE" regulations. Connect the positive and the negative of the power supply to the respective positive and negative terminals of the module, indicated in the wiring map. The distance between the power supply and the module has to be as short as possible (max. 60 cm). Verify that the assembly is correct.

**Note.** Connections indicated as 230 VAC in the wiring map have to be connected to 110 VAC, in American countries. Cebek's Modules and/or transformers will be supplied with corresponding modifications for their connection in these countries.

**INSTALLATION.** See the General Wiring Map. Install a fuse at the terminal indicated as Play/Rec. Connect also a push button to each message input. If you have configured the module with a number of message inferior than 15, messages input not used, could be left without connection.

Finally, you have to connect a loudspeaker to the corresponding output. This has to be a quality loudspeaker and with a minimum power of 10 W.

For Messages and Play/Rec inputs connections, the maximum suggested cable length is 20 cm. If you need more than this length, you have to use shielded cable and connect its braid to the "Common" terminal. Nevertheless, even using shielded cable, the maximum length had to be inferior than 80 cm. If you don't respect this point, probably the module doesn't properly work.

The rest of connections (power supply and loudspeaker), could be done with standard parallel cable.

For Messages and Play/Rec inputs connections you have to use devices free of power like push buttons, switches or relay. More over, we strongly suggest you to use quality components.

For the installation, you have to use a metallic enclosure and connect the circuit's negative terminal to it. Don't remove or manipulate any components of the circuit, otherwise, you could damage the module and the warranty will be cancelled.

### TO SELECT THE NUMBER OF MESSAGES.

**TO CONFIGURE the TIMING and NUMBER of MESSAGES.** The TR-7 offers a total recording and playing time of 120 seconds, which will be allowed according to the number of messages that you configure the module. To select the number of messages as well as its timing, you have to select among any of the 16 possibilities indicated on the fig. 1., placing switches 1, 2, 3 and 4 of the "Control" dip in ON or OFF position, according to your needs. Note that all combinations of the Fig. 1 are based on a total time of 60 sec. Thanks to the switch N°5, you could double this time till 120 sec. If you place the switch N°5 in ON position, each of the 16 possible messages configuration will double the assigned time. If you place the switch N°5 in OFF position, the messages configuration will be maintained according to the mentioned Fig.

Before to activate the TR-7 module, you have to select a position (ON or OFF) for the switch N°5. Otherwise, if you change its position after recording several messages, their register will be damaged or erased. For the moment forget the rest of switches, their function will be explained further.

Fig. 1. To configure Timing and Number of Messages.

Switches	1	2	3	4
15 Messages of 4sec. →	On	On	On	On
12 Messages of 5sec. →	Off	On	On	On
10 Messages of 6sec. →	On	Off	On	On
7 Messages of 8sec. →	Off	Off	On	On
6 Messages of 10sec. →	On	On	Off	On
5 Messages of 12sec. →	Off	On	Off	On
4 Messages of 15sec. →	On	Off	Off	On
2 Messages of 30sec. →	Off	Off	Off	On
6 Messages of 8 sec. + 6 Messages of 2sec. →	On	On	On	Off
5 Messages of 10 sec. + 5 Messages of 2sec. →	Off	On	On	Off
4 Messages of 10 sec. + 10 Messages of 2sec. →	On	Off	On	Off
3 Messages of 12 sec. + 12 Messages of 2sec. →	Off	Off	On	Off
5 Messages of 8 sec. + 5 Messages of 4sec. →	On	On	Off	Off
4 Messages of 10 sec. + 5 Messages of 4sec. →	Off	On	Off	Off
2 Messages of 10 sec. + 10 Messages of 4sec. →	On	Off	Off	Off
1 Message of 60sec. →	Off	Off	Off	Off

Fig. 2. Function of the Switch N°5.

Switch	5
Time of the Fig. →	Off
To double the Time of the Fig. →	On

### OPERATING MODE.

**INDICATORS.** There are five indicators Leds on the circuit.  
 - POWER Led. To indicate that the module is supplied.  
 - RUN Led. It intermittently lights during a message recording or playing.  
 - REPEAT Led. To indicate that the Repeat function is activated.  
 - REC Led. To indicate that the Record mode is activated.  
 - PLAY Led. To indicate that the PLAY mode is activated.

### PROTECTION AGAINST THE INVOLUNTARY RECORDING.

The TR-7 module includes a protection against involuntary recording. If you place the switch N°8 in ON position, the module will accept the recording. If you place it in OFF position, the TR-7 doesn't allow to record any message.

**AUTOMATIC GAIN CONTROL, AGC.** The automatic gain control allows correcting the recording volume level regarding the distance between it and the microphone (between maximum and minimum levels accepted by the circuit). If you wish to activate the AGC, place the AM jumper in ON position. If you don't wish to activate this function, maintain the jumper in OFF position.

Do never close or place the AM jumper in ON and OFF inputs at the same time and select obligatory one of these options. Otherwise, the module doesn't properly work.



**REC RECORDING.** Once the number of message selected, the recording will be done independently for each one and during the assigned time. To record, and only during this operation, remember that the switch N°8 had to be in ON position. When this operation is done, you have to place it again in the OFF position. Each one and during the assigned time. To record, and only during this operation, remember that the switch N°8 had to be in ON position. When this operation is done, you have to place it again in the OFF position.

### OPERATING MODE.

Activate the Recording function closing the Play/Rec switch. This operation will be confirmed when the Rec Led lights. Then, select which of fifteen messages you wish to record and close corresponding push button's contact. The recording mode will be activated during its assigned time. The Run Led will cyclically light till the end of the recording. You couldn't stop the recording before the end of the message's assigned time. recording mode will be activated during its assigned time. The Run Led will cyclically light till the end of the recording. You couldn't stop the recording before the end of the message's assigned time. When you will activate the recording mode, you have to clearly and highly speak in front of the microphone and at a maximum distance of 20 cm. Otherwise, and because of the analogue-digital integrated circuit's conversion, the generated noise by it will be audible in your own recording.

**PLAYING.** Before to activate a normal or repetitive function, verify that the switch N°8 is OFF position. Place the Play/Rec switch in open position, the Play Led will light. Then, select which message you wish to record and close corresponding push button's contact, the messages will be played. The Run Led intermittently lights during the playing. If you press at the same time several messages, the module will play the first one pressed. The module doesn't allow activating a message if other one is playing, you have to wait the end of the played one. To adjust the volume level, you have to use the potentiometer indicated on the General Wiring Map. Do never place the potentiometer at the maximum, otherwise you will saturate the output and sound distorted.

**REPETITIVE PLAYING.** The TR-7 module allows two different kinds of playing, normal and repetitive. To select one of them, you have to place the switch N°7 in the wished place. For a normal playing, place it in ON position and for repetitive playing place it in OFF position. If you select the repetitive option, at the end of the selected message time, and not before (even if the message is shorter than the assigned time), the module will automatically start again this message. This cycle will be repeated indefinitely if the push button corresponding to this message is closed. When you release it, at the end of the message, the TR-7 module will stop the cycle and go back at this quiescent state.

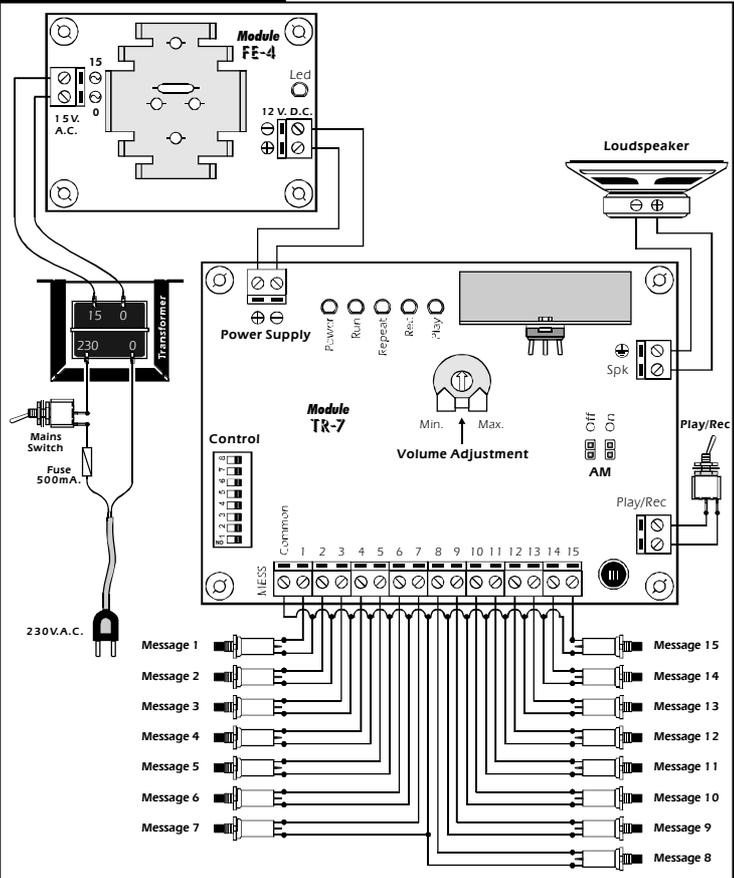
### DIP "CONTROL" SWITCHES FUNCTIONS.

In the following Fig. You could see assigned functions to the 8 switches of the "Control" dip.

Fig. 4. Assigned functions to the Switches.

Switch 1	Control of the number and time by Message.	ON →	According to the selected Combination in the fig. 1.
Switch 2	Control of the number and time by Message.	ON →	
Switch 3	Control of the number and time by Message.	ON →	
Switch 4	Control of the number and time by Message.	OFF →	
Switch 5	Total Time of the TR-7, Single or Double	ON → Double, (120 sec.).	OFF → Single, (60 sec.).
Switch 6	Without use, Unsed. .	ON →	OFF →
Switch 7	Control of the Repetitive function.	ON → Deactivated.	OFF → Activated.
Switch 8	Protection against Involuntary Recording.	ON → Deactivated.	OFF → Activated.

### GENERAL WIRING MAP.



### TECHNICAL CONSULTATIONS.

If you have any doubt, you could contact your wholesaler or our Technical Department.  
 - E-Mail, [sat@cebek.com](mailto:sat@cebek.com) | Fax. 34.93.432.29.95 | by mail, P.O. Box. 23455 - 08080 Barcelona - Spain.  
 - Keep the invoice of this module. For any repair, the corresponding invoice had to be added. If the invoices not presented together with this module, the module's warranty will be automatically cancelled.

All the module's CEBEK have 3 years of total warranty in technical repairing, and spaces from the date of buy.



Much more CEBEK module's are available in our products range, please, require our general catalogue or visit our Website.  
[Http://www.cebek.com](http://www.cebek.com)

